

Case study | Hitachi Construction Machinery

How Hitachi Construction Machinery went **from system obsolescence** **to cloud-driven agility**



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Accelerating global evolution through transformation in construction

Hitachi Construction Machinery Co., Ltd., a manufacturer and provider of construction machinery through sales and rentals, predominantly generates around 80% of its sales from overseas markets. Initially emphasizing exports from domestic production bases until the 1980s, the company transitioned to a strategy of "local production" in the 1990s, establishing production bases overseas.

Throughout the 2000s and 2010s, its overseas business witnessed substantial growth, with Hitachi consistently expanding its production and sales activities globally since the 1990s. In the 2000s, the company's operations in international markets experienced rapid expansion.

Presently, guided by its CONNECT TOGETHER 2019 mid-term business plan, Hitachi has shifted its focus from new-vehicle sales to after-sales service. The company aims to transform its corporate culture to enhance adaptability to change.

A global focus on **strengthening after-sales** **and cultivating it into their culture**

In 2016, as part of its enterprise resource planning (ERP) update, Hitachi explored the concept of "global system integration," a goal it had not achieved before. Opting for cloud-based services, Hitachi selected A365 as its platform—a management solution fine-tuned to industry needs.

Utilizing Microsoft Dynamics 365 Finance and Operations, an evolution of Dynamics AX on-premises ERP, A365 became the chosen platform. Under its CONNECT TOGETHER 2019 Mid-term business plan, Hitachi initiated a new revolution, enriching its value chain in response to trends in the global construction machinery industry.

Given the evolving business environment marked by reduced investment and extended service periods for construction machinery, Hitachi transitioned from a model focused on new machinery sales to emphasizing rentals, used equipment sales, and after-sales services like parts refurbishing.

This shift aimed to enhance profitability, and efficiency while fostering a more robust corporate structure.





Takayuki Onaka, Head of the Global Solutions Development Department in the IT Promotion Office at Hitachi's Business Management General Headquarters, explains, "With rentals, the hurdles to investment for consumers are lower. For example, all the costs involved with the rental can be included in expenses. We've offered rentals and used equipment sales in Japan previously, but many of our locations overseas didn't. By changing our attitudes here, our goal is to make our operations around the globe more profitable and transform ourselves into a strongly adaptable company."

As part of this initiative, Hitachi launched a project to integrate and unify global ERP systems through cloud services. The objective was to streamline transactions, adjust inventory for construction machinery and parts between overseas companies, and enable near-real-time transmission of information collection and analysis to its Japanese headquarters. A365, leveraging Microsoft Dynamics 365 for Finance and Operations, was selected as the "best cloud service" to achieve this goal.

Adopting A365 for the seamless **transformation of construction machinery management**

Mr. Onaka praises A365 as "an ERP that's an excellent fit for our needs in the vehicle and construction machinery industry. It contains a full set of functions we can use out of the box in almost all areas of our business, from sales of construction machinery to after-sales service, rentals, and accounting. Furthermore, our construction machinery can be traced piece by piece, and we can manage, in detail, information such as a unit's maintenance record and earnings. Managing that information in other firms' ERPs required costly customization. Plus, the user interface for Dynamics 365 is similar to that of Microsoft Office, which we're quite familiar with. The user-friendliness was another selling point."

Despite the rave reviews for Dynamics 365 and A365, Hitachi initially considered a plan where it would first introduce an on-premises version, see how things went as it expanded its installation base to other outlets, and gradually shift to the cloud. In fact, in the first half of 2016, when Hitachi was first considering Dynamics 365, a cloud version of A365 hadn't yet been released; instead, Hitachi based its evaluation on an on-premises product, Dynamics AX 2012.

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Before, our sense of speed was entirely different. For example, when we introduced Dynamics 365 and A365 in the Netherlands upon the launch of rental and leasing services there, the expansion was complete in three months....This is a far cry from the age when it took increments of one to two years to get everything 100 percent ready.

Takayuki Onaka

General Manager, Hitachi Construction
Machinery Business Management Division

Masahiro Ban, Deputy Department Manager of the IDMS Promotion Group within the IT Strategy Center Global Solutions Promotion Department at IT Promotion HQ, reflects on that time: “It was clear that a cloud version was the way to go if we wanted a speedy introduction and expansion of the ERP to locations all over the world.”

“However, at the time, there weren’t any examples yet in the Hitachi Group of using cloud services for ERPs. There was much we had to examine—whether extremely important data uploaded to the cloud would remain confidential; whether long-term use of such a system would produce errors—and there were certainly things that baffled us,” he added.

