

Launch of Japan's First AI-Powered Ship Allocation Optimization System in the Cement Industry

Taiheiyo Cement Corporation
GRID Inc.

Taiheiyo Cement Corporation (Headquarters: Bunkyo-ku, Tokyo; President and Representative Director: Yoshifumi Taura, hereinafter “Taiheiyo Cement”) and GRID Inc. (Head Office: Minato-ku, Tokyo; CEO: Masaru Sogabe, hereinafter “GRID”) have completed the development of an AI-powered ship allocation optimization system utilizing AI technology provided by GRID (hereinafter “the new ship allocation system”) and have officially commenced its operation in May 2025 for the first time in the domestic cement industry ^{*1}. This aims to improve transportation efficiency and streamline operations.



Improving transportation efficiency and streamlining operations have long been key challenges for Taiheiyo Cement. There were 10 to the power of 1400 combinations of shipping plans to transport cement from each plant to logistics hubs across Japan. Until now, these plans have been made by experienced personnel based on their experience while considering a vast number of conditions, but optimization was limited.

The new ship allocation system analyzes large volume of transportation data and generate optimal ship allocation plans while considering complex constraints. It contributes the following operational improvements:

- **Reduction in Transportation Costs:** Optimizes courses and loading efficiency, with an expected 10% reduction of fuel consumption at the planning stage.
- **Enhanced Inventory Management:** Ensures optimal inventory levels at each logistics hub, contributing to a more stable supply chain.
- **Faster Planning:** Cuts planning time by more than 50% compared to manual planning methods.
- **Support for Workstyle Reforms:** Aiming for efficient shipping plans that also complies with the Seafarers Act.
- **Environmental Benefits:** Promotes fuel savings by increasing transport efficiency, contributing to reduced environmental impact.

Taiheiyo Cement and GRID remain committed to further advancing the system, promoting digital transformation (DX), and pursuing efficient operation in shipping. Through these efforts, the companies aim to contribute to workstyle innovation and the realization of a carbon-neutral society.

^{*1} This date is based on internal research by Taiheiyo Cement and GRID in May 2025.