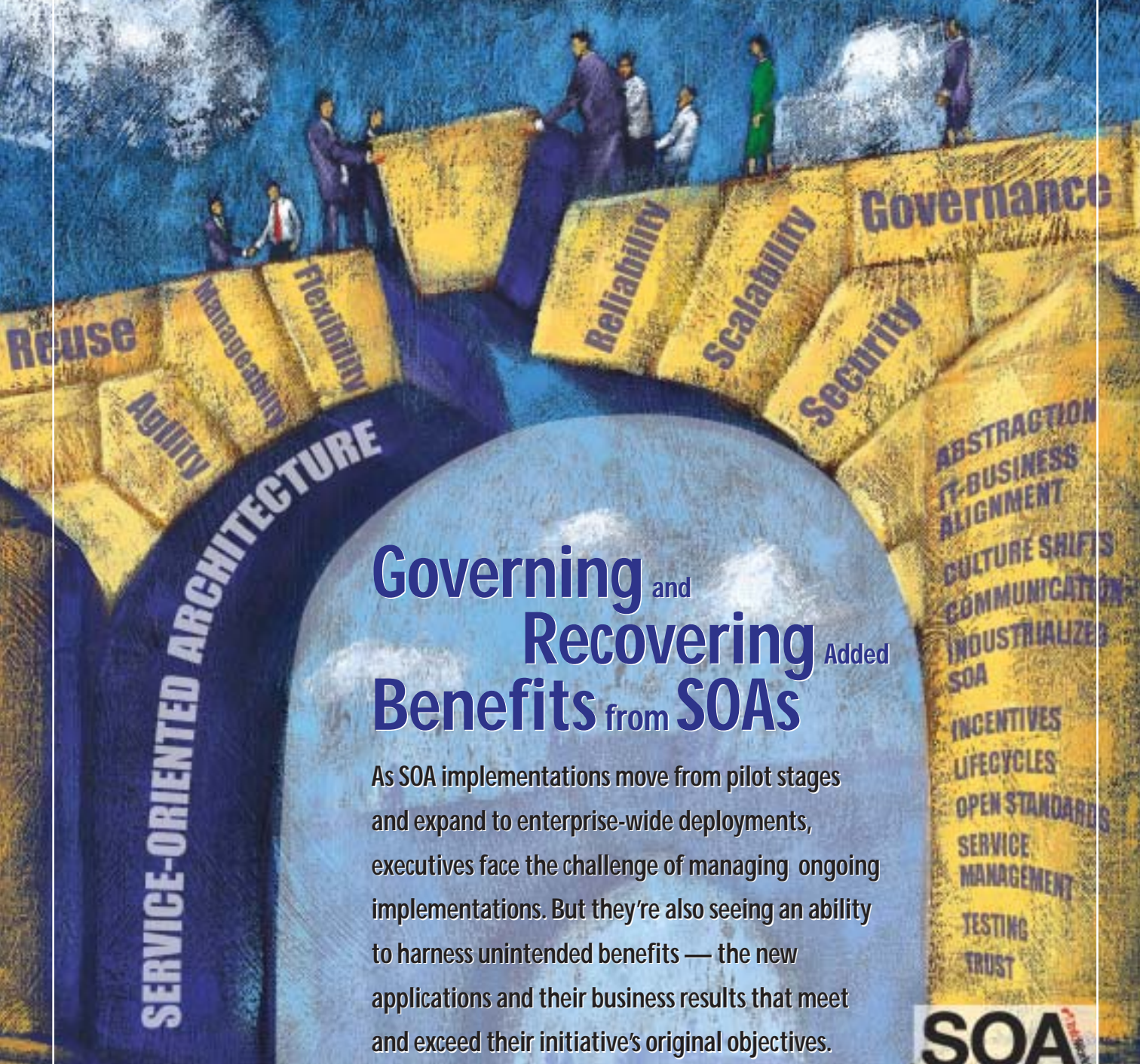


Next-Generation SOA Strategies



Governing and Recovering Added Benefits from SOAs

As SOA implementations move from pilot stages and expand to enterprise-wide deployments, executives face the challenge of managing ongoing implementations. But they're also seeing an ability to harness unintended benefits — the new applications and their business results that meet and exceed their initiative's original objectives.

