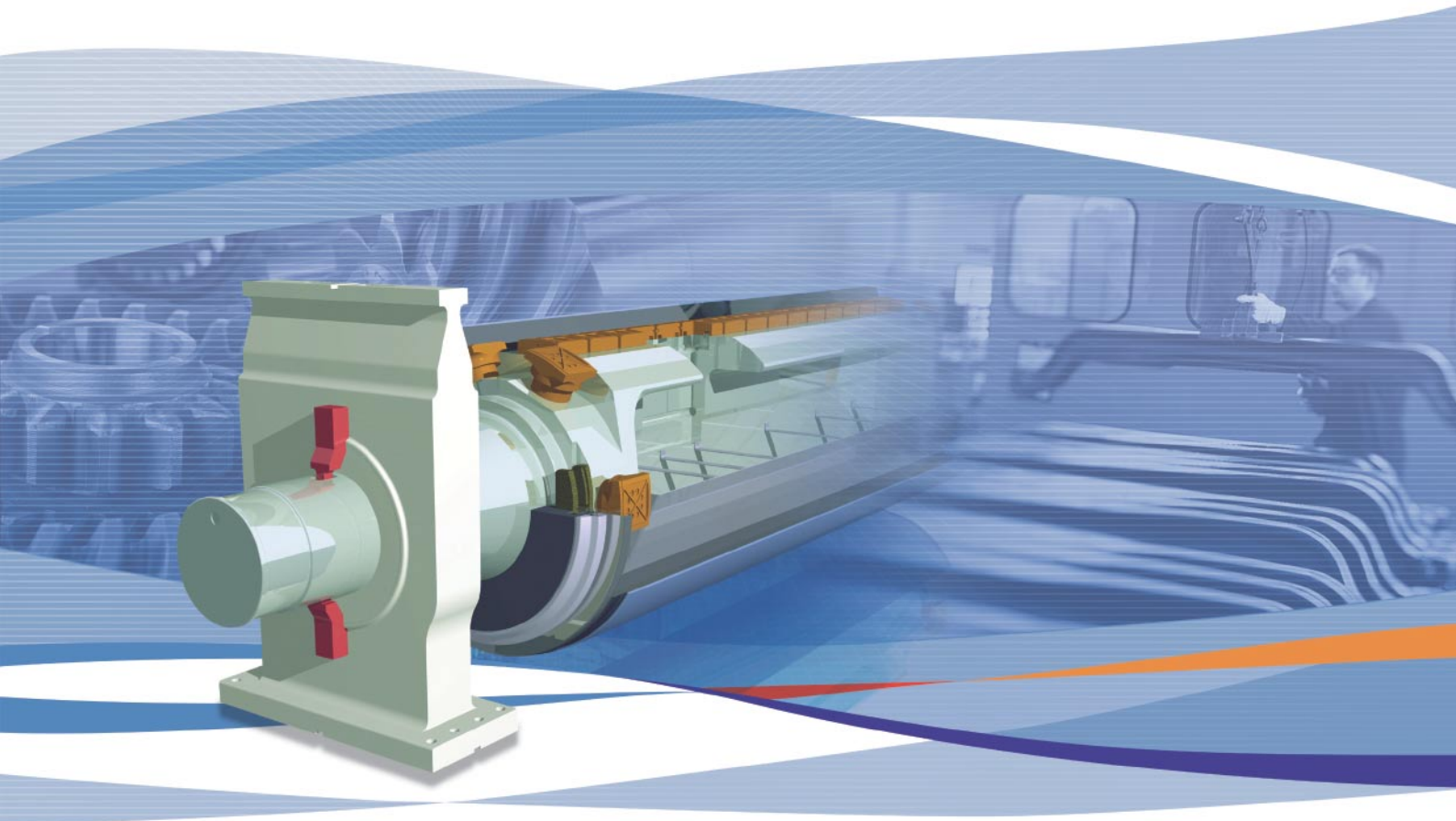


Customer-driven Product Development for Industrial Machinery and Mobile Equipment Manufacturers



The challenge

As worldwide competition replaces local rivalry, industrial machinery and mobile equipment manufacturers face an increasingly uncertain future. Against a backdrop of increased product complexity and costs – the design, development and maintenance of products inside a constantly changing global market impose major challenges for industry productivity and profitability.

