

Enterprise Service-Oriented Architecture

ADAPTING CRM PROCESSES WITH ENTERPRISE SOA

ACHIEVING A TURNAROUND
IN A MIDSIZE MANUFACTURER

THE BEST-RUN BUSINESSES RUN SAP™



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Overview

Med-Lathes (a fictional machine tools company) had enjoyed decades of continuous profitable growth but was suddenly facing strong offshore competition. Recognizing threats to its market position and continued global growth, the company's CEO mandated rapid measurable improvements in key performance indicators, including perfect order rates, lead-to-sales conversion rates, and service productivity.

Senior management determined that enterprise service-oriented architecture (enterprise SOA), an open IT architecture for creating and using business processes packaged as services, could provide the foundation for implementing the new processes necessary to achieve the desired outcomes. Five months following the initial implementation of the new customer relationship management (CRM) processes built on enterprise SOA – along with composite applications and integration with partners – Med-Lathes achieved the intended performance improvements.

FACING NEW GLOBAL COMPETITION

THE CASE FOR MAJOR CHANGE

The mood was grim. The executive presentations for the past hour described rapid declines in market share and profitability for the past two quarters. A conservative firm with a 62-year history, Med-Lathes had consistently – quarter after quarter, even amidst economic downturns – achieved modest profitability and growth in its specialized niche of machine tools for medical devices. But the long winning streak had ended.

“Don’t make little plans!” proclaimed the CEO after listening to numerous proposals to achieve a turnaround. The suggestions included incremental quality improvements, cost-saving initiatives ranging from cutting travel expenses to reducing printing costs, sales force realignments, and the like.

The company was suddenly facing new competition, particularly from Thailand and Singapore. It was rapidly losing customers to others who could deliver products faster, provide superior service, develop strong relationships with distributors and end users, sustain high quality, and undercut the company on price. “Little plans,” said the CEO, realizing that he would have to stir the organization to change dramatically, “have no magic.”

Revamping Sales, Service, and Marketing

Manufacturing was off-limits – it had always been the company’s bedrock and wasn’t the source of the problems. After extensive discussion, the executives determined that the key areas of focus needed to be sales, service, and mar-

keting – the areas where the competitors were making the most inroads. In fact, the company’s competitive intelligence group determined that competitors were achieving much greater lead-to-sales conversion rates and much higher average in order values. Moreover, the competitors had lower service costs with greater customer satisfaction, in-full and on-time delivery rates exceeding 98%, and nearly zero invoice errors.

The meeting lasted late into the night and provided an increasingly clear picture of the vast extent of the problems. “We have very little time to find a new direction,” said the CEO. “In five months, I expect a 30% improvement in perfect order rates, lead-to-sales conversion rates, and service productivity. In two months, I want new processes in place.” The CEO paused, looked out the window, and then slowly repeated: “Two months!”

Resistance to Change

“Two months,” muttered the vice president of service. “That would be magic.” The four vice presidents – sales, service, and marketing VPs and

the CIO – were in the first meeting convened based on the directive from the CEO. How, they all wondered, could they suddenly shift direction and transform the processes of a 1,900-person company in two months – and then achieve a 30% improvement in key metrics in five?

The service processes – involving 140 internal technicians and 67 partners – were put in place over a period of years and obviously couldn’t be changed in weeks. The sales organization – with 95 seasoned staffers – would revolt, and star performers would leave. The lead time for planning marketing campaigns and printing brochures was well over two months. The latest solutions from SAP – the SAP® ERP and SAP Customer Relationship Management (SAP CRM) applications – were put in place over a period of nine months and many employees were still growing accustomed to the new SAP-enabled processes.

The four VPs explained their concerns to the CEO. “We can’t make waves with our processes now – not at this time,” said the CIO. “We need some stability – we’ve finally reached a safe harbor.”

“Your ship may be in a safe harbor,” replied the CEO, glaring. “But that’s not what ships are for!”

ENTERPRISE SERVICE-ORIENTED ARCHITECTURE

COMBINING WEB SERVICES WITH BUSINESS LOGIC



Enterprise SOA is a blueprint for an adaptable and open IT architecture that elevates Web services to the enterprise level.

So, concluded the four VPs, big change really was in the air. They each convened meetings with their organizations to communicate the necessity for change and solicit ideas.