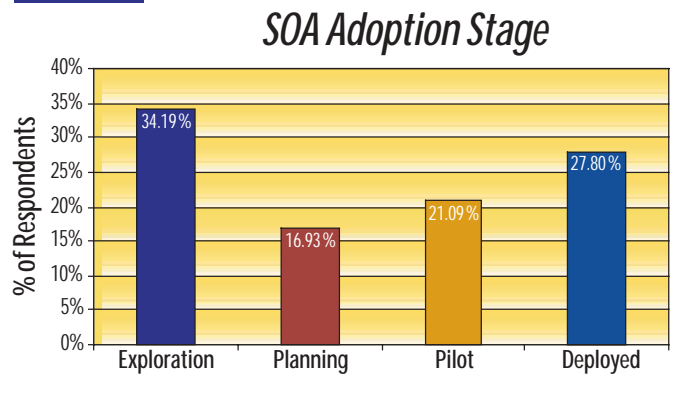
Mature SOA Requires Governance

By Beth Gold-Bernstein

CURRENT STATE OF THE SOA MARKET

If you've been reading the industry press lately and worrying that your company is lagging dangerously behind the SOA bandwagon, you'll be interested to hear that the hype is far ahead of actual implementations. A recent ebizQ SOA Governance survey of over 300 IT practitioners representing 21 different industries revealed that most companies were still in the early stages of SOA adoption (Chart 1). Fewer than 30% had deployed solutions in production. The rest were in the exploration, planning and pilot states of SOA adoption. While everyone seems to be talking about the benefits of SOA, actually implementing an SOA infrastructure is proving to be extremely challenging. Since this is not shrink-

Chart 1



wrapped software, there are many different types of business initiatives that can drive SOA implementation, and there is a myriad of technologies and systems involved. Companies seem to be moving cautiously, and this is probably a good way to mitigate the risks.

"Companies have to change a number of things they've done in the past and improve the way they communicate internally."

Theo Beack, Deputy CTO, BEA Systems

BEA Takes an 'SOA 360' Approach

BEA Systems' Deputy CTO Theo Beack describes his company's SOA 360 Platform as a unified SOA platform for business transformation and optimization designed to help companies improve cost structures and grow new revenue streams.

BEA's clients run the gamut from those with specific IT or project-centric needs, such as the ability to connect diverse systems after mergers and acquisitions. The other main camp, Beack notes, includes those who want to give customers new portal-based self-service information and services.

For all clients, improvement of business processes that support the core business activities is a key goal.

But Beack notes that to achieve such benefits, companies "have to change a number of things they've done in the past and improve the way they communicate internally. Education and just how to scale out are important issues that needs to be addressed."

To that end, the SOA 360 concept works by taking into consideration the entire lifecycle of the SOA, from the line of business users through to the architects and developers.

It addresses "problems ranging from the low level, such as the exposing of data as services and the service enablement, right through to orchestration and the implementation of a service bus to help facilitation between various consumers and the participants in the SOA infrastructure," Beack says.

"We also address the process layers, governance and security as well as the user-interface layer through he portal product," Beack adds.

The end result provides both the governance and reuse that "makes me agile and lets me solve the kind of problems I originally intended to address with SOA," Beack notes.

For more on BEA's SOA offerings, visit <http://www.bea.com>

To hear a more detailed podcast with Theo Beack, visit <http://www.ebizq.net/101> or listen to the entire series at

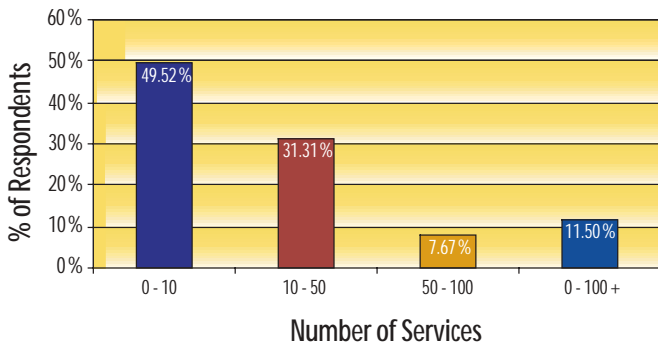
<http://infoworld.com/soapodcasts>

Given the state of market adoption, it is not surprising that only 19% have more than 50 services in production (Chart 2). Almost half the respondents (49.5%) have fewer than ten services deployed. The industries that have the most services deployed include financial services and banking, insurance, technology and telecommunications. Because these industries were also the early adopters of integration technology, this is probably not merely a coincidental finding.