To survive in today's competitive age, manufacturers are embracing collaborative product development in order to reduce time to market. Worldwide teams have to share critical product knowledge at every stage of the production lifecycle. This requires investments in the latest collaboration technology to expedite product development and time-to-revenues. Manufacturers also need to deploy infrastructure and processes that support the capture and re-use of designs and intellectual capital hereby creating an environment for increased innovation.

Establishing a new 'collaborative' working environment will help maximise manufacturer competitiveness, efficiency, productivity and profitability. However, this requires:

- *The ability to build processes for enhancing quality and enabling innovation*
- *An environment that promotes collaboration and supplier integration*
- *Manufacturing that adheres to appropriate quality and international standards*
- *Accommodation of changes in organisation and working culture*
- *Support for post-manufacturing maintenance and adaptation.*

Without these capabilities, it becomes increasingly difficult to deliver first class, differentiated products and realise ever-shortening product development timelines.

At every stage, from bidding and design to manufacturing and maintenance, organisations need to collaborate at the deepest levels of process and data to exceed customer expectations. Manufacturers can only secure commercial success by establishing an approach that affords them to maximise flexibility in a highly competitive global market.

“Our high-level product development know-how combined with IBM and Dassault Systemes’ pioneering PLM solutions have brought tremendous synergies to the development of the High Pick Lift. We achieved our original targets both by shortening the High Pick Lift development period from 18 to 10 months and by reducing development costs by 53%.”

*Kimpei Mitsuya, director and member of the board,
Global IT Division, TICO*

The collaboration imperative

The paradigm shift that is underway in this market demands unprecedented levels of design excellence, collaboration and accurate data. Without these three key components industrial machinery and mobile equipment manufacturers will be unable to satisfy the customisation needs of customers without incurring heavy costs and reduced productivity.

By working closely together in a totally collaborative environment throughout the bidding, design, construction and maintenance stages of the industrial machinery and mobile equipment product lifecycle, companies can deliver better products, faster. However, sharing information and working as teams in such a complex, geographically spread-out environment is a challenging task.

Product teams tend to spend much of their time fixing problems with designs and data that have been exchanged across disparate teams, rather than developing the highly innovative and attractive products that customers want.

Companies can balance the scales in their favour by adopting a Product Lifecycle Management (PLM) approach that supports a constant exchange of product information, design schematics, requirements and so on, as well as a completely collaborative innovation-led environment. The key benefits of this approach include:

- ***Faster time to market by shortening bidding and manufacturing lead-times***
- ***Cost reductions through the optimisation of business processes***
- ***Increased service revenues because of enhanced maintenance and adaptation supports.***

The solution

Secure full data management and data sharing capabilities

With PLM solution, information is managed and accessed in one place no matter where it is originated. Powerful collaboration capabilities enable design input from more people earlier in the design process. This solution connects all facets of the business together under a common production lifecycle.

SMARTEAM

SMARTEAM puts you in control of your engineering solutions by driving data across the extended enterprise through seamless cross-platform exchange and enhanced collaboration.

At the heart of each SMARTEAM environment is a managed data repository, where all product information is securely stored. Access through a basic Web browser makes the information easily available to all who need it. Integrated workflows and access to bills of materials enable sharing of this information throughout the design process. Information in various formats can be viewed and evaluated by more people earlier, workflow processes can be integrated with other suppliers, partners and others. Access to information increases the opportunity for innovation and improves the quality of finished goods. Collaboration is easier and more effective for more people with SMARTEAM.

