

Viking Range Corporation

Cooking up culinary excellence with DS PLM





Viking Range Objectives

- **Develop more innovative products to maintain market leadership and customer loyalty**
- **Shorten development time to meet rapidly evolving customer demand**
- **Increase synergies and eliminate redundancies among different product teams**
- **Reduce lead times for custom solutions to improve customer satisfaction**



Company Overview

Viking Range Corporation introduced professional-quality cooking to the home when its first range shipped in 1987. The company's passion for perfection is relentless. For example, the Viking simmer burner works at such low temperatures it can melt every chocolate chip on a paper plate without damaging the plate. "We provide not just appliances, but a complete epicurean experience," explains Brian Waldrop, the company's chief financial officer. In the process, Viking sparked a renaissance in its historic hometown of Greenwood, Mississippi, USA, renovating historic buildings for its offices and opening a hotel, restaurants and a world-class cooking school visited by renowned chefs from Jacques Pepin to Emeril Lagasse.

Business Challenges

With the introduction of the first Viking range, Viking invented an entirely new home appliance category. To maintain its leadership position in this now-crowded field, Viking must continually improve its products and introduce innovative new products at a fast pace.

"All great innovation comes with pain and turmoil and sometimes chaos," Waldrop says. "But it's part of the challenge of being the industry leader. Our Number One business challenge is stepping up the pace of continual innovation to develop a stream of products that will set our brand apart from competitors."

The broad Viking Range product line offers the opportunity to encourage synergies and promote company-wide best practices among its engineering teams, which are spread across multiple locations in Greenwood and a new, California-based Viking Commercial team. To stay competitive, each team must take advantage of the others' work by using existing designs to save time on the next iteration of a product while quickly adopting best practices developed elsewhere in the company.



"ENOVIA SmarTeam provides the discipline that keeps everyone on the same page and eliminates any excuses for making mistakes."

Brian Waldrop, Chief Financial Officer,
Viking Range Corporation



Solution

Viking selected Dassault Systèmes Product Lifecycle Management (PLM) solutions, including CATIA for virtual product design and ENOVIA SmarTeam for global collaborative lifecycle management, to increase the pace of product development, speed delivery of custom products and promote quality throughout its organization. “When you’re dedicated to being the best, it only makes sense to work with the best,” Waldrop says. “Dassault Systèmes is a consistent leader, so choosing CATIA and ENOVIA SmarTeam was a simple decision.”

CATIA automates design of custom products

In the past, an engineer might spend a month on engineering documentation for the retro-style steel cabinetry produced by Viking Range’s St. Charles Cabinetry Division. Leveraging CATIA for knowledge-based design, Viking developed a Cabinet Configurator that automatically generates design geometry and manufacturing documentation for custom cabinets in minutes. The configurator is allowing Viking to engineer an average of 50 items per day, compared to 5-7 items per day manually.

Once the intelligent templates are created, designer Troy McDaniel simply enters the job’s key engineering parameters. The software automatically designs the cabinetry and generates all of the documentation, from bills of material to manufacturing drawings. It also generates the geometry used to create computer numerical control (CNC) programs to produce the cabinetry on a laser-cutting machine.

“Because they’re steel, there’s no room for error with these cabinets,” McDaniel says. “They must fit precisely, and the configurator gives us that.”

Viking Commercial design engineers, meanwhile, use CATIA for part design, drafting, sheet metal design, product assembly, lineup assembly, suite assembly and electrical design. “CATIA’s 3D design and parametric capabilities allow faster development time and greater accuracy,

Focus on RAND

RAND NORTH AMERICA IS A LEADING PROVIDER OF TECHNOLOGY FOR INNOVATION, Industry Best Practices and consulting services and support to the engineering and manufacturing communities, covering multiple industries from automotive and aerospace to consumer goods, high tech, and life sciences. Exclusively committed to the Dassault Systèmes PLM portfolio and best-in-class solutions from other Dassault Systèmes ecosystem partners and complementary 3rd party solution providers, RAND North America enables its customers to improve their competitiveness, productivity and profitability by enhancing key aspects of their Product Lifecycle Management (PLM) capabilities.





“Our CATIA-based cabinet configurator enables us to design and build all-steel cabinetry in approximately 50% of the time it would take otherwise.”

Jim Gregory, General Manager,
St. Charles Cabinetry,
Viking Range Corporation

along with the flexibility to easily create other sizes and configurations,” says Eric Deng, director of operations for Viking Commercial. “CATIA also helps facilitate communications with marketing and industrial design groups during the early development phase and enables quicker prototype confirmation.”