Early adopters of integration technology would naturally gravitate to the standards-based interfaces defined by Web services as preferable to proprietary application adapters. Furthermore, SOA is inherently a distributed architecture, so those who have done the work of integrating their systems are in a better position to move to the next stage of taking an SOA approach to integrating and reusing existing corporate assets. (Chart 2).

Chart 2

Number of Web Services in Production



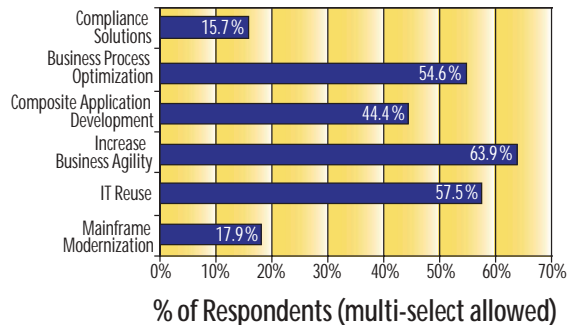
SOA IS BUSINESS-DRIVEN

While IT is often seen as the driving force proposing new SOA infrastructure investments, the survey showed that SOA is primarily a business-driven initiative. Business agility was the most popular driver for SOA adoption (Chart 3). IT reuse was the second most popular, and business process optimization was a close third. The fact that IT reuse comes in second actually does not tell the full story accurately, because multiple answers were allowed. For respondents who only noted one driver, increased business agility was the clear winner, followed by business process optimization second, and IT reuse third. When the answer combinations were correlated, the top three were:

1. Increase business agility and IT reuse
2. Increase business agility and business process optimization
3. Business process optimization and IT reuse

Chart 3

What is Driving SOA Adoption?



The IT-related combination of IT reuse and composite application development was fifth. We were a bit surprised by the fact that SOA is so clearly a business-driven initiative. This finding makes it clear that IT investments must be focused on delivering business agility.

CURRENT STATE OF SOA GOVERNANCE

The survey received a high level of interest from our audience, which indicates SOA governance is top of mind these days. Over half the respondents have a mandate to implement some form of governance, and another 30% expect there to be a mandate in the near future. Less than 15% of the respondents reported no corporate mandate regarding governance. Regulatory compliance, including Sarbanes-Oxley as well as industry-specific regulations for insurance, healthcare, banking and finance make it necessary for organizations to pay attention to SOA governance.

Despite this fact, we found that few organizations have instituted formal roles or job titles for setting and enforcing governance policies. Architects are the most frequent policy setters, which is consistent with the fact that most policies currently in place are IT- and security-related. Other policy setters included: IT management, business leaders, security administrators, and in two instances,

external consultants. Some 18% of the respondents said that they currently have an SOA governance officer in place.

To better understand the profile of companies who currently have SOA governance officers, we looked at both their state of SOA adoption and the number of services they have in production. As expected, the fewer the number of services, the lower the incidence of an SOA governance officer. Only 12% of respondents with 0-10 production services have a SOA governance officer, while 33% of organizations with greater than 50 production services do have one. Companies with deployed solutions are four times more likely to have a governance officer than those in the exploration stage.

So when is the best time for a company to appoint an SOA Governance officer? Brenda Michelson, principal consultant at Elemental Links (and a popular ebizQ.net blogger), correlated the survey results. She gave this answer at a recent ebizQ.net Webinar.

“Governance is both policy setting and enforcement. I believe governance enters the SOA picture when the first policy is set. Typically, this is during a technology proof of concept and the first policies are on the design side — service interface design and what technical protocols you’re going to use — Web services, REST, XML, HTTP. Other policies that are early typically relate to service access — authentication, authorization and how you are going to handle sensitive data — encryption and logging. In general, the formalization of SOA governance begins after the initial proof of concept and before SOA spreads beyond the early adopter team.”

(To hear the full Webinar please go to: <http://www.ebizq.net/to/survey1>).

