KPN Integrated Annual Report 2021

Connecting everyone in the Netherlands
to a sustainable future

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Statement – This copy of the Integrated Annual Report is the PDF/printed version of the KPN Integrated Annual Report 2021. This version has been prepared for ease of use, and does not contain ESEF information as specified in the Regulatory Technical Standards on ESEF (Delegated Regulation (EU) 2019/815). The offi cial ESEF reporting package is available on our website at: https://annualreport2021.kpn/

Introduction by the CEO

Into the future, together

Our resilience was tested again in 2021, more than we had hoped. It was another year in which our digital services enabled people to work from home, to follow education online or to keep doing business while stores were closed.

Once again, online access was often the only door to the outside world and contact with others. The pandemic is accelerating the digitalization of our lives in countless areas and in unprecedented ways. The data usage on KPN's networks, which broke records again last year, mirrored the various high and low points we all experienced.

Robust progress on strategy

We succeeded in making strong progress with our Accelerate to Grow strategy last year, thereby concretely demonstrating our purpose: we go all out to connect everyone in the Netherlands to a sustainable future. Our ambition is to make the Netherlands the best-connected country in the world – a country where everyone is secure online, and can reap the benefits the digital world has to offer.

Our Accelerate to Grow strategy is beginning to be reflected in our results, too. The number of broadband customers we have, is moving in the right direction; we are seeing growth in mobile and our growth in wholesale continues. A key milestone for us last year was the positive development in the SME segment, which has grown service revenue even sooner than expected.

The quality of our networks is significantly boosting customer satisfaction. We have successfully accelerated our journey to sustainable growth and long-term value creation last year – and we are all set to continue.

After years of declining revenues, we achieved growth in the mass market segments in 2021. In financial terms, we closed the year in line with our ambitious goals, with growing EBITDA and free cash flow. We are offering shareholders a growing dividend and have completed the first tranche of share buybacks to return additional value to shareholders.

Competitive market

With a large number of providers and wide choice for consumers, the Dutch telecommunications market is promising and competitive. Moreover, there are many asset-light players that use our networks for their sharply-priced offerings. The high quality of the digital infrastructure makes the Netherlands an attractive market for launching new products and services. Gaming, e-sports and streaming services are increasingly popular – and customers expect a lot from their digital connections as a result.

We are well-positioned to continue to lead this market thanks to the targeted innovation of our networks, our attractive services and effective organization. The unsolicited takeover proposals we received last year are one of the clear signs that the telecommunications market itself is in demand. We considered these proposals carefully, taking into account the interests of all our stakeholders, and concluded that they did not provide tangible and material added value to our strategy.

Strong networks

The Netherlands builds a high-quality, future-proof digital infrastructure based on fiber and 5G, enabling a first class internet experience. With our strategy, we are playing a leading role in this. The power of these networks opens new avenues for economic growth, as well as digital opportunities in many areas.

Introduction by the CEO

We are rolling out our fiber network at a record pace. We have already connected 40% of the Netherlands to the best, most future-proof infrastructure. Last year, we started the Glaspoort joint venture together with APG. Glaspoort will roll out fiber to nearly a thousand villages and a large number of business parks vis a vis our existing plans. Last year, Ookla once again perceived our mobile network as the best in the Netherlands, with the fastest 5G.

Cybersecurity

The importance of cybersecurity was made apparent several times last year. From large companies paralyzed by cybercriminals and global software vulnerabilities, to changing perspectives on the importance of digital sovereignty within Europe. Vulnerabilities in the legacy portfolio of InternedServices proved the importance of permanent vigilance within KPN. Raising awareness and improving the security of digital life is increasingly becoming a clear part of our mission. After all, a sustainable future must, first and foremost, be a safe and secure one. The integrity and safety of our systems and networks are therefore our highest priority; this is what our customers and society expect of us.

Increasing the cybersecurity of the Dutch business community also requires scalable and accessible solutions. KPN offers accessible security solutions for all business owners, from SMEs to large corporates. Moreover, we develop services such as secure data exchanges, to additionally safeguard critical data.

Our people

A big thank you to all employees for their great commitment and efforts; they make KPN what it is. It is encouraging to see that, despite the ongoing effects of COVID-19 and the increased pressure due to continued working from home, our employee engagement remains high. Technology is patient, but our people make the difference. That is why we also keep investing in developing talent, with a focus on increasing diversity, inclusion and being an attractive employer. We stimulate new ways of working that align with our core values of trust, courage and growth, with an eye for vitality and mutual connections. Only by having colleagues who understand the changing needs of our market we can continue to innovate and serve our customers better.

Sustainable future

Our stakeholders greatly value our sustainable nature. We continue to explore new paths so that we can remain a pioneer in the field of sustainability. KPN is the only telecommunications company to have been in the Dow Jones Sustainability World Index for 10 consecutive years. Our own energy consumption has been 100% climate-neutral for years, and continues to fall even as data usage on our networks rises.

Last year, we linked financial instruments to our climate ambitions with the issuance of a sustainability-linked bond and a sustainability-linked revolving credit facility. We have formulated robust circularity ambitions, and set a target to reduce emissions across our entire value chain to net-zero by 2040 and compensate for the remainder. We will do our utmost to achieve this goal.

Looking ahead

If 2021 has shown us anything, it is how resilient we are. In 2022, we will relentlessly pursue our path to sustainable growth. We will improve our services and networks, and further streamline our organization. This way, we will continue to play a leading role in the Netherlands' digital transition – a transition that offers new opportunities for our country's prosperity and economy.

This will only be possible through collaboration with our stakeholders and partners – something we do with great conviction. After all, the major challenges of our time, such as sustainability and cybersecurity, and the way we will help the Netherlands advance in the digital transition, require cooperation, solidarity and long-term thinking. This is how we will really make the Netherlands the best connected country in the world.

Thank you to all our customers, shareholders, friends and stakeholders for their support. I am looking forward to 2022 – a year in which we will join forces to help the Netherlands advance even further.

Joost Farwerck,
CEO and Chairman of the Board of Management of KPN

Our purpose and the world around us

A central role in society

Our purpose

We believe connections bring people closer and move them forward. That is why we are going all out to connect everyone in the Netherlands to a sustainable future. Every day we build the network of the future, a network of people and technology solutions that moves us forward. We enable new secure ways of working and strive to offer first-class connections, flexibility and outstanding customer experience that is both safe and simple. This way people can relax, do business, make friends, collaborate and discover new worlds. We are striving to make the Netherlands the most connected country in the world. We want to lead the country's digitalization and become the preferred partner in digital life.

The connected society

Doing everything we can to connect everyone in the Netherlands to a sustainable future means KPN is focusing and investing in connected networks, connected customers and a connected organization. This is the core of our Accelerate to Grow strategy.

We are not the only company building telecommunications infrastructure. Competitors announced new fiber initiatives throughout 2021. According to the Digital Economy and Society Index (DESI), the Netherlands is one of the best performers in the area of connectivity in Europe. The same DESI research concluded that the Netherlands has one of the most advanced digital economies and societies in the EU, together with Denmark, Finland and Sweden. Moreover, together with Denmark, we have the highest 5G coverage of Europe, covering 80% of the Netherlands. We are a very connected society and accustomed to benefiting from innovations like 5G and faster internet speeds. This means there is even greater potential for internet use, and the Netherlands is ready for it. The Netherlands' digital infrastructure has the potential to become the fastest, most robust and innovative digital infrastructure and past and future investments are supporting us on that journey.

Globally, according to the World Economic Forum, industry analysts have suggested that 5G will increase the expected gross output, by 2035, supporting many new jobs worldwide. There are great opportunities ahead, thanks to the investments KPN and other network companies are making as we work towards a common goal – connecting everyone in a sustainable way.

A more developed digital ecosystem can contribute to sustainable economic growth. The impact on GDP per capita is driven by the productivity and efficiency gains afforded by digital technologies. This occurs through greater output from new products and enhanced productivity, as well as knock-on benefits such as a better quality of life for citizens, health, personal safety, a more resilient economy, and equitable society. These are just a few of the reasons why infrastructure investments by KPN are so important for Dutch society.

KPN as part of Dutch society

The core of our strategy is to accelerate and enable society's digitalization. Every day, we improve the network of the future, a network of people and technology that makes progress happen. In 2021, KPN signed an agreement with APG to participate in a joint venture, Glaspoort, to further accelerate the roll-out of fiber and lead the digitalization of the Netherlands. This transaction creates additional value for stakeholders. Together with Glaspoort, KPN can strengthen its Accelerate to Grow strategy and reach a higher roll-out speed. KPN continues to pursue its existing fiber roll-out plans. Glaspoort will make a significant contribution to the Dutch digital infrastructure by taking up the long tail of KPN's fiber roll-out plans and will roll out ~1.1m fiber connections in the next 4 years. Glaspoort is a network company, pursuing an open access wholesale strategy, based on non-discriminatory terms, fostering competition and innovation in the Netherlands. By the end of 2021, KPN had rolled out fiber to 3.22m households in the Netherlands. Together with the new joint venture Glaspoort, we expect to connect 80% of households with fiber in the Netherlands by 2026.

Thanks to our constant network modernization efforts, our 5G network has been recognized with an innovation award from the umlaut Connect Mobile Benchmark and two Ookla speedtest awards for best and fastest mobile network in the Netherlands. Together with partners, we are testing the benefits of 5G in field labs across different industries. For example, with collision avoidance tests in the automotive industry and innovations in the health industry.

There are so many opportunities for our services, and KPN is excited to be tapping into their potential together with other players in Dutch society. We want everyone to be connected at all times, so they can get the most from the world around them and live their best lives.

Our purpose and the world around us

Our market position

Consumer market

KPN aims to be the preferred digital partner for all customers in the Netherlands. We do this by providing digital access with our fast fiber network, reliable copper network, 5G services, in-home WiFi and our workforce. We are by far the party with the biggest roll-out of fiber in the Netherlands. In 2021, we accelerated our fiber roll-out and increased our fiber footprint to ~40% of Dutch households. Another applied technology to increase internet speed is through a hybrid fiber/coax approach. We believe in the superiority of fiber in terms of stability and reliability, and symmetrical up- and download speeds. Higher upload speeds will become increasingly important with increased data usage and new applications, such as gaming.

New technologies such as fiber and 5G open new doors to our customers, making the best quality the new standard. We want to connect customers in the best possible way, while providing them with a seamless experience. To do this, partnerships with third parties will be one of the key elements of our consumer market strategy. Through our platform we want to provide customers with everything they need in their home environment, such as connectivity, entertainment, online gaming and virtual reality.

We are proud that our mobile network won an Ookla and umlaut award. Our mobile network offers the best coverage and the highest speed in the Netherlands according these awards. Although we see some of our competitors focusing on a 'value for money' approach, we believe that the superiority of our network pays off on its own as evidenced by the increase in our customer postpaid mobile base of 64k. Our focus on fixed mobile convergence (FMC) is paying off too; we have the highest market share in FMC in the Netherlands.

Business market

Simplification and migration to standardized solutions continue to be key topics in the business-to-business (B2B) market. We want to offer our clients the most innovative and best portfolios through our customer-centric approach. Our business market strategy has a clearly differentiated segment approach. Our product and service propositions are specifically aligned to our small and medium enterprises (SME), large corporate enterprises (LCE) and tailored solutions customers.

For our SME customers, we offer standardized and future-proof solutions (KPN ÉÉN portfolio) and focus on cross-selling with the aim of becoming the preferred digital partner for both fixed and mobile. For example, working from home offers many possibilities in the B2B market, and KPN is ready to meet these needs.

Our LCE customers are served through our modular Smart Combinations proposition, where we offer connectivity, cloud, security and workspace services. Competition in the LCE mobile segment continues to be strong, with competitors challenging us on price. We remain focused on delivering quality in the mobile market.

Wholesale

Wholesale shows sustainable growth and our wholesale service revenues keep rising. Our increasing fiber penetration and mobile network coverage make KPN an attractive partner. We remain committed to our open access model in order to guarantee consumers in the Dutch market the highest quality services. We offer sufficient room for all our wholesale customers to grow and compete. In 2021, we renewed several long-term agreements with most of the larger broadband service providers in the Dutch market.

Changes in the regulatory landscape in 2021 did not affect our open wholesale policy. We see more and more fiber investment initiatives from different network players, which is positive for the competitive landscape.

SWOT

We continuously review our business model and adapt our resources and capabilities to counter risks and create new opportunities. The overview on the next page summarizes our main insights and position in the environment in which we operate.

Our purpose and the world around us

Overview of our strengths, weaknesses, opportunities and threats

Strengths that make us stand out

Network
- Largest fiber footprint in the Netherlands
- Network advantage maintained through compelling fiber strategy
- Mobile network quality confirmed as best in class
- Trusted provider of critical communication services to governmental bodies

Business activities
- Strong brand reputation
- Open network policy, granting wholesale access to third-party operators

Corporate social responsibility
- Externally recognized as ESG frontrunner
- An attractive employer with skilled and engaged employees

Financial
- Sustainable mass-market service revenue growth
- Progressive dividend covered by growing free cash flow
- Robust balance sheet and liquidity position

Opportunities for growth

Network
- Improving fiber activation rate, leading to broadband base growth
- Growing fiber footprint
- Developments in infrastructure, software, 5G, IoT and virtual networks

Business activities
- Capitalizing the trend of working from home
- Digitalizing customer interactions
- Increasing household value by cross- and up-selling opportunities
- Utilizing data and analytics capabilities to create more value in current and new business

Corporate social responsibility
- Working from home, enabled by digitalization, reduces greenhouse gas emissions
- Substituting existing products and services in the supply chain with more sustainable alternatives

Financial
- Creating value from new 5G product and service offerings
- Copper switch-off, resulting in energy and spend savings

Weaknesses to improve

Network
- Dependency on worldwide supply chains for hardware (chips)
- Legacy network infrastructure

Business activities
- Extensive customized portfolio and processes for large enterprises
- Relatively high cost to cover due to complex IT systems and processes

Corporate social responsibility
- Gender diversity, especially in middle management functions

Financial
- Lower cost-cutting run-rate
- LCE and Tailored Solutions service revenues still in decline

Threats we face

Network
- Confidentiality, integrity and availability of networks, systems, and data
- Impact on our technical infrastructure due to medium-term impact of climate change

General
- Threat of fiber regulation when penetration and market share increase
- Potential restrictive regulation for telecommunication companies
- Challenging labor market
- Reliance on suppliers subject to international geopolitical discussions

Competition
- Price pressure from fierce competition
- Disruptive technologies and new business models that we need to adapt to

Financial
- Increasing energy prices and shortage of critical components
- Uncertain timing and outcome of future spectrum auction

Accelerate to Grow strategy starting to pay off

Accelerate to Grow strategy

KPN has identified three key pillars underpinning its Accelerate to Grow strategy:
1. Leverage & expand superior networks
2. Grow & strengthen customer footprint
3. Simplify & streamline operating model

With this strategy, KPN will lead the Dutch digitalization wave to connect the Netherlands to a sustainable future. In addition, it will grow mass-market service revenues and EBITDA, and continue its progressive dividend policy, covered by free cash flow. For results see page 11.

Leverage & expand superior network

Over the past few years, KPN has built a strong fiber foundation, covering 40% of the Netherlands with fiber and adding 433k homes in 2021. In the coming years, KPN will leverage and expand this superior network as it sees attractive returns from fiber investments with increased network penetration and more loyal customers with an increased willingness to pay for quality. To offer more households and businesses access to this best-in-class network, KPN will increase its fiber roll-out pace to more than 9k homes a week. KPN's 5G strategy is focused on differentiated services for B2B customers in specific industries.

Grow & strengthen customer footprint

72% of KPN's revenues are generated in the 'mass-market' or Consumer, SME, and Wholesale segments. KPN met its target to grow mass-market service revenues by year-end 2021 through a strengthened and stable-to-growing customer footprint. In Consumer, service revenues grew by 0.1% in the second half of 2021. The growth in KPN's fiber base is contributing to the end of the downward trend of our broadband base, accompanied by a strong recovery of Consumer net promoter score (NPS) of 16.

In Business, KPN has a clear segmented customer focus for SMEs, LCEs and Tailored Solutions. In SME, KPN met its target to stabilize service revenues by year-end 2021 by finalizing migrations and cross-selling opportunities from the KPN ÉÉN platform and continued growth from wholesale service revenues.

Simplify & streamline operating model

KPN will further simplify and streamline its operating model to prepare for the next wave of digitalization, which will improve customer experience, enhance KPN's time-to-market and contribute to further cost efficiencies. Begin 2021, KPN started a new cost-savings program initially running until 2023 with a total target of EUR 250m. In 2021, net indirect cost savings were somewhat lower than initially planned, mainly due to higher employee related provisions and less tailwind from COVID-related savings than in 2020. KPN remains fully focused to reduce indirect costs and still aims to deliver the earlier communicated cost savings target, but foresees that this will take additional time beyond 2023. KPN expects ~EUR 50m net indirect cost savings in 2022.

Value creation model

To properly understand the ways in which we impact society, we have identified the value we create for our stakeholders and society as a whole, using the six capitals model of the International Integrated Reporting Council (IIRC). We have visualized what impact our organization has on Dutch society and highlighted the assets that are most valuable to our business model and provide the necessary input for performing our core activities. The value we create for our stakeholders is the direct result of our business model. Our business outcomes ensure we can create long-term value for society, which in turn helps us contribute to the realization of the UN's Sustainable Development Goals.

Our Integrated Annual Report is based on the structure of this value creation model (see page 14), providing insights into our results, the value we created in 2021 for our stakeholders and the long-term value we create for society.

To examine the topics that are most important from both our business perspective and our stakeholders' perspective, we perform an annual materiality assessment (see Appendix 3). The connectivity table in Appendix 2 shows how these most material topics are linked to our value creation model and how they are reported on in this Integrated Annual Report.

Strategy, key performances and value creation model

Strategy

Leverage & expand superior network

Connecting the Netherlands through fiber

Fiber footprint KPN

2019	2020	2021
31%	35%	**40%**

Scaling up roll-out to 9k on average per week

2019	2020	2021
2k	6k	**9k**

5G coverage Dutch population

Population coverage

2021
81%

Best mobile network

“ KPN received the award for best mobile network in the Netherlands for the third time in a row from Ookla ”

Growth & strengthen customer footprint

Consumer

Stable customer base: households

2019	2020	2021
N/a	3.55m	**3.53m**

Customer satisfaction

2019	2020	2021
19	11	**16**

Business

Stable to growing customer base: Mobile, BB, VoIP, Fixed voice

2019	2020	2021
2.9m	3.1m	**3.2m**

Customer satisfaction

2019	2020	2021
-4	-2	**4**

Simplify & streamline operating model

New ways of digital working

Employee engagement

2019	2020	2021
77%	86%	**82%**

Continued disciplined cost control program

Indirect cost reduction

2019	2020	2021
€ 141m	€ 137m	**€ 47m**

Strategy, key performances and value creation model

Financial key performances

Adjusted EBITDA AL[1,2]

€ 2,317m	€ 2,320m	**€ 2,347m**
2019	2020	**2021**

Free cash flow growth[1]

€ 726m	€ 765m	**€ 784m**
2019	2020	**2021**

Capital expenditure[1]

€ 1,115m	€ 1,147m	**€ 1,216m**
2019	2020	**2021**

Commited to progressive dividend policy

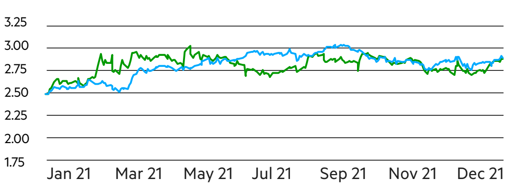
€ 12.5ct	€ 13.0ct	**€ 13.6ct[3]**
2019	2020	**2021**

Return on capital employed[4]

10.1%	**11.0%**
2020	**2021**

Total shareholder return (TSR)

KPN 15.1% 2021 Telco index 16.2% 2021



KPN
STOXX Europe 600 Telecommunications Index[5]

1 Based on continuing operations
2 KPN defines EBITDA as operating result before depreciation (incl. impairments) of PP&E and amortization (incl. impairments) of intangible assets. Adjusted EBITDA after leases are derived from EBITDA and are adjusted for the impact of restructuring costs and incidentals ('adjusted') and for lease costs, incl. depreciation of right-of-use assets and interest on lease liabilities ('after leases' or 'AL'). Reconciliations can be found in Appendix 1
3 To be proposed at the AGM on 13 April 2022
4 Net operating profit less adjustments for taxes divided by capital employed
5 Rebased to KPN's closing price of the last trading day of 2020

Strategy, key performances and value creation model

Non financial key performances

Network infrastructure

 # FttH households

2019	2020	**2021**
2.47m	2.78m	**3.22m**

Sites 5G ready

2019	2020	**2021**
641	2,936[1]	**4,000**

1 Restated number including replacement sites and densification sites

Network speed

Average maximum download speed broadband fixed per year-end

2019	2020	**2021**
236 Mbps	377 Mbps	**446 Mbps**

Average 5G download speed mobile network per year-end

2021
210 Mbps

Energy consumption in petajoules

Energy consumed by KPN

2019	2020	**2021**
2.728	2.428	**2.132**

Estimated energy consumption saving by KPN customers

2019	2020	**2021**
3.437	9.802[2]	**6.588**

2 Restated due to updated calculation method, for details see Appendix 3

B2C products and services

Fixed-mobile households as percentage of fixed households

2019	2020	**2021**
52%	53%	**54%**

Postpaid customers

2019	2020	**2021**
3.588m	3.584m	**3.647m**

RepTrak Reputation score

“ KPN maintains a significant lead over all benchmarks on reputation ”

2019	2020	**2021**
74.4	76.0	**74.4**

Strategy, key performances and value creation model

Value creation model

Our valuable assets

- **Loyal customers**
- **Strong partnerships and supplier base**
- **Future-proof infrastructure and mobile spectrum**
- **Skilled and motivated workforce**
- **Solid financial basis**
- **Climate-neutral**

Business model

‘We go all out to connect everyone in the Netherlands to a sustainable future’

Our ambition

To make the Netherlands the most connected country in the world and to become customers’ preferred partner in digital life

Strategic themes

- Leverage and expand superior networks
- Grow and strengthen customer footprint
- Simplify and streamline operating model

Safeguarding value

- Governance
- Compliance
- Risk and control

Our performance

- **Network infrastructure**
- **Flexible, simple and converged products and services**
- **Focused innovation and digitalization**
- **Safeguarded privacy and security**
- **Sustainable employability**
- **Environmental performance and responsible supply chain**

We create value for our customers, shareholders and employees, and we impact Dutch society as a whole

Impact in the Netherlands

9 INDUSTRY, INNOVATION AND INFRASTRUCTURE

Secure future-proof connectivity

11 SUSTAINABLE CITIES AND COMMUNITIES

Social and digital inclusion

12 RESPONSIBLE CONSUMPTION AND PRODUCTION

Environmental impact

Our value for stakeholders: Customer value

Creating value for all customers

We engage with our customers to understand their increasing dependence and growing expectations. Customers value the reliability and quality of products and services. Our effort to improve customer journeys and our customer centricity approach have been paying off, as illustrated by NPS growth for both Consumer and Business.

KPI	Result 2021	Result 2020
NPS Consumer	16	11
NPS Business	4	-2

Consumer

Customer service changes

Customer satisfaction remains one of our top priorities and our progress in 2021 has been encouraging. We are delighted to see that our efforts in this area are paying off. Consumer NPS, the indicator of customer satisfaction with our products and services, recovered to 16. This is a reflection of the improved experience of our iTV product, the customer journey improvements in several areas such as customers moving into new homes and complementary fiber upgrades of copper, and our new KPN WiFi manager service.

The number of customer calls to our service desk declined in 2021 to below 2020 levels. Changing our customer service desk protocols helped reduce the need for support from engineers to resolve customer issues. As a result, only the most complex problems required a home visit by an engineer.

In 2021, we gave Kadootje van KPN gifts to customers to show our appreciation for their loyalty.

Staff at our KPN stores continued handling incoming customer calls to the service desk when stores experienced a drop in customer visits due to COVID-19. We started doing this during the lockdowns in 2020 and decided to continue it at a lower level in 2021. Some retail staff also voluntarily joined the door-to-door teams that visit homes to sell KPN products and services.

We continued our multichannel strategy, aimed at integrating the different channels we use to interact with customers, such as phone, internet, or face-to-face in KPN stores. Our goal is to create one platform for customer data that can be used for all these channels. This means customers will not have to repeat questions or service requests when contacting different sales or service staff, making the process of handling queries or complaints more efficient. The update of the MijnKPN app is one example of this strategy.

Products and services

We continued improving our brand portfolio by adding content products and services, such as Spotify and Netflix, to the KPN Hussel bundle at a discounted rate. These products and services were previously offered as separate additional products. KPN Hussel is our modular proposition that enables consumers and small businesses to combine products and services of their choice in a single subscription. We also added our first gaming product, an Xbox offering, to the KPN Hussel bundle, with demand for this gaming product rising fast. The number of additional products and services purchased increased, confirming once again that our flexible standardized offering of converged products meets consumers' needs.

Mobile service revenues grew in 2021, which was driven by an increase in mobile postpaid customersusers of +64k. Corrected for migrations to, and new customers of, business propositions (in Q4 2021: 10k), the number of KPN's broadband customers rose for the first time in three years in Q4. Our converged household base increased to 1,496k (2020 figure has been restated due to new definition of fixed-mobile converged households: 1,475k), representing 54% of broadband customers (2020: 53%). The converged postpaid customer base grew to 2,508k (2020 figure has been restated due to new definition of fixed-mobile

Our value for stakeholders: Customer value

converged postpaid customer base: 2,432k), representing 69% of postpaid customers (2020: 68%).

The shift from copper connections to the fast fiber network supports our ambition to eventually phase out the digital subscriber line (DSL) network, which will lead to quality improvements, lower energy usage and spend savings.

Demand for Super WiFi, our proposition to strengthen in-home WiFi networks, was higher than in 2020. Even more than before the COVID-19 pandemic, customers seemed to realize how important it is for them to have stable, top-quality wireless internet access at home. We swapped old equipment for newer versions for tens of thousands of customers. Several thousands of customers are still to be migrated, and we plan to continue replacing old modems and set-top boxes in 2022.

Flagship KPN Brand

We continued to focus on the strong Flagship KPN brand. After acquiring the broadband base of energy company Oxxio, we integrated their customer base under the KPN brand within months. We refurbished 11 KPN stores in 2021, implementing our new store formula, based on the latest insights into how people shop physically in combination with online.

Our programs to collect feedback from customers through surveys and face-to-face interviews resumed in the second half of 2021 as COVID-19-related government restrictions eased in the summer. We also resumed mystery shopping, to get an outsiders' perspective on our sales approach.

Looking ahead

We aim to improve our ARPA, an indicator for the average revenue per address. We plan to set up a dedicated team that will coordinate efforts to increase this indicator.

In the coming years, we expect to sign more partnerships with content and entertainment providers, such as gaming and video streaming companies. In addition, we expect to partner with providers of cloud-based products, such as cloud-based cybersecurity or entertainment products, to add to our product portfolio.

We want to continue diversifying our entertainment services subscriptions. We see opportunities to offer households secure online 'smart home' services, as we expect demand to shift from free-of-charge services to safer and more secure cloud services that cost a modest fee. We plan to enhance our service, offering to visit customers' homes to install new products.

CHALLENGE

Although we slowed the downward trend in the number of broadband subscriptions, our broadband client base is not growing yet. We aim to attract more customers by rolling out fiber and by adding new products and services to the mix where our customers can choose from. We signed contracts with additional content providers in 2021, such as gaming and video streaming services. We would like to speed up in making these products available to customers. As a result, we can realize opportunities to expand our customer base. We aim to adjust our internal process and accelerate additions to our product portfolio.

Our value for stakeholders: Customer value

Business

The NPS of the KPN Business segment increased to +4 in Q4 2021. This improved result of customer satisfaction is partially due to a high appreciation for best network.

The accelerated digitalization of businesses and households in response to measures taken during the COVID-19 pandemic offers new opportunities for value creation to benefit our customers and society at large. As more customers migrated to our newest network technology and propositions, they got access to more and better digital services.

We believe this enhanced digitalization can be a driver towards a more sustainable economy and society, and that KPN, as an enabler of digitalization, has a responsibility and an opportunity to contribute to this. Being a climate-neutral company, KPN is able to help other organizations make their business processes more sustainable, partly through our offering of digital products and services.

With the new digital products and services we launched in 2021, we want to help our business customers provide new and better services to their clients and contribute to a lower ecological footprint. Likewise, wider access to fast broadband for consumers enables them to benefit from a wider range of remote online services. In healthcare in particular, we see opportunities to enhance services and efficiency through digital services and are committed to helping build a healthcare infrastructure that is both affordable and accessible to all.

Focus

Our Business segment continued its programs for migrating customers to our new propositions and network technology. We also made further strides towards simplifying our product portfolio. At the same time, we decided to focus even more on meeting customer needs during the COVID-19 pandemic, namely the need for fast and secure connections and operational stability.

In 2021, we adjusted our strategy to respond to the changes COVID-19 had brought about for us and our customers in 2020. Looking back, 2020 was a year of transition and transformation for many of our business customers. Some trends, such as digitalization, accelerated because of COVID-19 measures. As remote working and online shopping grew to unprecedented levels, companies and other organizations became even more aware of how important stable, secure and fast network connections are to them.

In the course of 2021, it became clear that, like KPN, companies wanted to maintain some of the changes that COVID-19 measures more or less forced on them, e.g. partial remote working, because they had delivered certain upsides. They also wanted to embrace other technological and market trends. As a provider of reliable, secure and fast connections, and digital cloud services, this put us in a good position to respond to these customer needs and to do so even more proactively than before, and so create value for our customers and our business.

CHALLENGE

In our quest to serve our business customers to the best of our ability, we strive to resolve any issues they may encounter while using our services. We sometimes resort to implementing a quick ad-hoc solution to a problem and in other cases take such an issue as a sign that we must improve a system or protocol, so we can resolve it once and for all. We do not always find it easy to choose between the two, especially in cases where we realize we don't have the resources to implement both. However, we increasingly opt for the latter, to ensure similar problems do not recur.

Achievements

We continued migrating customers from legacy products to future-proof propositions such as KPN Small Business, KPN ÉÉN, KPN Smart Combinations and KPN Smart Integration. By the end of 2021, 98% of SME customers and 83% of LCE customers eligible for migration had migrated from traditional fixed-voice or legacy broadband services. These migrations improve customer loyalty and provide better opportunities to offer additional products and services to meet customer needs.

Revenues from roaming were still lower compared to pre-COVID-19 for our Business segment due to less international travel in a second year of COVID-19. Our Digital Dutch event, where we reach out to business customers to inform them about technological and market trends, attracted a higher number of attendees than previous year. Like in 2020, we organized a digital event due to the pandemic.

We changed the way we process customer feedback, making it available faster to our account managers through a dedicated application. This enables them to then act immediately to resolve any issues. We continued efforts to digitalize our customer journey. We will continue to reduce the large number of self-service portals and optimize the remaining portals so that customers can use them more easily and more frequently.

In the yearly research of MT/Sprout on the most valued service providers in the Netherlands, we won in the categories ICT network and provider of mobile data and telecom.

Our value for stakeholders: Customer value

Innovations

Supporting our Accelerate to Grow strategy and in line with our increased customer focus in the Business segment, we introduced several new services and enriched existing services. In 2021, we further improved KPN Smart Combinations, which is a modular and converged proposition of LCEs that combines connectivity, network, IT, and security services. Examples of new services and functionalities added are Fixed Voice for Genesys cloud and Anywhere365 within Cloud Communications, Elastic Interconnect within Secure Networking, and Azure Virtual Desktop within Cloud & Workspace. Moreover, new e-shops were introduced for KPN ÉÉN.

KPN Things, our proposition enabling customers to build their own tailor-made Internet of Things solutions, has gained strong traction since its launch in 2021.

We grew the customer base of KPN Data Services Hub, our platform-as-a-service for real-time information exchange, enabling our customers to analyze and share data with partners in a secure and controlled environment. We continued to develop and improve this hub, enabling it to handle more complex data exchange activities.

We pitched KPN Health Exchange to potential customers, our new software-as-a-service platform facilitating the smooth and secure exchange of data between hospitals and other health institutions, and between these organizations and patients. We believe the KPN Health Exchange will not only help healthcare organizations develop new services and become more cost-efficient but, by doing so, also contribute to keeping healthcare accessible and affordable. Our cloud solution for the health sector (Zorgcloud) provides secure online platforms for health organizations to store and exchange information.

We see more opportunities for enhancing access to healthcare through digitalization in the near future. Home diagnostics, self-monitoring, early detection, and even the remote treatment of patients at home could potentially make life easier for patients and healthcare professionals. We plan to explore developing new products and services in this area.

As part of our commitment to the health sector, we joined the Green Deal for Sustainable Healthcare, an initiative to help hospitals and other health organizations to reduce their environmental footprint by providing smarter and more energy-efficient services, facilitating working from the cloud, and adopting circular business models where possible.

Security

Demand for security services keeps growing due to favorable market conditions, leading to a growth in KPN managed security services. Growth was negated due to a decline in resell activities and authentication services. Main segments addressed by KPN Security are medium to large companies and local and central governments. We added multiple services to this modular offering.

For small businesses, KPN Security offers mainly off-the-shelf and embedded services like E-herkenning and Extra Veilig Internet. Medium-sized companies that want to outsource their security can acquire managed security services from KPN Security, ranging from protection and detection to response and prevention. Security solutions for large companies and the government are offered as part of an integrated package of services within our Smart Integration offering.

Partnerships

We continued our strategic partnership with Microsoft, aimed at helping companies with their digital transformation. This collaboration combines Microsoft's Azure cloud platform with KPN's services and network in order to offer companies connectivity and scalability. KPN also offers support with adopting Microsoft solutions, so that companies can get the most out of the solutions.

Our value for stakeholders: Customer value

Wholesale

Our Wholesale segment gives third-party telecom providers access to our widespread fixed and mobile networks. We apply an open wholesale policy, offering access to our fixed networks on reasonable and non-discriminatory terms and based on our voluntary offer for Optical Distribution Frame (ODF) access, Wholesale Broadband Access (WBA) and Virtual Unbundled Local Access (VULA). By maximizing the value of KPN's assets and ecosystem and using the capacity of our networks as fully as possible, we create value for KPN and for our customers.

In 2021, the Netherlands Authority for Consumers and Markets (ACM) began investigating whether our open wholesale policy offers services to third parties in a way that allows free and open competition. We are confident that our open-access policy meets regulatory requirements and allows for fair competition; the fact that most of our wholesale customers extended their contracts serves as a proofpoint.

Third-party use of both our broadband and mobile networks grew in 2021. Our fixed and mobile access business continued to grow to 1.1 million broadband connections and 659 thousand postpaid connections, respectively. Our fiber portfolio continued to grow in the fixed access domain, offsetting the continuing decline in legacy services on copper. One driver of this growth was the further roll-out of our fiber network, which has enabled wholesale customers to provide better and faster connections to their end-consumers.

In this second year of COVID-19, we had to handle the steep increase in COVID-19-related communications. The launch of the Dutch government's vaccination program in particular, along with ongoing COVID-19 testing programs, led to peaks in voice calls and text messages from consumers arranging and confirming vaccination and test appointments. With our wholesale customers handling many of these calls and messages, we witnessed a more intense use of our network capacity.

The higher-value propositions in our wholesale portfolio continued to grow in 2021, as we sold more services than just network access, including mobile postpaid services and additional broadband services. Several of our major wholesale customers, such as Youfone Budget and Online, extended or renewed their contracts, and we agreed on plans for the coordinated migration of their broadband services from copper lines to the fiber network.

New products

We launched Elastic Interconnect, an innovative product that provides so-called multi-cloud solutions to B2B customers, in collaboration with NL-ix. Elastic Interconnect offers companies and their employees stable, low latency and secure connections to all the workload and applications in the cloud they use, such as Microsoft Teams. We provide continuous insight in network performance and enable the management of traffic streams with easy-to-use tools. Demand for this service increased quickly in 2021 and is expected to continue growing at a fast pace in 2022 and beyond.

Demand for our carrier billing services, renamed to KPN Pay in 2021, also saw strong growth. We plan to launch more prepaid travel SIM card products for overseas travelers visiting the EU.

We introduced the KPN PiM app for easy and safe identification. Due to the pandemic, consumers increasingly need to register and identify themselves at various locations (restaurants, sports clubs), to shop in online stores or enter venues. The PiM app enables people to provide proof of identity in a simple way using their smartphone, while personal data is protected.

Customer satisfaction

The feedback we receive from some wholesale customers is that KPN's services work well and reliably once set up. We see areas of improvement in the speed with which we deliver new connections or new services and with which we implement innovations. By improving our delivery chain and prioritizing our roadmap we are always working on enhancing the wholesale user experience.

Our value for stakeholders: Customer value

CHALLENGE

Migrating existing wholesale customers from legacy technology to the newest technologies can be a challenge. In the fixed domain, we managed to phase out the copper network in six pilot areas in close cooperation with wholesale customers and with no major incidents or disruptions. We will apply the lessons learned from this pilot in the wider copper switch-off and in the upcoming network rationalization projects. Introducing new technologies such as Voice over Lont-Term Evolution (VoLTE) in the mobile domain can also be challenging because it requires our wholesale customers' end-users to adjust the settings on their smartphones and/or smartphone manufacturers to implement specific MVNO settings, which, although complex, gives the wholesale end-user higher voice quality and better coverage.

CHALLENGE

Our customers expect us to continuously increase the speed of our connections and provide new, innovative products. Expectations are particularly high around cloud applications and cloud services, where customers push for new solutions almost all the time. Keeping up with these expectations can sometimes be a challenge and requires our organization to make intensive efforts and fast decisions. We are proud that we have been able to introduce new or upgraded products frequently, to meet this constant demand for higher speeds, greater capacity and other innovations.

Recognition

Reputation is important to KPN and we value how our stakeholders and Dutch society at large perceive us. Providing a service that is vital to society, we know that our image is not merely based on the quality of our products and services. People also base their view of KPN on the perception they have about the way we do business, how we act as a corporate citizen and how we behave as a large employer in the Netherlands.

KPN showed strong results in RepTrak for 2021 compared to the industry. Ending with an overall score of 74.4 in the last quarter of 2021 (2020: 76), we saw a fall of 1.6 points, with an uplift in one out of seven drivers. With a consistent lead in the benchmark, we maintained our track record as a company with a strong reputation.

Over the past few years, the way in which businesses act on ESG-related (Environmental, Social, and Governance) matters has become more important in terms of public perception. These matters continue to feature highly on the agenda of our Board of Management and we regularly monitor our ambitions to have a positive influence on society. As a result of our ESG efforts, KPN was awarded the number one spot in the telecom sector on the Dutch Sustainable Brand Index, a perception-based ranking that reflects the public's view of how sustainable they believe a company is.

The power of KPN Wholesale during COVID-19

"Business SMS messages increased by nearly 25%"

Michel van Wissen, EVP KPN Wholesale

"We have seen a clear growth in voice and data traffic during the COVID-19 pandemic for activities like making an appointment, the Dutch public health service (GGD) confirming an appointment or a vaccination reminder, and installing the CoronaCheck app to access public buildings and events. The work we do at KPN Wholesale helps support the large-scale activities of the Dutch government in this area. For instance, we provide the required capacity to process the voice traffic to the service and appointment telephone numbers of the Dutch public health authority, RIVM, and the GGD. We do this via our voice interconnect service, which provides a platform for all connections between all other operators and a service number. We also do a lot more to keep essential processes going during COVID-19.

Thousands of alerts are sent every day to warn people that that may have been in contact with a person who has tested positive. As one of the partners of the Netherlands Ministry of Health, Welfare & Sport, KPN Wholesale shares its Content Delivery Network (CDN) service. CDN provides the scalable capacity to ensure that peaks in demand and traffic volume can be processed efficiently. This ensures that the underlying infrastructure does not get overloaded and that COVID-19 alerts on possible exposure continue to get through to users, and so prevent others from being unknowingly infected.

Although SMS messages (SMS) may sound like an old-fashioned service, it remains the most effective method for reaching people. After all, SMS is supported on every device and delivered in almost 100% of cases. What's more, nearly everyone in the Netherlands has a mobile phone. With our Business SMS service, we enable our Large Account customers, also known as SMS gateways or brokers, to deliver mass quantities of SMS messages to mobile devices in a short space of time. For instance, when a person makes a COVID-19 test or vaccination appointment in the Netherlands they need to use their digital identification (DigiD), for which an additional check is carried out via SMS. In addition, with so many people working from home during the pandemic, SMS is being used to log on to a company network as part of multi-factor authentication.

The past year has also spurred online shopping: the volume of parcel and meal deliveries has grown, which in turn has led to an increase in data traffic. SMS is also being used a lot for logging in to the sites of (online) shops, and for sending alerts when a parcel is due to be delivered or a courier is nearby. The volume of business SMS messages increased by nearly 25% in 2021 compared to 2020. Together with our Large Account customers, e.g. brokers like CM.com, Sinch and Messagebird, we ensure the precise delivery of these SMS messages, so that the business community can continue to operate as before despite all the restrictions. In my view, the power of KPN Wholesale is evident and more tangible than ever."

Our value for stakeholders: Shareholder value

Providing attractive shareholder returns

We have made solid progress on our Accelerate to Grow strategy in 2021. We have delivered on our FY 2021 outlook, with sustainable mass-market service revenues and adjusted EBITDA AL growth, strong and improving Free cash flow and steadily increasing ROCE. Our improving commercial performance together with our strong financial position allows us to continue our progressive dividend policy and structurally return additional capital to shareholders.

KPI	Result 2021	Result 2020
Adjusted EBITDA after leases[1]	€ 2,347m	€ 2,320m
Capex	€ 1,216m	€ 1,147m
Free cash flow[1]	€ 784m	€ 765m
Dividend per share	€ 13.6ct	€ 13.0ct
Share buyback	€ 200m	–

1 For definition see Appendix 11

Financial review

In 2021, we continued to make good progress against our strategic and financial ambitions. We added a record number of households to our fiber footprint, together with Glaspoort even over half a million households in 2021. At this moment we reach more than 40% of the households in the Netherlands, and we are well on track, together with Glaspoort, to deliver 80% fiber coverage of Dutch households by 2026.

In the Consumer segment, fiber and converged portfolio are delivering growth, as well as the mobile service revenues, driven by base growth and growing average revenue per user (ARPU). In the Business segment, we delivered ahead of expectations service revenue growth in SME in second half of 2021, driven by good base developments in broadband and mobile. The Wholesale segment continued to show solid results supported by our open wholesale access policy.

Revenues and other income

Adjusted revenues and other income declined 0.3% y-on-y in 2021. The mass-market service revenue growth was offset by lower revenues from LCE and Tailored Solutions in the Business segment.

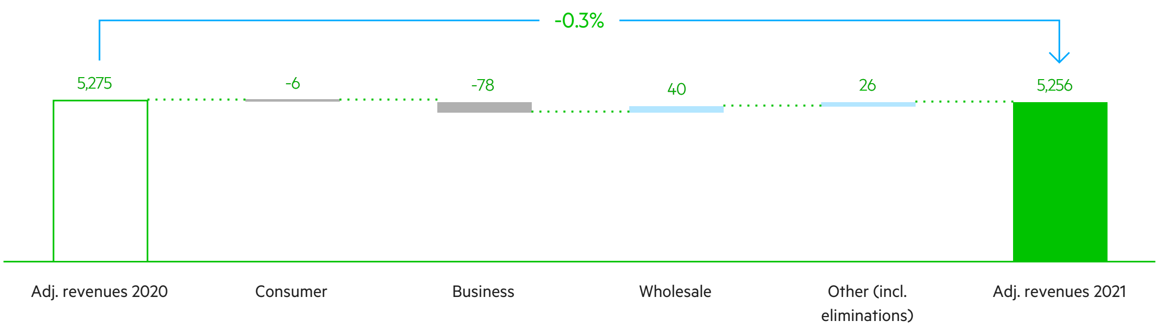
Adjusted revenues in Consumer were relatively stable in 2021 (-0.2% y-on-y). Mobile service revenues grew by 1.2% y-on-y, driven by solid growth in our postpaid customer base and a slight ARPU increase. Fixed service revenues declined by 1.5% y-on-y, with the underlying trend improving through the year as fiber broadband service revenue growth started to offset copper service revenue decline.

Our value for stakeholders: Shareholder value

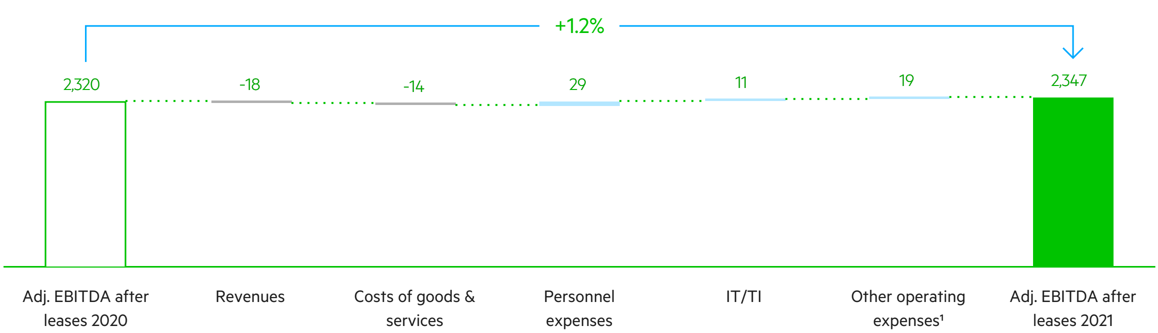
Adjusted revenues for the Business segment decreased 4.3% y-on-y in 2021. SME service revenues showed 3.7% growth in H2 2021, but decreased 0.5% y-on-y for FY 2021. Continued growth in Broadband & Network Services and IT Services was partly offset by lower revenues from Fixed Voice and Access and Connectivity. Underlying trends are favorable, with a growing customer base on both mobile and broadband and solid ARPU growth on broadband. The migration of SME clients to our target portfolio KPN EEN is almost completed, providing us with ample opportunities for cross- and deepsell. LCE service revenues declined 7.9% y-on-y, mainly due to market competition and price pressure and sale of KPN Consulting in Q1 2020. Access & Connectivity revenues decreased with 4.9% y-on-y, mainly due to rationalization of LCE access and VPN portfolio. IT Services revenues decreased with 8.1% y-on-y mainly due to portfolio rationalization and optimization. Tailored Solutions service revenues decreased 3.5% y-on-y, mainly driven by lower revenues from service management.

Adjusted revenues in Wholesale increased 6.3% y-on-y, largely driven by growing Broadband and Mobile service revenues.

Adjusted revenues
In € million



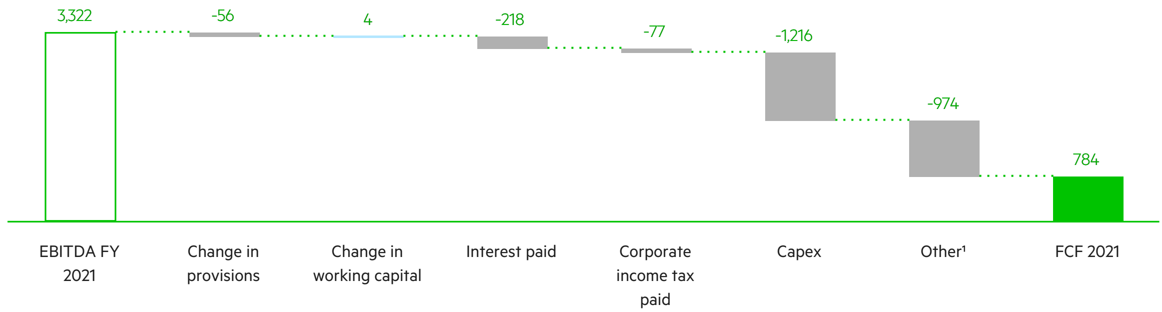
Adjusted EBITDA AL
In € million



1 Incl. lease-related expenses

Our value for stakeholders: Shareholder value

Free cash flow
In € million



1 Incl. EUR 830m book gain of Glaspoort

Adjusted EBITDA AL
Adjusted EBTIDA AL increased 1.2% y-on-y, supported by growing mass-market service revenues and cost savings. Cost of goods and services increased 1.1% y-on-y due to higher traffic and higher subscriber acquisition and retention costs. Personnel expenses declined 3.3% y-on-y due to reduction in FTE's. IT/TI expenses declined 3.5% y-on-y, due to additional costs in 2020 to support employees with working from home facilities. Adjusted other operating expenses declined 3.3%, due to lower call volumes and lower housing & facilities costs.

In 2021, restructuring costs were recognized for the amount of EUR 38m (2020: EUR 36m). The net positive impact of incidentals was EUR 870m, of which the largest one is EUR 830m book gain related to the sale of KPN's subsidiary Glaspoort B.V. Other incidentals include EUR 21m release of revenue related provisions in Wholesale and EUR 15m book gain on the extended Glaspoort scope. In 2020, the net positive impact of incidentals was EUR 28m, of which EUR 11m related to the book gain on sale of KPN Consulting and EUR 17m release of a revenue related provisions. See Appendix 1 for the reconciliation of reported EBITDA AL and adjusted EBITDA AL. The adjusted EBITDA AL margin increased to 44.7%.

For information on financial and operational performance per segment, see Note 3 to the Consolidated Financial Statements.

Operating profit
Operating profit (EBIT) of EUR 1,862m increased EUR 950m y-on-y, mainly impacted by an EUR 830m book gain related to the 'Glaspoort' transaction and other incidentals (incl. EUR 21m release of revenue related provisions in Wholesale and EUR 15m book gain on the extended Glaspoort scope). Excluding all incidentals, operating profit would have increased by EUR 108m y-on-y driven by lower depreciation and amortization.

Financial income and expenses
Net finance expenses decreased in 2021 by EUR 35m to EUR 234m, mainly driven by lower interest expenses on senior and hybrid debt due to redemptions and refinancings.

Income taxes
In 2021, KPN recognized a tax expense of EUR 344m (2020 EUR 88m). KPN's effective tax rate for 2021 is 21.1% (2020: 13.7%). The difference in effective tax rate is predominantly due to tax law changes, settlements with tax authorities, impairments, revaluations and changes in estimates.

KPN continues to qualify as an innovative company and therefore benefits from the innovation box tax regime, a facility under Dutch corporate income tax law whereby profits attributable to innovation are taxed at an effective rate of 9%.

For 2023 the effective tax rate is expected to be ~23%. See Note 8 to the Consolidated Financial Statements and Tax and regulations for further information on KPN's tax position.

Net profit
Net profit of EUR 1,283m increased EUR 722m y-on-y, mainly impacted by net effects of EUR 651m related to the 'Glaspoort' transaction. Excluding this incidental, net profit would have increased by EUR 71m (net of tax) mainly driven by higher operating profit and lower finance costs partially offset by higher income taxes.

Free cash flow
Free cash flow of EUR 784m increased EUR 19m, or 2.5% y-on-y. Higher Capex and cash taxes paid were more than offset by more favorable working capital developments, lower cash interest paid and cash restructuring. Free cash flow margin improved ~40 basis points to 14.9%.

Our value for stakeholders: Shareholder value

Solid financial position

KPN had a strong balance sheet and liquidity position at the end of 2021. As at 31 December 2021, net debt amounted to EUR 5.3bn, EUR 25m lower compared tot the end of 2020. The decrease in net debt was mainly driven by free cash flow generation and the proceeds from the 'Glaspoort' transaction offset by the share buyback, dividend payments and tax payments.

KPN issued a EUR 700m sustainability-linked bond in November 2021 in accordance with its Sustainability-Linked Finance Framework and links the coupon of the bond to its commitment to reduce Scope 3 CO_2e emissions by the end of 2030.

The nominal debt outstanding was EUR 6,868m including EUR 60m short-term commercial paper. KPN's committed liquidity consisted of EUR 1,093m cash & short-term investments and an EUR 1.0bn undrawn revolving credit facility which covers debt maturities through 2024.

KPN remains committed to an investment grade credit profile and aims for a leverage ratio of <2.5x in the medium term. As at 31 December 2021, the leverage ratio was 2.3x (2020: 2.3x). The leverage ratio takes the equity credit on hybrid bonds into account leading to 0.2x lower leverage.

The weighted average cost of senior debt declined by 19 basis points y-on-y to 2.7% (2020: 2.9%), mainly driven by positive refinancing conditions.

Capital allocation and shareholder remuneration

KPN continuously invests in its network infrastructure, products, customers and employees, resulting in high-quality fixed and mobile networks. KPN focuses on improving the customer experience by further investing in the capacity, reliability and stability of its integrated network.

These initiatives require significant investments in capital expenditure, working capital, spectrum licenses and acquisition opportunities that may arise from time to time. KPN aims to provide a progressive dividend per share, paid semi-annually, that will grow over time supported by its growing free cash flow. KPN's successful execution of its strategy and multi-year cash generation perspective enables the company to complement its progressive regular dividend with a structural return of additional capital to its shareholders, subject to our actual and anticipated level of liquidity, leverage requirements and other relevant factors.

In 2021, KPN executed a share buyback of EUR 200m through which it repurchased approximately 73.7 million ordinary shares at an average price of EUR 2.71 per share. These shares have been cancelled in Q1 2022. KPN aims to grow its regular dividends with 3 to 5% annually. In respect of 2021, KPN intends to pay a regular dividend per share of EUR 13.6 ct. The final dividend of EUR 9.1ct per share is subject to shareholder approval at the Annual General Meeting of Shareholders on 13 April 2022. If approved, the total cash returns to shareholders in respect of 2021 will amount to EUR 764m.

Outlook 2022 and ambitions 2023

	Achievements FY 2021	Outlook FY 2022	Ambitions FY 2023
Adj. EBITDA AL	€ 2,347m	~€ 2,400m	>€ 2,450m
Capex	€ 1,216m	€ 1.2bn	€ 1.2bn
Free Cash Flow	€ 784m	>€ 825m	>€ 870m
Regular DPS	€ 13.6ct[1]	€ 14.3ct +5.1% y-on-y	Progressive dividend +3-5% annual growth
Share buyback	€ 200m	€ 300m	

1 To be proposed at the AGM on 13 April 2022

For 2022, adjusted EBITDA AL is expected at approximately EUR 2,400m, supported by sustainable mass-market revenue growth and continued cost control. Capex will stay stable at EUR 1.2bn. Free cash flow is expected to show solid growth of at least 5% y-on-y, to a level of more than EUR 825m. In line with KPN's progressive dividend policy, expected dividend per share will increase to EUR 14.3ct (+5.1% y-on-y). Together with a EUR 300m share buyback program, KPN will return more than EUR 850m to its shareholders in 2022.

For 2023, KPN reiterates its EBITDA and FCF ambitions as outlined in the Strategy Update. Capex will remain stable at EUR 1.2bn.

Our value for stakeholders: Impact on society

Connecting the Netherlands to a sustainable future

Innovative
Secure, future-proof infrastructure

9 INDUSTRY, INNOVATION AND INFRASTRUCTURE

Approach
Innovation gives meaning to technology. Our solutions aim to help the Netherlands progress and become safer and more resilient. We serve customers in the field of public security, defense, industry, transport, and the maritime sector.

Ambitions
Networks:
2025: >60% of households connected with FttH
Healthcare:
2025: 155,000 professionals with secure digital access to healthcare information

Key results
Networks:
2021: 3.22m households connected with FttH
Security:
2021: 12% of Dutch municipalities monitored by KPN for cybersecurity attacks
Healthcare:
2021: 88,374 professionals had secure digital access to healthcare information

Inclusive
Social and digital inclusion

11 SUSTAINABLE CITIES AND COMMUNITIES

Approach
Our technology contributes to a connected society. We provide internet access for everyone and promote social and digital inclusion. We also provide the means to make cities smarter and cleaner, facilitating services such as smart parking and traffic lights, autonomous driving, and crowd control.

Ambitions
Social and digital inclusion:
2025: 13,800 clients and patients using healthcare facilities to live with more autonomy
2022-2025: 100% of eligible chronically ill children provided with a KPN Klasgenoot
2025: 25% of women at KPN

Key results
Social and digital inclusion:
2021: 11,767 clients and patients used healthcare facilities to live with more autonomy
2021: 100% of eligible chronically ill children provided with a KPN Klasgenoot
2021: Teletolk carried out 33,702 mediations and 262,058 calling minutes
2021: More than 25,000 customers with problematic debts received support in line with the NVVK covenant (debt assistance, administration, etc.)
2021: More than 13,800 times customers referred by KPN to the Nederlandse Schuldhulproute (a Dutch organization working to ease debt worries)[1]
2021: 22% women at KPN

Sustainable
Environmental impact

12 RESPONSIBLE CONSUMPTION AND PRODUCTION

Approach
We deploy our infrastructure and networks to co-create solutions for a more sustainable use of the environment. We reduce negative environmental impact by the way we produce, use and recycle our equipment.

Ambitions
Energy:
2030: 30% CO_2e reduction in the value chain (scope 3) compared to 2014
2030: Energy consumption by KPN Group reduced by 55% compared to 2010
2050: Stay 100% climate-neutral (scope 1 + 2)
Circularity:
2022: Reuse and recycling: 84%
2025: Only non-fossil fuel inflow cars
2025: Circular operations: ~100%
Helping customers save energy:
2022: Customers save as much energy as ~200% of KPN Group's energy consumption

Key results
Energy:
2021: Energy consumption by KPN Group reduced by 45% compared to 2010
2021: CO_2e reduction of 22% in the value chain compared to 2014
2021: 100% climate-neutral (scope 1 + 2)
Circularity:
2021: 84% reuse and recycling
Helping customers to save energy:
2021: Customers saved as much energy as 309% of KPN's energy consumption and saved around 518 kilotons of CO_2e emissions, 2,000 tons of PM10 (particulate matter), and EUR 375m in energy costs by using KPN services and products.

1 This number is based on the last 4 months of 2021 due to Dutch personal data retention periods

Our value for stakeholders: Impact on society

ICT is key to solving societal challenges

We continue our strong support of the UN Sustainable Development Goals (SDGs) as a shared ambition for peace and prosperity for people and the planet. We have identified three SDGs we believe we can contribute to most, as an employer, business partner, and telecommunication-services provider.

Each of these SDGs presents an opportunity to provide solutions while reminding us to act in a responsible way. We have tied our strategy to each of the SDGs summarized on page 26. We work to embed ESG themes in our organization through a secure future-proof infrastructure and by focusing on social and digital inclusion, energy efficiency, and circularity. All three topics will be discussed throughout our Integrated Annual Report.

Sponsorship

KPN has for many years been a sponsor in the world of sport (Dutch Eredivisie, the Royal Dutch Football Association and Team KPN SportFonds), in the arts and culture sector (Rijksmuseum, Boijmans van Beuningen, the Royal Concertgebouw) and in society in general (KPN Mooiste Contact Fonds). All our sponsorship activities contribute to our strong brand image, reputation and business goals. The ongoing COVID-19 situation in the Netherlands made 2021, much like 2020, an extraordinary year. Nevertheless, we continued to explore what was possible within the COVID-19 restrictions, looking at ways we could support our partners through sponsorship and continue to connect the Netherlands.

Sports

Soccer

KPN has been the main sponsor of the Dutch Premier League and partner of the Royal Dutch Soccer Association (KNVB) since 2017. Last May, we started a major media campaign for the delayed 2020 UEFA European Soccer Championship (Euro 2020) called ‘KPN, the network of Orange’ (referring to the Dutch national team).

Customers also received additional giveaways in the run-up to and during Euro 2020. These included the opportunity to participate in digital soccer training camps, photographs via augmented reality with their favorite national team player and personalized phone covers in national team colors.

Together with the KNVB, we organized ‘Trainen als Oranje’ soccer camps for talented young players. They experienced what it was like to live and train like a player on the Dutch national soccer team at the KNVB campus.

This year, we welcomed more than 3,500 customers to the matches played by the national men’s and women’s soccer teams. At the start of the new Dutch Premier League (Eredivisie) season in August, we announced that we had extended our main sponsorship of the Eredivisie through to the 2024/2025 season. In July, we also announced we would be extending our contract with the KNVB by two seasons through to 2023.

TEAMKPN Sportfonds

Through the TEAMKPN Sportfonds, KPN supports sports teams representing the Netherlands at top sporting events such as the European Championship, the World Cup or the Olympics. Every year, the fund assists one or more Dutch national sports teams financially. In 2021, TEAMKPN Sportfonds helped the bobsleigh team of Ivo de Bruin, the e-sports team for Rocket League and the mixed kite foil team realize their ambitions.

Art and culture

Rijksmuseum

As a main sponsor, KPN’s mission is to make the Rijksmuseum collection accessible to everyone in the Netherlands and across the globe, both in the actual museum and online. To ensure that art remains accessible and appealing to younger and future generations, KPN supports the Rijksmuseum in making all the museum’s artworks available to view online for free in high resolution, for instance through the Rijksmuseum app. Last April and September, we organized a livestreamed tour through the museum for thousands of customers and employees. In October, we welcomed more than 6,000 customers to the Rijksmuseum during the KPN Klantmaand.

Royal Concertgebouw

Music connects people, which is why we support the Royal Concertgebouw in Amsterdam with our IT products and services.

Depot Boijmans van Beuningen

KPN is a proud sponsor of the Depot Boijmans Van Beuningen in Rotterdam, of which the construction started in 2017. Not only is this building storing the Museum Boijmans Van Beuningen’s artwork collection during the extensive renovation of the main museum building, but visitors can also view the artworks there. The best works from KPN’s own art collection are displayed in this unique building, which opened on 6 November 2021.

Our value for stakeholders: Impact on society

KPN Mooiste Contact Fonds

Connecting lonely people

Loneliness is a major issue in Dutch society. More than one million adults are lonely, with 56% of people aged over 75 stating they feel lonely. But loneliness is a fast-growing phenomenon among younger age groups, too. Since 2007, KPN Mooiste Contact Fonds has supported vulnerable groups by financing a number of large projects together with NGOs. The foundation is supported by KPN employees, our IT resources and financial assistance. We received 716 voluntary contributions to our fund in 2021.

In March, we announced a partnership with the Oranje Fonds which will see us combine our strengths to tackle loneliness by structurally supporting 18 social enterprises for a fixed period of time. This 'Ondernemen tegen eenzaamheid' program will boost the financial resources and organization of the participating businesses to structurally combat loneliness. Their aim is to help thousands of people by harnessing the power of technology to facilitate human contact.

Thanks to COVID-19 restrictions being eased in the summer, over 400 KPN volunteers spent a wonderful day with more than 400 elderly people at the musical The Sound of Music. For many of these elderly people living in various care homes across the country, this was the first day out in a very long time – and both they and KPN employees enjoyed the day enormously.

Through our most important and longest-running KlasseContact project, we connect housebound chronically ill children to their classroom via an IT device, the KPN Klasgenoot. We connected 690 chronically ill children to KlasseContact. In 2021, we developed Klasgenoot 3.0: a new and smaller version of Klasgenoot 2.0 that has been fitted with the latest technology.

KPN: a network for gamers in the Netherlands

"Fast fiber-optic is the best way to go"

Mark Versteegen, Head of Corporate Sponsorship KPN

"As the main sponsor of the Dutch Premier League and partner to KNVB (the Royal Dutch Football Association), KPN is very involved in the world of Dutch football. We support football across the board, from the Dutch national men's team and the successful women's team to local amateur clubs. Football remains an ever-popular sport and its digital counterpart has grown enormously over the past few years. That is why KPN is investing heavily in e-sports and gaming, the fastest-growing sports communities in the world.

Online gaming would be impossible without a stable and fast connection. It is only logical then for a company primarily focused on rolling out fiber optics and a 5G network to connect with e-sports and gaming. We have decided to link up with e-football as we are already big in the world of football, and can make good use of our football network – from amateur clubs to fans and the KNVB – to properly showcase gaming and connect with a younger target group. The message is simple: if you want to game online, then a fast fiber-optic connection is the best way to go. Unlike with a cable connection, data upload and download rates are exactly the same. As such, with our superfast 5G and fiber-optic network, KPN is *the* gaming network in the Netherlands.

KPN has given its name to the KPN eDivisie, where 18 premier league clubs 'game' for one season, playing a match every Tuesday. With EUR 50,000 in prize money and a championship trophy, there is a lot at stake. Via the KPN eDivisie, players can qualify for the preliminary stages of the FIFA World Cup, the world championship in EA SPORTS FIFA 22.

In 2021, KPN also became the launch partner of E_Oranje, the KNVB's official national E_team. This is the first official FIFA team in Europe to have its own E_Room at the KNVB Campus in Zeist. The KPN E_Room is used for training camps and international matches. It also has the fastest and most stable fiber-optic connections at its disposal here. These will enable the team to perform at its best in the digital FIFA landscape. The KPN E_Room is spectacular. In the room itself, there are individual streaming spots and wall-to-wall LED screens, while outside there are 360-degree ceiling cameras, hyper-modern gaming chairs and, of course, the latest streaming and directing tools to ensure that fans at home can also enjoy the matches to the fullest. This room makes KNVB the first football association in the world to have all its teams train at one location. Zeist is now home to the Dutch men's team, women's team and the E_Oranje team.

To raise the profile of our e-sports and gaming sponsorship even further, we launched a brand-new video format called 'KPN Road to GOAT'. This involved personalities from the world of e-sports looking for the 'FIFA GOAT 2021' (Greatest Of All Time) in the eDivisie and E_Oranje community. And in Stijn Walraven, they found a FIFA fan in every sense of the word. Besides being a good gamer, a true GOAT is a fantastic entertainer, and also knows how to kick a ball around for real. KPN and gaming are here to stay."

Our performance: Network infrastructure

Accelerating the roll-out of fiber and modernizing our mobile network

We accelerated the roll-out of our fiber network in 2021, connecting a record of 433k households during the year. We continued making our mobile network faster, more energy efficient and ready for 5G, to ensure we can continue to provide our best-in-class network to businesses and consumers in the future.

KPI	Result 2021	Result 2020
FttH households	3.22m	2.78m
Average maximum download speed broadband fixed at year-end	446 Mbps	377 Mbps
Sites 5G ready	4,000	2,936[1]
Average 5G download speed at year-end	210 Mbps	N/a

1 Restated number including replacement sites and densification sites

From gaming, Internet of Things (IoT) and video streaming, to artificial intelligence and machine learning, today's consumers and businesses live more digitally than before. As a telecom company, KPN enables this digitalized economy and lifestyle through our products and services, and our solid fixed and mobile networks.

By increasing the need for many people to work from home and boosting demand for streaming video and other services requiring broadband and mobile network capacity, the COVID-19 pandemic significantly accelerated digitalization.

In response to this rapid digitalization, and to meet our customers' needs and expectations, we sharpened our strategic focus, launching our Accelerate to Grow strategy in late 2020. Expanding our fiber broadband network and upgrading our mobile network to enable 5G are key elements of this strategy.

Three pillars

Our plans to expand and modernize our networks are built on three pillars. Firstly, we aim to develop the best converged network, meaning a network that can process different kinds of communication and services such as data, voice and video. Secondly, we are modernizing our networks to support the digital transformation of our operations. This means, for instance, enabling digital interaction with customers, so they can obtain information, order products and be helped to resolve any issues online. Thirdly, we are running rationalization programs to make our networks more intelligent and cost efficient. This includes phasing out older technologies and infrastructure, such as copper lines, ISDN and 3G.

Bringing fiber to the home faster

We accelerated our fiber roll-out and connected more Dutch households in 2021 than all other fiber network operators combined and ever done before by anyone in a single year. Including the fiber infrastructure acquired through the takeover

Our performance: Network infrastructure

of Delta Rijssen Fiber Investments (8k), we brought fiber to 433k more households in 2021. This roll-out will contribute to energy savings as fiber is more energy-efficient than copper. It is also expected to generate attractive returns for shareholders.

We continued to equip our fiber network with future-proof technology. We use G-PON, which enables 1 Gbps connections, and XGS-PON technology, which allows for 10 Gbps connections to homes. The 10 Gbps connections are not yet in use, but installing the required equipment prepares us for future demand. We installed 1 Gbps PON connections for 332k fiber to the home (FttH) households, compared to 188k in 2020 and 7k in 2019. About 73% of mobile sites that support our mobile network were upgraded to 10 Gbps by the end of 2021.

Modernizing our mobile network

We upgraded 1,064 sites by fitting the latest mobile equipment, reaching 4,000 sites modernized by year-end 2021. We expect 95% of the Netherlands to be covered by the modernized, 5G-ready network by the end of 2022. Our current population coverage for 5G is 81%. Our modernized network already improves our service to 4G users, giving them faster speeds and more capacity. At the same time, this renewed mobile network uses less energy. We intend to shut down the 3G network in large parts of the Netherlands in 2022.

Despite a delay to the 5G auction of capacity in the 3.5 Ghz bandwidth, which was postponed from 2021 until further notice, we continued to roll out our 5G network, building on the bandwidths we had already acquired in earlier 5G capacity auctions.

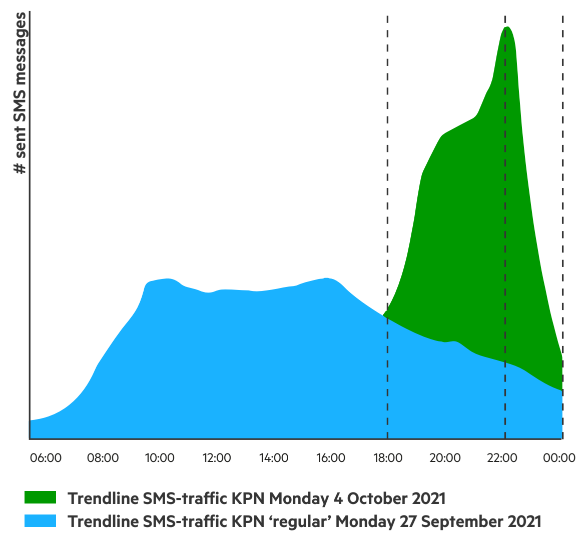
Keeping our network stable

With large numbers of people working from home, the stability of our network has become even more critical. As happens every year, we experienced instability in some parts of our network in 2021. However, we were able to resolve these issues quickly and our overall network stability in 2021 was higher than in 2020. Our service availability for fixed internet was 99.99% (2020: 99.78%) and for mobile 99.99% (2020: 99.89%).

Floods in the province of Limburg in the south of the Netherlands caused electricity disruptions and some minor damage to our networks in the region. We sent our engineers to the affected areas, to repair networks that had been damaged by flood water. Our network was up and running again just two days after the flood peaked.

Like any network operator, maintaining the stability of our network is a constant concern. To lower the risk of data loss and network interruptions, we have designed our network with back-ups and so-called redundancies. As soon as we notice instability in our network, the KPN Service Quality Center (SQC) and its teams will follow procedures to address the issue.

A worldwide outage of Facebook and WhatsApp on 4 October 2021 resulted in the Netherlands switching en masse to texting and telephony traffic also increased due to the disruption. The number of SMS messages sent over the KPN network doubled from the start of the outage and, at the peak, at 10 p.m., SMS traffic quadrupled compared to the same time a week earlier. Despite the increased popularity of services such as WhatsApp in recent years, for many, text messaging is the first alternative in the event of a disruption. The sudden increase in SMS traffic did not cause any problems for the KPN network.



To improve the way we operate and support our network, we have embarked on digitalizing our operations as much as possible.

Awards

Ookla, a company that provides speed tests for internet connections, recognized the KPN mobile network as the best mobile network for the second year in a row, based on more than 400,000 tests by users of the various Dutch mobile networks during 2021. This recognition means we have retained our position as the operator with the best mobile coverage and the highest up- and download speeds in the Netherlands. We have the fastest 5G network according to Ookla.

Our performance: Network infrastructure

Fostering safety

We are implementing the 5G network with the utmost care as the safety of our networks for people and the environment is paramount.

Although there is no scientific evidence that the electromagnetic radiation of mobile equipment or base stations pose any health risks, we take concerns about the introduction of 5G very seriously. We strive to be transparent about our 5G initiatives and technology. We monitor developments in scientific research into mobile technology and its effects and provide data for further scientific research. Like all mobile providers, we have signed an agreement with the government regarding maximum radiation levels. The basis for exposure limits has been determined by an international group of independent scientists, the International Commission on Non-Ionizing Radiation Protection (ICNIRP). KPN always adheres to the ICNIRP standards for electromagnetic fields.

Looking ahead

We continue to implement innovative technologies to support and improve our network. In addition to G-PON and XGS-PON technology, we introduced a new battery type for DSLAM that is more environmentally sound than previous versions.

Our Strategy Office is following edge computing, any implementation of which is still at an experimental stage. Our data centers and the aggregation points of our networks are close to the Netherlands' major cities, meaning that we are close to where most of our customers are. This enables us to provide low latency, in other words, connections with very small time delays.

In the coming years, we will continue to expand and improve our networks and, currently expect to reach more than 60% coverage of Dutch households by the end of 2025. Our 5G strategy is focused on providing differentiated services for B2B customers in specific industries.

All hands on deck to keep Limburg connected

"We could quickly identify the risks"

Alex Zuiderhoek - Lead Escalation Manager

"The floods in the summer of 2021 that affected Limburg in the Netherlands, as well as Belgium, Germany and Luxembourg, are still very fresh for many people. They had an enormous impact on people, homes, businesses, and entire villages. Our caretaker government designated the flooded area in South Limburg a disaster zone, and KPN did absolutely everything it could to keep Limburg connected during this period. After all, it is precisely in these difficult times that people appreciate being able to keep in touch, whether by phone or online. Those who had to leave their homes because of the flooding, wanted to stay abreast of the situation and connect with family and friends.

Once the news broke, we immediately formed a crisis team that met twice a day with the technical and communications teams, and our colleagues from the Consumer, Business and Wholesale segments. We took decisions at these meetings that ensured any impact was kept to a minimum or could be quickly resolved. We were in touch with the 'safety regions' and received information from other relevant parties, like the Dutch Ministry of Infrastructure and Water Management. By communicating well with each other, we could quickly identify where our risks lay. Although the impact on us was – thankfully – limited, we still kept the entire senior management team abreast of the situation to make sure we were on top of things.

KPN acted quickly and proactively, and also provided after-care. For example, a number of our engineers spent a few days working at a busy site in Valkenburg so they could immediately help customers.

In total, a few hundred customers were without fixed network services for a time. Mobile services stayed up and running, which was possible only because we acted immediately. As a preventive measure, for example, we placed sandbags and partitions in high-risk areas to keep the water out. In the event of a disruption to the fixed network, we gave our customers an additional mobile bundle so they could call, use the internet and watch TV. Neighboring sites took over disrupted mobile communication sites so that the mobile network could continue to operate. We even brought a few emergency aggregates to the area so we could use them in case of a power outage. We also implemented additional precautionary measures for the sites where the emergency services and evacuated residents gathered.

During this period, we gave our engineers additional hardware so they could offer customers solutions more quickly. We also freed up extra engineering capacity. For our business customers, we implemented re-routing to minimize any societal impact. We also offered more service as part of our after-care. For instance, when assessing water damage to KPN equipment, our engineers would also check the cables to prevent any subsequent disruption caused by rusting. All in all, our operation involved a range of teams working very quickly together in ways that tested their flexibility and ability to deliver to results. I am proud of how we succeeded in this. Based on the evaluation, we have established guidelines for an even better digital collaboration."

Our performance: Focused innovation and digitalization

Bringing innovation closer to the business

Innovation is crucial to KPN's future business growth. We are constantly building on our experience of exploring new technologies and societal trends to identify innovative opportunities. Developing new products and services enables us to meet new customer demands and to help further digitalize our society in a responsible way.

KPI	Result 2021	Result 2020
IoT revenues	€63m	€59m
Machine-to-machine (M2M) subscribers (#SIMs)	8.7m	7.5m
Patent families in KPN portfolio	331	328

In 2021, we changed the way we organize innovation at KPN. We created a new structure to bring innovation closer to the business and to enhance the probability that new ideas and inventions will lead to new products and services more frequently. This new approach is in line with our Accelerate to Grow strategy.

New innovation approach

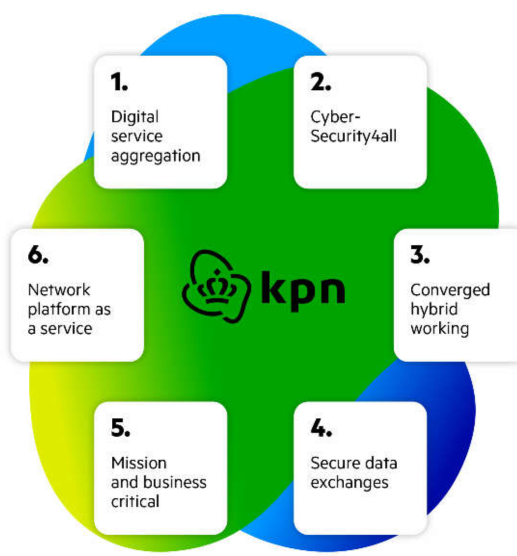
Within KPN's Strategy department, an expert innovation team is set up to design and manage our new innovation approach. They select promising business areas for growth and cooperate with technology and business departments for a coherent company-wide approach. We have defined three categories of innovation at KPN, each with its own time horizon.

- Horizon 1 innovations are simple improvements achievable in the short term. For instance, adjusting the price of a product or adding a new service component to our product portfolio. Our business units decide on and execute these innovations.
- Horizon 2 innovations typically take three to five years to explore, test, and – if deemed feasible – implement.
- Horizon 3 innovations are linked to new technologies at an early stage of development or new to the world, such as photonics and quantum technology. These may take years to materialize.

Horizon 2 innovations are the main focus of our new innovation policy.

Innovation areas

Based on customer demand analysis, geopolitical developments, and technology and societal trends, we identified six areas where we seek innovative products and solutions.



Our performance: Focused innovation and digitalization

1. **Digital services aggregation:** KPN is in a good position to develop new partner services through our B2C and SME platforms such as content streaming, cloud gaming, and smart home & office.
2. **Cybersecurity-4ALL:** We will explore new opportunities to offer embedded security platforms for corporate, small business and retail customers, building on our strong cybersecurity expertise and experience.
3. **Converged hybrid working:** This is a potentially promising innovation area in the post COVID-19 era and we will explore how we can offer secure hybrid working solutions combining B2B and B2C access services including new remote communication and collaboration solutions.
4. **Secure data exchanges:** Increasingly, organizations and companies need to share data with other organizations (e.g. Healthcare institutions or energy companies). As most organizations have built their own database architectures, exchanging data can be a challenge. KPN is well-positioned to develop more services to share data securely with help of AI technologies, while meeting regulatory requirements that we and our customers are subject to. As data sovereignty is becoming a hot topic in Europe, KPN plans to add a data sharing layer on top of our connectivity layer providing data sovereignty to our clients.
5. **Mission and business critical:** Businesses increasingly create private 5G converged grids within their company to enhance operational flexibility and security. Building on our expertise with highly secure networks, such as for emergency services, we see opportunities for innovative private network products and services.
6. **Network Platform as a service:** Make our network open as a platform to deliver connectivity solutions, standard telco services and compute ,and storage through easily accessible and secure API's. This will enrich our portfolio by third-party solutions and will fill our network with extra traffic.