Elevating Web Services to the Enterprise Level

In the CIO's meeting, the director of IT infrastructure noted that the company had yet to make use of enterprise SOA functionality for either SAP ERP or SAP CRM. She went on to explain that enterprise SOA – a blueprint for an adaptable and open IT architecture that elevates Web services to the enterprise level – could provide the benefits that Med-Lathes was seeking.

"Enterprise SOA uses the SAP NetWeaver® technology platform as a foundation," continued the director. "It allows Web services to be combined

with business logic that can be accessed and used repeatedly to support particular business processes – such as Med-Lathe's sales, service, and marketing processes. By using standard SAP enterprise services built on open standards, we'll have a solid foundation for quickly testing new processes and then automating the scenarios."

Many in the meeting shifted uncomfortably in their seats; body language expressed skepticism. "We've done similar prototyping before," explained one. "And the implementation always takes longer and costs more than we expected: remember our first system based on the theory of constraints?"

Said another, "You're forgetting that we have more than just SAP solutions – particularly in our rotary broaching and belt grinding divisions – and we're going to have a heck of a time integrating

with third-party applications." Many other concerns surfaced: the need to present sound user interfaces as underlying systems change; the extensive number of distribution partners, especially in South Korea and Brazil; existence of systems enabling direct-order capture from customers; and the need to integrate with those systems.

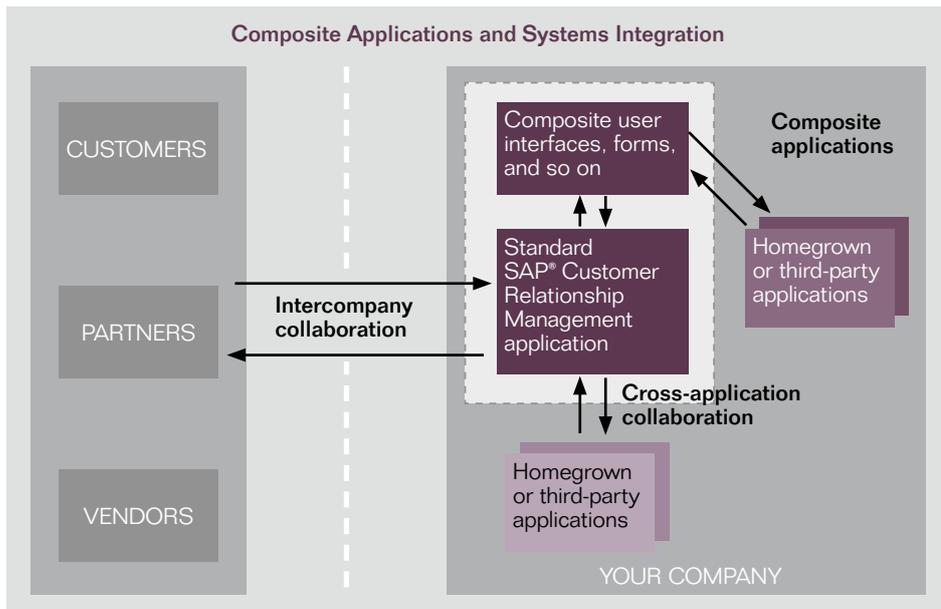
As the discussion progressed, the director of IT infrastructure was back on her feet, in front of the group. "All of your concerns are valid," she began, "and they are all addressed with enterprise SOA."

Robust Integration Supporting CRM Solutions

The director of IT infrastructure went on to explain that they could use enterprise SOA to support three main scenarios, which would address Med-Lathes' issues (see Figure 1).

Composite Applications

Composite applications are real-time applications, usually based on synchronous services that integrate standard SAP CRM along with homegrown or third-party applications to support a new user interface. "We can use these enterprise SOA-based composite applications for rapid implementation of a sales cockpit, a Web channel product catalog, and interactive forms for service-order confirmation," said the director. "I know that all of these and more will be beneficial for Med-Lathes, and we can get them done quickly by leveraging our enterprise SOA infrastructure."



Enterprise SOA is the key to delivering Web 2.0 advances because of its native Web services architecture and its ability to connect the interaction-based Web 2.0 layer with traditional transaction-based back-end applications like CRM.

