Business challenge

Develop an IT system that integrates a stable, reliable infrastructure to support 24x7 plant operations and a flexible IT environment that can quickly adapt to ever-changing global marketplace conditions

Transformation

Cloud and outsourcing services from IBM were used to build a hybrid infrastructure environment and move to a flexible system foundation. This allows the company to rapidly react to fluctuating marketplace dynamics and grow its business while also reducing costs.

Akira Nitta
Executive assistant general manager, JFE Steel Corporation

Business benefits

83% faster development

Flexible hybrid cloud infrastructure enables quick response to marketplace demands

Virtualized automation

expands the capabilities within a hybrid cloud environment

Improved IT governance

for reliability and continuity across multiple LOB operations

JFE Steel Corporation

Supporting aggressive growth with a responsive hybrid cloud environment based on IBM cloud services

Established in 2003, Japan's JFE Steel is the eighth largest steel maker in the world. The company is part of the JFE Group, with which it shares a philosophy "to contribute to society with the world's most innovative technologies." In 2015 and 2016, JFE Steel was designated as a competitive IT strategy company by the Ministry of Economy, Trade and Industry, and the Tokyo Stock Exchange based on its aggressive investment in and usage of IT to expand profitability, transform business and deliver products that meet customer needs.

"We used to spend more than two months to develop a system infrastructure. Now, we can do it in about 10 days."

—Akira Nitta, executive assistant general manager, JFE Steel Corporation

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Developing a flexible foundation that can adapt to ever-changing marketplace conditions

JFE Steel needed capabilities that would allow it to quickly understand and respond to the global marketplace challenges facing its worldwide business operations. This included such factors as geopolitical and economic conditions, resource price fluctuations, and global exchange rates.

"Achieving our global business strategy requires us to have a flexible system foundation adaptive to changing market conditions," says Akira Nitta, executive assistant general manager, IT innovation leading department, JFE Steel. "At the same time, the line-of-business system supporting our 24x7 steel plant operations is required to have both stability and high reliability." This led JFE Steel to pursue a next-generation IT infrastructure that could address disparate business needs by seamlessly integrating a stable infrastructure with a flexible IT environment.

Adopting a hybrid cloud increases options across multiple lines of business

Adhering to its medium-term goal of becoming a global company that delivers the world's most innovative technologies and services to customers, JFE Steel pursued a next-generation IT infrastructure using a cloud-first IT strategy. The company had been using IBM's outsourcing to support its line-of-business (LOB) systems since 2000, and when it renewed with IBM in 2015, the focal point became how to best leverage cloud to support different aspects of the systems.

JFE Steel opted to implement a hybrid cloud environment based on an IBM® Bluemix® cloud infrastructure that would connect a private cloud with the data center hosting the company's LOB system. This created a new hybrid cloud environment called J-OSCloud. Through J-OSCloud, JFE Steel can develop systems on the Bluemix platform while managing the production environment on a private cloud. Its main office can connect to international locations through the Bluemix infrastructure and to domestic locations through a private cloud. The solution also meets the company's requirements for greater system standardization, openness and automation.

From there, J-OSCloud was expanded by integrating it with IBM Control Desk to simplify IT operation services and IBM Cloud Orchestrator to standardize and automate cloud services. This was a first-of-its-kind combination of services, and it delivers the high levels of stability necessary for managing such a complex hybrid cloud foundation. JFE Steel also adopted IBM outsourcing services to help ensure the system reliability so critical to its LOB operations.

J-OSCloud coexists with other cloud services hosted by IT service companies that are affiliated with JFE Group. The hardware platform is built using Intel architecture servers and open, high-performance IBM Power Systems™ servers, all operated by EXA Corporation, an affiliate of the JFE Group. The Bluemix technology connects to the infrastructure to support rapid spikes of processing volumes and application development.

Responding faster to global marketplace conditions while reducing costs

JFE Steel is now able to respond to new and changing business requirements more rapidly than ever before thanks to J-OSCloud. Specifically, the company has been able to reduce the time it takes to develop new system infrastructure from two months to less than two weeks.

Moreover, J-OSCloud keeps the infrastructure more integrated, virtualized, open and standardized to reduce costs while allowing the company to easily capitalize on new and emerging technologies. This IT-as-a-service approach is designed to enhance IT governance and improve operational portability and continuity.

JFE Steel also expects to leverage additional IBM solutions via the cloud, including other Bluemix technologies. It also plans to use more advanced data, analytics and cognitive capabilities, including IBM Watson™ technology, to manage large volumes of unstructured data as well as operational and sensor data from its plants, so it can further improve product quality and continue to aggressively grow business through IT.

Solution components

- IBM® Cloud Orchestrator
- IBM Control Desk
- IBM Global Technology Services®
- IBM Power Systems™
- IBM Bluemix® infrastructure (rebranded from IBM SoftLayer®)
- IT as a service
- Outsourcing and managed services

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