We decide which potential new products or services we consider worth exploring. At that stage, we will assess in which market a solution would have the best chances of succeeding, which capabilities are required to develop it, and whether we have these capabilities or should acquire them via partnerships. Our goal is to establish a pipeline of concrete innovation plans for the next three years.

Our Board of Management oversees our innovation approach and is informed at least every quarter about the progress on each innovation area and related plans. Our goal is to create substantial additional revenues through innovations over a period of five years.

Our ongoing innovation departments, KPN Ventures, KPN Liaison management, KPN Technology Office, and KPN field labs, will align their activities with our new approach to innovation and our six focus areas.

KPN Technology Office

The Technology Office department determines the technology strategy and architecture of tomorrow. In order to build the best network and services for our customers, we translate innovative technologies into a sustainable and digital networks and services. By working with top universities in the Netherlands and applying new technologies in our field labs, KPN aims to develop and maintain key in-depth knowledge and first-hand experience.

Partnership with universities

We work together with several Dutch universities. The most important goal for KPN in these partnerships is to enable thought leadership and positioning in relevant research areas. We do this by collaborating with top universities in strategic areas and engaging with data and network science talents through Master and PhD thesis projects. Subjects vary from what a future network will look like to how KPN can continue to be a frontrunner in emerging digital ecosystems.

KPN field labs

In our field labs, we make future network technologies tangible and applicable. The field labs serve as the ecosystem in which we test the latest technology, applications, and services. Below we describe a selection of successful innovations:

Smart industries: We worked on expanding the business-critical services delivered through our 5G network. We achieved an edge computing platform for industrial applications at the Brainport Industries Campus (BIC) in Eindhoven, aimed at digitalizing industrial work processes.
Mobility: We continued with activities in our field lab on the Automotive Campus in Helmond, exploring remote and automated driving with local partners. We conducted tests and demonstrations, showed a collision-avoidance use case, and we will be working on seamless roaming in 2022. As a member of the 5G Blueprint consortium, we research and realize remote-controlled truck and barge transport, and remote harbor crane operations in the Vlissingen-Ghent-Antwerp border area. This is aimed at making logistical transport more efficient and sustainable.
Urban: In the Johan Cruijff Arena in Amsterdam we continued testing how our indoor 5G network can be used for gaming and enhanced priority for business-critical applications such as bodycams and payment terminals, and performed some trials in the period of Euro 2021. In parallel, KPN performed tests with a KNRM rescue drone in Scheveningen, highlighting the importance of enhanced priority for critical situations (drowning victims).

Our performance: Focused innovation and digitalization

Several field lab activities led to commercial customer contracts. For example, we installed a 5G network at a DHL logistics center in Waalwijk, used to manage autonomous mobile robots.

CHALLENGE

One of the challenges we face is creating an innovative mindset among our employees and making them aware that innovation is crucial to the growth and continuity of our business. As such, we encourage our people to explore unconventional, potentially disruptive, new technologies or products whenever possible. One example of this is the collaboration between KPN and the Amsterdam UMC hospital (location AMC) to improve how patients are transferred from an ambulance to a hospital through innovative services on our 5G network.

KPN Ventures

KPN Ventures is our venture capital investment fund. We invest directly and indirectly in innovative European technology companies to build value-creating partnerships. We aim to accelerate innovation and growth by giving our portfolio companies access to capital, industry expertise, technical infrastructure, professional networks, and channels. With a strong combination of partnerships and investments, we focus on adding value to KPN as a whole, mainly by supporting the six innovation areas and specific focus areas like cybersecurity and digital health.

The main focus of KPN Ventures in 2021 was to expand our portfolio and to support our existing portfolio companies. As a result, we have added a new company to our portfolio. Together with Brabant Development Agency, we invested in Dimenco which is the world's leading spatial visualization technology company. To support our existing portfolio companies with their growth path, we offer continued support on strategic decision-making and operational and commercial topics through our board positions at these companies. KPN Ventures also participated in follow-on investment rounds for existing portfolio companies.

Simultaneously, we invest in other venture capital funds that mainly focus on early-stage financing of commercial spin-offs from university research centers. This helps expand our network of potential innovative technology companies to partner with and invest in. In 2021, KPN Ventures invested in KEEN Venture Partners II and Cottonwood III. In total, KPN Ventures has now partnered with nine external venture capital funds across Europe.

KPN Liaison Management Scaleups

KPN Liaison Management Scaleups supports startups, scaleups, and other partners to connect with KPN and provide a joint platform to expertise, infrastructure, our partners and customers, and financial support. We believe in open innovation and by joining forces with ambitious technology companies, we are working on tomorrow's applications. This way, we can promptly provide our customers with better and more innovative products.

In 2021, we started several new collaborations. For instance, with Vormats, which offers a video-editing tool, and Fröbel, a Rotterdam-based social impact company. We are running pilot programs with two companies on search engine optimization (SEO) optimization and finished a successful pilot with Speaksee, that offers solutions to let hearing disabled employees participate in meetings. Moreover, we initiated IoT connectivity for, amongst others, E-bike-to-go and Aquatic Drones. We also started a pilot with several KPN employees and Budgetmaatjes Rotterdam to advise people with financial difficulties. We also work together with innovative companies to create 5G ecosystems to make our 5G propositions more relevant in the areas of smart industry, critical communications, mobility, health, agriculture, and drone use.

KPN was the proud winner of a VNO-NCW Costa award for our collaboration with Opt/net. KPN won the award because of the social impact of the project and for being a frontrunner in working with scaleups.

Intellectual property

KPN's current portfolio of intellectual property rights consists of 292 registered trademarks relating to our core brands and 331 patent families. Around 78 of the patent families that KPN owns are deemed essential for the commercial use of telecommunications technology and services, including in 5G and virtual reality. In 2021, we signed seven new license agreements, bringing the overall number of KPN's licensees up to 51.

We take appropriate steps to protect our intellectual property rights and generate value from these rights. KPN uses a combination of patents, trademarks, trade secrets, copyrights, database protection, confidentiality agreements with employees and third parties, and protective contractual provisions. We continue to protect and invest in our intellectual property rights portfolio through various means including our targeted long-term research and development program in close cooperation with TNO-ICT. The projects focus on 5G, extending to 6G, virtual reality and TV/video applications, and the use of artificial intelligence (AI) in this.

More independence through telehealth

"Sound guidance is key to the success"

Vinood Mangroelal, EVP KPN Health

"Over the past two years, the Netherlands has become more and more aware of the increasing pressure on the healthcare system. The focus has mainly been on the number of hospital beds and ICU capacity, but staff shortages is a problem throughout the entire healthcare sector and demand will further increase in the future. As such, giving the healthcare sector a sustainable perspective requires creative and innovative ideas. Extra money and extra staff alone are not going to solve the problem; we have to work smarter with the resources we have. In our experience, digitalization is one of the key changes to achieve this.

Increasing patients' independence could be a solution to some healthcare issues – and this is something KPN Health is eager to contribute to. Telehealth is becoming smarter and can relieve some of the burden on healthcare professionals, caregivers and clients. A key success factor here is to have the right focus on the impact and adoption of technology. At KPN Zorgvrij, we build the technology around healthcare processes, not the other way around. By providing caregivers with telehealth and smart IT solutions, we can support them in their work.

One good example of this are the care instructions for the elderly, who often require increasingly complex care. The emphasis on living at home for longer means that elderly people only become eligible for a nursing home once they are really no longer able to live independently. With our telehealth proposition, we offer a solution to both the cure and care market to support the Netherlands' aging population. We serve several groups: the elderly living at home longer (extramural); the elderly or people with disabilities in nursing homes (intramural); and people who can no longer live independently but for whom there is no place in a nursing home yet, e.g. people with dementia who, through technology, can often be helped to continue to live responsibly at home.

Healthcare professionals often fear that more technology means greater distance from the client, even though in practice they get more time and a better overview. Over the past few years, KPN has learned many lessons in this area about what works and what does not work. Sound guidance is key to the success of a new telehealth system, as evident from a number of nursing homes run by Zorgspectrum Het Zand. They rolled out a new telehealth system, with a lot of focus on change management and adoption. The use of alarm systems and lifestyle monitoring allowed clients to get maximum freedom of movement within their living space. All information was conveniently and clearly integrated into one device, allowing healthcare professionals or caregivers to spend more time on personal contact. The solutions for more independence offer peace of mind, safety and security, for both the client and the healthcare professional."

Our performance: Safeguarded privacy and security

Fostering future-proof privacy and security protection

We want everyone to enjoy the benefits of connectivity without having to worry about information security or infringement of privacy. Trust in our ability to safeguard privacy and security is one of our core values and crucial to the long-term value creation for our business and society.

KPI	Result 2021	Result 2020
% of Dutch people who believe their data is safe with KPN	66%	66%
% of Dutch municipalities monitored for cybersecurity attacks	12%	5%

Privacy

At KPN, it is a given that we abide by all relevant privacy laws and regulations. Indeed, our commitment goes further than legislation or compliance. We see respect for privacy as a crucial component of the trustworthiness and reliability we want to offer our customers.

In 2021, 66% of Dutch people said they believe their information is safe with KPN (2020: 66%). KPN remains ahead of the competition when it comes to the security of privacy and personal data.

After 1.5 years of working almost completely from home, in 2021 we moved to hybrid working at KPN. We designed a privacy-proof mechanism for gathering data about employees checking into our buildings when they come to work. The aggregated data that we collected is anonymized and will give us an insight into the number of people that visit the office. We will use these insights to develop hybrid working policies for different business units or teams in the near future.

We continuously assess how we can improve the data protection of our systems. We make adjustments if necessary, for instance when we launch new products and services such as 5G. We also continuously monitor new and upcoming legislation, and in 2021 began analyzing newly proposed EU legislation, the Digital Services Act and the Digital Market Act, to see how they might affect our privacy policy and whether adjustments will be required.

Privacy awareness among employees

Embedding ethical awareness and responsibility for privacy in the mindset of our employees is a priority at KPN. All employees must abide by the KPN Code of Conduct, which provides clear privacy guidance, including how to deal with customer information. They must also perform our privacy awareness e-learning training once every two years. Our Human Resource Privacy Statement sets out KPN's rules and principles for the handling and compliant processing of employee data.

Our business is guided by the principle of 'privacy by design'. This means we consider privacy and security risk from the earliest stage when developing new products and services. Our Privacy Council, consisting of representatives from the business and the Compliance, Privacy & Ethics team, coordinates decision-making about privacy-related issues and aims to ensure any privacy issues can be addressed quickly.

In 2021, we received 240 reported incidents concerning privacy and reported 95 data leaks[1,2] concerning customer privacy to the Dutch Data Protection Authority (AP). In each required case, we

1 In previous years, we also took into account incidents concerning employee data. As a result, the number of reported incidents is 9 lower than according to the methodology used in previous years

2 In previous years, we also took into account incidents concerning stolen or lost hardware (laptops/mobile phones). Due to published policy by the Data Protection Authority, it is no longer necessary to report stolen or lost hardware when these are sufficiently encrypted. As a result, the number of reported incidents is 75 lower than according to the methodology used in previous years

Our performance: Safeguarded privacy and security

informed the customers about the leak and the measures we took to resolve any issues. We also informed the AP that we had noticed that unauthorized persons have had access to servers of Internedservices, a subsidiary of KPN. The AP decided to open an investigation into this.

Lawful intercept

We respect our customers' right to privacy. At the same time, we are legally obliged to disclose certain information, obtained by intercept, to national investigation agencies. Our infrastructure must facilitate this and we are obliged to cooperate with law enforcement agencies as specified in the Dutch Telecommunications Act.

To help achieve this, a KPN liaison officer is available 24/7 to facilitate interaction with law enforcement authorities for all KPN brands. We assess incoming warrants and carry out checks to filter out any uncertainties. If we find discrepancies, we reject the warrant, inform the agency involved and follow the relevant procedures. In 2021, a mismatch was found in 1.5% of warrants received. Of the interception orders, 99.4% concerned telephone numbers, and in 0.6% of cases we were ordered to intercept IP addresses.

In the context of the Notice and Take Down Code of Conduct, KPN received six complaints in 2021. Most of these complaints regarded copyright and intellectual property disputes. In none of the cases did KPN provide the requested identity information.

Following Dutch media reports about alleged unauthorized access to our interception systems by one of our suppliers, Dutch regulator Agentschap Telecom (AT) opened an investigation into the security and privacy protection of our legal intercept facilities. We have cooperated fully in this investigation, which AT expects to complete in 2022. In parallel, we conducted an in-depth review of the security measures ourselves and implemented further improvements where relevant.

Artificial Intelligence

We used Artificial Intelligence technology in our business in 2021 and introduced a KPN wide Model Governance framework consisting of 3 workstreams, 1) Reporting and ensuring responsibilities, 2) AI Ethics and 3) monitoring and alerting. This framework will help us to monitor algorithms and adjust them in case they have any unintended privacy or other ethical consequences. An expert from Erasmus University Rotterdam is helping us to make our algorithms transparent by describing how they work and what their objectives are, which is an important prerequisite for using AI.

The European Commission updated rules for companies sharing data with other companies or institutions outside the European Union, where privacy protections may not be as strict. These so-called EU standard contractual clauses must be included in all contracts. For new contracts, KPN is using the new versions of the standard contractual clauses (SCC); existing contracts will be adjusted before December 2022.

CHALLENGE

The EDPB recommendations "Recommendations on measures that supplement transfer tools to ensure compliance with the EU level of protection of personal data" pose a challenge as some of the EDPB measures which are proposed in combination with SCCs are difficult to comply with. KPN is examining ways to comply to these. In some cases, the European GDPR privacy regulation would not permit us to share data with a US party, while the US government's anti-terrorism law would oblige us to make those same data available to US authorities at our American suppliers. This may affect how we use the data platforms of American partners such as Microsoft and Amazon. We are exploring how to best handle this dilemma.

Security

Cybersecurity remains a high priority, as cybersecurity attacks by nation states, phishing, ransomware and supply chain attacks are becoming increasingly sophisticated. To protect our systems and data, and those of our customers, we are constantly vigilant.

Our Chief Information Security Office (CISO) is organized into four teams. Together with the operational security officers throughout the company, they work according to the KPN Security Lifecycle, which is based on the NIST cybersecurity framework: identify, protect, detect, respond and recover. CISO sets a KPN Security Policy to prevent vulnerabilities and incidents. The CISO Red Team of ethical hackers conducts security testing of new products, proactively identifies weaknesses and detects vulnerabilities across the organization. The CISO Blue Team is responsible for continuously monitoring our networks and infrastructures, and detecting security threats and vulnerabilities in a timely manner from within our Security Operations Center (SOC). As part of the Blue Team, the KPN Computer Emergency Response Team (KPN-CERT) provides rapid incident response, while the CISO DevOps team is responsible for development, research and security analytics and reporting.

In 2021, the Red Team introduced a risk-based penetration testing approach to better address the most important security risks KPN faces. We performed so-called Red Team exercises and enhanced our reporting capabilities regarding the security status

Our performance: Safeguarded privacy and security

at KPN. We also stepped up the protection of our critical platforms. Our systems constantly monitor these devices and automatically block them as soon as any suspicious software is detected.

To better and more efficiently monitor our systems from a security perspective, we centralized the collection of log data of our critical systems. This means that the log data our systems continuously generate are brought together in one huge log database, enabling our security officers to analyze from a central location if there is a malfunction or a security issue anywhere in our network.

In 2021 CISO was a runner-up at the World Championship SOC X, an international challenge for detect and respond teams. CISO also came in third at the annual Capture the Flag exercise organized by the Ministry of Defense.

Vulnerabilities

At the end of 2021, the National Cyber Security Center (NCSC) warned companies about a serious vulnerability in software that is used worldwide, Apache's Java log tool Log4j, version 2. KPN has proactively communicated to customers about this vulnerability and is closely monitoring developments around it.

In September, KPN discovered a vulnerability that affected InternedServices, a 100% subsidiary of KPN and provider of managed cloud and hosting services. We immediately took the servers offline, isolated and examined them. As a result, customers were temporarily unable to use their e-mail and internet.

Continuing collaborations

We continued our collaboration with Dutch municipalities to enhance cybersecurity and continued rolling out our security services to all municipalities to make the Netherlands safer. In 2021, we monitored 12% of Dutch municipalities for cybersecurity attacks, which is less than our target of covering 40% for the year. The reason for this is twofold, namely the demand from communities being lower than our expectations and a longer onboarding period than anticipated.

New regulations

The Dutch government published a new ministerial ruling regarding network security, requiring that telecom operators adopt additional security measures by the end of 2022. KPN has set up a program to implement required actions throughout the organization.

Challenges and mitigations

To continuously increase the level of awareness of cybersecurity risks throughout the company, employees have once again taken mandatory security online Spot-On training. We have also run regular mock phishing exercises for our employees, including specific high-risk groups. The aim of these exercises was to make employees realize how cybercriminals operate and how easy it is to be tempted to click on a link to seemingly relevant information or open attachments.

Ransomware is an increasing problem worldwide, so awareness of cybersecurity risks remains an important matter throughout the company – any employee can be a potential target. Although we have systems in place to detect malicious (phishing/malware) links, potential attackers have more and more resources and money to carry out highly sophisticated cybersecurity attacks. According to the Dutch government, vital infrastructure such as our data network is an interesting target for state actors. As such, we have expanded end-point protection to critical systems.

New steps in quantum-safe communication

Quantum computing will eventually make it possible for cybercriminals to break current cryptography used worldwide. As in previous years, KPN once again supported research into quantum-safe communication in 2021. Quantum-safe communication consists of research regarding post-quantum cryptography and quantum key distribution. One of our aims is to modify current cryptographic protocols to make them quantum-resistant. In 2020, members of the IEEE Computer Society peer-reviewed a research paper regarding post-quantum cryptography that was subsequently accepted for the 2021 IEEE Symposium on Security & Privacy. The research paper, which showed that PQ-Wireguard outperforms other cryptographic models by up to a factor of 1,000, was conducted together with Radboud University and Eindhoven University of Technology.

Together with QuTech, a Dutch research institute for quantum computing and quantum internet, and Cisco, KPN has demonstrated that measurement-device independent (MDI) quantum key distribution (QKD) works on a fiber optic cable on which a conventional internet connection is also active at the same time. This is an important step in creating a cost-effective untappable connection. The MDI QKD network can scale up to many users, which is a major advantage over other QKD systems. MDI_QKD operates on a standard telecom fiber; this has been shown on a quantum demonstration network between the QuTech office in Delft and two KPN buildings in The Hague and Rijswijk. Additionally, it was shown that MDI-QKD can run on an optic fiber cable with conventional internet traffic being active at the same time.

Working from home makes cybersecurity even more challenging

“The number of attacks will continue to increase”

Paul Slootmaker – CISO Office KPN

“Last year saw several big ransomware attacks in the Netherlands, including at Maastricht University, Hof van Twente municipality, recruitment agency Randstad, manufacturing company VDL Group and consumer electronics retailer MediaMarkt. In attacks like these, organizations are cut off from their IT systems and data files, plunging them straight into a crisis. The developments in the cyber environment are very worrying. KPN has well-secured workspaces, a layered defense model, and detection and response tools that help us detect a lot in time. Yet it remains a game of cat and mouse. We need to be realistic and at the same time provide insight into what we are able to do. For ourselves and our clients.

With more and more people working from home, it’s important they have the right applications at their disposal. Employers really need to invest in secure and monitored working environments. Otherwise, employees will start looking for workarounds. If home offices aren’t monitored, employees can download illegal software or use unauthorized cloud services without the knowledge of their employer – opening the door to risks including ransomware and data leaks.

An additional factor is that it is harder to supervise employees when they work from home. If a company has call center employees working at the office, for instance, there’s some social control and visibility. Now, though, there are people working from home at some organizations who have too many access rights. A leak such as the one at the Netherlands’ municipal health services (GGD), where employees traded in data from the two most important COVID-19 systems, could also happen at other organizations.

To determine the right security measures, organizations can of course conduct risk analyses - but ultimately, it’s the risks you haven’t noticed that will catch you out. So it’s better to accept this uncertainty. Assume things will go wrong at some point, and prepare well for that. That means ensuring good basic cyber hygiene, a good crisis team, recovery procedures, simulations and collaboration.

Cybersecurity is hard work, and however tough it may be, companies first need to get their asset management in order. Patching their existing software, checking these, and paying attention to identity and access management are then also part of basic hygiene. Crisis teams are often trained to respond to ‘traditional’ crises, such as recovery after system failures or service interruptions caused by fire or national outages. But cybersecurity also needs the attention of a regular crisis team. Simulations should focus not just on continuity, but also on cybersecurity scenarios such as ransomware and data leaks.

Collaboration is all about actively sharing information about threats and best practices. We urge organizations to speed up these preparations, and we’re happy to help. Because in all this uncertainty there is – unfortunately - one certainty. The number of attacks will continue to increase, partly because the field of attack has grown with so many people working from home.”

Our performance: Sustainable employability

The network behind the network

KPN's employees are crucial to achieving our strategic objective of accelerating growth. We're creating an organization that's effective, inclusive and diverse. Recruiting, developing and retaining the right people and skills will make us stronger, more agile and enables us to obtain profitable business.

KPI	Result 2021	Result 2020
Employee survey score for engagement	82%	86%
Overall % women at KPN	22%	21%
% women on KPN Boards	36%	36%

Shaping a culture in which people make an impact

We strive to support, stimulate and develop our people, so they can feel happy and consequently have a positive impact on their colleagues, our customers, our business and society at large. Our Chief People Officer is a Board of Management member since 2019, leading the drive to shape the culture of KPN, engage employees and manage both the 'hard' and 'soft' elements of performance.

In our comprehensive people strategy, employee experience, business needs and our role in society are paramount. We are investing in our people and in creating and maintaining the organization and structure we need to achieve sustainable business growth. We intend to make our strategy a success by creating a culture in which we build on trust, we show courage and we aim for growth. By putting full focus on building a high performing culture with the right capabilities and ways of working, we can adapt to a changing digital era. In the chapter Maintaining effective risk management we describe how we strive for a business culture in which compliance and integrity are self-evident for all employees, for example by means of a KPN Code of Conduct that applies to all KPN employees.

Change, mobility and leadership are key to achieving this and were the main themes that guided our people initiatives in 2021.

Exploring hybrid working

As the COVID-19 pandemic continued, 2021 asked a lot of our employees. Restrictions and precautions necessary to slow down the spread of the virus forced us to adjust the way we work for much longer than many of us anticipated. We were proud to see continued resilience and a strong commitment among our employees to helping KPN through this period and keeping the Dutch economy and society running through our crucial networks and services.

At the same time, we noticed that the pandemic was beginning to take a toll on our employees. Our HR department picked up signs that some employees were becoming fatigued earlier and missed social interaction because of the prolonged period of working remotely. Others indicated they were struggling with a high workload.

As a consequence, absenteeism rose slightly in 2021. The increase in absenteeism at KPN was in line with the nationwide trend in the Netherlands, which was associated with a higher number of COVID-19 infections as well as the effects of long-term COVID-19 that some people suffered.

These developments did not affect our performance, but we took them as a sign of how important it is that we continue our efforts to manage work pressure and maintain a healthy work-life balance.

Our performance: Sustainable employability

As 2021 once again showed the need and opportunities of hybrid working, we decided to take a year to explore how to balance working remotely and working on site. Our people demonstrated during the pandemic that by working remotely we can act flexibly to keep Dutch society and its crucial digital services running. At the same time, we found that long-term working from home or other remote locations doesn't work for everyone.

In exploring what the best split between remote and on-site working is, we take different employee categories into account. For some employees, such as our retail store staff, working remotely is practically impossible. For most other categories, we will start experimenting based on a 60/40 split between home and work. We will then assess whether adjustments are required, monitoring work-life balance and performance, to find the best ratio for each employee team.

We are very aware that hybrid working may change the role our workplace plays. It may evolve into being a place for employees to meet, bond and maintain a sense of belonging even more than before, as joint time becomes scarcer.

Mobility

In 2021 we had a strong focus on internal mobility. Our internal recruitment tool, KPN Match, shows an increase of 63% in vacancies and an increase of 50% in the amount of colleagues who apply for jobs using this tool. Attrition also grew in a very competitive labor market. The war for talent has became more intense, with a relatively large number of companies looking to hire people from a relatively small pool of professionals with technical competences and skills. To meet this challenge, we continued our programs to develop and train our own people so they can take on other positions at KPN where demand is highest. We will explore how we can finetune our employee development programs to ensure we encourage employees to develop those skills and competencies that KPN will need most in the near future.

Training and developing our employees improves their position in the labor market. We support employees who are or may be affected by a reorganization to find jobs externally. We are a member of Buitenboordmotor, a national project of Dutch companies and organizations that helps people make a career change and find a job in a sector that suits them and where the need for talent is highest, such as IT, technology and the Dutch health sector.

CHALLENGE

As the world around us changes at an ever-increasing pace, we need to make organizational changes quicker. Reorganizations to respond to this changing environment demand a lot of our people, however. As such, our challenge is to find the right balance between acting decisively and changing our organization swiftly and preventing that from putting too much pressure on our people to change in a short timeframe, as this could be counterproductive.

Driving digitalization

Digitalization is about more than just technology, people are more crucial. We support employees and invest in their capabilities, so they can embody the digital transformation of KPN and its business.

We further digitalized our recruitment process in 2021 by launching a new recruitment on-boarding app. The app enables new employees to start their onboarding online.

The lockdown accelerated the digitalization of employee cooperation and training. We offer efficient tools and a wide range of online courses that enable people to learn and develop, at whatever time and location suits them.

Leadership and talent

Good leadership helps our people grow and develop, which in turn helps improve the customer experience. Leaders play a key role in setting a company culture and encouraging employees to keep pace with and support building a future-proof organization. We build on trust, show courage and live to grow. With this positive attitude we want to make the difference for our customers. Our leadership profiles set out the values and requirements of good leadership. The decision to adopt hybrid working will require changes in leadership style. Managers will have to trust their employees with more responsibilities and give them the room they need to take initiative and make their own decisions. Our Network 300 is a platform for KPN's top 300 leaders that engages them more in our strategy and transformation.

KPN is committed to investing in young talent in the long term. With our strategic Young Talent program, we remain an attractive employer in the war for talent.

Our performance: Sustainable employability

Employee engagement

We're committed to engaging our employees and making them proud. We want to be recognized for that, both in-house and externally, and so aspire to make KPN a great place to work, both now and in the future. We want our customers to see us as the digital partner in their lives. To connect them, we build on trust, show courage and go for growth.

Around 67% of staff participated in our employee engagement surveys in 2021. The last survey showed that 82% of respondents feel engaged at KPN, which is 4 percentage points lower compared to 2020, but, still significantly higher than in the years before COVID-19. The survey also revealed continued pride in the company, trust in the board's decision-making and employees' willingness to go the extra mile.

All employees are responsible for their own vitality and health. As an employer, we support our employees by giving them a working environment and opportunities that enable them to take that responsibility. In 2021, we continued to offer our employees a budget of EUR 1,500 to spend on personal development. For our employees with a technical background, there is an additional budget of EUR 1,000 available for technical craftmanship.

Diversity and inclusivity

We want to be an appealing, safe and inclusive workplace where every person can be themselves. It is our belief that we perform better if we are a true representation of Dutch society. We also believe that all people are entitled to participate in the labor market, and as a large employer we feel a responsibility to facilitate this. We provide equal opportunities for successful careers and strive to create a sustainable culture where people's differences are valued and put to good use, bringing out the best in our people and our company. If our employees can safely and proudly be themselves, it will help them grow and our company grow. Our ambition is to be best-in-class when it comes to diversity and inclusion in our sector.

Despite our efforts to be a safe and inclusive workplace, there were 248 (2020: 231) reported incidents concerning discrimination or aggression involving employees. These reported incidents were mainly resulting from the behavior of customers.

Gender diversity

We aim to have 25% women in our total workforce by 2025 (2021: 22%).

We run activities such as mentoring and talent programs, and leadership events with a focus on diversity, and post a range of communications on the intranet to inform, inspire and create awareness on this topic. KPN believes that investing in diversity in IT and technical jobs is important, so we focus on attracting women to the technical departments of our company. We do this through our internal women's network and by organizing inspiring in-house events. We support the international Women in Tech initiative and we joined the national taskforce from NL Digital and the Netherlands Ministry of Economic Affairs to accelerate the amount of women in digital and IT jobs.

KPN's policy regarding board diversity is described on page 57. We note that the Board of Management currently consists of 1/3 women, as well as 1/3 non-Dutch members.

LGBTQIA+ and cultural diversity

We're committed to creating a workplace where lesbian, gay, bisexual, transgender, queer, intersex and asexual people and people with other sexual and/or gender identities (LGBTQIA+) are valued and can be themselves. Our KPN Pride platform addresses LGBTQIA+ issues directly related to working at KPN. In 2021 it won the Winq Diversity Award for KPN's long-term commitment to the LGBTQIA+ community. We see this award as recognition of our efforts to contribute to a safe working environment for everyone.

We are also a signatory of the 'Declaration of Amsterdam', an initiative by Amsterdam-based Workplace Pride that calls for employers, unions and governments to implement concrete changes that ensure progress in matters affecting people in the LGBTQIA+ community.

We are very aware that we need to become more diverse from a cultural and socio-economic point of view. We joined the Agora Network, a Dutch non-profit foundation promoting cultural diversity in companies and other organizations. Our internal network Kleurrijk KPN works to increase understanding and respect for each other by talking about different cultural backgrounds and sharing which rituals, preferences, interests and customs belong to these backgrounds. In 2021, we saw increased cultural diversity in the Young Talent groups we recruited, something that bodes well for the future.

Social entrepreneurship

Government authorities stimulate social return on investment in their contracts in order to stimulate the market for social impact. KPN adheres to these criteria and is intrinsically motivated to include people with poor job prospects.

During 2021, KPN hired 14 employees with poor job prospects, slightly below our usual annual number of 20 because of COVID-19 contact-related measures. We offer these employees training at an intermediate vocational (MBO) level combined with professional work via Randstad Participatie in our Customer Service department in Amsterdam. After this one-year program 60% of these participants found a paid job.

Our performance: Sustainable employability

Digital inclusion and accessibility

To fulfill our purpose to connect everyone to a sustainable future, we believe that we need to invest in digital inclusion and accessibility within our products and services. In 2021, we worked on several software developments and our products, adhering to Web Content Accessibility Guidelines (WCAG) standards. We also designed a pilot with Speaksee software for 20 employees with auditive limitations so they could easily join online meetings. Speaksee translates speech into text in real time.

Pension

The Dutch government, unions and employers reached an agreement in 2020 on a new pension system, which brought changes affecting employees, former employees and retirees. This new pension system was meant to be formalized and implemented through new legislation and regulation in 2021. However, this plan was postponed until 2023. Companies will have until 1 January 2027 to adjust their pension schemes to the new regulations.

Travel and lease cars

As part of our ambition to minimize our ecological footprint, we reduced our fleet of company lease cars by 400 in 2021, aiming to achieve a total reduction of 700 cars by the end of 2022 relative to 2020. All new added cars will be fossil fuel free per 2025. We introduced a mobility package for employees, allowing them to travel by train or, if necessary, to use one of the cars in our company car-sharing program to visit clients or company facilities located in remote regions. Air travel was limited because of the pandemic.

Hybrid working; fit for purpose, fit for use

"We learn from changing circumstances"

Lisette Oosterbroek,
HR Director KPN Expertise Center

"Our new way of working, hybrid, has accelerated over the past two years. It is not new to KPN, however, as we have actively been facilitating flexible working since 2008. On average, KPN office staff were already working from home 20 percent of the time. But COVID-19 has changed things a lot. We went from 5,500 employees at our offices every day to 350, and from 20 percent to almost 100 percent working from home. And now we have to find a new balance – one that comes under renewed strain each time new COVID-19 measures are announced.

Looking out for each other is the most important thing at this time. HR supports us in making sure all employees continue to feel connected with each other and the company. Through workshops, we ensured that some 6,500 KPN colleagues made agreements with their teams on how they could organize their new way of working as effectively as possible. This has helped teams find out what works well and what not.

It helps that KPN already facilitates the technology and environment needed for working from home. Bad connections, equipment and environment are enormously frustrating when working from home. But we have supportive e-learning programs that teach our employees how to deal with all aspects of working from home: adopting a good posture, staying mentally and physically fit, and dealing with applications like Microsoft Teams. These are crucial conditions for successful hybrid working. It is also important to have a clear vision of how we as KPN see the future. And we have done just that with our 'This is how we work' guide. More than 75 percent of our colleagues support the direction we have chosen.

We also conduct regular surveys to hear what employees think about essential questions such as: Do you like working from home? Are you able to do your job well? How is your work-life balance? In general, the results of these surveys are positive. More than 90 percent of employees say they are able to work well at home, while more than 70 percent say they would like to work at home for more than 60 percent of their working week. Only two percent of our employees want to be in the office full-time.

We also share our experiences with customers, through dozens of one-on-one sessions and online events. For example, in 2021, 500 customers participated in KPN's 'Hybrid working' webinar. We share our practices too, and customers are free to use them in their own organizations. We are always available to answer their questions.

Sharing experiences is crucial because even though we have made great strides, we are continuing to learn from changing circumstances. In 2022, our teams will be given every opportunity to decide which version of hybrid working, within the KPN framework, suits them. We will try out different models and pursue those that work best. We will also be moving as much as possible towards a data-driven approach, while keeping a close eye on people's individual needs. After all, the best solution to hybrid working is often a customized one. Our focus is on doing what works best, and for KPN that means that one size most certainly does not fit all."

Our performance: Environmental performance and responsible supply chain

Collaborating towards a sustainable value chain

Over the past decade, we have positioned ourselves as one of the world's greenest telecom companies, driven by our belief that sustainable business is better business. This year, we increased our ambition to realize net-zero carbon emissions by 2040. Supplier and customer engagement play an important role across the value chain to create the solutions needed to achieve our ambitious agenda.

KPI	Result 2021	Result 2020
% reduction in KPN Group energy consumption compared to base year 2010	45%	37%
Reduction of value chain CO_2e (scope 3) compared to base year 2014	22%	19%[1]
Products with improved design for circularity	12	9
% reuse and recycling	84%	81%

1 We have improved our methodology on measuring scope 3 emissions by reconciling the basis for the EEIO method. See Appendix 3 for details. We have restated previous years, including the baseline. The baseline has changed from 1,063.2 kTon into 1,019.2 kTon

Collaborating towards zero waste and zero emissions

Through our approach to sustainability, we aim to influence the environmental impact of our total supply chain, from suppliers to customers. This includes our procurement process, operations, and the impact of our products and services before, during and after use.

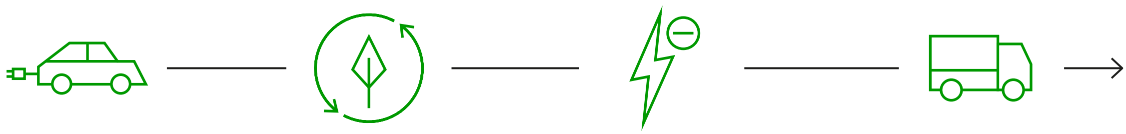
Our long-term ambition is zero waste, so our goal is to be close to 100% circular by 2025. We have set intermediate targets and use a pre-defined roadmap to track our progress in reducing the impact of our products and materials.

For inflow of materials, we have set a target to redesign for circularity at least 15 typical KPN products by 2022, for example by using recycled material. This includes network equipment and in-home equipment like modems and set-top boxes.

For outflow of waste and materials, we aim to maximize reuse and recycling, and avoid incineration and landfill. For KPN-owned customer equipment, our circular ambition is a closed-loop supply chain.

We will reduce CO_2e emissions from our company-car fleet by introducing fossil fuel-free vehicles.

Our performance: Environmental performance and responsible supply chain



2025	2025	2030	2040
0% CO_2e emissions from new cars	Close to 100% circular	-55% energy consumption vs. 2010	Net-zero CO_2e emissions in the supply chain

By 2030, we aim to have our energy consumption reduced by 55% compared to 2010. KPN is committed to reducing scope 1 and scope 2 greenhouse gas (GHG) emissions by 100% by 2030 from a 2010 base year. In addition, KPN will reduce its scope 3 emissions by 25% by 2025 and 30% by 2030 compared to a 2014 base year. We have committed to becoming net-zero by 2040. The targets, as approved by the Science Based Targets initiative, cover our GHG emissions (scope 1, 2 and 3) and are consistent with reductions required to keep global warming to 1.5°C, in line with the Paris Agreement.

In August 2021, KPN concluded a EUR 1 billion credit facility with an interest rate linked to three strategic sustainability targets: accelerating the digitalization of the Netherlands by rolling out fiber, reducing KPN's energy consumption, and decreasing CO_2e emissions throughout the chain (scope 3 emissions). In November 2021, KPN successfully issued its inaugural sustainability-linked bond. The bond issue amounted to EUR 700 million and is linked to performance against the commitment to reduce absolute value chain CO_2e emissions (scope 3) by 30% by the end of 2030 against a 2014 baseline.

As KPN's own operations are climate-neutral, all our services are low-carbon services. By using our cloud services, video conferencing and audio conferencing, our business customers can meet online, reducing the need to commute or use office space. Furthermore, KPN collaborates with energy grid operators in an initiative to strengthen biodiversity near our assets.

For the fifth time in a row, KPN was ranked as one of the top-five most sustainable telecom companies in the world according to the Dow Jones Sustainability Index (DJSI), with a strong score on climate strategy. We are the only telecommunications company with a ranking in the DJSI world index for ten consecutive years. KPN has been included in Carbon Disclosure Project (CDP) list in 2021 with a score of A-. The following sections report on our performance in relation to the objectives above. Detailed environmental figures, including intensity figures, targets and avoided energy consumption by our customers can be found in Appendix 6: Environmental figures (p. 204). An overview of major KPIs is available in Appendix 2: Connectivity of non-financial information (p. 176), calculation methods in Appendix 3: Transparency, materiality and stakeholder engagement (p. 179) and GRI application in Appendix 9: GRI index (p. 212).

CO_2e emissions and energy management

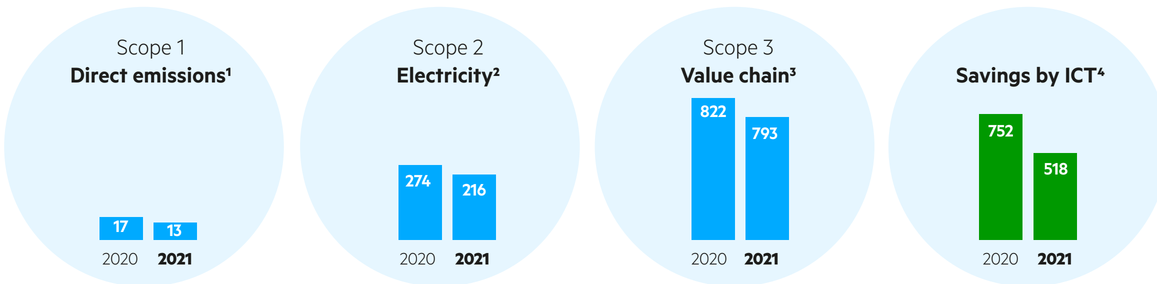
CO_2e emissions own operations scope 1 and 2 (in kTon)

	2021	2020	2010 base year	2021	2020	2010 base year
	Gross scope 1 and scope 2 location based			Net scope 1 and scope 2 market based		
Scope 1 NL (direct own emissions)	13.1	16.8	58.8	-	-	58.8
Scope 2 NL (indirect own emissions)	215.9	273.6	347.0	-	-	35.9
KPN NL	229.0	290.4	405.7	-	-	94.7
KPN non-NL entities	-	-	25.0	-	-	25.0
KPN Group	229.0	290.4	430.7	-	-	119.8

KPN operations are climate-neutral. We use 100% green electricity generated by local and European wind farms. Other CO_2e emissions (6%) from gas (buildings), gasoline and petrol (cars) and emergency power are compensated by REDD+ forest compensation projects. If we would not have been climate-neutral, our gross scope 1 and scope 2 location-based CO_2e emissions would be 229 ton CO_2e.

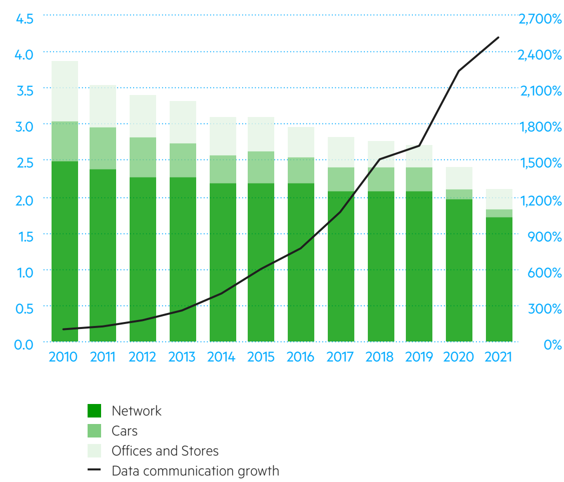
Our performance: Environmental performance and responsible supply chain

Overview of own emissions (scope 1 and 2), value chain emissions (scope 3) and savings by ICT
(CO_2e in kTon)



1 Gross emissions, mainly relating to our fleet; our net emissions are zero with compensation of fossil fuel cars
2 Location based emissions, relating to our usage of electricity; our market based emissions are zero
3 Upstream and downstream emissions in our value chain. 2020 figure has been restated due to improved calculation method, for details see Appendix 3
4 Savings realized through services used by our customers. Carbon emission savings realized through services used by our customers. 2020 figure has been restated due to improved calculation method, for details see Appendix 3

Energy consumption (PJ) compared to data communication growth (%)



Our energy consumption in 2021 was 2.132 petajoules, which is a decrease of 0.296 petajoules (12%) compared to 2020. Compared to base year 2010, this amounts to a reduction of 45%, while the data communication volume has increased 24-fold in the same period.

96% from our electricity consumption is consumed in the mobile and fixed networks. The network consists of ~22,000 sites with an electric grid connection. The total electricity consumption of the network in 2021 was 480 GWh, which is a decrease of 68 GWh (12% reduction) compared to 2020. The largest energy savings result from network modernization and simplification. Especially the phasing out of our legacy telephony network (TDM/PSTN) has contributed to a major energy saving. Another energy saving was realized through migrating one of our sites in Amsterdam to other sites. As part of our sustainability ambition, our network components are migrating to cloud solutions and network function virtualization. The total energy consumption of KPN has decreased 45% compared to 2010, so we are still on track to achieve the energy reduction targets for 2023 (49%) and 2030 (55%) compared to 2010. The energy consumption of base year 2010 has been adjusted for acquisitions and divestments where applicable. The energy saving program is subject to a monthly management review. We performed energy scans on our major technical buildings and sites to identify energy efficiency improvements. We also installed solar panels on one of our technical buildings in Utrecht. We are continuously improving the control and monitoring of our energy connections by installing smart meters. We actively contribute to the energy transition in the Netherlands. We have continued our efforts in our Energy Innovation Lab. In cooperation with GSMA we issued a report on Smart Energy Systems: Connectivity for a zero-emissions future.

Our offices and shops have saved 69% in energy consumption compared to 2010. In 2021, our absolute savings on car fuel compared to 2010 was 80%. In 2021, we added 114 electric cars and 14 biogas cars as part of our fleet transformation, which equates to an inflow of 90% fossil fuel-free cars (lease and engineers). We exceeded our 2021 target on inflow of 48% fossil fuel-free. The absolute inflow of new cars was relatively low compared to 2020 due to updated HR policies.

Our emissions in the supply chain (scope 3 emissions) are 793.2 kTon CO_2e. Our value chain emissions improved by 22% compared to base year 2014. We engage with suppliers on carbon reduction in the value chain. This is also covered by the scope extension of our ISO 14001 certificate with energy management and carbon reduction management.

Our performance: Environmental performance and responsible supply chain

Circular economy approach

Reduce
Use of virgin materials
- Virtualization
- Dematerialization
- Reused products

Extend
Use products longer and better
- Lifespan extension
- Rates of utilization

Recycle
High-end second life of products and materials
- Reuse
- Recycling

Energy efficiency
Reducing energy usage and increased energy efficiency

Supporting actions

Goal: zero waste

Also in 2021, the COVID-19 pandemic impacted the CO_2e savings for customers from using our ICT services, as there was an increased use of our services. Energy and CO_2e savings for customers from using our ICT services helped our customers to avoid around 518,000 tons of CO_2e emissions and 2000 tons of PM_{10} emissions. Most of these savings were due to reduced car fuel consumption (254 million liters). This is the equivalent of the fuel that 403,800 cars use in a year. We measure this avoided energy consumption by calculating the impact on our Consumer and Business customers for specific products and services. We improved the calculation methodology of the savings of teleworking and we restated the 2020 result (see Appendix 3 and Appendix 6, table 9). We realized 309% savings in terms of our own energy usage in 2021. See Appendix 3 for further information on our methodology to measure direct emissions (scope 1), electricity (scope 2), value chain emissions (scope 3) and savings by ICT. Scope 1, 2 and 3 are reported in line with the GHG Protocol.

Assessment of climate change related risks and opportunities

Our risk and opportunity assessment related to climate change and compliance with new environmental legislation are incorporated in our risk management and control systems. Please see chapter Compliance and risk (p. 63) and Appendix 4 for an overview of our top risks. We have taken into account the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD), which include matters such as governance, climate strategy, risk and opportunity assessment, and key performance indicators (see overview in Appendix 3).

EU taxonomy

As of 2021, we have started applying the EU taxonomy to our business. We concluded that KPN's turnover and Opex are not eligible under the economic activities currently in scope of the EU taxonomy regarding climate change mitigation and adaptation. At the moment, around 3% of our Capex activities qualifies as eligible. This includes certain customer in-home equipment. We have concluded that the roll-out of fiber is not currently eligible, however we believe this is an important enabler for climate change mitigation, mainly in terms of energy savings compared to copper. For further details, see Appendix 3.

Becoming circular in our operations

KPN is committed to the principles of a circular economy, by using fewer materials, enhancing product lifespans and taking measures to reduce our waste production to zero. To keep track of our progress, we are developing a framework to measure circularity in an even more integrated manner for the company as a whole. We collaborate with knowledge partners such as universities and the Platform for Accelerating Circular Economy (PACE) to build up and share knowledge on the circular economy.

For inflow of materials, we have introduced 12 products with improved circular design to date. First, we improved the circularity of our SuperWifi product by reducing the weight with 33% and applying 100% recycled plastic in the covers. Second, we selected EcoSIM cards with 100% recycled/recyclable plastic and replaced the plastic packaging with FSC-certified paper packaging. Third, by the end of 2021, we had 4,000 mobile sites modernized and 5G ready. We reduced the material weight of the installed base with ~8%. Obsolete equipment is largely being reused and recycled.

Our suppliers play a major part in the extent to which KPN can operate as a circular company. We collaborate with suppliers on product passports to improve the design using eco-design analysis. We updated our standard contracts and supplier selection process for circular procurement.

For outflow of waste and materials, we collaborate with third parties in our value chain to improve waste reduction and separation, and optimize reuse and recycling rates. Our reuse and recycling rate improved from 81% in 2020 to 84% in 2021.

Our performance: Environmental performance and responsible supply chain

In an effort to close the loops in our supply chain, we kept our return rate for modems and TV set-top boxes stable on 86% (2020 is restated from 93% to 86% due to an updated calculation method). See Appendix 3 for further details. To improve the circularity of our product portfolio, we continue to offer refurbished phones. Our customers can also choose to have their mobile handsets repaired through our repair service.

Procurement and suppliers

Procurement policy, selecting and contracting suppliers

Suppliers have a direct impact on the extent to which we can operate as a circular company and a direct influence on the communities and areas in which they carry out their activities. As such, we have integrated ESG criteria into our procurement process.

KPN's procurement policy guides us in sourcing, contracting and managing our suppliers, and our suppliers' sustainable performance plays a role in this. Our procurement process is based on a competitive comparison of suppliers and it applies economic and technical criteria, as well as the following ESG criteria:

- Compliance with the KPN Supplier Code of Conduct
- EcoVadis assessment, further described in next paragraph.
- Conflict minerals: We ask our suppliers to undertake reasonable due diligence within their supply chain to ensure the raw materials used in their products are sourced only from mines and smelters outside the 'conflict region' in the Democratic Republic of Congo or mines and smelters that have been certified by an independent third party as 'conflict-free' if sourced within the 'conflict region'
- Promoting the reduction of virgin materials, i.e. new materials not previously used
- Promoting the reuse and recycling of KPN products to reduce landfill and help KPN shift to a circular business model, in line with our ambition to be a close to fully circular company by 2025
- Extending the lifecycle of products
- Promoting the energy efficiency of KPN products

This set of ESG criteria for products and services forms part of the decision-making in our sourcing process.

Once we have selected a supplier, we expect them to comply with the KPN Supplier Code of Conduct. As a large company purchasing many products and services, we strive to do business only with suppliers who comply with our Supplier Code of Conduct. This code sets out social and environmental requirements for suppliers. It is inspired by the Charter of the United Nations and based on the core conventions of the International Labor Organization (ILO). The code contains conditions relating to human rights, labor conditions, privacy, safety, environment, bribery and corruption. It forms part of our general purchasing conditions.

We work with strategic suppliers on a structural basis, setting out specific terms and conditions for products and services to improve their sustainable performance.

Risk management

Once we have selected a supplier, we classify it along the impact, see Environmental figures, it may have on the environment in the communities where it operate and on the working conditions of their staff. We categorize suppliers based on the potential social and environmental risk of their operations, products and services. We assess this risk based on three parameters:

- Geographical areas
- Spend
- Potential environmental impact of a supplier's operations, products or services

We use this assessment to determine the degree in which we subject our suppliers to regular sustainability checks.

In 2021, we contracted a total of 1,348 unique suppliers, of which 35 were classified as high-risk.

Sustainability checks

Applying sustainability criteria

In 2021, EcoVadis assessed our strategic suppliers, which represent a large amount of spend, verifying whether they have integrated the principles of ESG into their business and management systems. These EcoVadis ESG criteria cover four areas:

- The environment
- Labor and human rights (which include health and safety, working conditions, social dialogue, child labor, forced labor and human trafficking, diversity, discrimination and external stakeholder human rights)
- Ethics
- Sustainable procurement

We expect our suppliers to score at least the industry average in which they operate. The average EcoVadis sustainability rating of our suppliers is significantly higher than the overall average score of the tens of thousands of suppliers EcoVadis assesses.

Social audits

Suppliers classified as high-risk are subject to social audits carried out by an independent third-party auditor. These audits are repeated periodically to monitor whether suppliers and subcontractors comply with the sustainable guidelines set by the Joint Audit Cooperation (JAC). This association of telecom

Our performance: Environmental performance and responsible supply chain

operators aims to verify, assess and develop corporate social responsibility implementation across manufacturing sites. JAC members, including KPN, share best practices on topics such as the circular economy, climate change and human rights to help embed long-term corporate social responsibility implementation in the different layers of the supply chain.

Thanks to the gradual increase in the number of JAC members, 77% of our high-risk suppliers were audited between 2014 and 2021. All audits were carried out in production plants (suppliers and sub-suppliers) located in China, Czech Republic, Indonesia, Mexico, South Korea, Taiwan, Thailand, Turkey and Vietnam. The audits were carried out by international specialist companies. The suppliers included in the audit campaign were from the sectors for user devices and appliances, network appliances and IT equipment production.

Fixing shortcomings through corrective action plans

The table below shows the numbers of non-conformities recorded during on-site audits conducted by KPN on behalf of JAC in 2015-2021.

	2021	2020	2019	2018	2017	2016	2015
Business ethics	**-**	2	3	4	11	7	19
Discrimination	**-**	-	2	-	1	-	-
Disciplinary practices	**-**	-	-	1	-	2	-
Environment	**3**	8	17	8	12	18	15
Freedom of association	**-**	-	1	1	1	1	2
Health & safety	**4**	10	39	23	27	31	45
Labor	**-**	-	-	4	-	2	5
Unlawful labor	**-**	-	-	5	1	-	8
Wages & compensation	**-**	-	3	4	3	6	5
Working hours	**3**	1	6	7	15	16	9
Other	**-**	-	-	-	1	-	-
Total	**10**	**21**	**71**	**57**	**72**	**83**	**108**

For all the non-conformities we encountered, we drew up specific corrective action plans (CAPs) that include resolution procedures and timetables. Suppliers and production plants are responsible for following up on these corrective actions. JAC members constantly monitor the implementation of these plans.

CAPs set clear deadlines to complete all corrective actions within 12 months. Although all our suppliers are committed to completing all corrective action plans, we have found that some issues are hard to resolve within one year. In 2021, we closed 98% of all non-conformities raised between 2018 and 2020.

Promoting human rights in the supply chain

KPN joined the JAC Human Rights Workstream in 2021, a workstream set up to detect, alert and escalate adverse human rights impacts within the supply chain through JAC and to support individual company actions and potential JAC statements. The primary focus point of this workstream is forced labor, but our joint initiative on a living wage was also adopted. A JAC statement on expectations regarding forced labor was published on the JAC website and suppliers were urged to carry out due diligence and respond to JAC members' questions concerning any reports of forced labor in their operations and supply chains. They were also asked to share what active measures they have taken, what their future plans are and to make sure that forced labor is not used anywhere and at any time in their operations.

Our valuable assets

Overview of our capitals to operate

Our organization is fueled by six key capitals, enabling us to contribute to digital transformation. Each of the capitals is vital to maximize the value we create for our organization, our stakeholders and society at large in the short and long term.

Loyal customer base and digital era demands

We aim to build a satisfied customer base, providing customer journeys designed to accommodate the digital needs of our customers, ranging from consumers to LCE.

	2021	2020
Consumer and Business postpaid customer base	**5,669k**	5,490k
Consumer and Business broadband customer base	**3,137k**	3,134k[1]
Fixed-mobile households	**1,496k**	1,475k[2]
Wholesale broadband customer base	**1,101k**	1,046k

1 2020 figure of Business broadband customer base has been corrected for 7k

2 2020 figure has been restated due to new definition of fixed-mobile converged households

Strong partnerships and supplier base

We join forces with ambitious technology companies to work on the applications of tomorrow, providing better and more innovative products to our customers while reducing adverse impacts across the supply chain.

	2021	2020
Partnering innovative startups and entrepreneurs	**34**	55
Partnering research centers and universities	**6**	6
KPN Ventures fund size	**€70m**	€70m
Contracted suppliers	**1,348**	1,435

Future-proof infrastructure and mobile spectrum

We connect telecom and IT activities through investments, partnerships and research in innovations strengthening the capacity of our network and IT infrastructure.

	2021	2020
FttH households	**3.22m**	2.78m
Modernized mobile sites	**4,000**	2,936[1]
Average max download speed broadband fixed	**446 Mbps**	377 Mbps
Average 5G download speed	**210 Mbps**	N/a

1 Restated number including replacement sites and densification sites

Skilled and motivated workforce

We create a more simple, effective and inclusive organization by acquiring, developing and retaining the right people and skills to become a stronger, more agile and profitable business.

	2021	2020
Full-time domestic personnel	**9,699**	10,102
Average training cost in EUR per FTE	**€1,499**	€1,507
Employee score for engagement	**82%**	86%

Our valuable assets

Solid financial basis

We focus on sustainable mass-market service revenue growth and efficiency aiming to realize a return on investment for our capital providers that outperforms the cost of capital while solidifying our financial and competitive position.

	2021	2020
Return on capital employed	**11.0%**	10.1%
Market capitalization	**€11.5bn**	€10.5bn
Leverage ratio	**2.3x**	2.3x
Credit ratings (Moody's/S&P/Fitch)	**Baa3/BBB/BBB**	Baa3/BBB/BBB

Sustainability

We mitigate our adverse environmental impacts driven by our belief that sustainable business is better business, which is expressed trough our climate-neutral operations, our commitment to a circular economy and our ambition to realize net-zero carbon emissions in our supply chain by 2040.

	2021	2020
Green electricity consumption	**100%**	100%
Energy consumption	**2.132 PJ**	2.428 PJ
Reduction of value chain CO_2e[1]	**22%**	19%

1 Scope 3 emissions compared to base year 2014, see Appendix 3

Corporate governance

Steering the company

KPN's corporate governance framework is in line with the requirements of the Dutch Civil Code, the Dutch Corporate Governance Code and applicable laws and regulations, including securities laws, and is aligned with our strategy. Furthermore, the company is governed by its Articles of Association and internal procedures, such as the by-laws of the Board of Management and the by-laws of the Supervisory Board.

Legal structure of the company

Royal KPN N.V. is a public limited liability company established under the laws of the Netherlands, with ordinary shares listed on Euronext Amsterdam. Its Articles of Association were last amended on 20 April 2018. KPN has a two-tier management structure with a board of management and a supervisory board. KPN qualifies as a 'large company' (*structuurvennootschap*) within the meaning of the Dutch Civil Code and applies the relevant rules of Dutch corporate law. The Board of Management is entrusted with the management of the company. The Supervisory Board oversees strategic and commercial policymaking by the Board of Management and the way in which it manages and directs KPN's operations. In the performance of their duties, the members of the Board of Management and the Supervisory Board are guided by the interests of the company and the enterprise connected with it, and take the relevant stakeholder interests into account. The Board of Management is accountable to the General Meeting of Shareholders in accordance with Dutch legislation. See Note 24 to the Consolidated Financial Statements for details of KPN's legal structure.

Shareholders

Share capital, listings and indices

KPN's authorized share capital totals EUR 720m, divided into nine billion ordinary shares of EUR 4ct each and nine billion preference shares B of EUR 4ct each. As of 31 December 2021, a total of 4,202,844,404 ordinary shares were outstanding. On 24 November 2021, the Board of Management decided to cancel 73,684,157 shares that the company held in its own capital. This cancellation will become effective upon completion of the mandatory notice period of two months. Since 13 June 1994, KPN's ordinary shares have been listed on Euronext Amsterdam (ticker: KPN). KPN has a Level I American Depositary Receipt (ADR) program, which allows investors to trade KPN ADRs in the United States on the over-the-counter market (ticker symbol: KKPNY). KPN shares are included in a number of leading indices, including the AEX, the EURO STOXX Telecommunications Index and the STOXX Europe 600 Telecommunications Index.

General Meeting of Shareholders

The General Meeting of Shareholders holds all powers that have not been granted to other company bodies. It is authorized to appoint members of the Supervisory Board upon binding nomination by the Supervisory Board and to dismiss the Supervisory Board. The General Meeting of Shareholders also adopts the Financial Statements, releases the members of the Board of Management and Supervisory Board from liability, determines the dividend, determines the remuneration for members of the Supervisory Board and approves the remuneration policy and share (option) plans for the Board of Management. Furthermore, certain decisions are subject to the approval of the General Meeting of Shareholders, including decisions entailing a significant change in the identity or character of the company or its business and corporate matters, such as amendments to the company's Articles of Association, a (de)merger or the dissolution of the company, and the issuance of shares or reduction of the issued capital of the company.

Within four months of the end of every fiscal year, the Board of Management prepares Financial Statements, accompanied by an Integrated Annual Report. The Financial Statements are submitted to the Supervisory Board for approval, and subsequently (within six months of the end of the fiscal year) to the Annual General Meeting of Shareholders (AGM) for adoption, and to the Central Works Council for information purposes. Adoption of the Financial Statements does not automatically discharge the Board of Management or the Supervisory Board from liability. This requires a separate resolution by the AGM. Further General Meetings of Shareholders are held as often as the Supervisory Board or Board of Management deem necessary. The Board of Management and the Supervisory Board set the agenda of the General Meetings of Shareholders. Shareholders who individually or collectively represent at least 1% of the issued capital or who, according to the Official Price List of Euronext Amsterdam, represent at least a value of EUR 50m are entitled to propose items for the agenda, within the boundaries of the law. Every shareholder is entitled to attend a General Meeting

Corporate governance

of Shareholders, by default in person or through written proxy, to address the meeting and to exercise voting rights. Depending on the status of the current Emergency Act in the Netherlands, the Annual General Meeting of Shareholders (AGM) will be held virtually or at headquarters Rotterdam.

Obligations to disclose holdings

The AGM in 2021 was fully virtual, in line with COVID-19 restrictions. Pursuant to the Dutch Financial Supervision Act (*Wft, Wet op het financieel toezicht*), legal entities as well as natural persons must immediately notify the Netherlands Authority for the Financial Markets (AFM) when a shareholding reaches, exceeds or falls below certain thresholds of the issued capital. The AFM incorporates these notifications in the public register, which is available on its website. See Note 23 to the Financial Statements for notified KPN shareholdings as at 31 December 2021. Please see 'Composition of the boards' (page 73) for information on insider transactions and share ownership by the members of the Board of Management and Supervisory Board.

Purchase of shares in the company's own capital and issuance of new shares

With the general aim of flexibility in financing of the company, the AGM authorized the Board of Management to purchase shares in the company's own capital and also decided to reduce the issued capital through cancellation of own shares held by the company by a number that could be determined by the Board of Management. The AGM also designated the Board of Management as the body authorized to issue ordinary shares and to grant rights to subscribe for ordinary shares and to restrict or exclude statutory pre-emptive rights of existing shareholders upon such issuance or granting of rights. The above authorities and decisions are limited to a maximum of 10% of the issued capital as of 14 April 2021 and are applicable until 14 October 2022. Resolutions by the Board of Management implementing the above are subject to the approval of the Supervisory Board. In 2021, KPN completed a EUR 200m share buyback program using the given authorities, repurchasing 73,684,157 shares equal to 1.8% of outstanding shared.

Supervisory Board

The Supervisory Board supervises and advises the Board of Management, guided by the interests of the company and the enterprise connected with it, and taking into account the interests of the stakeholders. It is closely involved in setting the strategy - including any ESG related items - and monitors the implementation of that strategy, including the operational and financial results thereof. Major investments, acquisitions and various corporate matters are subject to Supervisory Board approval.

Members of the Supervisory Board are appointed by the General Meeting of Shareholders upon binding nomination by the Supervisory Board. The Central Works Council has an enhanced right to recommend persons for nomination to the Supervisory Board for up to one-third of its members. The Supervisory Board must nominate the so recommended person unless it is of the opinion that the person would be unsuitable to fulfill the duties of a Supervisory Board member or such appointment would cause the Supervisory Board to be improperly composed. Pursuant to a specific arrangement with América Móvil, América Móvil is entitled, as long as it holds more than 10% of the shares in KPN, to designate one person to be nominated by the Supervisory Board for appointment as a member of the Supervisory Board.

According to the Articles of Association, the Supervisory Board must comprise of at least five and not more than nine members. Supervisory Board members are appointed for an initial term of four years, which ends at the first AGM after that term expires. They can be be reappointed once for a four-year term and thereafter for a maximum of two terms of two years, provided specific reasons for such further reappointments are given. The Supervisory Board has determined its 'profile', defining the basic principles for its composition. All nominees for election to the Supervisory Board must fit this profile. According to this profile, the Supervisory Board must be composed in such a way that members of the Supervisory Board are able to operate independently of each other and of the Board of Management. The profile is available on KPN's website.

The by-laws of the Supervisory Board comprise, among other things, rules regarding the members' duties, powers, working methods and decision-making, what decisions by the Board of Management it must approve, training and conflict handling. The by-laws are available on KPN's website.

Committees of the Supervisory Board

The Supervisory Board has four committees: the Audit Committee, the Remuneration Committee, the Nominating & Corporate Governance Committee and the Strategy and Organization Committee. These committees assist the Supervisory Board in its decision-making and report their findings to the Supervisory Board. Their tasks are laid down in terms of reference, which are available on KPN's website.

Further information on the activities of the Supervisory Board and its committees in 2021 can be found in the Report by the Supervisory Board.

Corporate governance

Board of Management

The Board of Management is responsible for setting KPN's strategy and for managing KPN's strategic, commercial, financial, operational, ESG and organizational matters. The Board of Management is accountable for its performance to the Supervisory Board and to the shareholders of the company. In performing their duties, the Board of Management focuses on long-term value creation for the company and the enterprise connected with it, taking into account stakeholder interests.

The members of the Board of Management are appointed and dismissed by the Supervisory Board. Members of the Board of Management are appointed for a four-year term, which ends at the first AGM after that term expires. The by-laws of the Board of Management contain, among other things, rules regarding the members' duties, powers, working methods, decision-making and conflict-handling. The by-laws are available on KPN's website.

ESG

ESG criteria are embedded in KPN's strategy and organizational structure. ESG themes are defined and approved by the Board of Management, including their ambitions and KPIs. Every ESG theme is assigned to a member of the senior management team who, as theme owner, is responsible for stakeholder dialogue, targets, progress and results. Each theme owner heads a committee, consisting of management of the key departments involved in this theme. The theme owners report to KPN's corporate social responsibility (CSR) Manager, who is responsible for the overall reporting, approach and cohesion. The CSR Manager reports to the Director of Corporate Communication & CSR, who in turn reports to the CEO. Four times a year, ESG data is included in the overall set of business KPIs that is reported to and discussed with the Board of Management. In order to obtain sufficient outside reflection, stakeholder dialogues are held with external experts to advise KPN on its approach to ESG in general and more in-depth on the ESG themes. Climate-related risks and opportunities are considered integral to the governance of operations and ESG themes. Further details on governance and risk can be found in chapter Compliance and risk.

Compliance with the Dutch Corporate Governance Code

KPN complies with all best practices of the Dutch Corporate Governance Code. For reporting of the pay ratio as referred to in best practice provision 3.4.1.iv, KPN uses a slightly different definition than guided by the monitoring committee. The average costs of external personnel are not part of the calculated pay ratio as no comparable headcount definitions are available within KPN to act as a solid reference. An overview of all principles and best practices of the Dutch Corporate Governance Code as well as KPN's application of these in accordance with the 'comply or explain' principle is available on KPN's website.

Conflict of interest

The handling of conflicts of interest between the company and members of the Board of Management or Supervisory Board is governed by Dutch law, the relevant provisions of the Dutch Corporate Governance Code and the by-laws of the respective boards. A board member is required to immediately report any (potential) conflict of interest that is of material significance to the company and/or to the member concerned, to the chairman of the Supervisory Board (or, in the case of the chairman, to the vice-chairman of the Supervisory Board). The board member shall not take part in discussions or decision-making on a subject in which it has a conflict of interest. Decisions to enter into transactions in which there are conflicts of interest with members of each of these company bodies that are of material significance to the company or such member require the approval of the Supervisory Board.

In 2021, KPN signed an agreement with APG to enter a joint venture called Glaspoort. Ms. Zuiderwijk is a member of the Supervisory Boards of both KPN and APG. Although investment decisions such as these are, under APG's governance, not shared with the Supervisory Board of APG, Ms. Zuiderwijk decided - to avoid any appearance of a conflict of interest - not to participate in the deliberations or decision-making on this topic, and therefore did not attend the meeting related to this topic at KPN.

For the Statement by the Board of Management and Responsibility Statement, see page 70.

Employee participation

KPN has implemented employee participation in accordance with the provisions of the Dutch Works Councils Act. Constructive employee participation is an integral part of our organization and allows employees to be involved in organizational matters in various ways and to have a say in their work. Employee participation is an important value for KPN and a part of its culture. To align employee participation processes with KPN's practices, we have established several individual work councils, specific to different business segments. These works councils are all represented in the Central Works Council, which is competent for subjects of common interest or subjects that concern a majority of the works councils. The Central Works Council interacts with the CEO, whereas individual works councils for each business segment interact with the director of that segment.

Corporate governance

External auditor

The external auditor is responsible for auditing the Financial Statements. The AGM appoints the external auditor on a yearly basis, upon a proposal by the Supervisory Board. The external auditor reports to the Board of Management, the Audit Committee and the Supervisory Board to discuss findings pertaining to their agreed procedures for the quarterly financial results and audit of the annual financial results. The external auditor attends the AGM to answer questions pertaining to the Combined Independent Auditor's Report, as included in the Integrated Annual Report. The Audit Committee approves every engagement of the external auditor, after pre-approval by the internal auditor, to ensure the external auditor's independence. All Audit Committee meetings are attended by the external auditor. For the role of the internal auditor, see page 68.

Foundation Preference Shares B KPN (Stichting Preferente Aandelen B KPN)

KPN has granted a call option, which is not limited in time, to the Foundation Preference Shares B KPN (the Foundation), to acquire a number of preference shares B in KPN, which have the same voting rights as ordinary shares, not exceeding the total issued number of ordinary shares, minus one share and minus any shares already issued to the Foundation. Upon exercise of the call option, 25% of the nominal value of EUR 4ct per Class B preference share needs to be paid by the Foundation. The statutory goal of the Foundation is to protect KPN's interests (which includes the interests of stakeholders, such as customers, shareholders and employees), by, among others, protecting KPN from influences that may threaten its continuity, independence and identity. Consequently, in the event of any circumstances where the company is subject to influences as described above and taking public security considerations into account, the board of the Foundation may decide to exercise the call option, with a view to enabling the company to determine its position in relation to the circumstances as referred to above, and seek alternatives. The board of the Foundation is of the opinion that under normal circumstances it should not exercise its voting rights for longer than a limited period. The members of the board of the Foundation are A.P. Aris (Chair), F. van der Wel, P.N. Wakkie and F.J.G.M. Cremers. Per 1 January 2022, Mr. Cremers has resigned, and Mr. C.F.H. Vogelzang has been appointed as member of the Board. The Board of Management has concluded that the board of the Foundation is independent from KPN in accordance with parts c and d of the first subsection of article 5:71 of the Dutch Financial Supervision Act.

The views of the board of the Foundation, summarized above, are published on the Foundation's website (www.prefs-kpn.nl).

Tax and regulations

Monitoring compliance of tax and regulations proactively

KPN is subject to taxation, as well as to sector specific regulation. We apply an open and proactive approach to authorities and regulators on these topics, aiming for fair and transparent taxation and regulation, enabling us to be in control over compliance.

Tax profile and current tax position

Tax profile

Embedded in KPN's Tax Strategy and Policy, KPN follows a tax approach in which principles of mutual trust, understanding and transparency are elementary. Combined with continuous dialogue with the government and active participation in representative associations, this approach is inspired by best practice around tax governance and compliance.

KPN's Corporate Tax department manages all relevant taxes and secures optimal use of subsidy opportunities, whereby KPN adheres to its Tax Strategy and Policy (see ir.kpn.com).

It is important to KPN to create sufficient tax awareness throughout the organization. Therefore, KPN regularly organizes meetings, knowledge updates and training, to ensure employees act with integrity and adhere to KPN's tax strategy and policy. An important pillar in its tax strategy and policy is KPN's Tax Control Framework (TCF). The TCF is an integrated part of KPN's control environment as described in chapter Compliance and risk (page 63). As part of the financial objectives (page 65), the effectiveness of the TCF is confirmed by the statement of the Board of Management (page 70).

As the TCF is part of the financial objective, KPN's Corporate Tax department is responsible for effectively identifying, assessing and managing the main tax risks of the company (first line of defense). Risk Management and Compliance departments (second line) and KPN Audit (third line) monitor and review the effectiveness of the TCF. The TCF effectiveness is monitored and evaluated every quarter and is challenged once a year to ensure a dynamical and up-to-date control environment. The identified tax risks are explained in Appendix 4 (p. 194) (including countermeasures). The whistleblower policy (page 64) also applies to tax. Misconduct or suspicion thereof relating to tax should be reported.

Current tax position

The relationship with the Dutch tax authorities is based on the principles of mutual trust, understanding and transparency. KPN is self-assessing and discusses in a pro-active and transparent manner current and potential future tax issues with the Dutch tax authorities. In line with their policy, that applies to the 100 largest and most complex organizations, the Dutch tax authorities prepared an Individual Monitoring Plan ("Individueel Toezichtsplan") based on the aforementioned principles with KPN.

In 2021, the following main developments and projects were relevant to KPN from a tax perspective:

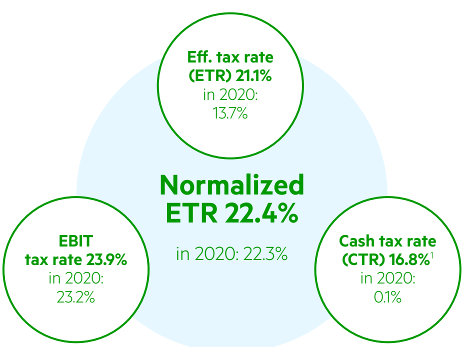
- KPN used all remaining realized losses in 2021. Consequently, KPN pays significantly more income tax compared to prior years.
- The realization of the joint venture (Glaspoort) with APG triggered a taxable event in Q2 2021, which has been discussed and agreed with the Dutch tax authorities. The extension of the fiber roll-out KPN, APG and Glaspoort agreed in Q4 2021, will follow the same principles for tax purposes as the initial transaction (see also Note 8).
- KPN and the Dutch Tax authorities concluded a new agreement on the application of the innovation box (iBox) facility for the years 2021-2025.
- The uncertain tax position (UTP) recognized in 2020 as a result of the discussions with the Dutch tax authorities on how the calculation of the iBox was made, has been settled with the Dutch tax authorities in line with the UTP recognized.
- Upon completion of all prior years, the German Tax authorities started a tax audit of E-Plus over fiscal year 2014. As part of this audit, in 2021, the German Tax authorities requested KPN's German subsidiary to further substantiate its tax filing with regard to the restructuring of the substantial debts that E-Plus had incurred over the years. The subsidiary has addressed the questions on the basis of supporting third party expert opinions regarding this matter. Completion of this process may take time given the materiality and complexity of the 2014 tax filings (see Note 8, Note 22 and appendix 4).
- Improvement of the calculation of the tax depreciation on lease property and real estate (see Note 8).
- To avoid further long lasting procedures, KPN agreed with the Dutch tax authorities not to start a new mutual agreement procedure ("MAP") for the years 2016-2020. The MAP allows

Tax and regulations

designated competent authorities to interact with the intent to resolve double taxation (as defined by the OECD). As from 2021, KPN will report its insurance activities of the Irish entity in line with the outcome of the mutual agreement procedure over 2014 and 2015. The impact of the agreement on prior years and changed reporting as from 2021 on KPN's tax position is limited.

- KPN filed notices of objections with regard to the VAT calculation methodology on new mobile consumer propositions (resulting in a lower remittance of VAT from August 2016 until December 2018). Based on the VAT decree regarding the VAT treatment of vouchers that applies as of 2019, KPN discontinued the lower remittance of VAT as of 2019. KPN has also filed notices of objections for these years. The Dutch tax authorities have rejected these notices of objections and KPN appealed to this decision of the Dutch tax authorities to the court. A court procedure is pending. For further details see also Note 20 and appendix 4.
- Tax credit on Research and Development: KPN is continuously monitoring its innovation activities to substantiate the R&D tax credit on labor costs (Research and Development Promotion Act, further in this report abbreviated as WBSO).

Tax metrics 2021



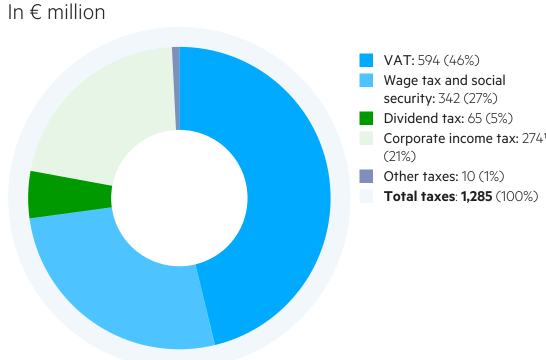
The reported difference between the effective tax rate and the cash tax rate is mainly caused by the impact of available tax losses (carry forward) and temporary differences (between the tax basis of assets and liabilities and their carrying values). See also Note 8 for the accounting policy on taxation. The EBIT tax rate is lower than the statutory rate mainly due to the impact of the innovation box facility. The EBIT rate is higher than 2020 since a part of the taxable book profits, realized on the joint venture with APG, does not benefit from the innovation box facility.

Tax contribution

Taxes paid by KPN include:

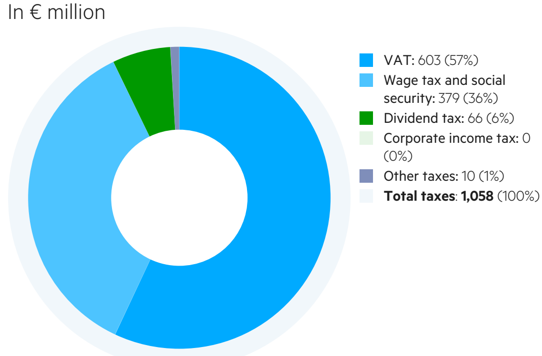
- Taxes paid by KPN - Corporate income taxes and other taxes (e.g. real estate tax)
- Taxes collected and paid by KPN as outcome of its activities - VAT, wage tax and social security, dividend tax and other taxes (e.g. energy tax)

2021
In € million



1 Of which related to investing activities EUR 197m, see Note 21

2020
In € million



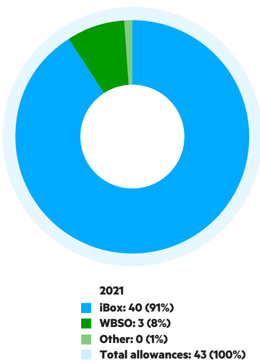
1 Of which investing activities 12.1%

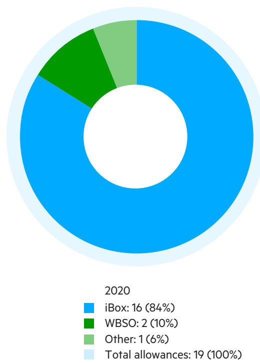
Tax and regulations

Government allowances

Government allowances include:
- Tax deduction on current year innovation box facility ("iBox" - see also Note 8 Taxation)
- Tax credits on research and development ("WBSO")
- Other: European and national government grants

In € million





The tax deduction on the innovation box facility for 2021 includes a one-off of total EUR 19m related to the realization of the Glaspoort joint venture and the transaction with Glaspoort and APG to extend the fiber roll-out.

