

Mitsui Chemicals and NS Solutions Launch Partnership to Optimize Supply Chains

Digital transformation expected to bring operational and efficiency improvements worth billions of yen

Mitsui Chemicals, Inc. (Tokyo: 4183; President & CEO: HASHIMOTO Osamu) and NS Solutions Corporation (Tokyo: 2327; President & CEO: TAMAOKI Kazuhiko; hereinafter "NSSOL") have begun a collaboration to improve operational efficiency and implement advanced decision-making* in the supply chain.

Through this collaboration, the two companies will combine NSSOL's advanced mathematical optimization technology and business design capabilities with Mitsui Chemicals' knowledge of frontline manufacturing and logistics to develop highly feasible solutions that will improve productivity while reducing costs.

A proof of concept (PoC) already conducted at some of Mitsui Chemicals' sites has shown that business improvements worth hundreds of millions of yen per site annually can be expected. By expanding this initiative to more locations in the future, the Mitsui Chemicals Group expects to see benefits worth several billion yen across the entire group.

*Advanced decision-making: Process methods for making faster, more effective decisions in businesses and organizations by using AI and data analysis to identify the optimal options while considering complex factors.

■ Details of the collaboration

When responding to demand fluctuations and production capacity issues, Mitsui Chemicals often made decisions that relied on experience and personal know-how, which led to challenges in terms of speed and accuracy.

Through this collaboration, the two companies are working to create a system that will support rapid, precise, data-based decision-making in planning operations by utilizing NSSOL's advanced mathematical optimization algorithms (such as production scheduling, inventory allocation optimization, and multi-product adjustment that takes into account raw material constraints) based on the production planning optimization program that Mitsui Chemicals has developed in-house. The study began in the fall of 2024, and PoC (proof of concept) is being conducted in stages, targeting production and inventory management operations for resin products at the Mitsui Chemicals Group's domestic manufacturing sites.

To take one example, Mitsui Chemicals is working to improve production scheduling by such means as reviewing monthly production volumes based on the supply and demand balance to prevent inventory surpluses and shortages, and optimizing production sequences to reduce losses and changeover workloads. The company is now moving toward the actual operation phase with a view to implementing these technologies on site.

Going forward, in addition to optimizing production and inventory management, namely the questions of which products to produce, when, and how much, and where and how much inventory to allocate, the two companies will further deepen their collaboration with a view to expanding into other areas, such as improving the efficiency of logistics networks and optimizing sales plans, with applications in the realms of logistics routes and sales plans in mind.

■ About Mitsui Chemicals

Mitsui Chemicals Co., Ltd. is a comprehensive chemical manufacturer that provides a wide range of materials and services in the fields of Life & Healthcare solutions, Mobility solutions, ICT solutions, and Basic & Green Materials. With numerous world-leading products, sales of 1.8 trillion yen, and over 160 companies in approximately 30 countries, Mitsui Chemicals aims to become a global specialty company with a strong presence around the world. In the VISION 2030 long-term business plan, which sets out the company's goal of contributing to a sustainable future by solving social issues, Mitsui Chemicals has positioned the enhancement of its operations by leveraging digital technology as a key strategy.

■ About NS Solutions (NSSOL)

NSSOL provides various solutions, services, and know-how to consistently support its customers' digital transformation efforts. One focus is optimization techniques, which began with steel production planning in the steel industry and have been used for many years in diverse, systematic efforts in the areas including production, inventory and logistics. Tapping into the advanced technical capabilities and know-how it has cultivated through this experience, NSSOL provides optimization systems and consulting services for a wide range of planning and scheduling tasks to a wide range of manufacturing customers.

Going forward, NSSOL will continue to harness the power of digital technology to make a wide range of contributions to promoting digital transformation at Mitsui Chemicals, based on its purpose of working with others to "Dream our future, Unleash the possibilities of society, With technology and passion."

<Contact for inquiries about this news release>

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Inquiry form: https://form.mitsuicheicals.com/corporate/cc_pr_csr_en?param=13

NS Solutions Corporation Third Sales Department, Sales Division, Industrial Business System Solutions Bureau

Inquiry form: <https://www.nssol.nipponsteel.com/cgi-bin/form/inquiry.pl>