

Industrial machinery and heavy equipment

CKE Manufacturing

NX supports CKE Manufacturing's full range of precision engineering plans; company cuts production time by 30 percent

Product

NX

Business challenges

Increased product demands and services from regional customers

Inefficient and complicated process flows limiting the number of jobs

Keys to success

Standardize production and process flows internally

Boost production and service capabilities by having the ability to view designs and products before the end product is completed

Increase exports to regional customers

Results

Decreased overall time spent doing NC programming by 30 percent

Improved machine availability by 15 percent

Reduced machining errors by 15 percent



Leading Singaporean precision engineering services provider streamlines production capabilities and significantly increases productivity

From small family shop to trusted name in precision engineering

CKE Manufacturing (CKE) was incorporated in 1990 and specializes in precision engineering machining services for companies in Asia, the Middle East and Europe that require highly complex and customized products. With its roots in a single precision machine shop established in 1946, CKE has continuously innovated and

upgraded its capabilities and technical knowledge through the robust training of staff, acquisition of new technology, and adoption and implementation of modern management systems.

With precision engineering as a core enabler for many industries requiring complex equipment, CKE supplies precision parts to various industries, including defense, semiconductor, electronics, oil and gas, offshore, biomedical and aerospace.

"We've come a long way since the days of programming, storing data on disks and uploading it into machines," says Kwan Li

Results *(continued)*

Transferred NC machining data directly to shop floor machines, enabling designers and engineers to focus on other tasks



Feng, enterprise development manager. “Our services have grown by leaps and bounds and have expanded to meet the needs of our customers. We have grown over the last 60 years and the company has established itself as a leading supplier of precision engineering services for customers within the oil and gas, aerospace, semiconductor and electronics industries.”

Utilizing PLM without compromising legacy

During the severe acute respiratory syndrome (SARS) epidemic, CKE looked to

customers overseas to mitigate risks. Shortly after the epidemic subsided in 2008, CKE noticed an increase in demand for its services across the Asia Pacific, Middle East and South Asia. With growing demand for its products and a larger customer base, CKE was forced to re-evaluate its manufacturing processes and realized that it needed a solution that would help reduce overall production time and enable smarter decisions.

In addition to that, the Singapore government launched a new initiative to push

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Kwan Li Feng
Enterprise Development Manager
CKE Manufacturing

local small and medium enterprises (SMEs) to improve overall productivity with the recent increase in data management trends. SMEs are a driving force behind the Singaporean economy, accounting for more than 90 percent of all enterprises, and contribute six percent of the total added value in the economy. This initiative, coupled with CKE's rapid business growth, prompted the company to search for a full suite of solutions – specifically on a single platform – to enable the management of all data for its different end-users, including supervisors, designers and manufacturers.

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CKE started an extensive evaluation process, approaching several vendors for a solution that would help the company to meet the needs of its customers overseas. Management also noted that it was important for the company to factor in the legacy data generated by enterprise solutions that had been in use for decades. After multiple product demonstrations, CKE chose NX™ software from product lifecycle management (PLM) specialist Siemens PLM Software. Management noted that NX provided a full platform of solutions for manufacturing; moreover, it was the platform that would best help the company achieve the greatest control of its machining strategies and meet its productivity goals.

The selection was not solely based on the technology, which it considered advanced, comprehensive and easy-to-use. CKE also valued the long-term relationships that Siemens PLM Software has with its channel partners and its reputation as a brand known for helping thousands of companies make great products by optimizing their lifecycle processes, from planning and development through manufacturing

and support. Siemens PLM Software’s strong relationship with its partner Hitachi Sunway Information Systems (Singapore) Pte Ltd, and the fact that CKE could rely on Hitachi Sunway Information Systems for additional support, ultimately solidified its choice of NX.

Better process planning, optimized productivity, greater innovation

NX, an integrated product design, engineering and manufacturing solution, provided CKE with the flexibility to maximize the use of its manufacturing resources and deliver products faster and more efficiently through digitization. As an engineering company, CKE needed a platform that provided a full suite of solutions that extended beyond computer-aided design (CAD) and computer-aided manufacturing (CAM) applications. NX delivered. Importantly, the use of NX empowered CKE’s engineers with unique functionality and best practices designed to accelerate innovation.

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Kwan Li Feng
Enterprise Development
Manager
CKE Manufacturing



Solutions/Services

NX
www.siemens.com/nx

Customer's primary business

CKE Manufacturing's primary business is precision engineering machining services.
www.cke.com.sg

Customer location

Singapore

Partner

Hitachi Sunway Information Systems (Singapore) Pte Ltd

Six months after implementing NX, CKE noticed a vast improvement in its processes and productivity. With NX, the company significantly improved its re-use of knowledge. CKE substantially cut product development time, effort and resources and quickly acquired the ability to handle designs of all complexities from its customers. In fact, NX served as one of the key drivers of its innovative new solutions.

CKE cited critical value in its ability to use NX to realize a significant decrease in the overall production time needed to create numerical control (NC) programs. "Before the solution was implemented, it took us 15 to 20 minutes to create one job," Kwan says. "With the implementation of NX, we spent less time on NC programming, reducing the total time to complete the same job to just 10 to 15 minutes. Using NX, we cut the time spent doing NC programming by 30 percent. This was due to the use of the same 3D model through the entire process, from design to manufacturing. This efficient, model-driven process enables our engineers to change the design and the edits to propagate through the entire process. The integrated NX system enables the 3D model to move

seamlessly between the applications without data translation and re-programming, which eliminates errors and minimizes the programming time."

CKE understood that with NX, it could now access manufacturing planning data directly from the shop floor, connecting engineering and production. This connectivity allows engineers to send the correct manufacturing data directly to the shop floor machines, which reduces delays and costs.

Overall, production time has been improved by 30 percent.

The implementation of Siemens PLM Software solutions has provided CKE with the confidence to find the right partners to help its business grow. Its investment in NX and new technologies has strengthened its competitive advantage and now differentiates the company from its competitors. With smart investments like NX, CKE is now looking to implement another Siemens PLM Software solution – Teamcenter® software for complete PLM – as it continues to expand its business across Asia.

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Kwan Li Feng
Enterprise Development Manager
CKE Manufacturing

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