Forward-looking

KPN's unrealized losses will be realized in 2022. As a result, KPN's income tax payments will likely be less in 2022 compared to 2021. Due to the fiscal unity loss compensation rules, certain profits within the KPN Group are not eligible to be offset against these (future) available losses.

In 2021, the Dutch government enacted new legislation, changing the method for carry forward and carry back losses: as from 2022 realized losses can be offset to 50% of the taxable profit of a certain year. However, losses will no longer be time-barred. Based on this, KPN's income tax payments will increase as of 2023 and part of the realized loss in 2022 can be carried back to 2021. As a result of the new legislation, KPN will need more time to utilize available losses. Based on current projections, KPN will utilize all losses in the foreseeable future for which a deferred tax asset is recognized.

KPN continuously monitors potential developments in the tax environment that may effect its tax position, including:
- EU/OECD harmonization of corporate income taxes
- Potential reform of the Dutch Corporate Income Tax Act
- Environmental taxes

KPN will continue to extend and optimize its tax control framework, and as part of KPN's total IT landscape, by simplification, automation and integration of administrative processes, controls and systems in the near future.

KPN appealed to the decision of the Dutch tax authorities with regard to the VAT calculation methodology regarding vouchers. A court procedure is pending. For further details, see also Note 20 Contract liabilities, trade and other payables and Appendix 4 List of top risks.

KPN continues actively participation in representative associations that seek to develop best practice around tax related disclosures.

Tax and regulations

Regulation affects our business

KPN is subject to sector-specific regulation and enforcement thereof by regulatory authorities, such as the Netherlands Authority for Consumers & Markets (ACM) and the Telecom Agency of the Ministry of Economic Affairs (Agentschap Telecom). As outlined in the chapter 'Compliance and risk', KPN's internal risk management and control systems are designed to minimize the risk of non-compliance with regulation.

European developments

Regulation of the electronic communications markets is largely based on European legislation. The EU's roaming and open internet access regulations are directly applicable in all member states. The current roaming regulation will be replaced by a new Roaming Regulation by July 1, 2022. Political agreement on the new regulation, that will be based on the same 'roam-like-at-home' principle, was reached in December 2021.

The regulation of operators with significant market power is enforced nationally, but coordinated by the European Commission. Licensing regimes for frequencies are based on national law. The national implementation of the 2018 European Electronic Communications Code, which amends the regulation for the electronic communications sector, was carried out in two stages. New powers on mapping broadband networks, enforcing symmetric access regulation and lowering switching barriers came into effect on 21 December 2020. Symmetrical access obligations aim to allow competitors to ask for connections in local situations where replication is not feasible (due to zoning restrictions for instance) or where replicability is not economically possible. BEREC issued Guidelines in December 2020 to ensure regulators across Europe take a harmonized approach to this new obligation. The implementation of the remaining part of the 2018 code is still pending and is expected to take effect early 2022. The scope of this part of the amended regulation has been extended to all interpersonal communications services (including over-the-top), resulting in a more level playing field for comparable services. EU institutions are still discussing the draft new e-Privacy Regulation (in addition to the General Data Protection Regulation), will replace the existing e-Privacy Directive.

Various legislative instruments that may have some impact on KPN are still being discussed, e.g. a draft e-Evidence Regulation and draft regulations in relation to broader digital markets, i.e. the Digital Markets Act and the Digital Services Act. In addition to this sector specific regulation, the importance of general regulation, such as privacy law, content related law and consumer protection law are increasing for our business.

Security concerns based on geopolitical developments

Stakeholders at both a European and a national level are paying greater attention to security concerns in relation to control over telecom operators via investment and to potential security risks in networks. The Foreign Direct Investment Screening Regulation that came into effect on 11 October 2020 is aimed at information shared between EU member states on potential risks to national security and public order in relation to investments. At a national level, the government has adopted a sector-specific act that creates new powers for the government to prevent undesirable control (in relation to security risks to public order or national security) of telecom operators that play a significant role in the market. Legislation may mandate operators not to use equipment from certain vendors in specifically designated critical parts of their networks. Additionally, specific security requirements for mobile networks have been published and should be implemented by 1 October 2022.

Spectrum licenses

The 700, 1,400 (L-band) and 2,100 megahertz (MHz) bands were auctioned in 2020. The auction of the 3.5 GHz band has been postponed until further notice. At the request of the user of the spectrum (Inmarsat), the courts have suspended the necessary reallocation of the spectrum. An advisory committee has been set up in December 2021 to come up with a solution that protects Inmarsat's emergency communications and allows the 3.5 GHz to be deployed in an effective and efficient manner.

The timing of the 26 GHz band allocation has not been finalized yet. The government intends to proceed with this later allocation in the next few years, while also taking into consideration advice from the Dutch Health Council (Gezondheidsraad) for further research to be done.

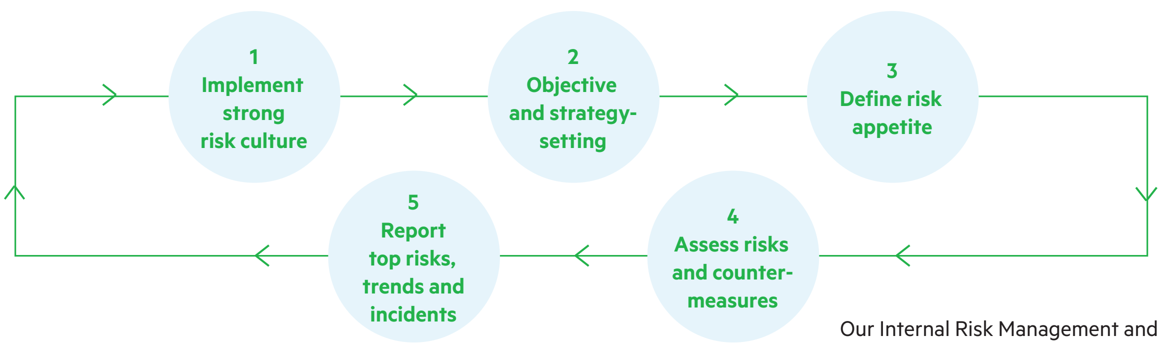
Market analysis decisions in the Netherlands

Ex-ante regulations have been lifted on almost all telecom markets. This includes the market for so-called High 'Quality Wholesale Broadband Access', following a decision to de-regulate by ACM, and the broadband access market analysis following an annulment in court in March 2020. ACM, however, is currently investigating options to intervene in the market for wholesale local access provided at a fixed location once again. It indicated it will publish a draft decision for consultation before the end of the first quarter of 2022. These investigations may still affect KPN in some fixed markets. Fixed and mobile call termination services are still regulated, e.g. the maximum tariffs have been regulated at an EU level since July 2021.

Compliance and risk

Maintaining effective risk management

Deploying effective risk management is a key success factor for realizing our company's objectives. For this reason, KPN has implemented robust Internal Risk Management and Control Systems.



Our Internal Risk Management and Control Systems and methodology

Maintaining effective Internal Risk Management and Control Systems requires a continuous and iterative process involving several steps. A strong risk culture and control environment form an important foundation of our control systems. After setting the strategy, the Board of Management defines its willingness to accept risks (risk appetite) in the pursuit of strategic objectives. Management subsequently assesses the main risks that could hinder the realization of the strategic objectives and defines and implements countermeasures to mitigate such risks, taking into account the risk appetite.

Periodically, KPN's performance, top risks, countermeasures, trends and incidents are reported to and discussed with the Board of Management, which defines further remedial actions if necessary.

1. Implement strong risk culture (control environment)

KPN strives for a business culture in which compliance and integrity are self-evident for all employees. We realize this through several actions including the following:

- The KPN Code of Conduct (the Code) applies to all KPN employees, including the Board of Management, the Supervisory Board and temporary staff. It describes how we work in an open, transparent, honest and socially responsible way. We communicate the Code on our corporate website (ir.kpn.com), our intranet, via a mandatory e-learning training for all employees and via online learning interventions ('workouts') that target specific segments of the employee population. We have a stringent approach to bribery and corruption, fraud and all other forms of (illegal) misconduct, including facilitation payments. The effectiveness of, and compliance with, the Code is structurally assessed by:
  1. Actively detecting and investigating any alleged misconduct and taking appropriate disciplinary action if misconduct is substantiated
  2. Monitoring that all staff (both internal and external) have completed the e-learning training for the Code
  3. Structural reporting of incidents to the Board of Management and to the Supervisory Board
- To strengthen awareness and the tone at the top and at other management levels, we frequently conduct fraud risk assessments, including a risk assessment on attitude and behavior, and provide integrity training.
- To emphasize our desired company culture and behavior and to create awareness in the business, we have implemented a communication and training program on compliance and integrity subjects. Information that is important to share because of (changes to) applicable policies, laws or regulations or because of a necessity or demand in business (risk- or need-based) is shared through e-learning, workshop or classroom training.
- The Business Control Framework (BCF) comprises all corporate policies and guidelines that are mandatory for all of KPN's

Compliance and risk

segments and entities. In 2021, senior management were given an e-learning course on the main principles and policies of the (revised) BCF.
- KPN requires all employees, and encourages external parties, to report (anonymously, if desired) any misconduct by KPN employees (or suspicion of this). Our whistleblower policy complies with the Dutch Whistleblower Act.
- We periodically measure the state of our organizational culture, compliance and integrity as perceived by our employees and report results as well as plans for improvement to a large part of senior management, and initiate responses, if deemed necessary. In chapter The network behind the network, we describe how we create a culture that contributes to our growth strategy.

2. Objective and strategy-setting

KPN's objectives and strategy are described on page 10. During the objective and strategy-setting process, senior management takes into account the company's known risks and opportunities, and its risk appetite (see next step). The objectives and strategy are discussed with the Supervisory Board.

3. Define risk appetite

Pursuing any business objective inevitably leads to taking risks. Risks can jeopardize achieving those objectives in various ways. Each type of risk encountered is dealt with in a manner that matches the risk appetite of the Board of Management. The risk appetite is the total residual impact of risks that KPN is willing to accept in the pursuit of its strategic objectives. The risk appetite per strategic objective or risk area is determined by the Board of Management every year. These risk areas include financial, operational, strategic, compliance and (information) security themes.

Risk areas with a low risk appetite, and hence a low acceptable residual risk, require strong risk management and strong internal controls. Risk areas with a high-risk appetite require relatively less risk management and internal control effort.

KPN has a prudent risk appetite, which can be described as follows per risk category:
- Strategic risks: in the pursuit of our strategic objectives, KPN is willing to accept reasonable risks in a responsible way, taking into account our stakeholders' interests.
- Operational risks: KPN is committed to a high quality of customer service which is reflected in an increasing NPS. We aim to limit the number of interruptions to our networks, services and systems as much as possible. We implement strict policies to keep our customer data private, safe and secure.
- Financial risks: we strive for the right balance between a prudent financing policy, sufficient investments in the business and fair shareholder remuneration. KPN is committed to an investment-grade credit profile. See Note 13 to the Financial Statements. For tax matters, KPN has defined a detailed tax risk appetite dashboard.
- Compliance risks: we are committed to fully complying with relevant laws and regulations and have a zero tolerance approach to bribery and corruption, fraud and all other forms of (illegal) misconduct.
- Financial reporting risks: we aim to minimize the risk of material misstatements and errors in our Financial Statements.

4. Assess risks and countermeasures

KPN has implemented effective Internal Risk Management and Control Systems to manage its main risks. The main part of these systems comprises seven KPN Internal Control Systems, which cover the most relevant risk areas for KPN, as summarized in the table below:

KPN Control System	Control System objective
Liquidity Management & Financial Framework	To maintain sufficient liquidity for continuity purposes and maintaining financial flexibility
Year Plan & Year Outlook	To create value
Network Service Levels	To maintain customer service delivery levels
RFR GRIP Framework	To maintain investor trust
Compliance Frameworks	To maintain licenses to operate
Main Non-Financial KPIs	To measure strategic success and integrated reporting
IT Security & Continuity	To mitigate cyber security threats

For each category of objectives (strategic, operational, sustainability, financial, compliance and reliable financial reporting), KPN has defined different control systems.

Strategic objectives

Every year, we assess the top risks at group (top-down approach) and segment level (bottom-up approach), and, if necessary, we implement countermeasures to mitigate them within the defined risk appetite. We conducted risk assessments with our Consumer, Business, Wholesale and Operations segments, as well as with selected staff functions in the Corporate Center in 2021. The business objectives are detailed in a strategic business plan. Every quarter, segments perform a 'most likely' forecast four to six quarters ahead on their main financials and key performance indicators (the rolling forecast). Segments update the main risks and opportunities, resulting in a bandwidth of outcomes around expected performance. Each month, segment

Compliance and risk

management discusses their actual performance with the Board of Management.

Operational objectives

KPN has business continuity plans in place to safeguard the continuity of services to customers and critical systems and processes. To manage our information security and privacy risks, we have implemented the KPN Security Policy as part of the BCF. For more details, see chapter Privacy and security (p. 38).

We have implemented ISO standards in designated areas to certify operational processes. Additionally, we continuously simplify and digitalize services and processes. We have implemented quality improvement plans where necessary.

Our main suppliers comply with our Supplier Code of Conduct. Through this code, suppliers confirm that they support and respect the protection of internationally proclaimed human rights and operate in the spirit of the Charter of the United Nations (e.g. by preventing discrimination, child labor or forced labor, and by recognizing and respecting the environment in their business operations). Compliance with environmental law is covered by our ISO 14001 certificate.

For information about the investigation into the security and privacy protection of our legal intercept facilities, please refer to page 39.

Sustainability objectives

Risks related to climate change and compliance with new environmental legislation are incorporated in our Risk Management and Control Systems. For example, flooding risks (caused by heavy rainfall or rising sea levels) or continuing drought and heat could damage our networks and systems. As such, these risks are managed in KPN's business continuity strategy. With our climate-neutral performance for our own operations and continued focus on absolute energy reduction, we are in a very good position to meet new regulations and customers' expectations –see chapter Environmental performance and responsible supply chain (p. 47). Read more in Appendix 3: Transparency, materiality and stakeholder engagement on our alignment in our reporting with the TCFD framework. In 2020, KPN performed scenario analyses for climate risks to analyze the vulnerability of our critical infrastructure to changing climate effects. For more information on these analyses, see our Integrated Annual Report 2020 (p. 75-76). In 2021, we added further details to these climate scenario analyses, raising senior management's awareness of climate and flooding risks as a result. Information from the scenario analyses also helped protect and repair telecom infrastructure and services in Limburg during the July 2021 floods.

In terms of climate adaptation, we ran a pilot in Arnhem and gave the roof of a technical building a green roof - a move that is also in line with our efforts on biodiversity. Together with other network operators in the Groene Netten coalition, we jointly improve biodiversity with our ecological infrastructure.

Circularity

The circular economy aims to reduce the impact of the materials used in our products and services. This strategy not only reduces risks concerning the availability of future materials and the risk of price volatility, but also prepares our company for future market demands, given that society aims to become more sustainable and reduce its carbon footprint. At the same time, circular business models mean rethinking our business and coming up with new innovations. We have also noticed the importance of having a leading sustainable strategy to attract and retain talent. For more information, see chapter Environmental performance and responsible supply chain.

Sustainable employability

For more information, see chapter Sustainable employability (p. 42).

Financial objectives

KPN's Corporate Treasury department manages risks related to cash and debt positions, finance agreements, credit ratings, currency and interest exposures, counterparty risks, and non-life insurance (see Note 13 to the Financial Statements). Corporate Treasury has defined policies with clear boundaries for these risks. Compliance with these policies is monitored frequently.

As part of KPN's tax strategy, the Corporate Tax department recommends the most tax-efficient and responsible approach in the interest of all stakeholders, while adhering to KPN's tax policy and complying with all relevant tax laws and regulations. This determines KPN's overall tax risk appetite. As KPN proactively engages with Dutch and other tax authorities, tax exposures, if any, are contained and under control. Besides potential tax exposure, reputational risk is always part of the consideration to apply particular tax planning. See also the separate chapter Tax and regulations (p. 59).

Compliance objectives

Our compliance risk assessment (CRA) framework comprises an integrated framework that oversees risks mainly related to compliance with telecommunications, competition, consumer, financial services (e.g. credit) and privacy legislation. We also monitor compliance with Solvency II requirements (KPN Insurance). For compliance risks, we have implemented relevant processes and controls that are continuously monitored. For risks related to our regulated business, compliance controls are tested by dedicated staff throughout the year.

Compliance and risk

Reliable financial reporting objectives

Our internal controls for Reliable Financial Reporting (also known as RFR GRIP Framework) ensure that material misstatements in KPN's Financial Statements are prevented or detected in a timely manner. Each quarter, Risk Management and KPN Audit assess the overall effectiveness of the controls before publication of the quarterly figures. The Review Committee examines all reports and documents containing financial information that is intended for external publication, to ensure that these fairly represent KPN's financial position and results.

5. Report top risks, trends and incidents

Segment management provides the Board of Management with a quarterly assurance letter regarding the reliability of their financial reporting, the effectiveness of their internal controls over financial reporting, risk management and compliance with telecommunication laws, internal policies and other laws and regulations. Twice a year, Corporate Control reports top risks and countermeasures to the Board of Management, including any main improvement actions.

Summary of main risks and countermeasures

The table on page 67 provides a summary of KPN's main risks and countermeasures, including the expected trends and impact. It also lists a selection of KPIs that are used to monitor the development of the risks and the realization of our risk appetite. The KPIs are frequently monitored in KPN's planning and control cycle, and discussed in the Board of Management's business reviews with segment management, including improvement actions where necessary. This is important as the risks might directly affect our external stakeholders and the value that we create.

For a more extensive list of our risks and countermeasures, see Appendix 4, which is also part of this Report by the Board of Management. Appendix 4 includes, for example, risks relating to:
- COVID-19 and other pandemics that could emerge in future.
- KPN's dependence on suppliers and the supply chain, the scarcity of equipment and rising prices (e.g. for energy).
- KPN's ability to attract and retain qualified and diverse staff members as the war for talent increases.

This extensive list also reflects three emerging risks that KPN identifies for the near term:
- Geopolitical volatility, driven by rising international tensions, protectionism and security concerns, may impact our ability to do business in any part of the world. These concerns could lead to international bans and other sanctions on hardware and software suppliers. See also Appendix 4.
- The increase in new entrants offering alternative or private networks, e.g. for telecom or IoT services. Because of these alternative networks, customers are no longer dependent on the networks of existing providers, which could lead to higher churn in the longer run and lower cash flows to finance new investments. KPN addresses this upcoming risk by accelerating its fiber roll-out and offering distinctive 5G services for B2B customers. See also Appendix 4.
- Continued climate changes in the future could lead to rising sea levels, extreme rainfall or extreme heat and drought. These weather conditions could disrupt our systems and networks and consequently could negatively affect the quality of our services and customer satisfaction. KPN addresses this emerging risk by investing in the high quality and resilient design of our networks and by performing scenario analyses for climate risks. KPN also has a strong Business Continuity Management program, with adequate back-up and recovery plans in case of emergencies. See also Appendix 4.

As stated in section 3 sub 1.c of the Non-financial Information Disclosure Decree (*Besluit bekendmaking niet-financiële informatie*) of 14 March 2017, KPN has identified and assessed its main risks regarding environmental, social and personnel matters, human rights and anti-bribery and corruption. For more details on these risks, see Appendix 4.

The table in Appendix 3 provides an overview of parties for whom we consider ourselves responsible for the implementation of our non-financial policy.

Compliance and risk

Main risks

Risk	Risk has impact on Strategic objective:	Risk category and risk appetite	Main countermeasures (summary)	Impact
Strong competition from current competitors or new market entrants (including big tech), or new emerging disruptive technologies Trend: →[1]	Grow & strengthen customer footprint	Strategic risk KPN is willing to accept reasonable risks in a responsible way.	• Offer converged services such as KPN ÉÉN SME and KPN Hussel in Consumer. • Implement a superior network e.g. by accelerating fiber roll-out and full modernization of mobile network and improving in-home WiFi coverage. • Improve customer experience by optimizing and digitalizing customer journeys. • Improve NPS and offer high-quality service to customers. • Develop new additional services for customers, such as super WiFi	High: the described risk could lead to lower profitability as well as lower market shares. In the longer run, it could impact our continuity. **Monitoring KPI:** Market shares Service revenues # Fiber homes passed
Damage, service interruptions, operational issues in KPN's technical infrastructure and IT Insufficient transformation progress by reducing complexity, legacy and costs in KPN's operations Trend: →[1]	Leverage & expand superior network; Simplify & streamline operating model	Operational risk KPN is committed to a high quality of customer services and to limiting disruptions as much as possible.	• Implement a superior network by accelerating fiber roll-out and full modernization of mobile network, moving to All-IP. • Operations stability program to ensure availability of our (critical) services. • Business Continuity Management, back-up and recovery plans in case of emergencies. • Implement lean operating model, including digitalization, rationalization of networks, IT and portfolio.	Medium-high: the incidents could negatively impact KPN's customer satisfaction, reputation and profitability. **Monitoring KPI:** NPS Network availability # major incidents # Fiber homes passed
Cybersecurity attacks or terrorism: generic threats by malicious actors to the security of KPN's networks, IT and (customer) data Trend: ↗[2]	Leverage & expand superior network	Operational risk KPN is committed to limiting incidents as much as possible and implements strict policies to keep our customer data private, safe and secure.	• Implementation of baseline security measures according to the KPN Security Policy. • Continuous improvement of security according to the KPN Security Lifecycle. • Enhanced risk intelligence and increased network visibility. • Continuous development of security capabilities (people, processes and technologies). • Execution of strategic security actions, e.g. Permanent Vulnerability Management.	High: the incidents could lead to loss/theft of customer data, higher costs, penalties and reputational damage. This risk could impact our continuity. **Monitoring KPI:** Severity and # of security incidents # data leakages
Geopolitical developments for high-risk vendors, which could trigger security, business continuity and reputational risks. New regulations or bans could lead to higher investment costs in future. Trend: ↗[2]	Leverage & expand superior network	Strategic/Operational/ Compliance risks KPN is committed to a high quality of customer services and to limiting disruptions as much as possible. KPN is committed to full compliance with relevant laws and regulations.	• Conduct frequent threat and risk analyses and closely monitor latest global and political developments. • Perform scenario analyses during network design to assess potential implications of geopolitical developments. • Prepare fallback scenarios and policies if KPN can no longer acquire or use hardware and software from specific suppliers and avoid dependence on single vendors or countries for critical or vital services. • Maintain and continuously update the KPN Security Policy and monitor continuous compliance with security requirements.	High: the risk could lead to a higher number of business continuity and security incidents, reputation damage and higher investments and costs. **Monitoring KPI:** N/a
New regulatory decisions in the EU and the Netherlands. Non-compliance with regulation, including privacy regulations Trend: ↗[2]	Generic	Compliance risk KPN is committed to full compliance with relevant laws and regulations.	• Proactive stakeholder and reputation management including dialogue with regulators. • Strengthening effectiveness of the compliance organization and internal controls. • Proactive internal compliance investigations. • Dedicated program to implement Ministerial Decree regulations in a structured and effective manner.	Medium-High: the risk could affect KPN's license to operate and profitability and cause reputational damage **Monitoring KPI:** Fines # incidents reported to regulators

1 → Risk is stable

2 ↗ Risk is increasing

Compliance and risk

Reference table on bribery and corruption

Our policy and outcomes	Risks and mitigation measures	Risks and mitigating measures
Customers and employees	The bribery and corruption chapter below describes our policy and the outcome of our policy. For more details, see Subcode 2 - How we interact with third parties: https://ir.kpn.com/websites/kpn/English/7050/code-of-conduct.html	See Compliance and risk, Appendix 4, GRI
Supply chain	Our policy and the outcome of our policy is described in 'Environmental performance and responsible supply chain' . For more details, see: https://overons.kpn.com/content/downloads/KPN_SUPPLIER-CODE-OF-CONDUCT.pdf, art 5.1, 5.2	See Appendix 2, Appendix 4

Bribery and corruption

We expect our employees to report any suspicion of non-compliance with the Code of Conduct. Following a report, an expert from the KPN Corporate Security Office and/or KPN Compliance, Privacy & Ethics investigates the potential violation. The outcome may lead to disciplinary action. The severity of the disciplinary action is determined by the nature and circumstances of the incident, and may include termination of employment.

In addition to internal reporting options, employees can also use the SpeakUp Line, an anonymous reporting procedure managed by an independent organization.

In 2021, we evaluated the effectiveness of most controls for fraud in the control framework and raised fraud risk awareness among management and staff.

In 2021, we identified 232 internal fraud cases (2020: 178). These concerned such things as the theft of goods, theft of access passes and keys, damaging of properties and breaches of internal incentive regulations. We imposed sanctions and took action to repair the shortcomings in procedures and systems in order to prevent similar issues in the future. As a result, 13 employees had their contract terminated. In 38 cases, we prematurely terminated the contracts of temporary staff. Our KPN Security Policy on Incident Management describes how we deal with incidents if they occur. The KPN Corporate Security Office has a procedure in place to investigate reported incidents of internal fraud by employees.

Our stringent approach to bribery and corruption is based on multiple policies, as listed in the table above. We distinguish between bribery and corruption in the supply chain and bribery and corruption among customers and employees (which includes e.g. fraud, verbal abuse or discrimination).

Governance of risk management and compliance

Three lines of defense

Although the Board of Management is ultimately responsible for risk management and compliance, it is the business management's duty to effectively identify, assess and manage the main risks of the company, in line with the steps discussed in the previous paragraphs (first line of defense). The Risk Management and Compliance departments (second line) are responsible for the design of the risk management and compliance policies, and for supporting and challenging business management in their assessment and management of top risks. KPN Audit (third line) performs, where necessary, independent reviews of the design and operational effectiveness of the Internal Risk Management and Control Systems. The main results of both the risk assessments and the evaluation of the Internal Risk Management and Control Systems are shared with the Audit Committee of the Supervisory Board and discussed with the external auditor.

Internal Audit

KPN's internal audit function (KPN Audit) assesses, in line with Dutch Corporate Governance requirements, the design and effectiveness of the Internal Risk Management and Control Systems and provides assurance to both the Board of Management and the Audit Committee concerning the 'in control status' of KPN's organization and processes. Moreover, KPN Audit conducts ad-hoc financial, information technology, strategic and operational audits and special investigations. KPN Audit conducts its activities in a manner based on continuous evaluation of perceived business risks and has full and unrestricted access to all activities, documents, records, properties and staff. The Chief Auditor reports to KPN's CEO, and quarterly KPN Audit reports are submitted to and discussed with both the Board of Management and the Audit Committee. KPN Audit liaises extensively with the external auditor, among other bodies, based on International Standard on Auditing 610.

Compliance and risk

Description and evaluation of the Internal Risk Management and Control Systems

As stated in principle 1.2 of the Dutch Corporate Governance Code and related best practice provisions, KPN has designed and implemented Internal Risk Management and Control Systems to identify and manage the risks associated with the company's strategy and activities. In 2021, KPN Audit systematically assessed the effectiveness of these systems. A summary of the main Internal Risk Management and Control Systems is provided in the preceding paragraphs.

During the assessment of the design and operating effectiveness of the systems, certain weaknesses, deficiencies and improvement actions were identified and implemented. If deemed appropriate, alternative procedures were conducted to obtain the required assurance. None of these weaknesses or deficiencies were classified as a major failing, as referred to in best practice provision 1.4.2 sub iii.

Human rights

We endorse the United Nations Guiding Principles on businesses and human rights. The obligation to respect human rights is the basis for our way of working and is reflected in our Code of Conduct and in the requirements we place on our suppliers. We monitor the number of reports of human rights violations externally and internally. In 2021, there was 1 report concerning human rights violations involving an employee in our operations (2020: 1).

In 2021, a number of our store employees became the victim or robberies and thereby of excessive violence - a clear violation of human rights. To protect our employees, we decided to temporarily close some of our shops, and to remove high end phones from the stores throughout the country.

The table below provides an overview of the relevant information on human rights policies for our three main stakeholder groups.

Reference table on human rights policies and outcomes

	Materiality	Our policy and outcomes	KPIs	Risks and mitigating measures
Customers	Material topics: • Data & information protection and customer interaction Other topic: • Responsible operations (see Appendix 3: Transparency, materiality and stakeholder engagement)	Our policy and the outcome of our policy is described in the chapters Safeguarded privacy and security, Impact on society and Network infrastructure. For more details on privacy and security, see: https://www.kpn.com/algemeen/missie-en-privacystatement/onze-missie.htm	Safeguarded privacy and security and Appendix 2: Connectivity of non-financial information	See Compliance and risk (p. 63) and Appendix 4: List of top risks
Employees	Other topic: • Attractive working conditions • KPN's corporate governance & human rights compliance (see Appendix 3: Transparency, materiality and stakeholder engagement)	Our policy and the outcome of our policy is described in the chapter Sustainable employability. Our human rights statement is described on our recruiting site: https://jobs.kpn.com/nl/human-rights/ Our privacy statement is described on our recruiting website: https://jobs.kpn.com/nl/over-ons/	Our performance: Sustainable employability (p. 42) and Appendix 2: Connectivity of non-financial information	See Compliance and risk (p. 63) and Appendix 4:List of top risks
Supply chain	Material topic: • Supplier selection & Security Other topic: • KPN's corporate governance & human rights compliance (see Appendix 3: Transparency, materiality and stakeholder engagement)	Our policy and the outcome of our policy is described in the chapter Collaborating towards a sustainable value chain . For more details, see: How we identify low/medium/ high risk suppliers, see: https://overons.kpn/content/downloads/Supply-Chain.pdf What we expect from our suppliers on human rights, see: https://www.overons.kpn/content/downloads/KPN_SUPPLIER-CODE%ADOF-CONDUCT.pdf	Environmental performance and responsible supply chain . Appendix 8: Supply chain, and Appendix 2: Connectivity of non-financial information	See Compliance and risk (p. 63) and Appendix 4: List of top risks

Compliance and risk

Statement by the Board of Management and Responsibility Statement

Statement by the Board of Management

The Board of Management is responsible for the effectiveness of the design and operation of KPN's Internal Risk Management and Control Systems. These have been designed to manage the risks that may prevent KPN from achieving its objectives. However, these Internal Risk Management and Control Systems cannot provide absolute assurance that material misstatements, fraud and violations of laws and regulations have been avoided.

The Board of Management reviewed and analyzed:

- The strategic, operational, financial, financial reporting and regulatory and compliance risks, as discussed in section 'Summary of main risks and countermeasures' on pages 66 and 67.
- The design and operational effectiveness of the Internal Risk Management and Control Systems, as discussed on pages 63 to 66 of this Integrated Annual Report.

The results of this review and analysis were shared with the Audit Committee and Supervisory Board and discussed with KPN's external auditors.

With reference to the best practice provision 1.4.3 of the Dutch Corporate Governance Code and the chapter 'Compliance and risk', including Appendix 4, in this Integrated Annual Report, the Board of Management states that, to the best of its knowledge:

i. This Integrated Annual Report provides sufficient insights into major failings in the effectiveness of the Internal Risk Management and Control Systems. There are no major failings to report (see also paragraph 'Description and evaluation of the Internal Risk Management and Control Systems' on page 69).
ii. The aforementioned systems provide reasonable assurance that the financial reporting, as included in the Financial Statements on pages 96 to 164, does not contain any material inaccuracies.
iii. Based on the current state of affairs, it is justified that the financial reporting, as included in the Financial Statements on pages 96 to 164, is prepared on a going concern basis.
iv. This Integrated Annual Report states those material risks and uncertainties that are relevant to the expectation of the company's continuity for the period of 12 months after the preparation of this report.

Responsibility Statement

With reference to section 5.25c paragraph 2c of the Financial Markets Supervision Act, the Board of Management states that, to the best of its knowledge:

- The Financial Statements of 2021 give a true and fair view of the assets, liabilities, financial position and profit or loss of KPN and its consolidated companies.
- The Integrated Annual Report gives a true and fair review of KPN's position as at 31 December 2021, the development during 2021 of KPN and its group companies included in the Financial Statements, together with a description of the top risks KPN faces.

Rotterdam, 18 February 2022

Joost Farwerck
Chairman of the Board of Management and Chief Executive Officer

Chris Figee
Member of the Board of Management and Chief Financial Officer

Jean-Pascal van Overbeke
Member of the Board of Management and Chief Consumer Market

Marieke Snoep
Member of the Board of Management and Chief Business Market

Babak Fouladi
Member of the Board of Management and Chief Technology and Digital Officer

Hilde Garssen
Member of the Board of Management and Chief People Officer

Composition of the Board of Management

The Board of Management manages KPN's strategic, commercial, financial, CSR and organizational matters. The Board of Management currently consists of six members.

The composition of the Board of Management did not change in 2021. All members of the Board of Management comply with clause 2:132a of the Dutch Civil Code, which limits the number of positions on a supervisory or management board that a director may hold.

Composition of the Board of Management

Name	Position	Year of birth	Start of term	End of current term
J.F.E. Farwerck	Chairman of the Board of Management and Chief Executive Officer	1965	April 2013/ April 2017/[1] December 2019[1]	2024
H.C. Figee	Board member and Chief Financial Officer	1972	February 2020	2024
J.P. van Overbeke	Board member and Chief Consumer Market	1965	December 2019	2024
M.W.M. Snoep	Board member and Chief Business Market	1971	December 2019	2024
B. Fouladi	Board member and Chief Technology & Digital Officer	1969	December 2019	2024
H. Garssen	Board member and Chief People Officer	1973	December 2019	2024

1 Reappointment

Joost Farwerck

Mr. Farwerck was appointed Chairman of the Board of Management and Chief Executive Officer on 1 October 2019. He has been a member of the Board of Management since 10 April 2013. Mr. Farwerck started working at KPN in 1994 and held senior management positions in various divisions. Mr. Farwerck is also a member of the board of FME, a member of the Cyber Security Council, a member of the Supervisory Board of De Nieuwe Kerk Amsterdam and a member of the Supervisory Board of Stichting Het Nationale Theater. Mr. Farwerck is a Dutch citizen.

Chris Figee

Mr. Figee has been a member of the Board of Management and Chief Financial Officer since 1 February 2020. Prior to his appointment at KPN, Mr. Figee was CFO of ASR Nederland. Before joining ASR, Mr. Figee worked at Achmea for five years, as a member of the Achmea Group Committee and Director of Group Finance. In 1999, he joined McKinsey, where he rose to the role of partner in 2006, a role he held until he joined Achmea in 2009. Mr. Figee started his career at Aegon, where he held various positions, including that of Senior Portfolio Manager. Mr. Figee is currently a member of the Supervisory Board of Azerion, a member of the Supervisory Board of UNICEF Netherlands and a member of the Economic Board Zuid-Holland. Mr. Figee is a Dutch citizen.

Composition of the Board of Management

Jean-Pascal van Overbeke

Mr. Van Overbeke has been a member of the Board of Management since 1 December 2019 and Chief Consumer Market since 1 September 2018. In this role, he oversees the day-to-day operations of KPN's Consumer activities. Prior to joining KPN, Mr. Van Overbeke served as Executive Director of SFR from 2016 to 2018. Before that, he was Deputy Group CEO of Lebara, Group Chief Operating Officer at Maxis Communications Group, and Chief Marketing Officer and Chief Commercial Officer at Orange. In his earlier career, he was Head of Trade Marketing, Director Marketing Residential Market and Director Strategy & Transformation Programs at Mobistar. Mr. Van Overbeke is a Belgian citizen.

Babak Fouladi

Mr. Fouladi has been a member of the Board of Management since 1 December 2019. He was appointed Chief Technology & Digital Officer on 4 December 2018. In this role, he is responsible for KPN's network technologies and the digitalization of processes and services. Prior to joining KPN, Mr. Fouladi served as Group Chief Technology and Information Officer at MTN Group (South Africa) from 2016. Before that, he formed part of the executive team as Chief Technology Officer of Vodafone Spain and Vodafone Romania. He was also Director for IT Development and Vice President for Multimedia & System Integration in the UK and later Vice President, Systems Integration in Russia for Ericsson. Mr. Fouladi is a British citizen.

Marieke Snoep

Ms. Snoep has been a member of the Board of Management since 1 December 2019. She was appointed as Chief Business Market effective on 1 February 2019. As Chief Business Market, Ms. Snoep oversees the day-to-day operations of KPN's Business activities. She has more than 25 years of strategic and commercial experience in the Dutch telecommunications market. Prior to joining KPN, Ms. Snoep was a member of the board of T-Mobile Netherlands from 2012. In her earlier career, she held consultancy roles with Solvision (currently Ordina) and Atos Origin. Ms. Snoep is an active member of topvrouwen.nl and a member of the board of KPN Mooiste Contact Fonds. Ms. Snoep is a Dutch citizen.

Hilde Garssen

Ms. Garssen has been a member of the Board of Management since 1 December 2019. She was appointed Chief People Officer on 10 December 2018. Prior to joining KPN, Ms. Garssen served as Senior Managing Director Business Services at ABN AMRO Bank for over two years. Since 1998, she has held numerous HR roles at ABN AMRO Bank, including Chief Human Resources Officer and Managing Director Change, Integration & Management Group Coordination & Reward. Ms. Garssen is a member of the Board of VNO-NCW, a member of the Supervisory Board of the KWF Dutch Cancer Society, a member of the Supervisory Board of TBI Holdings B.V and a member of the board of KPN Mooiste Contact Fonds. Ms. Garssen is a Dutch citizen.

Composition of the Board of Management

Insider transactions

KPN employees who have access to inside information because of their role, profession or duties, including all members of the Board of Management and Supervisory Board, are subject to the inside information Code of Conduct. This Code of Conduct comprises rules for the possession of and transactions in KPN securities by such employees. Members of the Board of Management and Supervisory Board are also subject to reporting obligations to the AFM. The following table provides an overview of transactions in 2021 by members of KPN's Board of Management and Supervisory Board.

Date	Name	Transaction	Price per share (EUR)
15-Apr	J.F.E. Farwerck	Award of 416,740 conditional KPN shares as LTI 2021.	-
15-Apr	H.C. Figee	Award of 214,324 conditional KPN shares as LTI 2021.	-
15-Apr	B. Fouladi	Award of 206,386 conditional KPN shares as LTI 2021.	-
15-Apr	H. Garssen	Award of 158,758 conditional KPN shares as LTI 2021.	-
15-Apr	J.P. van Overbeke	Award of 206,386 conditional KPN shares as LTI 2021.	-
15-Apr	M.W.M. Snoep	Award of 206,386 conditional KPN shares as LTI 2021.	-
19-Apr	J.F.E. Farwerck	Vesting of 76.57% of the 227,733 conditional KPN shares awarded as LTI 2018 into 111,683 ordinary KPN shares (after sale of part of the shares to finance the income tax).	-
19-Apr	J.P. van Overbeke	Vesting of 76.57% of the 114,777 conditional KPN shares awarded as LTI 2018 into 59,489 ordinary KPN shares (after sale of part of the shares to finance the income tax).	-
23-Apr	J.F.E. Farwerck	Award of 10,296 ordinary KPN shares as STI 2020.	-
23-Apr	H.C. Figee	Award of 27,609 ordinary KPN shares as STI 2020.	-
23-Apr	B. Fouladi	Award of 37,533 ordinary KPN shares as STI 2020.	-
23-Apr	H. Garssen	Award of 22,311 ordinary KPN shares as STI 2020.	-
23-Apr	J.P. van Overbeke	Award of 37,533 ordinary KPN shares as STI 2020.	-
23-Apr	M.W.M. Snoep	Award of 29,004 ordinary KPN shares as STI 2020.	-
27-Jul	J.F.E. Farwerck	Bought 140,000 ordinary KPN shares.	2.76
27-Jul	H.C. Figee	Bought 35,000 ordinary KPN shares.	2.75
27-Jul	H. Garssen	Bought 35,000 ordinary KPN shares.	2.75

Share ownership Board of Management[1]

Number of ordinary shares	31 December 2021	31 December 2020
J.F.E. Farwerck	902,261	640,282
H.C. Figee	102,609	40,000
J.P. Van Overbeke	132,172	35,150
M.W.M. Snoep	64,215	35,211
B. Fouladi	52,983	15,450
H. Garssen	90,301	32,990

1 Shares held by current members of the Board of Management (including vested shares in lock-up period). Share ownership relates to ordinary shares. A share ownership incentive applies, under which the members of the Board of Management are encouraged to acquire company shares equal to 150% of the annual fixed compensation for members of the Board of Management (excluding CEO) and 250% of the annual fixed compensation for the CEO

Share ownership Supervisory Board

Number of ordinary shares	31 December 2021	31 December 2020
D.W. Sickinghe	380,000	380,000

Composition of the Supervisory Board

Composition of the Supervisory Board

The Supervisory Board oversees strategic and commercial policymaking by the Board of Management and the way in which it manages and directs KPN's operations. KPN's Supervisory Board currently consists of eight members. At the AGM on 14 April 2021, Mr. Van de Aast was appointed and Mr. Overbeek was reappointed as members of the Supervisory Board and Mr. Haank stepped down as he had reached the end of his four-year term.

All members of the Supervisory Board comply with clause 2:142a of the Dutch Civil Code, which limits the number of positions on a supervisory or management board that a director may hold.

Two vacancies will arise at the closure of the 2022 AGM of Shareholders, as Mr. Sickinghe and Ms. Zuiderwijk will be stepping down, having reached the end of their second four-year term. As of 1 January 2022 a binding gender quotum will apply to the Supervisory Board, requiring at least 1/3 female and 1/3 male members. Mr. Spanbroek, General Counsel and Company Secretary, acts as secretary to the Supervisory Board.

Name	Year of birth	Start of term	End of current term	Audit Committee	Nominating & Corporate Governance Committee	Remuneration Committee	Strategy & Organization Committee
D.W. Sickinghe (Chairman Supervisory Board)	1958	9 April 2014 18 April 2018[2]	2022		C[1]	x	x
G.J.A. van de Aast (Vice-Chairman)	1957	14 April 2021	2025	x	x	x	
C.R.A. Guillouard	1965	15 April 2020	2024	C[1]			x
P.F. Hartman	1949	15 April 2015 10 April 2019[2]	2023		x	C[1]	
E.J.C. Overbeek	1967	4 September 2017 14 April 2021[2]	2025				C[1]
A.D. Plater	1967	10 September 2020	2025	x			x
J.C.M. Sap	1963	15 April 2015 10 April 2019[2]	2023	x		x	
C.J.G. Zuiderwijk	1962	9 April 2014 18 April 2018[2]	2022		x	x	

1 C: Chairman

2 Reappointment

Composition of the Supervisory Board

Duco Sickinghe

Mr. Sickinghe was reappointed as a member of the Supervisory Board on 18 April 2018 and has chaired the Supervisory Board since 15 April 2015. His current second, and final, term of office ends in 2022. Mr. Sickinghe is Managing Director of Fortino Capital. He is also Chairman of the Supervisory Board of Van Eeghen Group and a member of the board of Unibreda. Mr. Sickinghe was previously CEO and a member of the Board of Telenet from 2001 to 2013. Prior to that, he held various management positions at Hewlett-Packard, NeXT Computer and Wolters Kluwer, and was the founder of Software Direct. Mr. Sickinghe is a Dutch citizen.

Catherine Guillouard

Ms. Guillouard was appointed member of the Supervisory Board on 15 April 2020. Her current (first) term of office ends in 2024. Ms. Guillouard is Chief Executive Officer of RATP Group. Her previous roles include various positions at Air France, including that of CFO, the position of CFO at satellite company Eutelsat Communications and the position of CFO and Deputy CEO of the electrical parts distribution company Rexel. In addition to her role at RATP Group, Ms Guillouard is also a non-executive director at Airbus SE. Ms. Guillouard is a French citizen.

Gerard van de Aast

Mr. Van de Aast was appointed as a member of the Supervisory Board on 14 April 2021 and is its vice-chairman. His current (first) term ends in 2025. Mr. Van de Aast is currently Chairman of the Supervisory Board of NS Group, vice-chairman of the Supervisory Board of Signify NV and a member of the Supervisory Board of Witteveen+Bos, the consultancy and engineering firm where he started his professional career in 1979. Mr. Van de Aast is a seasoned executive with a recognized track record at board level in various sectors ranging from construction to software engineering, both in the Netherlands and abroad. His executive experience includes CEO positions at Reed Business, VolkerWessels and Imtech N.V.. Mr. Van de Aast is a Dutch citizen.

Peter Hartman

Mr. Hartman was reappointed as a member of the Supervisory Board on 10 April 2019. His current second term ends in 2023. Mr. Hartman is the chairman of the Supervisory Board of Texel Airport, a member of the advisory board of AviationGlass & Technology and a member of the Advisory Board of Mainblades Inspections. He was Vice-Chairman of the Supervisory Board of Air France/KLM Group from 2013 to 2017. Before that, he spent 40 years working for KLM, the last seven of those as CEO. Mr. Hartman is a Dutch citizen.

Composition of the Supervisory Board

Edzard Overbeek

Mr. Overbeek was reappointed as a member of the Supervisory Board on 14 April 2021. His second term ends in 2025. Mr. Overbeek is CEO of HERE Technologies. Having spent nearly 30 years in the ICT industry, Mr. Overbeek has gained extensive experience in the global digital and communication industry. Prior to joining HERE Technologies, he held several management roles at Cisco, including leading the global services organization and the Asia-Pacific, Japan and China region. Mr. Overbeek is a Dutch citizen.

Jolande Sap

Ms. Sap was reappointed as a member of the Supervisory Board on 10 April 2019. Her second term ends in 2023. Ms. Sap is dedicated to making the business world and society at large more sustainable. She holds several supervisory board and other board-level posts, including member of the Supervisory Board of KPMG Netherlands, chair of the Supervisory Board of Arkin, non-executive director of Renewi PLC, and member of the board of the Dutch Emissions Authority. Between 2008 and 2012, Ms. Sap represented the Dutch Green party, GroenLinks, in the lower house of the Dutch parliament, during the last two years of which she was party leader. Before that, she worked as an economist in the fields of science, policy and business. Ms. Sap is a Dutch citizen.

Alejandro Plater

Mr. Plater was appointed as a member of the Supervisory Board on 10 September 2020. His current (first) term ends in 2025. Mr. Plater is Group COO at A1 Telekom Austria Group, where he has been working since 2015. Prior to joining A1 Telekom Austria Group, Mr. Plater worked for 18 years for Ericsson in Mexico, Sweden and Argentina. Earlier in his career, Mr. Plater worked at insurance companies Sud América Seguras and Chubb & Son. As part of his position at A1 Telekom Austria Group, Mr. Plater is the chairman or a member of the supervisory board of various subsidiaries of this group. Mr. Plater is an Argentinian and a Swedish citizen.

Claudia Zuiderwijk

Ms. Zuiderwijk was reappointed as a member of the Supervisory Board on 18 April 2018 and her second, and final, term ends in 2022. Ms. Zuiderwijk is chair of the Board of Management of the Gemeentelijk Vervoer Bedrijf Amsterdam (GVB). Prior to that, she was chair of the Board of Management of the Chamber of Commerce. She is also a member of the supervisory board of APG. Between 1993 and 2003, Ms. Zuiderwijk worked at PinkRoccade, holding various management positions. After that, she was chair of the board of the Hilversum hospital and – following the merger with the Gooi Noord hospital – chair of the board of Tergooi hospitals. Ms. Zuiderwijk was also a member of the Innovation Platform of the Dutch government (2007-2010) and a member of the Care Innovation Platform of the Dutch Ministry of Health (2008-2010). Ms. Zuiderwijk is a Dutch citizen.

Supervisory Board Report

Supervisory Board report

The year 2021

2021 reflected a world that continued to combat the pandemic and its impact on society, while at the same time stepping up its efforts to halt climate change. Whereas most of the world's population seems united on the ultimate goals of these battles, views on the best pathway to reach those goals are highly diverged.

Short term, the continued functioning of economy and the well-being of families and individuals remains a high priority for all of us. In these circumstances, connecting people and facilitating cooperation in new remote settings, thus bringing different views together, remains the most important purpose for our company and its employees.

In addition, and further fueled by the measures taken to combat the impact of the pandemic, society continued its rapid move towards digitalization – in all aspects of daily life and business. Whereas this development offers great prospects for further growth to all, it also brings about new and real risks to privacy, security and continuity.

Against the backdrop of this rapidly evolving environment, KPN embarked on the first year of its new strategy 'Accelerate to Grow'. The Supervisory Board believes KPN is in good shape and well positioned to contribute to the challenges that the world, and Dutch society more specifically, must confront. Through its networks – whether of technical nature or of the commitment of its staff – it provides end-to-end solutions for our customers.

Our long standing emphasis on sustainability remains an important part of our foundation, as underpinned by the tenth consecutive year of inclusion in the DJSI World Index – unique for a telecommunications company. We continuously work towards reducing our ecological footprint, while helping our customers to limit theirs. The introduction of sustainability goals in our financing this year was another milestone in this respect.

Throughout the year, the Supervisory Board continued to monitor the operational performance in a challenging Covid-19 setting, while also regularly reviewing key strategic developments and the implementation of our strategic plan. Our focus remained on the well-being of our employees, reliable service to our customers, and value-creation for all stakeholders.

Strategy and business

Our core strategy is the accelerated roll-out of our fiber network to both residential areas and business parks - a massive and unprecedented challenge for the Netherlands that is well on track. Early in the year, the Supervisory Board reviewed and approved the set-up of a joint venture with APG to further strengthen this roll-out. The Supervisory Board carefully took into consideration various interests like the acceleration of the roll-out in less densely populated areas, the maximum use of available construction capacity, the discipline in respecting the recently announced financial framework, and more limited future income offset by the attractive upfront purchase price paid by APG. We concluded that the transaction is truly supportive of our long-term value creation. The joint venture – Glaspoort – was launched in summer, and further extended its scope in December. Together, KPN and Glaspoort realized more than 500,000 fiber connections this year.

Another key component of the current strategy is to grow and strengthen our customer footprint. The Supervisory Board reviewed KPN's commercial, operational and financial results on a quarterly basis, and was pleased to note clear improvements in this domain. Most notably, the company delivered on its ambition to achieve growth in its mass-market service revenues, with all segments – Consumer, SME and Wholesale – contributing. We consider both the investments made in the past, the proactive move from legacy to future-proof products and services, and the regained customer satisfaction levels (NPS) as key contributors to this success. Overall, the company realized its financial guidance for the year.

With the updated strategy set and well underway, specific attention has been paid to operational performance and end-to-end steering. The Supervisory Board (directly or through its committees) received regular updates on such topics as steering of the supply chain for fiber, the (future) way of working for our staff, third-party compliance reporting, and health and safety (including the robberies on shops). Specific attention was paid to cyber security and the investigation performed by the Telecom Agency into the security of our lawful intercept facilities. The Supervisory Board kept abreast of key developments in the market, including the competing fiber roll-outs and changes in the shareholder base of key competitors.

Throughout the year, structural attention was paid to leadership development, the leadership pipeline and succession planning, most notably via the Nominating & Corporate Governance Committee together with the CEO and Chief People Officer.

As to the company's financial framework, the Supervisory Board extensively discussed the proposed share buyback program. In particular, it considered the interests of its key stakeholders in this respect, noting the need for strong investments in our fiber network roll-out and services for our customers, as well as salary increases for, and overall well-being of, our employees. The Supervisory Board concluded that KPN's successful execution of its strategy and multi-year cash generation perspective enabled it to structurally return additional capital to its shareholders and approved buying back shares worth EUR 200 million in 2021 as a first step. Furthermore, the Supervisory Board was pleased that new parts of the company's financing, including the revolving credit facility renewed in August, and a EUR 700 million bond issued in November, could be linked to clear sustainability goals – thereby also introducing explicit ESG goals to our financial framework.

The Supervisory Board continued to have a regular dialogue with the Central Works Council and appreciated the continued open and professional relationship between the Central Works Council, the Board of Management, and the Supervisory Board.

Unsolicited takeover approaches

The attractive positioning of KPN also drew the attention of parties interested in a takeover of the company. In spring, KPN was approached by two separate parties to discuss an unsolicited takeover. In line with their fiduciary duties the Board of Management and the Supervisory Board carefully reviewed both approaches and concluded to reject both as they did not provide tangible and material added value to KPN's current and broadly supported strategy.

In reviewing the approaches, the Board of Management and Supervisory Board worked closely together, supported by financial, legal and communication advisors. The Supervisory Board decided not to set up a separate committee for this topic, but to discuss it in the full Board.

About the Supervisory Board

The composition of the Supervisory Board changed last year with the resignation of Mr. Haank, who had reached the end of his final term of office. In April, the shareholders meeting appointed Mr. van de Aast in the vacancy that had arisen, while reappointing Mr. Overbeek for a second term. The Supervisory Board continues to have a good mix of backgrounds and experience, supporting a diverse view on a wide range of topics. An overview of the current skills and competences in the Supervisory Board is provided in the skills matrix.

Skills / Characteristics	Duco Sickinghe	Gerard van de Aast	Catherine Guillouard	Alejandro Plater	Claudia Zuiderwijk	Peter Hartman	Jolande Sap	Edzard Overbeek
Business leadership	x	x	x	x	x	x		x
Industry knowledge (Telco)	x		x	x				x
Industry knowledge (IT)	x				x			x
Commercial	x	x	x	x	x	x		x
Operational	x	x	x	x	x	x		x
Employment / social relations					x	x	x	
Society / government relations		x	x		x	x	x	
ESG	x				x	x	x	
Financial markets	x	x	x	x				
Finance, Audit & Risk	x		x			x	x	
Financial experts (Dutch CGC)			x					
International experience	x	x	x	x		x		x
Executive / non-executive								
(Full time) Executive position at other company	x		x	x	x			x
Mainly non-executive role		x				x	x	
Diversity								
Male	x	x		x		x		x
Female			x		x		x	

At all times, the composition of the Supervisory Board was such that the members were able to act critically and independently of one another, the Board of Management and any particular interest involved, as provided for under best practice provisions 2.1.7 to 2.1.9 of the Dutch Corporate Governance Code. Throughout the year, seven members of the Supervisory Board, including the Chairman, were independent from the company within the meaning of these provisions. Mr. Plater, who was nominated by

Supervisory Board Report

América Móvil, is not considered independent under provision 2.1.8 of the Dutch Corporate Governance Code. See Note 23 to the Consolidated Financial Statements for information on related party transactions.

At the end of the 2022 AGM, Ms. Zuiderwijk and Mr. Sickinghe will have reached the end of their second term of office and will therefore resign. The Supervisory Board is grateful to both Mr. Sickinghe and Ms. Zuiderwijk for their valuable contribution to KPN. During his 8-year tenure, of which 7 years as Chairman of the Supervisory Board, Mr. Sickinghe helped guide KPN through a transformational period. Ms. Zuiderwijk has, during her 8-year term, supported KPN with her broad knowledge of business, IT and society, with a particular focus on the position of KPN's employees.

For the vacancies arising, the Supervisory Board has nominated Ms. Koelemeijer and Ms. Vergouw. Ms. Koelemeijer is a full professor of marketing at Nyenrode Business University. She has a strong background in marketing, supply chain management, innovation, digital transformation, retailing and digital commerce. Her nomination is based on the enhanced right of recommendation of the Central Works Council. Ms. Vergouw has been CEO of Dutch insurer Interpolis (part of Achmea) since 2016. She brings extensive knowledge in areas such as digitalization, customer service, marketing, branding and omnichannel sales towards B2C and B2B markets. The Central Works Council and Board of Management support the nominations.

Since April 2020, the Supervisory Board consists of three women and five men. Subject to the appointment of the nominated candidates by the shareholders meeting, – as of 13 April it will consist of four women and four men. It therefore complies with the new regulatory requirement of at least 1/3 female (and 1/3 male) members on a Supervisory Board. We continue to endorse the principle, whether enacted or not, that a board should have a diverse composition, in gender, but also skills and experience. Our profile and skills matrix, as set out above, helps us in evaluating new vacancies. The profile of the Supervisory Board has recently been reviewed and will be discussed with shareholders at the AGM in April 2022. We note that the Board of Management also currently consists of 1/3 female members, as well as 1/3 non-Dutch members.

The Supervisory Board annually evaluates its own performance. In 2021, the evaluation was supported by an external expert that held interviews with each of the members, as well as with members of the Board of Management and the Company Secretary. The findings were discussed in a board meeting in July, led by the expert, in which the Supervisory Board concluded, supported by the findings, that the board functioned overall in an effective and efficient way. There was the acknowledgment of a positive team spirit. In addition, it noted that online meetings – due to the current Covid-19 measures – created some additional challenges but that the quality of participation remained good. It was noted that the relationships within the Supervisory Board are very good, as are the relations with the Board of Management. The Supervisory Board made a number of practical modifications to its meetings schedule to allow more time for discussions and allocate time at the beginning and the end of the meeting for Supervisory Board members only.

Moreover given all the rapid changes the board noted that it wants to spend more time on the longer-term vision for the company including the operational aspects thereof. The board expressed a desire to discuss strategy and related matter as much as possible in the plenary board and have the Strategy Committee limit its added value to a good preparation for the plenary meeting.

All Members of the Board participated in a custom made - two day - seminar on Artificial intelligence with special attention on the specific implications and applications for KPN.

Meetings

The Supervisory Board met on 9 occasions in 2021, of which 6 were regularly scheduled. In Spring, the Supervisory Board met on a few extra occasions to discuss the unsolicited takeover approaches as well as the Glaspoort joint venture.

The overall attendance at the Supervisory Board meetings was 97%. An overview of attendance per member of the Supervisory Board and per Committee is provided in the following table. In the event members could not join a meeting, as standard practice the chairman discussed the matters at hand before and/or after the meeting to obtain the input and views of all Supervisory Board members. Also outside of formal board meetings, members of the Supervisory Board were in frequent contact.

Supervisory Board Report

Name	Board (9)	Audit (5)	RemCo (6)	NomCo (6)	SOC (1)[1]
Mr. Van de Aast[2]	83%	100%	100%	100%	
Ms. Guillouard	100%	100%			100%
Mr. Haank[3]	100%	100%	100%	100%	
Mr. Hartman	100%		100%	100%	
Mr. Overbeek	100%				100%
Mr. Plater	100%	100%			
Ms. Sap	100%	100%	100%		
Mr. Sickinghe	100%		100%	100%	100%
Ms. Zuiderwijk[4]	89%		100%	100%	
Total	**97%**	**100%**	**100%**	**100%**	**100%**

1 The Strategy & Organization Committee functions as a standing sounding committee on strategic matters for the Board of Management. During 2021, it held one formal meeting and its members had ad hoc contacts with the CEO or other members of the Board of Management on specific matters related to the strategy

2 Member as of 14/4/2021 – Mr. van de Aast missed one meeting of the Board due to a preceding commitment

3 Member until 14/4/2021

4 Ms. Zuiderwijk, in consultation with the Chairman, did not attend the meeting of the Supervisory Board that was specifically dedicated to the joint venture with APG, of which she is also a Supervisory Board member

Supervisory Board meetings normally commence and end with a closed session (meaning without presence of management), in which the members prepare respectively evaluate the meeting. In the quarterly meetings, typically the full Board of Management is present to review the performance over the past period and discuss key strategic topics. For other or ad hoc meetings, different participation from the Board of Management may be agreed.

Committee Reporting

The Supervisory Board has established four Committees that prepare deliberation and decision making in the full board: the Audit Committee, the Remuneration Committee (RemCo), the Nomination and Corporate Governance Committee (NomCo) and the Strategy and Organization Committee (SOC). The main considerations and conclusions of each Committee were shared with the full Supervisory Board and the meeting documents and minutes are available to all members of the Supervisory Board, which takes the finals decision in all matters.

Audit Committee

The Audit Committee had five meetings in 2021, all of which were also attended (at least in part) by the CFO, the external auditor Ernst & Young Accountants LLP (EY), the internal auditor and the Director Corporate Control. The Chairman of the Supervisory Board frequently attended the meetings as a permanent invitee. The Audit Committee – as well as the Chairman of the Supervisory Board – met separately with the external auditor.

In line with its tasks, the Audit Committee reviews and discusses all financially relevant matters that are presented to the Supervisory Board, most notably the quarterly and annual financial results and reports and (the financial and risk-related aspects of) the business plan. Overall, the Audit Committee was satisfied with the processes around external reporting as operated by the company, as was also confirmed by the reports from the internal and external auditors.

The Audit Committee has a specific focus on the effectiveness and outcome of the company's internal control framework and the risk management systems, for which it receives and reviews reports by the internal auditor, the chief compliance & privacy officer and the external reporting review committee. Each quarter, the Audit Committee also reviews the conclusions of the external auditor, as included in its board report. The audit plans, both for the internal and external auditor, are annually reviewed by the Audit Committee, and are subsequently submitted to the full Supervisory Board for its approval.

The Audit Committee furthermore discussed other topics within its scope of attention, including compliance, health and safety, and cyber security.

During 2021, the Audit Committee paid specific attention to a number of points withing its scope, including the establishment of the new fiber joint venture “Glaspoort” between KPN and APG, focusing on the financial and risk-related aspects thereof. It reviewed the company’s shareholder remuneration, most notably the share buyback program that was announced in July, and supported the launch thereof after having reviewed all relevant considerations around KPN’s strategic options for cash allocation.

Supervisory Board Report

A point of attention remained the assurance related to specific requirements by certain business customers (third party reporting). The Audit Committee recognized the progress that had been made over the past year in this field, but also found that further improvements were still required, and urged management to keep its focus on solving this. Furthermore, it reviewed the company's main tax topics, including the German tax audit and the dispute around the VAT treatment of vouchers.

Finally, the Audit Committee reviewed the performance evaluation of EY in 2021. It concluded, also based on input from management and the internal auditor, that EY had performed well, taking a generally constructive stance when possible, while always ensuring a critical view with sufficiently safeguarded objectivity and independence. It therefore recommended to the full Supervisory Board to nominate EY for appointment at the 2021 General Meeting of Shareholders as the company's independent external auditor for the financial year 2022.

Strategy & Organization Committee

The Strategy & Organization Committee functions as a standing sounding committee on strategic matters for the Board of Management. It held one formal meeting in 2021, in which it discussed management's proposal to establish a joint venture with APG to further accelerate the fiber roll-out. Committee members also occasionally served as a sounding board for the CEO and other members of the Board of Management on specific matters related to the strategy. As mentioned before, the goal was to discuss relevant matters as much as possible in the main board.

Remuneration Committee

The Remuneration Committee met six times in 2021. The CEO and Chief People Officer attended (parts of) the committee meetings. The committee assisted the Supervisory Board in executing and reviewing KPN's remuneration policy and ensuring that members of the Board of Management are compensated consistently with that policy.

For an overview of the activities of the Remuneration Committee in 2021, and further details on the remuneration policy and its application, please refer to the Remuneration Report starting on page 84.

Nomination & Corporate Governance Committee

The Nomination and Corporate Governance Committee met on six occasions in 2021, mostly with the CEO and Chief People Officer attending. The Committee received regular updates on key HR related matters in the company from the Chief People Officer. It reviewed the performance of (the members of) the Board of Management on key leadership traits as well as operational performance. It also held regular discussions with the CEO and Chief People Officer on the company's leadership pipeline and leadership development, with a specific focus on the management layer directly below the Board of Management.

Given the resignation of a number of its members, including the chairman, over the past and coming years, the Committee devoted ample time to the succession planning of the Supervisory Board itself. As the formal 'profile of the Supervisory Board' was last amended in 2013, it decided to rewrite this profile to comply with current standards and best practices, as well as its latest views on the ideal composition, both in terms of skills, expertise and diversity. This new profile will be discussed with the shareholders at the AGM in April 2022.

For the vacancies arising in the Board in 2022, the Committee concluded that the Board and the company would benefit from a member with executive experience in the field of digitalization, marketing and branding. The Committee steered the selection process, which ultimately lead to the nomination of Ms. Chantal Vergouw. Ms. Vergouw is currently the CEO of Interpolis and has previously held several (management) positions at ING. During her career, she has gained extensive knowledge in just the areas of expertise as determined by the Committee.

The second vacancy arising was subject to the enhanced right of recommendation of the Central Works Council. Following an expeditious and careful process, the Central Works Council recommended the nomination of Ms. Kitty Koelemeijer. Ms. Koelemeijer is a full professor of marketing at Nyenrode Business University, and holds several other non-executive positions. She brings extensive experience in such areas as marketing, retailing and digital commerce. The Supervisory Board gladly adopted this recommendation.

The Committee – and the Board – believe both Ms. Koelemeijer and Ms. Vergouw will bring substantial added value to the Supervisory Board. As in 2023 again two members of the Board (Mr. Hartman and Ms. Sap) will resign at the end of their second term, the Committee will once again determine the required profile for these positions. The position of Ms. Sap is also subject to the enhanced right of recommendation of the Central Works Council.

The Committee finally steered the annual evaluation of the Supervisory Board itself (see above – 'About the Supervisory Board').

Supervisory Board Report

Financial Statements

The Financial Statements for the year ended 31 December 2021, were prepared by the Board of Management and approved by the Supervisory Board. The Report of the independent auditor, Ernst & Young Accountants LLP, is included in the section 'Other Information' on pages 165 - 173. The Supervisory Board recommends that the AGM adopts these Financial Statements.

Final remarks

The year behind us was very challenging for our company. The Supervisory Board has been impressed by the resilience of our operations in this context. Our employees have remained highly engaged despite quite isolated work conditions. Our customers have rewarded us with a higher satisfaction score.

The Board of Management has gained another year's experience to work together as a good team and many employees have acted as true leaders across the company.

Our network is not only a product we sell, it is a very important element in Dutch society. Each day this importance grows as our daily lives depend increasingly on digital tools and/or support platforms.

The Supervisory Board has been proud to oversee the many accomplishments of KPN over the last 12 months. At the same time, we have also debated transformational operational challenges in the year ahead.

Duco Sickinghe, Chairman

Gerard van de Aast

Catherine Guillouard

Peter Hartman

Edzard Overbeek

Alejandro Plater

Jolande Sap

Claudia Zuiderwijk

Supervisory Board Report

Word from the departing Chairman

It is my last annual report to our stakeholders. Counter intuitively, the legacy fixed networks of the original telecom operators still represent by far the most important part of the enterprise value or the 'sum of parts' of these companies, and they have been the basis for the rapid digitalization of our society that we see today. In recent years, competing networks – both cable and fiber – delivered increasingly high speeds, which is generally seen as the single most important USP of broadband internet. The innovation of our copper networks towards a new fiber-to-the-home infrastructure required the company to build a new strategy which today is known as our massive fiber roll-out.

Simultaneously, KPN's management delivered on targets to substantially simplify the company, thereby reduce operating cost. I have always been impressed how well KPN has handled the simplification of the company – which inherently goes hand-in-hand with reductions in its employee base – and yet could keep a very high employee engagement and attract new skills at the same time.

This operational effort resulted in a strong EBITDA margin, one of the best in the industry. Thanks to this achievement and a healthy balance sheet, KPN earned the trust from share- and bondholders to embark on an ambitious roll-out plan for the fixed network of the future.

The evolving company's culture has put the customer's satisfaction and sustainability on top of its operational priorities. It was always a pleasure to visit the operations and listen to our employees about the challenges they face day-in and day-out.

I was grateful to chair a very engaged and competent Supervisory Board. When the going was tough, the tough were there! All of us, no matter what day and time.

KPN staff are fortunate to work at the heart of digital society. Lots has been accomplished by them and yet much is still to happen. Most of what is ahead, is still unknown to us. The spirit of many leaders at KPN and the diverse skills of our dedicated staff are a precious intangible asset and will foster KPN's future value creation.

I would like to thank our shareholders, the Board of Management, the Central Works Council, and my colleagues for the professional and pleasant cooperation.

And last but not least a big 'thank you' to our customers without whom our journey would be without purpose!

Duco Sickinghe

Remuneration Report

Letter from the Chair of the Remuneration Committee
Dear stakeholder,

On behalf of the Remuneration Committee, I am pleased to report on the activities of the Committee in 2021 and to present the Remuneration Report 2021. This Remuneration Report was prepared in line with the requirements stemming from the implementation of the Shareholder Rights Directive in Dutch law and will consequently be submitted to the General Meeting of Shareholders for an advisory vote. The Remuneration Report 2020 was submitted to the AGM for an advisory vote in April 2021 and resulted in a 97.39% voting 'for' and 2.61% voting 'against'. Given this outcome, no material changes were considered with regard to the underlying guiding principles of the Remuneration Report 2021.

The remuneration policy was last amended by the General Meeting of Shareholders in April 2020. The objective of the remuneration policy for the Board of Management is to attract, reward and retain necessary leadership talent, in order to support the execution of the company's strategic objectives.

We made good progress on the execution of our strategy in 2021 and our financial results were solid and continue to reflect a mix of an ongoing competitive environment and the impact of our strategic actions. Our long standing emphasis on sustainability remains an important part of our foundation. We continuously work towards reducing our ecological footprint, while helping our customers to limit theirs. Our Accelerate to Grow strategy focuses on accelerating our fiber roll-out, growing our customer footprint, improving the digital customer experience for families and businesses and renewing our way of working. The Remuneration Committee believes that the main principles of the remuneration policy for the members of the Board of Management supports this strategy, so that there is no need to update this policy.

As part of its annually recurring tasks, the Committee defined the level of pay-out for individual members of the Board of Management as part of the STI plan 2020 and LTI grant 2018, and determined the financial and non-financial targets and performance criteria for the STI and LTI plans 2021. In the second half of the year, the Committee received updates on anticipated pay-out levels and scenarios in this respect. The Committee evaluated the KPI's used for both the STI and LTI plans going forward and proposed to the Supervisory Board to make certain changes thereto as of the plans to be issued in 2022, most notably to the non-financial metrics applied. All changes proposed fit within the existing remuneration policy, so that no amendments to the policy would be necessary. The Chairman of the Committee, together with the Chief People Officer, also discussed the remuneration policy and its application with the Central Works Council. During an annual evaluation meeting with the individual members of the Board of Management, the Committee took note of their views on their own remuneration. Also in 2021, the Committee considered whether the COVID-19 pandemic would be a reason to take specific measures related to the remuneration of the members of the Board of Management and concluded that there were no reasons to deviate from the agreed executive remuneration schemes.

I trust that the Remuneration Report on the next pages provides our stakeholders with the relevant information on the implementation of the company's remuneration policy.

Peter Hartman
Chairman of the Remuneration Committee

Remuneration Report

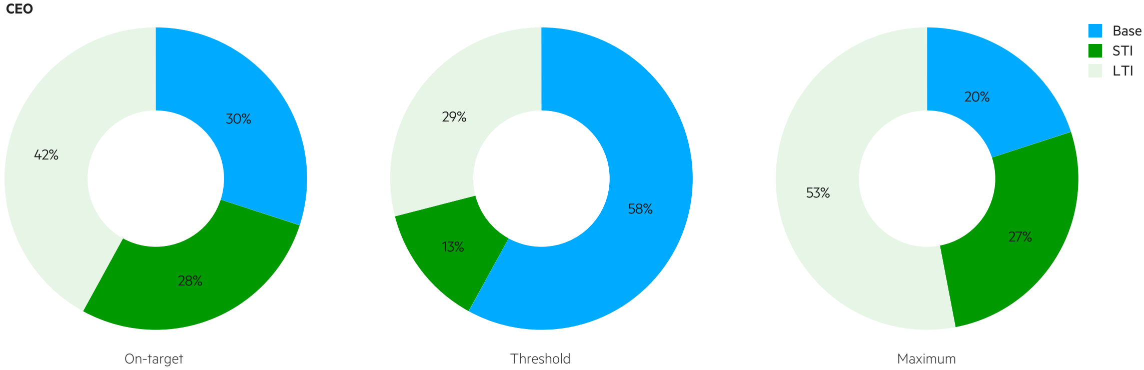
Remuneration policy of the Board of Management

The main principles of KPN's remuneration policy, as described below, are based on a balanced approach between market competitive standards, the ratio between fixed and variable pay and the economic and social contribution of the company linked to the non-financial parameters of the variable pay:

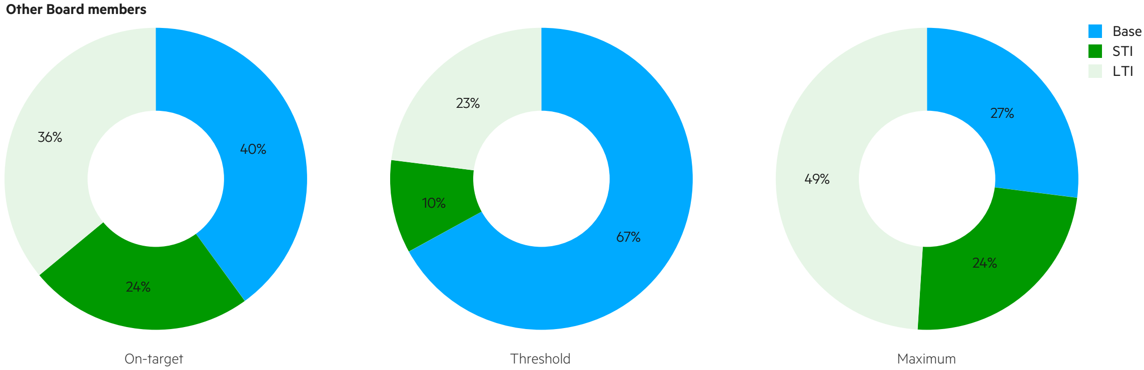
- Paying at market-competitive level, considering all fixed and variable components of the remuneration policy, achieved through benchmarking against an employment market peer group
- Pay-for-performance by driving financial and non-financial performance that generates long-term sustainable and profitable growth. Target remuneration aims at 30-40% of pay in base pay and 60-70% in variable pay in order to maintain a strong alignment with the company's financial performance goals and long-term value creation strategy
- Differentiating by experience and responsibility through alignment of the pay with the responsibilities, relevant experience, required competences and performance of individual jobholders
- Balancing all stakeholder interests, including the views of shareholders and society, including dialogue with the works council, by complying with best practices in corporate governance, defining targets for the variable pay plans based on financial and non-financial targets and a transparent and clear remuneration.

The following pie charts represent the fixed/variable pay mix for both the CEO and other Board members in the case of an on-target, threshold and maximum performance of the assigned financial and non-financial targets.

CEO



Other Board members



Remuneration Report

KPN uses the following employment market peer group that consists of Dutch-listed and European sector-specific companies:

Companies:		
Akzo Nobel	ASML	Telecom Italia
DSM	Signify	Telenor
Randstad	Telecom Austria	Proximus
Ahold Delhaize	Telefónica Deutschland[1]	Swisscom
Philips	Telia Company	

1 Telefónica Deutschland replaced Iliad in the peer group as Iliad was delisted on 14 October 2021 after a tender offer

The employment market peer group is used as a reference to evaluate the overall market-competitive pay-level for the members of the Board of Management.

Main features of the short-term and long-term incentive plans:

Short-term incentive (STI) plan

Component	Short-term incentives
Form of compensation	Cash, possible pay-out for maximum 50% in shares, if share ownership guideline levels have not yet been reached
Value determination (on-target level)	CEO: 90% of base salary and other members Board of Management: 60% of base salary
Financial- and non-financial targets	Financial (70% weight) and non-financial targets (30% weight), subject to the financial circuit-breaker; linear vesting
Scenario at or below threshold performance	At threshold: 25% of the on-target incentive paid. Below threshold: no pay-out
Scenario on-target performance	100% of the on-target incentive paid
Scenario maximum performance	150% of the on-target incentive paid

Long-term incentive (LTI) plan

Component	Long-term incentives
Form of compensation	Shares
Value determination (on-target level)	CEO: 135% of base salary and other members of the Board of Management: 90% of base salary
Financial- and non-financial targets	Financial (70% weight) and non-financial targets (30% weight); linear vesting
Scenario at or below threshold performance	At threshold: 25% of granted shares vest (TSR 75%, i.e. 50th percentile peer group). Below threshold: no vesting
Scenario on-target performance	100% of the granted shares vest (for TSR linear between 50th percentile and first position peer group)
Scenario maximum performance	200% of the granted shares vest (for TSR first position in the peer group)
Holding period	3 years after vesting

Remuneration of the Board of Management in 2021

The actual remuneration of the members of the Board of Management was determined by the Supervisory Board according to the remuneration policy as approved by the AGM.

Remuneration Report

Remuneration packages of the individual current members of the Board of Management:

Member	Position	Base salary (EUR)	On-target STI (% base salary)	On-target LTI (% base salary)
Joost Farwerck	Chief Executive Officer	875,000	90%	135%
Chris Figee	Chief Financial Officer	675,000	60%	90%
Jean-Pascal van Overbeke	Chief Consumer Market	650,000	60%	90%
Marieke Snoep	Chief Business Market	650,000	60%	90%
Babak Fouladi	Chief Technology & Digital Officer	650,000	60%	90%
Hilde Garssen	Chief People Officer	500,000	60%	90%

Annual base salary

The base salary levels of the Board of Management were not adjusted in 2021. The Committee considered possible amendments to the base salaries of the members of the Board of Management, which had not been changed since their appointment in December 2019. It concluded to decide on this in the course of 2022, taking due account of any changes to the base salaries of the company's employees under the collective labor agreement.

Details actual pay-out level STI

			Bandwidth pay-out level					Outcome		
Plan	**Target**	**Weight**	**Minimum**	**On-target**	**Maximum**	**Performance**	**Actual pay-out %**	**Minimum**	**On-target**	**Maximum**
STI 2021	**Financials (70% weighting):**									
	– Adjusted EBITDA-AL	20%	25%	100%	150%	103%	21%			
	– Service Revenue	25%	25%	100%	150%	121%	30%			
	– FCF	25%	25%	100%	150%	117%	29%			
	Non-financials (30% weighting):		25%	100%	150%					
	– NPS NL	20%	4	7	10	9.5	28%			
	– Employee engagement	10%	51%	54%	57%	54.36%	11%			
	Total pay-out level	100%					118.96%			

The STI 2021 outcome reflects the fact that we delivered on our financial guidance aspects for 2021, supported by our continuing solid progress on simplification and digitalization. KPN remains fully on track with the execution of its strategy while maintaining a robust liquidity position. We continued to execute disciplined cost control which, supported by higher then target Group service revenues, resulted in solid growth in adjusted EBITDA after leases and FCF. Engagement scores were based on the employees' views about the future of the company, including their individual contribution to this, and the improvement in the implementation of straightforward processes. The on-target level was set at 54% with a minimum and maximum bandwidth of 51% and 57%. The actual performance of 54.36% was slightly above the assigned on-target level, mainly driven by the high-end scores of the employees views about the future of the company and their individual contribution. Although the employees were more positive on the implementation of straightforward processes when compared to last year, there is still a need to further improve our processes as part of a more simplified operating model. The commitment our employees showed towards customer centricity has been paying off, as illustrated by an NPS growth for both the Business and Consumer market. Based on an on-target NPS NL target of 7 set at the beginning of the year, with a minimum and maximum bandwidth of 4 and 10, the actual performance ended up at 9.5.

