



## **NEW PRODUCT DEVELOPMENT AND INTRODUCTION WITH SAP® FOR HIGH TECH**

### **Transforming NPDI Processes for Increased Profitability**

For high-tech companies, improving the new product development and introduction (NPDI) process is an increasingly important way to achieve competitive advantage. However, for most businesses, the NPDI process is fragmented and slow. The SAP® for High Tech solution portfolio helps companies transform and integrate the NPDI process across business functions so that they can increase speed and efficiency, cut time and expense out of product development, and capitalize on innovation for improved profitability.

Many high-tech companies have increased their competitive advantage and achieved higher profitability by leveraging development partners and introducing new solutions more quickly. Customers today, however, increasingly demand more innovative, customized, higher-quality products at lower prices, resulting in increased pressure on businesses to further reduce time to market and cut development costs. To achieve these goals, savvy companies are leveraging product development approaches that address the entire product life cycle – from conception to market launch. One such approach involves deploying an integrated business solution to streamline and optimize the new product development and introduction (NPDI) process.

NPDI is the process of defining a product strategy within a portfolio of technologies and markets; managing projects and collaborating with design partners; developing the product and sourcing components from suppliers; and managing the ramp-up to production. Companies need to perform all of these activities while complying with stringent environmental concerns (such as RoHS-WEEE) and responding to an influx of customer requirements.

In many organizations, however, new product development is handled through a collection of disconnected processes and fragmented systems operating in functional silos. Rather than working collaboratively, teams from R & D, product management, engineering, procurement, and manufacturing focus on their own contribution to the process. In such an environment, the NPDI process is usually wasteful, unreliable, and unpredictable. The challenge is to find a way to effectively manage the NPDI process so that your company can realize new revenues and higher margins.

### Take Control of NPDI

NPDI with the SAP for High Tech solution portfolio enables you to automate and integrate processes – replacing the traditional fragmented and disconnected approach to NPDI with a unified, closed-loop process that helps you operate with greater speed, efficiency, and flexibility. The solutions allow you to manage the planning and execution of a portfolio of products, programs, and platforms, while simultaneously keeping the development process aligned with corporate objectives and market demands. By simplifying the sharing of product-related information across functional and company boundaries throughout the development cycle, NPDI with SAP for High Tech also makes it easy to collaborate with key stakeholders, including customers, suppliers, design partners, supporting engineers, and product management.

### Powerful Support for the NPDI Process

SAP for High Tech is the only set of solutions that supports the entire range of processes needed for effective NPDI, from defining product strategies and gathering requirements to developing products, sourcing new products, ramping up production, and launching products into markets (see Figure 1). By providing a number of sophisticated tools that support the entire new product development process, SAP for High Tech helps you transform NPDI processes for increased competitive advantage and profitability.

### Prioritize and Monitor Product Portfolios

NPDI with SAP for High Tech solutions gives you the resources to monitor a portfolio of product development projects, prioritize new product initiatives, make informed trade-offs, and keep the development process in line with corporate strategy. Flexible