Despite initial doubts, Hitachi soon decided to implement Dynamics 365 and A365, which Mr. Ban deemed “the most rational and advantageous options.” A significant turning point was the surge in ransomware attacks in 2017.

As cyber-attacks evolved, the challenges of maintaining security internally became evident. Microsoft, in contrast, demonstrated a strong grasp of cloud services and received the first Cyber Security Gold Mark in Japan. Security certifications, coupled with discussions with Microsoft Japan and partner companies like Annata, dispelled the worries that had initially led to confusion.

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We can collaborate with our partners without any hassle no matter where they are on the globe and can be certain we’re using the same environment. This has enabled us to proceed with the expansion of the Dynamics 365 and A365 installation project.

Masahiro Ban

Deputy Department Manager, Hitachi
Construction Machinery IT Promotion Division

Achieving data-driven management at a global scale

Now, Mr. Onaka and Mr. Ban agree: their decision to move all at once to a global cloud-based ERP solution was no mistake. “Before, our sense of speed was entirely different. For example, even when we introduced Dynamics 365 and A365 in the Netherlands upon the launch of rental and leasing services there, the expansion was complete in three months: six weeks for the workshop beforehand and six weeks for development. This is a far cry from the age when it took increments of one to two years to get everything 100 percent ready, from defining requirements to creating and expanding the system.”

“We realized that we were now in an age when we could instantaneously test a cloud service that was a ‘good-enough fit’ at our business and improve it rapidly to create a service that was a better fit for our work. Also, after the system was installed, we always had access to the latest in functionality and security. There was no worrying about our system becoming obsolete over time. Proceeding with an instant changeover to the cloud was the right decision.”



Mr. Onaka emphasizes, “Our cloud changeover gave us the environment we had always wanted but could never achieve before. Starting in the '90s, as our company’s business became more global, visualizing management resources for the entire group, including our overseas sales agents, became a long-term challenge.”

“In 2005, we introduced a package from France to integrate our overseas ERP systems, but the process, from installing and expanding the program worldwide to using and maintaining it, was burdensome, and certain details didn’t go well.

Now, however, we can connect with our SI partners globally, confident that we’re all using the same system environment, advancing our ERP integration with minimal burden,” he added.

Hitachi’s global expansion of Dynamics 365 and A365 is progressing step by step. After ERP integration, connecting with Microsoft’s self-service business intelligence tool, Power BI, and utilizing data collected by Dynamics 365 and A365 for analysis will contribute to speedy, data-driven management.

Mr. Onaka and his colleagues have high hopes for accelerating Hitachi’s transformation through the rapid application of data on a global scale.

Mr. Ban adds, “Before, aggregating and analyzing data from around the world required a tremendous effort from our headquarters in Japan. Since 1997, we had a mix of ERPs tailored to individual country needs and the customized French package, making data collection challenging. In the future, we expect real-time responses to any data requests from headquarters, eliminating problems and facilitating prompt reactions.”





Amplifying change at Hitachi **through smooth information circulation on a global scale**

Mr. Onaka emphasizes that in the future, the use of Dynamics 365 and A365 will “revitalize global communication. The global expansion of the system is proceeding with cooperation from our partners around the world.”

“Both Microsoft and Annata have points of contact across the globe, so cooperation has been smooth, and the support we’re receiving is tailored to circumstances in each nation. We can optimize the system for our business in each country without sacrificing Hitachi’s governance — a huge advantage. Previously, our company dispatched engineers from Japan to build systems globally, handling collective data usage and maintenance in Japan.”

“This not only placed an extraordinary burden on us but was inefficient, as support for these activities could be offered only during Japan time. Now, we can collaborate with our partners worldwide without any hassle, ensuring we’re using the same environment. This has enabled us to proceed with the expansion of the Dynamics 365 and A365 installation project. System information and data for business support are also circulating smoothly, and we’re seeing revitalized communication on a global scale. This is a significant change for us.”

Accelerating cloud conversion of mission-critical systems through Azure

Hitachi's introduction of Dynamics 365 and A365 is progressing smoothly and is expected to be completed in 2022. Mr. Onaka also reports that preparations have been made for other Hitachi systems to join its ERP on the cloud.

“At Hitachi, we're now moving forward with transferring business systems throughout the group to the cloud. We plan to move not just our ERP but also our other information analysis systems—and more—to the cloud via the Microsoft Azure platform. Taking the connection between Dynamics 365 and our information analysis systems to the next level will accelerate our internal transformation and speed of business.”

“We're also preparing a system to provide support for this extensive project, centered on Hitachi Solutions, the Hitachi Group's SI firm. We're in close communication with Microsoft Japan and Annata, and we expect even better results.”

