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THE

State of Middleware



Strategic Middleware Enables Growth

Today's middleware does much more than integrate applications—it delivers a strategic platform that enables businesses to compete more effectively

More than ever, businesses today need their IT investment to pay off strategically. Information systems must deliver visibility and insight into business operations, enabling companies to respond quickly to changing market conditions.

The Internet has placed new demands for speed, responsiveness and availability to meet customer expectations. Companies need their infrastructure to be flexible and adaptable to deploy new business processes virtually overnight when conditions dictate.

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Juggling IT requirements

In a world where competition is fierce, where mergers and acquisitions take place without warning, and where the playing field changes daily, businesses need to extract all the functionality they can from their IT investment. Yet leading analysts estimate that as much as 80 percent of today's IT budget is spent on managing complex IT systems, leaving scant funds for driving actual business value.

With the added demands of having to comply with new accountability, privacy and financial transparency regulations, combined with ever-increasing security requirements, businesses today are wrestling with IT challenges that are all too real.

“Middleware delivers unprecedented visibility and control over your business by making timely information available to decision makers.”

Middleware: More strategic than ever

Businesses are looking to middleware to protect their investment in legacy applications and hardware, while delivering the agility needed to compete.

In the past, middleware usually came bundled with a specific application, with the express purpose of integrating

it with an enterprise's IT infrastructure. Today, middleware comes to market as suites of modular components that provide greater value beyond integration. IT relies on middleware to develop, deploy, secure and manage web services as well as utilize business intelligence, portal, identity management and content management capabilities to gain greater control and transparency in running their business.

Today, middleware is enabling companies to improve customer service, segment and market more effectively to their customers, cost-effectively consolidate IT operations and increase the ability to respond to change, bring new efficiencies to business processes and operations, and increase overall profitability.

Middleware in the real world

Middleware enables companies to use their IT resources more strategically. Here's how some real-world companies are using middleware to drive business value and solve critical challenges.

► Example: Actionable Business Insight

The Business: A global diversified financial services company needs to double revenue across its 13 business units, which range from retail and corporate banking to credit card and insurance. By improving customer loyalty and selling more effectively to its customers, the company plans on tripling its profits.

The Challenge: The company's business units used disparate systems and applications that didn't share customer information. Front-line employees received poor quality information that hindered their ability to service their customers. Meanwhile, executives had a limited view into their lines of business, which hindered their ability to make fully informed decisions for their organizations.

To achieve its profitability goals, the company had to put an infrastructure in place that enabled all business units to share and analyze customer information, as well as establish a set of key business metrics to monitor the health of customer relationships. Moreover, the company needed to make insights accessible and actionable for customer service reps, branch managers and line-of-business owners.

The Solution: Using an Oracle Fusion Middleware business intelligence solution, call center representatives can now access, via a web-based portal, a comprehensive snapshot of the customer including transaction history across all business units, financial status, and overall customer satisfaction level. The bank division can now use technology to provide a highly targeted, personalized experience based on the customer's unique profile.

Though this project was implemented just last year, there is already significant improvement in the customer retention ratio as well as improved ability to cross-sell and up-sell products/services among the business units. This initiative is also helping to cut the significant operational costs of maintaining multiple dedicated call centers – the company is currently working on plans to consolidate its eight disparate call centers into four, while maintaining or improving customer service levels.

► Example: Streamline and Optimize Business

The Business: The U.S. subsidiary of one of the world's largest silicon wafer manufacturers is looking to improve its business processes. In an industry where shaving seconds off of existing processes has major P&L impact, this semiconductor supplier was struggling with a hard-to-manage environment in which business processes required complex interactions among multiple applications. Because each process change required cus-

tom manual coding among multiple systems, making even small improvements and modifications to their manufacturing process was expensive and time-consuming.

The Challenge: To keep its operations running efficiently while being responsive to the market, the company needed a consistent way to change existing processes and deploy new processes quickly. Clearly, it was hampered by a heterogeneous IT environment that required considerable human intervention to manage the business processes that spanned SAP and the company's manufacturing execution systems (MES). Moreover, the old techniques of solving problems with proprietary point-solutions were not an option, due to the spiraling costs and complexity of that approach.

The Solution: The company selected a standards-based approach to managing their manufacturing operations with an Oracle Fusion Middleware business process management solution. Oracle BPEL Process Manager works with existing systems and human operators to quickly and efficiently streamline their wafer manufacturing processes. Deploying a user-friendly graphical interface improves business and IT productivity by making it simpler to compose, develop, test and deploy business processes in a consistent way. Additionally, the monitoring and event handling capabilities provide transparency to the entire process that wasn't possible previously. Now operation managers can investigate the origin of any problem and then take corrective action more quickly, and with fewer errors, than before.

