

# Sun Java™ Application Platform Suite

## Solutions for Manufacturing

### Sun Java Application Suite: Benefits for Manufacturing

The Sun Java Application Platform is essential in enabling manufacturers to develop and manage best-of-breed application infrastructure and reduce IT integration effort. Manufacturers can truly collaborate and adhere to industry regulations through sharing of cross-functional planning, design, and procurement information, and better management of supplier relationships. The Java Application Suite enables manufacturers to adopt and deploy web services on a single platform, and provides a foundation for service orientated architecture.



While technology and automation have revolutionized the manufacturing industry over the past few decades, new challenges and requirements continue to present themselves to manufacturing enterprises. The Sun Java Application Platform Suite, one of the Sun Java System Suites, provides manufacturers with the simplicity, predictability, and affordability to meet these challenges.

#### The New Manufacturer

The manufacturing industry has seen enormous advances in efficiency and productivity as a result of the implementation of applications that automate the wide variety of functions required to bring a product to market. These applications include Supply Chain Management [SCM], Product Lifecycle Management [PLM], Manufacturing Execution Systems [MES], Shop Floor Control and more. Each point product application addresses the automation and simplification of its own business process; it creates and captures data as it applies to that silo business process and practice.

However, management of all these point product applications has become extremely challenging in terms of costs and resources required. According to a recent report by E-Business Strategies, it is estimated that up to 80% of an IT department's budget can be consumed by merely trying to manage these disparate systems<sup>1</sup>. This drain on resources severely hinders an IT organization that is struggling to provide business value and deploy new applications and services, but is barely maintaining existing applications.

The challenges for the manufacturer are that each one of these applications provides a unique set of data which in itself is useable and valuable to other applications. Interoperability of applications reduces the risk of inconsistent data as input by these silos of business processes. For a manufacturing

enterprise to operate "real time" it is vital that the data submission is integrated to the applications that drive the business. Thus the real costs are in maintaining the integration of applications across the manufacturing enterprise, not creating real benefit by enhancing the application / business process performance.

In order to overcome IT challenges and stay competitive by increasing product quality and reducing production cost, manufacturers need to collaborate and share business processes within the entire company not just at the site, business unit, or regional level. For example, automotive manufacturers typically provide product configuration tools to customers via the web, but need to tie it to back-end applications in order to assemble the end-product per customer requirements. Procurement, design, sourcing, planning, manufacturing, and buying divisions need to be closely intertwined to drive the highest value by enabling appropriate business decisions in real time. In addition, certain business processes need to be integrated with supply-side systems, as manufacturers need to out-source product components. Inadequate visibility into production processes and purchased goods and services across the entire enterprise and supply chain is detrimental.

Real time enterprises have a virtually integrated business via leading technology that reduces the redundancy (i.e. input of data) and has implemented an infrastructure /

architecture that allows for adaptable interchange of best business processes. They provide a single portal to facilitate communications among key players within the manufacturing process. Real time enterprises must quickly adapt to demands and constantly strive to achieve economy-of-scale.

### Sun Java Application Platform Suite to the Rescue

The Application Platform Suite is a comprehensive, flexible, secure, and reliable platform designed to accelerate time to service of new applications, while streamlining the integration of existing legacy manufacturing applications through a robust portal platform.

Bringing together the market-leading.

Application, Web, and Portal services of the Sun Java Enterprise System with a comprehensive set of developer tools, the Application Platform Suite is a pragmatic first step in implementing a service-oriented architecture (SOA). Bridging the chasm between business and IT, Sun's comprehensive approach to implementing an SOA provides a flexible environment that helps manufacturers respond quickly to competitive pressures while maintaining a high level of security. The Suite combines and maximizes the benefits of the standard Java Platform, Enterprise Edition (JEE™) architecture, fostering application reuse with the highly scalable and secure Java System Web Server.

Secure universal access is critical to ensuring high usage rates of new applications and services. The Application Platform Suite enables access from outside the company firewall by a manufacturer's entire supply chain, securely from virtually any Web browser and supports access from over 4000 mobile devices. In addition to delivery to remote and mobile suppliers and customers, applications and services can be readily delivered based on users' roles and privileges.

