TVS MOTOR

REVVING UP THE NEW PRODUCT PIPELINE WITH SAP® PRODUCT LIFECYCLE MANAGEMENT

"We have more than doubled the rate of new products introduced into the market. But we had to do even better – and once we deployed the SAP Product Lifecycle Management application, we did."

T G Dhandapani, Group CIO, TVS Motor Company

QUICK FACTS

Company
- Name: TVS Motor Company
- Headquarters: Hosur, India
- Industry: Automotive
- Products and services: 2-wheeled vehicles
- Revenue: US$1.5 billion
- Employees: Around 6,500
- Web site: www.tvsmotor.in

Challenges and Opportunities
- Succeed in highly competitive market by accelerating new-product development (NPD) process
- Establish collaboration and data sharing across globally distributed supplier and dealer network
- Streamline and automate manual and error-prone processes
- Establish tighter quality controls across all design stages
- Develop new products simultaneously

Objectives
- Speed time to market with a highly collaborative enterprise software system
- Automate and streamline NPD workflow using best-of-breed software for product lifecycle management

SAP® Solutions and Services
SAP® Product Lifecycle Management application

Implementation Highlights
- Completed in-house project on time and within budget
- Connected manufacturing units with global suppliers and dealers
- Received strong executive leadership

Why SAP
- Compelling solution demonstration that fully aligned to requirements
- Integration with deployed SAP ERP application and third-party software
- 2-way communication support with global supply network
- Familiar, intuitive user interfaces
- Automated process controls, including e-mail and text alerts

Benefits
- Ability to deliver new product to market 25% more quickly
- Ability to finalize new product component designs 55% more quickly (on supplier side)
- 40% increase in employee productivity
- Greater visibility and control of entire NPD process
- Control and visibility of cost overruns and risks via streamlined workflow
- Improved product quality and faster processing times via strong internal and external collaboration
- Consistent and comprehensive quality standards across all products
- Improved capability to handle multiple projects simultaneously
- Fast and accurate decision support for management

Existing Environment
SAP ERP application

For decades, TVS Motor Company has been building best-of-breed two-wheelers for its 20 million customers across Asia. It's also built a reputation for innovation – a reputation borne out of the fact that TVS Motor is one of the largest patent owners in the Indian automotive industry. "We have more than doubled the rate of new products introduced into the market," says T G Dhandapani, group CIO at TVS Motor. "But we had to do even better – and once we deployed the SAP Product Lifecycle Management application, we did."

Competing in a Crowded Automotive Market

TVS Motor relies on its own R & D center to design a wide range of two-wheelers, from mopeds to racing-inspired motorcycles "We know how to design the best products in the Indian automotive market," says Dhandapani. "But as other global players come in, we have to get new models out to market faster, while maintaining our build quality."

The new-product development (NPD) process at TVS Motor is a stage-gate approach that is divided into six phases, from initiating a new product design to mass production. This process requires tight integration between all of the company's internal departments and, most crucially, with TVS Motor's global network of supplier partners. "External collaboration is critical to us," says Dhandapani. "We use 25 to 35 critical vendors in a typical project. And they supply almost 95% of the components for any two-wheeler we manufacture."

Building the Best Motorcycles via Collaboration

Unfortunately, that level of collaboration was not possible with TVS Motor's legacy system. Project activities were isolated among separate departments, and information that needed to be shared remained locked in business users' computers. Getting information when and where it was needed was a highly manual process – including changes made on the supplier end. This lack of insight also affected the gate controls, and oftentimes projects were approved for the next stage without all the appropriate information. "In a few cases, we only realized this at the last stages of product development," explains Dhandapani.

The highly manual nature of the NPD process severely hampered TVS Motor's ability to handle multiple projects at the same time. "We were not using our resources efficiently and we often had to deploy scarce resources to meet the most critical deadlines while delaying other pending projects," says Dhandapani. The design team also found it difficult to access full performance histories of various components, resulting in NPD cost and time overruns.