Remuneration Report

Members of the Board of Management are encouraged to acquire company shares equal to 250% of base salary for the CEO and 150% of base salary for the other members of the Board of Management. To further stimulate reaching the anticipated share ownership levels, the STI is paid out, after deduction of taxes, for maximum 50% in shares if the share ownership guideline levels have not yet been reached.

Details actual pay-out (vesting) level LTI 2019: vesting period 2019-2021

			Bandwidth vesting level					Outcome		
Plan	**Target**	**Weight**	**Minimum**	**On-target**	**Maximum**	**Performance**	**Actual vesting %**	**Minimum**	**On-target**	**Maximum**
LTI 2019	**Financials (70% weighting):**									
	– TSR versus peer group	25%	75% 10th position	100% linear vesting	200% 1st position	102.8%	26%			
	– FCF	45%	25%	100%	200%	40.6%	18%			
	Non-financials (30% weighting):		25%	100%	200%					
	– Reputation target	15%	66.7	67.2	69.3	71.3	30%			
	– Circularity target	15%	78%	82%	89%	83.5%	18%			
	Total vesting level	100%					92.1%			

For the LTI plan issued in 2019, the financial targets were based on relative TSR, 25% weight, and free cash flow, 45% weight and the non-financial targets were determined based on circularity and reputation, each with a weight of 15%. The LTI plan 2019 vests in April 2022 and the final TSR performance will be determined in mid-February 2022. The LTI plan vested based on the TSR performance that put KPN in eight position in the TSR reference peer group that consists of 20 companies (i.e. STOXX 600 Europe Telecom index), supported by KPN's growing dividend and share buyback program. During the vesting period 2019-2021, KPN's results on cumulative free cash flow, supported by a strong cost savings discipline, performed above the ambitious threshold level of the bandwidth which contributed to a strong liquidity position at the end of 2021.

The reputation target is based on external data measured by RepTrak, the leading international organization devoted to advancing knowledge about corporate reputations. The external data are independently collected through an online survey among a representative sample of the general public. The bandwidth of the reputation target is based on the 12-month moving averages of the data collected by RepTrak prior to the vesting period. The reputation target for the LTI plan 2019 was set based on three attributes, i.e. 'well organized company', 'excellent managers' and 'positive influence on society'. The two attributes 'excellent managers' and 'well-organized company' were selected as main drivers to measure the successful implementation and execution of the new strategy, while the attribute 'positive influence on society' was selected for KPN's continuous commitment to Dutch society. The composite performance of the three attributes was 71.3 and outperformed the maximum level of the bandwidth set at 69.3, indicating a significant growth as part of the continuous improvement in KPN's reputation during the vesting period 2019-2021. In the vesting period KPN particularly improved on 'positive influence on society', one of the most impactful drivers of reputation. This is also the outcome of KPN continued contribution to society, sustainable operations and its vital role in society during the pandemic.

Circularity was selected as a non-financial target to reflect our long-term ambition on sustainability. We built a road-map to reach our ambition of having close to 100% circular operations by 2025. This roadmap is governed by the Energy & Environmental Board. The circularity target was aligned to a close to 100% performance on re-use and recycling (i.e. outflow of materials and waste) by 2025. The on-target ambition for the performance period 2019-2021 on reuse and recycling was set at 82% versus a baseline of on or about 75% in 2018. The actual outcome in the performance period 2019-2021 is 83.47% and therefore well above the on-target level. This reflects the significant effort by our suppliers to improve transparency and timely reporting in our value chains across all significant materials flows.

Targets LTI 2021, vesting period 2021-2023

For the LTI plan issued in 2021, the financial targets are based on relative TSR with a 25% weighting and free cash flow with a 45% weighting. Under the LTI plan, the Supervisory Board selects each year two non-financial targets based on a predetermined set of five strategic categories. The non-financial targets for the LTI plan 2021 have been determined based on circularity and reputation, each with a weighting of 15%.

Remuneration Report

Circularity was selected as a non-financial target to reflect our long-term sustainability ambitions. The circularity target was aligned to a close to 100% performance on reuse and recycling (i.e. outflow of materials and waste) by 2025. The on-target ambition for the performance period 2021-2023 on reuse and recycling was set at 85% versus a baseline of approximately 81% in 2020. As part of our close to 100% circular ambition we collaborate with our partners to optimize our value chain towards our ambition of zero waste by 2025.

Reputation was selected as a non-financial target to maintain continued focus on our role in Dutch society during the execution of our 'Accelerate to Grow' strategy. The attribute 'well-organized company' was selected as a main driver to measure the successful implementation and execution of our strategy, while the attribute 'positive influence on society' was selected for KPN's continuous commitment to Dutch society. A new attribute 'strong prospects for growth' was selected to focus on the importance of a perspective for growth during the performance period 2021-2023. The on-target ambition for the composite performance of the three new attributes was set at 74.4 by the end of 2023. In line with KPN's growth strategy and the consistently strong performance on the reputation KPIs, KPN decided to set the targets for LTI 2021, vesting period 2021-2023, at an even higher ambition level.

Actual received remuneration of the Board of Management (in thousands of EUR)

See Note 5 for full disclosure of remuneration cost under IFRS principles (also including former members).

Name	Position	Year	Base	STI	Actual vested LTI [1]	Pension cost	Social security/ other compensation[2]	Total[3]	% Fixed[4]	% Variable[4]
Joost Farwerck	CEO	2021	875	937	900	213	30	2,955	32%	68%
		2020	875	676	545	185	20	2,301	42%	58%
Chris Figee	CFO[5]	2021	675	482		110	37	1,304	58%	42%
		2020	619	319		100	34	1,072	66%	34%
Jean-Pascal van Overbeke	CCM	2021	650	464	580	153	15	1,862	38%	62%
		2020	650	335	224	124	15	1,348	54%	46%
Marieke Snoep	CBM	2021	650	464	460	117	30	1,721	41%	59%
		2020	650	335		106	30	1,121	66%	34%
Babak Fouladi	CTDO	2021	650	464	580	125	13	1,832	38%	62%
		2020	650	335		124	14	1,123	66%	34%
Hilde Garssen	CPO	2021	500	357	190	82	15	1,144	48%	52%
		2020	500	257		82	15	854	66%	34%

1 The 2021 amounts give an indication of the value of the shares that will vest in April 2022 related to the LTI 2019. The LTI 2018 vested in April 2021 based on the share price on the actual vesting date (2020 amounts).

2 In addition to social security, the stated amounts include allowances that can be considered as indirect remuneration and relates to the value for the private use of the company car.

3 All remuneration was borne by KPN B.V, please see Note 5 to the Consolidated Financial Statements for the individual pension benefits, on cost and social security.

4 Excluding pension cost, social security and other compensation.

5 Actual remuneration since appointment to the Board of Management with an effective date of 1 February 2020.

Remuneration Report

Change in remuneration for members of the Board of Management versus company performance and remuneration of an average employee over five years.

The tables includes the current members of the Board of Management and a comparison is disclosed over the last five years as far as a 'like for like' comparison was possible (i.e. full year appointment during the five-year period).

	2017	2018	2019	2020	2021
Remuneration Joost Farwerck (EUR)[1]	1,904,000	1,384,000	1,669,000	2,301,000	2,955,000
Position	COO	COO	COO/CEO	CEO	CEO
-Year on Year difference (EUR)	486,000	-520,000	285,000	632,000	654,000
-Year on year difference (%)	+34%	-27%	+21%	+38%	+28%
Remuneration CFO (EUR)[2]	2,022,000	1,419,000	1,555,000	1,169,000	1,304,000
-Year on Year difference (EUR)	532,000	-603,000	136,000	-386,000	135,000
-Year on year difference (%)	+36%	-30%	+10%	-25%	+12%
Remuneration other current members on average (EUR)[3]			92,500	1,112,000	1,640,000
-Year on Year difference (EUR)				1,019,500	528,000
-Year on year difference (%)				n/m	+47%
TSR position (part of LTI)					
-Position peer group	3rd (150% vesting)	8th (no vesting)	6th (75% vesting)	6th (75% vesting)	8th (102.8% vesting)
Free cash flow (part of STI/LTI)	Performance:	Performance:	Performance:	Performance:	Performance:
-STI bandwidth pay-out level	Maximum	Around maximum	Maximum	Between on-target and maximum	Between on-target and maximum
-LTI bandwidth pay-out level	Between on-target and maximum	Below threshold	Slightly above threshold	Slightly above threshold	Between threshold and on-target
EBITDA (part of STI)	Performance:	Performance:	Performance:	Performance:	Performance:
-Pay-out level STI bandwidth	Between threshold and on-target	Around on-target	Between on-target and maximum	Above on-target	Around on-target
Average cost per FTE (IFRS, EUR)[4]	82,967	85,355	88,445	84,306	90,869
Pay ratio CEO (IFRS)[5]	36	29	30	30	33

1 Remuneration as of 1 October 2019 as CEO. Prior to that the remuneration relates to his COO position.

2 The years 2017-2019 refer to the remuneration of Jan Kees de Jager. The 2020 amount is the remuneration of Chris Figee recalculated on a full-year basis considering his appointment on 1 February 2020.

3 Since appointment to the Board of Management with an effective date of 1 December 2019.

4 Based on KPN CLA agreement, base salaries for the CLA population increased by 3.0% in 2021. Average cost per FTE (IFRS) in 2021 was impacted by annual differences in outcomes of incentive plans.

5 The pay ratio for the year 2017 relates to Eelco Blok and for the year 2018 to Maximo Ibarra.

The fluctuation in actual pay levels during the five reference years is predominantly the result of the outcome of the STI and LTI combined with the relative high emphasis on pay for performance reflected in the short-term and long-term incentive plans. The STI pay-out (in terms of performance versus the assigned targets) was aligned with the level of pay-out to senior management and the CLA employees as in general the same financial and non-financial targets were applied in these variable pay plans when compared to the assigned targets of the Board of Management. The average STI pay-out over the five-year period is close to 98% of the on-target level and the LTI plans vested over the five-year period on average close to 90% of the on-target level reflecting the ambitious targets set for variable incentive plans.

Considering the five-year results, variable pay on financial and non-financial targets is strongly linked with KPN's performance against peers (TSR) and its outcomes on the key metrics FCF and EBITDA ensuring alignment with the financial performance goals and the long-term value creation strategy. Lower revenues were offset by ongoing savings from the simplification and digitalization of services. KPN generates growth in FCF which supports a progressive regular dividend and a robust liquidity position and the company remains committed to an investment grade credit profile.

KPN's internal pay ratio

To ensure transparency and clarity, KPN applies an IFRS-driven methodology to calculate the internal pay ratio. KPN's internal

Remuneration Report

pay ratio compares the total CEO compensation under IFRS principles with the average compensation of employees with a labour agreement with KPN (total personnel expenses of KPN employees divided by the average number of KPN FTEs).[1]

KPN's calculated pay ratio in 2021 is 33 (2020: 30). This outcome is in line with KPN's acceptable bandwidths.

For further details, see Note 5 to the Consolidated Financial Statements.

The table below presents the number of shares and current share plans for current board members.

	Grant date	Granted as of 1 January 2021	Vested	Granted or forfeited[1]	As of 31 December 2021	Pre-tax fair value on grant date (EUR)[2]	Pre-tax market value on vesting date or end of lock-up in 2021 (EUR)	End of lock-up period
Joost Farwerck	15 April 2021	-		416,740	416,740	1,125,198		15 April 2027
	16 April 2020	535,132	-	-	535,132	1,091,669	-	16 April 2026
	11 April 2019	302,514	-	-	302,514	874,265	-	11 April 2025
	19 April 2018	227,733[3]	-210,526	-17,207	-	498,735	544,888	19 April 2023
Chris Figee	15 April 2021	-		214,324	214,324	578,675		15 April 2027
	16 April 2020	275,211	-	-	275,211	561,430	-	16 April 2026
Jean-Pascal van Overbeke	15 April 2021	-		206,386	206,386	557,242		15 April 2027
	16 April 2020	265,018	-		265,018	540,637	-	16 April 2026
	11 April 2019	196,732	-	-	196,732	568,555	-	11 April 2025
	19 April 2018	114,777[3]	-87,719	-27,058	-	251,362	224,308	19 April 2023
Marieke Snoep	15 April 2021	-		206,386	206,386	557,242		15 April 2027
	16 April 2020	265,018	-	-	265,018	540,637	-	16 April 2026
	11 April 2019	156,136	-	-	156,136	451,233	-	11 April 2025
Babak Fouladi	15 April 2021	-		206,386	206,386	557,242		15 April 2027
	16 April 2020	265,018	-	-	265,018	540,637	-	16 April 2026
	11 April 2019	196,732	-	-	196,732	568,555	-	11 April 2025
Hilde Garssen	15 April 2021	-		158,758	158,758	428,647		15 April 2027
	16 April 2020	203,860	-		203,860	415,874	-	16 April 2026
	11 April 2019	62,454	-	-	62,454	180,492	-	11 April 2025

1 The shares granted to the Board of Management represent 41% (2020: 38%) of the total number of shares and share-based awards granted in 2021 to all employees. The grant numbers do not include any deferred dividend during the vesting period. The deferred dividend during the vesting period will be additionally granted in shares.

2 Value is calculated by multiplying the number of share awards by the fair value at grant date.

3 The 2018 share grant vested in April 2021 with a vesting percentage of 77% (if applicable excluding deferred dividend).

See the Insider transactions section for stock ownership of the members of the Board of Management and Supervisory Board and see Note 5 to the Consolidated Financial Statements for a further description and valuation of the share plans.

Claw-back clause

The claw-back clause was not applied in 2021.

Developments for 2022

No adjustments to the remuneration policy of the Board of Management are foreseen in 2022.

1 For reporting of the pay ratio as referred to in best practice provision 3.4.1.iv of the Dutch Corporate Governance Code, KPN uses a slightly different definition than guided by the monitoring committee. The average costs of external personnel are not part of the calculated pay ratio as no comparable headcount definitions are available within KPN to act as a solid reference.

Remuneration Report

Supervisory Board

The objective of the remuneration policy for the Supervisory Board is to reward the members appropriately for their work based on market-competitive fee levels. To the extent applicable, the same principles of the Board of Management remuneration policy apply to the Supervisory Board remuneration policy.

KPN has a fixed annual fee and annual committee membership fees for the members of the Supervisory Board. The eligibility for committee fees is limited to two committees (i.e. the two highest fees will be applicable).

AEX-listed companies with a two-tier board serve as a reference to determine market-competitive fee levels. Supervisory Board members do not receive any variable compensation and are not granted any shares as a form of pay.

The following table shows the annual fixed fee structure for the members of the Supervisory Board and the members of the committees.

Position	Annual fee in EUR
Chairman Supervisory Board	100,000
Vice-chairman Supervisory Board	70,000
Member Supervisory Board	60,000
Chairman Audit Committee	20,000
Member Audit Committee	10,000
Chairman Strategy & Organization Committee	12,500
Member Strategy & Organization Committee	7,500
Chairman Remuneration Committee	10,000
Member Remuneration Committee	5,000
Chairman Nominating & Corporate Governance Committee	10,000
Member Nominating & Corporate Governance Committee	5,000

The following table shows the actual fee for each current member of the Supervisory Board.

Amounts in €		Membership fee 2021	Committee fees 2021	Total 2021	Total 2020	Total 2019	Total 2018	Total 2017
D.W. Sickinghe	Chairman	100,000	17,500	117,500	116,771	115,000	116,875	122,500
G.J.A. van de Aast[1]	Vice-chairman	42,667	10,667	53,334	-	-	-	-
D.J. Haank[2]	Vice-chairman	20,222	7,222	27,444	92,813	87,500	86,250	82,500
C.R.A. Guillouard	Member	60,000	24,611	84,611	54,896	-	-	-
P.F. Hartman	Member	60,000	15,000	75,000	75,000	75,000	76,875	82,500
E.J.C. Overbeek	Member	60,000	12,500	72,500	72,500	72,500	71,250	16,875
A.D. Plater	Member	60,000	17,500	77,500	23,680	-	-	-
J.C.M. Sap	Member	60,000	15,000	75,000	75,000	70,000	70,000	70,000
C.J.G. Zuiderwijk	Member	60,000	10,000	70,000	70,000	70,000	71,875	77,500
Total		**522,889**	**130,000**	**652,889**				

1 Since appointment in the Supervisory Board with an effective date of 14 April 2021. Mr. Van de Aast declined the additional fee for vice-chairmanship due to limited activities.

2 Up to 14 April 2021

Developments for 2022

The Supervisory Board plans to review the remuneration policy for its members in 2022.

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Consolidated Financial Statements

Consolidated Statement of Profit or Loss

For the year ended 31 December

€ million	Notes	2021	2020
Revenues	[4.1]	5,271	5,283
Other income	[4.2, 21]	852	19
Total revenues and other income		**6,122**	**5,303**
Cost of goods & services		1,298	1,284
Personnel expenses	[5]	863	892
Information technology/Technical infrastructure		316	328
Other operating expenses	[6]	323	335
Depreciation, amortization and impairments	[10, 11, 19]	1,460	1,552
Total operating expenses		**4,260**	**4,390**
Operating profit		**1,862**	**912**
Finance income		-	-3
Finance costs		-223	-239
Other financial results		-11	-28
Financial income and expenses	**[7, 19]**	**-234**	**-269**
Share of the profit/loss (-) of associates and joint ventures	[12, 21]	-2	6
Profit before income tax from continuing operations		**1,627**	**649**
Income taxes	[8]	-344	-88
Profit for the year from continuing operations		**1,283**	**561**
Profit/loss (-) for the year from discontinued operations		5	-
Profit for the year		**1,288**	**561**
Profit attributable to non-controlling interests		1	-
Profit attributable to equity holders of the company		1,288	560
Earnings per ordinary share after taxes attributable to equity holders of the company for the year in EUR	[9]		
Basic (continuing operations)		0.30	0.13
Diluted (continuing operations)		0.30	0.13
Basic (discontinued operations)		-	-
Diluted (discontinued operations)		-	-
Basic (total, including discontinued operations)		0.31	0.13
Diluted (total, including discontinued operations)		0.31	0.13

Consolidated Financial Statements

Consolidated Statement of Other Comprehensive Income

For the year ended 31 December

€ million	Notes	2021	2020
Profit for the year		**1,288**	**561**
Other comprehensive income, net of tax			
Other comprehensive income to be reclassified subsequently to profit or loss when specific conditions are met:			
Net gain/loss (-) on cash flow hedges	[16]	31	84
Currency translation differences	[16]	-7	3
Net other comprehensive income/loss (-) to be reclassified to profit or loss in subsequent periods		**24**	**87**
Items of other comprehensive income not to be reclassified subsequently to profit or loss:			
Retirement benefits remeasurements		52	-11
Net gain/loss (-) on equity instruments designated at fair value through other comprehensive income	[13.1]	5	6
Net other comprehensive income/loss (-) not to be reclassified to profit or loss in subsequent periods		**57**	**-5**
Other comprehensive income/loss (-) for the year, net of tax		**81**	**82**
Total comprehensive income for the year, net of tax		**1,369**	**643**
Total comprehensive income for the year, net of tax, attributable to:			
Equity holders of the company		1,368	643
Non-controlling interests		1	-
		1,369	**643**
Total comprehensive income/loss (-) attributable to equity holders of the company arises from:			
Continuing operations		1,363	643
Discontinued operations		5	-

Consolidated Financial Statements

Consolidated Statement of Financial Position

Assets

€ million	Notes	31 December 2021	31 December 2020
Non-current assets			
Property, plant and equipment	[10]	5,463	5,422
Intangible assets	[11]	3,006	3,238
Right-of-use assets	[19]	804	857
Equity investments accounted for using the equity method	[12]	511	8
Equity investments measured at fair value through other comprehensive income	[13.1]	49	37
Derivative financial instruments	[13.3]	212	191
Other financial asset at fair value through profit or loss	[12]	204	-
Deferred income tax assets	[8]	506	567
Trade and other receivables	[14.1]	77	132
Contract assets and contract costs	[14.2]	36	18
		10,869	**10,469**
Current assets			
Inventories		37	47
Trade and other receivables	[14.1]	677	636
Contract assets and contract costs	[14.2]	45	49
Income tax receivables	[8]	2	1
Derivative financial instruments	[13.3]	-	11
Other financial asset at fair value through profit or loss	[12]	14	-
Other current financial assets	[13.1]	300	270
Cash and cash equivalents	[15]	793	597
		1,868	**1,611**
Total assets		**12,737**	**12,080**

Consolidated Financial Statements

Equity and liabilities

€ million	Notes	31 December 2021	31 December 2020
Equity			
Share capital		168	168
Share premium		8,445	8,445
Other reserves		-358	-199
Retained earnings		-5,523	-6,289
Equity attributable to holders of perpetual capital securities		496	496
Equity attributable to equity holders of the company		**3,228**	**2,621**
Non-controlling interests		2	1
Total equity	**[16]**	**3,230**	**2,622**
Non-current liabilities			
Borrowings	[13.2]	6,067	5,821
Lease liabilities	[19]	736	787
Derivative financial instruments	[13.3]	64	192
Provisions for retirement benefit obligations	[17]	92	152
Provisions for other liabilities and charges	[18]	150	151
Contract liabilities	[20]	169	136
Other payables	[20]	8	12
		7,286	**7,250**
Current liabilities			
Trade and other payables	[20]	1,176	1,128
Contract liabilities	[20]	186	209
Borrowings	[13.2]	677	679
Lease liabilities	[19]	137	150
Derivative financial instruments	[13.3]	-	4
Income tax payables	[8]	17	-
Provisions for other liabilities and charges	[18]	27	38
		2,221	**2,209**
Total equity and liabilities		**12,737**	**12,080**

Consolidated Financial Statements

Consolidated Statement of Changes in Equity

€ million, except number of shares	Notes	Subscribed ordinary shares	Share capital	Share premium	Other reserves	Retained earnings	Equity attributable to holders of perpetual capital securities	Equity attributable to equity holders of the company	Non-controlling interests	Total equity
Balance at 31 December 2019		**4,202,844,404**	**168**	**8,445**	**-300**	**-6,302**	**496**	**2,507**	**1**	**2,507**
Profit for the year			-	-	-	561	-	560	-	561
Other comprehensive income for the period			-	-	87	-5	-	82	-	82
Total comprehensive income for the period			**-**	**-**	**87**	**556**	**-**	**643**	**-**	**643**
Share based compensation	[5]		-	-	-	-11	-	-11	-	-11
Sold treasury shares			-	-	14	-	-	14	-	14
Dividends paid			-	-	-	-529	-	-529	-	-529
Paid coupon perpetual hybrid bond	[13.2]		-	-	-	-3	-	-3	-	-3
Total transactions with owners, recognized directly in equity			**-**	**-**	**14**	**-543**	**-**	**-529**	**-**	**-529**
Balance at 31 December 2020		**4,202,844,404**	**168**	**8,445**	**-199**	**-6,289**	**496**	**2,621**	**1**	**2,622**
Profit for the year			-	-	-	1,288	-	1,288	1	1,288
Other comprehensive income for the period			-	-	24	57	-	81	-	81
Total comprehensive income for the period			**-**	**-**	**24**	**1,344**	**-**	**1,368**	**1**	**1,369**
Share based compensation	[5]		-	-	-	-14	-	-14	-	-14
Sold treasury shares			-	-	17	-	-	17	-	17
Dividends paid			-	-	-	-554	-	-554	-	-554
Paid coupon perpetual hybrid bond	[13.2]		-	-	-	-10	-	-10	-	-10
Share repurchase	[16]		-	-	-200	-	-	-200	-	-200
Total transactions with owners, recognized directly in equity			**-**	**-**	**-183**	**-578**	**-**	**-761**	**-**	**-761**
Balance at 31 December 2021		**4,202,844,404**	**168**	**8,445**	**-358**	**-5,523**	**496**	**3,228**	**2**	**3,230**

Consolidated Financial Statements

Consolidated Statement of Cash Flows

For the year ended 31 December

€ million	Notes	2021	2020
Profit before income tax from continuing operations		1,627	649
Adjustments for:			
– Net financial expense	[7]	234	269
– Share-based compensation	[5]	6	5
– Share of the profit/loss (-) of associates and joint ventures		2	-6
– Depreciation, amortization and impairments	[10, 11, 19]	1,460	1,552
– Other income and non-cash income and expense	[4.2, 21]	-852	-19
– Changes in provisions (excluding deferred taxes)		-56	-117
Changes in working capital relating to:			
– Current assets		-49	98
– Current liabilities		53	-131
Income taxes paid/received		-77	-
Interest paid/received		-218	-255
Net cash flow from operating activities from continuing operations		**2,129**	**2,043**
Net cash flow from operating activities from discontinued operations		**-1**	**-1**
Net cash flow from operating activities		**2,128**	**2,043**
Acquisition of and investments in subsidiaries, associates and joint ventures (net of acquired cash)	[21]	-30	-14
Disposal of subsidiaries and associates (net of cash)	[21]	196	28
Tax paid on disposal of subsidiaries and associates	[21]	-197	-
Investments in software		-227	-225
Investments in other intangible assets		-4	-417
Investments in property, plant and equipment		-989	-922
Disposals of property, plant and equipment and intangible assets		79	4
Acquisition or disposal of other financial assets	[13.1]	-37	1
Net cash flow from investing activities from continuing operations		**-1,209**	**-1,545**
Net cash flow from investing activities from discontinued operations		**-3**	**-**
Net cash flow from investing activities		**-1,212**	**-1,545**
Dividends paid		-554	-529
Share repurchase	[16]	-200	-
Paid coupon perpetual hybrid bonds		-10	-3
Proceeds from borrowings	[13.2]	689	949
Repayments of borrowings and settlement of derivatives	[13.1, 13.2]	-498	-951
Repayments of lease liabilities	[19]	-135	-135
Other		-9	-2
Net cash flow from financing activities from continuing operations		**-717**	**-670**
Net cash flow from financing activities from discontinued operations		**-**	**-**
Net cash flow from financing activities		**-717**	**-670**
Total net cash flow from continuing operations		**203**	**-172**
Total net cash flow from discontinued operations		**-4**	**-1**
Changes in cash and cash equivalents		**198**	**-173**
Net cash and cash equivalents at 1 January		594	767
Net cash and cash equivalents at 31 December		**793**	**594**
Bank overdrafts		-	2
Cash and cash equivalents	**[15]**	**793**	**597**

Consolidated Financial Statements

General notes to the Consolidated Financial Statements

[1] General information

Koninklijke KPN N.V. (KPN or the company) was incorporated in 1989 and is domiciled in the Netherlands. KPN is registered at the Chamber of Commerce (file no. 02045200). The address of KPN's registered office is Wilhelminakade 123, 3072 AP, Rotterdam. KPN's shares are listed on Euronext Amsterdam.

KPN is a leading telecommunications and IT provider in the Netherlands, offering fixed and mobile telephony, fixed and mobile broadband internet and TV to retail and business consumers. KPN is market leader in the Netherlands in infrastructure and network-related IT solutions to business customers. KPN also provides wholesale network services to third parties.

The Financial Statements were authorized for issue by both the Supervisory Board and the Board of Management on 21 February 2022 and are subject to adoption by the Annual General Meeting of Shareholders on 13 April 2022.

[2] Summary of significant accounting policies

Basis of preparation

The Consolidated Financial Statements of KPN have been prepared in accordance with International Financial Reporting Standards as adopted by the European Union (IFRS) and with the statutory provisions of Part 9, Book 2 of the Dutch Civil Code, under the historical cost convention, except for certain equity investments accounted for using the equity method, and certain equity investments and derivative financial instruments measured at fair value, and on a going concern basis.

All amounts are presented in millions unless stated otherwise. Certain figures may not tally exactly due to rounding. In addition, certain percentages may have been calculated using rounded figures.

Summary of significant accounting policies

The general accounting policies as applied are described below. Significant accounting policies are described in the Notes to the Consolidated Financial Statements.

Changes in accounting policies and disclosures

KPN applies new standards and amendments issued by the International Accounting Standards Board (IASB), when effective and endorsed by the European Union. KPN has not early adopted any standards.

KPN has concluded that the following, endorsed amendments effective 1 January 2021 did not have a significant impact:
- IFRS 9, IAS 39 and IFRS 7 regarding interest rate benchmark reforms
- IAS 1 and IAS 8 on the definition of 'material'

KPN has not applied the amendments to IFRS 16 regarding COVID-19 related rent concessions.

Future implications of new and amended standards and interpretations

The IASB has issued several new standards and amendments to existing standards with an effective date of 1 January 2022 or later. Only changes with a possible relevant impact are discussed.

Amendment to IAS 37: Onerous contracts

The amendments to IAS 37 Provisions, Contingent Liabilities and Contingent Assets specify which costs must be included when assessing whether a contract is onerous or loss-making using a 'directly related cost approach'.

Costs that relate directly to a contract to provide goods or services include both incremental costs (such as costs of direct labor and materials) and an allocation of costs directly related to contract activities (such as depreciation of equipment used to fulfill the contract as well as costs of contract management). General and administrative costs do not relate directly to a contract and are excluded unless they are explicitly chargeable to the counterparty under the contract. Currently, KPN does not consider costs of own personnel as incremental costs, whereas costs of externally hired personnel are included in the incremental costs.

The amendments are effective as of 1 January 2022 and must be applied prospectively to contracts for which an entity has not yet fulfilled all of its obligations at the beginning of the annual reporting period in which it first applies the amendments. The cumulative effect of initially applying the amendments must be recognized as an adjustment to the opening balance of retained earnings. The amendments have been endorsed by the EU. The amendments will result in an increase of the provisions for onerous contracts of EUR 13m on 1 January 2022. The impact on equity (net of tax) is EUR 10m.

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Amendments to IAS 12: Deferred tax related to assets and liabilities arising from a single transaction
The amendments are intended to reduce diversity in accounting for deferred tax on transactions and events that lead to recognition of both an asset and a liability, such as leases and decommissioning obligations.

The initial recognition exception of IAS 12 will no longer apply to transactions that give rise to equal taxable and deductible temporary differences. Also, the amendments clarify that where payments that settle a liability are deductible for tax purposes, it is a matter of judgment (having considered the applicable tax laws) whether such deductions are attributable for tax purposes to the liability recognized in the financial statements (and interest expense) or to the related asset component (and interest expense). This judgment will be relevant when determining if any temporary differences exist on initial recognition of the asset and liability.

The amendments are effective as of 1 January 2023 and have not been endorsed. Prospective application is required to transactions that occur on or after the beginning of the earliest comparative financial period presented. KPN already applies the main principle of this amendment.

Other amendments
KPN has concluded that the following, endorsed amendments effective 1 January 2022 (or later) will not have a significant impact:
- IFRS 3 regarding the added exception to avoid potential 'day 2' gains or losses from contingent assets and liabilities or levies
- IAS 16 regarding recognition of proceeds generated by items of PP&E during its construction phase

KPN is reviewing the impact of the following amendments which are effective as of 1 January 2023 (or later) but have not yet been endorsed:
- IAS 1 regarding the classification of liabilities as current or non-current
- IAS 8 regarding the definition of accounting estimates
- IFRS 10 and IAS 28 regarding the sale or contribution of assets between an investor and its associate or joint venture

KPN currently does not expect an significant impact from these standards.

Basis of consolidation
KPN's Consolidated Financial Statements include the financial results of its subsidiaries and incorporate KPN's share of the results from associates.

Subsidiaries are all entities directly or indirectly controlled by KPN. 'Control' is defined as the power over an entity, i.e. the ability to govern the financial and operating policies, resulting in obtaining the gains or losses from the entity's activities.

Subsidiaries are fully consolidated from the date on which control is obtained by KPN and are deconsolidated from the date on which KPN's control ceases. All intercompany transactions, balances and unrealized results on transactions with subsidiaries are eliminated.

Changes in ownership interests in subsidiaries without change of control that do not result in loss of control are accounted for as equity transactions. Gains or losses on disposals to non-controlling interests are also recorded in equity.

Foreign currency translation
The Financial Statements are presented in euro (EUR), which is KPN's presentation currency as well as functional currency.

Transactions in foreign currencies are translated into euro using the exchange rates applicable at transaction date. At reporting date, monetary assets and liabilities denominated in foreign currencies are translated to euro using the rates at reporting date. Exchange rate differences are recognized in profit or loss except when these differences are related to qualifying cash flow hedges and qualifying net investment hedges in which case the exchange rate differences are recorded in OCI.

Exchange rate differences on non-monetary assets and liabilities are reported as part of the fair value gain or loss from that asset or liability. Exchange rate differences arising from the translation of the net investment in foreign entities, of borrowings and other currency instruments designated as hedges of such investments are recognized in OCI.

Goodwill and fair value adjustments arising on the acquisition of a foreign entity are treated as assets and liabilities of the foreign entity and translated at the closing rate at the reporting date.

Subsidiaries
For consolidation purposes, the results and financial position of subsidiaries are translated into euro at the closing rate of the date of the financial position (assets and liabilities) or at the average exchange rates applicable for the specific reporting period (income and expenses). All resulting exchange differences are recognized in OCI.

Statement of Cash Flows
The Statement of Cash Flows is prepared using the indirect method. Cash flows denominated in currencies other than euro are translated at average exchange rates. Cash flows relating to interest and taxes on profits and tax deductions relating to interest on perpetual hybrid bonds are included in the cash flow from operating activities. Tax payments directly related

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to disposal of subsidiaries are presented as part of the cash flows from investing activities when separately identifiable. The consideration paid in cash for acquired subsidiaries is included in the cash flow from investing activities, net of cash acquired. Cash flows resulting from the disposal of subsidiaries are disclosed separately, net of cash sold.

Significant accounting estimates, judgments and assumptions made by management

Significant accounting estimates, judgments and assumptions made by management are evaluated continuously and are based on historic experience and other factors, including expectations of future events thought to be reasonable under the circumstances. Actual results may deviate from the estimates applied. Estimates are revised when material changes to the underlying assumption occur.

The accounting estimates, judgments and assumptions deemed significant to KPN's Financial Statements relate to:

Subjects	Notes
Determination of deferred tax assets for losses carry forward and provisions for tax contingencies	Notes 8 and 22
Determination of value in use of cash-generating units for goodwill impairment testing	Note 11
Assessments of exposure to credit risk and financial markets risk	Note 13.4
The 'more likely than not' assessment required to determine whether or not to recognize a provision for idle cables, which are part of a public electronic communications network	Notes 18 and 22
The assessment of the lease terms deemed reasonably certain of KPN's lease contracts and the incremental borrowing rate used to measure the lease liabilities	Note 19
Assessments whether revenue for variable consideration is probable or highly probable. This concerns revenue related to disputes and revenue related to VAT regarding unused multipurpose bundles	Notes 4
Several assessments related to KPN's 50% interest in Glaspoort B.V. (classified as a joint venture): - The assessment whether KPN has joint control over Glaspoort - The assessment whether Glaspoort, as divested subsidiary, classifies as a 'business' in terms of IFRS 3 - The assessment whether operational contracts between Glaspoort and KPN are at arms' length - The valuation of KPN's interest in the joint venture (initially set at fair value, subsequently accounted for using the equity method subject to periodic impairment testing) - The allocation of the initial fair value of the joint venture to identifiable intangible assets and goodwill - The valuation of the contingent cash consideration (financial asset at fair value through profit or loss)	Notes 12, 13.1 and 21

In preparing the Financial Statements, KPN has applied the concept of materiality to the presentation and level of disclosures. Only essential and mandatory information is disclosed that is relevant to a reader's understanding of these Financial Statements.

Impact of COVID-19

During 2021, KPN continued to closely monitor the developments of the COVID-19 pandemic and the impact on its customers, suppliers and KPN's own performance. KPN continued to closely monitor a number of business drivers including payment behavior, net working capital and credit quality. The total estimated net effect on KPN's financial results was limited.

The financial results of KPN do not indicate that any impairment may be necessary. KPN's balance sheet and liquidity position remain strong.

Sustainability and climate change

KPN is continuously enhancing, improving and modernizing its network to realize its sustainability goals which include: providing internet access for everyone and everything and stimulate social inclusion, while building the most efficient network using technology to reduce energy consumption despite higher data usage. Through its sustainability efforts, KPN not only reduces its own energy consumption but also enables its customers to do the same. KPN's increasing fiber footprint and the migration from copper to the more energy efficient fiber network contributes to realization of KPN's sustainability goals. Through participation in its joint venture Glaspoort B.V., KPN has realized a substantial acceleration of these nationwide ambitions. In mobile, initiatives include the modernization of broadcasting and customer premises equipment. Other initiatives include the reduction of KPN's leased fleet and replacement of expired vehicle leases with electric vehicles only. The Board of Management has committed to the sustainability goals by adding non-financial sustainability linked targets to the LTI plans such as circularity of assets and reputation.

In 2021, KPN issued a sustainability-linked bonds, demonstrating its commitment to the realization of its goals (see Note 13.2).

KPN has analysed whether the above has had any impact on the valuation of KPN's assets, liabilities and financial results and concluded the impact is limited. The migration to new generation network equipment has resulted in an acceleration of depreciation charges for the assets to be replaced. KPN is also investing in its employees by facilitating suitable solutions to continue working from home.

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[3] Segment reporting

Operating segments are reported in a manner consistent with the internal reporting to KPN's CEO, who is the Chief Operating Decision-Maker according to IFRS 8 Operating Segments.

Comparative financial information for 2020 has been restated as several smaller units were transferred from the Consumer and Business segments to Network, Operations & IT (NOI) and Other. The impact on the segment information was not material.

Almost all of KPN's operating activities are in the Netherlands.

Operating segments

KPN's operating segments comprise of Consumer, Business, Wholesale and Network, Operations & IT (NOI). For general information on these segments, read more in sections Shareholder value and Flexible, simple and converged products and services.

Other

'Other' comprises KPN Holding, Corporate Center and eliminations. KPN accounts for its interest in Glaspoort within this segment.

Segment performance

As part of the simplification process, KPN has limited the intercompany charges to charges that are considered relevant for tax purposes.

The EBITDA AL of Consumer, Business and Wholesale represents the contribution margin of these segments and the EBITDA AL of NOI mostly consists of operating expenses. Due to the fact that KPN neither allocates interest expenses to segments nor accounts for taxes in the segments, the disclosure is limited to operating profit for the year.

Investments in property, plant and equipment, and intangible assets (Capex) are centrally managed and reported to KPN's Chief Operating Decision-Maker at the KPN Group level, not at a segment level.

For an explanation of EBITDA, EBITDA AL and incidental transactions included in Revenues, Other income and EBITDA AL, see Appendix 1.

Segmentation 2021

€ million	Notes	Consumer	Business	Wholesale	NOI	Other[1]	Total KPN Group
Statement of Profit or Loss							
External revenues[2]		2,845	1,755	646	13	11	5,271
Other income	[4.2]	1	1	-	20	830	852
Inter-division revenues		12	7	38	1	-57	-
Total	**[4]**	**2,857**	**1,762**	**684**	**34**	**785**	**6,122**
Operating expenses		-984	-926	-132	-597	-162	-2,800
EBITDA		**1,873**	**837**	**553**	**-563**	**623**	**3,322**
DA&I		-176	-57	-8	-1,162	-57	-1,460
Operating result		**1,697**	**780**	**545**	**-1,726**	**566**	**1,862**
Share of profit or loss of associates and joint ventures	[12]	-	-	-	-	-2	-2
EBITDA		1,873	837	553	-563	623	3,322
DA&I right-of-use assets	[19]	-12	-2	-1	-63	-45	-123
Interest lease liabilities	[19]	-1	-	-	-14	-5	-20
EBITDA after lease		**1,860**	**834**	**552**	**-640**	**574**	**3,180**
Total assets[3]		4,398	2,846	629	9,343	-4,480	12,737
Total liabilities		4,401	2,727	630	9,354	-7,605	9,507

1 Including eliminations

2 External revenues mainly consist of rendering of services

3 Total assets of Segment Other includes the carrying value of Glaspoort (EUR 503m, see Note 12) and the deferred consideration related to Glaspoort (EUR 218m, see Note 13.1)

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Segmentation 2020 (restated)

€ million	Notes	Consumer	Business	Wholesale	NOI	Other[1]	Total KPN Group
Statement of Profit or Loss							
External revenues[2]		2,852	1,832	590	5	4	5,283
Other income		-	12	4	3	-	19
Inter-division revenues		11	8	46	1	-66	-
Total	**[4]**	**2,863**	**1,852**	**641**	**9**	**-62**	**5,303**
Operating expenses		-981	-968	-126	-614	-149	-2,839
EBITDA		**1,881**	**884**	**514**	**-605**	**-211**	**2,464**
DA&I		-189	-53	-9	-1,237	-63	-1,552
Operating result		**1,692**	**831**	**505**	**-1,842**	**-274**	**912**
Share of profit or loss of associates and joint ventures	[12]	-	-	-1	-	6	6
EBITDA		1,881	884	514	-605	-211	2,464
DA&I right-of-use assets	[19]	-10	-4	-1	-65	-50	-130
Interest lease liabilities	[19]	-2	-	-	-15	-5	-22
EBITDA after lease		**1,869**	**881**	**513**	**-685**	**-266**	**2,312**
Total assets		4,453	2,779	612	9,232	-4,996	12,080
Total liabilities		4,537	2,759	612	9,263	-7,712	9,458

1 Including eliminations

2 External revenues mainly consist of rendering of services

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Notes to the Consolidated Statement of Profit or Loss

[4] Revenues and Other income

[4.1] Revenues

€ million	2021	2020
Service revenues	4,860	4,891
Non-service revenues	378	368
Revenues from contracts with customers	**5,238**	**5,258**
Rentals and other revenues	33	25
Revenues	**5,271**	**5,283**

Service revenues are all revenues recognized over time and includes fees for usage of KPN's network and facilities, e.g. monthly subscription fees and revenues from customer-specific IT solutions.

Non-service revenues are revenues recognized at a point in time and includes for example sale of handsets, peripheral equipment as well as software licenses sold without ongoing support.

The application of KPN's accounting policies on revenue recognition, including relevant judgments, and information about KPN's performance obligations is summarized below:

Service revenues

- Exploitation services are considered a separate performance obligation. Revenue is recognized over time during the contract period.
- Network access is considered a separate performance obligation. Revenue is recognized over time during the subscription period. In general content, e.g. TV content, is considered part of the network access performance obligation and revenue is recognized on a gross basis.
  Revenue for streaming services, which are contracted and billed to customers separately, are recognized on a net basis if KPN acts as an agent.
- One-off connection fees are not separate performance obligations as they are considered to be necessary to get access to the network. The fees charged to the customer are recognized as a contract liability and bundled with the performance obligation for network access.
- Transaction-related dealer fees paid to acquire or retain subscribers are capitalized as contract costs and expensed on a straight-line basis over the contract term of the underlying customer contract.
- Installation services offered to consumer customers are generally considered a separate performance obligation, as the customer can choose to use an engineer for installation or to install the equipment themselves. Installation services treated as a separate performance obligation include installing of customer premises equipment (CPE), e.g. set-top boxes, setting up in-home WiFi and installing customers' own devices. Revenue from installation services is allocated to the installation service at the start of the contract and recognized as revenue at a point in time (at completion of the installation).
  The difference between the amount of revenue recognized and the amount charged to the customer is recognized as a contract asset. Most CPE is considered part of KPN's network. These hardware elements are capitalized as part of property, plant and equipment as KPN retains ownership and control over the economic benefits, and are therefore not considered a separate performance obligation.
- Transition projects for corporate customers are considered separate performance obligations, as the customer can benefit from the project deliverables on their own. Revenue is recognized over time (percentage of completion during the project phase). Transition projects sometimes include the delivery of peripheral equipment and software licenses. These are not considered as separate performance obligations if KPN performs the installation and/or must provide ongoing support as part of the transition project. If not part of a transition project, revenue for peripheral equipment is recognized as revenue at a point in time (upon delivery of the equipment), whereas revenue for licenses with ongoing support is recognized over time (on a monthly basis).
- The Wholesale segment bills customers at (regulated) tariffs that may be disputed by other operators and regulators. A contract liability is recognized in case the invoiced revenue is not considered highly probable.

Non-service revenues

- Handset sales are a separate performance obligation and are recognized as revenue at a point in time (upon delivery of the handset equipment). The amount of revenue allocated to the handset less the amount charged to the customer upfront is recognized as a contract asset if the payment to be received for the handset is conditional on the delivery of telco services and as a financial receivable if the payment to be received is unconditional.
- As of 1 May 2017, KPN is legally required to treat a handset combined with a postpaid subscription as a consumer loan under the Dutch Financial Supervision Act (Wet op het financieel toezicht, Wft) if the consumer customer repays the handset in monthly instalments and the credit amount is above EUR 250. The outstanding handset credit is considered

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a contract asset because the payment is conditional on the delivery of telco services. As of 1 January 2018, the contract with consumer customers for the handset instalment payments changed and is no longer conditional on the delivery of the telco services. Therefore, a financial receivable is recognized for the instalments to be received (see Note 14). Taking into account the low interest rates and contract duration, these receivables do not include a significant financing component.

- The handsets sold and delivered by third parties, related to KPN subscription contracts, do not qualify as performance obligations for KPN. Handset-related dealer fees result in an unbilled receivable on the Statement of Financial Position, which is decreased when handset instalments are billed to the end-customer.

In 2020 and 2021, the time value of money was not significant and therefore not recorded.

Generally, the payment term is two weeks in the consumer market and 30 days in the business market.

KPN applies the practical expedients provided in IFRS 15 under which disclosure of amounts of consideration allocated to the remaining performance obligations (unsatisfied or partially satisfied) do not need to be disclosed. This applies to contracts with an original expected duration of less than one year or when KPN bills a fixed amount for network services provided. KPN recognizes revenue from network services in the amount to which KPN has a right to invoice the customer and this amount corresponds directly with the value of KPN's performance completed to date.

The remaining performance obligations expected to be recognized in future periods relating to the transition and transformation projects for workspace services with business customers were nil as at 31 December 2021 and 31 December 2020.

Revenues, disaggregated per segment, including interdivision revenues

The disaggregation of the revenues per segment has been restated, consistent with internal reporting, to align with KPN's strategy to converge fixed-mobile propositions and differentiate the Business segment into SME (small & medium enterprises), LCE (large corporate enterprises) and Tailored Solutions (large corporate customers with integrated solutions). In all segments, a split is made between service revenues and non-service revenues. In the Consumer segment, the revenue disaggregation between Residential and Mobile communication services has been restated to Fixed-Mobile, Fixed-only, Postpaid-only and Legacy services. In the Business segment, the revenue disaggregation by product portfolio has been restated to a split between the market segments SME, LCE and Tailored Solutions and per segment a disaggregation into the portfolio clusters Access & Connectivity, IT services & Other and Service management. In the Wholesale segment, the restate includes the split into service and non-service revenues and the disaggregation of the Fixed service revenues into Broadband services (lines) and Other services.

€ million	2021	2020 (Restated)
Fixed-Mobile service revenues	1,455	1,416
Fixed-only service revenues	779	810
Postpaid-only service revenues	241	242
Legacy/other service revenues	109	135
Consumer service revenues	**2,584**	**2,604**
Consumer non-service revenues[1]	273	259
Total Consumer revenues	**2,857**	**2,863**
Access & connectivity[2]	518	529
IT services[3]	31	23
SME service revenues	**549**	**552**
Access & connectivity[2]	473	498
IT services & Other[3]	184	215
LCE service revenues	**657**	**713**
Access & connectivity[2]	126	130
IT services & Other[3]	98	94
Service management	202	218
Tailored Solutions service revenues	**426**	**442**
Business service revenues	**1,633**	**1,706**
Non-service & other revenues[1]	130	135
Total Business revenues	**1,762**	**1,841**
Mobile service revenues	156	138
Broadband service revenues	293	245
Other service revenues[4]	233	245
Wholesale service revenues	**681**	**628**
Non-service revenues	2	8
Total Wholesale revenues	**683**	**636**
NOI and Other (incl. eliminations)	**-32**	**-56**
Total	**5,271**	**5,283**

1 Non-service revenues includes the sale of handsets and peripheral equipment and in the business segment also the sale of software licenses.
2 Service revenues for among others mobile, broadband & networking, fixed voice and internet of things.
3 IT services includes cloud & workspace and cybersecurity.
4 Service revenues for among others interconnect traffic, visitor roaming, digital products (messaging, content delivery) and NL-ix (interconnect exchange).

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Accounting policy: Revenues

The core principle is that revenue is recognized to depict the transfer of promised goods or services to the customer in an amount that reflects the consideration to which KPN expects to be entitled in exchange for those goods or services. Revenue is recognized when it is probable that the economic benefits associated with a transaction will flow to KPN and the amount of revenue and associated costs can be measured reliably.

KPN follows the five-step process of IFRS 15 to recognize revenue. After a contract with a customer has been entered into, the separate performance obligations are identified which are the distinct goods and services promised to the customer (the customer can benefit from the goods or services either on their own or together with other resources that are readily available to the customer, and the transfer of goods or services to the customer are separately identifiable from other promises in the contract). The next steps are the determination of the transaction price and the allocation to the performance obligations. Allocation of the transaction price to performance obligations is based on standalone selling prices, which are based on our price lists and therefore readily available. The final step is to recognize revenue when a performance obligation is satisfied. Revenue is recognized either at a point in time or over time. In general, telco and IT services are delivered over time, whereas handsets and peripheral and network equipment, in case they are treated as separate performance obligations, are delivered at a point in time.

Revenue for variable considerations, including revenue under dispute, is recognized only when it is highly probable which, in some cases, requires significant judgment.

An adjustment for the time value of money is made to a transaction price for the effects of financing if time between recognition of revenue and cash receipt is expected to exceed 12 months and if it provides the customer with a significant benefit.

If KPN transfers goods or services to a customer before the customer pays consideration or before payment is due, a contract asset is recognized in case the earned consideration is conditional. A financial receivable is recognized if KPN's right to an amount of consideration is unconditional (only the passage of time is required before payment of the consideration is due).

KPN recognizes contract liabilities in the Statement of Financial Position for considerations received in respect of unsatisfied performance obligations. Contract liabilities are recognized as revenue when KPN performs under the contract. At the start of a contract with a customer, in case services or goods are delivered by sub-contractors, KPN determines whether its performance obligation is to provide the specified goods or services itself (acting as a principal) or to arrange for another party to provide those goods or services (acting as an agent) based on the agreed terms and conditions with the customer and the sub-contractor, as well as the nature of the goods and services promised to the customer.

Accounting policy: Costs to obtain and/or fulfill a contract

The incremental costs of obtaining a contract with a customer are recognized as an asset if KPN expects to recover those costs. Costs to obtain a contract that would have been incurred regardless of whether the contract was obtained are recognized as an expense when incurred, unless those costs are explicitly chargeable to the customer regardless of whether the contract is obtained or not. Costs to fulfill a contract are recognized as an asset if:

- The costs relate directly to a contract; and
- The costs generate or enhance resources that will be used in satisfying performance obligations in the future; and
- The costs are expected to be recovered.

Capitalized contract costs are amortized on a linear basis over the period in which KPN transfers the related goods or services to the customer. KPN applies the practical expedient to immediately expense contract costs when the asset that would have resulted from capitalizing such costs would have been amortized within one year or less.

Assets recognized for costs to obtain a contract and costs to fulfill a contract are subject to impairment testing.

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[4.2] Other income

€ million	2021	2020
Other income	852	19

Other income in 2021 relates to the book gain on the sale of the subsidiary Glaspoort B.V. (EUR 830m), see Note 21 for further information on the sale of subsidiaries, the book gain on the sale of assets to Glaspoort B.V. (EUR 15m), book gains on the sale of various fixed assets (EUR 5m) and adjustments to the book result on sale of subsidiaries in 2019 and 2020 (EUR 1m).

Other income in 2020 relates to the sale of KPN's subsidiary KPN Consulting B.V. (EUR 11m), book gains on the sale of various fixed assets (EUR 6m) and adjustments to the book result on sale of subsidiaries in 2019 (EUR 2m).

Accounting policy: Other income
Other income includes gains on the sale of property, plant and equipment, gains on the sale of subsidiaries as well as other gains not related to KPN's operating activities.

[5] Personnel expenses

€ million	2021	2020
Salaries and wages	748	739
Retirement benefits	79	79
Social security contributions	84	90
Additional labor capacity	76	105
Own work capitalized	-116	-120
Other	-8	-1
Total personnel expenses	**863**	**892**

Employee redundancy costs are not included in personnel expenses but in other operating expenses (see Note 18).

Number of own personnel (FTE) per segment	31 December 2021	31 December 2020 Restated[1]
Consumer	2,566	2,519
Business	2,694	2,829
Wholesale	213	202
NOI	3,232	3,525
Other	993	1,027
Total FTE	**9,699**	**10,102**

1 Comparative financial information for 2020 has been restated as several smaller units were transferred from the Consumer and Business segments to Network, Operations & IT (NOI) and Other.

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Share plans

KPN has granted shares (equity-settled) and share-based awards (cash-settled) on its shares to members of the Board of Management and senior management. The conditionally granted awards will vest after three years if the employee is still employed by KPN. For awards granted until 2018 vesting is based on individual vesting of 25% relative total shareholder return (TSR) versus peer group, 25% free cash flow, 25% earnings per share, 12.5% on sustainability/environmental targets and 12.5% on stakeholder/customer targets. Vesting of non-financial targets is subject to achieving a cumulative net profit during the vesting period of three years (i.e. a qualifier for vesting). The peer group and the vesting schedule can be found under 'Long-term incentives' in the Remuneration Report.

As of 2019, the targets for the LTI plan are set as follows: 70% financial targets, of which 45% on cumulative free cash flow over the plan period and 25% on relative TSR measured against the STOXX Europe 600 Telecommunications index and 30% non-financial targets, determined at the start of a new plan from the following categories: (i) Sustainability; (ii) Reputation; (iii) Social; (iv) Key business projects; and (v) Market share.

The main features of the awards granted to KPN management are summarized in the following table.

	Board of Management	Senior management	Maximum term	Settlement type[1]	Vesting period	Holding period after vesting of/until
2017	X	X	5 years	Equity[2]	3 years	2 years
		X	3 years	Cash	3 years	–
2018	X	X	5 years	Equity[2]	3 years	2 years
		X	3 years	Cash	3 years	–
2019	X	X	5 years	Equity[2]	3 years	3 years
		X	3 years	Cash	3 years	–
2020	X		5 years	Equity[2]	3 years	3 years
		X	3 years	Cash	3 years	–
2021	X		5 years	Equity[2]	3 years	3 years
		X	3 years	Cash	3 years	–

1 The cash-settled share awards will be settled in cash and no holding restrictions apply. An exception to the holding period for equity-settled plans is made with respect to shares that were sold upon vesting to cover the tax obligation on the vested shares. After vesting, the holder is able to sell a number of unconditional granted shares only up to the amount necessary to settle the wage taxes liability relating to the profit made on the stock compensation plan. Wage tax in the Netherlands is generally around 50% of the total vested amount.

2 Including deferred dividend.

The total compensation expense associated with the share plans was EUR 8m in 2021 (2020: EUR 6m). The related liability (for cash-settled shares) on 31 December 2021 was EUR 8m (31 December 2020: EUR 6m). This liability is included under Other payables. For the 2018 Share Plan and share-based awards, the service conditions were met in the year 2021. The intrinsic value at vesting was EUR 6m (2020: EUR 5m).

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The following table presents the number of shares and share-based awards in thousands under the share plans.

	Total 31 Dec 2019	Granted/ additional vesting[1]	Exercised/ Vested	Forfeited	Total 31 Dec 2020	Granted/ additional vesting[2]	Exercised/ Vested	Forfeited[3]	Total 31 Dec 2021[4]	-of which: Non-vested
2017 Share-based awards Sr. man.	1,061	-	-677	-384	-	-	-	-	-	-
2017 Shares BoM/Sr. man.	1,872	-	-1,194	-678	-	-	-	-	-	-
2018 Share-based awards Sr. man.	1,209	-	-	-126	1,083	-	-834	-249	-	-
2018 Shares BoM/Sr. man.	2,184	-	-	-271	1,913	-	-1,473	-440	-	-
2019 Share-based awards Sr. man.	2,059	13	-	-50	2,022	-	-	-265	1,757	1,757
2019 Shares BoM/Sr. man.	1,176	-	-	-39	1,137	-	-	-30	1,107	1,107
2020 Share-based awards Sr. man.		2,942	-	-17	2,925	-	-	-167	2,758	2,758
2020 Shares BoM		1,809	-	-	1,809	-	-	-	1,809	1,809
2021 Share-based awards Sr. man.					-	2,033	-	-	2,033	2,033
2021 Shares BoM					-	1,409	-	-	1,409	1,409

1 On the basis of a 100% grant. The equity-settled share numbers do not include any deferred dividend during the vesting period. The deferred dividend during the vesting period will be granted in additional shares.

2 At grant date, the fair value is calculated using a Monte Carlo Simulation model. In April 2021 the fair value was EUR 2.41 (2020 grant: EUR 1.77) for the 2021 share-based award (cash-settled) and EUR 2.70 (2020 grant: EUR 2.04) for the 2021 equity-settled share grant for the Board of Management (excluding deferred dividend).

3 At the end of 2021, KPN held the 8th position with respect to the 2019 share grant and at the end of 2020, KPN held the 6th position with respect to the 2018 share grant. This position and the outcomes of the other targets will lead to a 92% vesting in April 2022 of the 2019 share grant. Final TSR measurement for the 2018 share grant was conducted in February 2021 which resulted in 77% vesting in April 2021.

4 The fair value of each cash-settled share-based award was measured on 31 December 2021 using recent strategic plans, forecasts and a Monte Carlo Simulation model, based on the most recent available share price of KPN and its performance compared with peer companies at the moment of valuation (i.e. closing share prices as at 31 December 2021). The fair value on 31 December 2021 was EUR 2.33 (2020: EUR 2.15) for the 2019 share-based award, EUR 2.23 (2020: EUR 2.06) for the 2020 share-based award and EUR 2.19 for the 2021 share-based award.

The fair value of each award at the grant date is determined using the following assumptions:

Assumptions	2021 LTI	2020 LTI
Risk-free interest rate based on euro government bonds for remaining time to maturity of 2.7 years	-0.5%	-0.3%
Expected dividend for KPN (based on one year's historical daily data preceding the date of award)	5.6%	5.4%
Expected volatility (PSP grant based on 2.7 years' historical daily data) used for TSR	27.0%	24.1%
Share price at date of award (closing at grant date)	€ 2.82	€ 2.20

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The following paragraphs detail the actual remuneration of the Board of Management. Please refer to the Remuneration Report for the executive pay policy.

Details of actual remuneration

The remuneration of the Board of Management, representing the costs incurred by the company measured under IFRS principles, is as follows:

Name current member	Year	Salary	STI[1]	LTI[2]	Pension Cost[3]	Social security and other compensation[4]	Total
J.F.E. Farwerck	2021	875,000	936,775	971,240	213,246	30,364	3,026,625
	2020	875,000	675,833	767,501	185,345	19,793	2,523,472
H.C. Figee	2021	675,000	481,815	324,249	109,638	37,416	1,628,118
	2020[5]	618,750	318,594	132,674	99,675	34,386	1,204,079
J.P.E.D. van Overbeke	2021	650,000	463,944	526,584	152,525	14,814	1,807,867
	2020	650,000	334,698	401,564	123,973	15,019	1,525,254
M. Snoep	2021	650,000	463,944	462,514	117,328	30,070	1,723,856
	2020	650,000	334,698	278,445	106,089	30,275	1,399,507
B. Fouladi	2021	650,000	463,944	501,586	124,975	12,901	1,753,406
	2020	650,000	334,698	317,624	123,979	14,031	1,440,332
H. Garssen	2021	500,000	356,880	300,294	81,984	14,828	1,253,986
	2020	500,000	257,460	158,551	81,544	15,033	1,012,588
Total current members	**2021**	**4,000,000**	**3,167,302**	**3,086,467**	**799,696**	**140,393**	**11,193,858**
	2020	**3,943,750**	**2,255,981**	**2,056,359**	**720,605**	**128,537**	**9,105,232**

1 Actual STI relates to performance in the current year but paid out in the following financial year. Please see the 'Short-term incentives' section in the Remuneration Report for the actual pay-out levels per target.

2 The amounts in the table represent the cost recognized for shares in 2021 and 2020 based on their fair values at grant date. The fair value of the share-based award is recorded as cost over the vesting period. Please see the 'Long-term incentives' section in the Remuneration Report for a further explanation.

3 The pension costs include the costs for survivor's pension, disability coverage, administration as well as the gross allowances. The fixed gross allowance (for the base pay part above EUR 112,189) in 2021 was, EUR 153,991 for Mr. Farwerck (2020: EUR 127,940), EUR 75,095 for Mr. Figee (2020: EUR 67,990), EUR 110,922 for Mr. Van Overbeke (2020: EUR 83,533), EUR 81,622 for Ms. Snoep (2020: EUR 72,270), EUR 87,758 for Mr. Fouladi (2020: EUR 86,753) and EUR 53,411 for Ms. Garssen (2020: EUR 52,984).

4 In addition to social security, the stated amounts include allowances that can be considered as indirect remuneration and relates to the value for the private use of the company car.

5 Remuneration since 1 February 2020.

Name former member	Year	Salary	Severance	STI[1]	LTI[2]	Pension Cost[3]	Social security and other compensation[4]	Total
J.C. de Jager (until February 2020)	2020	112,500	-	57,929	84,114	22,097	5,813	282,453

1 Actual STI relates to performance in the current year but paid out in the following financial year. Please see the 'Short-term incentives' section in the Remuneration Report for the actual pay-out levels per target.

2 The amounts in the table represent the cost recognized for shares based on their fair values at grant date. The fair value of the share-based award is recorded as cost over the vesting period. Please see the 'Long-term incentives' section in the Remuneration Report for a further explanation.

3 The pension costs include the costs for survivor's pension, disability coverage, administration as well as the gross allowances. For the former members the fixed gross allowance in 2020 was EUR 15,885 for Mr. De Jager

4 In addition to social security, the stated amounts include allowances that can be considered as indirect remuneration and relates to the value for the private use of the company car.

See the Remuneration Report for the number of shares under the share plans per individual board member.

See the Insider Transactions section for stock ownership of members of the Board of Management and Supervisory Board.

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Supervisory Board

Please see the Remuneration Report for the actual fee received by each member of the Supervisory Board. The total fee for 2021 is EUR 652,889 (2020: EUR 655,626).

Accounting policy: Share-based compensation

For equity-settled plans, the fair value of shares granted to employees is measured at grant date. For cash-settled plans, the fair value of the liability for the awards granted is remeasured at each reporting date and at settlement date.

The costs of share-based compensation plans are determined based on the fair value of the shares and the number of shares expected to vest. On each balance date, KPN determines whether it is necessary to revise the expectation of the number of shares that will vest. The fair value is recognized as personnel expense in profit or loss over the vesting period of the shares against an increase in equity in the case of equity-settled share-based compensation plans and against the recognition of a liability in the case of cash-settled share-based compensation plans.

[6] Other operating expenses

Other operating expenses comprise, among others, a net addition to the restructuring provision (see Note 18).

Auditor's fees

The fees listed below relate to the services provided to KPN and its consolidated group entities by Ernst & Young Accountants LLP, as well as by other Dutch and foreign-based EY individual partnerships and legal entities, including their tax services and advisory groups:

€ million	2021	2020
Financial statements audit fees	3.9	3.6
Other assurance fees	0.9	0.9
Total audit fees	**4.7**	**4.5**
Tax fees	0.2	0.1
Total	**5.0**	**4.6**

The total audit fees of Ernst & Young Accountants LLP charged to KPN and its consolidated group entities amounted to EUR 4.7m in 2021 (2020: EUR 4.5m). The financial statements audit fees include the fees for professional services rendered for the audit of KPN's annual financial statements and the annual statutory financial statements of subsidiaries or services that are normally provided by the auditor in connection with the audits.

The other assurance fees include the fees incurred for assurance and related services that are reasonably related to the performance of the audit or review of KPN's Financial Statements, such as revenue and IT-related assurance services and regulatory-related assurance services.

Accounting policy: Operating expenses

Operating expenses are divided into direct cost (cost of goods and services) and indirect cost (IT/TI, personnel expenses and other operating expenses).

Cost of goods and services are costs incurred in the context of a sales transaction and include subscriber acquisition and retention costs and traffic expenses. These costs are expensed as incurred, except handset fees paid to dealers and transaction related dealer commissions that are capitalized and amortized over the contract term. The cost of a handset is expensed when the handset is sold (as incurred), both as an individual sale or as a component of a transaction in combination with a subscription.

Information technology (IT) expenses relate to KPN's IT environment and include licenses and maintenance expenses for software and/or IT hardware when not directly related to a sales transaction. Technical infrastructure (TI) expenses are expenses related to KPN's fixed and mobile networks.

Personnel expenses are all expenses related to KPN's workforce, both related to own employees and external personnel.

Other operating expenses include expenses related to marketing and communication, billing and collection, housing and facilities.

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[7] Financial income and expenses

€ million	Notes	2021	2020
Finance income		**-**	**-3**
Interest on borrowings		-192	-207
Interest expense lease liability	[19]	-20	-22
Interest on other provisions		-3	-3
Other interest expenses		-8	-7
Finance costs		**-223**	**-239**
Amortizable part of hedge reserve	[13.1]	-15	-15
Amortization discontinued fair value hedges	[13]	22	29
Derivative financial instruments not qualified for hedge accounting	[13]	-17	-27
Exchange rate differences		5	-4
Other		-6	-11
Other financial results		**-11**	**-28**
Total		**-234**	**-269**

Finance income in 2021 was EUR 0m (2020: EUR -3m). Negative interest on cash balances of EUR 3m was offset by the interest accrued in 2021 on the contingent cash receivable related to Glaspoort.

Finance costs decreased by EUR 16m, which was mainly related to debt redemptions and lower interest rates on borrowings. Interest on borrowings included a non-cash amount of EUR 6m (2020: EUR 4m) relating to debt issuance and similar costs, which are amortized over the remaining life of the respective bonds using the effective interest rate method.

Other financial results decreased by EUR 17m (lower net cost), mainly due to lower fair value changes on derivative financial instruments not qualified for hedge accounting due to maturing swaps (EUR 17m loss versus EUR 27m loss in 2020), hedge ineffectiveness of EUR 0m (2020: EUR 7m loss) and exchange rate gains of EUR 5m (2020: EUR 4m loss), partly offset by a EUR 2m fair value loss on the contingent cash receivable related to Glaspoort included in Other (2020: n.a.) and EUR 7m lower gains from amortization of discontinued fair value hedges.

[8] Taxation

The Netherlands

The book loss, which is recognized as a result of the sale of E-Plus in 2014 (see schedule net DTA book loss sale of E-Plus), was used to offset KPN's taxable income in the Netherlands in 2014 up to and including 2021, and will be used to offset a significant part of KPN's taxable income in the Netherlands in the coming years.

The realization of the joint venture (Glaspoort) with APG triggered a taxable event in Q2 2021, which has been discussed and agreed with the Dutch tax authorities (see Note 21). The extension of the fiber roll-out, KPN, APG and Glaspoort agreed on in Q4 2021, will follow the same principles for tax purposes as the initial transaction (see Note 12).

KPN has an agreement with the Dutch tax authorities with respect to the application of the Dutch innovation box tax regime. This is a facility under Dutch corporate income tax law where profits attributable to innovation are taxed at an effective rate of 9.0% (2020: 7.0%). The application of the innovation box resulted in a benefit of EUR 40m over 2021 (2020: EUR 16m). The increase in the iBox benefit is a result of the realization of the joint venture Glaspoort and the agreement to extend the fiber roll-out.

Germany

Upon completion of all prior years, the German Tax authorities started a tax audit of E-Plus over fiscal year 2014. In 2014, KPN completed the sale of E-Plus. Over the years, E-Plus had incurred substantial debts to KPN, a.o. in relation to the acquisition of the UMTS licenses and the roll-out of its network. The sale of E-Plus excluded these debts, which were subsequently restructured. In 2021, the German Tax authorities requested KPN's German subsidiary to further substantiate its tax filing with regard to these debt restructurings. The subsidiary has addressed the questions on the basis of supporting third party expert opinions regarding this matter. Completion of this process may take time given the materiality and complexity of the 2014 tax filings. As this matter could have a material impact for KPN, it is treated as a contingent liability as referred to in Note 22.

See Note 21 for the impact of the acquisitions, which are separately liable for income taxes, and disposals of subsidiaries and business units and see Note 22 and the Tax and regulations section in this Integrated Annual Report for tax proceedings on disposed businesses.

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Income tax expense

€ million	2021	2020
Current tax	-292	1
Deferred taxes	-52	-89
Income tax (charge)/benefit from continuing operations	**-344**	**-88**

KPN used all remaining realized losses in 2021. Consequently, KPN reports significantly more current income tax expense compared to prior years and cash tax payments increased accordingly as well.

The reconciliation from the Dutch statutory tax of 25% (2020: 25%) to the effective tax rate (ETR) of 21.1% (2020: 13.7%) is explained in the following table.

	2021		2020[1]	
	€ million	ETR	€ million	ETR
Profit before income tax from continuing operations excluding associates and joint ventures	**1,628**		**643**	
Taxes at Dutch statutory tax rates	-407	25.0%	-161	25.0%
Dutch tax rate adjustment	14	-0.8%	67	-10.4%
Not taxable income, non deductible expenses and liquidation losses	1	-0.1%	3	-0.5%
Innovation tax facilities current year	40	-2.4%	16	-2.4%
Innovation tax facilities prior year	-	0.0%	-8	1.3%
Deferred tax related to prior years	7	-0.4%	-1	0.1%
Deferred tax related to current year	3	-0.2%	-3	0.4%
Other	-1	0.0%	-1	0.2%
Income tax benefit/(charge) from continuing operations	**-344**	**21.1%**	**-88**	**13.7%**

1 Deferred tax related to prior years is restated. The 2020 amount related to the additional tax expense recognized in PL for the estimated adjustment on depreciation limitations of < EUR 1m on real estate for the years 2018-2019.

Changes in Dutch tax rates resulted in a benefit of EUR 14m in 2021 (2020: EUR 67m) due to the valuation of our net deferred tax assets, while the tax exemption of the result on disposal of subsidiaries and business units resulted in a tax benefit of EUR 1m (2020: EUR 3m). Furthermore, a one-time tax benefit of EUR 7m has been claimed due to an update of tax calculations on real estate and lease property depreciation that relate to deferred tax positions reported in prior years.

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Deferred tax positions

Deferred tax assets

€ million	Tax loss & other carry forwards[1]	Unrealized liquidation losses[2]	Bonds & hedges[3]	Restriction on depreciation[4]	Fiscal goodwill[5]	Lease Liabilities[6]	Other	Offset against deferred tax liabilities	Total[7]
Balance at 31 December 2019	**195**	**435**	**85**	**105**	**16**	**201**	**76**	**-452**	**662**
Income statement benefit/(charge)	-29	-	-7	-19	-14	2	-14	16	-65
Transfer to current tax	-102	-	-	12	-	-	-	-	-90
Tax charged to OCI	6	-	-25	-	-	-	-	-	-19
Tax rate changes[8]	11	66	11	-4	1	3	-1	-10	77
Transfer to held for sale	-	-	-	-	1	-	-	-	1
Balance at 31 December 2020	**81**	**501**	**64**	**94**	**4**	**206**	**61**	**-446**	**567**
Income statement benefit/(charge)	-8	-	-4	-20	-5	-16	28	33	7
Transfer to current tax	-73	-	-	1	-	-	-	-	-72
Tax charged to OCI	-	-	-10	-	-	-	-	-	-10
Tax rate changes[8]	-	16	2	6	1	11	-	-22	14
Balance at 31 December 2021	**-**	**517**	**52**	**81**	**-**	**201**	**89**	**-435**	**506**

1 Net offsettable losses expected to be recovered within the foreseeable future. KPN has a history of recent profits.

2 Unrealized losses will become available for offset against taxable profits as from 2022. The offset is unlimited in time.

3 Amounts relate to capitalized costs for tax purposes, derivative positions adjusted for tax purposes and unrealized FX results included in the hedge reserve.

4 Amounts relate to assets depreciated in 5 years for tax purposes and less than 5 years for book purposes.

5 Amounts relate to goodwill depreciated for tax purposes (originated from internal transfers).

6 For leases, KPN separately recognizes both deferred tax assets and deferred tax liabilities, based on the underlying temporary difference.

7 Of which EUR 230m to be recovered within 12 months (2020: EUR 100m). Recoverability depending on future taxable results. Based on current projections, KPN expects to fully utilize its losses within the foreseeable future.

8 Representing the impact of the Dutch corporate tax rate change of which a net benefit of EUR 1m has been added to OCI in 2021 (2020: net benefit of EUR 10m).

Net DTA book loss on the sale of E-Plus

€ million	Net DTA	Realized	Unrealized	Offset by DTL	Net Loss
Balance at 31 December 2019	**588**	**153**	**435**	**-**	**2,638**
Movement 2020	-41	-107	66	-	-450
Balance at 31 December 2020	**547**	**46**	**501**	**-**	**2,188**
Movement 2021	-30	-46	16	-	-184
Balance at 31 December 2021	**517**	**-**	**517**	**-**	**2,004**

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Deferred tax liabilities

€ million	Software development[1]	Goodwill depreciation[2]	PPA[3]	Right-of-use assets[4]	Other	Offset against deferred tax assets	Total
Balance at 31 December 2019	**126**	**86**	**45**	**183**	**12**	**-452**	**-**
Income statement benefit/(charge)	-25	16	-8	3	-2	16	-
Tax rate changes	-1	-	7	3	1	-10	-
Balance at 31 December 2020	**100**	**102**	**44**	**189**	**11**	**-446**	**-**
Income statement benefit/(charge)	-24	10	-7	-14	2	33	-
Tax rate changes	7	4	1	10	-	-22	-
Balance at 31 December 2021	**83**	**116**	**38**	**185**	**13**	**-435**	**-**

1 Amounts relate to capitalized software costs which are taken as expenses for tax books.

2 Amounts relate to acquired goodwill depreciated for tax purposes (not for book purposes).

3 See Note 21 for the impact of the acquisitions.

4 For leases, KPN separately recognizes both deferred tax assets and deferred tax liabilities, based on the underlying temporary difference.

Tax loss carry forward

	31 December 2021			31 December 2020		
€ million	Tax loss carry forward	Maximum deferred tax asset	Recognized deferred tax asset	Tax loss carry forward	Maximum deferred tax asset	Recognized deferred tax asset
Koninklijke KPN – corporate tax[1]	-	-	-	328	82	81
Other	77[2]	16	-	71	15	-
Total KPN Group	**77**	**16**	**-**	**400**	**97**	**81**

1 The offset of realized losses with future profits is unlimited as from 2021. Furthermore, we refer to "Tax and regulations" in this integrated report on changes regarding the use of losses as from 2022. Note: this schedule does not yet include the unrealized losses (loss E-Plus) that will become available as from 2022.

2 Losses relating to foreign jurisdictions that are not expected to materialize in foreseeable future.

Expiration of the available tax loss carry forward and recognized tax assets

	31 December 2021			31 December 2020		
€ million	Tax loss carry forward	Maximum deferred tax asset	Recognized deferred tax asset	Tax loss carry forward	Maximum deferred tax asset	Recognized deferred tax asset
2023	-	-	-	186	47	46
2024	-	-	-	1	-	-
2025	-	-	-	141	35	35
2026	3	1	-	-	-	-
Later	54	11	-	53	11	-
Unlimited	20	4	-	18	4	-
Total	**77**	**16**	**-**	**400**	**97**	**81**

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Accounting policy: Taxation

Current income tax
The current income tax charge is calculated in accordance with the prevailing tax regulations and rates, taking into account non-taxable income and non-deductible expenses. The current income tax expense reflects the amount for the current reporting period that KPN expects to recover from or pay to the tax authorities. Current income tax related to items recognized directly in equity/OCI is recorded in equity/OCI and not in profit or loss, with an exception for (hybrid) financial instruments classified as equity.

KPN's management periodically evaluates positions taken in the tax returns regarding situations in which uncertainty on a tax position exists over whether the relevant taxation authority will accept the tax treatment under law. These uncertain tax positions ('UTP') will be recognized if the amount can be reliably estimated and when the chance of a cash outflow is estimated as probable. When these criteria are not met, these positions are classified as contingent liabilities, unless the cash outflow is considered remote.

Deferred income tax
Deferred income tax positions are recognized for temporary differences between the tax basis of assets and liabilities and their carrying values. DTAs are recognized for deductible temporary differences, the carry forward of unused tax credits and any unused tax losses. DTAs are recognized only to the extent that it is probable that future taxable profits will be available against which the temporary differences can be utilized. Both the recognized and unrecognized DTAs are reassessed on each reporting date based on available projections. If future taxable profits are insufficiently available, derecognition may become inevitable unless certain exceptions can be applied. DTAs are recorded for deductible temporary differences associated with investments in subsidiaries and associates and are recorded only to the extent that it is probable that the temporary differences will reverse in the foreseeable future and taxable profit will be available against which the temporary differences can be utilized.

DTLs are recognized for all taxable temporary differences except when they arise from the initial recognition of goodwill or an asset or liability in a transaction that is not a business combination and, at the time of the transaction, affects neither the profit or loss reported in the Statement of Profit or Loss nor the taxable profit or loss. Also, no DTLs are recorded for taxable temporary differences associated with investments in subsidiaries and associates when the timing of the reversal of the temporary differences can be controlled and it is probable that the temporary differences will not reverse in the foreseeable future. Deferred tax positions are stated at nominal value and are measured at the corporate income tax rates KPN expects to be applicable in the year when the asset is realized or liability is settled based on enacted or substantially enacted tax laws.

If a tax provision is recognized for an UTP that relates to deferred taxes, the UTP will be netted against these deferred taxes. DTAs and DTLs are netted if there is a legally enforceable right to offset current tax assets against current tax liabilities and the DTAs/DTLs relate to income taxes levied by the same taxation authority on the same taxable entity or if, in the case of different taxable entities, there is an intention either to settle current tax liabilities and assets on a net basis, or to realize the assets and settle the liabilities simultaneously in each future period in which significant amounts of deferred tax liabilities or assets are expected to be settled or recovered.

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[9] Earnings per share

The following table shows the income and share data used in the calculations of the basic and diluted EPS.