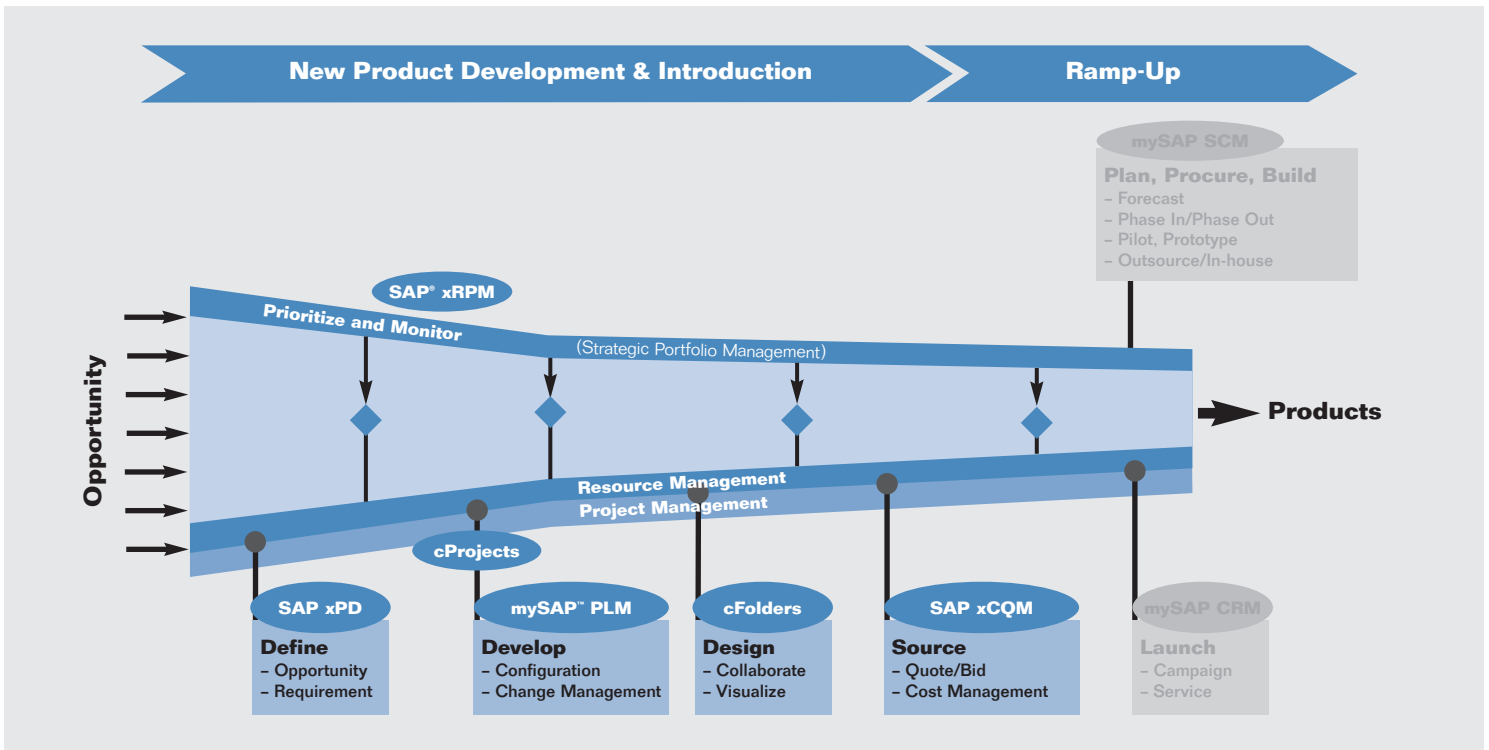


Figure 1: SAP® Solutions Addressing the Entire NPDI Process

analytics provide a concise overview of the NPDI process, and supporting what-if scenarios allow you to make better resource and project management decisions. The SAP® xApp™ Resource and Portfolio Management (SAP xRPM) composite application offers seamless integration to key back-end data, enabling monitoring and analysis of key performance indicators such as number of engineering changes, resource availability, R & D costs as a percentage of sales, and number of carry-over parts used.

### **Adopt a Project-Driven Development Approach**

NPDI with SAP for High Tech helps you to move from reactive, workflow-driven development approaches to plan-driven engineering. Using the Collaboration Projects (cProjects) suite, you can distribute key development and design tasks, incorporate stage-gate methodologies, and provide control throughout development execution. By providing a central point of access to critical deliverables and data, cProjects enables more efficient and effective delivery of projects. And by transforming workflow-driven approaches into project-driven team approaches, you can more effectively allocate team resources and tasks to both internal cross-functional teams and external development partners.

### **Translate Requirements into Opportunities**

With SAP for High Tech solutions, you can define requirements, use them to create product concepts or specifications, manage iterative changes as the development process progresses, and incorporate input from customers and from engineering, manufacturing, and marketing planners. By structuring and mapping these requirements to new product concepts, you can incorporate customer requirements directly into your innovation process. Through the SAP xApp Product Definition (SAP xPD) composite application, you can take a customer-centric design approach and align requirements to core-development data structures such as bills of material (BOMs).

### **Manage Changes and Configurations**

By centralizing product data, SAP for High Tech provides all stakeholders with easy access to information. At the same time, this centralized data repository supports simple change processes and data reuse, enabling you to manage data through the core development and design processes of NPDI. Leveraging functions included in the mySAP™ Product Lifecycle Management (mySAP PLM) solution, SAP for High Tech also lets you manage core development and design processes by integrating with mechanical- and electronic-CAD solution technologies. This integration more tightly connects design tools and data and provides powerful classification tools for component data and design reuse.