Figure 1: Enterprise SOA for CRM

Cross-Application Collaboration

Cross-application collaboration integrates SAP CRM and disparate systems; it normally uses asynchronous services and focuses on robust data exchange. "We can use enterprise SOA-based cross-application collaboration to connect real-time offer management solutions with CRM software and integrate our third-party system covering lead management. It will also help us achieve better territory alignment for our sales force through connection of the requisite internally developed application," said the director. "The only way we can possibly get such integration cost-effectively and in the required time is by using enterprise SOA."

Intercompany Collaboration

Intercompany collaboration scenarios are also based on asynchronous services, which integrate SAP CRM with systems of customers, partners, and vendors. "This will be beneficial for collaborating with our advertising agencies and allowing our distributors direct order entry and available-to-promise visibility in our CRM solution. It will also help us use direct-order-capture solutions for specific requirements of cross-company order data interchange and track shipments through our third-party delivery networks," explained the director.

"What's more," she said, "we're starting to see increased demand for Web 2.0-based interactions with traditional CRM applications, such as "mashups" involving maps and customer master data for our sales force. There is also demand for collaboration tools such as Wikis and social networking and community sites for sharing information about products. Enterprise SOA is the key to delivering these types of Web 2.0 advances because of its native Web services architecture and its ability to connect the interaction-based Web 2.0 layer with traditional transaction-based back-end applications like CRM."

A REVOLUTIONARY AND EVOLUTIONARY APPROACH

ALIGNING THE ORGANIZATION, ENTERPRISE SOA AS THE ENABLER

Over a three-day period, the CIO discussed the enterprise SOA option with his senior staff, external consultants, CIOs of customers and partners, and many others. Many were optimistic that this was a truly innovative way to implement the required applications quickly, but many expressed concern about the unknown risks and costs.

Ultimately, the CIO decided that enterprise SOA – because of its anchor in World Wide Web Consortium standards, such as XML and SOAP, and its enterprise orientation toward quality, stability, and reusability – could work very well. It would be both revolutionary – providing a tool for the immediate and fundamental changes needed – and evolutionary, as the company adopts a future stream of enhancements. The CIO convened a meeting with the other three VPs to review his proposal.

Rapid and Low-Cost Process Enablement

“Technology,” said the vice president of sales, “won’t change our organizational behavior.” The CIO agreed that was true, but that with enterprise SOA, the organization could quickly put in place new processes – provided that senior management was aligned and that there were clear messages from the CEO about the necessity for change.

“It all comes back to revamping our business processes,” said the vice president of marketing. “The new ideas we surfaced in our group were essentially new marketing processes – and we need the type of rapid and low-cost enablement that an enterprise SOA can provide. We need to quickly shape our processes to achieve the measurable outcomes we need.”

The four VPs concluded that enterprise SOA was their best underlying solution and proceeded to develop specific plans to propose to the CEO. Their proposals encompassed new processes enabled by enterprise SOA – leveraging composite applications, cross-application collaboration, and intercompany collaboration – in line with the framework that the director of IT infrastructure had described.

Achieving Mandated, Measurable Targets

The CEO agreed and assigned a line-of-business executive (in the precious metal spinning division) to lead the global implementation. The initial set of applications – including direct order entry and available-to-promise visibility for distributors, a marketing dashboard, and interactive forms-based service dispatching – were intentionally narrow in scope and implemented in one month. New processes were put in place two weeks after the applications were implemented.

In another three months, the company had achieved – more or less – results mandated by the CEO: a 30% improvement in perfect order rates, lead-to-

sales conversion rates, and service productivity. Moreover, the company had identified and planned a stream of new enterprise SOA-based applications – encompassing a much broader scope – with additional process designs and measurable targets slated for the future.

“We’ve reversed our fortunes,” said the CEO in a company meeting, five months after the initial meeting he had with management. “We’ve significantly improved many business measures in order to address our competitive threats. Our customers are coming back to us, profitable growth has returned, and we have a sound plan for the future. We must never again lose touch with our global operating environment – and, of course, we must stay close to our customers. Our IT platform can help with those goals. But at the end of the day – to achieve internal alignment and grow our business – it’s up to us.”

For More Information

For a more detailed introduction to enterprise SOA, read the following papers by SAP: [Enterprise SOA in a Nutshell](#) and [Putting Enterprise SOA to Work](#). For more information how enterprise SOA can help you adapt your customer relationship management processes, contact your SAP representative or visit us online at www.sap.com/platform/esoa/index.epx.

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