€ million	2021	2020
Profit for the year from continuing operations	1,283	561
Profit for the year from discontinued operations	5	-
Profit for the year	**1,288**	**561**
Profit attributable to non-controlling interests	-	-
Deduction for perpetual capital securities	-10	-10
Adjusted profit (loss) attributable to ordinary shareholders of the company	**1,278**	**551**
Weighted average number of subscribed ordinary shares	**4,178,961,845**	**4,196,846,423**
Dilution effects: non-vested shares	4,363,596	5,079,463
Weighted average number of subscribed ordinary shares including dilution effects	**4,183,325,441**	**4,201,925,886**

Earnings per ordinary share after taxes attributable to equity holders of the company for the year:

€	2021	2020
Basic (continuing operations)	0.30	0.13
Diluted (continuing operations)	0.30	0.13
Basic (discontinued operations)	-	-
Diluted (discontinued operations)	-	-
Basic (total, including discontinued operations)	0.31	0.13
Diluted (total, including discontinued operations)	0.31	0.13

Diluted earnings per share are calculated by adjusting the weighted average number of ordinary shares outstanding to assume conversion of all dilutive potential ordinary shares.

Non-vested shares are regarded to have potential dilutive effects on the ordinary shares.

Coupons and carrying amount adjustments on the perpetual capital securities were deducted from the profit attributable to equity holders, since the perpetual hybrid bonds represent equity but do not constitute profit attributable to ordinary holders.

The total basic earnings per share include EUR 0.08 (2020: EUR 0.02) tax expenses.

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Notes to the Consolidated Statement of Financial Position

[10] Property, plant and equipment

Statement of changes in property, plant and equipment

€ million	Land and buildings	Plant and equipment	Other tangible non-current assets	Assets under construction	Total
Balance at 1 January 2020	**351**	**4,839**	**40**	**203**	**5,432**
Investments[1]	101	952	14	-79	987
Depreciation	-44	-925	-15	-	-984
Impairments and retirements	-2	-15	-	-7	-25
Changes in consolidation[2]	-	11	-	-	11
Other	-	1	-1	-	-
Closing net book value	**405**	**4,863**	**38**	**116**	**5,422**
Cost	1,536	9,570	87	116	11,310
Accumulated depreciation/impairments	-1,131	-4,707	-50	-	-5,888
Balance at 31 December 2020	**405**	**4,863**	**38**	**116**	**5,422**
Investments[1]	44	937	13	3	997
Depreciation	-46	-872	-15	-	-933
Impairments and retirements	-	-8	-	-1	-10
Other	-2	-9	-2	-	-13
Closing net book value	**401**	**4,912**	**34**	**118**	**5,463**
Cost	1,569	9,756	79	118	11,521
Accumulated depreciation/impairments	-1,168	-4,845	-45	-	-6,058
Balance at 31 December 2021	**401**	**4,912**	**34**	**118**	**5,463**

1 Investments in plant and equipment include the acquisitions of fiber networks not qualifying as a business under IFRS 3 of EUR 17m in 2021 (2020: EUR 9m).

2 Changes in consolidation include the acquisition of the cooperative Sterk Midden-Drenthe.

Estimated useful lives of the principal PPE categories

PPE category	Depreciation period
Land	No depreciation
Buildings	14-33 years
Network equipment	3-7 years
Fiber network infrastructure	30 years
Copper network infrastructure	5-10 years
Office equipment	4-10 years

The assets' residual values and useful lives are reviewed at least annually and adjusted if appropriate.

KPN's strategy includes, amongst others, accelerating the roll-out of fiber which affects the depreciation period of all new investments in copper infrastructure. As of 1 January 2019, depreciations of these investments were capped at 10 years.

In early 2020, KPN announced its plans to phase out its copper network after three years starting in early 2023 for existing addresses where fiber service delivery is available as per early 2020 and for the addresses in every then already announced fiber roll-out project under construction. Together with the current fiber roll-out these overlay addresses receive an announcement that copper will be phased out after three years. The depreciation of this part of the copper network was accelerated for an additional amount of EUR 17m in 2021 (2020: EUR 13m).

Interest is capitalized as an increase in PPE if the construction of assets takes a substantial period of time and the amount is material.

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Accounting policy: PPE

PPE are valued at cost less depreciation and impairment. The cost include direct costs (materials, direct labor and work contracted out) and directly attributable overhead costs.

Asset retirement obligations are capitalized as part of the cost of tangible fixed assets and expensed as either depreciation over the assets' estimated useful life or as impairment charges.

PPE are depreciated using the straight-line method, based on estimated useful life, taking into account residual value. Land is not depreciated. PPE are reviewed for impairment whenever events or changes in circumstances indicate that the book value of the assets concerned may not be recoverable. An impairment loss is recognized for the amount by which the assets' book value exceeds its recoverable amount.

Impairments are reversed if and to the extent that the impairment no longer exists. The recoverable amount is defined as the higher of an assets' fair value less costs of disposal and its value in use.

[11] Intangible assets

Statement of changes in intangible assets with finite lives and goodwill

€ million	Goodwill	Customer relationships	Software acquired from third parties	Software internally generated	Software in development	Licenses	Other	Total
Balance at 1 January 2020	**1,495**	**202**	**117**	**341**	**30**	**805**	**4**	**2,995**
Investments	1	-	60	178	-3	417	-	653
Changes in consolidation	-	2	-	-	-	-	-	2
Amortization	-	-29	-74	-214	-	-91	-2	-409
Impairments	-	-	-	-3	-	-	-	-3
Reclassifications	-	-	-2	3	-	-	-	-
Closing net book value	**1,496**	**175**	**100**	**305**	**27**	**1,132**	**3**	**3,238**
Cost	2,153	334	249	678	27	1,803	13	5,256
Accumulated amortization/impairments	-657	-159	-149	-373	-	-671	-10	-2,018
Balance at 31 December 2020	**1,496**	**175**	**100**	**305**	**27**	**1,132**	**3**	**3,238**
Investments	-	-	31	182	9	-	4	226
Changes in consolidation[1]	-64	-	-	-	-	-	-	-64
Amortization	-	-26	-61	-199	-	-100	-1	-387
Impairments	-	-	-1	-6	-	-	-	-8
Reclassifications	-	-1	-1	1	-	-	1	-
Closing net book value	**1,432**	**148**	**69**	**283**	**35**	**1,032**	**7**	**3,006**
Cost	2,089	326	177	650	35	1,779	17	5,074
Accumulated amortization/impairments	-657	-178	-108	-367	-	-747	-11	-2,068
Balance at 31 December 2021	**1,432**	**148**	**69**	**283**	**35**	**1,032**	**7**	**3,006**

1 Changes in consolidation of EUR 64m is related to the sale of Glaspoort B.V. (see Note 21).

Licenses

In 2020, KPN acquired a combination of frequency licenses in the Dutch multiband auction for EUR 417m, including additional expenses. These licenses, with in total 75MHz of the spectrum, are amortized over a period of 20 years. The investment in the 700MHz and 1400MHz band (EUR 253m) has been used and amortized as of July 2020. The investment in the 2100MHz band (EUR 164m) has been used and amortized as of January 2021.

Goodwill per CGU

€ million	31 December 2021	31 December 2020
Consumer	743	770
Business	654	689
Wholesale	35	36
Total[1]	**1,432**	**1,496**

1 Decline of EUR 64m is due to the sale of Glaspoort B.V. (see Note 21).

On 9 June 2021, KPN sold 50% of the shares of its subsidiary Glaspoort B.V. The book value of KPN's remaining interest in Glaspoort, which includes goodwill (see Note 12), is not part of the above mentioned CGU's and is tested separately for impairment when there is an indication that the book value may be impaired.

Goodwill impairment tests

In accordance with IAS 36, KPN assesses goodwill for impairment at the end of each year and when a triggering event occurs. The annual impairment tests as at 31 December 2021 did not indicate that the book value of KPN's goodwill is not recoverable. KPN's market capitalization on 31 December 2021 was higher than the book value of its equity. A test was performed of the recoverable amount of the book value of each cash-generating unit (CGU), based on their value-in-use, which was determined by using the discounted cash flow method.

Key assumptions used in the cash flow projections are estimated EBITDA, Capex, change in working capital and pre-tax weighted average cost of capital (WACC). The cash flow projections are management's best estimate based on the updated strategic plan and extrapolation to terminal values. The WACC is calculated using a capital asset pricing model. The WACC used reflects the impact of the lease liabilities recognized in accordance with IFRS 16. The terminal growth rate for the period after 10 years is updated consistently in line with the changes in the post-tax WACC. In 2021, the post-tax WACC and the terminal growth rate were slightly lower compared to 2020.

For all three CGUs, the annual impairment tests in 2021 and 2020 resulted in significant positive headroom as at 31 December 2021 and 31 December 2020.

Key assumptions in goodwill impairment tests

CGU	EBITDA margin	Capex intensity	Discount rate	Terminal sales growth[1]
Consumer 2021	53% – 56%	25% – 30%	6% – 7%	-0.6%
Consumer 2020	52% – 57%	27% – 29%	6% – 7%	-0.5%
Business 2021	30% – 33%	14% – 16%	6% – 7%	-0.6%
Business 2020	28% – 35%	16% – 17%	6% – 7%	-0.5%
Wholesale 2021	69% – 75%	35% – 39%	6% – 7%	-0.6%
Wholesale 2020	67% – 70%	36% – 40%	6% – 7%	-0.5%

1 Estimates after 10 years.

The sensitivity analyses on the impairment test, resulting from a change in the key assumptions, showed that the headroom of the CGUs is more than sufficient. The analyses were performed for each key assumption separately. For example, a 1% higher discount rate, a 20% higher Capex, a 1% lower terminal growth rate or a 20% lower EBITDA in each of the CGUs would not lead to a goodwill impairment.

Accounting policy: Goodwill and intangibles with finite lives

The excess of the consideration transferred over the fair value of the identifiable net assets acquired in a business combination is recorded as goodwill. Goodwill on acquisitions of subsidiaries is included in intangible assets. Goodwill on acquisition of associates is included in investments in associates. Goodwill is allocated to CGUs for the purpose of impairment testing. The allocation is made to those CGUs or groups of CGUs that are expected to benefit from the synergies of the business combination. Goodwill is carried at cost less accumulated impairment losses and tested for impairment annually or whenever there is an indication that goodwill may be impaired. Goodwill is impaired if the recoverable amount is lower than the book value. The recoverable amount is defined as the higher of the fair value less costs of disposal and the value in use of the CGU concerned. Impairment losses on goodwill are not reversed in the event that circumstances that triggered the impairment have changed.

Licenses and software are valued at cost less amortization and impairment. Amortization is calculated using the straight-line method over the economic useful life and commences at the date that services can be offered (available for use). Internally developed and acquired software which is not an integral part of PPE, is capitalized on the basis of the costs incurred, which includes direct costs and directly attributable overhead costs incurred.

Other intangible assets such as customer relationships and trade names acquired in business combinations are capitalized at their fair values at acquisition date and are amortized using the straight-line method over the economic useful life.

Intangible assets are reviewed for impairment whenever events or changes in circumstances indicate that the book value of the asset may not be recoverable. An impairment loss is recognized for the amount by which the book value of the licenses exceeds its recoverable amount. Impairments are reversed if and to the extent that the impairment no longer exists. Intangible assets not yet available for use are tested annually for impairment or whenever KPN has an indication that the intangible fixed assets may be impaired. For example, licenses are tested as part of a CGU as licenses do not generate independent cash flows.

The amortization periods of the intangible assets with finite lives are 5-20 years for licenses, 3-5 years for software and 4-20 years for other intangible assets.

[12] Equity investments accounted for using the equity method

KPN holds several equity investments accounted for using the equity method of which Glaspoort (see below) is the most significant. Other equity investments are not material, individually nor in aggregate. Their combined carrying value at 31 December 2021 is EUR 8m (31 December 2020: EUR 8m) and KPN's share in their net result amounted to nil in 2021 (2020: EUR 6m).

Joint venture Glaspoort

On 9 June 2021, KPN sold 50% of the shares of its subsidiary Glaspoort B.V. to Drepana Investments Holding B.V., an investment entity managed by APG. At the same time, KPN entered into a joint venture agreement with Drepana Investments Holding B.V. regarding Glaspoort. Glaspoort is a network company, pursuing an open-access wholesale strategy based on non-discriminatory terms, fostering competition and innovation in the Netherlands. See Note 21 for more information on the sale of Glaspoort.

Glaspoort is classified as a joint venture based on the assessment of ownership and voting power (50/50 with the joint venture partner) and the joint control established through the joint venture agreement between the shareholders. The assessment includes among others the following:

- KPN's option to purchase one additional share in Glaspoort. This option is exercisable between the 5th and the 8th anniversary of the transaction provided certain criteria are met, and in any case after the 8th anniversary.
- KPN's influence on Glaspoort's relevant activities through KPN's presence in the governance structure.
- KPN is anchor tenant on Glaspoort's network and will also be one of its suppliers through a number of operational contracts between KPN and Glaspoort.

The assessment whether joint control remains in place is reviewed annually.

KPN accounts for its interest in Glaspoort using the equity method in the consolidated financial statements. KPN initially recognized its interest in the joint venture at its fair value (EUR 451m), based on the total consideration received (see Note 21). The initial fair value has been allocated to equity of Glaspoort, determined under application of KPN's accounting policies, and goodwill. In determining equity, intangible assets of EUR 878m have been recognized in the initial balance sheet of Glaspoort which mostly relate to contractual relationships held by Glaspoort with, among

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others, KPN. The sale of the additional scope projects to Glaspoort in December 2021 (refer below), which is treated as a sale of assets, has been used as an input to determine the fair value of the intangible assets. The intangible assets are expected to be amortized over a period ranging from 15-30 years. The allocation of the fair value and the amortization term of the intangible assets are considered provisional.

In December 2021, KPN, Drepana and Glaspoort signed an agreement to extend the scope of the fiber roll-out of Glaspoort. KPN will receive EUR 170m (pre-tax) for the sale of the additional scope from Glaspoort. Of this amount, EUR 60m has been received in cash upon closing of the transaction and the remaining amount will be received in annual installments based on the roll-out progress. KPN will recognize 50% of the agreed consideration as other income when the roll-out activities of the additional scope projects have started by Glaspoort at which point KPN's obligations regarding realization of the additional scope projects are deemed fulfilled. The remaining 50% will be recognized over time as part of the result from joint ventures following the requirements of IAS 28 on downstream transactions. During 2021, KPN recognized EUR 15m in other income related to the sale of these additional scope projects. As at 31 December 2021, the corresponding deferred gain of EUR 15m is included in the net book value of the joint venture. The extended scope of the fiber roll-out is not tax exempt and resulted in a tax expense of EUR 3m, a current tax payable of EUR 36m and a deferred tax asset of EUR 33m. This deferred tax asset will be realized upon recognition of the gains on the transaction.

On the closing date of the initial transaction (9 June 2021), both shareholders paid a share premium contribution of EUR 39m to Glaspoort's equity. In December 2021, both shareholders contributed an additional share premium of EUR 30m as part of the scope extension. KPN added the share premium payments to the carrying value of KPN's interest in the joint venture.

Summarized financial information of the joint venture, based on IFRS as applied by KPN, and reconciliation with the carrying amount of the investment in the consolidated financial statements, is set out below:

Summarized statement of financial position of Glaspoort B.V.

€ million	31 December 2021
Tangible fixed assets	77
Intangible assets	908
Other non-current assets	11
Current assets	90
Net cash and cash equivalents	28
Non-current liabilities	-99
Current liabilities	-11
Equity	**1,004**
KPN's share in equity	502
Goodwill from initial valuation at fair value	15
Carrying amount of the investment Equity Method	**517**
Less: Deferred gain on downstream transactions	-15
Carrying amount of the investment	**503**

Summarized statement of profit or loss of Glaspoort B.V.

€ million	2021
Revenue	2
Operating expenses	-6
Depreciation, amortization & impairment expenses	-1
Net finance cost	-
Profit before tax	**-5**
Income tax expense	2
Profit for the year	**-3**
Total comprehensive income for the year	**-3**
KPN's share of profit for the year	**-2**

Both shareholders have committed to additional share premium contributions. On 31 December 2021, the remaining maximum commitment of each shareholder is EUR 187m, payable to Glaspoort based on funding requirements following its annual budget. Neither shareholder has additional funding obligations regarding Glaspoort. Glaspoort has entered into funding agreements with financial institutions to cover its financial commitments, which include its fiber roll-out activities. These funding agreements have been entered into on a non-recourse basis without any guarantees from the shareholders.

For information on transactions between Glaspoort and KPN and unsettled positions between Glaspoort and KPN, see Note 23. Glaspoort cannot distribute its profits without the consent from the two joint venture partners and not before 2026. After 2026, Glaspoort can distribute dividends only if specific criteria are met.

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Accounting policy: Equity investments accounted for using the equity method

Equity investments accounted for using the equity method include associates and joint ventures.

Associates are entities over which KPN has significant influence. Significant influence is the power to participate in the financial and operating policy decisions of the investee, but is not control or joint control over those policies. A joint venture is a type of joint arrangement whereby the parties that have joint control of the arrangement have rights to the net assets of the joint venture. Joint control is the contractually agreed sharing of control of an arrangement, which exists only when decisions about the relevant activities require the unanimous consent of the parties sharing control. The considerations made in determining significant influence or joint control are similar to those necessary to determine control over subsidiaries.

Investments in associates and joint ventures are accounted for using the equity method. Under the equity method, the investment in an associate or a joint venture is initially recognized at cost. The carrying amount of the investment is adjusted to recognize changes in KPN's share of net assets of the associate or joint venture since the acquisition date. Goodwill relating to the associate or joint venture is included in the carrying amount of the investment and is not tested for impairment separately.

The statement of profit or loss reflects KPN's share of the results of operations of the associate or joint venture. Any change in OCI of those investees is presented as part of KPN's OCI. In addition, when there has been a change recognized directly in the equity of the associate or joint venture, KPN recognizes its share of any change, when applicable, in the statement of changes in equity. Unrealized gains and losses resulting from transactions between KPN and the associate or joint venture are eliminated to the extent of the interest in the associate or joint venture through KPN's share of the profit (or loss) of associates and joint ventures.

The aggregate of KPN's share of profit or loss of an associate and a joint venture is shown in the statement of profit or loss.

The financial statements of the associate or joint venture are prepared for the same reporting period as KPN. When necessary, adjustments are made to bring the accounting policies in line with those of KPN.

After application of the equity method, KPN determines whether it is necessary to recognize an impairment loss on its investment in its associate or joint venture. At each reporting date, KPN determines whether there is objective evidence that the investment in the associate or joint venture is impaired. If there is such evidence, KPN calculates the amount of impairment as the difference between the recoverable amount of the associate or joint venture and its carrying value, and then recognizes the loss within 'share of profit/loss (-) of associates and joint ventures' in the statement of profit or loss.

Upon loss of significant influence over the associate or joint control over the joint venture, the Group measures and recognizes any retained investment at its fair value. Any difference between the carrying amount of the associate or joint venture upon loss of significant influence or joint control, and the fair value of the retained investment and proceeds from disposal, is recognized in profit or loss.

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[13] Financial assets and financial liabilities

Summary of the financial assets and liabilities at carrying amount and fair value, classified per category

€ million	Notes	31 December 2021 Carrying amount	31 December 2021 Fair value	31 December 2020 Carrying amount	31 December 2020 Fair value
Financial assets at FVPL					
Other financial asset at fair value through profit or loss	[13.1]	218	218	-	-
Other current financial assets	[13.1]	300	300	270	270
Derivatives	[13.3]	212	212	202	202
Cash and cash equivalents, including classified as held for sale	[15]	793	793	597	597
Financial assets at amortized cost					
Trade and other receivables[1]	[14]	641	641	641	641
Financial assets at FVOCI					
Equity investments	[13.1]	49	49	37	37
Total financial assets		**2,213**	**2,213**	**1,746**	**1,746**
Financial liabilities FVPL					
Derivatives	[13.3]	64	64	196	196
Financial liabilities at amortized cost					
Borrowings	[13.2]	6,744	7,223	6,500	6,997
Lease liabilities	[19]	873	873	937	937
Trade and other payables[2]	[20]	973	973	953	953
Total financial liabilities		**8,654**	**9,132**	**8,587**	**9,083**

1 Excluding prepayments.

2 Excluding social security and other taxes payable.

Fair value measurement hierarchy at 31 December 2021

€ million	Level 1	Level 2	Level 3	Total
Financial assets at FVPL				
Other financial asset at fair value through profit or loss	-	-	218	218
Derivatives (cross-currency interest rate swap)	-	117	-	117
Derivatives (interest rate swap) and other	-	95	-	95
Financial assets at FVOCI				
Equity investments:				
Unlisted securities	-	-	49	49
Total assets	**-**	**212**	**267**	**479**
Financial liabilities at FVPL				
Derivatives (cross-currency interest rate swap)	-	47	-	47
Derivatives (interest rate swap)	-	17	-	17
Total liabilities	**-**	**64**	**-**	**64**

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Fair value measurement hierarchy at 31 December 2020

€ million	Level 1	Level 2	Level 3	Total
Financial assets at FVPL				
Derivatives (cross-currency interest rate swap)	-	26	-	26
Derivatives (interest rate swap) and other	-	176	-	176
Financial assets at FVOCI				
Equity investments:				
Unlisted securities	-	-	37	37
Total assets	**-**	**202**	**37**	**239**
Financial liabilities at FVPL				
Derivatives (cross-currency interest rate swap)	-	161	-	161
Derivatives (interest rate swap)	-	34	-	34
Total liabilities	**-**	**196**	**-**	**196**

Fair value estimation

Level 1: Fair value of instruments traded in active markets and based on quoted market prices.
Level 2: Instrument is not traded in an active market and fair value is determined by using valuation techniques based on maximum use of observable market data for all significant inputs.
Level 3: One or more of the significant inputs is not based on observable market data, the fair value is estimated using models and other valuation methods. The valuation of available-for-sale unlisted securities is based on a discounted cash flow model.

Accounting policy: Financial assets

Financial assets are classified at initial recognition.

The classification of financial assets at initial recognition depends on the financial asset's contractual cash flow characteristics and KPN's business model for managing them.

KPN initially measures a financial asset at its fair value plus, in the case of a financial asset not at fair value through profit or loss, transaction costs.

For the purposes of subsequent measurement, financial assets are classified into four categories:
- Financial assets at amortized cost (debt instruments).
- Financial assets at fair value through other comprehensive income (OCI) with recycling of cumulative gains and losses (debt instruments).
- Financial assets designated at fair value through OCI with no recycling of cumulative gains and losses upon derecognition (equity instruments).
- Financial assets at fair value through profit or loss.

[13.1] Financial assets

Other financial asset at fair value through profit or loss

Upon sale of the 50% interest in Glaspoort B.V. to Drepana Investments Holding B.V. (see Note 21), KPN received a cash consideration upon deal close of EUR 233m and a contingent cash receivable of EUR 234m. The contingent cash receivable, to be received in annual installments based on the roll-out progress of Glaspoort, is classified as a financial asset measured at fair value through profit or loss. The contingent cash receivable was initially value at EUR 218m. As at 31 December 2021, the carrying value is EUR 218m, of which EUR 14m is current. In 2021, the book value increased with interest income of EUR 3m and decreased with EUR 2m due to a fair value adjustment. The latter was recognized as a loss in other financial results.

Based on Glaspoort's current roll-out plan, KPN expects the final payment in 2027. The fair value of this contingent receivable is deemed equal to the net present value of the full amount of the installments to be received using the expected roll-out schedule as included in Glaspoort's initial business plan. A weighted average discount rate of 2.39% has been used based on the following elements:
- A base-rate using mid-swap rates to account for the time value of money, plus
- A credit spread mark-up to account for the risk of non-payment based on AA rated credit curves resulting in a spread of ~0.2% over a 5 year tenor, plus
- A mark-up to reflect the roll-out risk (mostly the risk of delay)

Equity investments measured at fair value through OCI

This includes several minority stakes of which the largest is Actility SA, a provider of network solutions and managed information systems for the Internet of Things market with a carrying value of EUR 7m (2020: EUR 7m). In 2021, additional investments for an amount of EUR 7m were acquired.

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These investments were irrevocably designated at fair value through OCI because KPN believes that the fluctuations in the fair value of these investments do not give a fair view of KPN's performance. In 2021, fair value gains of EUR 5m were recognized.

Other current financial assets

Other current financial assets include investments in short-term money market funds of EUR 300m (2020: EUR 270m), which are held at fair value through profit or loss (FVPL). These funds have a low volatility, with an investment objective of preservation of principal.

[13.2] Financial liabilities

	31 December 2021		31 December 2020	
€ million	**Carrying amount**	**Fair value**	**Carrying amount**	**Fair value**
Senior eurobonds EUR	3,638	3,667	3,616	3,681
Senior eurobonds GBP	1,478	1,762	1,380	1,678
Senior global bonds USD	620	751	591	687
Subordinated hybrid bonds classified as liability	529	558	487	516
Other borrowings	480	484	427	434
Total borrowings	**6,744**	**7,223**	**6,500**	**6,997**
> of which: current	**677**	**681**	**679**	**685**
> of which: non-current	**6,067**	**6,542**	**5,821**	**6,311**

The fair value for eurobonds, global bonds and hybrid bonds is based on the listed price of the bonds. Other borrowings include commercial paper, cash collateral received on derivatives, bank overdraft and other loans.

KPN's weighted average interest rate on total outstanding borrowings on 31 December 2021 was 2.9% after swaps (2020: 3.0%). KPN's weighted average interest rate on senior debt on 31 December 2021 was 2.7% after swaps (2020: 2.9%).

Senior bonds

KPN has an unlimited Global Medium-Term Notes program which is used to meet medium- to long-term funding requirements. As at 31 December 2021, the total amounts outstanding under this program were EUR 3,597m across six bonds (carrying value EUR 3,638m) and GBP 1,250m across two bonds (carrying value EUR 1,478m, swapped to EUR 1,445m nominal). In addition, KPN has a senior global bond with USD 595m outstanding (carrying value EUR 620m, swapped to EUR 450m nominal) which was issued under standalone documentation.

During the year, KPN redeemed bonds with a total nominal value of EUR 614m and issued bonds with a nominal value of EUR 700m:

- On 1 February 2021, KPN redeemed the 3.25% coupon eurobond with a remaining outstanding principal amount of EUR 361m, in line with its scheduled maturity.
- On 4 October 2021, KPN redeemed the 4.50% coupon eurobond with a remaining outstanding principal amount of EUR 253m, in line with its scheduled maturity. This bond had been swapped to an effective interest rate of 0.867%.
- On 15 November 2021, KPN issued its first EUR 700m sustainability-linked eurobond with a term of 12 years, maturing on 15 November 2033. The issuance was priced at 98.772% and carries an annual coupon of 0.875%. The bond is linked to the achievement of a target to reduce absolute value chain CO_2 emissions (scope 3) by 30% by the end of 2030 against a 2014 baseline. If this target is not achieved on 31 December 2030, the interest rate for this bond will increase by 0.375% p.a. for the period from 15 November 2031 until the maturity date. The accounting (effective interest) for this bond is based on the assumption that the target will be achieved.

Hybrid bonds

million	Nominal	Nominal €	Coupon	Classification	Redemption	First call date	Swapped	Credit rating
USD hybrid bond	600	465	7.000%	Liability	28 Mar 2073	28 Mar 2023	Fixed 6.34%	BB/Ba2
EUR perpetual hybrid bond	500	500	2.000%	Equity	Perpetual	8 Feb 2025	N/a	BB+/Ba2

As at 31 December 2021, two hybrid bonds are outstanding with an aggregate nominal amount of EUR 965m after swaps. The USD 600m hybrid bond (carrying value EUR 529m, swapped to EUR 465m nominal) is included in borrowings, while the

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EUR 500m perpetual hybrid bond is classified as equity. Both hybrid bonds are subordinated debt instruments and are treated for 50% as equity and 50% as debt in KPN's gross and net debt definitions.

KPN may, at its discretion and subject to certain conditions, elect to defer payments of interest on the hybrid bonds. Arrears of interest must be paid if dividends are paid on ordinary shares, if payments are made on other hybrid bonds, in the event of early redemption, and for the USD hybrid bond at final maturity. KPN does not recognize accruals for coupon payments on the EUR perpetual hybrid bond of EUR 10m per annum. If an accrual had been recognized, the amount would have been EUR 9m on 31 December 2021.

Other borrowings

As at 31 December 2021, KPN has fully drawn its EUR 300m credit facility from the European Investment Bank. The loan has a floating interest rate referenced to 3-month Euribor and a single repayment on 2 August 2027. The interest for the current interest period was floored at 0%.

KPN has a Euro commercial paper program under which KPN can issue short-term debt instruments for up to EUR 1 billion. As at 31 December 2021, the outstanding balance of commercial paper amounted to EUR 60m (2020: EUR 60m) issued at an average interest rate of -0.45%.

As at 31 December 2021, other borrowings furthermore included EUR 70m of collateral received as security under derivative financial instruments and EUR 50m borrowings under private placements.

Accounting policy: Borrowings

After initial recognition, loans and borrowings are subsequently carried at amortized cost; any difference between the proceeds (net of transaction costs) and the redemption value is recognized in the P&L over the period of the borrowings using the effective interest method. The amortized cost is calculated by taking into account any discounts or premiums on acquisition or issuance and transaction costs. The effective interest rate amortization is recognized in the P&L as finance costs.

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Changes in liabilities arising from financing activities

€ million	Borrowings	Derivative financial instruments	Net liability	Lease liabilities	Net liability, including lease liabilities
Balance at 1 January 2020	**6,659**	**-118**	**6,541**	**930**	**7,472**
Exchange differences	-197	199	1	-	1
Movements recorded as net cash flows arising from/used in financing activities:					
Repayments of borrowings and settlement of derivatives and repayments of lease liabilities[1]	-901	-21	-922	-135	-1,057
Issued bonds & loans[2]	950	-	950	-	950
Fair value adjustments	-8	-68	-76	-	-76
Other movements	-3	3	-	142	142
Balance at 31 December 2020	**6,500**	**-6**	**6,494**	**937**	**7,432**
Exchange differences	177	-178	-2	-	-2
Movements recorded as net cash flows arising from/used in financing activities:					
Repayments of borrowings and settlement of derivatives and repayments of lease liabilities[1]	-613	-	-613	-135	-748
Issued bonds & loans	689	-	689	-	689
Fair value adjustments	-67	36	-31	-	-31
Other movements[3]	59	-	59	70	130
Balance at 31 December 2021	**6,744**	**-148**	**6,596**	**873**	**7,469**

1 In the Consolidated Statement of Cash Flows, this line item includes a net receipt of EUR 115m in 2021 and a payment of EUR 29m in 2020 regarding cash collateral on derivatives (presented as non-current other receivables). The interest component of the lease payments is presented within cash flow from operating activities.

2 Includes net proceeds from commercial paper of EUR 60m.

3 Other movements of borrowings in 2021 includes receipts of EUR 55m of cash collateral on derivatives and energy contracts. Other movements of the derivative financial instruments are predominantly movements in the interest part of cash flow hedges. Other movements of the lease liabilities include interest, additions of new contracts, remeasurements and modifications (see Note 19).

[13.3] Hedging activities and derivatives

KPN uses derivatives solely for the purpose of hedging underlying exposures. The primary risks managed using derivative instruments are foreign currency risk and interest rate risk.

€ million	31 December 2021	31 December 2020
Assets (current and non-current)	212	202
Liabilities (current and non-current)	-64	-196
Total derivatives	**148**	**6**
of which: designated in a hedge relationship	**122**	**-37**
of which: other derivatives not designated in a hedge relationship	**26**	**43**

A total loss of EUR 0.2m due to hedge ineffectiveness was recognized in the P&L in 2021 (2020: EUR 11m loss). This was mainly due to small differences in the valuation of hedging instruments and hedged items due to credit risk and valuation curves in combination with the cumulative change of the fair value of the hedging instrument becoming greater than the change in the fair value of the hedged item. Note that all hedges continue to be highly effective prospectively.

Derivatives positions are reported on a gross basis and include a credit value adjustment attributable to derivative counterparty default risk. As at 31 December 2021, this was a net liability of EUR 0.2m (2020: net asset of EUR 0.1m). Part of the derivatives portfolio is subject to master netting agreements that allow netting under certain circumstances.

If netting had been applied, the total derivatives asset position would be EUR 155m and the total derivatives liability position would be EUR 6m as at 31 December 2021 (2020: EUR 70m and EUR 64m respectively).

Derivatives designated in a hedge relationship

Cash flow hedges

Bonds denominated in foreign currencies are hedged with cross-currency swaps. The currency exposure is hedged by effectively

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fixing the countervalue in the foreign currency to EUR and by hedging the interest rate exposure by swapping the fixed interest rates in foreign currency to fixed interest rates in EUR. There is an economic relationship between the hedged items and hedging instruments as the terms of the cross-currency swaps match the terms of the bonds. KPN has established a hedge ratio of 1:1 for the hedging relationships as the quantity of hedged items equals the notional amount of the cross-currency swaps. The hedges are until maturity of the underlying senior bonds or until the first call date in the case of the USD hybrid bond. For these hedges, KPN meets the criteria of, and also applies, cash flow hedge accounting. The effectiveness of the hedges is determined at inception and on a quarterly basis. To test the hedge effectiveness, KPN uses the hypothetical derivative method and compares the changes in the fair value of the hedging instruments against the changes in the fair value of the hedged items attributable to the hedged risks. If the cumulative change in fair value of the hedging instrument and hedged item are not equal in absolute terms, the difference will be reported in the P&L to the extent that, in absolute terms, the fair value change of the hedging instrument is greater than the fair value change of the hedged item. Hedge ineffectiveness can arise from:

- Different curves linked to hedged items and hedging instruments
- The counterparties' credit risk differently impacting the fair value movement of the hedging instruments and hedged items
- Changes in the terms of the hedged item or hedge instrument

Overview of the cross-currency swaps at 31 December 2021 and 31 December 2020

Nominal (receive)	Coupon (receive)	Nominal (pay) (EUR m)	Coupon (pay)	Maturity date	Fair value 2021 (EUR m)	Fair value 2020 (EUR m)
USD 600m	7.000% semi-annual	465	6.344% semi-annual	28-3-2023	66	25
GBP 400m	5.000% annual	474	4.424% annual	18-11-2026	-16	-43
GBP 850m	5.750% annual	971	5.432% annual	17-9-2029	-18	-88
USD 595m	8.375% semi-annual	450	8.517% semi-annual	1-10-2030	38	-28
Total					**70**	**-135**

Impact of the cash flow hedges on the Statement of Financial Position

€ million	Notional amount	Carrying amount	Line item in Statement of Financial Position	Change in fair value used for measuring ineffectiveness for the period
As at 31 December 2021				
Cross-currency swaps GBP	1,445	-34	Derivatives	97
Cross-currency swaps USD	915	104	Derivatives	108
Total	**2,361**	**70**		**205**
As at 31 December 2020				
Cross-currency swaps GBP	1,445	-131	Derivatives	-51
Cross-currency swaps USD	915	-4	Derivatives	-56
Total	**2,361**	**-135**		**-107**

The change in fair value of the associated hedged items attributable to the hedged risks resulted in an ineffectiveness gain in 2021 of EUR 1m (2020: EUR 12m loss, which included a EUR 10m loss caused by an adjustment of the hedge accounting procedure, mainly reversing gains in previous years).

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Effect of the cash flow hedge in the P&L and OCI

€ million	Total hedging gain/(loss) recognized in OCI	Ineffectiveness recognized as a gain/(loss) in P&L	Line item in P&L	Amount reclassified from OCI as a gain/(loss) in P&L	Line item in P&L
Year ended 31 December 2021					
Cross-currency swaps GBP	-97	2	Other financial results	97	Other financial results
Cross-currency swaps USD	-108	-	Other financial results	81	Other financial results
Total	**-205**	**1**		**178**	
Year ended 31 December 2020					
Cross-currency swaps GBP	51	-11	Other financial results	-109	Other financial results
Cross-currency swaps USD	56	-1	Other financial results	-90	Other financial results
Total	**107**	**-12**		**-199**	

Fair value hedges

The 1.125% fixed-rate eurobond maturing on 11 September 2028 has been swapped to a floating rate using fixed-to-floating interest rate swaps, where KPN receives a fixed rate of 0.907% and pays interest at a variable rate equal to six-month Euribor.

The 0.625% fixed-rate eurobond maturing on 9 April 2025 has also been swapped to a floating rate using fixed-to-floating interest rate swaps, where KPN receives a fixed rate of 0.920% and pays interest at a variable rate equal to six-month Euribor (fixed in arrears). The swaps are used to hedge the exposure to changes in the fair value of these fixed rate eurobonds against changes in the EUR interest curve.

There is an economic relationship between the hedged item and the hedging instrument, as the terms of the interest rate swaps match the terms of the fixed-rate bonds (i.e. notional amount, maturity and payment dates). KPN has established a hedge ratio of 1:1 for the hedging relationships as the quantity of hedged item equals the notional amount of the hedging instrument. For these hedges, KPN meets the criteria of, and also applies, hedge accounting. If the cumulative change in the fair value of the hedging instrument and hedged item are not equal in absolute terms, the difference will be recorded in the P&L. The hedge ineffectiveness can arise from:

- Different curves linked to the hedged items and hedging instruments
- The counterparties' credit risk differently impacting the fair value movement of the hedging instruments and hedged items
- Changes in the terms of the hedge item or hedge instrument

Impact of the fair value hedges on the Statement of Financial Position

€ million	Notional amount	Carrying amount	Line item in Statement of Financial Position	Change in fair value used for measuring ineffectiveness for the period
As at 31 December 2021				
Interest rate swaps	1,250	52	Derivatives	-47
As at 31 December 2020				
Interest rate swaps	1,250	98	Derivatives	23

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Impact of the hedged items on the Statement of Financial Position

€ million	Carrying amount	Change in fair value adjustments	Line item in Statement of Financial Position	Change in fair value used for measuring ineffectiveness for the period
As at 31 December 2021				
Fixed-rate eurobonds 2025 & 2028	-1,308	47	Borrowings	45
As at 31 December 2020				
Fixed-rate eurobonds 2025 & 2028	-1,337	-23	Borrowings	-22

The ineffectiveness recognized in the P&L for the year ended 31 December 2021 was a loss of EUR 1m (2020: EUR 1m gain).

Derivatives not designated in a hedge relationship

In 2011, fixed-rate eurobonds with maturities on 21 September 2020, 4 October 2021 and 30 September 2024 were swapped to a floating interest rate using fixed-to-floating interest rate swaps. Subsequently, in May 2015, KPN decided to re-fix these bonds (until maturity) by entering into offsetting floating-to-fixed interest rate swaps. At that time fair value hedge accounting for fixed-to-floating interest rate swaps was discontinued. As a result, the cumulative gain until de-designation, which amounted to EUR 224m, is amortized to earnings until maturity of the associated bonds. This is offset by the change in fair value of the outstanding interest rate swaps. The amortization recognized in earnings for 2021 was a gain of EUR 11m (2020: EUR 18m) and the remaining balance of the unamortized gain was EUR 19m at 31 December 2021 (2020: EUR 30m). The fair value of the outstanding interest rate swaps was EUR 26m as at December 2021 (2020: EUR 43m) and the change in fair value of these swaps resulted in a P&L loss of EUR 17m in 2021 (2020: EUR 27m loss). The net interest income of these swaps was an additional gain of EUR 16m (2020: EUR 18m) which results in net earnings (including amortization and change in fair value) of EUR 10m (2020: EUR 8m).

Accounting policy: Derivatives and hedging activities

Derivatives are recognized at fair value. Gains and losses arising from changes in fair value are recognized as finance cost/income during the period in which they arise to the extent that the derivatives have no hedging designation or they are ineffective.

KPN applies IFRS 9 hedge accounting. Derivatives related to loans are designated as either cash flow or fair value hedges.

Offsetting effects are recognized in the P&L.

The hedge documentation includes identification of the hedging instrument, the hedged item, the nature of the risk being hedged and how KPN will assess whether the hedging relationship meets the hedge effectiveness requirements (including the analysis of sources of hedge ineffectiveness and how the hedge ratio is determined).

A hedging relationship qualifies for hedge accounting if it meets all of the following effectiveness requirements:
- There is 'an economic relationship' between the hedged item and the hedging instrument
- The effect of credit risk does not 'dominate the value changes' that result from that economic relationship
- The hedge ratio of the hedging relationship is the same as that resulting from the quantity of the hedged item that KPN actually hedges and the quantity of the hedging instrument that KPN actually uses to hedge that quantity of hedged item

Changes in the fair value of an effective derivative, which is designated as a fair value hedge, along with the gain or loss on the hedged item that is attributable to the hedged risk, are recorded in the P&L as finance cost/ income. Changes in the fair value of an effective derivative, which is designated as a cash flow hedge, are recorded in OCI for the effective part, until the P&L is affected by the variability in cash flows of the

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designated hedged item. The ineffective part of the cash flow hedge is recognized as finance cost/income. If an underlying transaction has ceased to be an effective hedge or in case of early redemption of the hedged item, hedge accounting is discontinued prospectively which means that subsequent changes in fair value are recognized in the P&L as finance cost/income and the cumulative amount recorded in OCI is released in the P&L.

[13.4] Financial risk management and policies

Financing policy

KPN strives for the right balance between investments in the business, shareholder remuneration and a prudent financing policy. It is KPN's policy to utilize excess cash for operational and financial flexibility and/or shareholder remuneration.

The net debt/EBITDA AL ratio is one of the drivers for KPN's credit rating and is based on the nominal value of borrowings borrowings and takes 50% equity credit on hybrid bonds into account. KPN remains committed to an investment grade credit profile and aims for a net debt/EBITDA AL ratio of below 2.5x in the medium term.

The difference between the carrying value and nominal value of borrowings includes: (1) carrying value adjustments resulting from fair value hedges; (2) in case of foreign currency bonds, the difference between the nominal amount at the prevailing spot rate and the swapped nominal amount in EUR; and (3) amortized debt issuance costs.

€ million	31 December 2021	31 December 2020
Borrowings	6,744	6,500
Perpetual hybrid	500	500
Bank overdraft	-	-2
50% equity credit for hybrid bonds	-483	-483
Cash collateral paid on derivatives	-56	-117
Difference between carrying value and nominal value	-305	-202
Adjusted gross debt	**6,400**	**6,197**
Net cash and cash equivalents	793	594
Short-term investments	300	270
Net debt[1]	5,307	5,332
Adjusted EBITDA AL	2,347	2,320
Net debt/EBITDA AL	**2.3x**	**2.3x**

1 Excluding lease liabilities.

Financial risk management

KPN is exposed to a variety of financial risks. The overall risk management program focuses on the unpredictability of financial markets and seeks to minimize potential adverse effects on KPN's financial position and performance.

Derivatives are used to hedge certain risk exposures (see Note 13.3).

KPN's key financial risks are:

- Credit and counterparty risk
- Liquidity risk
- Market risk

KPN's Treasury department manages the financial risks according to policies approved by the Board of Management and Supervisory Board. These policies are established to identify and analyze financial risks, set appropriate risk limits and controls, and monitor adherence to those limits.

The COVID-19 pandemic in 2020 and 2021 led to increased volatility in capital markets and a deterioration in market liquidity. KPN's Treasury department monitored the situation closely and the impact on KPN's liquidity position, sources of financing and financial counterparties remained within acceptable risk limits. KPN did not suffer any material impact on its liquidity reserves and its ability to raise financing at attractive rates remained very strong.

Credit and counterparty risk

Credit risk arises from the possibility of asset impairment occurring when counterparties are unable to meet their obligations in transactions involving financial instruments. KPN's counterparty policy sets limits for the maximum exposure per counterparty, which are primarily based on credit ratings, investment periods and collateral. The minimum counterparty credit rating (Moody's equivalent) is Baa2 for cash balances and Baa1 for entering into new derivative transactions. Cash balances used for working capital purposes can also reside at banks with lower credit ratings. Capital preservation is KPN's main priority when investing excess cash.

As at 31 December 2021, KPN's cash balances and short-term investments were held in bank accounts, bank deposits and money market funds with maturities of up to three months. The majority of cash balances were invested with counterparties with a credit rating equivalent to A3 at Moody's or higher and the counterparties of outstanding derivatives have a credit rating equivalent to Baa1 or higher with Moody's.

KPN mitigates credit risk on bank counterparties arising from derivative financial instruments through collateral support agreements, which results in cash being paid or received as

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security. This is repayable when derivatives are settled and/or mature. As at 31 December 2021, cash collateral received was EUR 70m (2020: EUR 15m) and cash collateral paid was EUR 56m (2020: 117m).

Credit risk on trade receivables is controlled using restrictive policies for customer acceptance. Credit management is focused on mobile services. Before accepting certain new customers in this segment, the creditworthiness of prospective clients is checked. In addition, KPN keeps track of the payment performance of customers. If customers fail to meet set criteria, payment issues must be resolved before a new transaction will be entered into.

KPN's policy is to provide financial guarantees only to wholly-owned subsidiaries. As at 31 December 2021, KPN had parent guarantees and bank guarantees outstanding to third parties for various Dutch wholly-owned subsidiaries. The carrying amount of financial assets, including cash, and contract assets represents the maximum credit exposure, which amounts to EUR 2,265m as at 31 December 2021 (2020: EUR 1,784m). On 31 December 2021, the total outstanding bank guarantees amounted to EUR 6m (2020: EUR 7m), which were issued in the ordinary course of business.

See schedule of the allowances for expected losses in Note 14 for information about credit losses on trade and other receivables. There were no other credit losses.

Maturity analysis of the financial liabilities based on the remaining contractual maturities on 31 December 2021

	Borrowings				Derivatives			
€ million	Bonds and loans[1]	Interest on bonds and loans[2]	Lease liabilities (undiscounted)	Other debt and cash collateral	Derivatives inflow (including interest)	Derivatives outflow (including interest)	Trade and other payables[3]	Total
2022	676	201	156	-52	-279	236	896	1,833
2023	-	174	126	3	-788	685	-	201
2024	431	174	113	36	-239	205	-	719
2025	625	150	104	-	-225	200	-	854
2026	476	146	95	-	-931	909	-	695
2027 and further	4,342	451	382	-	-3,244	3,078	-	5,008
Contractual cash flows	**6,550**	**1,297**	**975**	**-13**	**-5,707**	**5,312**	**896**	**9,310**

1 Includes the USD hybrid bond with final maturity in 2073 (redemption value of EUR 465m).

2 Interest payments on the USD hybrid bond (EUR 37m per year until the first call date in 2023) are not included. KPN may, at its discretion and subject to certain conditions, elect to defer payments of interest on this hybrid bond. Any arrears of interest must be paid at the latest at redemption in 2073, the amount of which cannot be reliably measured because of the duration of the hybrid bond.

3 Excluding accrued interest and social security and other taxes payable.

Liquidity risk

Liquidity risk is the risk that KPN will not be able to meet its financial obligations associated with financial instruments as they become due. KPN's approach to managing liquidity is to ensure sufficient liquidity to meet its liabilities when due, under both normal and stressed conditions, without incurring unacceptable losses or risking damage. Some of the derivatives contain reset clauses or collateral postings at pre-agreed dates, in order to mitigate counterparty exposure during the life of the swap. These reset clauses will result in early euro settlement obligations in cash with the swap counterparty, which could lead to additional cash inflows or outflows before maturity. In order to reduce liquidity risks, the reset clauses or collateral postings are spread over different points in time.

During 2021, KPN received net collateral of EUR 115m (2020: paid EUR 29m) according to pre-agreed settlement schedules.

Available financing resources

In addition to the available cash and cash equivalents and short-term investments and cash flows from operations, KPN has the following committed financing resources available:

Revolving credit facility

On 4 August 2021, KPN signed a new sustainability-linked revolving credit facility for EUR 1.0 billion with twelve banks, refinancing the 2016-dated EUR 1.25 billion facility. The new revolving credit facility matures in August 2026 and includes two one-year extension options. The credit facility has a mechanism to adjust the margin based on KPN's performance on predefined sustainability targets including roll-out of fiber, reduction in KPN's energy consumption and reduction of carbon emissions in the supply chain. Both the previous and new facility are used for general corporate purposes and do not contain any financial covenants. The facilities were undrawn as at 31 December 2021 resp. 31 December 2020.

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Capital resources covenants

KPN's existing capital resources contain the following covenants as at 31 December 2021, which could trigger additional financial obligations or early redemption of the outstanding indebtedness. All senior bonds issued after 1 January 2006 (EUR 5.0bn outstanding as at 31 December 2021) contain a change of control clause. KPN may be required to early redeem if certain changes of control occur and within this change of control period (maximum of 90 days) a rating downgrade to sub-investment grade occurs. The hybrid bonds also contain a change of control clause by means of which KPN has the possibility to repurchase the hybrid bonds at par. A 5% interest step-up applies if a rating downgrade occurs during the change of control period in respect of that change of control. In addition, many of KPN's capital resources contain a covenant prohibiting KPN from entering into any amalgamation, demerger, merger, corporate restructuring or reorganization, unless prior written consent has been given by a majority of the lenders or bondholders or the resulting company assumes all of the rights and obligations with respect to the loans or bonds.

Market risk

KPN is exposed to various kinds of market risks in the ordinary course of business. These risks include foreign currency exchange rate risk and interest rate risk.

Foreign currency exchange rate risk

Foreign currency risks mainly result from settlement of international telecommunications traffic and purchase of assets and primarily consist of GBP and USD exposure. Foreign currency exchange rate risks related to bonds that are not denominated in EUR are hedged into EUR in line with KPN's hedging policies. Group companies and business operations are obliged to hedge their firm commitments and highly predictable anticipated transactions in non-functional currencies by forward exchange contracts.

Accordingly, KPN's Treasury department matches and manages the intercompany and external exposures using forward exchange contracts. No hedge accounting is applied for these hedge instruments.

As at 31 December 2021, more than 98% (2020: 97%) of cash and cash equivalents was denominated in the functional currency of the related entities. More than 99% of the net amount of trade receivables and more than 93% of the amount of trade payables was outstanding in the functional currency of the related entities as at 31 December 2021 (2020: more than 99% resp. 95%).

Interest rate risk and interest rate profile

Interest rate risk is the risk that the fair value or future cash flows of a financial instrument will fluctuate as a result of changes in market interest rates. Borrowings, derivatives, cash and cash equivalents are subject to interest rate risk. With regard to interest rate risk exposure, KPN periodically evaluates the desired mix of fixed and floating interest rate liabilities, balancing the benefit of lower interest costs vs. the variability of cash flows. Any interest rate risk exposure longer than one year is considered to be fixed. KPN may use derivative financial instruments to adjust the desired interest rate risk exposure.

As at 31 December 2021, 77% of KPN's interest-bearing gross debt (after swaps, excluding bank overdrafts) was at fixed interest rates (2020: 76%).

With a view to the existing and forecasted debt structure, KPN could enter into additional future derivatives to further adjust the mix of fixed and floating interest rate liabilities.

A sensitivity analysis as at 31 December 2021 with regard to interest rate risk on interest-bearing liabilities (excl. cash flow hedges) showed that, ceteris paribus, each adverse change of 100 bps in six-month Euribor would hypothetically result in EUR 13m higher interest costs per annum (2020: EUR 16m).

Interest rate benchmarks (Interbank Offered Rates, or IBORs) are reformed and/or replaced by alternative Risk-Free Rates (RFRs). This affects financial instruments on the derivatives and cash markets that operate with the impacted floating reference rates. The three most used IBORs are the European Interbank Offered Rate (Euribor), the London Interbank Offered Rate (Libor) and the EURO Overnight Index Average (Eonia). For each benchmark the developments are at different stages and vary in scope and transition time. For example, GBP Libor is discontinued after 31 December 2021 whereas most tenors of USD Libor will continue until 1 July 2023. Euribor has been reformed and is not scheduled to be discontinued. As the Euribor benchmark remains, there is no impact for KPN on the used floating EUR interest rates. The transition of Eonia to Euro Short-Term Rate (ESTR) has a negligible impact for KPN, concerning interest on collateral paid and/or received under credit support agreements with swap counterparties. The relevant agreements have been amended to reflect the change to ESTR. The transition of GBP Libor to Secured Overnight Financing Rate (SOFR) may have a small impact on the valuation of KPN's cross-currency swaps as this benchmark is used to value the derivatives with a GBP currency leg.

Cash flow hedges

KPN carried out a sensitivity analysis as at 31 December 2021 with regard to interest rate and currency risk on the cash flow hedges. KPN applies cash flow hedge accounting on all bonds not denominated in EUR. With all other variables held constant, KPN calculated the hypothetical impact of changes in interest rates based on various scenarios. This would hypothetically result in a higher or lower value of the hedge reserve, which is included in equity attributable to equity holders. In a similar way, KPN calculated the hypothetical impact of changes in the EUR/USD rate and the EUR/GBP rate, holding all other variables constant. The results of the analysis are shown in the table below, indicating the hypothetical impact on the fair value of the cross-currency swaps (excluding the partially offsetting impact on the hedged items).

		GBP		USD		Total	
€ million (before tax)	**Change**	**2021**	**2020**	**2021**	**2020**	**2021**	**2020**
Change in interest rate	+1%-point	-3	-5	3	1	-	-4
	-1%-point	3	5	-3	-2	-	3
Change in FX rate	+10%-point	31	41	29	36	60	77
	-10%-point	-42	-52	-36	-45	-78	-96

Prospective effectiveness testing indicates that all cash flow hedges are expected to be highly effective. Consequently, the expected impact on the P&L is immaterial.

Fair value hedges

KPN carried out a sensitivity analysis on 31 December 2021 with regard to the fair value of interest rate swaps (excluding the partial offsetting impact on the hedged items):

€ million	Change	2021	2020
Change in EUR interest rates	+1%-point	-63	-77
	-1%-point	66	82

For the sensitivity analysis on interest rate risk regarding pensions, see Note 17.

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Offsetting financial assets and financial liabilities

Financial assets

Financial assets subject to offsetting, enforceable master netting arrangements and similar agreements

€ million	Gross amount	Financial liabilities offset	Net amount in balance sheet	Not offset: Financial instruments/ Cash collateral	Net amount
31 December 2021					
Cash and cash equivalents	793	-	793	-	793
Derivatives	212	-	212	-46	166
Total	**1,005**	**-**	**1,005**	**-46**	**959**
31 December 2020					
Cash and cash equivalents	597	-	597	-	597
Derivatives	202	-	202	-15	187
Total	**799**	**-**	**799**	**-15**	**783**

Financial liabilities

Financial liabilities subject to offsetting, enforceable master netting arrangements and similar agreements

€ million	Gross amount	Financial assets offset	Net amount in balance sheet	Not offset: Financial instruments/ Cash collateral	Net amount
31 December 2021					
Derivatives	64	-	64	-56	7
Total	**64**	**-**	**64**	**-56**	**7**
31 December 2020					
Derivatives	196	-	196	-117	79
Total	**196**	**-**	**196**	**-117**	**79**

For the financial assets and liabilities summarized above, each agreement between KPN and the counterparty allows for net settlement of the relevant financial assets and liabilities when both parties elect to settle on a net basis.

Accounting policy: Offsetting financial assets and liabilities

Financial assets and liabilities are offset and reported on a net basis on the balance sheet only when there is a legally enforceable right to offset the recognized amounts and there is an intention either to settle on a net basis or to realize the asset and settle the liability simultaneously.

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[14] Trade and other receivables, contract assets and contract costs

[14.1] Trade and other receivables

	31 December 2021		31 December 2020	
€ million	Current	Non-current	Current	Non-current
Trade receivables	222	-	219	-
Financial receivables handsets	199	-	216	-
Sales to be invoiced	103	-	82	-
Interest to be received	17	-	18	-
Prepayments	95	16	98	10
Accruals and other receivables	40	61	4	122
Total	**677**	**77**	**636**	**132**

The financial receivables handsets consist of installment payments on the handset loans, mainly issued by KPN Finance B.V.

The non-current other receivables relate for EUR 56m to cash collateral received on derivatives (2020: EUR 117m).

Sales to be invoiced include accrued income related to usage of KPN's network, which is invoiced monthly in arrears.

The carrying amounts of trade and other receivables approximate their fair value. Trade and other receivables are non-interest bearing. Trade receivables are generally on payment terms of 14-30 days. The aging of the gross trade receivables is as follows:

€ million	31 December 2021	31 December 2020
Trade receivables gross		
Amounts undue	169	151
Past due 0–90 days	48	55
Past due 91–360 days	17	16
More than one year	10	18
Total trade receivables gross	**244**	**240**
Provision for credit risk exposure	-21	-20
Total trade receivables net	**222**	**219**

[14.2] Contract assets and contract costs

	31 December 2021		31 December 2020	
€ million	Current	Non-current	Current	Non-current
Contract assets	32	20	35	2
Costs to obtain a contract	-	15	-	16
Costs to fulfill a contract	13	-	13	-
Total	**45**	**36**	**49**	**18**

Contract assets

A contract asset is recognized if the earned consideration is conditional. This includes:

- Deferred discounts invoiced to customers if the discount is only granted in the first period of the service contract and the discount is recognized on a straight-line basis over the contract term.
- The consideration to be received regarding those additional scope projects sold to Glaspoort B.V. in December 2021 of which the roll-out activities have started at which point other income is recognized. KPN has received 35% of the total consideration in cash upon closing of the transaction and the remaining amount will be received based on the roll-out progress (see Note 12 for the sale to Glaspoort of additional scope projects).
- Installation services and hardware delivered at the start of the contract if the amount of revenue recognized is higher than the amounts charged upfront.
- Transition projects for business customers when the revenue recognized is higher than the amounts invoiced for the transition phase.

Upon invoicing of contracts assets, the invoiced amounts are reclassified to trade receivables.

Contract costs

Contract costs include:

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- Transaction-related dealer fees paid to acquire or retain mobile subscribers.
- Costs incurred during the transition phase of projects for business customers to be able to deliver exploitation services that are not treated as a separate performance obligation. The costs are capitalized as costs to fulfill a contract and expensed in principle on a straight-line basis over the remaining contract term in which the exploitation services are delivered.

[14.3] Allowances for expected credit losses

Movement schedule of the allowances for expected credit losses:

€ million	Trade receivables	Financial receivables handsets	Contract assets	Total
Balance at 1 January 2020	**20**	**4**	**-**	**24**
Additions/releases P&L	14	-1	-	13
Usage	-14	-	-	-13
Balance at 31 December 2020	**20**	**3**	**1**	**24**
Additions/releases P&L	9	-	-	9
Usage	-8	-1	-1	-10
Balance at 31 December 2021	**21**	**3**	**-**	**24**

Accounting policy: Trade and other receivables, contract assets and contract costs

Trade and other receivables and contract assets classify as financial assets and are measured at amortized cost if both of the following conditions are met:

- The financial asset is held within a business model with the objective to hold financial assets in order to collect contractual cash flows
- The contractual terms of the financial asset give rise on specified dates to cash flows that are solely payments of principal and interest on the principal amount outstanding

Financial assets at amortized cost are subsequently measured using the effective interest method less provisions for impairment. An allowance for expected credit losses is recorded for all financial assets and contract assets at initial recognition. This allowance is regularly updated.

The amortized cost is calculated by taking into account any discounts or premiums on acquisition and transactions costs.

The effective interest rate amortization is recognized under finance income or finance costs.

See Note 4 for the accounting policy regarding contract costs.

[15] Cash and cash equivalents

Cash and cash equivalents consist of highly liquid instruments with initial maturities of three months or less, including balances on bank accounts, bank deposits and money market funds.

€ million	31 December 2021	31 December 2020
Cash	258	253
Short-term bank deposits and money market funds	535	344
Total cash and cash equivalents	**793**	**597**

The increase in cash and cash equivalents was mainly the result of EUR 784m free cash flow, EUR 236m net proceeds related to the Glaspoort joint venture with APG, EUR 115m of net inflow of cash collateral on derivatives, EUR 76m of net funding (EUR 689m bond proceeds minus EUR 613m bond redemptions), partly offset by EUR 554m dividend payments, EUR 200m share repurchases, EUR 197m tax payments related to investing activities and EUR 30m change in short term investments.

Accounting policy: Cash and cash equivalents

Cash and cash equivalents comprise cash in hand, deposits held at call with banks, AAA-rated prime money market funds and other short-term highly liquid investments with original maturities of three months or less. Bank overdrafts are included in borrowings in current liabilities.

[16] Equity

Limitations in distribution of shareholders' equity

Total distributable reserves as at 31 December 2021 amounted to EUR 2,545m which includes the perpetual capital securities (2020:

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EUR 2,304m). For further details on non-distributable reserves, see Note C to the Corporate Financial Statements.

Share capital

Authorized capital stock totals EUR 720m divided into nine billion ordinary shares of EUR 4ct each and nine billion preference shares B of EUR 4ct each. At 31 December 2021, a total of 4,202,844,404 ordinary shares were outstanding and fully paid-in. Dutch law prohibits KPN from casting a vote on shares KPN holds (treasury shares). The ordinary shares and preference shares B carry the right to cast one vote each. The ordinary shares are registered or payable to the bearer.

Shareholders may request the company to convert their registered shares to bearer shares, but not vice versa.

Share buyback

In 2021, KPN repurchased 73,684,157 ordinary shares at an average price of EUR 2.71. These shares will be cancelled in 2022, reducing the number of outstanding shares to 4,129,160,247.

At the 14 April 2021 AGM, shareholders granted the Board of Management the authority to acquire the company's own ordinary shares for a period of 18 months starting on 14 April 2021 and ending on 14 October 2022. The number of ordinary shares to be acquired is limited to a maximum of 10% of the issued capital per 14 April 2021. The shares may be acquired, by or on behalf of the company, on the stock exchange or through other means at a price per share of at least the par value and at most the quoted share price plus 10%. The quoted share price is defined as the average of the closing prices of KPN shares as reported in the official price list of Euronext Amsterdam over the five trading days prior to the acquisition date. Resolutions by the Board of Management to acquire the company's own shares are subject to the approval of the Supervisory Board.

Ordinary shares purchased by the company will either be cancelled or held in treasury. At the 14 April 2021 AGM, shareholders granted the Board of Management the authority to reduce the issued capital by cancelling own shares with the approval of the Supervisory Board. The number of shares that may be cancelled is restricted to a maximum of 10% of the issued capital as at 14 April 2021 and may, if desired, be cancelled in one or more phases.

Other reserves

€ million, unless indicated otherwise	Number of treasury shares	Treasury shares reserve	Hedge reserve	Currency translation reserve	Total Other reserves
Balance at 1 January 2020	**6,929,923**	**-79**	**-240**	**19**	**-300**
Movements recorded in OCI (net)	-	-	84	3	87
Sold treasury shares	-1,320,491	14	-	-	14
Balance at 31 December 2020	**5,609,432**	**-65**	**-156**	**22**	**-199**
Movements recorded in OCI (net)	-	-	31	-7	24
Share buyback	73,684,157	-200	-	-	-200
Sold treasury shares	-1,643,571	17	-	-	17
Balance at 31 December 2021	**77,650,018**	**-248**	**-125**	**15**	**-358**

The additional paid-in capital is exempt from Dutch tax up to an amount of EUR 9,282m at 31 December 2021 (2020: EUR 9,282m).

Hedge reserve

€ million	31 December 2021	31 December 2020
Effective portion cash flow hedges[1]	-61	-87
Amortizable part[2]	-107	-122
Hedge reserve	**-168**	**-209**
Tax effect	43	53
Hedge reserve, net of tax	**-125**	**-156**

1 The effective portion of cash flow hedges will be recognized in the P&L in line with the maturities of the related derivatives (see Note 13.3).

2 The amortizable part of the hedge reserve is amortized over the remaining life of the related bonds (between 2016 and 2030). The impact on the P&L will be EUR 15m in 2022.

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Treasury shares reserve

KPN purchased shares in its own capital for delivery upon vesting of equity-settled share plans for management (see Note 5). Votes on purchased shares may not be cast and do not count in determining the number of votes required at a General Meeting of Shareholders. In 2021 and 2020, no shares were purchased for the equity-settled share plans. In 2021 and 2020, shares were sold in connection with vesting of these plans.

Treasury shares are accounted for at cost, representing the market price on the acquisition date. The proceeds at delivery of the treasury shares are recognized directly in the other reserves.

Equity attributable to holders of perpetual capital securities

On 8 November 2019, KPN issued a EUR 500m hybrid bond with a 2.00% coupon and a perpetual maturity. This bond is classified as equity in the Consolidated Statement of Financial Position and valued at net proceeds (see Note 13.2).

Foundation Preference Shares B KPN

KPN has granted a call option, which is not limited in time, to the Foundation Preference Shares B KPN (the Foundation) to acquire preference shares B. For further information about the Foundation, see chapter 'Corporate governance'.

In KPN's opinion, the call option does not represent a significant fair value due to the fact that the preference shares B, issued after exercise of the call option, bear interest linked to Euribor.

Dividend per share

At the AGM of Shareholders on 13 April 2022, a final dividend of EUR 9.1ct per share will be proposed in respect of 2021. In August 2021, KPN paid an interim dividend in respect of 2021 of EUR 4.5ct per share, in total EUR 189m, bringing the total regular dividend in respect of 2021 to EUR 13.6ct per share (in total EUR 564m based on the number of outstanding shares at 31 December 2021 less Treasury shares held by KPN).

These Financial Statements do not reflect the proposal for the remaining dividend payable. In April 2021, KPN paid a final dividend of EUR 8.7ct per share in respect of 2020, in total EUR 365m. The total dividend in respect of 2020 was EUR 13.0ct per ordinary share.

[17] Retirement benefits

Retirement benefits are provided through a number of defined contribution plans and funded and unfunded defined benefit plans. The most significant plans are described hereafter.

KPN main pension plan

KPN's main pension plan covers employees in the Netherlands who are subject to KPN's collective labor agreement and employees with an individual labor agreement, and is externally funded through Stichting Pensioenfonds KPN. This plan is a collective defined contribution pension plan and is accounted for as a defined contribution plan because KPN has no other obligation than to pay the annual contribution which is a fixed percentage of the pensionable base for a period of three years as of 1 January 2020. After this three-year period, the annual contribution will be reassessed based on a fixed and agreed method in which no reflection to past service or the funded status of the fund is included.

Getronics UK and US

The Getronics US and UK operations were divested in 2008 and 2012, respectively. The closed and frozen pension plans of the former US and UK operations remained with KPN and are accounted for as a defined benefit plan. The assets of the plans are held separately from KPN in independently administered funds. The UK plan operates under the regulations of the UK Pensions Regulator and the main US plan under the provisions of the Employee Retirement Income Security Act (ERISA). The deficit in the plans' funding must be recovered by the investment returns in the plans' assets and contributions by KPN. The pension plans in the UK and US expose KPN to a number of risks which can have an impact on the future contributions by KPN and the liability recorded in its balance sheet. The most significant risks are summarized below:

- Asset volatility risk: the pension plans' assets are partially invested in equity securities and other return seeking assets, so the plans' funding levels are exposed to equity market risks. The spread of COVID-19 in 2020, for example, caused great volatility.
- Interest rate risk: a decrease in interest rates will increase the plans' liabilities, although this will be partially offset by an increase in the value of the plans' bond holdings.
- Inflation risk: the indexation of part of the accrued benefits in the UK is unconditional and is based on a combination of consumer and retail price indices, so the UK plan is exposed to inflation risk.
- Life expectancy risk: the plans provide benefits for the life of the members, so increases in life expectancy will result in an increase in the plans' liabilities.

In the UK, guaranteed minimum pension (GMP) is a portion of pension that was accrued by individuals who were contracted out of the state second pension prior to 6 April 1997. At present there is an inequality of benefits between male and female members who have GMP. The High Court in the UK ruled in 2018 that equalization will be required for affected defined benefit pension schemes. A number of options can be used to equalize. The estimated cost of equalization as at 31 December 2021 and 2020 for the UK plan is EUR 6m, which has been recognized as a past service cost in 2018. However, the cost to the UK plan for

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equalizing heavily depends on a complex interaction between the benefit design and membership profile as well as the method used to equalize, which must be determined by the trustees.

Other

KPN has a number of other funded (insured) plans in the Netherlands which are all closed to new entrants. Based on Dutch law, KPN could be required to make contributions if participants of these plans require a value transfer to another pension fund or insurer. However, the risk related to these value transfers is limited and therefore no provision has been recognized for these plans.

In 2021. a final payment of EUR 7m for the unfunded transitional early retirement plan was made.

Provisions for retirement benefit obligations

The provisions for retirement benefit obligations consist of the net defined benefit liability regarding pension plans and early retirement plans, which are accounted for as defined benefit plans as described above. See the table below for a specification of the balance sheet position.

	Defined benefit obligation[1]		Fair value of assets		Net defined benefit liability (asset)	
€ million	**2021**	**2020**	**2021**	**2020**	**2021**	**2020**
Balance at 1 January	**651**	**670**	**-499**	**-482**	**152**	**188**
Included in profit or loss						
Operating expense[2]	-56	1	58	3	2	4
Interest expense (income)	9	14	-7	-10	2	4
Included in OCI						
Remeasurements loss (gain):						
Actuarial loss (gain)[3]	-32	53	-	-	-32	53
Return on plan assets excluding interest income	-	-	-20	-42	-20	-42
Effect of movements in exchange rates	40	-38	-31	27	9	-11
Total	**8**	**15**	**-51**	**-15**	**-43**	**-**
Other						
Employer's contribution	-	-	-21	-45	-21	-45
Benefits paid	-38	-49	38	49	-	-
Balance at 31 December	**574**	**651**	**-482**	**-499**	**92**	**152**

1 The measurement date for all defined benefit plans is 31 December.

2 Service costs were EUR 0m and administrative costs EUR 3m in 2021 and EUR 1m and EUR 3m in 2020. Operating expense in 2021 includes settlement gains of EUR 1m. The latter relates to a partial transfer of the retiree pension liabilities of the US pension fund to an insurance company and a conversion into a non-profit-sharing agreement with regard to a Dutch insured pension plan.

3 The actuarial loss (gain) in 2021 and 2020 consists of demographic assumptions (EUR -5m and EUR -2m, financial assumptions (EUR -29m and EUR +56m) and experience adjustments (EUR 2m and EUR -1m).

Defined benefit obligations

Actuarial assumptions

The key actuarial assumptions used in the calculation of the defined benefit obligations are as follows:

	31 December 2021			31 December 2020		
	Getronics UK	**Getronics US**	**Other**	**Getronics UK**	**Getronics US**	**Other**
Discount rate (%)	2.0	2.6	1.0	1.4	2.3	0.6
Expected salary increases (%)	N/a	N/a	2.0	N/a	N/a	2.0
Expected benefit increases/indexation (%)	2.5-3.1	N/a	0.0	2.1-2.8	N/a	0.0
Life expectancy for pensioners at retirement age:						
Male	22.1	20.6	21.4	22.2	20.5	21.4
Female	24.1	22.6	23.4	24.2	22.4	23.4

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The discount rate is based on yield curves of AA corporate bonds with maturities equal to the duration of the benefit obligations and in the applicable currency. As at 31 December 2021, the (weighted) average duration of the defined benefit obligation was 13 years.

Assumptions regarding life expectancy are based on published statistics and mortality tables that include allowances for future improvement in mortality. The mortality table used in the Netherlands is the projected table AG 2020 which includes projected improvement rates varying by year of birth, corrected for fund specific circumstances. The mortality table used in the UK is the 97% of SAPS S3PXA tables with CMI 2020 projection with a 1.25% long-term improvement, and in the US the Pri-2012 Total Dataset with Scale MP-2021. The life expectancy at the age of 65 is expected to increase in the next 20 years by between one and two years in the UK and the US.

Sensitivity analysis

The following table shows the approximate impact on the defined benefit obligation of a change in the key actuarial assumptions of 0.5% and in the case of life expectancy of a change of one year.

	31 December 2021		31 December 2020	
€ million	Increase	Decrease	Increase	Decrease
Discount rate	-35	39	-42	46
Expected salary increases	-	-	-	-
Expected benefit increases	16	-19	18	-21
Life expectancy	26	-26	30	-30

Plan assets

The assets of all defined benefit pension plans as at 31 December 2021 and 2020 comprise of:

	31 December 2021	31 December 2020
Quoted in active markets:		
Equity securities	21%	19%
Fixed-income securities	41%	35%
Real estate[1]	0%	0%
Commodities[2]	1%	1%
Other	2%	3%
Other:		
Equity securities	6%	8%
Fixed-income securities	10%	11%
Real estate[1]	3%	2%
Other[3]	16%	20%

1 As at 31 December 2021, none of the investments in real estate were located in Europe.

2 Includes investment funds which invest in financial instruments related to commodities such as energy, agricultural products and precious metals.

3 Mainly insurance contracts and hedge funds.

Strategic investment policies

The strategic investment portfolios of the defined benefit plans (before hedging) at year-end 2021 were as follows:

€ million	Getronics UK	Getronics US	Other plans
Equity securities	35%	35%	0%
Fixed-income securities (including inflation-linked bonds)	60%	45%	0%
Other	5%	20%	100%
Total	**100%**	**100%**	**100%**

In both the UK and the US, a roadmap is in place to move to more fixed-income exposure as the funded status improves. The Getronics UK pension fund partially hedges interest rate and inflation risks. The Getronics US pension fund partially hedges interest rate risks. As the pension funds mainly invest in global investment funds, a minor part of these investments could be related to KPN equities. The pension funds do not have direct investments in KPN equities.

Expected contributions and benefits

In 2021, the total employer's contributions and benefit payments for all defined benefit and defined contribution plans amounted to EUR 98m, consisting of EUR 78m employer's premiums for defined contribution plans, EUR 13m contributions for funded defined benefit plans and EUR 7m payments for unfunded plans.

The amount of employer's contributions in 2022 for the remaining defined benefit pension plans is estimated to be EUR 20m for the funded plans. The total amount of employer's premiums to be paid in 2022 for the defined contribution plans is estimated to be EUR 79m.

Accounting policy: Provisions for retirement benefit obligations (pension obligations)

The liability recognized in respect of all pension and early retirement plans that qualify as a defined benefit obligation is the present value of the defined benefit obligation less the fair value of plan assets. KPN uses actuarial calculations (projected unit credit method) to measure the obligations and the costs. For the calculation, actuarial assumptions are made about demographic variables (such as employee turnover and mortality) and financial variables (such as future indexation and the discount rate). The discount rate is determined by reference to market rates. These are interest rates of high-quality corporate bonds that are denominated in the currency in which the benefit will be paid and that have terms to maturity approximating the terms of the related liability. A net defined benefit asset may arise where a defined benefit plan has been overfunded. KPN recognizes a net defined benefit asset in such a case only when future economic benefits are available to KPN in the form of a reduction in future contributions or a cash refund. Actuarial gains and losses are recognized immediately in OCI.

Past service costs, curtailments and settlements are recognized immediately in the P&L.

The amount of pension costs included in operating expenses with respect to defined benefit plans consists of service cost, past service costs, curtailments and settlements and administration costs. Net interest on the net defined benefit liability is presented as part of finance costs.

For pension plans that qualify as a defined contribution plan, KPN recognizes contributions as an expense when an employee has rendered service in exchange for those contributions.

[18] Provisions for other liabilities and charges

€ million	31 December 2021	31 December 2020
Restructuring provision	19	19
Asset retirement obligations	98	94
Other provisions	60	76
Total provisions for other liabilities and charges	**177**	**189**
of which: non-current	150	151
of which: current	**27**	**38**

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Statement of changes in provisions

€ million	Personnel	Contractual	Total restructuring	Asset retirement obligation	Other provisions	Total provisions
Balance at 1 January 2020	**40**	**2**	**42**	**44**	**82**	**168**
of which: current portion restated	**40**	**1**	**40**	**3**	**20**	**63**
Additions	36	-	36	52	4	92
Releases	-	-	-	-1	-	-1
Usage	-58	-	-58	-2	-11	-71
Other movements	-	-	-	-	1	1
Balance at 31 December 2020	**18**	**2**	**19**	**94**	**76**	**189**
of which: current portion restated	**18**	**-**	**18**	**4**	**17**	**38**
Additions	38	-	38	8	8	54
Releases	-	-	-	-1	-7	-7
Usage	-38	-	-38	-4	-13	-55
Other movements, incl. discontinued operations	-	-	-	1	-5	-3
Balance at 31 December 2021	**18**	**1**	**19**	**98**	**60**	**177**
< 1 year	**18**	**-**	**18**	**2**	**7**	**27**
1-5 years	**-**	**1**	**1**	**14**	**2**	**17**
> 5 years	**-**	**-**	**-**	**82**	**51**	**132**

Restructuring provisions
Termination benefits are payable when employment is terminated before the normal retirement date, or whenever an employee accepts redundancy in exchange for these benefits.

Termination benefits are recognized when KPN is demonstrably committed either to terminating the employment according to a detailed formal plan without the possibility of withdrawal or to providing termination benefits as a result of an individual and accepted offer made to encourage redundancy. Benefits falling due more than 12 months after 31 December are discounted to present value.

Asset retirement obligations
The provision for asset retirement obligations (ARO) is based on assumptions of the estimated costs of removal, discount rate and estimated period of removal, which vary per type of asset. In 2020, EUR 47m was added to ARO provision for the decommissioning costs of the radio sites because the actual costs are considerably higher, partly due to the fact that the new radio site equipment is heavier and bigger. The increase in the ARO provision is recognized fully in the balance sheet as activated asset retirement costs, which is included in plant and equipment.

As defined in the Telecommunications Act, the obligation for landlords to tolerate cables terminates as soon as those cables have been idle for a continuous period of 10 years. Because the date when the cables will become idle is uncertain and KPN is not able to predict whether and when a landlord will place a request for removal, KPN is not able to make a reliable estimate of the impact and therefore no provision was recognized at 31 December 2021 nor at 31 December 2020.

Other provisions
Includes provisions for claims and litigations, onerous contracts and warranties and provisions for long-term employee obligations related to jubilee or other long-service employee benefits, long-term disability benefits and, if they are not fully payable within 12 months after the end of the period, bonuses and deferred compensation. The expected costs of these benefits are accrued over the period of employment using an accounting method similar to that for defined benefit pension plans, except that actuarial gains and losses and past-service costs are recognized immediately in the P&L.

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Accounting policy: Provisions for other liabilities and charges
Provisions for asset retirement obligations, restructuring costs and legal claims are recognized when KPN has a present legal or constructive obligation as a result of past events and it is probable that an outflow of resources will be required to settle the obligation and the amount can be reliably estimated. When these criteria are not met, these positions are classified as contingent liabilities, unless the cash outflow is considered remote.

Provisions are measured at the present value of management's best estimate of the expenditure required to settle the present obligation at balance sheet date. The discount rate used to determine the present value reflects current market assessments of the time value of money and the risks specific to the liability.