ENOVIA SmarTeam helps accelerate innovation

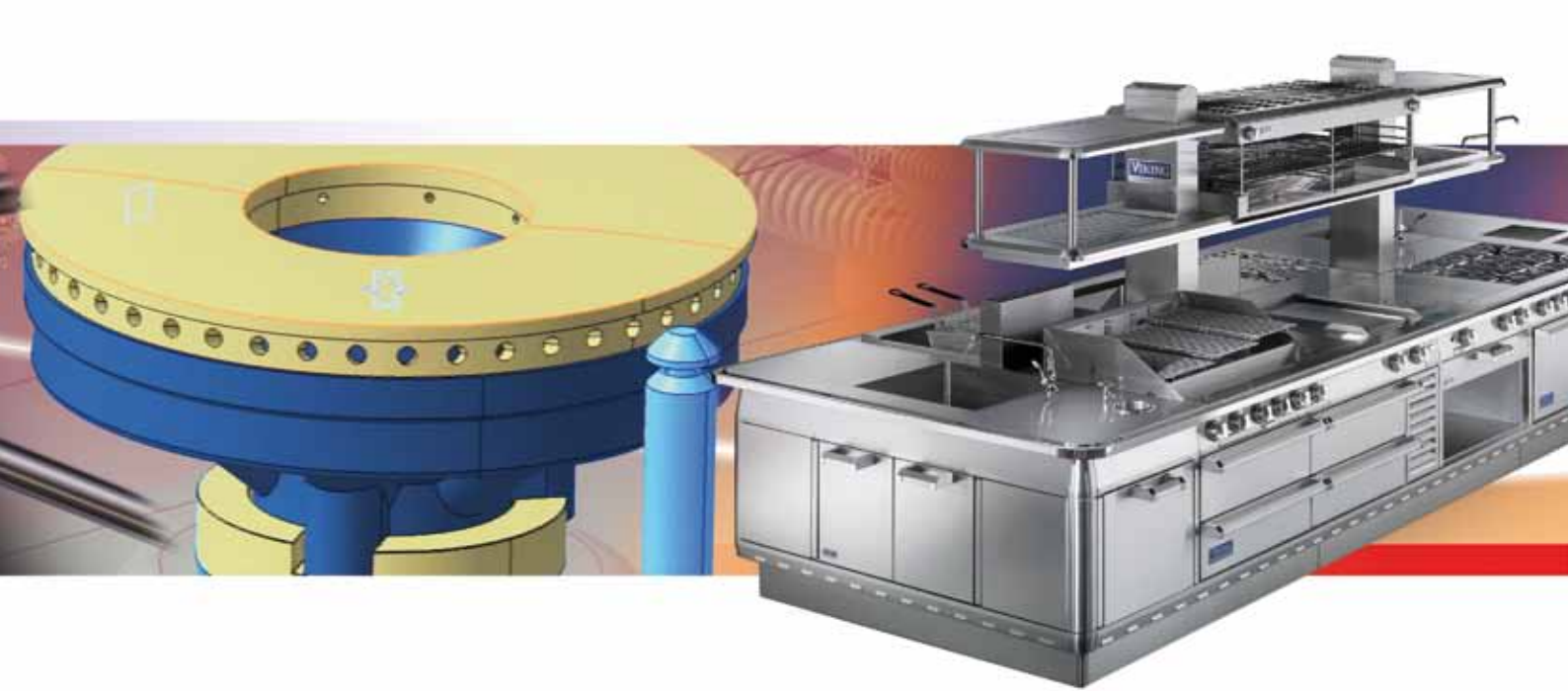
Almost every Viking product development process involves numerous engineering change notices (ECNs). In the past, ECNs were reviewed through a complex manual process lasting a month or more. “I sometimes had engineering change orders stacked up on my desk so high that I could barely see over them,” says Sheila Taylor, engineering technical information coordinator.

Because the system was paper-based, changes often remained invisible to manufacturing and purchasing until they were nearly ready to implement, raising the risk of making or buying soon-to-be-obsolete parts. The risk of working with outdated paper documents led to additional confusion.

Leveraging ENOVIA SmarTeam, Viking developed an automated workflow process that delivers ECNs to each approver electronically, with reminders when due dates approach. Documenting every step in the change order process, including who made the change, when, and why, takes just seconds. Taylor knows immediately which ECNs are at risk of falling behind – and her desk is no longer buried in paper.

ENOVIA SmarTeam also helps teams on opposite coasts stay in synch. “It provides a systematic and consistent flow of communications and approvals between California and Mississippi among all departments including engineering, production, purchasing, quality control, service and industrial design,” Deng says. “ENOVIA SmarTeam makes it easy to share drawings, BOMs, and deviations, and increases visibility at all levels, from users to management.”

Dan Lyvers, vice president of engineering, observes that consistency is critical to quality. “Each of our engineering teams had developed its own individual processes and standards,



which had grown up around its people and products but which were not conducive to doing business as a single entity. ENOVIA SmarTeam provides the information infrastructure that gives everyone access to parts designed by other teams and delivers common processes built on proven best practices.”

Improved efficiency for greater innovation

ENOVIA SmarTeam workflow has dramatically reduced the time required to complete ECNs, the processes that drive innovation at Viking. The average time required to process an ECN was cut from 25-30 days in the past to five or six days now, and doubled the number of ECNs that can be completed in any given month.