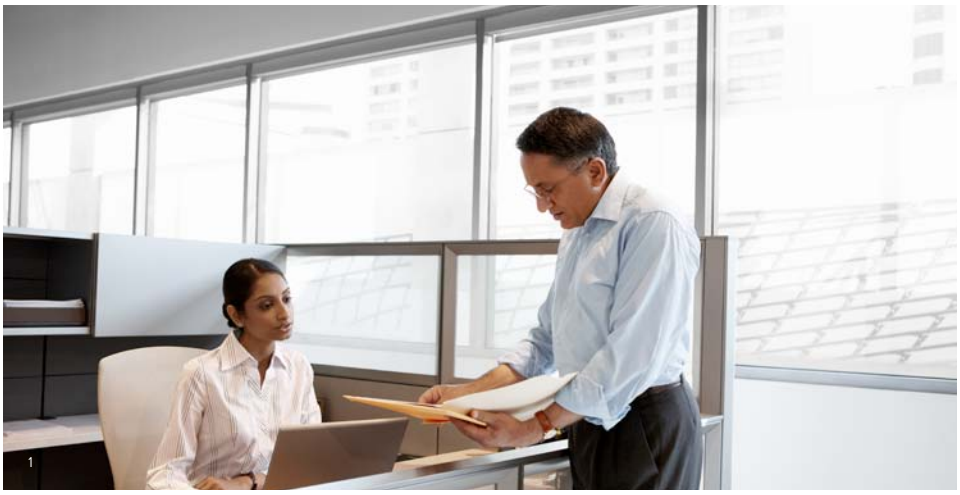
Supporting a Supplier-Intensive Product Development Process

To meet these challenges, TVS Motor wanted to adopt a robust product lifecycle management (PLM) solution. "We had initially perceived SAP Product Lifecycle Management as simply a CAD tool," admits Dhandapani. "But that perception changed once we started evaluating the software." The company quickly learned that the solution would enable fast, two-way communication and collaboration with its component suppliers and provide timely information and alerts on project status to all stakeholders.

Integration with the company's deployed SAP® ERP application was another key benefit, allowing TVS Motor to leverage its current investment in enterprise software and provide its business users with familiar interfaces. And through rigorous and automated control functionality that fully enforces the company's stage-gate process, TVS Motor could also bolster product quality and cost-effectiveness. "SAP PLM would allow us to streamline our workflow and give all of the NPD process people fast access to the data they need to be far more efficient," says Dhandapani. "It would enable us to collaborate on more than one product at a time."

Connecting SAP PLM to a Global Production Network

In deploying SAP PLM, TVS Motor connected business users in its central R & D facility with its four manufactur-



> "SAP PLM helps ensure that we get no surprises at the end of the development cycle. It has also helped us achieve our target of improving time to market by 25% across all projects."
>
> **T G Dhandapani,** Group CIO, TVS Motor Company

ing plants in India and Indonesia. It also connected business users across its network of component suppliers throughout India, China, Japan, and Europe as well as its network of dealers located in 40 countries around the world. "SAP PLM connects everyone involved with our products, which gives us insight into quality issues at a much earlier stage," says Dhandapani.

The project team also took advantage of the SAP application's ability to integrate with CAD viewing software from Adobe in order to support global collaboration of component design drawings. "SAP PLM has a familiar user interface and is Web based, so it's highly accessible to all of our suppliers," explains Dhandapani. "This eliminated the need for us to invest in separate CAD viewing software for our entire supply chain."

> "With SAP PLM, we are highly synchronized with our global network of suppliers and dealers. We can now work together to improve time to market and product performance and quality, and that helps us compete successfully with other industry players throughout the globe."
>
> **T G Dhandapani,** Group CIO, TVS Motor Company

Because TVS Motor and its entire global network of partners had to adapt to a new workflow, change management was a critical factor in the implementation. To ensure that milestones were met and completed on time, senior managers, as well as the company's president, remained involved throughout the implementation.

Sharing Resources and Data to Improve Supplier Performance

The entire NPD process is now highly collaborative and far more efficient, due to the tight integration between internal and external stakeholders. TVS Motors and its suppliers can share project information and work together on deliverables such as drawings, quality control plans, and more. To further speed the process, the software automatically sends e-mail and text alerts when stakeholder action is required. Says Dhandapani, "SAP PLM helps us constantly keep track of available resources and schedules, and we instantly see changes in each other's project plans. Everything moves much faster." In fact, on one of TVS Motor's recent projects, suppliers were able to finalize new product component designs in 10 to 14 days – versus 28 to 32 days with the legacy system.