With Oracle Fusion Middleware, the company was able to quickly introduce an improved manufacturing process that delivered double-digit increases in yield and quality while significantly reducing errors. These results would not have been possible with traditional workflow solutions, where such integration projects would have taken at least eight months. The ability to quickly increase output of silicon wafers, to handle exceptions, and to identify and eliminate bottlenecks in the manufacturing process in near real time has translated to a real competitive advantage.

► Example: Streamline and Optimize IT

The Business: A transportation holding company has just acquired another major brand and expects to gain significant operational efficiencies by consolidating the separate IT systems used to support the business. This consolidation also includes merging the two brands' online reservation systems onto a common platform.

The Challenge: The company depends on its reservation systems to be up and running 24x7, and needs to consolidate two

formerly separate operations and business systems (Java and Microsoft technologies) without disrupting operations.

The Solution: The business decided to standardize on J2EE platform running on Linux with a goal of reusing existing legacy data access services. By using connectors available in Oracle Fusion Middleware, they were able to reuse over 400 existing application services without additional coding. They also significantly increased developer productivity by standardizing on an integrated development environment, JDeveloper, as a single place to develop, test, and manage versions of web applications. Since launching the newly dynamic web site for the newly acquired brand, they have maintained 100% uptime.

Due to the success of this project, the company is using additional functionality in Oracle Fusion Middleware for streamlining and optimizing IT operations. For example, it is using the identity management and single-sign-on solution from Oracle Fusion

Middleware to manage user profiles and access to internal applications that used to be maintained separately. Next, the company plans to streamline user access to enterprise applications, such as ERP and CRM, by implementing an enterprise portal to serve as a front-end.

► Example: Security and Compliance

The Business: A large Midwest state's Department of Human Services (DHS) provides access to its custom-built web-based applications for health care providers and users. The Health Insurance Portability and Accountability Act (HIPAA) mandates complex privacy requirements to ensure patient confidentiality.

“Today's middle-ware is helping companies streamline and optimize their IT and business operations, meet compliance regulations, and deploy business intelligence for better decision-making.”

The Challenge: The DHS application is subject to very demanding requirements. Approximately 30,000 medical providers submit electronic claims both individually and in huge batch transactions from all across the state. The agency also needed to find a cost-effective solution for managing over 80,000 users that access their applications, while ensuring that the system complies with HIPAA's strict requirements for patient privacy.

The Solution: To solve this challenge, DHS deployed the identity management solution from Oracle Fusion Middleware, choosing it for its ability to provide secure access to its Web-based applications and to delegate user administration privileges to multiple levels of user communities.

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By allowing individual medical offices and medical groups to securely manage their respective provider and patient information, Oracle Fusion Middleware enabled local DHS administrators to automate HIPAA compliance in their own operations. This capability provided full compliance with HIPAA regulations while lowering administrative costs. With this scalable, flexible identity management solution, DHS also

ensures that medical claims, whether generated by a small office or large, multi-site clinic, are secure and quickly processed.

Middleware: Helping the bottom line

Today's middleware has come a long way from its humble beginnings in application integration. Middleware delivers unprecedented visibility and control over your business by making timely information available to decision makers. Companies are using middleware to leverage their existing IT investment, while optimizing their IT and business operations, securing their infrastructure, and driving compliance.

The recent rise of standards has freed IT from its dependence on proprietary solutions and the specialized skills needed to maintain them. Companies can now take advantage of standards to more quickly and predictably integrate applications, orchestrate business processes, retrieve data from far-flung locations and cost-effectively

manage users' access across the enterprise to meet constantly changing business needs.

The bottom line is profitability, and today's standards-based middleware delivers that.

Oracle Fusion Middleware drives business value

Oracle Fusion Middleware is a comprehensive suite of solutions, ranging from Java application development tools and web services to business intelligence and content management. Designed to reduce the cost of doing business, Oracle Fusion Middleware integrates seamlessly with your existing infrastructure.

As Ken Vollmer, principal analyst at Forrester Research says, "People are looking for robust, packaged middleware solutions that provide the business functionality that used to be attained by painstakingly integrating a variety of best-of-breed products. These integrated middleware toolsets are much more productive—you don't have to worry about tying the pieces together."

By rigorously adhering to standards and open solutions, Oracle Fusion Middleware enables you to extract lasting value from both your past and future investment in technology to compete successfully in the demanding 24x7x365 world in which you do business.

To learn more about Oracle Fusion Middleware and how it can help your business thrive, visit www.oracle.com/middleware.

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