### **Enable Collaborative Design Processes**

The Collaboration Folders (cFolders) application makes it possible to incorporate partners into the overall design and change management process, as well as to share product and design information and documentation with them. Development partners can utilize cFolders to access key design information, redline changes, and make new information available to all project participants. This collaborative capability enables you to proactively analyze the impact of changes on data structures such as BOMs, as well as to link critical information such as manufacturing part numbers, or MPNs, to ensure accuracy and accelerate the product development process.

### **Integrate Product Costing and Sourcing**

These SAP solutions include a set of sourcing and product-costing functionalities, enabling you to perform cost calculations throughout the design, development, and start-up phases. You can leverage terms within contracts with your key suppliers to provide a solid idea of costs early in the NPDI process – information that makes it easier to create sourcing documents such as requests for quotation. The solutions also include tools that streamline cost estimation and quotation preparation processes, resulting in shorter turnaround times for engineering changes and bids. For example, SAP for High Tech leverages SAP's sourcing solutions to support the entire sourcing process for new products, including the SAP xApp Cost and Quotation Management (SAP xCQM) composite application and the mySAP Supplier Relationship Management solution.

### Move Smoothly into Ramp-Up

The NPDI functions of the SAP solution portfolio are integrated with key enterprise and execution systems such as product life-cycle management; supply chain management; quality management; and applications for environment, health, and safety. As a result, information created and gathered during product development processes (BOMs, CAD drawings, and quality documents) can be transferred seamlessly into follow-on production, supply chain, reporting, and after-market processes. This translates into fewer and less complicated handoffs and reduced time required to bring new solutions to market.

### The Payoff of Effective NPDI

NPDI with SAP for High Tech gives you better control over, and visibility into, the end-to-end NPDI process. As a result, you can reduce engineering and development costs, improve product quality, reduce cycle times, cut production costs, and shorten time to market. Ultimately, an integrated and focused NPDI process can help drive broader benefits across your business, including the following:

- **Increased revenue and profitability**  
NPDI with SAP for High Tech provides a systematic, disciplined approach to coordinating the cross-functional delivery of new, innovative products to the marketplace. Businesses can bring more products to market, achieve quicker time to volume, focus resources on the right opportunities, improve product quality, and develop products that meet market needs.
- **Reduced operating costs**  
Operating costs are lower because companies can create product designs that are optimized for manufacturing and the supply chain, achieve shorter cycle times, and reduce errors and rework.
- **Lower working-capital requirements**  
NPDI with SAP for High Tech lowers working-capital needs by reducing inventory level requirements, improving capacity utilization, and reducing warranty and return allowances by improving product quality.

Tangible Benefits	% impact
<b>Revenue &amp; Profitability</b>	
■ Capitalize on the best ideas and develop market-attractive products	2-10%
■ Increase in new product sales	10-20%
■ Reduce time to market & improved time to volume	2-20%
<b>Operating Cost</b>	
■ Optimally allocate resource	5-20%
■ Reduced errors and rework	3-5%
■ Increase productivity	5-15%
■ Reduction in direct material costs	2-5%
<b>Working Capital</b>	
■ Reduction in inventory levels	3-5%
■ Improved capacity utilization	5-10%
■ Reduction in warranty and returns allowances	10-20%

Figure 2: Value Proposition of SAP's NPDI Process  
Source: AMR Report "The Value of PLM and How to Get It" and Benchmarks from SAP Value Engineering

### To Get Started

SAP for High Tech enables you to transform your NPDI process to increase speed and efficiency, helping you thrive in a competitive industry. To find out more about how SAP for High Tech can help your company, visit [www.sap.com/industries/hightech](http://www.sap.com/industries/hightech).

### Powered by SAP NetWeaver®

SAP for High Tech solutions are powered by the SAP NetWeaver® platform. SAP NetWeaver unifies technology components into a single platform, allowing organizations to reduce IT complexity and obtain more business value from their IT investments. It provides the best way to integrate all systems running SAP or non-SAP software.

SAP NetWeaver also helps organizations align IT with their business. With SAP NetWeaver, organizations can compose and enhance business solutions rapidly using enterprise services. As the foundation for enterprise services architecture (ESA), SAP NetWeaver allows organizations to evolve their current IT landscapes into a strategic environment that drives business change.