[19] Leasing

Right-of-use assets

€ million	Mobile network	Fixed network & data centers	Real estate	Vehicles	Other	Total
Accumulated cost	906	138	510	137	4	1,695
Accumulated depreciation & impairment	-400	-108	-265	-72	-3	-848
Balance as at 1 January 2020	**506**	**30**	**245**	**64**	**1**	**847**
Additions	39	2	1	31	-	74
Remeasurement & lease modifications	76	2	-6	-4	-	70
Depreciation	-55	-11	-35	-31	-1	-132
Impairments	-	-	-	-	-	-
Closing net book value	**566**	**23**	**205**	**61**	**1**	**857**
Accumulated cost	995	119	493	137	4	1,749
Accumulated depreciation & impairment	-429	-96	-288	-76	-3	-892
Balance as at 31 December 2020	**566**	**23**	**205**	**61**	**1**	**857**
Additions	8	-	3	7	8	27
Remeasurement & lease modifications	35	3	9	1	1	48
Depreciation	-57	-10	-31	-28	-2	-127
Impairments	-	-	-	-	-	-
Closing net book value	**553**	**17**	**186**	**40**	**9**	**804**
Accumulated cost	997	89	458	119	14	1,677
Accumulated depreciation & impairment	-445	-71	-272	-80	-5	-872
Balance as at 31 December 2021	**553**	**17**	**186**	**40**	**9**	**804**
Total estimated lease term at commencement of a lease (in years)	5-15	5-20	5-20	5-7	<5	

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Lease liabilities

€ million	Mobile network	Fixed network & data centers	Real estate	Vehicles	Other	Total
Non-current lease liability	477	26	244	37	-	785
Current lease liability	77	12	32	24	-	145
Balance as at 1 January 2020	**554**	**38**	**276**	**61**	**1**	**930**
Additions	37	3	1	31	-	73
Remeasurement & lease modifications	75	2	-7	-2	-	68
Interest	13	1	7	1	-	22
Redemptions	-61	-17	-45	-32	-1	-156
Closing net book value	**618**	**27**	**232**	**58**	**1**	**937**
Non-current lease liability	531	19	202	35	-	787
Current lease liability	88	9	30	23	-	150
Balance as at 31 December 2020	**618**	**27**	**232**	**58**	**1**	**937**
Additions	8	1	3	7	8	27
Remeasurement & lease modifications	30	3	8	-	1	42
Interest	13	1	5	1	-	20
Redemptions	-73	-11	-40	-28	-2	-154
Closing net book value	**597**	**20**	**210**	**37**	**9**	**873**
Non-current lease liability	515	14	180	20	7	736
Current lease liability	83	6	30	17	2	137
Balance as at 31 December 2021	**598**	**20**	**209**	**37**	**9**	**873**

The redemptions reflect the total payments made during the year for the lease fees included in the lease liability. The redemption consists of the repayments of the lease liabilities which are presented in the cash flow from financing activities (2021: EUR 135m, 2020: EUR 135m) and the interest paid during the year (2021: EUR 20m, 2020: EUR 22m) which is part of the cash flow from operating activities.

The maturity analysis of the lease liabilities can be found in Note 13.4.

KPN's lease portfolio consists of mobile network (mostly site rentals and mobile towers), fixed network & data centers (technical buildings), real estate (offices and shops), vehicles and other leased assets.

The following amounts are recognized in the profit or loss:

€ million	2021	2020
Depreciation right-of-use assets	-127	-132
Impairment (-) or impairment reversal right-of-use assets	-	-
Gain or loss (-) on early terminations	5	3
Total depreciation & impairments presented in the P&L	**-123**	**-130**
Interest on lease liabilities	-20	-22
Total amount recognized in profit or loss	**-142**	**-152**

In both 2021 and 2020, KPN entered into sale and leaseback transactions for some of its technical buildings. In 2021, the transactions resulted in a gain of EUR 2m (2020: EUR 3m), other income. The leaseback periods are limited to a period of five years. The impact on the lease liability and right-of-use asset (fixed network) was limited.

The expenses related to short-term vehicle leases (included in employee expenses) are not material. KPN does not apply the low-value exemption and does not have contracts with variable lease payments other than variable lease payments dependent on an index or a rate.

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Most of KPN's lease contracts include extension (renewal) or termination options. KPN exercises significant judgment in determining whether these options are reasonably certain to be exercised (see Note 2). The assessments are updated annually or when a significant change in the economic circumstances occurs. Periods covered by renewal options deemed reasonably certain or early termination options that are reasonably certain not to be exercised are included in the total lease liability.

A significant number of KPN's contracts have an unlimited number of extension options. Only those deemed reasonably certain are included in the lease term and therefore the lease liability. A reliable estimate of the potential future lease payments related to periods beyond the lease terms reflected on the balance sheet cannot be provided. This affects mostly the mobile and fixed network, as well as real estate. Vehicles are generally returned by the end of their term.

KPN as a lessor

KPN acts as a lessor in a limited number of real estate, mobile site contracts and some specific types of customer premises equipment, all classified as operating leases. These lessor contracts are not material to KPN Group, individually nor in aggregate. The terms are 1-10 years. All leases include a clause to enable upward revision of the lease fees (annual indexation). Rental income recognized in 2021 amounted to EUR 2m (2020: EUR 3m). The future minimum lease receivable under the non-cancellable operating leases as at 31 December 2021 is EUR 7m (31 December 2020: EUR 9m).

Accounting policy: Leases

KPN as lessee

Lease liabilities

At the commencement date of a lease (i.e. the date on which the underlying asset of the lease is available for use by KPN), KPN recognizes a lease liability measured at the present value of future lease payments to be made over the term of the lease. This includes fixed fees (including in-substance fixed payments), lease incentives (such as rent-free periods or fee discounts), variable lease payments that depend on an index or a rate, and amounts expected to be paid under residual value guarantees. KPN does not have purchase options to be taken into account. Penalties for early termination of a lease are not included when KPN is reasonably certain that the related early termination will not take place.

All contracts of KPN that contain variable lease payments depend on a consumer price index or a rate. However, should other types of fees occur, these variable fees will be accounted for in the operating expenses.

After the commencement date, the lease liabilities increase due to the accrual of interest and decrease due to the payments of the fees due. The lease liabilities are remeasured when a change occurs in the fees due, the lease term deemed reasonably certain and/or changes to the scope of a lease. Upon remeasurement of the lease liability of a contract, the applied discount rate (incremental borrowing rate) is revised unless the remeasurement relates to a fee change following a change in consumer price index or rate.

The total lease liability recognized is split into a non-current and a current portion. The current lease liabilities reflect only the part of the payments due within one year related to the repayment of the total lease liabilities.

Lease term

KPN determined the lease term as the non-cancellable term of a contract together with any periods covered by an option to extend the lease if it is reasonably certain to be exercised, or any periods covered by an option to terminate the lease if it is reasonably certain not to be exercised.

KPN applies judgment when assessing if the use of an option is reasonably certain. Factors included are KPN's asset and network strategy, technological developments and other circumstances that may impose an economic incentive affecting the expected use of an underlying asset. For vehicles, renewal options are not included in the initial assessment of the lease term as KPN's policy prescribes the return of vehicles to the lessor at the end of the lease term.

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After the commencement of a lease, KPN reassesses the lease term if there is a significant event or change in circumstances that is within KPN's control and effects KPN's ability to exercise or not to exercise the option to renew or to terminate a lease.

Incremental borrowing rate
The implicit discount rates of KPN's leases are not readily available, with the exception for vehicles, KPN applies its applicable incremental borrowing rate to determine the discounted value of the lease liabilities. Upon modification of a lease, the lease liability is remeasured using the applicable discount rate at the date of the remeasurement. KPN's incremental borrowing rates are mainly determined using a risk-free rate combined with a spread reflecting KPN's credit risk. The applicable rate per contract is primarily dependent on the total expected term of a lease at its commencement date (new leases) or the total expected remaining lease term in case of a remeasurement of a lease.

Right-of-use assets
Right-of-use assets are recognized at commencement date of a lease as counterpart to the lease liabilities. The right-of-use assets are measured at cost, less accumulated depreciation and impairment losses and adjusted for any remeasurement in the corresponding lease liabilities. The cost of the right-of-use assets includes the initially recognized amount of the corresponding lease liabilities, initial direct costs incurred in obtaining the lease (if any) and lease payments made at or before commencement of the lease. Lease incentives received are deducted from the carrying value of the right-of-use assets.

The right-of-use assets are depreciated on a straight-line basis over the shorter of the estimated useful life of the underlying asset and the lease term. Right-of-use assets are subject to impairment.

Short-term leases and leases of low-value assets
KPN does not apply the practical expedients for low-value leases (leases of an underlying asset with a value of less than EUR 5,000) and short-term leases (leases with a total expected term of less than 12 months) except for short-term rental vehicles.

Regarding vehicle leases, KPN applies the practical expedient not to separate non-lease components from lease components. Therefore, the full monthly lease fees are reflected in KPN's Statement of Financial Position. For all types of leased assets, electricity and fuel-related expenses remain part of operating expenses.

KPN as lessor
Leases where KPN as lessor retains a significant portion of the risk and rewards of ownership of the lease asset are classified as operating leases. The assets remain on the balance sheet and are depreciated over the assets' useful life.

Lease payments received from lessees are recognized as revenue on a straight-line basis over the lease period.

If KPN acts as a lessor in a finance lease, the transaction is accounted for as a normal sale and the present value of the lease payments is recognized as a receivable. The difference between the gross receivable and the present value of the receivable is deferred and recognized as interest over the lease term.

[20] Contract liabilities, trade and other payables

Trade and other payables

	31 December 2021		31 December 2020	
€ million	Current	Non-current	Current	Non-current
Trade payables	514	-	531	-
Accrued interest	77	-	88	-
Accrued expenses	338	-	283	-
Social security and other taxes payable	220	-	187	-
Other payables	26	8	39	12
Total	**1,176**	**8**	**1,128**	**12**

Some of KPN's suppliers participate in Supplier Finance Programs giving suppliers the opportunity to receive earlier payment (from a financial institution), without modifying KPN's payment terms, or providing KPN an extended payment period. As the payment terms under these programs do not materially deviate from customary payment terms in the industry or from the terms agreed with suppliers who do not participate in these programs, the relating liabilities are classified as trade and other payables, and payments are classified as operating cash flow. The Supplier Finance Programs do not impact covenants or KPN's access to (future) borrowings from financial institutions. As at 31 December 2021, the total amount of payables under the Supplier Finance Programs amounted to EUR 141m (2020: EUR 162m).

Contract liabilities

	31 December 2021		31 December 2020	
€ million	Current	Non-current	Current	Non-current
Contract liabilities	186	169	209	136
Of which variable considerations	-	86	-	102

The contract liabilities primarily relate to the consideration received from customers before satisfying performance obligations, such as advances for subscriptions and airtime. KPN recognizes a contract liability for postpaid and prepaid bundled minutes based on the actual usage of these bundles per proposition. The utilization percentage, which is the number of credits used as a percentage of total credits granted for that period, is monitored periodically and is based on the historical data.

For the transition phase of projects for business customers which are treated as a separate performance obligation a contract liability is recognized if the amount invoiced is higher than the amount of revenue allocated to these projects. For the mobile connection fees charged to the customer a contract liability is recognized if the connection is not treated as a separate performance obligation.

Contract liabilities are also recognized for variable considerations which are not deemed highly probable. This applies to the billed roaming and MTA tariffs that are regulated and imposed retrospectively and to VAT related to certain mobile consumer propositions.

The introduction of new mobile consumer propositions in August 2016 caused a change in the VAT calculation methodology, which resulted in a lower remittance of VAT from August 2016 until December 2018. KPN's view is not shared by the Dutch tax authorities. KPN concluded, based on the applicable regulations, that a positive outcome of this dispute is not highly probable and therefore recorded a contract liability for the VAT amount. Additionally, an amount for the corresponding interest amount has been accounted for. A potential negative outcome of a forthcoming court procedure will lead to a negative cash flow in future years.

In 2021, EUR 13m revenue was recognized from variable considerations related to performance obligations satisfied (or partially satisfied) in previous years (in 2020: EUR 17m).

The year's revenues include the current portion of the contract liability balance at the beginning of the year.

Accounting policy: Contract liabilities, trade and other payables

Trade and other payables are classified as 'borrowings' within KPN's financial liabilities. For the accounting policy, see Note 13.

For the accounting policy regarding contract liabilities, see Note 4.

Consolidated Financial Statements

Notes to the Consolidated Financial Statements

[21] Business combinations and disposals

Disposals

€ million	2021	2020
Amount of assets and liabilities in the subsidiaries or businesses over which control is lost:		
Property, plant and equipment	7	-
Intangible assets	-	5
Right-of-use assets	-	9
Other non-current assets	-	4
Trade and other receivables, prepayments and accrued income	17	12
Net cash and cash equivalents	-	2
Non-current liabilities	-	-5
Trade and other payables and accrued expenses	-24	-17
Total net assets	**-**	**11**
Transaction costs[1]	7	2
Allocation of goodwill upon loss of control over a business	64	-
Total costs	**71**	**2**
Cash consideration[2]	233	25
Contingent cash consideration	218	-
Interest in joint venture (50%)	451	-
Total consideration	**902**	**25**
Book gain before income tax	**831**	**13**
Income taxes	-190	-
Book gain after income tax	**640**	**13**

1 The transaction costs in 2021 include EUR 1m release of accruals related to disposals in previous years.

2 The cash consideration in 2020 includes EUR 2m final settlement of sold subsidiaries in 2019.

Changes in consolidation in 2021

Joint venture Glaspoort

On 9 June 2021, KPN sold 50% of the shares of its subsidiary Glaspoort B.V. to Drepana Investments Holding B.V., an investment entity managed by APG. At the same time, KPN entered into a joint venture agreement with Drepana Investments Holding B.V. regarding Glaspoort. Glaspoort is a network company, pursuing an open-access wholesale strategy based on non-discriminatory terms, fostering competition and innovation in the Netherlands. The total consideration upon sale of the 50% interest in Glaspoort consists of a cash consideration received upon deal close of EUR 238m (later adjusted to EUR 233m) and a contingent cash receivable of EUR 234m to be received in annual installments based on the roll-out progress of Glaspoort. The contingent cash receivable classifies as a financial asset initially recognized at fair value (EUR 218m) and is subsequently measured at fair value through profit or loss (see Note 13.1). On the closing date, both joint venture partners paid a share premium contribution of EUR 39m to Glaspoort's equity.

Glaspoort is classified as a joint venture, based on the assessment of ownership and voting power (50/50 with the joint venture partner) and the joint control established through the joint venture agreement between the shareholders of Glaspoort. In analyzing the joint control status, KPN evaluated among others the following:

- KPN holds the option whether or not to purchase one share. This option is exercisable between the 5th and 8th anniversary of the transaction provided certain criteria are met, and in any case after the 8th anniversary.
- KPN's influence on Glaspoort's relevant activities through KPN's presence in the governance structure.
- KPN is an anchor tenant on Glaspoort's network and also one of its suppliers through a number of operational contracts between KPN and Glaspoort.

Following the requirements of IFRS, KPN initially recognized its interest in the joint venture at its fair value (EUR 456m), based on the total consideration, consisting of the initial cash consideration (EUR 238m) and the fair value of the deferred consideration (EUR 218m), and corroborated by internal valuation models. In December 2021, the initial cash consideration was adjusted by EUR 5m to EUR 233m and the fair value of KPN's interest in the joint venture was adjusted for the same amount to EUR 451m. See Note 12 for further information on Glaspoort.

Due to the limited relative size of Glaspoort to the KPN Group, Glaspoort did not qualify as a discontinued operation. Therefore, the results and cash flows of Glaspoort remained included in KPN's consolidated income and cash flow statements until the date of completion of the transaction, whereas its assets and liabilities were classified on KPN's consolidated balance sheet as part of the 'assets held for sale'.

The transaction was subject to closing conditions and the regulatory approvals were obtained on 12 May 2021. The transaction resulted in a net book gain of EUR 639m, consisting of a book gain on the transaction of EUR 830m, included in other income (see Note 4.2), and a tax expense of EUR 190m. KPN's 50% share in the result of Glaspoort in the period between the transaction and 31 December 2021 was EUR -2m.

The transaction resulted in a net cash inflow of EUR 196m in 2021, classified as cash flow from investing activities in the Consolidated Statement of Cash Flows. This amount consists of the cash consideration received for the shares (EUR 233m), the transferred assets at closing (EUR 24m), less the share premium contribution (EUR 39m), transaction costs paid (EUR 8m) and EUR 15m for invoices paid by KPN regarding transferred assets.

Due to the specific nature, this transaction is not tax exempt. The total tax paid on the transaction during 2021 was EUR 197m based on preliminary tax assessments. As these tax payments are directly related to the transaction, KPN presents these taxes paid as part of the cash flows from investing activities due to separate identifiability.

Changes in consolidation in 2020

On 1 April 2020, KPN completed the sale of KPN Consulting B.V. to Cegeka N.V. KPN Consulting was part of KPN's Business segment and was classified as held for sale as of 31 December 2019. The transaction resulted in a book gain of EUR 11m, recognized as other income (see Note 4.2). The gain is income tax exempt (see Note 8).

On 2 November 2020, KPN acquired a fiber network with 5,900 addresses in a rural area from the cooperative Sterk Midden-Drenthe, together with the contracts with internet service providers, the business activities and the employees. The transaction is accounted for as a business combination because the assets acquired and liabilities assumed are considered to constitute a business, as KPN acquired business activities of a network operator including inputs and substantive processes applied to those inputs that provide network services to customers.

Purchase price allocation of the acquisition

€ million	2020
Recognized amounts of identifiable assets acquired and liabilities assumed:	
Property, plant and equipment	11
Intangible assets	2
Total identifiable net assets	**13**
Cash consideration	14
Total consideration	**14**
Goodwill	**1**

The impact of the acquisition on KPN Group's revenues, EBITDA and net profit in 2020 is negligible, also if the acquisition had taken place at the beginning of the year.

Accounting policy: Business combinations

KPN uses the acquisition method to account for business combinations. The consideration paid is measured at the fair value of the assets transferred, equity instruments issued and liabilities incurred or assumed at the date of exchange.

Identifiable assets acquired and liabilities and contingent liabilities assumed are measured at their fair values at the acquisition date. When a business combination is achieved in stages, any previously held equity interest is remeasured at its acquisition date fair value and any resulting gain or loss is recognized in the P&L.

Contingent considerations are recognized at fair value at acquisition date and subsequent changes to the fair value are recognized in the P&L. Contingent considerations classified as equity are not remeasured and subsequent settlement is counted for within equity.

For each business combination, KPN elects to recognize any non-controlling interest in the acquiree either at fair value or at the proportionate share in the acquiree's net assets.

Acquisition-related costs are expensed as incurred.

The excess of the consideration paid, non-controlling interests recognized and the acquisition date fair value of any previous equity interests in the acquiree over the fair value of KPN's share of the net assets acquired is recorded as goodwill. If negative goodwill occurs (bargain purchase), the difference is recognized directly in the P&L.

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[22] Commitments, contingencies and legal proceedings

Commitments

€ million	Less than 1 year	1-5 years	More than 5 years	Total 31 December 2021	Total 31 December 2020
Capital and purchase commitments	948	326	17	1,291	1,183
Guarantees and other	-	3	128	131	131
Total commitments	**948**	**329**	**145**	**1,422**	**1,314**

The capital and purchase commitments mainly relate to minimum contractual obligations with regard to network operations, mobile handsets and telco services, and lease contracts that have not yet commenced.

Guarantees consist of financial obligations of group companies under certain contracts guaranteed by KPN. A total amount of EUR 131m relates to parent guarantees (2020: EUR 131m).

Contingent liabilities

KPN is involved in a number of legal and tax proceedings that have arisen in the ordinary course of its business and in discontinued operations, including commercial, regulatory or other proceedings. KPN periodically carefully assesses the likelihood that legal and tax proceedings may lead to a cash outflow and recognizes provisions in such matters if and when the chance of a cash outflow is estimated as probable and a reliable estimate of the cash outflow can be made. When these criteria are not met, such matters are classified as contingent liabilities, unless the cash outflow is considered remote.

However, the outcome of such proceedings can be difficult to predict with certainty and KPN can offer no assurances in this regard. In some cases, the impact of a legal proceeding may be more strategic than financial and such impact cannot properly be quantified. Below is a description of legal and tax related contingent liabilities that could have a material impact for KPN.

Tax

For information on the German Tax Audit, see chapter Tax and regulations, as well as Note 8.

Idle cables

See Note 18 for a contingent liability related to idle cables and the accounting policy of provisions.

Glaspoort

In May 2021, ACM approved the establishment of Glaspoort, our joint venture with APG, under the Dutch merger control regulation. T-Mobile has appealed this decision. Should the appeal be successful, than the result could be that the joint venture cannot be assessed under merger control regulation or can only be approved after carrying out a new assessment of the effects on competition including any potential remedy. Depending on the outcome, a different legal treatment of the joint venture cannot be ruled out. See Note 12 for more information on Glaspoort.

Indemnification

In KPN's Articles of Association and in a further decision by the Board of Management, which was approved by the Supervisory Board, KPN has indemnified the members and former members of KPN's Board of Management and Supervisory Board, as well as a number of KPN's officers and directors and former officers and directors, against liabilities, claims, judgments, fines and penalties incurred by such officer or director as a result of any threatened, pending or completed action, investigation or proceeding (whether civil, criminal or administrative) brought by a third party in relation to acts or omissions in or related to their capacity as officer or director.

The indemnification does not apply to claims and expenses reimbursed by insurers nor to an officer or a director adjudged to be liable for willful misconduct ('opzet') or intentional recklessness ('bewuste roekeloosheid').

[23] Related-party transactions

KPN considers none of the related-party transactions to be material on an individual basis. Transactions between group companies are not included in the description below as these are eliminated in the Consolidated Financial Statements.

Transactions with shareholders

On 8 February 2022, América Móvil, S.A.B. de C.V. (AMX) published in its fourth quarter 2021 report that it owned 21.3% of KPN's ordinary share capital as at 31 December 2021. The total value of sales and purchase transactions by the continuing operations of KPN in 2021 and 2020 with AMX, its subsidiaries and associated companies amounted to less than EUR 1m and total trade

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receivables and payables as at 31 December 2021 also amounted to less than EUR 1m.

Other shareholdings equaling or exceeding 3% of the issued capital:

- On 31 December 2021, BlackRock, Inc. notified the AFM that it held 4.16% of the shares and 5.05% of the voting rights related to KPN's ordinary share capital.
- On 22 April 2021, The Income Fund of America notified the AFM that it held 5.04% of the shares related to KPN's ordinary share capital.
- On 12 January 2021, Capital Research and Management Company notified the AFM that it held 14.99% of the voting rights related to KPN's ordinary share capital.
- On 26 February 2020, Amundi Asset Management notified the AFM that it held 3.00% of the shares and voting rights related to KPN's ordinary share capital.

To KPN's knowledge, no other shareholder owned 3% or more of KPN's issued share capital as at 31 December 2021. KPN did not enter into agreements with AMX or other shareholders that could have a material impact on KPN's Financial Statements.

Transactions with associated companies and joint ventures

On 9 June 2021, KPN sold 50% of the shares of its subsidiary Glaspoort B.V. and entered into a joint venture agreement with APG (see Note 12). As of 9 June 2021, KPN's remaining 50% interest in Glaspoort is classified as a joint venture and accounted for using the equity method. KPN is the anchor tenant on the network of Glaspoort and also supplies services to Glaspoort. In the period between completion of the sale and 31 December 2021, the value of the services delivered to and acquired from Glaspoort amounted to EUR 5m and EUR 3m respectively. Furthermore, in December 2021, KPN, Drepana and Glaspoort signed an agreement to extend the scope of the fiber roll-out of Glaspoort. KPN will receive EUR 170m (pre-tax) from Glaspoort for the sale of the additional scope projects. Of this amount, EUR 60m has been received in cash upon closing of the transaction and the remaining amount will be received in annual installments based on the fiber roll-out. Trade and other receivables with respect to Glaspoort as at 31 December 2021 amounted to EUR 36m, trade payables less than EUR 1m, non-current contract assets EUR 20m and non-current contract liabilities EUR 49m.

The total value of sales transactions and purchase transactions by KPN with other associated and non-consolidated companies in 2021 amounted to approximately EUR 23m and EUR 1m respectively (2020: EUR 20m and EUR 1m respectively). The total trade receivables and payables as at 31 December 2021 amounted to less than EUR 1m (31 December 2020: less than EUR 1m).

Transactions with directors and related parties

For details of the relationship between directors and the company, see the Remuneration Report section of this Integrated Annual Report. Directors in this respect are defined as key management and relate to those having authority and responsibility for planning, directing, and controlling the activities of an entity, either directly or indirectly. At KPN, key management consists of the members of the Board of Management and the Supervisory Board.

The members of KPN's Board of Management and Supervisory Board or close members of their families are also members of supervisory boards or management boards of other companies or are shareholders of other companies, without having (joint) control, with which KPN maintains relations in the ordinary course of business. All transactions with these companies are performed on an arm's length basis.

[24] Legal structure

Name of significant subsidiaries and other principal interests	Country of incorporation
KPN B.V.	
• Broadband Hosting B.V.	The Netherlands
• CAM IT Solutions B.V.	The Netherlands
• E-Zorg B.V.	The Netherlands
• Glaspoort B.V.	The Netherlands
• GroupIT B.V.	The Netherlands
• InSpark Holding B.V.	The Netherlands
• KPN Finance B.V.	The Netherlands
• Reggefiber Group B.V.	The Netherlands
• Solcon Internetdiensten B.V.	The Netherlands
• Telfort Zakelijk B.V.	The Netherlands
• XS4ALL Internet B.V.	The Netherlands
• Yes Telecom Netherlands B.V.	The Netherlands
KPN Mobile N.V.	The Netherlands
• KPN Mobile International B.V.	The Netherlands
KPN Ventures B.V.	The Netherlands
Getronics B.V.	The Netherlands
• Getronics Finance Holdings B.V.	The Netherlands
• Getronics Pensions UK Ltd.	UK
• Getronics US Operations, Inc.	US
KPN Insurance Company DAC	Ireland

The percentage ownership/voting interest of these entities is 100%, except the joint venture Glaspoort B.V. in which KPN has an interest of 50%.

[25] Proposed appropriation of result

On outstanding Class B preferred shares, a dividend is paid out equal to the average of the 12-month Euribor increased by 1%. If the 12-month Euribor is no longer determined, the dividend on preference shares will be calculated based on the yield on state loans. Subsequently, subject to the approval of the Supervisory Board, the Board of Management will determine what proportion of net income remaining after payment of the dividend on any Class B preferred shares will be appropriated to the reserves. The part of the profit remaining after the appropriation to the reserves shall be at the disposal of the AGM. No Class B preferred shares were outstanding on 31 December 2021.

The profit of the financial year 2021 that is attributable to equity holders of the company amounts to EUR 1,288m. In August 2021, a regular interim dividend of EUR 4.5ct per ordinary share was paid (total amount of EUR 189m). On 18 February 2022, the Board of Management, with the approval of the Supervisory Board, appropriated EUR 723m of the profit 2021 to the other reserves. Taking into account the interim dividend that was paid in August 2021, the remaining part of the profit is available for payment of a final dividend in respect of 2021. The Board of Management, with the approval of the Supervisory Board, will propose to the AGM to pay a final regular dividend of EUR 9.1ct per ordinary share in respect of 2021 (in total EUR 375m based on the number of outstanding shares at 31 December 2021 less Treasury shares held by KPN).

[26] Subsequent event

KPN has evaluated events up to publication date of these Financial Statements of this Integrated Annual Report and determined that no subsequent event activity required disclosure.

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Corporate Statement of Profit or Loss

For the year ended 31 December

€ million	Notes	2021	2020
Total revenues and other income		**-**	**-**
Other operating expenses		-14	1
Total operating expenses		**-14**	**1**
Operating profit		**-14**	**1**
Finance income		-3	-3
Finance costs		-195	-211
Other financial results		-7	-24
Intercompany interest (net)		-132	-639
Financial income and expenses	**[A]**	**-336**	**-878**
Income from subsidiaries		1,531	1,152
Profit before income tax		**1,181**	**276**
Income taxes	[B]	107	285
Profit for the year		**1,288**	**560**

Corporate Financial Statements

Corporate Statement of Financial Position

Before appropriation of current year result

Assets

€ million	Notes	31 December 2021	31 December 2020
Non-current assets			
Financial fixed assets			
Investments in subsidiaries		9,883	16,721
Loan to subsidiary		60	60
Derivatives		212	191
Deferred taxes		566	640
Other fixed financial assets		59	117
Total non-current assets	**[B]**	**10,780**	**17,729**
Current assets			
Accounts receivable from subsidiaries	[F]	1,805	1,601
Other receivables and accrued income		20	19
Derivatives		-	11
Other current financial assets		300	270
Cash and cash equivalents		708	472
Total current assets		**2,834**	**2,373**
Total assets		**13,613**	**20,102**

Corporate Financial Statements

Equity and liabilities

€ million	Notes	31 December 2021	31 December 2020
Equity			
Subscribed capital stock		168	168
Additional paid-in capital		8,445	8,445
Treasury shares reserve		-248	-65
Hedge reserve		-125	-156
Legal reserves	[C]	516	149
Retained earnings	[C]	-7,311	-6,977
Equity attributable to holders of perpetual capital securities		496	496
Profit (loss) current year		1,288	560
Total equity attributable to equity holders		**3,228**	**2,621**
Provisions			
Provisions for retirement benefit obligations		-	7
Other provisions		23	24
Total provisions	**[D]**	**24**	**31**
Non-current liabilities			
Loans from subsidiaries	[E]	50	8,135
Borrowings	[E]	5,648	5,457
Derivative financial instruments		64	192
Other long-term liabilities		424	368
Total non-current liabilities		**6,186**	**14,152**
Current liabilities			
Accounts payable to subsidiaries	[F]	3,300	2,424
Borrowings	[E]	676	679
Derivative financial instruments		-	4
Income tax payable		17	-
Other current liabilities	[G]	102	101
Accruals and deferred income		81	91
Total current liabilities		**4,176**	**3,299**
Total equity and liabilities		**13,613**	**20,102**

Corporate Financial Statements

Notes to the Corporate Financial Statements

The principles for the recognition and measurement of assets and liabilities and determination of the result (hereafter referred to as 'accounting policies') of the Corporate Financial Statements of Koninklijke KPN N.V. are the same as those applied to the Consolidated Financial Statements under IFRS (applying the option provided in Article 362 sub 8, Part 9, Book 2 of the Dutch Civil Code). The Consolidated Financial Statements have been prepared in accordance with the IFRS (see Notes to the Consolidated Financial Statements).

Investments in consolidated subsidiaries are measured at net asset value. Net asset value is based on the measurement of assets (including goodwill), provisions and liabilities and the determination of profit based on the principles applied in the Consolidated Financial Statements.

Expected credit losses, if any, with respect to loans granted to and receivables from consolidated subsidiaries are not recognized in these Corporate Financial Statements, which is in line with RJ 100.107a.

[A] Financial income and expenses

€ million	2021	2020
Finance income	**-3**	**-3**
Interest on borrowings	-192	-208
Other	-3	-3
Finance costs	**-195**	**-211**
Amortizable part of hedge reserve	-15	-15
Amortization discontinued fair value hedges	21	29
Derivative financial instruments not qualified for hedge accounting	-17	-27
Other	3	-12
Other financial results	**-7**	**-25**
Intercompany interest (net)	**-132**	**-639**
Total	**-336**	**-878**

Finance income included negative interest on cash balances.

In 2021, interest on borrowings decreased by EUR 16m, which was mainly related to debt redemptions and lower interest rates on borrowings.

Intercompany interest (net) mainly includes interest of 8.5% on an intercompany loan provided by KPN Mobile N.V. In the course of 2021 this loan was waived (see Note E).

Corporate Financial Statements

[B] Non-current assets

€ million	Investments in subsidiaries companies	Loan to subsidiary[1]	Derivatives	Deferred taxes	Other financial fixed assets	Total
Balance at 1 January 2020	**15,571**	**80**	**236**	**698**	**97**	**16,682**
Exchange rate differences	4	-	-	-	-	4
Income from group companies after taxes	1,152	-	-	-	-	1,152
Capital contributions	1	-	-	-	-	1
Repayments	-	-20	-	-	-	-20
Fair value adjustments	-	-	-45	-	-	-45
Other	-7	-	-	-58[2]	20	-45
Total changes	**1,150**	**-20**	**-45**	**-58**	**20**	**1,047**
Balance at 31 December 2020	**16,721**	**60**	**191**	**640**	**117**	**17,729**
Exchange rate differences	-11	-	-	-	-	-11
Income from group companies after taxes	1,531	-	-	-	-	1,531
Decrease due to waiver[3]	-8,414					-8,414
Capital contributions	2	-	-	-	-	2
Repayments	-	-	-	-	-	-
Fair value adjustments	-	-	21	-	-	21
Other	55	-	-	-75[2]	-58	-78
Total changes	**-6,838**	**-**	**21**	**-75**	**-58**	**-6,949**
Balance at 31 December 2021	**9,883**	**60**	**212**	**566**	**59**	**10,780**

1 Loan to KPN Finance B.V., which is repayable on 28 September 2023 at the latest and is subordinated to all other loans, obligations and creditors. Annual interest is 4.6%.

2 Decrease mainly relates to the use of tax loss carry forward.

3 Decrease relates to the waiver of the loan payable to KPN Mobile N.V. (see Note E).

Taxation

The Corporate Financial Statements on behalf of Koninklijke KPN N.V. are prepared as if the company is independently subject to corporate income tax, so excluding the offset of profits within the tax group of which the entity is the parent.

As a result, the company reports a tax benefit for the tax-deductible interest and no tax on the result of consolidated entities as the tax of these entities is booked at the level of the entity itself.

The company's deferred tax asset represents the future tax relief on taxable profits (within the tax group) due to available losses and is higher than reported on consolidated level, since the asset can be offset against deferred tax liabilities reported in other entities that are part of the same tax group.

[C] Equity attributable to equity holders

For a breakdown of equity attributable to equity holders, see the Consolidated Statement of Changes in Equity and related notes. On 8 November 2019, KPN issued a EUR 500m hybrid bond with a 2.00% coupon and a perpetual maturity. This bond is classified as equity and valued at net proceeds (see Note 13.2).

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Legal reserves (net of tax)

€ million	Revaluation reserves[1]	Cumulative translation adjustments	Capitalized software development costs	Fair value reserve equity investments	Other	Total
Balance at 1 January 2020	**16**	**19**	**107**	**9**	**15**	**166**
Addition/release (-) retained earnings	-2	-	-17	-1	-	-20
Exchange rate differences	-	3	-	-	-	3
Balance at 31 December 2020	**14**	**22**	**90**	**8**	**15**	**149**
Addition/release (-) retained earnings	350	-	19	5	-	374
Exchange rate differences	-	-7	-	-	-	-7
Balance at 31 December 2021	**364**	**15**	**109**	**13**	**15**	**516**

1 Relates to the equity investment in Glaspoort (EUR 352m – net of tax, refer to Note 21 of the Consolidated Financial Statements) and property, plant and equipment (EUR 12m) at 31 December 2021.

Pursuant to Dutch law, there are limitations on the distribution of equity attributable to equity holders. Such limitations relate to the subscribed capital stock as well as to legal reserves required by Dutch law as presented above. Dutch law also requires that in determining the amount for distribution, the company's ability to continue to pay its debt must be taken into account. The total distributable reserves, which include the perpetual capital securities, amounted to EUR 2,545m as at 31 December 2021 (2020: EUR 2,304m).

Retained earnings

Movements in retained earnings

€ million	2021	2020
Balance at 1 January	**-6,977**	**-7,076**
Profit of previous year	560	626
Coupon perpetual hybrid bond	-10	-3
Dividend ordinary shares	-554	-529
Actuarial gain/loss pensions and other post-employment plans (net of tax)	52	-11
Fair value adjustment equity investments	5	6
Release/addition legal reserves (except cumulative translation adjustments)	-374	20
Share-based compensation	-14	-11
Balance at 31 December	**-7,311**	**-6,977**

Retained earnings reconciled with the Consolidated Statement of Financial Position

€ million	2021	2020
Retained earnings as per Consolidated Statement of Financial Position	**-5,523**	**-6,289**
Revaluation reserve	-364	-14
Capitalized software development costs	-109	-90
Fair value reserve equity investments	-13	-8
Other non-distributable reserves	-15	-15
Profit for the year	-1,288	-560
Retained earnings as per Corporate Statement of Financial Position	**-7,311**	**-6,977**

[D] Provisions

Movements in provisions

€ million	Retirement benefit obligations	Other provisions	Total
Balance at 1 January 2020	**24**	**24**	**48**
Additions/releases to income	1	2	3
Additions/releases in OCI	4	-	4
Usage	-21	-3	-24
Balance at 31 December 2020	**7**	**24**	**31**
Additions/releases to income	-	3	3
Usage	-7	-3	-10
Balance at 31 December 2021	**-**	**23**	**23**

Corporate Financial Statements

The provisions for retirement benefit obligations relate to early retirement plans (see Note 17 to the Consolidated Financial Statements).

[E] Loans from subsidiaries and borrowings

Loans from subsidiaries (non-current) included a loan payable to KPN Mobile N.V., which bore interest of 8.5% and had to be repaid in full, including accrued interest, in 2034. In 2021, an amount of EUR 8,414m was waived after which there is no further amount outstanding. The balance as at 31 December 2021 of EUR 50m consists of a loan from KPN Insurance Company DAC to be repaid in 2025 which bears 0% interest.

Non-current borrowings include bonds outstanding for EUR 5,120m (2020: EUR 4,970m) and hybrid bonds outstanding for EUR 529m (2020: EUR 487m), see also Note 13.2 to the Consolidated Financial Statements. Current loans include bonds outstanding for EUR 616m.

KPN set up a Euro commercial paper program under which KPN can issue short-term debt instruments for up to EUR 1 billion. As at 31 December 2021, current borrowings include the outstanding balance of commercial paper of EUR 60m (2020: 60m).

[F] Accounts receivable from and accounts payable to subsidiaries

Koninklijke KPN N.V. operates a cash pool for the KPN Group, which leads to accounts receivable from and accounts payable to subsidiaries. In 2021, accounts receivable from subsidiaries increased, mainly due to Capex and other investments made by subsidiaries. Accounts payable to subsidiaries also increased, mainly due to cash flows from operating activities generated by subsidiaries. Accounts payable to subsidiaries (net) at 31 December 2021 is offset by a current income tax position of the subsidiaries which are included in the fiscal unity of Koninklijke KPN NV of EUR 456m.

Most of these current accounts have an indefinite duration. The interest is determined annually and based on the 12-month Euribor increased by 0.15% and a risk premium attached by the market to the specific KPN credit risk.

[G] Other current liabilities

This balance sheet item consists of VAT payable of the KPN fiscal unity.

[H] Commitments and contingencies

Commitments by virtue of guarantees amounted to EUR 131m (2020: EUR 131m).

KPN has issued several declarations of joint and several liabilities for various group companies in compliance with Article 403, Book 2 of the Dutch Civil Code. These declarations of joint and several liabilities for group companies are included in a complete list of subsidiaries and participating interests, which is available at the offices of the Chamber of Commerce in Rotterdam.

Directors' remuneration

See Note 5 to the Consolidated Financial Statements on employee benefits.

Rotterdam, 18 February 2022

Board of Management	Supervisory Board
Joost Farwerck	Duco Sickinghe
Chris Figee	Gerard van de Aast
Jean-Pascal van Overbeke	Catherine Guillouard
Marieke Snoep	Peter Hartman
Babak Fouladi	Edzard Overbeek
Hilde Garssen	Alejandro Plater
	Jolande Sap
	Claudia Zuiderwijk

Other information

Combined Independent Auditor's Report

To: Shareholders and members of the Supervisory Board of Koninklijke KPN N.V. (KPN),

Combined independent auditor's report on the 2021 financial statements and sustainability information included in the integrated annual report

Our conclusions

We have audited the financial statements 2021 of Koninklijke KPN N.V. based in Rotterdam (hereinafter: KPN or the company). The financial statements comprise the consolidated and the corporate financial statements.

In our opinion:

- the accompanying consolidated financial statements give a true and fair view of the financial position of KPN as at 31 December 2021 and of its result and its cash flows for 2021 in accordance with International Financial Reporting Standards as adopted by the European Union (EU-IFRS) and with Part 9 of Book 2 of the Dutch Civil Code;
- the accompanying corporate financial statements give a true and fair view of the financial position of KPN as at 31 December 2021 and of its result for 2021 in accordance with Part 9 of Book 2 of the Dutch Civil Code.

We have reviewed the sustainability information for the year 2021 of KPN. A review is aimed at obtaining a limited level of assurance. Furthermore, we have audited the CO_2e emission data 2021 (Scope 1 and 2) of KPN's own operations in the Netherlands and the underlying energy data. The scope of our engagements is described in the section The scope of our engagements.

Based on our review nothing has come to our attention that causes us to believe that the sustainability information in scope does not present, in all material respects, a reliable and adequate view of KPN's policy and business operations with regard to sustainability and the thereto related events and achievements for 2021, in accordance with the Sustainability Reporting Standards of the Global Reporting Initiative (GRI Standards) (comprehensive option), the Regulation (EU) 2020/852 as supplemented with Commission Delegated Regulation (EU) 2021/2139 and Commission Delegated Regulation (EU) 2021/2178 (hereinafter: EU Taxonomy), and the supplemental KPN reporting criteria as disclosed in Appendix 3: Transparency, materiality and stakeholder engagement (hereinafter: Transparency), of the Integrated Annual Report.

In our opinion, the CO_2e emission data 2021 (Scope 1 and 2) of own operations in the Netherlands and the underlying energy data as presented on page 48 of the Integrated Annual Report are prepared, in all material respects, in accordance with the GRI Standards (comprehensive option) and the applied supplemental KPN reporting criteria as disclosed in Appendix 3: Transparency, of the Integrated Annual Report.

Based on the procedures performed required by Part 9 of Book 2 of the Dutch Civil Code, section 2:135b sub-section 7 of the Dutch Civil Code and the Dutch Standard 720, we conclude that the other information included in the Integrated Annual Report, including the Reports by the Board of Management and Supervisory Board:

- Is consistent with the financial statements and does not contain material misstatements;
- Contains the information as required by Part 9 of Book 2 for the management board report and the other information as required by Part 9 of Book 2; and as required sections 2:135b and 2:145 sub-section 2 of the Dutch Civil Code for the remuneration report.

Basis for our conclusions

We conducted our assurance engagements in accordance with Dutch law, including the Dutch Standards on Auditing and the Dutch Standard 3810N, "Assurance engagements relating to sustainability reports", which is a specific Dutch Standard that is based on the International Standard on Assurance Engagements (ISAE) 3000 (Revised) "Assurance Engagements Other Than Audits or Reviews of Historical Financial Information". Our responsibilities under those standards are further described in the section Our responsibilities in this report.

We believe the assurance evidence we have obtained is sufficient and appropriate to provide a basis for our conclusions.

Our independence

We are independent of KPN in accordance with the EU Regulation on specific requirements regarding statutory audit of public-interest entities, the Wet toezicht accountantsorganisaties (Wta, Audit firms supervision act), the Verordening inzake de onafhankelijkheid van accountants bij assurance-opdrachten (ViO, Code of Ethics for Professional Accountants, a regulation with respect to independence) and other relevant independence regulations in the Netherlands. This means that we do not perform any activities that could result in a conflict of interest with our independent assurance engagements. Furthermore, we have complied with the Verordening gedrags- en beroepsregels accountants (VGBA, Dutch Code of Ethics).

Other information

Reporting criteria

The information in the scope of our engagements needs to be read and understood together with the reporting criteria. KPN is solely responsible for selecting and applying these reporting criteria, taking into account applicable law and regulations related to reporting. The reporting criteria used for the preparation of the Integrated Annual Report are described below.

The absence of an established practice on which to draw, to evaluate and measure sustainability information allows for different, but acceptable, measurement techniques and can affect comparability between entities and over time.

Consolidated Financial Statements:	International Financial Reporting Standards, as adopted by the European Union (EU-IFRS) and Part 9 of Book 2 of the Dutch Civil Code.
Corporate Financial Statements, Report by the Board of Management and the other information as required by Part 9 of Book 2 of the Dutch Civil Code:	Part 9 of Book 2 of the Dutch Civil Code.
Remuneration Report:	Sections 2:135b and 2:145 sub-section 2 of the Dutch Civil Code.
Sustainability information including the CO_2e emission data 2021 (Scope 1 and 2) and the underlying energy data:	GRI Standards (comprehensive option), EU Taxonomy and the applied supplemental reporting criteria as disclosed in Appendix 3: Transparency of the Integrated Annual Report. These criteria include the Greenhouse Gas Protocol (WRI/WBCSD).

The scope of our engagements

Our engagements scope

The Integrated Annual Report 2021 (hereafter: the Report) of KPN consists of the financial statements and other information, including Reports by the Board of Management and Supervisory Board and the Remuneration Report, that provide altogether an overview of the policies, activities, events and performances related to the financial position, results, cash flow, remuneration as well as the sustainable development of KPN and other non-financial information. The following information in the Report has been in scope for our assurance engagements:

- The consolidated financial statements, comprising:
  - The Consolidated Statement of Financial Position as at 31 December 2021;
  - The Consolidated Statements of Profit or Loss, Other Comprehensive Income, Changes in Equity and Cash Flows for 2021;
  - The Notes comprising a summary of the significant accounting policies and other explanatory information.
- The corporate financial statements, comprising:
  - The Corporate Statement of Financial Position as at 31 December 2021;
  - The Corporate Statement of Profit or Loss for 2021;
  - The Notes comprising a summary of the accounting policies and other explanatory information.
- The sustainability information in scope comprising:
  - Reasonable assurance - The CO_2e emission data 2021 (Scope 1 and 2) of own operations in the Netherlands and the underlying energy data as presented on page 48 of the Report;
  - Limited assurance - The sustainability information in the following chapters and appendices:
    - Chapters: 'Report by the Board of Management' and 'Tax and regulation';
    - Appendices: Appendix 2, 3, 5, 6, 7, 8, 9 and 11.
- In addition to the financial statements and the sustainability information in scope and our combined independent auditor's report, the Report contains other information.

Limitations to the scope of our assurance engagements on the sustainability information

The sustainability information contains prospective information, such as ambitions, strategy, plans, targets, expectations and estimates. Inherent to prospective information, the actual future results are uncertain. We do not provide any assurance on the assumptions and achievability of prospective information in the sustainability information.

The references to external sources or websites in the sustainability information are not part of the sustainability information as reviewed by us. We therefore do not provide assurance on this information.

Our conclusions are not modified in respect of these matters.

Information in support of our opinion on the financial statements

We designed our audit procedures in the context of our audit of the financial statements as a whole and in forming our opinion thereon. The following information in support of our opinion and any findings were addressed in this context, and we do not provide a separate opinion or conclusion on these matters.

Our understanding of the business

KPN is a telecommunications and IT provider in the Netherlands, offering fixed and mobile telephony, fixed and mobile broadband internet and TV to retail and business customers. KPN offers in the Netherlands infrastructure and network-related IT solutions to business customers. KPN also provides wholesale network services to third parties. KPN is head of a group of entities, both

Other information

in the Netherlands and abroad. The Dutch entities and segments thereby form the majority of the business. We have tailored our group audit approach accordingly. We paid specific attention in our audit to a number of areas driven by the operations of the group and our risk assessment.

We start by determining materiality and identifying and assessing the risks of material misstatement of the financial statements, whether due to fraud or error in order to design audit procedures responsive to those risks and to obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.

Materiality

Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these financial statements. The materiality affects the nature, timing and extent of our audit procedures and the evaluation of the effect of identified misstatements on our opinion.

Materiality	EUR 45,000,000
Benchmark used	2.0% of adjusted earnings before interest, tax, depreciation and amortization after lease (EBITDA AL).
Additional explanation	The users of the financial statements of a for-profit entity typically focus on operating performance, particularly profit before tax. Over the past years KPN's profit before tax heavily fluctuated, resulting from the impact of the discontinuance of operations and other non-recurring transactions. Furthermore, we note that in KPN's external communications, adjusted earnings before interest, tax, depreciation and amortization after lease (EBITDA AL) is commonly used to report on financial performance. Considering these aspects, we have concluded that EBITDA AL is the most appropriate and stable benchmark for KPN to base our materiality upon. The materiality is thereby set at EUR 45,000,000, using a percentage of 2.0% (and round down the amount), which is at the lower end of a generally accepted range. Last year we used the same percentage and amount.

We have also taken into account misstatements and/or possible misstatements that in our opinion are material for the users of the financial statements for qualitative reasons.

We agreed with the Supervisory Board that misstatements in the financial statements in excess of EUR 2.25 million, would be reported to them, as well as smaller misstatements that in our view must be reported on qualitative grounds.

Our scope for the group audit of the financial statements

KPN is head of a group of entities, both in the Netherlands and abroad. The financial information of all these entities has been included in the consolidated financial statements.

Because we are ultimately responsible for the opinion, we are also responsible for directing, supervising and performing the group audit. In this respect we have determined the nature and extent of the audit procedures to be carried out for group entities. Decisive were the size and/or the risk profile of the group entities or operations. On this basis, we selected group entities for which an audit or review had to be carried out on the complete set of financial information or specific items.

Our group audit mainly focused on the more significant segments, including 'Consumer', 'Business', 'Wholesale' and 'Network, Operations and IT'. We performed full scope audit procedures on the financial information of these segments.

At other group entities we performed review procedures or specific audit procedures. We audited the group consolidation, financial disclosures and a number of complex items ourselves at the company's head office. These included revenue assurance, purchase price allocation, taxation including tax related contingent liabilities, fixed assets and goodwill impairment, pensions, derivative financial instruments, hedge accounting, joint venture accounting and share-based payments. We involved several EY specialists to assist the audit team, including specialists from our tax, valuations, actuarial and treasury departments.

By performing audit procedures at segment and at corporate level as mentioned above, we have been able to obtain sufficient and appropriate audit evidence about the group's financial information to provide an opinion about the consolidated financial statements.

Our focus on climate risks and the energy transition

Climate objectives will be high on the public agenda in the next decades. Issues such as CO_2 reduction impact financial reporting, as these issues entail risks for the business operation, the valuation of assets ('stranded assets') and provisions or the sustainability of the business model and access to financial markets of companies with a larger CO_2 footprint. The disclosure requirements for non-financial information are emerging, including the requirements for assurance on consolidated sustainability reporting for financial years beginning on or after 1 January 2023 under the proposed European Corporate Sustainability Reporting Directive (CSRD).

Other information

As part of our audit of the financial statements, we evaluated the extent to which climate-related risks and the possible effects of the energy transition are taken into account in estimates and significant assumptions as well as in the design of relevant internal control measures by KPN. Furthermore, we read the management board report and considered whether there is any material inconsistency between the non-financial information in 'Our value for stakeholders', 'Our performance' and Appendix 3 and the financial statements.

Our audit procedures to address the assessed climate-related risks and the possible effects of the energy transition did not result in a key audit matter for the financial statements.

Our focus on fraud and non-compliance with laws and regulations

Our responsibility

Although we are not responsible for preventing fraud or non-compliance and we cannot be expected to detect non-compliance with all laws and regulations, it is our responsibility to obtain reasonable assurance that the financial statements, taken as a whole, are free from material misstatement, whether caused by fraud or error.

Our audit response related to fraud risks

We identify and assess the risks of material misstatements of the financial statements due to fraud. During our audit we obtained an understanding of the company and its environment and the components of the system of internal control, including the risk assessment process and the Board of Management's (hereinafter: management) process for responding to the risks of fraud and monitoring the system of internal control and how the supervisory board exercises oversight, as well as the outcomes.
We refer to section Compliance and Risk of the management board report for management's fraud risk assessment and section Audit Committee of the supervisory board report in which the supervisory board reflects on the fraud risk assessment.

We evaluated the design and relevant aspects of the system of internal control and in particular the fraud risk assessment, as well as the code of conduct, whistle blower procedures and incident registration. We evaluated the design and the implementation and, where considered appropriate, tested the operating effectiveness, of internal controls designed to mitigate fraud risks.

As part of our process of identifying fraud risks, we evaluated fraud risk factors with respect to financial reporting fraud, misappropriation of assets and bribery and corruption in close co-operation with our forensic specialists. We evaluated whether these factors indicate that a risk of material misstatement due to fraud is present.

We incorporated elements of unpredictability in our assurance engagements. We considered the outcome of our other audit procedures and evaluated whether any findings were indicative of fraud or non-compliance.

As in all our audits, we addressed the risks related to management override of controls. However, we concluded that the risk related to management override of controls did not require significant auditor's attention in addition to the following fraud risk identified during our audit.

Risks related to revenue recognition including management override of controls

Fraud risk	When identifying and assessing fraud risks we presume that there are risks of fraud in revenue recognition, including risk of management override of controls. In our audit approach we considered that this fraud risk would primarily impact the Corporate Clients revenue cycle within the business segment. This revenue cycle consists of large KPN clients that acquire several types of services. These clients generally have separate contracts per type of services, however they receive one invoice. As all types of services are summarized on one monthly invoice, there is a higher risk of errors in preparing these invoices and deriving related contract liability positions. These revenues are disclosed in note 4.1 to the financial statements.
Our audit approach	We performed among others the following audit procedures, directed specifically to this fraud risk: • We updated our understanding of the revenue recognition process, including the company's accounting policies and practices for revenue recognition in accordance with IFRS 15, Revenue from Contracts with Customers, performed walkthroughs of the revenue classes of transactions and evaluated the design of controls in this area. • We tested the effectiveness of the control framework (e.g. quality assurance office) as implemented by KPN by reviewing the procedures performed by KPN Risk Management and KPN Audit and we conducted re-performance and independent testing as well. • As part of our additional audit procedures we performed additional detailed substantive procedures to obtain sufficient comfort and audit evidence regarding this revenue cycle.

We considered available information and made enquiries of relevant executives, directors (including KPN Audit, KPN Risk Management, legal, compliance, human resources and segment management) and the supervisory board.

The fraud risk we identified, enquiries and other available information did not lead to specific indications for fraud or suspected fraud potentially materially impacting the view of the financial statements.

Other information

Our audit response related to risks of non-compliance with laws and regulations

We assessed factors related to the risks of non-compliance with laws and regulations that could reasonably be expected to have a material effect on the financial statements from our general industry experience, through discussions with management, reading minutes, inspection of internal audit and compliance reports, and performing substantive tests of details of classes of transactions, account balances or disclosures.

We also inspected lawyers' letters and correspondence with regulatory authorities and remained alert to any indication of (suspected) non-compliance throughout the audit. Finally, we obtained written representations that all known instances of non-compliance with laws and regulations have been disclosed to us.

Our audit response related to going concern

Management made a specific assessment of the company's ability to continue as a going concern and to continue its operations for at least the next 12 months. We discussed and evaluated the assessment with management exercising professional judgment and maintaining professional skepticism. We considered whether management's going concern assessment, based on our knowledge and understanding obtained through our audit of the financial statements or otherwise, contains all events or conditions that may cast significant doubt on the company's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the financial statements or, if such disclosures are inadequate, to modify our opinion.

Based on our procedures performed, we did not identify serious doubts on KPN's ability to continue as a going concern for the next 12 months.

Our conclusions are based on the audit evidence obtained up to the date of our combined independent auditor's report. However, future events or conditions may cause a company to cease to continue as a going concern.

Key audit matters

Key audit matters are those matters that, in our professional judgment, were of most significance in our audit of the financial statements. We have communicated the key audit matters to the supervisory board. The key audit matters are not a comprehensive reflection of all matters discussed.

Following the transactions with Drepana Investments Holding B.V., an investment entity managed by APG, resulting in a joint venture called Glaspoort B.V., a new key audit matter has been defined.

General observation

For the audit of the financial statements, we make use of KPN's internal control framework and its governance. The framework is maintained by the business and continuously tested by KPN Risk Management and KPN Audit. The Management Board and Audit Committee are being informed of the outcome of the tests performed on a quarterly basis. For purposes of our audit, we assess the adequacy of the framework and we test the work of KPN Risk Management and KPN Audit. We believe that KPN's internal control framework meets the required criteria and it allows us to perform a system-based audit in an effective manner.

The key audit matters addressed below are all covered by KPN's internal control framework and have been audited by us with satisfactory results. We highlight the most important elements we focused on in 2021.

Key audit matter	Our audit approach	Key observations
Valuation of (in)tangible assets, including goodwill		
Under IFRS, it is required to annually test the amount of goodwill and other intangible assets with an indefinite life for impairment. KPN's disclosures about goodwill and other intangible assets are included in Note 11. No impairments of goodwill and other intangible assets with indefinite life were recorded during 2021. On assets with finite lives an impairment test has to be performed if indications of impairment exist. Some triggering events were identified, for example in the area of hardware and software that required impairment testing and for which minor impairments were recorded, as included in Note 10 and 11.	We compared forecasted revenue and profit margins for all cash generating units with the approved KPN strategic plan. We also verified the assumptions to which the outcome of the impairment test is most sensitive and reviewed the company's statement that the headroom of the CGU's is more than sufficient and therefore no sensitivity analysis needs to be disclosed. Our audit procedures included, among others, using EY valuation specialists to assist us in verifying the assumptions and methodologies used by KPN and evaluating the historical accuracy of management's estimates that drive the assessment, such as strategic plans and expected growth rates.	We concur with management that there is no need for impairments of goodwill and other intangible assets with indefinite life and agree with the disclosures. We concur with management on the impairments recorded.

Other information

Key audit matter	Our audit approach	Key observations
The valuation of (in)tangible assets, including goodwill is considered a key audit matter as the impairment tests were important for our audit as the related asset amounts are significant and the assessment process itself is complex and requires judgment. The impairment test includes assumptions about future market or economic conditions.		
Recognition of deferred tax assets		
At 31 December 2021 the deferred tax assets (DTA) of EUR 506 million are recognized and related disclosures are included in the notes to the consolidated statement of profit or loss in Note 8. KPN assessed whether the DTA can be recovered and sufficient sources of income are available. KPN provided a recoverability analysis based on the current loss compensation rules. The outcome of the analyses is that the DTA can be recognized for the full amount as disclosed in Note 8. The recognition of deferred tax assets is considered a key audit matter as the assessment process is complex and judgmental and is based on assumptions about expected future market or economic conditions.	Our audit procedures related to the deferred tax assets including, amongst others, using EY tax specialists to assist us in verifying and interpreting the agreements ('vaststellingsovereenkomsten') and other agreements reached with the Dutch Tax Authorities as well as evaluating the assumptions, such as expected future taxable income and methodologies used by the company. In addition, the EY tax specialists assessed whether DTAs are at risk due to exposures which could lead to adjustments of the Net Operating Losses. This entailed reviewing KPN's latest approved strategic plan. We discussed this plan with management and determined the reasonableness of the assumptions used regarding the recoverability of the deferred tax assets and assessed the plan's assumptions and sensitivities and evaluating the historical accuracy of management's estimates that drive the assessment.	We concur with the deferred tax assets recorded and the disclosures.
Reliability of IT systems, including security, cybercrime and data privacy		
At KPN, processes are highly automated and KPN continuously invests in simplification and improvement of IT systems, which has led to several changes in 2021 that have been discussed in 'Accelerate to Grow strategy starting to pay off'. Reliability and security of IT systems are thereby high on the agenda of KPN and for that purpose KPN's internal control framework includes several controls to ensure, inter alia, proper identity, access and change management of its IT systems. KPN also has a security team in place focusing on policies, security management and a team of ethical hackers. This team tests the security of KPN's IT environment and imitates behavior of hackers to stay continuously up to date with the latest developments and helps KPN in managing their own security risks, including cybercrime and data privacy as disclosed in 'Safeguarded privacy and security' in the Integrated Annual Report. The reliability of IT systems, including security, cybercrime and data privacy is considered a key audit matter as it is key for KPN's activities and financial reporting.	As part of our audit, we have reviewed the quality of KPN's IT systems and the controls embedded therein with a purpose to express an opinion on the financial statements. For this purpose, we performed our own procedures and reviewed and tested the work done by KPN Risk Management and KPN Audit. Since this is highly specialized work, our audit team includes IT specialists.	In a few instances, we identified situations where controls needed improvement. KPN has set-up remediation procedures that we have also reviewed and tested with satisfactory results.
Accounting treatment Joint Venture Glaspoort		
On 9 June 2021 the transaction with Drepana Investments Holding B.V., an investment entity managed by APG, was closed which related to the participation in a joint venture, Glaspoort B.V., to roll out a fiber network in specifically identified areas in the Netherlands. The transaction resulted in a book gain after tax of EUR 640 million. This is further explained in Note 21 to the Consolidated Financial Statements. The accounting treatment of the joint venture Glaspoort is considered a key audit matter as the accounting and its classification is complex as well as the impact on result in the financial statements.	Our audit included assessing the accounting of the transaction and its documentation and determining if the classification as joint venture is appropriate and in line with the applicable accounting standards.	We concur with the accounting treatment and the disclosure in the Consolidated Financial Statements.

Other information

Information in support of our conclusions on sustainability information

Materiality
The scope of our assurance procedures is influenced by the application of materiality. Our assurance engagements aim to provide assurance about whether the sustainability information in scope is free from material misstatement. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the (economic) decisions of users taken on the basis of the Report. The materiality affects the nature, timing and extent of our assurance procedures and the evaluation of the effect of identified misstatements on our conclusions.

Based on our professional judgment we determined materiality levels for each relevant part of the sustainability information and for the sustainability information as a whole. When evaluating our materiality levels, we have taken into account quantitative and qualitative considerations as well as the relevance of information for both stakeholders and the organization.

For CO_2e emission data 2021 (Scope 1 and 2) of own operations in the Netherlands and the underlying energy data we have determined the materiality at 5% deviation.

We agreed with the Supervisory Board that misstatements which are identified during our assurance engagement and which in our view must be reported on quantitative or qualitative grounds, would be reported to them.

Key assurance matters
Key assurance matters are those matters that, in our professional judgement, were of most significance in our review of the sustainability information and the audit of the selected information. We have communicated the key assurance matters to the supervisory board. The key assurance matters are not a comprehensive reflection of all matters discussed.

These matters were addressed in the context of our review of the sustainability information and audit of the selected information as a whole and in forming our conclusion thereon, and we do not provide a separate conclusion on these matters.

For the assurance procedures concerning the sustainability information in scope, we identified the following key assurance matters:

Key assurance matter	How our review addressed the matter	Key observations
Estimations and assumptions in Scope 3 (CO_2e emissions) and energy savings by customers		
Inherent to the nature of information on Scope 3 (CO_2e emissions) and energy savings by customers, is that they are to a large extent based on the use of estimates and underlying assumptions as disclosed in Appendix 3 of the Integrated Annual Report.	Our review procedures focused on evaluating the suitability and consistent application of the reporting criteria and assessing the reasonableness of the assumptions made. We have also reviewed whether the disclosures in the Report are adequate.	We assessed the reporting criteria as suitable and consistently applied and the assumptions made to be reasonable. We agreed that the methodologies used are sufficiently disclosed in Appendix 3.
Disclosure of methodology for RepTrak Reputation score and Net Promoter Score in the Netherlands (customer satisfaction)		
The indicators RepTrak and NPS are identified by KPN as part of their representation of key achievements. The indicators are measured by third parties. The outcomes are influenced by the methodologies used by the third parties.	Our review procedures focused on evaluating whether the methodologies are suitable and assessing whether the transparency on the methodologies as disclosed in Appendix 3 in the Integrated Annual Report, are sufficient for a proper understanding by the reader.	We assessed the reporting criteria to be suitable and consistently applied. We agreed that the methodologies used are sufficiently disclosed in Appendix 3.

Report on other legal and regulatory requirements and ESEF

Engagement
We were engaged by the Supervisory Board as auditor of Koninklijke KPN N.V. on 9 April 2014, as of the audit for the year 2015 and have operated as statutory auditor since that date.

No prohibited non-audit services
We have not provided prohibited non-audit services as referred to in Article 5(1) of the EU Regulation on specific requirements regarding statutory audit of public-interest entities.

European Single Electronic Reporting Format (ESEF)
KPN has prepared the integrated annual report in ESEF. The requirements for this are set out in the Delegated Regulation (EU) 2019/815 with regard to Regulatory Technical Standards on the specification of a single electronic reporting format (hereinafter: the RTS on ESEF).

In our opinion, the integrated annual report, prepared in the XHTML format, including the partially marked-up consolidated financial statements, as included in the reporting package by KPN, complies in all material respects with the RTS on ESEF.

Other information

Management is responsible for preparing the integrated annual report, including the financial statements, in accordance with the RTS on ESEF, whereby management combines the various components into a single reporting package.

Our responsibility is to obtain reasonable assurance for our opinion whether the integrated annual report in this reporting package complies with the RTS on ESEF.

Our procedures, taking into account Alert 43 of the NBA (the Netherlands Institute of Chartered Accountants), included amongst others:

- obtaining an understanding of KPN's financial reporting process, including the preparation of the reporting package
- obtaining the reporting package and performing validations to determine whether the reporting package containing the Inline XBRL instance document and the XBRL extension taxonomy files has been prepared in accordance with the technical specifications as included in the RTS on ESEF
- examining the information related to the consolidated financial statements in the reporting package to determine whether all required mark-ups have been applied and whether these are in accordance with the RTS on ESEF.

Responsibilities

Responsibilities of Board of Management and the Supervisory Board

The Board of Management (hereafter: management) is responsible for the preparation and fair presentation of the financial statements in accordance with EU-IFRS and Part 9 of Book 2 of the Dutch Civil Code, and for the preparation of the other information, including the Report by the Board of Management in accordance with Part 9 of Book 2 of the Dutch Civil Code, the other information required by Part 9 of Book 2 of the Dutch Civil Code and the remuneration report in accordance with section 2:135b and 2:145 sub-section 2 of the Dutch Civil Code.

Management is also responsible for the preparation of reliable and adequate sustainability information in accordance with the GRI Standards (comprehensive option) and the applied supplemental KPN reporting criteria, including the identification of stakeholders and the determination of material topics. The choices made by management in respect of the scope of the Report and the reporting criteria are included in the section entitled Appendix 3: Transparency in the Integrated Annual Report.

Furthermore, management is responsible for such internal control as management determines is necessary to enable the preparation of the Report that is free from material misstatement, whether due to fraud or error.

As part of the preparation of the financial statements, management is responsible for assessing the company's ability to continue as a going concern. Based on the financial reporting frameworks mentioned, management should prepare the financial statements using the going concern basis of accounting unless management either intends to liquidate the company or to cease operations, or has no realistic alternative but to do so. Management should disclose events and circumstances that may cast significant doubt on the company's ability to continue as a going concern in the financial statements.

The Supervisory Board is responsible for overseeing the KPN's reporting process.

Our responsibilities

Our objective is to plan and perform the assurance engagements in a manner that allows us to obtain sufficient and appropriate assurance evidence for our conclusions.

Our assurance procedures aimed at obtaining reasonable assurance have been performed with a high, but not absolute, level of assurance, which means we may not detect all material errors and fraud during our audit. The assurance procedures performed to obtain a limited level of assurance (review) are aimed on the plausibility of information and vary in nature and timing from, and are less in extent, than for obtaining reasonable assurance. The level of assurance obtained in a review is therefore substantially less than the assurance obtained in an audit.

We apply the "Nadere voorschriften kwaliteitssystemen" (NVKS, Regulations for Quality management systems) and accordingly maintain a comprehensive system of quality control including documented policies and procedures regarding compliance with ethical requirements, professional standards and other applicable legal and regulatory requirements.

An informative summary of the work performed as the basis of our conclusions is included in the Annex to the combined independent auditor's report.

Amsterdam, 18 February 2022

Ernst & Young Accountants LLP

Signed by F.J. Blenderman

Other information

Annex to the Combined Independent Auditor’s Report

Work performed

We have exercised professional judgment and have maintained professional skepticism throughout the assurance engagements performed by a multi-disciplinary team, in accordance with Dutch Standards on Auditing and the Dutch Standard 3810N, ethical requirements and independence requirements.
The ‘Information in support of our opinion on the financial statements’ and ‘Information in support of our conclusions on sustainability information’ sections above in the combined independent auditor’s report includes an informative summary of our responsibilities and the work performed should be read in conjunction with the information in this annex as the basis for our conclusions.

Our audit to obtain reasonable assurance about the financial statements (consolidated and corporate) included the following:
- Performing audit procedures responsive to the risks identified, and obtaining audit evidence that is sufficient and appropriate to provide a basis for our opinion.
- Obtaining an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the company’s internal control.
- Evaluating the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by management.
- Evaluating the overall presentation, structure and content of the financial statements, including the disclosures.
- Evaluating whether the financial statements represent the underlying transactions and events in a manner that achieves fair presentation.

Our review to obtain limited assurance about the sustainability information in scope included amongst others:
- Performing an analysis of the external environment and obtaining an understanding of relevant social themes and issues and the characteristics of the company.
- Evaluating the appropriateness of the reporting criteria used, their consistent application and related disclosures in the sustainability information. This includes the evaluation of the results of the stakeholders’ dialogue and the reasonableness of estimates by management.
- Obtaining an understanding of the reporting processes for the sustainability information, including obtaining a general understanding of internal control relevant to our review.
- Reconciling the relevant financial information with the financial statements.
- Obtaining an understanding of the procedures performed by the internal audit department of KPN.
- Identifying areas of the sustainability information with a higher risk of misleading or unbalanced information or material misstatements, whether due to fraud or errors. Designing and performing further procedures aimed at determining the plausibility of the sustainability information responsive to this risk analysis. These further review procedures consisted amongst others of:
  - Interviewing management and relevant staff at corporate level responsible for the sustainability strategy, policies and results.
  - Interviewing relevant staff responsible for providing the information for, carrying out internal control procedures on, and consolidating the data in the sustainability information.
  - Obtaining assurance information that the sustainability information reconciles with underlying records of the company.
  - Reviewing, on a limited test basis, relevant internal and external documentation.
  - Performing an analytical review of the data and trends in the information submitted for consolidation at corporate level.
- Evaluating the consistency of the sustainability information in scope with the information in the Report which is not included in the scope of our assurance engagement.
- Evaluating the overall presentation, structure and content of the sustainability information.
- Considering whether the sustainability information as a whole, including the disclosures, reflects the purpose of the reporting criteria used.

In addition to the procedures mentioned above, for the CO_2e emission data 2021 (Scope 1 and 2) of own operations in the Netherlands and the underlying energy data we designed and performed further audit procedures responsive to the risks identified, and obtained audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk that the CO_2e emission data 2021 is misleading or unbalanced, or the risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from errors. Fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control. These further audit procedures included the following procedures:
- Obtaining a more detailed understanding of systems and reporting processes, including obtaining an understanding of internal control relevant to our assurance engagement, but not for the purpose of expressing an opinion on the effectiveness of the company’s internal control.
- Evaluating the design and implementation of the relevant internal controls during the reporting year.
- Conducting more in-depth analytical procedures and substantive testing procedures on the relevant data.
- Evaluating relevant internal and external documentation, on a test basis, to determine the reliability of the CO_2e emission data 2021 (Scope 1 and 2) of own operations in the Netherlands and the underlying energy data.

We have read the other information. Based on our knowledge and understanding obtained through our audit of the financial statements or otherwise, we have considered whether the other information contains material misstatements. The scope of the procedures performed on the other information is substantially less than the scope of those performed in our audit of the financial statements or in our review of the sustainability information.

Communication
We communicate with the Supervisory Board regarding, among other matters, the planned scope and timing of the assurance procedures and significant findings, including any significant findings in internal control that we identify during our assurance engagements. In this respect we also submit an additional report to the Audit Committee in accordance with Article 11 of the EU Regulation on specific requirements regarding statutory audit of public-interest entities. The information included in this additional report is consistent with our audit opinion in this auditor’s report.

We provide the Supervisory Board with a statement that we have complied with relevant ethical requirements regarding independence, and to communicate with them all relationships and other matters that may reasonably be thought to bear on our independence, and where applicable, related safeguards.

From the matters communicated with the Supervisory Board, we determine the key audit matters: those matters that were of most significance in the audit of the financial statements, and the key assurance matters: that were of most significance in the review of the sustainability information in scope and the audit of the CO_2e emission data 2021 (Scope 1 and 2) of own operations in the Netherlands and the underlying energy data of the current period. We describe these matters in our combined independent auditor’s report unless law or regulation precludes public disclosure about the matter or when, in extremely rare circumstances, not communicating the matter is in the public interest.

Appendices

Appendix 1: Alternative performance measures

In the discussion of KPN's financial results, a number of alternative performance measures (non-GAAP figures) are used to provide readers with additional financial information, that is regularly reviewed by management. These non-GAAP figures should not be viewed as a substitute for KPN's financial results as determined in accordance with IFRS, which are presented in KPN's Consolidated Financial Statements. Also, the additional information presented is not uniformly defined by all companies, including KPN's peers. Therefore, the non-GAAP figures presented may not be comparable with similarly named numbers and disclosures by other companies. In addition, readers should be aware that certain information presented is derived from amounts determined under IFRS, but is not in itself an expressly defined GAAP measure. Such non-GAAP measures should not be viewed in isolation or as an alternative to an equivalent GAAP measure.

KPN's management considers these non-GAAP figures, combined with GAAP performance measures and in conjunction with each other, the most appropriate to measure the performance of the group and its segments. The non-GAAP figures are used by management for planning, reporting (internal and external) and incentive purposes.

All non-GAAP figures are based on continuing operations unless stated otherwise.

KPN's main non-GAAP figures are explained hereafter.

EBITDA

KPN defines EBITDA as operating result before depreciation (including impairments) of PP&E and amortization (including impairments) of intangible assets. Note that KPN's definition of EBITDA deviates from the literal definition of earnings before interest, taxes, depreciation and amortization and should not be considered in isolation or as a substitute for analyses of the results as reported under IFRS as adopted by the European Union.

€ million	2021	2020
Total revenues and other income	**6,122**	**5,303**
Cost of goods & services	1,298	1,284
Personnel expenses	863	892
Information technology/ Technical infrastructure	316	328
Other operating expenses	323	335
Total operating expenses (excl. D&A)	**2,800**	**2,839**
EBITDA	**3,322**	**2,464**

Adjusted revenues and adjusted EBITDA after leases (Adjusted EBITDA AL)

Adjusted revenues are derived from revenues (including other income), adjusted for the impact of incidentals. Incidentals are non-recurring transactions which are not directly related to day-to-day operational activities at or over EUR 5m, unless significant for the specific reportable segment.

Adjusted EBITDA AL is derived from EBITDA, adjusted for the impact of restructuring costs and incidentals ('adjusted') and for lease-related expenses ('after leases' or 'AL'). Lease-related expenses in this definition are the depreciation and impairment expenses of right-of-use assets and interest on lease liabilities, as well as the gains or losses arising upon remeasurement or (early) termination of a lease.

Key items between reported and adjusted revenues

€ million	FY 2021 reported	Incidentals	FY 2021 adjusted	FY 2020 reported (restated)	Incidentals	FY 2020 adjusted (restated)	y-on-y reported	y-on-y adjusted
Consumer	2,857	-	2,857	2,863	-	2,863	-0.2%	-0.2%
Business	1,762	-	1,762	1,852	11	1,841	-4.8%	-4.3%
Wholesale	684	21	663	641	17	624	6.8%	6.3%
Network, Operations & IT	34	15	19	9	-	9	>100%	>100%
Other (incl. eliminations)	785	830	-45	-62	-	-62	n.m.	-27%
KPN Group	**6,122**	**866**	**5,256**	**5,303**	**28**	**5,275**	**15%**	**-0.3%**

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Revenue incidentals

€ million	Segment	2021	2020
Book gain on sale of joint venture (Glaspoort B.V.)	Other	830	-
Book gain on sale of assets to joint venture (Glaspoort B.V.)	NOI	15	-
Release of revenue related provisions	Wholesale	21	17
Book gain on sale of KPN Consulting	Business	-	11
Total revenue incidentals		**866**	**28**

Key items between reported and adjusted EBITDA AL

€ million	2021	2020	y-on-y
EBITDA	**3,322**	**2,464**	**35%**
Incidentals	870	28	>100%
Restructuring	-38	-36	6.4%
Lease-related expenses			
Depreciation right-of-use assets	-123	-130	-5.7%
Interest lease liabilities	-20	-22	-10%
Adjusted EBITDA after leases	**2,347**	**2,320**	**1.2%**

EBITDA AL incidentals

€ million	Account	2021	2020
Book gain on sale of joint venture (Glaspoort B.V.)	Revenue	830	-
Book gain on sale of assets to joint venture (Glaspoort B.V.)	Revenue	15	
Release of revenue related provisions	Revenue	21	17
Book gain on sale of KPN Consulting	Revenue		11
Release of provisions	Other operating expenses	4	-
KPN Group		**870**	**28**

Net Opex reduction program

KPN's net Opex reduction program is directed at reducing KPN's net indirect operating expenses after leases. The program is directed at the operating expense categories personnel, IT/TI, other operating expenses and lease-related expenses, excluding restructuring costs and incidentals. Through its nature, the program will also mean a reduction in FTEs. The baseline for measurement is the operating expense level at the end of 2018.

The baseline is adjusted for major changes in the composition of the group in the years 2019-2021 (acquisitions and disposals).

The program has generated net indirect opex savings of EUR 325m by the end of 2021.

Free cash flow (FCF)

FCF is defined as cash flow from continuing operating activities plus proceeds from disposals of property, plant & equipment (PP&E) minus capital expenditure (Capex) and adjusted for repayments of lease liabilities. KPN defines Capex as investments in PP&E and software. Please note that KPN's Capex definition differs from Capex as defined by the EU Taxonomy discussed in Appendix 3.

€ million	2021	2020
Net cash flow provided by operating activities from continuing operations	**2,129**	**2,043**
Capex	-1,216	-1,147
Proceeds from real estate	6	4
Repayments of lease liabilities	-135	-135
Free cash flow from continuing operations	**784**	**765**

Operational free cash flow

Operational free cash flow is defined as adjusted EBITDA AL minus capital expenditure (Capex).

€ million	2021	2020
Adjusted EBITDA AL	**2,347**	**2,320**
Capex	-1,216	-1,147
Operational free cash flow	**1,131**	**1,172**

Leverage ratio

KPN defines its leverage ratio as net debt (excl. lease liabilities) divided by the 12-month rolling adjusted EBITDA AL. The ratio is adjusted for major changes in the composition of the KPN Group (acquisitions and disposals) when applicable.

Net debt is defined as gross debt less net cash and short-term investments. Gross debt is defined as the nominal value of interest-bearing financial liabilities representing the net repayment obligations in euro, excluding derivatives, related collateral and leases, and taking into account 50% of the nominal value of the hybrid capital instruments.