LACK OF CONFIDENCE IN CURRENT SOA GOVERNANCE PRACTICES

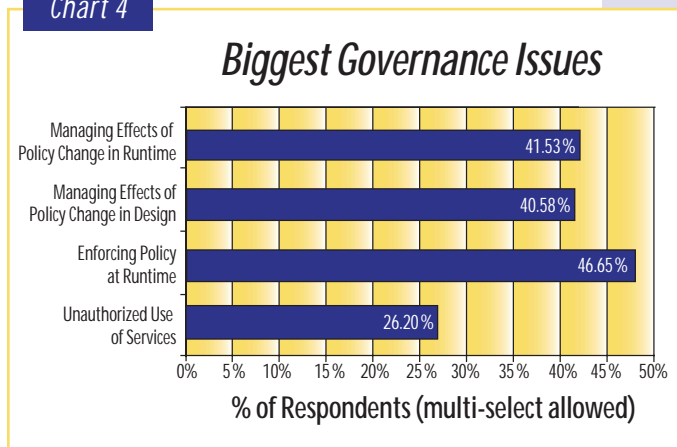
At the present time, it appears that most companies are handling enforcement of SOA governance policies

manually through design reviews (34.5%) or through manual auditing and reporting (22.4%). Surprisingly, a relatively large percentage of respondents do not know how governance is handled (26.8%). If both the business and IT is going to have confidence in their SOA solutions, it would seem important that they understand who is responsible for setting governance policies, what the policies are, and how they are enforced, especially since there is a corporate mandate for governance.

Even among the third of respondents who have deployed SOA, governance solutions seem to be lagging in implementations, and respondents reported that they lack confidence in their current solutions. Their biggest areas of concern were enforcing policies during runtime, managing the effects of policy changes in the run-time environment, and managing the effects of policy change in design. (Chart 4).

In fact, it seems clear that the manual solutions the majority of respondents are now using are causing a lack of confidence. Only 20% reported having automated design-time solutions and only 10% reported having run-

Chart 4



time solutions. However, there was a clear correlation between confidence in governance and the level of automation in place. Those who expressed the most confidence in their solutions have automated design-time and/or run-time governance solutions. (Chart 5).

Design-time SOA governance focuses on interface standards, service design, reuse practices and service cataloging. Service registries help automate design-time gov-

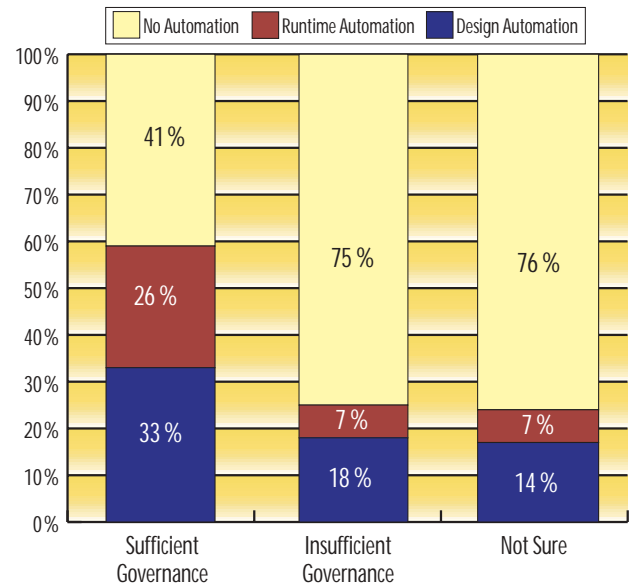
enance tasks of service registration, discovery and binding. Repositories provide metadata about the services to help manage the service lifecycle, including moving it from design to production, and providing impact analysis of changes to a service.

Run-time governance solutions include mechanisms for ensuring security, auditing compliance, and threat detection and response. It provides real-time visibility into service interactions, including metrics on service usage, performance, service levels, and key business indicators, and also provides the information both business and IT need to manage the run-time service environment. Web service management solutions, also sometimes called Service Level Management (SLM) solutions, utilize agents to enforce policies on ESB message traffic.

While both design time and run-time governance are necessary to adequately support enterprise-class SOA solutions,

Chart 5

Governance Comfort and Automation Levels



"SOA requires new skill sets, so you have to update yourself in new technologies in Java or maybe even .NET, plus standards like BPEL."