“The increased speed with which we are able to process ECNs reduces the time required to get new products and improvements to existing products to our customers,” says Neil Littell, CAD/PLM Administrator, Viking Range. “The automated workflow also saves our engineers and designers time that they use to investigate new concepts and innovative designs.”

Saving engineering cost and time

ENOVIA SmarTeam has helped reduce time to market and engineering costs by making it easy for engineers to find and reuse existing component designs rather than design them again. For example, Viking Commercial developed a line of more than 500 modular products and more than 250 accessories from scratch in less than two years, with parts that can be mixed and matched to deliver thousands of customer-specific configurations. “With CATIA, we can offer flexibilities in modular customization superior to our competitors,” Deng says.

ENOVIA SmarTeam also enables Viking to leverage best practices from one area across the entire organization.

Ensuring everything is built to the latest specification

Viking Range’s Manufacturing and Purchasing departments access design documents and work instructions exclusively through ENOVIA SmarTeam. The instant anything changes, the database and all related documents are updated

DS PLM Key Benefits

- 75%
**Engineering change
lead time reduced from
30 days to 5 days**

- \$250,000
**Outdated parts Cost of
inadvertently creating
outdated parts reduced
from \$250,000 to zero**

- 50%
**Design and build time
Time to design and build
all-steel cabinets cut in half**



“We selected ENOVIA SmarTeam and CATIA because Dassault Systèmes shares our vision of continuously growing and striving to be the best of the best.”

Dan Lyvers, Vice President-Engineering,
Viking Range Corporation

immediately. This approach has saved approximately \$250,000 by eliminating the production of parts based on outdated documentation, a risk with the previous paper-based approach. ENOVIA SmarTeam also ensures that teams from Mississippi to California all work from consistent, up-to-date data.

Designing and building custom products faster

The CATIA-based Cabinet Configurator application has dramatically reduced the time required to design and manufacture St. Charles cabinetry. Even the largest and most complex orders are automatically processed in just hours, from receipt of the acknowledged order to the beginning of the manufacturing process. St. Charles Cabinetry can now deliver a steel cabinet in far less time than the industry standard for similar products.

Viking Commercial, too, is benefiting from the power of CATIA. “The 3D design and parametric capabilities allow faster development time and accuracy, along with the flexibility to create sizes and configurations,” Deng says.

Focus on RAND North America

RAND North America provides Viking Range with Product Lifecycle Management (PLM) solutions from Dassault Systèmes and complementary third-party solution providers, as well as training, consulting, implementation services and best practices support for customers.

“RAND North America has supported us extremely well,” Littell says. “RAND developed the Cabinet Configurator based on our specifications. They provided considerable support during implementation of CATIA and ENOVIA SmarTeam. We subscribe to their helpdesk support program, which helps us to not only correct problems quickly, but also learn how to avoid them in the future.”

Working with Viking IT, RAND North America also built CATIA templates and scripts that help the Commercial Products group automate routine work, freeing more time to spend on product quality and innovation.



Future

Viking plans to leverage ENOVIA SmarTeam's modularity and implementation methodology to replicate its successes throughout the company, gradually expanding functionality in line with users' experience and expertise. CATIA, too, will be extended across the company's divisions to reduce time to market and engineering costs, primarily by leveraging knowledge-based design and improved sheet metal design capabilities.



"Our vision is to integrate the entire company with ENOVIA SmarTeam to drive innovation, eliminate wasted time and promote best practices throughout all of our business processes."

Neil Littell, CAD/PLM Administrator,
Viking Range Corporation

DS PLM for Consumer Goods

Dassault Systèmes has worked with major Consumer Goods (CG) manufacturers and suppliers for more than 20 years to provide a range of leading PLM solutions for CG sectors ranging from furniture and white goods to jewelry and consumer packaged goods.

The DS PLM portfolio of CATIA, DELMIA, ENOVIA, SIMULIA and 3DVIA enable CG manufacturers to increase innovation, reuse intellectual property, standardize processes, ensure quality, increase flexibility, and reduce costs.

For information about DS PLM solutions for Consumer Goods industries, visit www.3ds.com

For information about Viking Range Corporation, visit www.vikingrange.com

For more information on RAND, visit www.rand-na.com

The Dassault Systèmes home page can be found at www.3ds.com

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As a world leader in 3D and Product Lifecycle Management (PLM) solutions, the Dassault Systèmes group brings value to more than 100,000 customers in 80 countries. A pioneer in the 3D software market since 1981, Dassault Systèmes develops and markets PLM application software and services that support industrial processes and provide a 3D vision of the entire lifecycle of products from conception to maintenance.

The Dassault Systèmes V5 PLM offering consists of CATIA V5 for designing the virtual product, DELMIA for virtual production, ENOVIA for global collaborative lifecycle management (including ENOVIA VPLM, ENOVIA SmarTeam, and ENOVIA MatrixOne), and SIMULIA for virtual testing.

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