For the calculation of KPN's leverage ratio, see Note 13.4 to the Consolidated Financial Statements.

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Appendix 2: Connectivity of non-financial information

Reference	Strategic pillar	GRI reference	Impact/ SDG
Customer value	Grow & strengthen customer footprint	Customer interaction: Own indicator	**9. Industry, Infrastructure and Innovation**

Critical performance indicator	Target 2021	Result 2021	Result 2020	Result 2019	Target 2022	Target 2023	Target > 2025
NPS CM total	13	16	11	19	21	N/a	N/a
NPS BM total	4	4	-2	-4	5	N/a	N/a

Reference	Strategic pillar	GRI reference	Impact/ SDG
Impact on society	Connected Society	Economic performance Customer interaction: Own indicator	**4. Quality Education**

Critical performance indicator	Target 2021	Result 2021	Result 2020	Result 2019	Target 2022	Target 2023	Target > 2025
% eligible chronically ill children provided with a KPN Klasgenoot	100%	100%	100%	100%	100%	100%	100%
# chronically ill children provided with a KPN Klasgenoot	N/a	690	847	1,046	N/a	N/a	N/a

Reference	Strategic pillar	GRI reference	Impact/ SDG
Network Infrastructure	Leverage & expand superior network	Network quality, reliability & availability: Own indicator	**9. Industry, Infrastructure and Innovation** **11. Sustainable Cities and Communities**

Critical performance indicator	Target 2021	Result 2021	Result 2020	Result 2019	Target 2022	Target 2023	Target > 2025
FttH households	3.23-3.28m	3.22m	2.78m	2.47m	45%[1]	>50%[1]	>60%[1]
# mobile sites modernized and 5G ready	>80%[2]	4,000	2,936[3]	641	4,900	100%	
Service Availability Internet	N/a	99.99%	99.78%	N/a	99.99%	99.99%	N/a
Service Availability Mobile	N/a	99.99%	99.89%	N/a	99.9%	99.9%	N/a
Download speed experience	>115 Mbps	148 Mbps	97 Mbps[4]	68 Mbps[4]	150 Mbps	150 Mbps	>160 Mbps

1 Excluding Glaspoort

2 Population coverage

3 Restated number including replacement sites and densification sites

4 In 2019-2020 we reported on Average 4G download speed per year-end

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Reference	Strategic pillar				GRI reference	Impact/ SDG		
Focused innovation and digitalization	Grow & strengthen customer footprint				Customer privacy, data and information protection: Own indicator	**3. Good Health and Well-being 9. Industry, Infrastructure and Innovation**		
	Critical performance indicator	**Target 2021**	**Result 2021**	**Result 2020**	**Result 2019**	**Target 2022**	**Target 2023**	**Target > 2025**
	# of professionals with secure digital access to healthcare information	70,000	88,374	69,770	N/a	113,000	120,000	155,000
	# of clients and patients using healthcare facilities to live with more autonomy	12,500	11,767	11,815	N/a	12,300	12,800	13,800

Reference	Strategic pillar				GRI reference	Impact/ SDG		
Safeguarded privacy and security	Leverage & expand superior network				Customer privacy, data and information protection: Own indicator	**9. Industry, Infrastructure and Innovation 11. Sustainable Cities and Communities**		
	Critical performance indicator	**Target 2021**	**Result 2021**	**Result 2020**	**Result 2019**	**Target 2022**	**Target 2023**	**Target > 2025**
	% of Dutch people that believe their data is safe with KPN	70%	66%	66%	68%	71%	71%	73%
	% of Dutch municipalities monitored for cyber security attacks so that the appropriate mitigation can take place	40%	12%	5%	N/a	Discontinued[1]		
	% of SME KPN EEN customers that activates safe internet	N/A	41.5%	N/A	N/a	47.5%	N/a	N/a

1 Due to changing market situation, see chapter Safeguarded privacy and security

Reference	Strategic pillar				GRI reference	Impact/ SDG		
Sustainable employability	Leverage & expand superior network Grow & strengthen customer footprint Simplify & streamline operating model				Supplier selection and security: Own indicator	**5. Gender Equality 8. Decent Work and Economic Growth**		
	Critical performance indicator	**Target 2021**	**Result 2021**	**Result 2020**	**Result 2019**	**Target 2022**	**Target 2023**	**Target > 2025**
	Overall % of women at KPN in the Netherlands	24%	22%	21%	21%	23%	24%	25%
	Sustainable employability: % of employees with a new job < 1 year after leaving KPN	>80%	79%	75%	85%	>80%	N/a	N/a
	Employee survey score for engagement	82%	82%	86%	77%	83%	82%	82%

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Reference	Strategic pillar				GRI reference	Impact/ SDG		
Environmental performance	Leverage & expand superior network				Materials, effluents and waste	**12. Responsible Consumption and Production**		
	Critical performance indicator	**Target 2021**	**Result 2021**	**Result 2020**	**Result 2019**	**Target 2022**	**Target 2023-2024**	**Target > 2025**
	Energy savings by customers as % of KPN Group	200%	309%	404%[1]	126%	~200%	150%	150%
	CO_2e reduction in the chain (scope 3) compared to 2014	18%	22%	19%[2]	16%[2]	23%	24%	30% in 2030 net-zero in 2040
	% reduction of energy consumption of KPN Group compared to 2010	44%	45%	37%	30%	46%	49% in 2023	55% in 2030
	Absolute car-fuel savings compared to 2010	70%	80%	74%	49%	80%	90%	only fossil fuel free inflow cars from 2025
	% collected customer premises equipment	85%	86%	86%[1]	74%	90%	92%	95%
	Climate-neutral own operations	100%	100%	100%	100%	100%	100%	100%
	% reuse and recycling	82%	84%	81%	78%	84%	85% in 2023	85%
	% fossil fuel free cars added to company fleet in reporting year (lease pool + engineers)	48%	90%	46%	33%	80%	85% in 2023 90% in 2024	100%

1 Result 2020 has been restated due to an updated calculation method, for details see Appendix 3

2 Results 2020, 2019 and baseyear have been restated due to an improvement in the calculation method, for details see Appendix 3

Reference	Strategic pillar				GRI reference	Impact/ SDG		
Responsible supply chain	Leverage & expand superior network				Supplier selection and security: Own indicator	**12. Responsible Consumption and Production** **17. Partnership for the Goals**		
	Critical performance indicator	**Target 2021**	**Result 2021**	**Result 2020**	**Result 2019**	**Target 2022**	**Target 2023**	**Target > 2025**
	% realized improvements on corrective action plans	75%	98%	91%	88%	75%	N/a	N/a
	% high-risk Tier I, Tier II and Tier III suppliers audited	40%	46%	32%	41%	40%	N/a	N/a

Appendices

Appendix 3: Transparency, materiality and stakeholder engagement

About this report

Scope

The Integrated Annual Report was published on 21 February 2022.

The scope of the information in this report covers the KPN Group and subsidiaries in which KPN has a majority shareholding. This scope is the same as the previous year's report. Unless stated otherwise, references to KPN should be read as referring to the KPN Group. For our non-financial information, we include new acquisitions in our report as of the first full year of ownership. Non-financial information for divestments that occurred during the reporting year is excluded for the full year.

The data in this report refers to KPN's performance and not to that of our subcontractors, unless stated otherwise. The full scope of the financial information is reported in the Consolidated Financial Statements (p. 96). The report specifically reviews developments and performance in 2021 and is based on topics identified as highly material for KPN. The described scope applies to all material topics. Aspects of a more static nature (such as management approaches to our ESG themes and our stakeholders) or with less reporting priority (such as the list of external memberships) are included in the GRI index (p. 212).

The Report of the Board of Management consist of pages 4 to 73 and Appendices 3 and 4.

Reporting criteria

The purpose of this report is to inform stakeholders about KPN's role in society, in connection with the main strategic objectives and targets. Stakeholders are defined as all people and organizations affected by KPN's operations or with whom a relationship is maintained, such as employees, governments and regulators, the investor community, suppliers, customers and society. The section Stakeholder dialogue in this appendix provides more information on stakeholder approach for specific stakeholder groups.

In preparing this Integrated Annual Report, we have taken the principles of the International Integrated Reporting Council (IIRC) into account. We comply with the EU Directive Non-Financial Reporting (NFRD) and, where possible, have already considered the Corporate Sustainability Reporting Directive (CSRD), which is expected to become effective as of 2023. We have also taken the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD) into account. For the sustainability information included in this report, KPN follows the Global Reporting Initiative (GRI) Standards - Option Comprehensive, the Regulation (EU) 2020/852 as supplemented with Commission Delegated Regulation (EU) 2021/2139 and Commission Delegated Regulation (EU) 2021/2178 (hereinafter; EU Taxonomy) and self-developed reporting criteria as disclosed in this appendix. The Option - Comprehensive of the GRI Standards means that KPN reports on all general standard disclosures and all specific standard disclosures related to identified material topics. This year, we have taken the SASB standards into account for the first time, see Appendix 10 SASB index. KPN recognizes the importance of disclosure on environmental, social and governance matters. We do so by integrating disclosure of this information with other financial and non-financial information, based on materiality considerations, in this Integrated Annual Report.

The process for defining the material topics and report content, as well as the list of material topics, is described in the materiality determination. The results of this assessment (list of material topics for KPN, including their reporting priority) determine which GRI standards are set out in this report and which indicators are featured only on the website or in the GRI index. The overview can be found in the GRI index (p. 212).

Quantitative data concerning the workforce and financial results set out in this report has been collected using our financial data management system. The remaining data has been collected using a standardized questionnaire that was completed with data from information management systems by the responsible business units. The Internal Audit and Corporate Control departments used the consistency and availability of supporting evidence as the basis for their assessment of the data reported at group level. Validation criteria set out in advance were also used to assess the data.

External assurance

EY was engaged as an independent assurance provider to perform an assurance engagement with the aim of obtaining reasonable assurance on CO_2e emission data 2021 (scope 1 and 2) of own operations in the Netherlands and the underlying energy data as presented in this Report, and limited assurance on other sustainability information as disclosed in the following chapters and appendices:

- Chapters 'Report by the Board of Management' and 'Tax and regulations'
- Appendices 2: Connectivity of non-financial information, 3: Transparency, materiality and stakeholder engagement, 5: Social figures, 6: Environmental figures, 7: Supply chain, 8: Tax overview for continuing operations per country, 9: GRI index, 11: Glossary

Appendices

The key social and environmental figures, which are available in Appendices 5 and 6, are also part of this report. This report provides more detailed numbers on key figures that reflect on high material topics within the report (such as CO_2e emissions and electricity consumption). This report also contains prospective information, such as ambitions, strategy, targets and expectations. Inherent to this information is that actual future results may be different from the prospective information and as such may be uncertain. Therefore, the assumptions and feasibility of this prospective information are not covered by the external assurance.

The Audit Committee approved every engagement of the external auditor, after pre-approval by the internal auditor, in order to avoid potential breaches of the external auditor's independence. For more details we refer to the Combined Independent Auditor's Report (p. 165).

Reporting ambitions

KPN adheres to several reporting benchmarks, such as the Dow Jones Sustainability Index (DJSI) and the CDP. In this way, our performance and way of reporting can be compared to peers and expectations from the industry and other stakeholders. Reporting ambitions for the coming years are: to keep reporting in line with the IIRC framework and in accordance with GRI standards; to keep reporting on high material topics; to report more on qualitative and quantitative value creation for society; and to maintain a leading position in several benchmarks like the DJSI, MSCI and CDP.

Taskforce on Climate-related Financial Disclosures

KPN recognizes the recommendations of the Taskforce on Climate-related Financial Disclosures (TCFD) as an important step in providing transparency on climate strategy. We have mapped TCFD elements to this report (see sections on environmental performance, responsible supply chain and related appendices). KPN's risk framework is described in the chapter Compliance and risk (p. 63) and Appendix 4: List of top risks (p. 194) contains the list of top risks.

TCFD element	TCFD recommendation	KPN reporting on TCFD guidelines
Governance	Describe the governance of Board of Management related to climate-related risks and opportunities	Compliance and risk (p.63)
	Describe the role of management on the judgement and governance of climate-related risks and opportunities.	Compliance and risk (p.63) Appendix 4: List of top risks (p.194)
Strategy	Describe the climate-related risks and opportunities as described on short, midterm and long-term timeframe.	SWOT (p.8) Compliance and risk (p.63) Appendix 4: List of top risks (p.194)
	Describe the impact of climate-related risks and opportunities on business activity, strategy and financial planning of the organization.	Compliance and risk (p.63) Appendix 4: List of top risks (p.194)
	Describe the agility of the strategy, taking climate-related scenarios into account, amongst others a scenario to stay within the 2-degrees Celsius limit for global warming.	Our performance: Environmental performance and responsible supply chain (p.47) Compliance and risk (p.63) Appendix 4: List of top risks (p.194) We performed scenario analysis on long-term energy pricing taking the impact of CO_2e-price regulation into account.
Risk Management	Describe the climate-related risks and opportunities as described on short, midterm and long term timeframe.	Compliance and risk (p.63) Appendix 4: List of top risks (p.194)
	Describe the processes the organization uses to manage climate-related risks and opportunities.	Compliance and risk (p.63) Appendix 4: List of top risks (p.194)
	Describe how processes for the identification, assessment and management of climate-related risks are integrated into the risk approach of the organization.	Compliance and risk (p.63) Appendix 4: List of top risks (p.194)
Indicators and objectives	Describe the organizational processes for identification and assessment of climate-related risks.	Compliance and risk (p.63) Appendix 4: List of top risks (p.194)
	Report on scope 1, 2 and 3 emissions	Our performance: Environmental performance and responsible supply chain (p.47)
	Report on performance to climate-related objectives	Our performance: Environmental performance and responsible supply chain (p.47)

Appendices

EU Directive: Disclosure of non-financial information and diversity information

Requirements EU Directive	Subtopic	Chapter / Page reference (starting page)
A brief description of the business model	The business environment	Our purpose and the world around us (p. 7) Strategy, key performances and value creation model (p. 10) Our valuable assets (p. 53)
	Organization and structure	Strategy, key performances and value creation model (p. 10) Our valuable assets (p. 53)
	Markets where the undertaking operates	Our purpose and the world around us (p. 7) Strategy, key performances and value creation model (p. 10) Our valuable assets (p. 53)
	Objectives and strategies	Strategy, key performances and value creation model (p. 10) Our valuable assets (p. 53)
	Main trends and factors that may affect the undertaking's future development	Our purpose and the world around us (p. 7)
Relevant social and personnel matters (e.g. HR, safety, etc.)	A description of the policies pursued, including due diligence	Our performance: Sustainable employability (p. 42)
	The outcome of those policies	Our performance: Sustainable employability (p. 42)
	Principle risks in own operations and within value chain	Our performance: Sustainable employability (p. 42) Appendix 4: List of top risks (p. 194)
	How risks are managed	Compliance and risk (p. 63) Appendix 4: List of top risks
	Non-financial key performance indicators	Our performance: Sustainable employability (p. 42)
Relevant environmental matters (e.g. climate-related impacts)	A description of the policies pursued, including due diligence	Our performance: Environmental performance and responsible supply chain (p. 47)
	The outcome of those policies	Our performance: Environmental performance and responsible supply chain (p. 47)
	Principle risks in own operations and within value chain	Our performance: Environmental performance and responsible supply chain (p. 47) Appendix 4: List of top risks (p. 194)
	How risks are managed	Compliance and risk (p. 63) Appendix 4: List of top risks (p. 194)
	Non-financial key performance indicators	Our performance: Environmental performance and responsible supply chain (p. 47)
Relevant matters with respect for human rights (e.g. labor protection)	A description of the policies pursued, including due diligence	Our performance: Sustainable employability (p. 42) Procurement and suppliers (p .51)
	Principle risks in own operations and within value chain	Our performance: Sustainable employability (p. 42) Procurement and suppliers (p. 51) Appendix 4: List of top risks (p. 194)
Relevant matters with respect to anti-corruption and bribery	A description of the policies pursued, including due diligence	Maintaining effective risk management (p. 63) Our performance: Environmental performance and responsible supply chain (p. 47)
	The outcome of those policies	Our performance: Sustainable employability (p. 42) Compliance and risk (p. 63)
	Principle risks in own operations and within value chain	Our performance: Sustainable employability (p. 42) Compliance and risk (p. 63)
	How risks are managed	Our performance: Sustainable employability (p. 42) Compliance and risk (p. 63)
	Non-financial key performance indicators	Our performance: Sustainable employability (p. 42)
Insight into diversity (Board of Management and Supervisory Board)	A description of the policies pursued	Our performance: Sustainable employability (p. 42) Supervisory Board report (p. 77)
	Diversity targets	Our performance: Sustainable employability (p. 42) Supervisory Board report (p. 77)
	Description of how the policy is implemented	Our performance: Sustainable employability (p. 42) Supervisory Board report (p. 77)
	Results of the diversity policy	Our performance: Sustainable employability (p. 42) Supervisory Board report (p. 77)

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EU Taxonomy

General
An important purpose of the EU Action Plan on Sustainable Finance is to steer cash flows towards sustainable investments. In this context, the EU Taxonomy-Regulation became effective mid-2020. The EU Taxonomy-Regulation is intended to serve as a standardized and mandatory classification system to determine which economic activities are considered as 'environmentally sustainable'.

The EU has currently published a catalog of sustainable activities in the manner of the EU Taxonomy ('EU Catalog') for two environmental objectives (climate change mitigation and climate change adaptation). By the Delegated Regulations, it is determined which economic activities can be considered in general.

As only those activities described in these Delegated Regulations can be examined as Taxonomy-eligible, we concluded that the impact of this current framework in relation to the two environmental objectives is very limited given KPN's business model.

Activities can be considered 'environmentally sustainable' (i.e. Taxonomy-aligned) if certain criteria are fulfilled. These technical screening criteria determine the conditions under which an economic activity qualifies as contributing substantially to the two environmental objectives and determine whether that economic activity causes no significant harm to any of the other environmental objectives. As of 2022, KPN will report activities which can be examined as Taxonomy-aligned.

Significant judgments and assumptions made by management regarding the EU Taxonomy
Based on our assessment of the current EU Taxonomy, we conclude that various aspects are open to multiple applications. In order to comply to the EU Taxonomy disclosure obligations, management has made the following significant judgments and assumptions:

- Regarding the objective climate change mitigation, we conclude that chapter 8.2 – Data driven solutions for GHG emissions reductions, chapter 6.3 – Urban and suburban transport, road passenger transport, and chapter 7 – Renovation of existing buildings, apply to KPN. Other chapters do not apply to KPN and are therefore not disclosed in the following tables.
- Based on chapter 8.2 – Data driven solutions for GHG emissions reductions, we conclude the following:
  - We report Capex on specific customer premises equipment as eligible. In 2021, KPN purchased new customer premises equipment aiming for our customers to reduce energy by 35% when using it, compared to using the previous customer premises equipment. Both the energy savings and the Capex amount were readily available.
  - We did not report Turnover on ICT Solutions helping our customers to reduce GHG emission, for example our network which enables customers to work from home, because KPN has not built this network *predominantly aiming* at enabling GHG emission reductions. Industry alignment on treatment of this topic is ongoing.
  - We did not report Capex on fiber roll-out, as this is not covered by chapter 8.2. However, we do believe that fiber is an important enabler for climate change mitigation, mainly in terms of energy savings compared to copper. We hope that roll-out of fiber will be added to the framework in the future, an ETNO lobby on this topic is currently ongoing.
- Based on chapter 6.3 – Urban and suburban transport, road passenger transport, we conclude the following:
  - We did not report Capex on full electric lease-cars due to limited contribution.
- Based on chapter 7 – Renovation of existing buildings, we conclude the following:
  - We did not report Capex on new charging stations and solar panels due to limited contribution.
- Please refer to the accounting policy EU Taxonomy on the next page for a calculation of the EU Taxonomy Turnover, Capex and Opex. The accounting policy includes references to the related line items in the consolidated financial statements, making sure to avoid double counting between the various reporting categories and between the objectives climate change mitigation and adaptation.
- We did not include our Joint Venture in Glaspoort in our disclosure, as KPN does not have control over this entity. We did not report impact separately as Glaspoort's main activities relate to fiber roll-out which is currently not eligible.

Conclusion
For the reporting year 2021, only ~3% of KPN's EU Taxonomy Capex activities qualifies as eligible. This includes certain customer in-home equipment. We concluded that KPN's EU Taxonomy Turnover and Opex are not eligible under the economic activities currently in scope of the EU Taxonomy regarding climate change mitigation and adaptation.

We have concluded that the roll-out of fiber is currently not eligible, however we believe this is an important enabler for climate change mitigation, also providing significant energy savings compared to copper.

Our future EU Taxonomy disclosures are subject to any potential new guidance with more accurate definitions released by the EU.

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The proportion of eligible and non-eligible activities are reported below in terms of EU Taxonomy Turnover, Capex and Opex.

EU Taxonomy Turnover

	Absolute Turnover (in EUR million)	Proportion of Turnover	Climate Change Mitigation	Climate change adaptation
Eligible activities		0%	0%	0%
Non-eligible activities		100%		
Total	**5,271**	**100%**		

EU Taxonomy Capex

	Absolute Capex (in EUR million)	Proportion of Capex	Climate Change Mitigation	Climate change adaptation
Eligible activities		3%	100%	0%
Non-eligible activities		97%		
Total	**1,250**	**100%**		

EU Taxonomy Opex

	Absolute Opex (in EUR million)	Proportion of Opex	Climate Change Mitigation	Climate change adaptation
Eligible activities		0%	0%	0%
Non-eligible activities		100%		
Total	**316**	**100%**		

Accounting policy EU Taxonomy

Accounting policy on EU taxonomy Turnover definition

EU Taxonomy Turnover is defined as Revenue as disclosed in Note 4 of the Consolidated Financial Statements.

Accounting policy on EU taxonomy Capex definition

EU Taxonomy Capex definition differs from KPN's Capex definition in Appendix 1. EU Taxonomy Capex consists of the following components: Property, plant and equipment investments and PPE changes in consolidation, in case of acquisitions of business combinations (Note 10 of the Consolidated Financial Statements), Intangible assets investments and Intangible assets changes in consolidation, in case of acquisitions of business combinations (Note 11 of the Consolidated Financial Statements) and Leasing, Right-of-use assets additions (Note 19 of the Consolidated Financial Statements).

Accounting policy on EU taxonomy Opex definition

EU Taxonomy Opex definition differs from KPN's Opex definition in Appendix 1. EU Taxonomy Opex consists of the following components: research & development costs, building renovation costs, short-term leases, maintenance and repair costs and all other direct costs necessary to service the asset.

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Scoping and calculation methodologies for environmental figures

Scoping and calculation of reported emissions

The report includes reporting on CO_2e emissions in the chapter Our performance: Environmental performance and responsible supply chain (p. 47) and Appendix 6:Environmental figures (p. 204). Reporting is done in accordance with the guidance and standards of the GHG Protocol and the ISO 14064-1 standard. KPN uses the operational control approach when reporting CO_2 emissions. Carbon dioxide (CO_2) is the most relevant GHG for KPN. Where available, CH_4 and N_2O are taken into consideration in the GHG emissions information. The term 'CO_2e emissions' is used to refer to the GHG emissions reported on. These are stated in CO_2 equivalents.

Scope 1 – Direct emissions

- Fuel consumption of the lease vehicle fleet (employees' passenger vehicles and commercial vehicles)
- Heating of buildings (gas)
- Consumption of coolants for air conditioning and/or cooling
- Fuel consumption of emergency power generators

Scope 2 – Indirect emissions

- Electricity consumption of the fixed and mobile networks, data centers, offices and shops
- District heating
- District cooling

The accuracy of the electricity consumption data is a key factor in the reliability of the CO_2e emissions calculations. In the data-collection process, a number of factors affect the accuracy of the collected data. In general, data originating from direct measurements and recordings or invoices, including measurements from third parties, are the most accurate.

The net Scope 2 emissions are market-based and calculated based on the tank-to-wheel (TTW) CO_2e emissions factors for renewable electricity. For renewables (wind, biomass, solar), the TTW values are all zero. The CO_2e emissions of the well-to-tank (WTT) phase are accounted for in our Scope 3 emissions (category 3 – fuel and energy-related activities). Both the location-based and market-based Scope 2 emissions are published in Our performance: Environmental performance and responsible supply chain (p. 47).

Electricity providers estimate the consumption for part of our network operations - as monthly meter readings are not always conducted - so there is some uncertainty around the accuracy and completeness of our energy consumption. To improve the accuracy, transparency and reliability of our energy data, we are migrating to remote readable meters, reviewing administrative processes and updating profiles with our electricity providers.

Scope 3 – Other indirect emissions:

- Emissions in the upstream value chain (during the production phase of products, services and equipment at suppliers)
- Emissions in the downstream value chain (during the use phase, including recycling and disposal of the products, services and equipment)

The results are presented in Our performance: Environmental performance and responsible supply chain (p. 47). and in Table 7 of Appendix 6: Environmental figures (p. 204). We have used two main methodologies to calculate Scope 3 emissions: the spend-based method, which takes procurement data and calculates the emissions within an environmentally extended input output (EEIO) model to assess the emissions, and the process-based method, which uses quantity-based data to evaluate the emissions associated with specific activities, e.g. kWh of energy usage or quantity of materials purchased to manufacture goods. In both cases, we used actual data covering January to November, extrapolating it to a full year.

All parameters used in the Scope 3 calculations are checked annually whether new values are available or not. Suppliers with zero net emissions are assessed and adjusted accordingly. The table on the next page describes the calculation of emission methods, coverage and assurance. In 2021, KPN improved its calculation method to make the total electricity consumption of TV set-top boxes more accurate (category 13). Accordingly we recalculated 2018-2020 and baseyear 2014 with the same method to make the figures comparable. We have improved our methodology on measuring scope 3 emissions by reconciling the basis for the EEIO method. In previous years we applied an uplift factor on our calculated upstream emissions to explain the difference between the basis for spend related emissions and our consolidation system. We have restated previous years, including the baseline. Please refer to appendix 6 for the calculated emissions and impact of methodology changes.

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Scope CO_2e	Standard	Scope	Coverage	Approach	Reported	Assurance	Sources and additional information
Scope 1	GHG Protocol Scope 1 Guidance	Netherlands	98% of all KPN business units and subsidiaries (opex/FTE)	Operational control approach	Gross and Net Scope 1 emissions	Reasonable	co2emissiefactoren.nl January 2022 Gold standard and REDD+ forest compensation projects
Scope 2	GHG Protocol Scope 2 Guidance	Netherlands	98% of all KPN business units and subsidiaries (opex/FTE)	Operational control approach	Market- and Location-based Scope 2 emissions	Reasonable	co2emissiefactoren.nl January 2022 100% renewable electricity (windfarms)
Scope 3 Cat: 1, 2, 5, 9	GHG Protocol Scope 3 Guidance	Netherlands	98% of all KPN business units and subsidiaries (opex/FTE)	Spend-based (Environmentally Extended Input Output data (EEIO) approach)	Scope 3 emissions	Limited	UK DEFRA 2014 (Indirect emissions from the supply chain) and CBS Statline The EEIO-factors are corrected for inflation.
Scope 3 Cat: 3, 6, 7, 11, 13	GHG Protocol Scope 3 Guidance	Netherlands	98% of all KPN business units and subsidiaries (opex/FTE)	Process- and activity-based	Scope 3 emissons	Limited	co2emissiefactoren.nl January 2022 Emissions Cat 11 and 13 of used electricity by customers with location based scope 2 factor (gid mix)
Scope 3 Cat: 4, 8, 10, 12, 14, 15	GHG Protocol Scope 3 Guidance	Netherlands	98% of all KPN business units and subsidiaries (opex/FTE)	Not applicable for KPN	Not applicable	Not applicable	Not applicable

Energy consumption and carbon emissions avoided through customers using our IT solutions

The calculation of avoided energy consumption, CO_2e emissions and cost reduction for customers is based on models per service.

The results are presented in Our performance: Environmental performance and responsible supply chain (p. 47) and in Table 9 of Appendix 6: Environmental figures (p. 204).

Avoided energy consumption	Kind of avoidance (most impact)	KPN measurement	Source external information
Teleworking (enabled by KPN connectivity)	Avoided travel	Market share of broadband subscribers based on Telecompaper Research	Publicly available statistics and reports from Statistics Netherlands (CBS), Kennisinstituut voor Mobiliteitsbeleid (KIM), ECN, Netbeheer Nederland, Milieu Centraal, Telecompaper and other sources
KPN audio conferencing	Avoided travel	Number of audio conferences; average number participants per meeting	Publicly available statistics and reports from Statistics Netherlands (CBS), Kennisinstituut voor Mobiliteitsbeleid (KIM), British Telecom and CarbonTrust
KPN hosting	Electricity savings	Volume-hosting services	Statistics Netherlands (CBS)
Dematerialization	Energy and raw materials savings	CD and DVD papers avoided by e.g. Spotify, Netflix	NVPI, Sociaal en Cultureel Planbureau, SVDJ, RVO, CE Delft, WWF and, CarbonTrust
iTV cloud solution	Energy and raw materials savings	Number of customers, energy consumption KPN Cloud for iTV	Stichting KijkOnderzoek
KPN video conferencing	Avoided travel	Number of video conferences; average travel savings per meeting	Statistics Netherlands (CBS) research on movement in the Netherlands

We used actual data covering January to November in the calculation, extrapolated for the full year. All parameters are annually checked by KPN for updates. In case of changes or new services are introduced in calculation methods, we involve external consultants. In the teleworking calculation for 2021, we made a more accurate calculation of hours working at home per teleworker. This is based on average working hours per week published by CBS. Also, we extended the scope from partial working population to full working population due to availability of teleworking figures scoping full population by KIM.

For the parameters saved on office space and the extra electricity and gas consumption at home when working at home (rebound effect), the values used in the teleworking savings calculation are based on averages. We use the average between the lowest and highest reported value in reports and research. Cost savings are based on the average fuel, electricity and gas prices published by Statistics Netherlands (CBS) and Milieu Centraal.

Scope and calculations for KPI % reuse and recycling

The KPI % reuse and recycling covers the outflow of KPN materials and waste destined to be reused, recycled, incinerated or landfilled. This means the scope includes, but is not limited to:

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- Regular waste streams from KPN offices and operations
- Obsolete (end-of-use) equipment and inventory coming from KPN operations, offices and shops
- Obsolete (end-of-use) customer-premises equipment and mobile phones that are collected via KPN return programs and processed by KPN or on KPN's behalf

The scope therefore does not include obsolete (end-of-use) customer-premises equipment, mobile phones and related packaging that are not collected via KPN return programs. In this case, the customer is responsible for disposing of this in accordance with the law, regulations and local waste-collection procedures.

The outflow of materials and waste is reported in table 10 of Appendix 6. The following disposal methods are reported with reference to GRI-306-2: reuse (i), recycling (ii, iii), incineration (iv, v) and landfill (vii). The other disposal methods, i.e. deep well injection (vi), on-site storage (viii) and other (ix), do not apply. The waste disposal method is mostly determined by selected service partners and their waste-disposal contractor, which are challenged on methods and performance. As part of our circular ambitions, we promote reuse over recycling and incineration with energy recovery over landfill to minimize ecological impacts. Service partners report the waste volumes (tons) on a monthly or quarterly basis. These volumes are allocated to the four types of disposal method based on processing rates (%) from direct information or public information. The KPI % reuse and recycling is then calculated by dividing the tons reuse and recycling by the total volume.

Collected equipment

The return rate for modems and TV set-top boxes is based on the total number of returns (numerator) and the total number send and delivered to customers (denominator) in the reporting year. In the calculation method used in reporting years 2019 and 2020 the total outflow volume was corrected for decreases and increases in the development of the customer installed base. In retrospect these corrections have led to a high variance in figures (from 74% -2019- to 92% -2020-) which didn't give a correct view of the return performance. For this reason this installed base correction isn't done any more in the calculation method used for 2021. To make like for like comparison possible the 2020 return rate is restated with the adjusted calculation method.

Other calculation methodologies

RepTrak

RepTrak has been developed by the RepTrak Company and is used as a method to calculate the reputation score of companies worldwide. The RepTrak methodology also measures the drivers of reputation and the consequences for supportive behavior. The RepTrak Company's policy is to adjust all RepTrak scores by standardizing them against the aggregate distribution of all scores obtained from the RepTrak Company's Annual Global RepTrak Reputation Score Standardization has the effect of lowering scores in countries that tend to over-rate companies, and has the effect of raising scores for companies in countries that tend to rate companies more negatively. All RepTrak scores are culturally standardized. This means that all RepTrak results are comparable across countries, industries and over time. Every month, the progress on the key attributes that stimulate reputation and supportive behavior is measured.

The results are based on a minimum of 500 respondents per company each quarter. The data collection method is an online interview of 20 minutes. The qualified respondents have to be familiar or very familiar with the company. The RepTrak Company started using an updated cultural bias adjustment procedure on 1 January 2011, whereby the cultural adjustment analysis was rebased based on the latest reputation scores. Because KPN was already in the middle of setting KPIs, we asked the RepTrak Company to report KPN's reputation scores using the 'old' cultural bias adjustment analysis. Hence, this report shows 'unrebased' reputation scores for KPN. KPN reports the fourth quarterly average in the report.

NPS

We use NPS as the leading indicator to measure customer loyalty and satisfaction. The NPS results included in this report are measured, calculated and provided by Kantar (a leading market-research company). NPS is based on direct customer input, with the key question being whether a customer would recommend KPN to someone else. Depending on the score they give, the customer is classified as a 'promoter' or a 'detractor'. The NPS is calculated by subtracting the percentage of 'detractors' from the percentage of 'promoters'. The result is displayed as an absolute number instead of a percentage, within a range of -100 to +100.

In this report, all NPS results refer to Q4 of the respective year, based on a three-month rolling average (December 2021 is based on October 2021, November 2021 and December 2021). The NPS Consumer and NPS Business reflect a weighted average based on 2019 revenues. NPS Business combines this with EBITDA margins for segments.

Materiality and stakeholder engagement determination

Materiality

The annual materiality assessment ensures KPN is aware of what is happening around us, where we can have an impact and how we can add focus to our efforts. We conducted an extensive assessment in 2018. This assessment consisted of both an internal consultation held with employees, representing all

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sections of KPN, as well as an online survey sent to over 2,500 external stakeholders, representing various stakeholder groups. The outcomes resulted in a list of material topics, which was aligned with the guidelines and standards of the Global Reporting Initiative (GRI). We conducted a review process in 2021. The process for this consisted of three steps, detailed below.

Step 1: Review relevance topics for 2021

We applied the same definition of materiality as in the previous years to ensure alignment with the GRI minimum requirements, while incorporating insights from other reporting initiatives. For this report, the definition applied for a material topic is any topic that significantly influences the organization or on which the organization has a significant impact with its activities. This includes positive and negative and direct and indirect influences (risk/opportunity) and impact.

Through a standards, peers, trend and media analysis, we concluded that the 2020 list of topics provided a complete basis for the 2021 report. As a next step, we conducted an email consultation followed by interviews with internal stakeholder representatives to review the context relevance and gain qualitative input on the role and responsibility stakeholders expect of KPN in relation to the topics.

Based on the results from the interviews the shortlist was edited and several definitions and terms were changed slightly to incorporate feedback from the stakeholder representatives.

Materiality topic	Content (adjustments in bold)
Network quality, reliability & availability	The impact the quality and reliability of KPN's networks have on the accessibility of high speed internet - and therewith the availability of critical communications (short term) and the contribution to growing economic and social activity (long term). **It is a basic need for customers that needs to be available everywhere all the time at a fair price.**
Cybersecurity & Data & information protection	The impact KPN's data & **information** protection **and cybersecurity** efforts has on safeguarding the safety, privacy & identity of customers and employees & **where applicable suppliers**.
Supplier selection & security	The impact that KPN's selection of suppliers has on Dutch society and the impact of good governance **and security** among KPN's suppliers and respected human rights have on local communities
Environmental performance	The impact KPN's energy use for own operations (technologies, networks) and circular approach (sourcing of virgin materials, extended product use, high end second life of product and materials **in consultation with its suppliers**) has on the circular economy, biodiversity and climate change

Step 2: Review impact relevance and maturity

For the second step, to assess the relevance of topics in a KPN context, we conducted an email consultation of internal KPN representatives, followed by an interactive online session to gain qualitative input on the relevance of the topics.

During the session the quantitative ranking from an internal perspective was validated through a discussion of the topics and their definitions and given the input on the topics and definitions received in step 1. The top-5 highly material topics was validated in the session and it was discussed to adhere to a top-6 rather than a top-5. As a result, "Sustainable ICT-solutions/Product innovation" were validated as a highly material topic and more material than topics G-M (Figure 1). Moreover, during the discussion it became clear that the following three topics are defined as medium material:

- Responsible operations / Responsible implementation
- Attractive working conditions
- Fair access to KPN fixed network / being a decent company

Next to validating topics, one definition was adjusted during the session by the participants to take the important elements of digitalization and simplified customer interaction into account:

Materiality topic	Content (adjustments in bold)
Customer interaction	The impact **digitalized and simplified customer interaction** and complete and transparent marketing and communication (e.g., on brand strategy) has on customer value and on the sense of appreciation of customers.

The scoring in step 1 and 2 resulted in the matrix on the next page. The combination of the horizontal axis and the vertical axis determines the degree of impact that KPN has on the topic in society. KPN divides the results into these categories:

- High material topics: we aim to fulfill a leading role on these topics by developing policies, setting targets and defining KPIs to monitor and report on our impact.
- Medium material topics: we aspire to stay on top of these topics as they are relevant for creating medium and long term value for KPN.
- Other topics: we want to demonstrate our social responsibility in these areas, and although we monitor these topics, our reporting on them is more concise.

In order to see where GRI topics are translated into KPN topics, please see the cross reference in Appendix 2 Connectivity of non-financial information.

Participants also provided input on the internal scoring, resulting in the below matrix. The combination of the horizontal axis and

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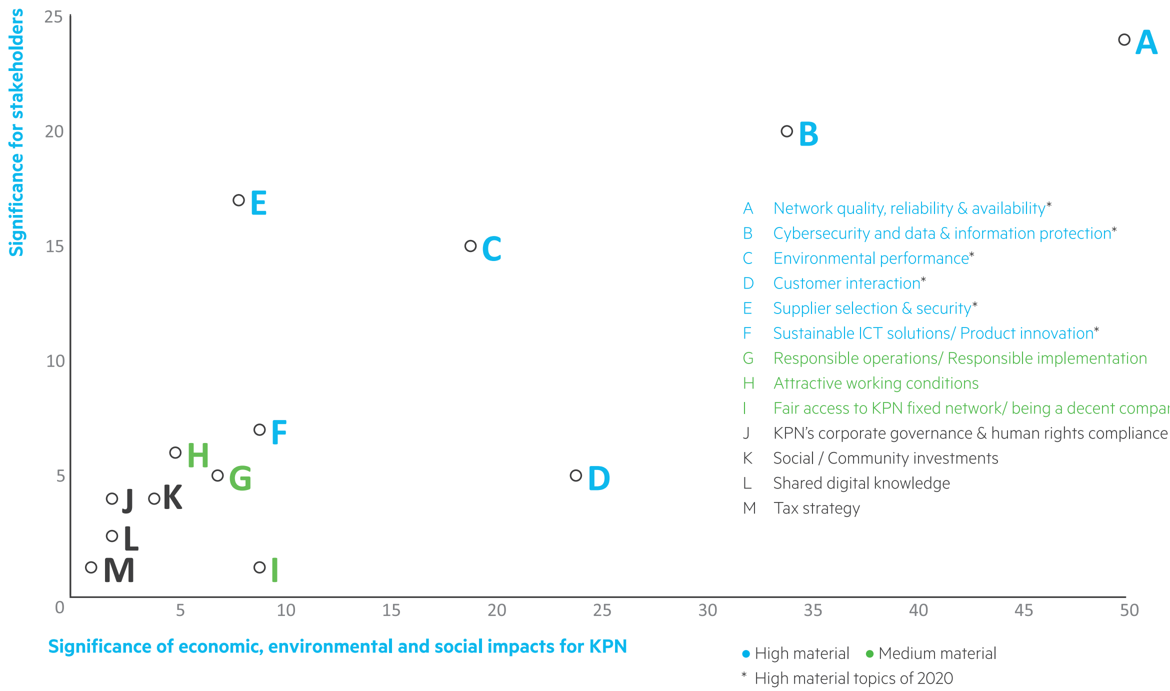
the vertical axis determines the degree of impact that KPN has on the topic in society. KPN divides the results into these categories:

- Material topics: we aim to fulfill a leading role on these topics by developing policies, setting targets and defining KPIs to monitor and report on our impact.
- Other topics: we want to demonstrate our social responsibility in these areas, and although we monitor these topics, our reporting on them is more concise.

KPN materiality matrix 2021



Step 3: Approval and integration in the report
Based on the priority outcomes of the materiality analysis, approved by the Board of Management, we determined which material topics would be addressed in the report, including the scope and aspect boundaries of all topics. The definitions per topic are described in the table on the next page.

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Topic 2020	Topic 2021	Definition
Network quality, reliability & availability	Network quality, reliability & availability	The impact the quality and reliability of KPN's networks have on the accessibility of high speed internet - and therewith the availability of critical communications (short term) and the contribution to growing economic and social activity (long term). It is a basic need for customers that needs to be available everywhere all the time at a fair price.
Data & information protection	Cybersecurity & Data & information protection	The impact KPN's data & information protection and cybersecurity efforts have on safeguarding the safety, privacy & identity of customers and employees & where applicable suppliers.
Environmental performance	Environmental performance	The impact KPN's energy use for own operations (technologies, networks) and circular approach (sourcing of virgin materials, extended product use, high end second life of product and materials in consultation with its suppliers) have on the circular economy, biodiversity and climate change.
Customer interaction	Customer interaction	The impact digitalized and simplified customer interaction and complete and transparent marketing and communication (e.g., on brand strategy) have on customer value and on the sense of appreciation of customers.
Supplier selection & good governance	Supplier selection & Security	The impact that KPN's selection of suppliers has on Dutch society and the impact good governance and security among KPN's suppliers and respected human rights have on local communities.
Sustainable ICT solutions	Sustainable ICT solutions / Product innovation	The impact that KPN has with its digital product innovation and future proof technologies on the acceleration of digitalization and reduction of GHG emissions.
Responsible operations	Responsible operations / Responsible implementation	Impact on health and safety of people in the surrounding communities of KPN's network infrastructure.
Attractive working conditions	Attractive working conditions	The impact that providing attractive and fair working conditions (professional development, health & safety, diversity & equality promoting measures) has on KPN's workforce employability, well-being and welfare.
Fair access to KPN fixed network	Fair access to KPN fixed network / being a decent company	The impact of being a decent company and offering fair access to KPN's fixed network (non-discriminatory treatment access seekers both customers, business and wholesale) has on KPN's competition position.
KPN's corporate governance & human rights compliance	KPN's corporate governance & human rights compliance	The impact that responsible governance (e.g. anti-corruption, anti-fraud, anti-money laundering) and respected human rights (e.g. related to child labour, bonded labour, safety hazards) have on business continuity and trust.
Social community investments	Social / community investments	The impact KPN's social / community investments on digital access (information and communication technologies) and sponsoring have on digital and social inclusion of everyone and anywhere.
Shared digital knowledge	Shared digital knowledge	The impact KPN has with sharing its knowledge on digital technologies, on preparing and influencing people and society (government) for a digital future.
Tax strategy	Tax strategy	The impact of a tax strategy that is compliant with all relevant laws, regulations and international standards that strives to the most tax efficient and responsible approach in the interest of all stakeholders of KPN.

Stakeholder dialogue

KPN is in continuous dialogue with a diverse set of stakeholders, with equally diverse interests and motivations. These dialogues take place on different levels within our organization and are often a part of our daily business. Members of the Board of Management attend the most important stakeholder dialogues, in which a variety of stakeholders are present. The below table provides insight into all the interactions we had with different stakeholders.

Stakeholder group	What they expect	How we engage (incl. frequency)	Main topics in 2021	Our response
Employees	Employees expect us to provide opportunities to develop in a dynamic workplace. For them, this translates to an attractive, effective and inspiring work environment (physical, technology, learning and development); simplicity in data, organization, technology and processes; transparency in the organization, and from leadership, a recognizable culture and values, and excellent development opportunities. New generations expect generational awareness, dynamic career perspectives, continuous feedback, mentoring and coaching, empowerment, purpose and agility.	To some, the changing conditions in the world and the labor market may feel like a threat. That is a natural reaction and we see it as our responsibility as an employer to both create awareness of the consequences of the fast-changing environment and encourage and enable people to seize the opportunities this offers. In the long run, KPN's HR function will increasingly be using data, digital tools and robotization and AI to create an employee experience that responds to increasing consumerism and will result in alternative employment relations.	• Safe and COVID-19 proof work environment for all employees • Leadership based on our leadership profile – giving purpose, engaging people, delivering performance • Maximize internal mobility with continuous support on personal development • Focus on future skills and capabilities, rationalization and standardization • A future-proof organizational design with room for authenticity, diversity and inclusiveness • Implementing a HR information system in the cloud (Oracle, launch Jan '22) aimed at simplifying and standardizing HR processes and enabling managers and Employees in their day-to-day HR related tasks	• Create a safe and digital work environment, with attention for the psychical and mental wellbeing of our employees • Continuous investment and development of our employees with an enlarged digital L&D offer

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Stakeholder group	What they expect	How we engage (incl. frequency)	Main topics in 2021	Our response
Government and regulators	The government and regulators expect us to run infrastructure and services considered as very important to the Dutch economy and Dutch society at large and to create coverage of high-speed networks. One of their goals is to create a level playing field and protect the interests of end-users. They therefore expect us to comply with applicable rules and regulations on various topics, including fair competition, safety, consumer protection, privacy et cetera. They also expect us to be climate responsible and transparent in our communication.	We proactively engage with the government and regulators. We engage in a continuous dialogue to explain our efforts and results. Furthermore, we work together with (local) governments on the roll-out of our networks, innovation (e.g. IoT) projects, generating energy and cost savings.	• Avoiding non-compliance • Integrity and transparency • Continued concerns around national cybersecurity • Network roll-out (both fiber and mobile) in agreement with local governments, and compliance with various regulations • Access regulation to KPN's fixed network	• We continued our compliance efforts through clear and practical legal advice, clear operating procedures and related control frameworks, compliance training and culture programs, and clear and safe ways to report potential misconduct • We interact closely with ACM in relation to compliance, incidents and potentially different views on the interpretation of the law • We engage with local governments on the best way to roll-out of our networks in their territories
Investor community	The investor community – financial markets in general, our shareholders, debt investors and research analysts – expects us to be extensive and transparent. We should be clear and consistent in communicating our financial and operational performance, strategy, objectives, and outlook, and transparent about environmental, social and corporate governance topics, including executive remuneration. Their main interest is our commitment to creating value. They want timely and accurate updates and ample opportunity to seek clarification and ask questions.	We organize key corporate events such as the Annual General Meeting of Shareholders and Capital Markets Days, and we meet with (potential) investors, analysts and credit rating agencies during (virtual) roadshows and conferences. We also provide relevant company information through timely press releases and regular publications such as our quarterly results and Integrated Annual Report.	• Execution of our updated strategy Accelerate to Grow to create long-term value in the interests of all KPN stakeholders • Progress on accelerated fiber roll-out • Unsolicited takeover approaches • Regulatory uncertainty from potential fixed access regulation • Shareholder returns • Leverage profile/balance sheet	• We organized a virtual ESG webinar, providing insights on how sustainability is embedded in our strategic focus for the coming years and what our group-wide objectives are • We rejected two unrelated, unsolicited approaches as they did not provide tangible and material added value to KPN's widely supported new strategy • We announced a strategic partnership with APG to accelerate the roll-out of fiber. The scope of the agreement was extended at the end of the year • While KPN's fixed access network is no longer regulated, KPN has reconfirmed its open wholesale policy based on its voluntary offer and the long-term contracts it has in place with several parties • We completed a €200m share buyback as part of our commitment to structurally return additional capital to our shareholders • We closed a €1.0bn Sustainability-Linked Revolving Credit Facility and issued a €700m Sustainability-Linked Bond
Suppliers	Our suppliers expect to maintain a long-term commitment and cooperation with us. Furthermore, they expect simple contracts, fair prices, acceptable payment terms and compliance with the core principles of data protection. Together we should look for opportunities regarding sustainable cost reduction.	KPN has a central corporate procurement organization that is responsible for contracting deals with suppliers. We make sure the principles of our suppliers' CSR policies are in line with our own. We are constantly in touch with our suppliers and invite them to our annual Supplier Day. We increasingly partner with them on sustainable solutions. We are also a member of the Joint Audit Cooperation (JAC), an association of 17 telecom	• We adjusted our procurement policy in 2020, introducing a new process for suppliers from non-EU countries, mainly to assess potential geopolitical risks involved. One of the reasons we set up this non-EU suppliers procedure was the increased impact of geopolitical issues on international business in the past few years.	• Together with our suppliers we implemented sustainable solutions which resulted in cost reductions, as well as reductions in energy and material use. • We aim for all suppliers we do business with to comply with the KPN Supplier Code of Conduct or have their own equivalent code. Our Code of Conduct helps to ensure that all our suppliers are committed to conducting their business in a manner that is ethical, legal

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Stakeholder group	What they expect	How we engage (incl. frequency)	Main topics in 2021	Our response
		operators that aims to verify, assess and develop CSR implementation across the manufacturing centers of important multinational suppliers.		environmentally friendly, respectful of human rights and socially responsible, and adheres to JAC standards too. • KPN has integrated the EcoVadis Scorecard. This is an evaluation of how well a company has integrated the principles of CSR into their business and management system. The assessment is part of our tender process. The scope criteria are across four themes: environment, labor & human rights (Employee Health & Safety, Working Cond., Soc. Dialogue, Child Labor, Forced Labor & Human Trafficking, Diversity, Discrimination and External Stakeholder Human Rights, ethics & sustainable procurement). If the outcome of the assessment is <35 points, the supplier must draw up an improvement plan in order to mitigate identified risks for the purpose of achieving a score of the least 35 points in a later assessment.
Business customers	Customers expect KPN to help them with the digital transformation within their companies. They want sincere and proactive advice that meets their specific needs. Business customers also expect effortless IT solutions and there is a growing customer demand for continuous accessibility, as well as fast and reliable fixed and mobile connections. When problems do occur, they expect KPN to solve them adequately and demonstrate customer-centric behavior.	We talk to our business customers every day via account managers, service managers, in our XL stores, our contact centers and our Business Partners. We give customer the opportunity for 'Advies op Afstand', an online video solution for contact. We also engage with them through customer panels, quarterly market research and workshops connecting customers' strategies with KPN, as well as social media through our B2B platform, The Digital Dutch. We engage through our Customer Experience Lab in which we test the needs and experience of the customers. We closely monitor our business customers' satisfaction and loyalty through NPS.	• Digital Dutch Experience • Improve customer experience & loyalty • Migrations of customers to our target portfolio	• We started a large-scale roll-out of fiber broadband including high-speed internet business parks • We continue to inspire our customers with our online Digital Dutch platform. We co-create content with our customers to inspire others with our customers in the podcast Digital Heroes and proactively engage with our customers in other Dutch forums • Growth in professional services supported by integrated solutions at KPN's larger customers
Retail customers	Our retail customers expect the certainty of failure-free and secure networks, easy to use products & processes and good on- and offline customer service. They also want their loyalty to be acknowledged and appreciated through sincere and proactive advice about the best possible subscriptions that meet their needs.	We communicate 24/7 with our customers on our front ends (through customer service, our engineers, in our stores and on social media). Both reactive as well as pro-active. We collect and monitor both requested and unrequested customer feedback on a daily basis and share these customer voices throughout the company. We also use external panels	• Best network: Always being connected by giving our customers the best Wifi experience, best iTV experience and best fixed internet and mobile connection • A seamless and easy digital experience • Improved Customer Journeys • Best proposition for households	• We continued the roll-out of fiber broadband, for both existing, new and future customers • We introduced 5G in our mobile propositions • We introduced a new WiFi manager were customers can easily check and improve their WiFi. And we

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Stakeholder group	What they expect	How we engage (incl. frequency)	Main topics in 2021	Our response
		for our Brand NPS and RepTrak to objectively monitor our reputation.		improved our Super WiFi offer for existing customers • We raised iTV customer satisfaction by new software releases, finalising the new menu migration, improving recording platform and improving content
Society	Society expects us to have a positive influence on Dutch society. They expect us to be socially and environmentally responsible and to be a good corporate citizen. They want products and services that help to solve social and environmental issues. They also expect us to be a frontrunner in sustainability and other societal issues by creating sustainable partnerships. KPN has the potential to lead debates, e.g. on privacy and the data use.	We are active in working groups initiated by NGOs and participate in or liaise with organizations such as the European Telecommunications Network Operators' Association (ETNO), the International Telecom Union (ITU), the United Nations Global Compact Foundation, the Dutch Association of Investors for Sustainable Development (VBDO), the ICT Coalition and Circle Economy. Furthermore, we organize an annual meeting with stakeholders to discuss our contribution to society and the desired next steps	Topics discussed with our societal partners were: • How can KPN enforce the beneficial effects of the increased digitalization (a.o. working from home) and safeguard the beneficial environmental effects • How to interact with suppliers on the living wage standard • What actions does KPN take to stimulate diversity and reduce the gender pay gap • Taking the next step to develop impact measurement	• We developed a new Way of Working that we also promote outside KPN • We put Living Wage on the agenda of JAC and made it a proposal to act upon. • We introduced a recruitment approach aimed at diversity and did an investigation on the existing gender pay gap • We carried out a branch-wide impact study on climate and on employees and we published a handbook on impact measurement for network organizations.

How we engage with policymakers

KPN actively engages with policymakers in politics and government, and sponsors activities that help to generate public debate around the consequences of digitalization, as well as develop actions to address them. For KPN, as a predominantly Dutch operation, policy is primarily shaped in Brussels and The Hague. The focus of our engagement is therefore aimed at policy makers in these cities. To increase relevance with policymakers, our aim is to cooperate as much as possible with other like-minded companies. As such, KPN participates in trade organizations active in the Netherlands as well as at a European level, and contributes to these organizations.

These contributions account for the majority of the disclosed amounts. The sums apportioned to Brussels are part of the sums disclosed in the Transparency Register to which KPN has subscribed from the start. The Transparency Register also encompasses an estimation of cost of staff. KPN also participates in global organizations like GSMA, which aims to develop the mobile industry worldwide, and which engages with policymakers in Europe and elsewhere, too.

Finally, KPN contributes to ITU, which is a standardization body and a United Nations Agency, but which is not a trade organization and therefore is not included in the sums presented.

KPN does not financially, or in any other way, support political parties or candidates for political positions. KPN does engage with national and regional authorities through knowledge-sharing to facilitate informed regulatory policy measures. KPN contributes to sector organizations representing the interests of KPN in specific fields. Management upholds strict standards on ethical and transparent behavior.

Employees who are politically active must ask for permission if they have paid political functions, e.g. as a member of municipal or regional councils. In the past, KPN's policy has always been to approach policymakers directly. KPN does not use external public affairs agencies to speak on its behalf.

KPN presents the amount of money spent on public affairs in three categories. KPN does not disaggregate these figures further, as we are not at liberty to divulge the contributions to individual organizations.

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Type of Trade organization	Geographic scope	Spend in 2021 in EUR	Focus of membership (non-exhaustive)
Trade bodies representing the interests of mobile operators worldwide	Global	85,882	Develop the mobile industry worldwide with a focus on a level playing field and predictability of the law. Create common standards and encourage sustainable innovation
Trade body representing Europe's telecommunications network operators	European Union	131,207	Create a level playing field within the EU based on an unambiguous and predictable legal situation Focus on the European Electronic Communications Code, the General Data Protection Regulation, ePrivacy, and the Privacy Shield
Trade body representing industry and employers in the Netherlands	The Netherlands and the European Union	356,723	Monitor and influence nationwide issues that are of importance across sectors, e.g. include creating a prosperous investment climate, fiscal climate, social agenda and a digital agenda
Trade association for IT, telecom and internet companies	The Netherlands	38,115	Monitor, influence and increase awareness of (issues in) the digital economy, e.g. on continuity and security and privacy
Trade association in the technology industry	The Netherlands	181,500	Monitor and influence national policies in particular for the manufacturing industries, such as health care, metallurgy, microconductor industry, and the digital industry
Trade association for the positioning of the Netherlands defense- and safety-related industry	The Netherlands	40,896	Monitor and influence national policies specifically in the field of national security
Trade body and knowledge center representing commercial users of electricity and water in the Netherlands	The Netherlands and the European Union	27,983	Representing the interests of small, medium and larger organizations that use water and electricity on a professional basis
Trade body representing the interests of the cybersecurity sector	The Netherlands and the European Union	30,250	Aims to increase the digital resilience of the Netherlands and to increase the quality and transparency within the growing cybersecurity sector
Coalition formed to stimulate AI	The Netherlands	27,225	Coalition bringing together organizations to facilitate an organized approach with regard to Artificial Intelligence
Platform for information society	The Netherlands	24,200	Neutral platform where government, knowledge institutions, business and civil society organizations collaborate on public-private partnerships and share knowledge about the responsible design of our digitalizing society
Cluster in the security domain	The Netherlands	24,200	Network of businesses, governments and knowledge institutions, that work together on knowledge development and innovation in security
Association for data-driven marketing	The Netherlands	10,787	Association advocating responsible data-driven marketing, unlocking the potential withing the regulatory framework
Association for healthcare technology	The Netherlands	4,365	Healthcare association advocating actual care issues to increase the knowledge and quality of the healthcare industry

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Appendix 4: List of top risks

Category	Risk	Countermeasures	Evaluation
Fast-changing market conditions: strong competition	KPN faces strong competition on services and network access from current competitors as well as new market entrants and over-the-top (OTT) players. Competition in Consumer, Business and Wholesale markets can occur based on price, content, increase of investment in customer acquisition or retention costs, subscription options, coverage and service quality. Most of our services are increasingly based on technology standards, limiting the possibilities for differentiation from competitors. Our competitive position could be threatened by actions of competitors, e.g. in the roll-out of fiber networks or in the adoption of pricing strategies. These factors could lead to lower profitability as well as lower market shares. ***Impacted strategic objective*** Grow & strengthen customer footprint	• Implement a superior network in the Netherlands by: o Accelerating fiber roll-out for Consumer and Business market (by KPN or its joint venture), increasing availability of high access speeds and improving in-home WiFi coverage o Enabling the latest innovative mobile technologies by modernizing the mobile network o Moving to an All-IP infrastructure • Offer fixed-mobile converged services and competitive price/portfolio combinations, such as KPN Hussel for Consumer Market (CM) and KPN ÉÉN SME, Smart Integration and Smart Combinations for Business market (BM) • Improve NPS and offer high quality of service to customers • Maintain focus on high-value customers in both Consumer and Business market • Launch targeted household approach and optimize KPN Hussel propositions • Introduce new innovative products and services to meet changing customer needs, such as SuperWiFi (CM) and Security services (BM) • Simplify and streamline the operating model. This will lead to improved time-to-market, better quality of service and a simplified and agile organization. Additionally, it will lead to a structural lower level of operational costs and will enable swift response to new market developments • Strengthen distribution power with business partners, online channels, and shops • Strategic partnerships and cooperation with OTT players including third-party services such as gaming, content (CM) and Office, Azure (BM) • Rationalize our brand portfolio: focusing on the strong KPN brand by expanding KPN's services with the best elements of the individual brands, to offer customers in all segments a better user experience • Improve customer loyalty and customer experience by optimizing and digitalizing customer journeys, use of AI and implementing advanced data analytics programs	**Likelihood** High **Impact** High **Trend** Stable **Monitoring KPI:** • Market shares, net adds • (Mass-market) service revenues • ARPU, ARPA • Number of Fiber homes passed
Fast-changing market conditions: disruptive technologies or business models	KPN's business model and financial performance could be affected by disruptive technologies or business models, changing customer preferences and entrance of new players (including big tech companies and companies that provide telecom services via satellite). KPN's response to new technologies (such as artificial intelligence, quantum computing, software-defined networks, alternative network providers, integrated optics, eSIM), changing customer behavior, and market developments and its ability to successfully and/or timely introduce new competitive products or services, are essential to KPN's performance and profitability in the long run. The introduction of new products and services such as new propositions may not be successful and/or timely. This could lead to lower profitability as well as lower market shares. ***Impacted strategic objective*** Leverage & expand superior network Grow & strengthen customer footprint Simplify & streamline operating model	• Implement a superior network in the Netherlands by: o Accelerating fiber roll-out for Consumer and Business market (by KPN or its joint venture), increasing availability of high access speeds and improving in-home WiFi coverage o Enabling the latest innovative mobile technologies by modernization of mobile network o Moving to an All-IP infrastructure • Develop new services, business models and pricing models • Continue the exploration of how KPN can adequately and timely respond to changes in the (telecommunications) market and value chain by implementing new business initiatives, in line with KPN's strategy • Develop strategic partnerships with OTT players and network suppliers • Implement an agile organization, technology (such as applying open innovation models and standardized technology) and processes to enable swift response to new market developments • 5G field labs, Innovation & Partnerships team and proof of concepts (e.g. in software-defined networks and network function virtualization) to test new technologies with customers • KPN Ventures: scout, invest in and create cooperations with innovative technology companies to enhance innovation in key areas such as Internet of Things, smart home, cybersecurity, cloud computing, data services, digital healthcare, mobile/video (OTT) services and networking technology (e.g. integrated optics)	**Likelihood** Medium-High **Impact** High **Trend** Increasing risk **Monitoring KPI:** • Revenues existing business (Mobile, Fixed, TV, etc)

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Category	Risk	Countermeasures	Evaluation
Operational and quality related incidents	KPN's services, technical infrastructure and IT may be vulnerable to damage, service interruptions, operational issues and loss/theft or manipulation of customer data. These incidents could be caused by failures in the network systems, power supplies, failures and bugs in supporting computer systems, disasters (e.g. fire, flooding), human errors, supplier failures, pandemics and absenteeism, sabotage, terrorism or legacy systems. During the COVID-19 crisis, our customers and society relied heavily on our networks and services, making them more sensitive and vulnerable to network disruptions. Continued climate changes in the future could lead to rising sea levels, extreme rainfall, flooding or extreme heat; these weather conditions could also disrupt our systems, networks and services. Such incidents could have a negative impact on society, the quality of our services, reputation, profitability and customer satisfaction. ***Impacted strategic objective*** Leverage & expand superior network	• Implement a superior network including a resilient design of our networks in the Netherlands by: o Accelerating fiber roll-out for Consumer and Business market (by KPN or its joint venture), increasing availability of high access speeds and improving in-home WiFi coverage o Enabling the latest innovative mobile technologies by modernization of mobile network o Moving to an All-IP infrastructure • Simplify and streamline operating model: acceleration of simplification, automation and digitalization program for improved quality of service • In order to increase our operational performance as a company KPN has established the Operations Stability Program. This KPN-wide program is focused at increasing the availability of our (critical) services to our customers. It consists of several streams, not only addressing business continuity management, architecture and recovery times, but also cultural and behavioral aspects • Monitor performance of technical infrastructure (e.g. traffic growth and utilization rate), IT (predictive analysis of required maintenance), and network components, connections and platforms, and also improve (insight in) network redundancy • Continuous improvement of operational processes and systems (including problem management) • Business continuity management of all assets needed for continuous delivery and evaluation of their dependencies, back-up and recovery plans in case of emergencies and adequate external communication (e.g. escalation procedures, corporate crisis management teams and public affairs) • Regional roaming in which a part of mobile voice traffic can be transferred to other operators in the event of calamities • Insurance agreements to cover liability claims of customers or third parties in case of service interruptions • Continued implementation of the regularly updated KPN Security Policy which is aligned with acknowledged standards (NIST, ISO, OWASP, CIS benchmarks, etc) • Perform scenario analyses for climate change: assess the effects of climate change (such as flooding or heating risks) on our critical infrastructure and implement additional protective measures where necessary • KPN's activities to acquire annual recertification for ISO, including e.g. ISO14001	**Likelihood** Medium **Impact** High **Trend** Stable **Monitoring KPI:** • NPS NL • Network availability • Major incidents • Damage per incident per service
Strategic transformation	KPN may not make sufficient progress in realizing the necessary simplification and transformation actions, for example by phasing out legacy networks and systems, by simplifying our processes and services, by digitalizing our business, by organizational transformation (more lean and flat), by post-merger integration of our acquisitions or by strengthening our capabilities and culture. These actions must lead to necessary cost reductions, increased agility (e.g. less complexity and improved time-to-market of new innovative services), increased digitalized operations and higher quality of services (e.g. higher NPS and first-time right). Global pandemics such as the COVID-19 pandemic could delay the implementation of restructurings and consequently could lead to lower cost savings in the medium term. If KPN cannot realize simplification and transformation in time, we may not able to adequately respond to actions of our competitors and could lead to lower cost savings, less room for new Capex and lower profitability in future. ***Impacted strategic objective*** Simplify & streamline operating model	• Lean operating model: acceleration of simplification and digitalization program (digital customer interaction, digital employee mindset, simple IT architecture and technology). This will lead to improved time-to-market, better quality of service and a simplified and agile organization. Additionally, it will lead to a structural lower level of operational costs • Rationalization of networks, IT, products and services, datacenters and technical infrastructure • Increased use of standard (cloud) building blocks in networks • Focused innovation and govern innovations and simplification at executive level; strong planning of new innovation, simplification and organizational improvement projects	**Likelihood** Medium **Impact** Medium **Trend** Stable **Monitoring KPI:** • Opex reduction • Progress on strategic transformation programs •Fiber homes passed

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Category	Risk	Countermeasures	Evaluation
Sustainability	KPN may fail to meet stakeholder expectations relating to energy, emissions and sustainability. This could lead to reputational damage and subsequently loss of customers, and loss of profitability in the future. **Impacted strategic objective** *Generic (recognized as ESG frontrunner)*	• Embed sustainability in our corporate strategy, ambitions and targets • Maintain KPN's climate-neutral performance • Continued efforts on reducing energy usage and emissions for our own operations and in the supply chain (KPN aims for net-zero emissions in 2040) • Implement circular operations and services to reduce our footprint, e.g. by collecting customer equipment for reuse and recycling, increasing the longevity of our products and where possible switch to less virgin materials • Continue KPN's CO_2e-reduction objectives as approved by the Science Based Targets Initiative (SBTI), which means they are in line with the climate goals of the Paris Agreement • Measure energy savings by ICT solutions for our customers • External communication program about KPN's activities on corporate social responsibility, sustainability and on energy management and the benefits for KPN's stakeholders such as customers and Dutch society	**Likelihood** Low **Impact** Low **Trend** Stable **Monitoring KPI:** • Energy consumption • Carbon emissions • Circularity (long-term goal: close to 100% as of 2025) • Percentage of waste • Ranking in Dow Jones Sustainability Index and CDP or similar ratings
Information and cybersecurity threats	Unauthorized access, modification and disclosure within KPN's technical infrastructure, IT and (customer and company) data. This risk could be caused by: • Malicious actions and attacks by actors such as nation-states, organized criminals, hacktivists, terrorists and insiders • Vulnerabilities in KPN's systems, applications or platforms The risk could lead to: • Loss or leakage of confidential information (KPN and customer data) • Disruption of our telecom services to customers • Reputation damage, high remedial costs, fines, loss of customers, declining results of operations • Increased regulation and supervision thereof ***Impacted strategic objective*** Leverage & expand superior network	• Implementation of baseline security measures according to the KPN Security Policy (KSP), which are aligned with acknowledged standards (NIST, ISO, OWASP, CIS benchmarks, etc) • Continuous improvement of security according to the KPN security lifecycle • Role-based security awareness of KPN employees, partners and suppliers • Enhanced risk intelligence and increased network visibility • Continuous development of security capabilities (people, processes and technology) • Execution of strategic security actions, e.g. permanent vulnerability management, identity and access management, endpoint protection and security incident & event management • Introduction of threat hunting • Increase cybersecurity exercises to improve response readiness • Knowledge and threat intelligence sharing with the NCSC, leading Dutch and EU telecom operators, vendors and the global CERT community • Proactive stakeholder and reputation management including dialogue with regulators, national security agencies and decision makers • Insurance agreements to cover liability claims of customers or third parties in case of cyber attacks	**Likelihood** High **Impact** High **Trend** Increasing risk **Monitoring KPI:** • Number and severity of security alerts and incidents • Number and severity of expired KSP exceptions • Number and severity of network & asset vulnerabilities
Regulatory compliance	KPN may face issues in relation to non-compliance with regulation, including –but not limited to– telecommunications, privacy and consumer protection regulations. These incidents can lead to fines or have a negative impact on KPN's reputation and relationship with regulators and/or supervisors. ***Impacted strategic objective*** Generic	• Centralized organization for compliance and risk management • Compliance training sessions for staff and management, for example e-learnings about the company codes for all KPN staff in the Netherlands • Proactive internal compliance investigations • Surveys and culture improvement programs • Improving and maintaining a robust internal control framework dedicated to complying with specific regulations • Ringfencing wholesale within operations • Quarterly compliance report to Board of Management	**Likelihood** Medium **Impact** Medium **Trend** Stable **Monitoring KPI:** • Fines • Compliance incidents reported to regulator
Tax	Tax risks: • Adverse decisions or interpretations of tax authorities on pending disputes or changes in tax treaties, tax laws, OECD guidelines, EU Directives and other rules could have a material adverse effect on KPN's net result and cash flow. • Notwithstanding the fact that KPN is committed to being fully compliant with the relevant laws and regulations and adheres to its tax strategy and policy (see ir.kpn.com), some of KPN's tax positions could be perceived negatively by the political environment and society, which could lead to reputational damage.	• Act in line with our company-wide tax strategy and tax policy • Continuous monitoring of internal control framework for key tax risk areas • Maintain good working relationships with tax authorities and provide them with required information if and when relevant • Tax planning, while remaining compliant with all relevant laws, regulations and international standards • All KPN's tax positions need to pass the 'mirror test' • If (taxable) profits do not develop according to plan, timely action/tax planning is needed to avoid impairment (loss) of DTA • Defending KPN's position through court procedure	**Likelihood** Medium-High **Impact** High **Trend** Increasing risk **Monitoring KPI:** • Effectiveness of tax control framework

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Category	Risk	Countermeasures	Evaluation
	• With regard to WBSO and Innovation Box benefits: KPN has a volatile number of eligible hours for WBSO, mainly due to divestments and lower qualifying Capex budgets for innovation. • If business results do not meet expectations, KPN's net DTA may have to be impaired. • The introduction of new mobile consumer propositions in August 2016 caused a change in the VAT calculation methodology which resulted in a lower remittance of VAT from August 2016 until December 2018. KPN's view is not shared by the Dutch tax authorities. KPN concluded, based on the applicable regulations, that a positive outcome of this dispute is not highly probable and therefore recorded a contract liability for the VAT amount. Additionally, an amount for the corresponding interest amount has been accounted for. A potential negative outcome of a forthcoming court procedure will lead to a negative cash flow in future years. • Upon completion of all prior years, the German Tax authorities started a tax audit of E-Plus over the fiscal year 2014. As part of this audit, in 2021, the German Tax authorities requested KPN's German subsidiary to further substantiate its tax filing with regard to the restructuring of the substantial debts that E-Plus had incurred over the years. The subsidiary has addressed the questions on the basis of supporting third party expert opinions regarding this matter. Completion of this process may take time given the materiality and complexity of the 2014 tax filings. ***Impacted strategic objective*** Generic		
Electromagnetic fields	Although there is no evidence that electromagnetic fields of (mobile) equipment or base stations pose health risks, a change in this view could expose us to significant claims and litigations, a severe drop in our mobile business or high compliance costs of new laws and regulations (e.g. major changes in our mobile networks). Public perception of electromagnetic fields or actions of anti-5G movements could hinder the roll-out of mobile networks or disrupt our (critical) communications equipment, which could lead to service interruptions and higher costs of operations. ***Impacted strategic objective*** Leverage & expand superior network	• Monitor national and international scientific research on the effects of electromagnetic fields on health, provide data to longitudinal and other research • Strict adherence to all national and international standards for electromagnetic fields • Increase pressure on government (EU -via GSMA- and national) to steer the EMF debate • Provide adequate and scientific information to the public regarding the effects of electromagnetic fields • Start of escalation procedures and continuous consultation with police, local authorities, industry representatives (Monet) and owners of mobile sites for preventive and protective measures (e.g. surveillance) to protect mobile sites	**Likelihood** Very low **Impact** High **Trend** Stable **Monitoring KPI:** • Research developments

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Category	Risk	Countermeasures	Evaluation
Impact of new regulations	New regulatory decisions in the EU and the Netherlands could affect KPN's future operations and profitability, such as decisions regarding continuity, end-user protection, level playing field in access regulation and between telco and internet players, (national) security, and spectrum auctions. Currently, no designation of significant market power (SMP) for fixed (wholesale) markets exists, although the Dutch national regulator reviews these markets again and could once again designate KPN. A new 'symmetric access' obligation (without the need for SMP findings) has been introduced in the European Electronic Communications Code (that was implemented by 21 December 2020 in Dutch law) for wholesale access to non-replicable cable infrastructure to customer premises. The scope of this new provision has not yet been defined at national level and the ACM may – upon request of operators – define a broader application of the provision than currently foreseen by KPN. ***Impacted strategic objective*** Generic	• Proactive stakeholder and reputation management including dialogue with regulators, national security agencies and decision makers • Periodic report to Board of Management on status of new laws and regulations, and where necessary scenario analyses on the possible impact for KPN • Legal proceedings where deemed necessary • Dedicated program to implement new regulations in a structured and effective manner	**Likelihood** Medium-High **Impact** Medium-High **Trend** Increasing risk **Monitoring KPI:** • Regulatory developments (NL, EU)
Uncertainty about KPN's future business model to recover high investments	The telecom and ICT market is characterized by strong competition, accelerating changes in customer behavior, accelerating technological developments, increasing price pressure and shrinking markets. Due to these developments, high investments in our assets such as technical infrastructure (access and core networks), IT infrastructure, licenses and goodwill may not be recovered as KPN's business models to generate revenue and cash flow streams could change in future. Also, changes in assumptions such as profitability, network penetration, long-term growth and discount rate could negatively affect the value of cash-generating units. These factors could lead to impairments of tangible assets, such as mobile and fixed networks, and of intangible assets, such as licenses and goodwill. ***Impacted strategic objective*** Leverage & expand superior network Grow & strengthen customer footprint	• Strong Capex planning, supported by data-driven decision-making process and based on ROCE and NPV analyses • Cross- and upselling of new services such as IoT, cloud, security and content to add value to our connectivity and access portfolio (Business segment) and deep-selling of telecom services in households (Consumer segment) • Customer lifetime value (CLV) steering by monitoring end-to-end profitability of services and business lines • Long-term vision on our networks, to optimize and align future investments (both timing, size and technology) with our commercial portfolio, market developments and financial performance • KPN Accelerate to Grow strategy; continuous monitoring of realization strategic business plans and performance, e.g. utilization and return on investments • Develop strategic partnerships and investigate options for network sharing • Implement a solid investment policy • Monitor profitability of the cash-generating units and network penetration	**Likelihood** Medium **Impact** Medium-High **Trend** Stable **Monitoring KPI:** • ROCE • Capex as % of revenues • Network utilization • CLV • (Mass-market) service revenues
Delay of roll-out new networks	The telecommunications industry is characterized by rapid technological changes and innovations. To meet future customer needs and to stay ahead of our competitors, KPN must continuously invest in its infrastructure to upgrade, modernize and simplify its networks and supporting systems. The modernization of our fixed networks (e.g. fiber roll-out) and mobile networks could be delayed, for example due to higher costs, lack of construction capacity, the COVID-19 and other pandemics, or initiatives of (new) competitors. Also, if KPN cannot generate sufficient cash flows in the future (e.g. due to lower number of activation of new customers on our networks or strong competition) or if KPN's capital position declines (e.g. deteriorating net debt/EBITDA ratio), we are not able to realize and finance the required investments. This could subsequently lead to a higher churn of customers, declining market shares and to lower revenues and profitability in future. ***Impacted strategic objective*** Leverage & expand superior network Grow & strengthen customer footprint	• Close long-term contracts with suppliers and contractors to safeguard construction capacity for the near term • Apply new innovative techniques and procedures for fast roll-out of fiber networks • Develop strategic partnerships (e.g. Glaspoort) and investigate options for network sharing • Continuous monitoring of realization of strategic business plans and performance, e.g. growth of EBITDA and FCF, network utilization, and return on investments • Strong Capex planning, supported by data-driven decision making process and based on NPV analyses • Perform ROCE analyses on current and future investments	**Likelihood** Low **Impact** High **Trend** Decreasing risk **Monitoring KPI:** • Net cash flow from operating activities • Progress in fiber roll-out and mobile network modernization • Capex as % of revenues • ROCE

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Category	Risk	Countermeasures	Evaluation
Spectrum auctions	Participation in spectrum auction in the Netherlands in 2022 or later (3.5 GHz): in acquiring the required frequency blocks KPN may have to pay a high price for – or may not be able to acquire – the required spectrum. The 3.5 GHz auction that was planned in April 2022 will be delayed due to recent court rulings with regard to the protection of Inmarsat satellite services in the Netherlands. A long delay could lead to lower service revenues and increasing network costs in the short and medium term. ***Impacted strategic objective*** Leverage & expand superior network	• Thorough preparation by experienced KPN team and external experts; extensive simulation of auctions • Investigate alternative combinations of spectrum and advanced techniques to meet customer demands • Prudent financial policies to secure adequate funding • Proactive stakeholder management and dialogue with regulators and decision-makers, to minimize delays and ensure that the 3.5 GHz spectrum can be used for 5G in the whole of the Netherlands as quickly as possible	**Likelihood** Medium **Impact** High **Trend** Stable **Monitoring KPI:** • KPN spectrum position relative to competitors • €/MHz/pop, also benchmarked against foreign auctions
New business initiatives	KPN may not be able to sufficiently grow and monetize new business initiatives and opportunities in the near future, which may jeopardize KPN's profitability. ***Impacted strategic objective*** Grow & strengthen customer footprint	• Focused innovation initiatives such as IoT and 5G, new business as well as strategic partnerships and cooperation with OTT players to ensure KPN meets the changing customer needs and adapts to a dynamic market • 5G field labs, KPN innovation playground and proof of concepts (e.g. in software-defined networks and network function virtualization) to test new technologies with customers • Innovation & Partnerships team to incorporate innovation/growth themes in KPN's strategy • Focus innovation on six innovation and growth themes (digital services aggregation, cybersecurity4all, converged hybrid working, secure data exchanges, mission & business critical and network as a platform). The Innovation & Partnerships team will work on the execution of these themes together with the business and technology departments. The KPN startup community, Ventures and M&A scope will also be predominantly focusing on these six themes going forward. • KPN startup community to co-operate with startups and scout new innovative technologies • KPN Ventures to form partnerships with innovative companies • Allocate Capex budgets for innovative new business • Well guided migration of customers from legacy to new innovative portfolio • Accelerate digitalization of processes and customer services to foster swift development and roll-out of new innovations	**Likelihood** Medium-High **Impact** Medium **Trend** Stable **Monitoring KPI:** • Revenues new business • Take up 5G services • Market sizes (IoT, etc) • Incubator budget
Financing KPN and volatile financial markets	KPN requires solid access to (debt) capital markets to finance its operations and refinance its outstanding debt. The pressure on KPN's financial framework may increase in the event of higher net debt levels and/or lower profitability. In that case, KPN might not be able to maintain its current credit ratings, which could negatively affect pricing and availability of financing resources. ***Impacted strategic objective*** Provide attractive shareholder returns	KPN ensures solid access to debt capital markets by: • Commitment to an investment-grade credit profile • Maintaining a strong liquidity position and prefunding debt redemptions • Monitoring and forecasting of metrics used by rating agencies • Maintaining discipline in allocating capital to investment opportunities and shareholder remuneration	**Likelihood** Low **Impact** Medium **Trend** Decreasing risk **Monitoring KPI:** • Credit ratings • Net debt/EBITDA ratio • Liquidity forecast • Rating metrics (used in credit rating) • Dividend pay out ratio, total shareholder remuneration • Interest cover ratio
Financing KPN and volatile financial markets	Uncertainty or changes in financial markets could negatively affect pricing and availability of KPN's funding sources. ***Impacted strategic objective*** Provide attractive shareholder returns	• Cash flow forecasting to ensure sufficient liquidity headroom in both normal and stressed market circumstances • Maintaining a varied maturity profile, limiting the amount of debt maturing in any one calendar year • Financing upcoming debt maturities well ahead of their maturity • Maintaining sufficient liquidity reserves in the form of cash and/or committed credit facilities • Managing the mix of floating and fixed interest rates • Diversification in funding sources	**Likelihood** Medium **Impact** Medium **Trend** Increasing risk **Monitoring KPI:** • Liquidity forecast • Redemption profile • Fixed/floating interest rate mix • Interest cover ratio

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Category	Risk	Countermeasures	Evaluation
Equity erosion	Group equity position may be negatively impacted by impairments of goodwill or other assets, lower profits or future dividend payments. If our equity position is too low, it could potentially limit our dividend payments to shareholders. ***Impacted strategic objective*** Provide attractive shareholder returns	• Improve profitability of KPN Group • Monitoring (future) development of equity position and solvency ratio • Balanced shareholder remuneration in relation to profit and cash flow development	**Likelihood** Low **Impact** Low **Trend** Decreasing risk **Monitoring KPI** • Group equity position • Free distributable reserves • Total shareholder remuneration
Reliance on suppliers and their products and services	KPN relies heavily on products and services of external suppliers. This reliance relates to adequate telecommunications equipment, software and IT services, and contractors' ability to build and roll-out telecommunications networks, as well as suppliers' ability to deliver technical support. This reliance could potentially lead to unbalanced supply-demand relationships and could lead to an inability to obtain the products and services at a competitive price and quality. Scarcity could lead to late or less availability of equipment, and to increasing prices in future. Containment measures for pandemics could impact financial health of suppliers which could affect the quality and continuity of our services and projects. Furthermore, we identify the risk of an inappropriate level of back-to-back contracting with regards to customer requirements on e.g. price and services in supplier agreements. Suppliers could breach relevant legislation such as data protection, security, privacy, IPR, human rights and/or environmental laws, which could negatively impact KPN's reputation. ***Impacted strategic objective*** Leverage & expand superior network Note: Suppliers have a significant role in the realization of KPN's strategic objectives (including recognition as ESG frontrunner)	• Establishing a strong and centralized demand and contract management organization that defines, enforces and monitors compliance of suppliers with terms of contracts and preparation of re-transition plans as a fall-back scenario • Continuously monitor the availability and timely delivery of critical products and services with key suppliers and update business continuity plans accordingly. Proactively discuss with suppliers any risk mitigating measures to timely safeguard KPN's supply chain • Simplification of the supplier landscape in line with KPN's strategy and cost focus • Evaluation of outsourced activities on effectiveness and efficiency and (where applicable) preparation of a re-transition plan for insourcing • Include the possibility to terminate contracts based on non-performance and, in that case, migration of the activities to other suppliers • Include a right-to-audit clause in supplier contracts and the possibility to conduct regular audits • Monitor compliance of suppliers with the KPN Security Policy • Align customer contract requirements with supplier contract requirements (this alignment is part of the governance rules for outsourcing), in line with requirements and policies of General Counsel Office • Share the KPN Supplier Code of Conduct with all suppliers and ask that all medium and high-risk suppliers confirm compliance with this code • For high-risk suppliers, perform audit procedures to evaluate suppliers' compliance with international standards for human rights and environmental laws. Monitor timely follow-up on main audit findings • Promote transparent pricing and way of doing business • Secure long-term commitments with contractors and key suppliers, e.g. for fiber roll-out	**Likelihood** High **Impact** Medium-High **Trend** Increasing risk **Monitoring KPI:** • Spend development: % spend at top 20 suppliers • JAC audit results
Employment and diversity	KPN may not be able to attract and retain qualified and diverse staff members, as the war for talent increases rapidly. This could lead to insufficient competency and capacity in KPN's workforce. Also, employees or new candidates may have negative perceptions about KPN's employer identity. If KPN does not meet the diversity goals and 'social return' requirements, this could impact KPN's future profitability (e.g. lower margins in business market for public sector), customer satisfaction and reputation. Restructuring could lead to less motivated personnel and/or key personnel leaving the company and thus loss of knowledge and continuity. ***Impacted strategic objective*** Generic (recognized as ESG frontrunner)	• Improve skilled and talented workforce by: o Innovative and inspiring talent management programs to attract and maintain qualified staff (both from the Netherlands and abroad) o Discover new talent and make KPN more attractive for talented employees across the organization o Launch of a new employer identity and accompanying labor market strategy to attract external staff with the right capabilities o Promote technical education initiatives at high schools and universities to attract new and diverse workforce o Targeted development programs to attract hires on specific areas such as security and cloud • Clear communication to (key) staff about KPN's strategy and reasons for restructuring and value their opinions • Sustainable employability and mobility: support employees in acquiring different skills, enabling them to find a new role inside or outside KPN • Maintain or improve employee engagement and attractiveness as employer • Continued implementation of KPN's policy to improve diversity in KPN's workforce • Implementation of a strategic plan on inclusion and social return	**Likelihood** Medium-High **Impact** Medium **Trend** Increasing risk **Monitoring KPI:** • Employee engagement • % women in CLA scale 12 and higher • Ranking KPN in 'attractive employer' benchmarks.