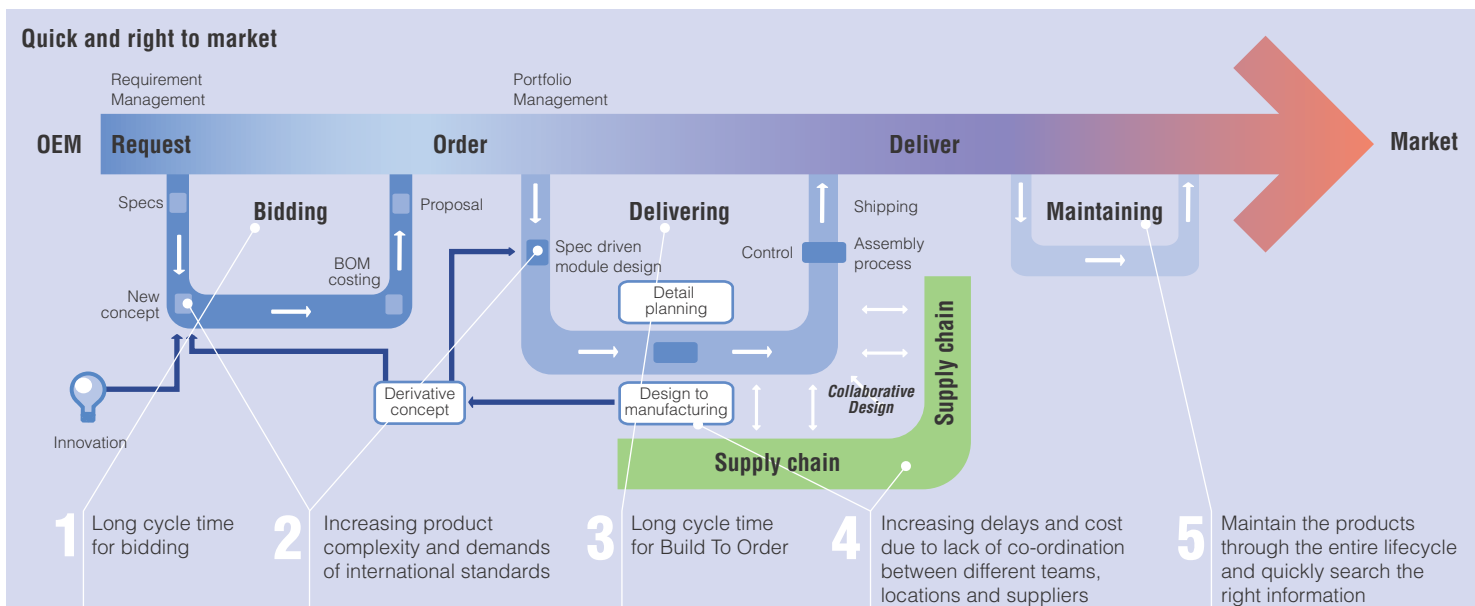
CATIA and ENOVIA digital mock-up (DMU)

With CATIA and ENOVIA DMU, a comprehensive collaborative design infrastructure for multiple CAD systems is now available.

The IBM solution provides a simple environment where many CAD formats can be brought together for evaluation of space, fit, function, appearance, and annotations can be passed through the extended enterprise. Even more advanced analysis can be performed on multi-CAD models, such as kinematics, clash analysis, ergonomics, serviceability and high-end visualisation. With ENOVIA DMU other disciplines in the enterprise can be included earlier in the design process: shop floor, technical documentation, sales and marketing, along with any other groups that need early access to design considerations.

This powerful combination of products support extended lifecycle collaboration and delivers powerful tools on Microsoft® Windows® platforms that can be easily deployed across the extended enterprise.

To achieve success in this increasingly global market, industrial machinery and mobile equipment manufacturers will need to manage information and harness it to promote competitive advantage, flexibility and innovation. The IBM PLM solution enables companies to tackle these challenges in a robust, straightforward and powerful manner.



Based on feedback obtained further to meetings held with customers in the industry, this graph shows the main areas where the benefits of the solution are most appreciated.

Checklist – could your organisation benefit from PLM?

- Do you keep reinventing the wheel, making the same mistakes?
- Are you under constant pressure to specify requirements to suppliers before having all the information?
- Spending too much time trying to work with suppliers to get the design right and correct errors?
- Are you always accommodating late changes caused by customers and suppliers?
- Have you got too many product variables to manage?
- Does collaborating with suppliers and customers slow down the design process and put program targets at risk?
- Do demands from marketing to change product design result in unacceptable delays?
- Do you spend too much time and resources on products that ultimately fail in the marketplace?

The time to act is now !

Contact your Business Partner or an IBM representative today and let us show you how CATIA, ENOVIA and SMARTEAM can give you benefits.

“By shortening the cycle time by ten months, we are now much more flexible and have a much better fit with the ever-changing market demand. This benefit is priceless for our company.”

Paolo Cera, Marketing Director, MASCHIO GROUP

“Perhaps what’s most amazing is we are using solutions that until recently only mega-corporations with huge budgets could afford to buy and implement. The time, resources and expertise required were typically beyond the reach of small and medium-size companies due to cost and complexity in programming. But with SMARTEAM, we implemented and performed our legacy data conversion literally overnight.”

Mark Holmberg, Engineering Processes Manager at Krebs Engineers



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