

Reducing lead times to compete in a very tight market

NX plays a vital role by supporting development process innovation

PANASONIC FACTORY SOLUTIONS CO., LTD.



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▶ Business challenges

Compete for a share of a shrinking market

Protect the environment without adding costs or delaying cycle times

▶ Keys to success

Offering shortest lead times in the industry by adopting 3D design

Using 3D models for design reviews instead of 2D drawings

Leveraging legacy CAD (I-deas® software) assets

▶ Results

Designers can concentrate on designing instead of non-value-added tasks

The use of 3D data throughout the organization permits better collaboration

NX seen as best possibility for a global CAD standard

Innovation for customers and the environment

Panasonic Factory Solutions' mission is innovation. The company focuses on improving development processes related to the manufacture of electronic products. It was founded in January, 2003 through the merger of two companies in the Matsushita Group, with the goal of becoming a world-class factory automation company. As a "Factory Solution Creator," it is committed to meeting the needs of its customers throughout the world and to providing them with optimal solutions for their factories.



Panasonic Factory Solutions' success in the past was achieved by shortening the development cycle of its equipment for fabricating printed circuit boards and quickly bringing them to market. Today the company must compete in a very tight market segment due to saturation in the electronic component mounting device market. "When the IT bubble burst, the market shrank overnight," says Kazuo Arikado, director of the Development Process Innovation Center at Panasonic Factory Solutions. Another challenge is the lightning speed at which mounting devices increased in functionality and performance, which put a cap on the number that could be sold. This has forced the company to compete for a share of a shrinking pie. "We have been in a difficult situation where if we do not develop models that will definitely sell, we could end up closing our doors," Arikado says.

There is another concern as well. "Protecting the global environment has become a major challenge," says Arikado. "As a member of the Matsushita Electric Group, we were required to reduce levels of toxic substances. Doing this, however, raised costs and lengthened development cycles. Our company needed to establish an environmentally aware design structure without adding more work."

3D CAD plays a vital role in innovation

Development process innovation at Panasonic Factory Solutions consists of four main components. The first of these is management innovation; the second is method/tool innovation; the third is the introduction of IT infrastructure; and the fourth is standardization. In IT infrastructure, for example, the company is introducing product data management (PDM) and green databases, which form the basis of environmentally aware design.

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Solutions/Services

NX

Client's primary business

Panasonic Factory Solutions, Ltd. is a "Factory Solution Creator" focusing on electronics manufacturing.
www.panasonic.co.jp/pfsc/en/

Client location

Osaka
Japan

"CAD users have a deep-felt desire to easily maintain their assets through standardization that breaks down barriers between vendors. For this to happen, the industry leader has to create a de facto standard. By our assessment, NX is fully capable of that."

*Kazuo Arikado, Director
Development Process Innovation
Center
Panasonic Factory Solutions Co., Ltd.*

The use of 3D CAD is expected to play a major role in the innovation activities. "3D models are effective for communications between the strategy formulation team and decision making team," says Arikado. He also explains that an environment that allows people with many different job classifications to review 3D models instead of drawings is essential for an organizational commitment to TRIZ (a methodology for generating superior ideas in a short period based on past patent case studies and quality-stabilization methods).

Before the merger that created Panasonic Factory Solutions, the company's predecessors were already performing 3D design using I-deas. Most design, however, was still two-dimensional. The use of 3D CAD was not yet widespread, and several designers had to share the same 3D machine. In June 2003, the company formed the 3D CAD committee, which held discussions for about a year. The committee examined several mid-range to high-end 3D CAD solutions and compared them using comprehensive benchmarks. At the committee's recommendation the company decided to adopt NX® software, which had the highest score of all of the products considered.

Choosing the most-likely global standard

"NX is well-suited to the large-scale assemblies involved in factory automation," says Arikado. "It also has good performance." He also explains that looking toward future design automation, it was essential to introduce a high-end CAD product that maintained a history record. Another major advantage of NX was the ability to leverage I-deas assets. Arikado says that leveraging the company's existing store of library assets will make it possible to reap the benefits of process innovation sooner.

These were not the only reasons for selecting NX, however. The most important, as Arikado explains, was the company's expectation that it would become a global standard. "CAD users have a deep-felt desire to easily maintain their assets through standardization that breaks down barriers between vendors," says Arikado. "For this to happen, the industry leader has to create a de facto standard. By our assessment, NX is fully capable of that."

As its first step in implementing NX, Panasonic Factory Solutions plans to successively deploy NX to its development models. The goal here is to create an environment where designers can concentrate on designing, greatly reducing the workload for part and assembly drawing creation, PDM attribute entry, CAE model entry and the like, through the use of 3D models. For its second step, the company plans to deploy NX to its manufacturing and evaluation divisions, incorporating data linked to 3D CAD throughout the organization. This will expand the team of technical employees capable of effectively using this information company wide. In an era of mega-competition, the company is aiming to establish a corporate structure that can succeed in all processes, from concept, to prototype, to manufacturing and service.

Contact**Siemens PLM Software**

Americas 800 498 5351
Europe 44 (0) 1276 702000
Asia-Pacific 852 2230 3333

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