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Category	Risk	Countermeasures	Evaluation
Adverse macro-economic conditions	The economic climate could deteriorate in the near term, for example due to the impact of the COVID-19 or other pandemics, continued political uncertainties in Europe, increasing protectionism, rising prices in assets, raw materials and energy and climate change (e.g. extreme weather). This could lead to declining spending of customers in both the Consumer and Business market and higher bad debt, and will consequently lead to lower future revenue growth, profitability and cash flows. ***Impacted strategic objective*** Grow & strengthen customer footprint	• Close monitoring of and swift response to new market developments and trends, for example by drafting contingency plans such as plans for cost-cutting initiatives and restructurings • Simplify & streamline operating model: acceleration of simplification and digitalization program. This will lead to improved time-to-market, better quality of service and a simplified and agile organization. Additionally, this will also lead to a structurally lower level of operational costs • Seizing new opportunities by innovation and introduction of new services, to compensate for declining telecom and IT businesses	**Likelihood** Low **Impact** Medium-High **Trend** Decreasing risk **Monitoring KPI** • Order intake, sales • Organic revenue growth • Bad debt, deferred customer payments • Opex levels
Pandemics	Global epidemics or pandemics such as COVID-19 and the accompanying containment measures could have several adverse effects on our business in the coming years: • Lower business revenues, for example caused by lower roaming revenues, lower handset sales and cancellations or postponement of sales contracts in business market (e.g. IT projects). • Increasing interruptions in the continuity and quality of our services, for example caused by sick leave of key personnel or disruptions in the international supply chain leading to shortage of network equipment or devices. • Lower operational cash flows due to increasing bad debt in Consumer, Wholesale or Business segments (especially when the Dutch government reduces its COVID-19 support packages). Overall, the risk could lead to lower profitability of our operations and declining customer satisfaction. ***Impacted strategic objective*** Grow & strengthen customer footprint Leverage & expand superior network	• Implement a superior network including a resilient design of our networks in the Netherlands, to offer our customers reliable and robust telecom services • Hire trained staff that are committed to delivering a high quality of customer services amid the challenging conditions of a pandemic • Offer excellent remote customer services e.g. via video chats or helpdesks • Accelerate the digitalization program for improved digital customer journeys and quality of service • Continuously assess our revenue risk profile and focus on services that are relevant for customers during a pandemic, such as broadband, security and videoconferencing services • Implement protective and preventive measures for engineers and shop personnel; implement strong network facilities for office staff to work from home • Corporate Pandemic team that co-ordinates, in close cooperation with Board of Management, the necessary actions in response to national virus developments and new regulations • Continue the execution of cost-saving programs, to offset declining revenues. Revisit roaming contracts and improve working capital management • Prepare fall-back scenarios and dual-sourcing contracts when suppliers are not able to deliver their products and services due to effects of pandemics or containment measures	**Likelihood** High **Impact** Low-Medium **Trend** Decreasing risk **Monitoring KPI** • Order intake, sales • Mass-market service revenue growth • Bad debt, deferred customer payments
High-risk vendors: Geopolitical developments for suppliers, which could trigger security, business continuity and reputational risks	Geopolitical volatility, driven by rising international tensions, protectionism and security concerns, may impact our ability to do (sourcing) business in any part of the world. These concerns could lead to bans and other sanctions on suppliers of hardware and software from countries with offensive cybersecurity activities. Such sanctions could significantly impact the supply chain and products of those suppliers and consequently could also harm KPN's availability, innovation roadmap, and use of network equipment. Additionally, public opinion of these vendors and the use of their services could lead to reputational damage and loss of consumer or business customers. The Dutch government or other regulating bodies may impose additional security requirements or ultimately ban a vendor in order to mitigate or prevent possible security issues that some vendors (or the originating countries) could bring for Dutch society. If we can no longer use equipment from those vendors in (parts of) our networks, it could lead to higher and unexpected investment and maintenance costs in future. ***Impacted strategic objective*** Leverage & expand superior network	• Conduct frequent threat analyses and closely monitor latest global and political developments in general and specifically US and EU actions regarding suppliers from countries with offensive cybersecurity activities • Perform scenario analyses during network and solution design to assess potential implications of geopolitical developments for suppliers and impact thereof on associated risks • Prepare fall-back scenarios and policies if KPN can no longer acquire or use hardware and software from specific suppliers and avoid reliance on single vendors or countries for critical or vital services • Implement new governmental regulations by defining KPN's critical assets and implementing technical and process security measures in order to sustain trusted service delivery • Ensure good relations and exchange with relevant national security agencies and political decision-makers • Maintain strong PR and communication with customers and other stakeholders regarding the use of equipment from specific suppliers and KPN's high security standards • Maintain structural risk management and governance processes for high-risk vendors in the sourcing and tender processes to be able to respond to global and political developments for vendors and their country of origin • Include the possibility to terminate contracts due to geopolitical developments and governmental decisions • In the longer term consider using open source and standardized network equipment and interfaces to limit reliance on specific suppliers or proprietary hardware and software • Maintain the KPN Security Policy and monitor continuous compliance with security requirements	**Likelihood** High **Impact** High **Trend** Increasing risk **Monitoring KPI:** N/a

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Appendix 5: Social figures

According to the Dutch law (AVG), we are not allowed to register ethic nor racial background, nor are we allowed to register nationality.

Table 1: Total number of employees (in FTEs and number)

	2021		2020		2019	
	FTE	Number	FTE	Number	FTE	Number
Overall	9,699	10,285	10,102	10,691	11,248	11,913

Table 2: Gender proportion among employees (in FTE and numbers, both as % of total)

	2021		2020		2019	
	FTE	Number	FTE	Number	FTE	Number
Male	80.0	78.2	80.3	78.6	80.7	78.9
Female	20.0	21.8	19.7	21.4	19.3	21.1

Table 3: Employee contract type (in % of total number of employees)

	2021	2020	2019
Permanent	97.5	96.6	94.4
Temporary	2.5	3.4	5.6
Part-time	28.4	27.2	26.6
Full-time	71.6	72.8	73.4

Table 4: Composition of employees per age category (in % of total number of employees)

	2021	2020	2019
< 30 years	7.1	7.7	10.0
30 - 50 years	51.2	51.7	52.9
> 50 years	41.7	40.6	37.1

Table 5: Gender proportions at management level (in % of total number of employees in top and middle management)[1]

	2021		2020		2019	
	Top	Middle	Top	Middle	Top	Middle
Male	74.8	83.7	76.4	84.2	77.4	83.8
Female	25.2	16.3	23.6	15.8	22.6	16.2

1 Top is Personal Labor Agreement and middle is salary scale 11-13

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Table 6: Remuneration difference and gender proportions (in % of total number of employees per management level)[1]

	2021			2020	2019
	Difference	Male	Female	Difference	Difference
Overall	1.8	78.2	21.8	1.5	2.0
Senior management	0.7	72.5	27.5	-	-
Higher management	1.3	74.3	25.7	-	-
Middle management	-2.2	71.3	28.7	-	-
Senior professional	3.2	84.5	15.5	-	-
Other staff	1.5	76.7	23.3	-	-

1 Senior management is Personal Labor Agreement and manager, higher management is salary scale ≥ 12 and manager, middle management is salary scale <12 and manager, senior professional is salary scale ≥ 12 no manager and other staff is salary scale <12 and no manager

Table 7: Employees covered by a collective bargaining agreement (in % of total number of employees)

	2021	2020	2019
Workforce represented in a formal joint management-worker health and safety committee	98.9	98.9	97.4
Collective bargaining agreement	93.2	92.3	84.8

Table 8: Employee training (in average hours and euro per FTE)

	2021	2020	2019
Hours/FTE	54.8	67.7	87.2
Euro/FTE	1,499	1,507	2,047

Table 9: Employee turnover (in % of total number of employees)

	2021	2020	2019
Intake	1.1	2.0	2.8
Exit	11.4	11.6	19.8

Table 10: Accident and fatality rate

	2021	2020	2019
Accidents (% of total employee number)	0.38	0.43	0.43
Fatality rate (accidents per 100 FTE)	0	0	0

Table 11: Absentee rate (per 100 FTE)

	2021	2020	2019
Absentee rate	4.6	4.2	4.4

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Appendix 6: Environmental figures

Notes

As outlined in the Combined Independent Auditor's Report (page 165), Appendix 6 is part of the assurance scope of EY's assurance procedures over KPN's 2021 sustainability information.

Scoping and calculation methodology of the reported items are specified in Appendix 3 Transparency, materiality and stakeholder engagement (page 179). Coverage of all figures according to materiality assessment (98% of operational cost).

Table 1: Energy consumption (in PJ)

	Target 2030 compared to base year	Target 2023 compared to base year	2021	2020	2019	2018	2010 base year
The Netherlands			2.132	2.428	2.728	2.841	3.662
KPN non-NL entities			-	-	-	-	0.217
KPN Group	**1.746**	**1.978**	**2.132**	**2.428**	**2.728**	**2.841**	**3.879**
Energy directly consumed			0.199	0.246	0.386	0.445	-
Energy indirectly consumed			1.934	2.182	2.342	2.396	-
KPN Group	**1.746**	**1.978**	**2.132**	**2.428**	**2.728**	**2.841**	**3.879**
% Reduction compared to base year	**-55%**	**-49%**	**-45%**	**-37%**	**-30%**	**-27%**	

Table 2: Electricity consumption (in GWh)

	Target 2030 compared to base year	Target 2023 compared to base year	2021	2020	2019	2018	2010 base year
Network			480	548	580	595	697
Offices & Shops			22	25	37	36	72
KPN Group	**400**	**462**	**502**	**573**	**617**	**631**	**769**
% Reduction compared to base year	**-48%**	**-40%**	**-35%**	**-26%**	**-20%**	**-18%**	

Table 3: Fuel consumption, lease vehicle fleet

	Unit	Target as from 2025	Target 2022 compared to base year	2021	2020	2019	2018	2010 base year
Petrol, diesel and LPG	1,000 liter	100% inflow of fossil fuel free cars		3,389	4,311	8,457	9,346	16,597
% Reduction fuels compared to base year			**-80%**	**-80%**	**-74%**	**-49%**	**-44%**	
Electric	MWh			2,399	1,891	1,756	839	

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Table 4: Other Energy consumption KPN Group

	Unit	2021	2020	2019	2018
Natural gas	1,000 m3	2,361	2,746	2,580	3,424
Heating purchased	GJ	28,068	23,531	27,618	29,653
Cooling purchased	GJ	97,711	97,191	92,891	94,571
Diesel for emergency power generators	1,000 liter	107	140	116	103

Table 5: CO_2e emissions own operations Scope 1 and 2 (in kTon)[1]

	Target 2022-2050	2021	2020	2019	2018	2010 base year
Scope 1 KPN NL	0	0	0	0	0	58.8
Scope 2 KPN NL	0	0	0	0	0	35.9
KPN non-NL entities	-	-	-	-	-	25.0
KPN Group	**0**	**0**	**0**	**0**	**0**	**119.7**

1 The reported emissions in the table are net scope 1 and scope 2 market based. In the table in section CO_2e emission and energy management both net and gross scope 1 emissions are reported as well as the location and market based scope 2 emissions

Table 6: Energy efficiency and Carbon intensity indicators target

	Target 2022	2021	2020	2019	2018	2010
Ton CO_2e per Gb/s (2010=100)	0	0	0	0	0	100
GWh per Gb/s (2010=100)	3.0	3.4	3.9	5.4	5.6	100

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Table 7: CO_2e emissions Scope 3 (in kTon) KPN the Netherlands

	Target 2040 compared to base year	Target 2025 compared to base year	Target 2022 compared to base year	2021[1]	2020	2019	2018	2014 base year
CAT1 Purchased goods and services				455.4	437.7	432.7	452.6	469.1
CAT2 Capital goods				164.0	181.3	198.5	174.9	237.5
CAT3 Fuel and energy related activities				2.7	3.4	6.7	11.3	95.3
CAT4 Upstream transportation and distribution				-	-	-	-	-
CAT5 Waste generated in operations				-	-0.0	0.1	0.5	0.3
CAT6 Business travel				1.1	0.9	3.2	3.1	3.2
CAT7 Employee commuting				1.0	2.9	16.5	15.9	17.7
CAT8 Leased assets				-	-	-	-	-
CAT9 Downstream transportation and distribution				13.1	13.5	16.3	18.3	23.0
CAT10 Processing of sold products				-	-	-	-	-
CAT11 Use of sold products				1.6	2.0	2.1	2.6	4.4
CAT12 End–of–life				-	-	-	-	-
CAT13 Downstream leased assets				154.5[2]	180.0	181.6	182.2	168.9
CAT14 Franchises				-	-	-	-	-
CAT15 Investments				-	-	-	-	-
Total CO_2e emissions	**0.0**	**765.2**	**786.2**	**793.2**	**821.7**	**857.6**	**861.4**	**1,019.2**
Total upstream CO_2e emissions				**624.0**	**626.2**	**657.6**	**658.3**	**823.0**
Total downstream CO_2e emissions				**169.2**	**195.5**	**200.0**	**203.1**	**196.2**
% Reduction compared to base year	**net-zero**	**-25%**	**-23%**	**-22%**	**-19%**	**-16%**	**-15%**	

1 We have improved our methodology on measuring scope 3 emissions by reconciling the basis for the EEIO method. See Appendix 3 for details. We have restated previous years, including the baseline. The baseline has changed from 1,063.2 kTon into 1,019.2 kTon

2 In 2021, KPN improved its calculation method to determine the total electricity consumption of TV set-top boxes. We have restated previous years, including the baseline. Further details on the calculation method in Appendix 3

Table 8: Other environmental impacts KPN Group

	Unit	Target 2022	2021	2020	2019	2018
Materials usage						
Cable length	1,000 km		~660	~618	~587	~571
Paper consumption	Tons		233	201	268	459
% FSC or PEFC	%		100%	100%	100%	100%
Coolants (e.g. R407C and R417A)	kg		538	661	657	826
Water consumption	1,000 m^3					
Offices and shops	1,000 m^3		38.7	49.2	52.4	66.5
Operations	1,000 m^3		33.6	34.7	31.7	51.7
KPN Group		**80**	**72.3**	**83.9**	**84.1**	**118.2**

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Table 9: Estimated avoided energy consumption and CO_2e emissions by usage of KPN

	Target 2022	Target 2021	2021	2020	2019	2018
Estimated avoided energy consumption (in PJ)						
Teleworking (enabled by KPN connectivity)[1]			6.345	9.494	3.065	2.144
Dematerialization			0.202	0.170	0.169	0.131
KPN Audioconferencing[2]			0.009	0.077	0.109	0.135
KPN Videoconferencing[2]			0.001	0.027	0.050	0.053
KPN Hosting services			0.014	0.020	0.032	0.030
KPN iTV Cloud solution			0.016	0.014	0.012	0.018
Total estimated avoided energy consumption			**6.588**	**9.802**	**3.437**	**2.511**
Total energy consumption KPN			2.132	2.428	2.728	2.841
% Avoided energy consumption compared to energy consumption KPN[1]	**~200%**	**200%**	**309%**	**404%**	**126%**	**88%**
Estimated avoided CO_2e-emissions (in kTon)			**2021**	**2020**	**2019**	**2018**
Teleworking (enabled by KPN connectivity)[1]			499.9	728.0	259.7	172.3
Dematerialization			13.5	11.9	12.4	10.4
KPN Audioconferencing[2]			0.6	5.3	8.3	10.2
KPN Videoconferencing[2]			0.1	1.8	3.7	3.8
KPN Hosting services			1.7	2.6	4.3	3.5
KPN iTV Cloud solution			2.4	2.4	2.1	2.5
Total estimated avoided carbon emissions[1]			**518.2**	**751.9**	**290.5**	**202.7**
Avoided Particulate matter emissions (PM_{10}) in tons			**2021**	**2020**	**2019**	**2018**
Total avoided PM_{10} emissions[1]			2,007	2,161	795	not calc.

1 We updated in 2021 the savings calculation for Teleworking by using public statistics from CBS in combination with data from customer panels on mobility from the Ministry of Infrastructure. This updated calculation method is also applied for 2020 to make like-for-like comparison possible. The decrease in avoided energy consumption, CO_2-emissions and particulate matter emissions by Teleworking in 2021 compared to 2020 is a combined effect. Firstly, an increase in savings is caused by extension to full working population scope. Secondly, a decrease in savings is caused by improved fuel efficiency of cars, reduction of the average commuting distance, and decrease in broadband market share. For 2020 the avoided energy consumption (PJ) has changed from 7.507 to 9.802, the total estimated avoided carbon emissions (kTons) has changed from 572.6 to 751.9 and the avoided PM_{10} emissions (tons) has changed from 1,798 to 2,161. Further details on the calculation method can be found in Appendix 3 (p. 179)

2 Decrease in usage of dedicated audio-/videoconferencing services due to intensified usage of cloud collaboration tools and applications like e.g. Microsoft Teams and Zoom

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Table 10: Circular information on reuse, recycling and disposal

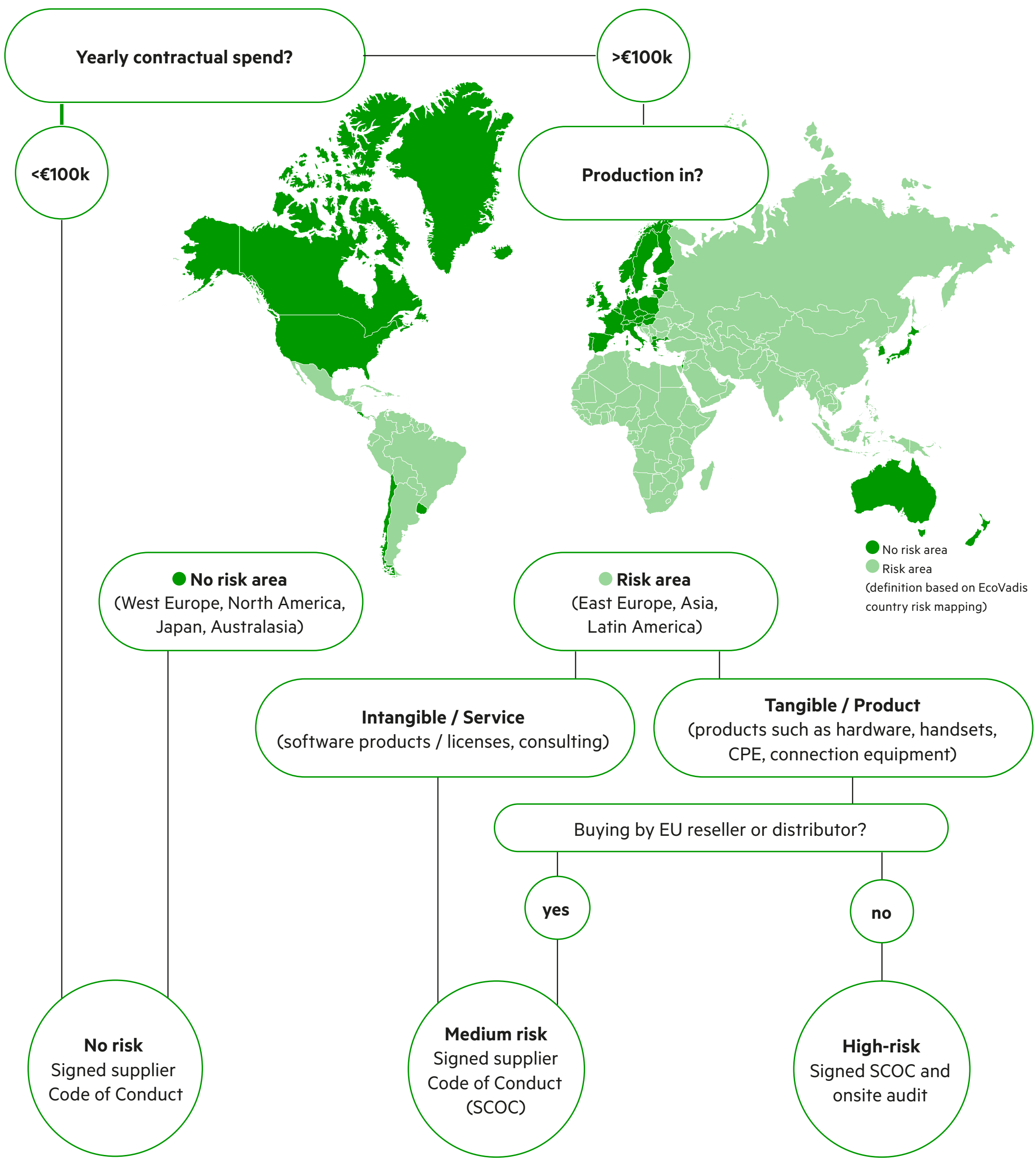
Total outflow	Unit	Target 2022	Target 2021	Result 2021	Result 2020	Result 2019	Result 2018
Total volume non-hazardous materials & waste	**ton**			**6,909**	**7,803**	**6,863**	**6,494**
Reuse	ton			1,011	1,018	561	497
Recycling	ton			4,756	5,263	4,780	4,490
Incineration	ton			1,018	1,397	1,366	1,359
Landfill	ton			124	125	156	148
Total volume hazardous materials & waste	**ton**			**569**	**367**	**190**	**105**
Reuse	ton			10	1	-	-
Recycling	ton			467	295	148	75
Incineration	ton			72	62	39	20
Landfill	ton			19	9	3	10.22
Total volume	**ton**			**7,478**	**8,170**	**7,053**	**6,599**
% Reuse	%			14%	12%	8%	8%
% Recycling	%			70%	69%	70%	69%
% Reuse and Recycling	**%**	**84%**	**82%**	**84%**	**81%**	**78%**	**77%**
% Incineration	%			14%	17%	20%	21%
% Landfill	%			2%	2%	2%	2%
Collected equipment							
Modems and TV set-top boxes	%	**90%**	**85%**	**86%**	**86%**[1]	**74%**	**67%**
Mobile phones	%			4%	4%	5%	6%

1 Due to adjustment in calculation method, result 2020 has been restated from 92% to 86%, for details see Appendix 3

Appendices

Appendix 7: Supply chain

Risk level decision maker



Appendices

Assessing our suppliers

KPN works together with suppliers in order to purchase their products and services. We critically review these suppliers in terms of their environmental impact and the working conditions of their staff.

Our sourcing process (new, extension or renewal of products or services) therefore includes a qualification process. This entails classifying the supplier based on the potential social and environmental risks that its operations, products and services represent.

We assess these risks based on three parameters (see decision tree on the previous page):
- Geographical areas
- Spend
- Potential environmental impact of a supplier's operations, products or services.

For the definition of the risk of countries of production we use the EcoVadis country risk mapping.

In total we have 4,911 Tier I suppliers, and 1,348 contracted Tier I suppliers. In 2021, we identified 35 high-risk suppliers based on the definition above.

JAC audits

High risk Tier I, Tier II, Tier III and Tier IV suppliers to KPN are audited by the Joint Audit Cooperation (JAC) association.

Between 2010 and 2021, together with other JAC members, 584 audits were carried out in production plants (Tier I, II, III and IV) in Asia, North America, Latin America, Eastern and Western Europe and Oceania, covering a total of more than 1.5 million workers. During 2021, audits were conducted in China, Czech Republic, Indonesia, Mexico, South Korea, Taiwan, Thailand, Turkey and Vietnam.

In 2021, JAC raised 65 environmental issues at suppliers following on-site audits of which 31 are still pending. In 2021 JAC raised 246 CSR issues at suppliers following on-site audit relating to working hours and health & safety at suppliers. 125 issues in these two categories were resolved during 2021.

In 2021, JAC has raised 326 issues relating to human rights (these include the following auditing categories: health & safety, working hours, child labor & juvenile workers, wages & compensation, forced labor & prison labor, discrimination, disciplinary practice and freedom of association). 167 were resolved during 2021.

In 2021, JAC raised 4 CSR issues at suppliers following on-site audits relating to child labor & juvenile workers. 2 issues were resolved during 2021 .

During 2021, JAC has raised 402 CSR issues overall, of which 11 relating to business ethics (including corruption). 8 issues related to business ethics were resolved during 2021.

In 2021, JAC raised 16 CSR issues at suppliers following on-site audits relating to forced labor & prison labor. 11 of these issues were resolved during 2021.

In 2021, no supplier relations were terminated.

Appendices

Appendix 8: Tax overview for continuing operations per country

Tax overview for continuing operations per country

In € million or FTE		Total unrelated income[1]	Total related income	Profit before tax excl. Associates and joint ventures	Corporate income tax expense	ETR	Corporate income tax cash flow	Corporate income tax receivable/ payable CY	Other tax cash flow mainly VAT & payroll	Property plant and equipment	Employees end of year (FTE)
NL	2021	6,112	533	1,635	-344	21.0%	-273	-17	-1,011	5,463	9,699
(Regular operating activities)	2020	5,273	410	652	-89	13.7%	-	-	-1,058	5,422	10,098
DE	2021	-	-	-	-	0.0%	-	-	-	-	-
(Regular operating activities)	2020	-	-	-1	-	-26.3%	-	-	-	-	4
IRL	2021	-	7	-	-	24.6%	-	1	-	-	-
(Main activity: insurance)	2020	-	6	-1	1	120.7%	-	1	-	-	-
UK[2]	2021	-	-	-3	-	9.0%	-	-	-	-	-
(Main activity: pension)	2020	-	-	-4	-	0.0%	-	-	-	-	-
USA[2]	2021	-	-	-3	-	0.0%	-	-	-	-	-
(Main activity: pension)	2020	-	1	-3	-	0.0%	-	-	-	-	-
Other	2021	-	-	-	-	0.0%	-	-	-	-	-
	2020	-	-	-	-	0.0%	-	-	-	-	-
Total	2021	6,112	540	1,628	-344	21.1%	-274	-16	-1,011	5,463	9,699
	2020	5,272	418	643	-88	13.7%	-	1	-1,058	5,422	10,102

1 Unrelated income is the total of revenues and (other) financial income.

2 See Note 17 Retirement benefits (page 143).

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Appendix 9: GRI index

GRI Standard	#	GRI Disclosure	Relevant section	Omission
General Disclosures				
Organization Profile	102-1	Name of the organization	Koninklijke KPN N.V.	
	102-2	Activities, brands, products, and services	Our purpose and the world around us (p. 7) Strategy, key performances and value creation model (p. 10) Our value for stakeholders: Customer value (p. 15)	
	102-3	Location of headquarters	Rotterdam, the Netherlands	
	102-4	Location of operations	the Netherlands	
	102-5	Ownership and legal form	Corporate governance (p. 55)	
	102-6	Markets served	Our purpose and the world around us (p. 7) Strategy, key performances and value creation model (p. 10) Our performance: Network infrastructure (p. 30) Our performance: Focused innovation and digitalization (p. 34)	
	102-7	Scale of the organization	Strategy, key performances and value creation model (p. 10) Our value for stakeholders: Shareholder value (p. 22) Our performance: Sustainable employability (p. 42) Financial Statements (p. 93)	
	102-8	Information on employees and other workers	Our performance: Sustainable employability (p. 42) Appendix 5: Social figures (p. 202) All employees (on the payroll as regular staff) are eligible for regular performance and career development reviews. Following the implementation of a different approach, 'Het Goede Gesprek', we no longer collect data on individual performance reviews.	Reporting on employees of contractors is considered not applicable to KPN. Our stakeholders do not request us to report on such information.
	102-9	Supply chain	Our performance: Sustainable employability (p. 42) Our performance: Environmental performance and responsible supply chain (p. 47)	
	102-10	Significant changes to the organization and its supply chain	Strategy, key performances and value creation model (p. 10) Our value for stakeholders: Shareholder value (p. 22) Financial Statements (p. 93) Our performance: Network infrastructure (p. 30) Our performance: Sustainable employability (p. 42) Our performance: Environmental performance and responsible supply chain (p. 47) Corporate governance (p. 55)	
	102-11	Precautionary principle or approach	Compliance and risk (p. 63) For our approach to EMF, see: https://www.overons.kpn/en/kpn-in-the-netherlands/sustainabillity/working-together	
	102-12	External initiatives	The most important charters, principles, or other initiatives to which KPN subscribes or which KPN endorses are: UN Global Compact, UN Declaration on Business and Human Rights, International Labor Organization, OECD Guidelines for Multinational Enterprises, Principles of the World Economic Forum, RE100. For more information and context, see https://www.overons.kpn/en/kpn-in-the-netherlands/sustainabillity/working-together	
	102-13	Membership of associations	Our most important memberships are: ETNO, Green Grid, Mobility Management Task Force, UN Global Compact, ITU, NL Digital, ECP For more information and the most recent overview of memberships, see: https://www.overons.kpn/en/kpn-in-the-netherlands/sustainabillity/working-together For information on lobbying activities, see: Appendix 3: Transparency, materiality and stakeholder engagement (p. 179)	
Strategy	102-14	Statement from senior decision-maker	Introduction by the CEO (p. 4)	

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GRI Standard	#	GRI Disclosure	Relevant section	Omission
	102-15	Key impacts, risks, and opportunities	Our purpose and the world around us (p. 7) Strategy, key performances and value creation model (p. 10) Our performance: Environmental performance and responsible supply chain (p. 47) Compliance and risk (p. 63)	
Ethics and integrity	102-16	Values, principles, standards, and norms of behavior	Remuneration Report (p. 84) Our performance: Safeguarded privacy and security (p. 38) Our performance: Sustainable employability (p. 42) Compliance and risk (p. 63) Our performance: Environmental performance and responsible supply chain (p. 47) For more information, see our Code of Conduct and the KPN SpeakUp Line: https://ir.kpn.com/websites/kpn/English/7050/code-of-conduct.html	
	102-17	Mechanisms for advice and concerns about ethics	Employees can seek advice and report violations on ethical and lawful behavior by contacting the KPN Helpdesk Security, Compliance and Integrity. All reports made to this helpdesk are registered. In 2021, 4,180 reports have been made to the helpdesk. However, KPN only registers reports on violations of the Code of Conduct and the subcodes (which include all company policy on ethical and lawful behavior) including the results of formal investigation and follow-up in terms of corrective measures. The system is not yet designed to be able to register requests for advice separately. Reports on possible violations of the KPN Code of Conduct or subcodes (which include all company policy on ethical and lawful behavior) are registered by the KPN Helpdesk Security, Compliance and Integrity. In 2021, 1,380 reports on possible violations have been registered. In 169 occasions, these were followed by corrective measures. KPN does not register the number of complaints about breaches of the company Code or other ethical issues at the helpdesks, social media and mvo@kpn.com. For the Code and more information on anonymous reporting, see: https://ir.kpn.com/websites/kpn/English/7050/code-of-conduct.html Compliance and risk (p. 63)	
Governance	102-18	Governance structure	Corporate governance (p. 55) Compliance and risk (p. 63) Composition of the Board of Management (p. 71)	
	102-19	Delegating authority	Corporate governance (p. 55) Compliance and risk (p. 63) Composition of the Board of Management (p. 71) Report by the Supervisory Board (p. 74)	
	102-20	Executive-level responsibility for economic, environmental, and social topics	Corporate governance (p. 55) Composition of the Board of Management (p. 71) Report by the Supervisory Board (p. 74)	
	102-21	Consulting stakeholders on economic, environmental, and social topics	Corporate governance (p. 55) Composition of the Board of Management (p. 71) Appendix 3: Transparency, materiality and stakeholder engagement (p. 179)	
	102-22	Composition of the highest governance body and its committees	Composition of the Board of Management (p. 71) Report by the Supervisory Board (p. 74)	
	102-23	Chair of the highest governance body	Composition of the Board of Management (p. 71)	
	102-24	Nominating and selecting the highest governance body	Corporate governance (p. 55) Report by the Supervisory Board (p. 74)	
	102-25	Conflicts of interest	Remuneration Report (p. 84) Corporate governance (p. 55) Report by the Supervisory Board (p. 74)	
	102-26	Role of highest governance body in setting purpose, values, and strategy	Composition of the Board of Management (p. 71) Corporate governance (p. 55)	

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GRI Standard	#	GRI Disclosure	Relevant section	Omission
			Report by the Supervisory Board (p. 74) Compliance and risk (p. 63)	
	102-27	Collective knowledge of highest governance body	Composition of the Board of Management (p. 71) Corporate governance (p. 55) Report by the Supervisory Board (p. 74) Compliance and risk (p. 63)	
	102-28	Evaluating the highest governance body's performance	Report by the Supervisory Board (p. 74)	
	102-29	Identifying and managing economic, environmental, and social impacts	Compliance and risk (p. 63)	
	102-30	Effectiveness of risk management processes	Compliance and risk (p. 63) Report by the Supervisory Board (p. 74)	
	102-31	Review of economic, environmental, and social topics	Appendix 3: Transparency, materiality and stakeholder engagement(p. ##) Compliance and risk (p. 63)	
	102-32	Highest governance body's role in sustainability reporting	Appendix 3: Transparency, materiality and stakeholder engagement (p. 179)	
	102-33	Communicating critical concerns	Critical concerns are communicated on a quarterly basis to both the Board of Management and the Supervisory Board. This communication consists of a GRIP report, an external audit report and an internal audit report. The GRIP report is most comprehensive and includes all risks for KPN communicated by risk managers. The external audit report comprises mostly financial risks for KPN whereas the internal audit report reports financial and IT security risks. The Board of Management closely monitors all risks and defines procedures and working methods for critical risks. All risks are reviewed by the Audit Committee.	
	102-34	Nature and total number of critical concerns	Reference omitted	The nature and number of critical concerns raised during 2021 cannot be communicated, as this concerns sensitive information.
	102-35	Remuneration policies	Remuneration Report (p. 84) Report by the Supervisory Board (p. 74)	
	102-36	Process for determining remuneration	Remuneration Report (p. 84) Report by the Supervisory Board (p. 74)	
	102-37	Stakeholders' involvement in remuneration	Report by the Supervisory Board (p. 74)	
	102-38	Annual total compensation ratio	We monitor the ratio in annual total compensation for our employees in the main country of operation: the Netherlands. The basis for determining the ratio is the pension base salary, which includes all fixed components of the salary of our employees. For the calculation, we use the annualized salary paid in the reporting year. This is not by definition a full time salary, part time salaries are also included. All bonuses paid during 2021 are included in the calculation, including the value of vested shares or phantom shares received by employees in the reporting year. For the reporting year 2021, the ratio of annual total compensation of the highest-paid individual to the median annual total compensation is 35.54/1. The total annual compensation of the highest paid individual is predominately defined by incentives. Consequently this results in highly fluctuating total annual compensation year-on-year even though base payments remains unchanged.	
	102-39	Percentage increase in annual total compensation ratio	We monitor the ratio in annual total compensation for our employees in the main country of operation, the Netherlands. The basis for determining the ratio is the pension base salary, which includes all fixed components of the salary of our employees. For the calculation, we use the annualized salary as paid in the reporting year. This is not by definition a full time salary, part time salaries are also included. All bonuses paid during 2021 are included in the	

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GRI Standard	#	GRI Disclosure	Relevant section	Omission
			calculation, including the value of vested shares or phantom shares received by employees in the reporting year. For the reporting year 2021, the annual total compensation of the highest paid individual increased with 24.14% in 2021 (compared with 2020) and the annual total compensation of the median increased with 1.33% in 2021 (compared with 2020). The ratio of the percentage increase of the highest paid individual to the increase of the median annual total compensation of 2021 is 18.14/1.	
Stakeholder engagement	102-40	List of stakeholder groups	Appendix 3: Transparency, materiality and stakeholder engagement (p. 179)	
	102-41	Collective bargaining agreements	Appendix 5: Social figures (p. 202) This indicator supports Principles 1 and 3 of the UN Global Compact.	
	102-42	Identifying and selecting stakeholders	Appendix 3: Transparency, materiality and stakeholder engagement (p. 179)	
	102-43	Approach to stakeholder engagement	Our value for stakeholders: Customer value (p. 15) Appendix 3: Transparency, materiality and stakeholder engagement (p. 179) KPN does not engage with stakeholders exclusively as part of the report preparations process, although all stakeholders input is considered to be of potential value to the report. KPN wants to know what topics stakeholders deem important and actively respond to their rising demands.	
	102-44	Key topics and concerns raised	Our purpose and the world around us (p. 7) Our value for stakeholders: Customer value (p. 15) Appendix 3: Transparency, materiality and stakeholder engagement (p. 179)	
	102-45	Entities included in the Consolidated Financial Statements	Corporate governance (p. 55) Financial Statements (p. 93)	
	102-46	Defining report content and topic Boundaries	Strategy, key performances and value creation model (p. 10) Appendix 3: Transparency, materiality and stakeholder engagement (p. 179)	
	102-47	List of material topics	Appendix 3: Transparency, materiality and stakeholder engagement (p. 179)	
	102-48	Restatements of information	Our value for stakeholders: Shareholder value (p. 22) Appendix 3: Transparency, materiality and stakeholder engagement (p. 179)	
	102-49	Changes in reporting	Appendix 3: Transparency, materiality and stakeholder engagement (p. 179).	
	102-50	Reporting period	1 January 2021 - 31 December 2021	
	102-51	Date of most recent report	22 February 2021	
	102-52	Reporting cycle	Annually	
	102-53	Contact point for questions regarding the report	Colophon	
	102-54	Claims of reporting in accordance with the GRI standards	This report has been prepared in accordance with the GRI Standards: Comprehensive option.	
	102-55	GRI index	The GRI index can be found in the downloadmanager on www.kpn.com/annualreport	
	102-56	External assurance	Combined Independent Auditor's Report	
Material topics				
Network quality, reliability & availability				
GRI 103: Management approach 2018	103-1	Explanation of the relevant topic and its Boundaries	Appendix 3: Transparency, materiality and stakeholder engagement (p. 179) Our performance: Network infrastructure (p. 30)	
	103-2	The management approach and its components	Our performance: Network infrastructure (p. 30) Corporate governance (p. 55)	
	103-3	Evaluation of the management approach	Our performance: Network infrastructure (p. 30) Corporate governance (p. 55)	

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GRI Standard	#	GRI Disclosure	Relevant section	Omission
	Own indicator	FttH Footprint of the Netherlands	Our performance: Network infrastructure (p. 30) Appendix 2: Connectivity of non-financial information (p. 176)	
	Own indicator	# mobile sites modernized and 5G ready	Our performance: Network infrastructure (p. 30) Appendix 2: Connectivity of non-financial information (p. 176)	
Sustainable ICT solutions / Product innovation				
GRI 103: Management approach 2018	103-1	Explanation of the relevant topic and its Boundaries	Appendix 3: Transparency, materiality and stakeholder engagement (p. 179) Our performance: Focused innovation and digitalization (p. 34) Our performance: Environmental performance and responsible supply chain (p. 47)	
	103-2	The management approach and its components	Our performance: Focused innovation and digitalization (p. 34) Our performance: Environmental performance and responsible supply chain (p. 47) Corporate governance (p. 55)	
	103-3	Evaluation of the management approach	Our performance: Focused innovation and digitalization (p. 34) Our performance: Environmental performance and responsible supply chain (p. 47) Corporate governance (p. 55)	
	Own indicator	# of professionals with secure digital access to healthcare information	Connecting the Netherlands to a sustainable future (p. 26) Appendix 2: Connectivity of non-financial information (p. 176)	
	Own indicator	# of clients and patients using healthcare facilities to live with more autonomy	Connecting the Netherlands to a sustainable future (p. 26) Appendix 2: Connectivity of non-financial information (p. 176)	
	Own indicator	Energy savings by customers as % of KPN Group energy usage	Connecting the Netherlands to a sustainable future (p. 26) Appendix 2: Connectivity of non-financial information (p. 176)	
Customer interaction				
GRI 103: Management approach 2018	103-1	Explanation of the relevant topic and its Boundaries	Appendix 3: Transparency, materiality and stakeholder engagement (p. 179) Our value for stakeholders: Customer value (p. 15)	
	103-2	The management approach and its components	Our value for stakeholders: Customer value (p. 15) Corporate governance (p. 55)	
	103-3	Evaluation of the management approach	Our value for stakeholders: Customer value (p. 15) Corporate governance (p. 55)	
	Own indicator	Net Promoter Score (NPS)	Our value for stakeholders: Customer value (p. 15) Appendix 2: Connectivity of non-financial information (p. 176)	
	Own indicator	RepTrak	Our value for stakeholders: Customer value (p. 15) Appendix 2: Connectivity of non-financial information (p. 176)	
Cybersecurity and data & information protection				
GRI 103: Management approach 2018	103-1	Explanation of the material topic and its Boundaries	Appendix 3: Transparency, materiality and stakeholder engagement (p. 179) Our performance: Safeguarded privacy and security (p. 38)	
	103-2	The management approach and its components	Our performance: Safeguarded privacy and security (p. 38) Corporate governance (p. 55)	
	103-3	Evaluation of the management approach	Our performance: Safeguarded privacy and security (p. 38) Corporate governance (p. 55)	

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GRI Standard	#	GRI Disclosure	Relevant section	Omission
GRI 418: Customer privacy 2018	418-1	Substantiated complaints concerning breaches of customer privacy and losses of customer data	Our performance: Safeguarded privacy and security (p. 38)	
	Own indicator	% of Dutch people who believe their data is safe with KPN	Our performance: Safeguarded privacy and security (p. 38) Appendix 2: Connectivity of non-financial information (p. 176)	
	Own indicator	% of Dutch municipalities monitored for cybersecurity attacks	Our performance: Safeguarded privacy and security (p. 38) Appendix 2: Connectivity of non-financial information (p. 176)	
Supplier selection & security				
GRI 103: Management approach 2018	103-1	Explanation of the material topic and its Boundaries	Appendix 3: Transparency, materiality and stakeholder engagement (p. 179) Our performance: Environmental performance and responsible supply chain (p. 47)	
	103-2	The management approach and its components	Our performance: Environmental performance and responsible supply chain (p. 47) Corporate governance (p. 55)	
	103-3	Evaluation of the management approach	Our performance: Environmental performance and responsible supply chain (p. 47) Corporate governance (p. 55)	
	Own indicator	% high-risk Tier I, Tier II and Tier III suppliers audited	Our performance: Environmental performance and responsible supply chain (p. 47) Appendix 2: Connectivity of non-financial information (p. 176)	
	Own indicator	% realized improvements on corrective action plans	Our performance: Environmental performance and responsible supply chain (p. 47) Appendix 2: Connectivity of non-financial information (p. 176)	
Environmental performance				
GRI 103: Management approach 2018	103-1	Explanation of the material topic and its Boundaries	Appendix 3: Transparency, materiality and stakeholder engagement (p. 179) Our performance: Environmental performance and responsible supply chain (p. 47)	
	103-2	The management approach and its components	Our performance: Environmental performance and responsible supply chain (p. 47) Corporate governance (p. 55)	
	103-3	Evaluation of the management approach	Our performance: Environmental performance and responsible supply chain (p. 47) Corporate governance (p. 55)	
	Own indicator	% reduction of energy consumption of KPN Group compared with 2010	Our performance: Environmental performance and responsible supply chain (p. 47) Appendix 2: Connectivity of non-financial information (p. 176)	
	Own indicator	Climate-neutral own operations	Our performance: Environmental performance and responsible supply chain (p. 47) Appendix 2: Connectivity of non-financial information (p. 176)	
	Own indicator	% reuse and recycling	Our performance: Environmental performance and responsible supply chain (p. 47) Appendix 2: Connectivity of non-financial information (p. 176)	
Other topics				
Economic performance				
GRI 103: Management approach 2018	103-1	Explanation of the material topic and its Boundaries	Appendix 3: Transparency, materiality and stakeholder engagement (p. 179) Strategy, key performances and value creation model (p. 10) Our value for stakeholders: Shareholder value (p. 22)	

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GRI Standard	#	GRI Disclosure	Relevant section	Omission
	103-2	The management approach and its components	Introduction by the CEO (p. 4) Strategy, key performances and value creation model (p. 10) Our value for stakeholders: Shareholder value (p. 22) Corporate governance (p. 55)	
	103-3	Evaluation of the management approach	Corporate governance (p. 55)	
GRI 201: Economic performance 2018	201-1	Direct economic value generated and distributed	Strategy, key performances and value creation model (p. 10) Our value for stakeholders: Shareholder value (p. 22)	
	201-2	Financial implications and other risks and opportunities due to climate change	Our performance: Environmental performance and responsible supply chain (p. 47) Compliance and risk (p. 63) Appendix 6: Environmental figures (p. 204) KPN discloses all material carbon emissions, climate governance and management approach, including the financial implications of risks regarding climate change and the costs of mitigating actions for the CDP (Carbon Disclosure Project). Find our 2021 disclosure at https://cdp.net/en.	
	201-3	Defined benefit plan obligations and other retirement plans	Financial Statements (p. 93)	
	201-4	Financial assistance received from government	KPN does not receive significant financial assistance from the government.	
Tax				
GRI 103: Management approach 2018	103-1	Explanation of the material topic and its Boundaries	Appendix 3: Transparency, materiality and stakeholder engagement (p. 179) Tax and regulations (p. 59)	
	103-2	The management approach and its components	Corporate governance (p. 55) Tax and regulations (p. 59)	
	103-3	Evaluation of the management approach	Corporate governance (p. 55) Tax and regulations (p. 59)	
GRI 207: Tax 2019	207-1	Approach to tax	Corporate governance (p. 55) Tax and regulations (p. 59) For our Tax strategy & Policy, see: https://ir.kpn.com/websites/kpn/ English/ 7070/tax-strategy-_-policy.html	
	207-2	Tax governance, control, and risk management	Corporate governance (p. 55) Compliance and risk (p. 63) Tax and regulations (p. 59) For our Tax strategy & Policy: https://ir.kpn.com/websites/kpn/English/ 7070/ tax-strategy-_-policy.html	
	207-3	Stakeholder engagement and management of concerns related to tax	Corporate governance (p. 55) Tax and regulations (p. 59) Appendix 3: Transparency, materiality and stakeholder engagement (p. 179) For our Tax strategy & Policy: https://ir.kpn.com/websites/kpn/English/ 7070/ tax-strategy-_-policy.html	
	207-4	Country-by-country reporting	Tax and regulations (p. 59) Financial Statements (p. 93)	
Materials				
GRI 103: Management approach 2018	103-1	Explanation of the relevant topic and its Boundaries	Appendix 3: Transparency, materiality and stakeholder engagement (p. 179) Appendix 6: Environmental figures (p. 204)	
	103-2	The management approach and its components	Our performance: Environmental performance and responsible supply chain (p. 47) Corporate governance (p. 55) Appendix 6: Environmental figures (p. 204)	

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GRI Standard	#	GRI Disclosure	Relevant section	Omission
	103-3	Evaluation of the management approach	Corporate governance (p. 55)	
GRI 301: Materials 2018	301-1	Materials used by weight or volume	KPN is a service provider and not a production company. The materials consumed are therefore limited.	
	301-2	Recycled input materials used	Our performance: Environmental performance and responsible supply chain (p. 47)	
	301-3	Reclaimed products and their packaging materials	Our performance: Environmental performance and responsible supply chain (p. 47) Appendix 6: Environmental figures (p. 204) This indicator supports Principles 8 and 9 of the UN Global Compact.	Reporting on reclaimed packaging material is considered not applicable to KPN. Our stakeholders do not request us to report on such information.
Water and effluents				
Water and effluents	103-1	Explanation of the relevant topic and its Boundaries	Appendix 3: Transparency, materiality and stakeholder engagement (p. 179) Appendix 6: Environmental figures (p. 204)	
	103-2	The management approach and its components	Our performance: Environmental performance and responsible supply chain (p. 47) Corporate governance (p. 55) Appendix 6: Environmental figures (p. 204)	
	103-3	Evaluation of the management approach	Corporate governance (p. 55)	
GRI 303: Water and effluents 2018	303-1	Interactions with water as a shared resource	Not applicable	
	303-2	Management of water discharge-related impacts	Not applicable	
	303-3	Water withdrawal	Appendix 6: Environmental figures (p. 204). Only applies to third party freshwater.	
	303-4	Water discharge	Only applies to third party water released to municipal water treatment facilities (same volume assumed as reported under 303-3).	
	303-5	Water consumption	Appendix 6: Environmental figures (p. 204)	
Effluents and waste				
GRI 103: Management approach 2018	103-1	Explanation of the relevant topic and its Boundaries	Appendix 3: Transparency, materiality and stakeholder engagement Appendix 6: Environmental figures (p. 204)	
	103-2	The management approach and its components	Our performance: Environmental performance and responsible supply chain (p. 47) Corporate governance (p. 55) Appendix 6:Environmental figures (p. 204)	
	103-3	Evaluation of the management approach	Corporate governance (p. 55)	
GRI 306: Effluents and waste 2016	306-1	Water discharge by quality and destination	Not applicable	
	306-2	Waste by type and disposal method	Appendix 6: Environmental figures (p. 204)	
	306-3	Significant spills	Not applicable	
	306-4	Transport of hazardous waste	Appendix 6: Environmental figures (p. 204). Only transport of hazardous waste within the Netherlands applies	
	306-5	Water bodies affected by water discharges and/or runoff	Not applicable	

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Appendix 10: SASB index

Topic	SASB Code	Metric	Response
Activity metrics	TC-TL-000.A	Total number of mobile accesses (millions)	9.4m
	TC-TL-000.B	Total number of fixed line accesses (millions)	0.3m
	TC-TL-000.C	Number of fixed broadband subscribers (millions)	4.2m
	TC-TL-000.D	Network traffic in petabytes	N/a[1]
Topic	**SASB Code**	**Metric**	**Response**
Environmental footprint of operations	TC-TL-130a.1	Total energy consumed (GJ)	2,132,073
		Percentage of grid electricity out of total energy consumption	85%
		Percentage renewable energy out of total energy consumption	89%
Data privacy	TC-TL-220a.1	Description of policies and practices relating to behavioral advertising and customer privacy	KPN is aware of the fact that we must carefully manage two separate and often conflicting priorities: data as a valuable revenue source versus privacy. We have a reputation to uphold where it concerns the safety of customer data. We believe that customer privacy must be a core value when doing business. As such, we have made promises to our customers on how we use their data. One of our core promises is that we do not sell data of our customers to third parties. Our second promise is that if we want to use traffic data for commercial purposes (which is not secondary use, but primary use after consent), we only do so after we have received unambiguous consent of the customers. Customers can, at all times, revoke their consent. KPN has procedures in place for consent and revocation and customers are informed through the KPN Privacy Statement. As such we provide transparency on our processing of customer data.
	TC-TL-220a.2	Number of customers whose information is used for secondary purposes	For our use of customer data, we refer to our Privacy Statement.
	TC-TL-220a.3	Total amount of monetary losses as a result of legal proceedings associated with customer privacy	Monetary losses in the form of fines by regulators resulting from privacy breaches: EUR 0,- Monetary losses in the form of fines ruled by the court resulting from privacy breaches: EUR 0,-
	TC-TL-220a.4	Number of law enforcement requests for customer information	It is prohibited by law to publish the number of government requests either publicly or sharing this figure on a confidential basis for benchmarks. This question concerns obligations under the law of Telecommunications and the handling of warrants received by KPN, based on the Criminal Procedure Code, i.e. Intelligence and Security services, described in the "Telecommunications Security Data Decree": https://wetten.overheid.nl/BWBR0015808/2018-05-01. Reporting on the scope is reserved for and responsibility of the Ministry of Justice and Security and the Ministry of Internal Affairs and Kingdom Relations. In general, Dutch judicial law has a commitment to notify persons if information concerning these persons has been collected. See https://wetten.overheid.nl/BWBR0015808/2018-05-01 on the Decree on data security by public telecommunication providers.
		Number of customers whose information was requested	See "Number of law enforcement requests for customer information"
		Percentage resulting in disclosure	98%
Data security	TC-TL-230a.1	Number of data breaches	104 For this indicator, we use the definition as relevant for the jurisdiction(s) in which KPN is active. This definition is broader than the standard definition used by SASB.
		Percentage involving personally identifiable information	For 2021, it is not possible to report on this KPI yet. For this indicator, we use the definition as relevant for the jurisdiction(s) in which KPN is active. This definition is broader than the standard definition used by SASB.
		Number of customers affected	KPN is not able to report on this number due to the practical implications.

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	TC-TL-230a.2	Description of approach to identifying and addressing data security risks, including use of third-party cybersecurity standards	Cybersecurity remains a high priority, as cybersecurity attacks by nation states, phishing, ransomware and supply chain attacks are becoming increasingly sophisticated. To protect our systems and data, and those of our customers, we are constantly vigilant. Our Chief Information Security Office (CISO) is working according to the KPN Security Lifecycle, which is based on the NIST cybersecurity framework: identify, protect, detect, respond and recover. CISO sets a KPN Security Policy to prevent vulnerabilities and incidents. The CISO Red Team of ethical hackers conducts security testing of new products, proactively identifies weaknesses and detects vulnerabilities across the organization. The CISO Blue Team is responsible for continuously monitoring our networks and infrastructures, and detecting security threats and vulnerabilities in a timely manner from within our Security Operations Center (SOC). As part of the Blue Team, the KPN Computer Emergency Response Team (KPN-CERT) provides rapid incident response, while the CISO DevOps team is responsible for development, research and security analytics and reporting.
Product end-of-life management	TC-TL-440a.1	Weight, in *metric tons*, of materials recovered through product take-back programs and recycling services	7,478 tons
		Percentage (%) of recovered materials that are reused	14%
		Percentage (%) of recovered materials that are recycled	70%
		Percentage (%) of recovered materials that are deposited in landfills	2%
Competitive behavior & open internet	TC-TL-520a.1	Total amount of monetary losses as a result of legal proceedings associated with anti-competitive behavior regulations	EUR 0,-
	TC-TL-520a.2	Actual average sustained download speed in Megabits per second (Mbps) of own and commercially partnered content	446 Mbps[2]
		Actual average sustained download speed in Megabits per second (Mbps) of nonassociated content	446 Mbps[2]
	TC-TL-520a.3	Description of risks and opportunities associated with net neutrality, paid peering, zero rating and related practices	KPN acts in accordance with the the EU Regulation 2015/2120 of the European Parliament regarding measures concerning open internet access (net neutrality). Both paid peering and zero rating are of less importance to KPN, as also stated by the ACM, since we do not have placed 'zero rated offers' in the market and the ACM has not established significant problems regarding these topics in the Dutch market.
Managing systemic risks from technology disruptions	TC-TL-550a.1	Average system outage frequency (fixed line network)	Broadband: 0.27 Mobile: 0.07
		Average duration of customer interruption (fixed line network)	Broadband: 1.17 Mobile: 0.79
	TC-TL-550a.2	Discussion of systems to provide unimpeded service during outages	At KPN, we are doing the best we can to avoid outages or other service disruptions. The bigger the impact, the more measures are taken to minimalize the chances of something going wrong, with procedures being ready for every service disruption one could think of. For common service disruptions we have automated reboots programmed to minimize the impact of the disruption. In the event that any loss of service distribution does occur, KPN makes us of the Be Alert classification matrix to determine the urgency of the disruption of Major Incidents. This classification, by means of colour coding, happens on the basis of the amount of impact and the importance of the service that is malfunctioning. In order to minimize the negative experience for customers, we proactively inform clients about the disruption to inform them that we are aware of the problem and that we are working towards a solution.

1 SASB definition is not in line with KPN's value for network traffic

2 The average maximum download speed that we report is the predicted technical speed, based on the best available technologies, per address. Figures are based on year-end data

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Appendix 11: Glossary

3G
Third-generation mobile system, which is based on the UMTS universal standard.

4G
Fourth-generation mobile system, a standard for wireless communication delivering high-speed data for mobile phones and data terminals.

5G
Fifth-generation mobile system, a standard for wireless communication delivering high-speed data for mobile phones and data terminals, exceeding 4G speeds. 5G targets high data rates, reduced latency, network slicing, higher system capacity and massive device connectivity.

A

ACM (Authority for Consumers and Markets)
The ACM acts as a regulator in the Netherlands and is responsible for monitoring compliance with antitrust rules.

ADR
American depository receipt.

Adjusted revenues
Adjusted revenues are derived from revenues (including other income) and are adjusted for the impact of restructuring costs and incidentals. Incidentals are non-recurring transactions of EUR 5m or over unless significant for the specific reportable segment, which are not directly related to day-to-day operational activities.

Adjusted EBITDA AL
Adjusted EBITDA AL (adjusted EBITDA after leases) are derived from EBITDA and are adjusted for the impact of restructuring costs and incidentals and for lease costs, including depreciation of right-of-use assets and interest on lease liabilities. Incidentals are non-recurring transactions of EUR 5m or more unless significant for the specific reportable segment, which are not directly related to day-to-day operational activities.

AI (artificial intelligence)
AI is the intelligence demonstrated by machines.

ARPA (average revenue per address)
ARPA is the sum of connection fees, monthly fixed subscription revenues, traffic revenues and gross service-provider revenues less related discounts during a one-month period, divided by the average number of addresses during that month. Gross service-provider revenues represent revenues generated by third-party providers. KPN accounts for the net part as gross service-provider revenues.

ARPU (average revenue per user)
ARPU is the sum of connection fees, monthly fixed subscription revenues, traffic revenues and gross service-provider revenues less related discounts during a one-month period, divided by the average number of customers during that month. Gross service-provider revenues represent revenues generated by third-party providers. KPN accounts for the net part as gross service-provider revenues.

Average 4G download speed
The average download speed is based on the results of a speedtest that customers initiate on 4G with their smartphone. Robot measurements and customers using networks other than KPN's are excluded from the results.

Average maximum download speed broadband fixed
The average maximum download speed that we report is the predicted technical speed, based on the best available technologies, per address. Figures are based on year-end data.

B

BCF (business control framework)
The BCF contains all corporate policies and guidelines that are mandatory for KPN segments and entities. It forms the cornerstone of the governance of the KPN Group.

B2B
Business-to-business, commercial transactions between businesses.

Broadband
Broadband refers to telecommunication that provides multiple channels of data over a single communications medium, typically using some form of frequency or wave division multiplexing.

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C

Capex (capital expenditure)
Investments in property, plants, equipment (PPE) and software. Please note that EU taxonomy's Capex definition differs from KPN's Capex definition. EU taxonomy Capex consists of the following components: PPE investments and PPE changes in consolidation in case of acquisitions of business combinations, Intangibles investments and Intangibles assets changes in consolidation in case of acquisitions of business combinations and Right-of-use assets additions.

CDP
The CDP (formerly the Carbon Disclosure Project) is a joint initiative of investors worldwide that questions and benchmarks listed companies on their approach to climate change.

Churn (calculated on an annual basis)
The number of customers no longer connected to an operator's network divided by the operator's customer base.

Circular economy
The circular economy is a generic term for an industrial economy that is producing no waste and pollution and in which material flows are of two types: biological nutrients, designed to re-enter the biosphere safely, and technical nutrients, which are designed to circulate at high quality in the production system without entering the biosphere.

Climate-neutral
For KPN, climate-neutral means operating with zero net CO_2e emissions.

Cloud services
Cloud services are standardized IT capability (services, software or infrastructure) delivered via internet technologies in a pay-per-use, self-service way.

CO_2e
Carbon dioxide equivalent, is a standard unit for measuring carbon footprints. The idea is to express the impact of each different greenhouse gas in terms of the amount of CO_2 that would create the same amount of warming. That way, a carbon footprint consisting of different greenhouse gases can be expressed as a single number.

Conflict minerals
Conflict minerals are minerals mined under conditions of armed conflicts and human rights issues. These minerals are used in a variety of products, including consumer electronic devices such as mobile phones.

CSR (corporate social responsibility)
CSR, to KPN, is the integrated vision of entrepreneurship, in which the company takes responsibility and creates value in economic (profit), ecological (planet) and social (people) terms. We incorporate CSR into our business and by doing so, take our social responsibility and contribute to societal challenges.

CSRD
The Corporate Sustainability Reporting Directive (CSRD) will replace the existing reporting requirements of the EU's Non-Financial Reporting Directive (NFRD). The CSRD covers all relevant Environmental, Social and Governance elements and aims to increase investments in truly sustainable activities across the European Union. The CSRD will be phased in from 2021 until 2023 (first reporting year is FY2023).

Customer base
Customer base is the total number of subscribers.

D

DEFRA
UK Department for Environment, Food & Rural Affairs. DEFRA has published conversion factors to calculate greenhouse gas emissions.

DJSI (Dow Jones Sustainability Index)
The DJSI series is a collection of indices that track the performance of companies that are frontrunners in terms of CSR. The DJSI is based on an analysis of corporate economic, environmental and social performance. There are several sub-indices based on geographical parameters.

DSL (digital subscriber line)
DSL is a technology for bringing high bandwidth information to homes and small businesses over copper PSTN lines. The widely used term xDSL refers to different variations of DSL, such as ADSL, HDSL, VDSL and SDSL.

E

EBITDA
Operating result before depreciation and impairments of property, plant and equipment and amortization and impairments of intangible assets.

EBITDA AL
EBITDA AL (EBITDA after leases) are derived from EBITDA and adjusted for lease costs, including depreciation of right-of-use assets and interest on lease liabilities.

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EcoVadis
EcoVadis is an international platform that assesses the material CSR impacts of companies. Purchasing organizations can integrate EcoVadis Scorecards into their day-to-day business practices driving their organization to make more sustainable procurement decisions, while positively incentivizing trading partners that align with their sustainability practices.

EEIO (environmentally extended input output data)
EEIO models estimate energy use and/or GHG emissions resulting from the production and upstream supply chain activities of different sectors and products. The resulting EEIO emissions factors can be used to estimate cradle-to-gate GHG emissions for a given industry or product category. EEIO models are derived by allocating national GHG emissions to groups of finished products based on economic flows between industry sectors.

ESG (Environmental, Social and Governance)
Environmental, Social, and Governance (ESG) refers to the three central factors in measuring the sustainability and societal impact of an investment in a company or business.

Externally
An externality is an economic term referring to a cost or benefit incurred or received by a third party. However, the third party has no control over the creation of that cost or benefit.

F

FTE (full-time equivalent)
The equivalent of the number of employees with a full-time contract. FTEs are calculated compared to the standard number of contract hours per employment group within KPN.

FttH (Fiber to the Home)
FttH is defined as an access network architecture in which the final part of the connection to the home also consists of optical fiber.

FttH households
FttH households are defined as premises to which an operator can connect in a service area. Fiber is available, at least, at the premises property boundary.

FCF (Free Cash Flow)
FCF is defined as cash flow from continuing operating activities plus proceeds from real estate, minus capital expenditure (Capex), being expenditure on PP&E and software and adjusted for repayments of lease liabilities.

G

Gbps (Gigabit per second)
A gigabit is a unit denoting the speed of data transfer. It is the speed in billions of bits per second.

GHG (Greenhouse Gas) Protocol
The GHG Protocol is a multi-stakeholder partnership of business, non-governmental organizations (NGOs), governments and others that develop internationally accepted GHG accounting and reporting standards for organizations.

Green electricity
Green electricity is electricity from renewable sources. KPN only uses wind energy and electricity from biomass that does not compete with food production.

GRI (Global Reporting Initiative)
The Global Reporting Initiative is an organization that publishes international standards for CSR reporting.

H

High-risk supplier
Our procurement process includes an assessment of all new contracted suppliers, classifying them based on the potential social and environmental risk their operations, products and services represent. We assess this risk based on three parameters: geographical areas, spend and potential environmental impact of a supplier's operations, products or services. High-risk suppliers are audited by independent external auditors once every two to four years.

I

IT
IT refers to information technology.

IoT (Internet of Things)
The Internet of Things connects objects such as garbage bins or cars via a chip with the internet. This offers many opportunities, such as Smart City solutions.

ISDN (Integrated services digital network)
A form of digital telephony. It is an alternative to the analogue POTS. With ISDN, more data can be transported over a copper two-wire connection at the district level than is usually possible with POTS.

ISO (International Organization for Standardization)
This organization is responsible for international management standards such as ISO 14001, ISO 140064-1, ISO 27001 and ISO 22301 (mentioned in this report).

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iTV
iTV stands for interactive TV. With iTV, the customer can easily choose when, where and which programs to watch.

J

JAC (Joint Audit Cooperation)
The JAC is a cooperation of 13 European telecommunication operators (including KPN) focusing on the social, ethical, and environmental conditions across their supply chains.

K

KPN Mooiste Contact Fonds
This KPN foundation supports societal initiatives aimed at stimulating social contact, by combining people and technological resources to best advantage.

L

LGBTQIA+
Lesbians, gays, bisexuals, transgenders, queers, intersexuals, asexuals and people with other sexual and/or gender identity. KPN Pride is an inclusive community for LGBTQIA+, and all colleagues (including heterosexuals) who are interested in LGBTQIA+ subjects related to the KPN workfloor.

LCE
LCE refers to large corporate enterprises.

M

M2M (machine-to-machine)
Direct communication between devices using any communications channel, including wired and wireless.

Market share
Market share is the percentage or proportion of the total available market that is being serviced by KPN. These figures are based on externally available market data, which may not be completely accurate, and may partially be based on estimates.

Mass-market
The collective term forconsumer market, SME and wholesale customers.

Mbps (Megabits per second)
A megabit is a unit denoting the speed of data transfer. It is the speed in millions of bits per second. The bandwidths of broadband networks are often indicated in Mbps.

MHz (megahertz)
MHz is one million hertz (a unit of frequency).

Modernized site
A site is considered to be modernized when the equipment is being replaced by future-proof equipment that is also able to handle 5G traffic.

MTA
MTA refers to mobile terminating access.

N

NPS (Net Promoter Score)
NPS is a metric for measuring customer loyalty, based on whether customers would recommend KPN to someone else.

Non-conformities
Non-conformities are identified when a supplier is found to be in breach of any of the JAC Supply Chain Sustainability Guidelines that form the set of common requirements expected from the ICT industry.

NOPLAT
NOPLAT refers to net operating profit less adjustments for taxes.

Normalized ETR
Normalized effective tax rate (ETR) is defined as the total ETR excluding incidentals (such as return to provisions), major changes in the composition of the group, changes in (de-)recognition of deferred taxes and changes in tax law.

Notice and Take Down code
A code that specifies how organizations have to deal with reports of unlawful content on the internet. Content is removed by the host following notice. Notice and take down is widely operated in relation to copyright infringement, as well as for libel and other illegal content We are committed to removing content related to Child Sexual Abuse Material within 24 hours after notification by our national hotline, Expertisebureau Online Kindermisbruik (Expertise Center for Online Child Abuse).

O

OECD (Organization for Economic Cooperation and Development)
An international organization that works to establish evidence-based international standards and find solutions to a range of social, economic and environmental challenges.

OTT (over-the-top)
In broadcasting, over-the-top content (OTT) refers to the delivery of audio, video, and other media over the internet for which no subscription to a traditional cable or satellite operator is required. A famous example is WhatsApp, which is replacing text messaging.

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P

Product with improved circular design
Our “number of products with an improved circular design” KPI measures our progress on our circular ambitions. This cumulative number shows how many products we have improved the design of to make them more circular. We regard a product as having improved design for circularity if the design changes lead to (1) reduced use of virgin raw materials and/or (2) extended lifetime or improved resource efficiency and/or (3) improved opportunities for re-using components or recycling materials and/or (4) improved energy efficiency. We count a product from the year in which it enters KPN’s value chain of operations – that is, when we can actually use or sell it.

PSTN (Public Switched Telephone Network)
Globally used telephone network.

R

RepTrak
RepTrak, developed by the RepTrak Company, is a method to calculate a reputation score of companies. KPN’s reputation is based on three out of twelve RepTrak attributes that are kept confidential and are stable over the years.

Return on capital employed (ROCE)
Return on capital employed is calculated by the net operating profit less adjustments for taxes (NOPLAT) divided by capital employed, on a 4-quarter rolling basis. Net operating profit is the adjusted EBITA (excluding incidentals and amortization of other Intangibles, and including restructuring costs). KPN defines capital employed as the carrying amount of operating assets and liabilities, which excludes goodwill and the other intangibles.

Roaming
Transfer of mobile traffic from one network to another, referring to the exchange of international mobile traffic.

S

Scope 1
Direct greenhouse gas emissions occurring from sources that are owned or controlled by an organization.

Scope 2
Indirect greenhouse gas emissions from the generation of purchased electricity, heating or cooling consumed by an organization.

Scope 3
Other direct greenhouse gas emissions as a consequence of the activities of the company, but occurring from sources not owned or controlled by an organization.

Service revenues
Service revenues are defined as the aggregate of connection fees, monthly subscription fees and traffic fees.

SME
SME refers to small and medium enterprises.

Stakeholder
Stakeholders are the people or organizations with an interest in the company, such as customers, employees, shareholders, suppliers, governments and media.

Subscriber
A subscriber is defined as an end-user with a connection to the mobile or fixed networks and/or service platforms of KPN.

Sustainable Development Goals (SDGs)
On 25 September 2015, countries within the United Nations adopted 17 goals to end poverty, protect the planet, and ensure prosperity for all as part of a new sustainable development agenda. Each goal has specific targets to be achieved in 2030. Also known as Global Goals.

T

Tier standards (I to IV)
Telecommunications Infrastructure Standard for data centers. Tier levels describe the availability of data at a location. The higher the tier, the greater the availability. Tier IV is the highest level and entails independent dual-powered cooling and expected data availability of 99.995% or higher.

TSR (total shareholder return)
A measure of the performance of different companies’ stocks and shares over time. TSR is calculated from the growth in capital from purchasing a share in the company, assuming that the dividends are reinvested each time they are paid. This growth is expressed as a percentage as the compound annual growth rate.

V

VBDO (Vereniging van Beleggers voor Duurzame Ontwikkeling)
The Dutch Association of Investors for Sustainable Development (VBDO) works to create a sustainable capital market, a market that considers not only financial criteria but also non-financial, social and environmental criteria. VBDO’s vision is to increase sustainability awareness among companies and investors.

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Virgin materials
Materials sourced directly from nature in their raw form, such as wood or metal ores. Manufacturing products using virgin materials uses much more energy and depletes more natural resources, as opposed to producing goods using recycled materials.

Virtualization
The separation of the physical hardware and the functions to run the network in software.

W

Weighted downtime
The weighted downtime concerns the average monthly time period in which a combination of KPN platforms and systems is inaccessible to clients due to major incidents, weighted by the impact of this downtime.

WBSO (Wet bevordering speur- en ontwikkelingswerk)
The WBSO is a subsidy that is intended for every entrepreneur in the Netherlands who conducts research into technological innovations.

Colophon

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Forward-looking statements and management estimates
Certain of the statements we have made in this Integrated Annual Report are 'forward-looking statements'. These statements are based on our beliefs and assumptions and on information currently available to us. They include information concerning our possible or assumed future results of operations, business strategies, financing plans, competitive position, potential growth opportunities, potential operating performance or expense improvements and the effects of future legislation or regulation.

Forward-looking statements include all statements that are not historical facts and can be identified by the use of forwardlooking terminology such as the words 'believe', 'expect', 'plan', 'intend', 'anticipate', 'estimate', 'predict', 'potential', 'continue', 'may', 'will', 'should', 'could', 'shall', or the negative of these terms or similar expressions.

Forward-looking statements involve risks, uncertainties and assumptions. Actual results may differ materially from those expressed in these forward-looking statements. No undue reliance should be put on any forward-looking statements. Unless required by applicable law or applicable rules of the stock exchange on which our securities are listed, we have neither the intention nor an obligation to update forwardlooking statements after distribution of this Integrated Annual Report. All market share information in this financial report is based on management estimates based on externally available information, unless indicated otherwise.

The terms 'we', 'our' and 'us' are used to describe the company.

We always aim to further improve our CSR activities and reporting. Therefore, we highly appreciate your feedback, questions and comments on our Integrated Annual Report and CSR activities. Please contact mvo@kpn.com.

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