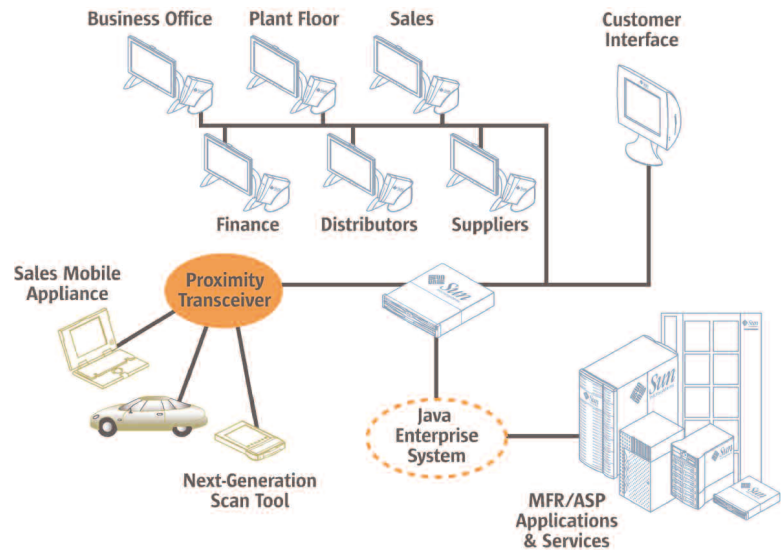


Figure 1: The Manufacturing Environment

The Java System Portal Server provides a robust delivery platform that includes powerful personalization, aggregation, integration, and search capabilities.

The Application Platform Suite excels against the competition by providing unmatched value in the most comprehensive platform for manufacturing organizations worldwide. It includes a complete set of Java developer tools that support the latest standards, dynamic developer collaboration, and SOA methodologies:

- Java System Application Server Enterprise Edition
- Java System Web Server
- Java System Portal Server
- Java System Portal Server Secure Remote Access
- Java System Portal Server Mobile Access
- Java Studio Enterprise
- Java Studio Creator

- Java System Web Proxy Server

- Java Message Queue

Deployment of Sun Java Application Platform Suite is an ideal first step to enterprise-wide integration that can scale to include other Suites or the entire Sun Java Enterprise Systems.

### Sun Java Application Platform Suite Leverages the Strength of Sun Java Enterprise System

The Sun Java Enterprise System introduced a radical new approach to enterprise infrastructure software – the entire process of how infrastructure software is acquired, deployed, and operated was made simple, predictable, and affordable. And now with Sun Java System Suites, that simple process just became easier. Java System Suites group together functionally similar product components, and enable a phased-in approach to the overall Java Enterprise System over time. As manufacturing customers' plant operations or supplier management activities require new infrastructure services, manufacturers can combine Suites to fit their growing business needs, or upgrade to the Sun Java Enterprise System.

### Sun Java Application Platform Suite Integrates and Simplifies the Manufacturing Enterprise

With a component-based software philosophy and Java-based technologies, Sun Java System Suites simplify the integration of applications utilized across the manufacturing enterprise. This Sun architecture, which includes Sun's proven server platforms, Solaris™ Operating System, and built-in security capabilities, leverages the networked community by connecting devices (such as plant floor sensors and control systems) to applications (like MRO, supply chain, purchasing, and engineering). This eliminates a silo information approach, as information is now in secure repositories—created once, stored centrally, and utilized across many applications and geographies.

Deployment of the Sun Java Application Platform Suite offers flexibility and choice to the manufacturer while compiling data into usable information, which is gathered and disseminated in real time. The newly networked manufacturing enterprise insures consistency of data and information to ensure quality of processes and compliance for information tracking.

Footnotes:

1. Sun Java Enterprise System: Planning and Executing Migration Strategies Executive Brief, eBusiness Strategies Inc, 2004.

#### Learn More

For more on Sun in the manufacturing industry, visit [sun.com/manufacturing](http://sun.com/manufacturing). To learn more about the Sun Java Enterprise System and Sun Java System Suites and evaluate the software free for 90 days, visit Sun's download site at [sun.com/javaenterprisesystem](http://sun.com/javaenterprisesystem).

#### About Sun Microsystems, Inc.

Since its inception in 1982, customers have continually turned to Sun to help them grow their business, lower their costs, and gain competitive advantage. Sun is a leading provider of industrial-strength hardware, software, services, and technologies that make the Net work.

Sun Win#: 445574

Sun Microsystems, Inc. 4150 Network Circle, Santa Clara, CA 95054 USA Phone 1-650-960-1300 or 1-800-555-9SUN Web [sun.com](http://sun.com)

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