Proving SOA Worth Is a Big Challenge for IT

Tools emerging to manage, measure benefits of the complex architecture

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August 07, 2006 (Computerworld) -- The allure of easing integration costs and infusing flexibility into rigid monolithic applications is persuading IT shops to flock to Web services and service-oriented architectures. But soon after committing to use the new integration architectures, many IT managers find themselves searching for ways to justify the cost to top corporate management. "It is very difficult to convey this message to senior executives who don't have a clue what SOA is nor what it brings to the party," said David Berry, senior vice president and CIO at Coty Inc., a cosmetics company in New York. "The only thing they do recognize is the end result."

IT managers say that efforts to manage SOAs are far more difficult than similar projects for client/ server and Internet technologies. Some companies are creating or buying tools to help calculate the performance and measure the benefits of an SOA. Then they can use the data to persuade sometimes skittish executives to continue investing in the technology.

Berry: Execs only recognize the end result.

Coty has just completed an extensive SOA project and has started building a set of internal tools to manage and measure the performance of the systems, Berry said.

The company last month finished integrating IT systems it acquired in its purchase of Unilever Cosmetics International by using SOA middleware from Information Builders Inc. subsidiary iWay Software Inc.

Coty acquired the perfume business of London-based Unilever for $800 million late last year.

Berry said that although top management was initially nervous about using SOA for the large integration effort, executives are so far pleased with the resulting benefits.

Berry credited the SOA technology with allowing Coty to absorb in six months a company that will make up approximately 30% of its business.

In addition, Coty used the SOA technology to integrate new SAP software being rolled out in the U.S., Canada and Europe with existing systems, Berry said.

The decision to use the SOA as part of the SAP rollout "was the key to integrating our existing business to our distribution centers," Berry said, adding that "what it really means is that we can ship our products to our customers."

The SOA rollout caused "almost zero disruption" to the overall business, he said.

The vice president of SOA strategy and Web services for the global architecture group at a large U.S.-based financial services firm, who asked not to be named, said his company this month will begin final testing of a new tool set that can justify the company's SOA investment to senior management throughout its lines of business.

The company, which the executive asked not be identified, plans to go live this fall with SOA management software from AmberPoint Inc. in Oakland, Calif. His company hopes to prove the value of the 100-plus Web services it has in place today.

The AmberPoint tool includes software agents that sit on application servers to inspect message traffic and report key information about the services it discovers -- such as who owns the service, its function and how critical it is to the business overall -- to a data warehouse.

The company expects that the implementation of Amber-Point's SOA Management System tool, coupled with Tibco Software Inc.'s Staffware Process Suite process management software, will replace previous efforts to manage the firm's SOA using service registries.

The registries were not an effective way to get visibility into the SOA, because only 20% of the services were being registered by the company's 1,500 developers, he said. At the same time, even fewer consumers were logging information about how they would be using the services.

With the AmberPoint system, once a service is discovered and all its associated metadata is added to the warehouse, a workflow is automatically kicked off to retrieve approval for the service and to request that managers build a service-level agreement governing its use.

"When I go to IT management, they don't care how many services are out there," the executive said. "But if we know the value of a service -- which we get people to model once it is discovered -- and we know how many reuse [instances] there are, we can start backing into the value of reuse."

Long-Term Challenge

Finding ways to show the value of an SOA remains perplexing for many corporate IT organizations, according to industry analysts.

A recent research report from Boston-based Aberdeen Group Inc., for example, noted that 41% of respondents surveyed at 284 companies have found that the biggest obstacles to SOA adoption is "limited visibility of SOA value."

Likewise, a recent survey of 400 IT managers by Evans Data Corp. found that justifying an SOA investment is one of the top four inhibitors to SOA adoption.

"Implementing a new technology architecture takes time and money, and [any new technology] has always been hard to justify and to ascertain an ROI," said John Andrews, president of Santa Cruz, Calif.-based Evans Data. The value of an SOA will most likely be realized over the long term rather than the short term, he added.

In the meantime, Andrews suggested placating senior management by building an SOA incrementally and choosing projects "where there is rapid need for change, and the reuse of a service can accelerate the ability for IT to react."

Linda Scotto, manager of applications development and support at the National Rural Electric Cooperative Association (NRECA) in Arlington, Va., said she has been able to justify her organization's investment in SOA by showing that it has helped boost customer satisfaction while extending the life of the organization's mainframe system.

Prior to building an SOA, the association, which provides employee benefit plans to more than 900 cooperative electric utilities nationwide, had manually entered data into an IBM zSeries mainframe from changes customers had entered through its Microsoft SharePoint Portal.

"Our customers saw through the smoke and mirrors when there were typos [in company correspondence]," Scotto said. "We were getting bad egg on our faces."

So last November, the NRECA began installing DataDirect Technologies Inc.'s Shadow z/Services integration tool to let clients directly deliver information to the mainframe system via the portal and Microsoft's BizTalk server.

Since then, the NRECA has been processing changes to plans that are made by individual clients.

Last month, the association moved to expand use of DataDirect's tool by gathering requirements for processing group plan changes made by clients, Scotto said.

Some users are justifying SOA investments to management simply by solving problems.

Alan Anderson, director of application development at VP Buildings Inc., said his IT shop has never had to use management tools to justify the use of Web services to upper-level management. The executives "don't care how we solve a problem, as long as we solve it," he said.

The Memphis-based manufacturer of steel building materials this month will extend its SOA to the second of its five manufacturing sites to provide purchasers in its procurement department with real-time access to the status of inventory consumed on the shop floor.

VP Buildings is using SOA middleware from iWay to link its PeopleSoft inventory software -- which is operated by an off-site firm -- and homegrown Microsoft .Net-based manufacturing software.

Before launching a Web services link between the systems, inventory consumption had to be updated manually from the shop floor, a process that could take several days, Anderson said. Now, by pairing the integrated systems with bar-code labeling, inventory information can be updated in real time.

The selling point for using Web services for the integration, Anderson added, was the cost-effectiveness and simplicity of linking the applications compared with traditional hard-coded integration.

He noted that building a customized link between the systems would have cost about $175,000 and taken 18 weeks, whereas installing the iWay software took two weeks and cost $110,000.