ARES INDUSTRIAL REAL ESTATE INCOME TRUST INC. SUPPLEMENT NO. 2 DATED MAY 3, 2023 TO THE PROSPECTUS DATED APRIL 17, 2023

This prospectus supplement ("Supplement") is part of and should be read in conjunction with the prospectus of Ares Industrial Real Estate Income Trust Inc. (the "Company"), dated April 17, 2023 (the "Prospectus"), as supplemented by Supplement No. 1, dated April 17, 2023. Unless otherwise defined herein, capitalized terms used in this Supplement shall have the same meanings as in the Prospectus.

The purpose of this Supplement is to disclose:

• updated information regarding the Advisory Agreement.

ADVISORY AGREEMENT

Effective as of April 30, 2023, we, the Operating Partnership and the Advisor renewed the Amended and Restated Advisory Agreement (2022), dated as of May 1, 2022, for an additional one-year term by entering into the Amended and Restated Advisory Agreement (2023) (the "2023 Advisory Agreement"). The terms of the 2023 Advisory Agreement are substantially the same as the terms of the prior version of the agreement.

Accordingly, all references in the Prospectus to the Advisory Agreement for periods on and after April 30, 2023 pertain to the 2023 Advisory Agreement.