Automating Processes to Develop Products Simultaneously

TVS Motor is making smarter use of its production teams with the help of SAP PLM. "We have the visibility we need to accurately forecast resource needs and the flexibility we need to develop more than one product at the same time," says Dhandapani. Key deliverables, including operating and quality control plans, are automatically generated by the solution. The software also routes data to the CAD viewing software, allowing users to generate process design flow charts on demand. People can also access design data and track the entire design process online. "The main benefit for all of this is the enhanced productivity of our users, which has improved by 40%," explains Dhandapani.

Controlling Workflow to Lower Cost and Reduce Time to Market

Solution functionality, such as workflow constraints for critical activities and automatic detection and escalation of nonadherence events, has enabled tighter control over the NPD process. At the same time, efficient and error-free master data creation and parts tracking has helped the company reduce its inventory. This is because TVS no longer has to create new part numbers for every project when those same parts (such as nuts and bolts) are used in multiple projects. "Because SAP PLM provides us with the full histories and specifics of all past projects, we can streamline the design process by reducing iterations," explains Dhandapani.

Managers are also taking full advantage of dashboard reporting tools available through SAP PLM to monitor and share key performance indicators and status with all stakeholders. "SAP PLM helps ensure that we get no surprises at the end of the development cycle," says Dhandapani. "It has also helped us achieve our target of improving time to market by 25% across all projects."

Accelerating ROI Through SAP ERP Integration

Dhandapani acknowledges that even a 10% improvement in time to market for new product would more than pay for the company's investment in SAP PLM. He also mentions additional benefits, including better cost control, lower inventory levels, and reduced meeting and travel costs. But he credits one particular factor that has helped streamline the NPD process. "The sharing of data between SAP PLM and SAP ERP has really accelerated our return on investment, as well as our ability to integrate third-party solutions like the CAD viewing software from Adobe," he says.

Riding Confidently on the Road of Continuous Improvement

Optimizing the NPD process is a continuous journey for TVS Motor. Next steps include using the simulation and scenario planning functionality in SAP PLM to improve schedule and resource forecasting. TVS Motor also plans to employ the application's cost-estimating functionality to ensure that new-product costs stay within target. "With SAP PLM, we are highly synchronized with our global network of suppliers and dealers," concludes Dhandapani. "We can now work together to improve time to market and product performance and quality, and that helps us compete successfully with other industry players throughout the globe."

Picture Credits
1: TVS Motor Company, India

50 106 439 (11/08)
©2011 SAP AG. All rights reserved.

SAP, R/3, SAP NetWeaver, Duet, PartnerEdge, ByDesign, SAP BusinessObjects Explorer, StreamWork, SAP HANA, and other SAP products and services mentioned herein as well as their respective logos are trademarks or registered trademarks of SAP AG in Germany and other countries.

Business Objects and the Business Objects logo, BusinessObjects, Crystal Reports, Crystal Decisions, Web Intelligence, Xcelsius, and other Business Objects products and services mentioned herein as well as their respective logos are trademarks or registered trademarks of Business Objects Software Ltd. Business Objects is an SAP company.

Sybase and Adaptive Server, iAnywhere, Sybase 365, SQL Anywhere, and other Sybase products and services mentioned herein as well as their respective logos are trademarks or registered trademarks of Sybase, Inc. Sybase is an SAP company.

All other product and service names mentioned are the trademarks of their respective companies. Data contained in this document serves informational purposes only. National product specifications may vary.

These materials are subject to change without notice. These materials are provided by SAP AG and its affiliated companies ("SAP Group") for informational purposes only, without representation or warranty of any kind, and SAP Group shall not be liable for errors or omissions with respect to the materials. The only warranties for SAP Group products and services are those that are set forth in the express warranty statements accompanying such products and services, if any. Nothing herein should be construed as constituting an additional warranty.