Ashish Mohindroo, Product Director of Oracle Fusion Middleware

Oracle's Five Levels to Industrialized SOA

While some companies are still at the early proof-of-concept stages of SOA, Ashish Mohindroo, Oracle's Senior Product Director of Oracle Fusion Middleware, cites considerable progress.

"We have a SOA methodology called 'Five Levels to Industrialized SOA,' and we see a lot customers that are moving toward the fifth level, which we call 'industrialized SOA' — it's an enterprise-level SOA implementation," Mohindroo says.

Still, a majority of Oracle's clients seeking to adopt and automate open standards-based technologies must integrate people-based processes with automated packaged applications.

"SOA requires new skill sets, so you have to update yourself in new technologies in Java or maybe even .NET, plus standards like BPEL which helps you actually automate multi-step interim process flow," Mohindroo notes.

SOA also spans departmental boundaries, "so there is an issue of where does the service begin and end; who has ownership of that particular service; how do you refine this service; how do you update these services, and who has access to them," Mohindroo says.

Oracle aims for a comprehensive, non-proprietary integrated solution with "hot pluggable software" that can be installed atop existing IT infrastructure.

It allows companies to go from service creation all the way to service management, as changes to one service are immediately transferred to all other components within the suite.

"Developers can actually drill into to the code bits if they need to — and we have a business user interface where a business analyst can define the business processes that can be transferred into IT executables to the backend," Mohindroo notes.

To learn more about Oracle's SOA offerings, go to: <http://www.oracle.com/SOA>

To hear a more detailed podcast with Ashish Mohindroo, go to <http://www.ebizq.net/102> or listen to the entire series at <http://infoworld.com/soapcasts>



respondents with automated run-time governance solutions reported a higher level of confidence in their solutions than those who just have design-time automation.

CONCLUSION

As SOA implementations begin to proliferate across organizations, both business and IT managers should begin to pay more attention to how they manage the way services are designed and deployed and how they control security, manage change and enforce business policies across distributed services and platforms.

It is clear that governance will need to become more formalized, including appointing who can create and/or change policies and who is responsible for ensuring policies

are enforced at designtime and runtime.

In order to deliver business agility — the number one reason business is investing in SOA — organizations need to ensure that all parts of their SOA environments can adopt to change easily, including their governance solutions. This requires solutions that manage the complete service lifecycle — from design to testing to deployment to managing changes and the impact of change.

The manual governance solutions that include design reviews and after-the-fact reporting will clearly not scale. SOA success will clearly require automated governance solutions. Organizations should consider their governance strategy early, and implement it incrementally, in concert with their overall SOA plan. ■

“Customers really want to find the right partner or partners who can show that they have had the experience of moving toward an SOA.”

Parag Doshi, Practice Principle for HP Consulting and Integration Group's SOA Practice in North America

HP: Solutions Address Management, Quality, and Governance Up Front

Most of HP's clients are adopting SOA approaches and architectural patterns — and are starting to see tangible success, says Parag Doshi, Practice Principle for HP Consulting and Integration Group's SOA Practice in North America.

Doshi cites a major hotel chain, which expects to save \$15-20 million from a new SOA-based central reservation system. There's also Helvetia Patria, a leading European insurance company, which cut their e-business IT costs by 59% and realized a six-year ROI of 200% by eliminating duplicate paper-based products across multiple channels in multiple countries.

But other companies have built out Web Services as just wrappers without looking at management, quality and governance aspects — “key things that not everyone thinks about until the ninth inning,” Doshi notes.

HP's approach follows a road map that ties together the enabling technologies, their impact on people and the organization, their governance aspects — and the customer's choice for SOA middleware.

“We're not out to sell any particular platform, and I think our customers recognize this advantage when they choose to go with HP,” Doshi notes. “We leverage our partners like BEA, Microsoft .NET, Oracle, SAP and JBoss; we even deploy WebSphere solutions.

“So our approach is really well suited to a heterogeneous environment,” notes Doshi. “Customers really want to find the right partner or partners who can show that they have had the experience of moving toward an SOA.

“But our product focus has long been in the management space and driving products such as SOA Manager as well standards bodies for the SOA management space and interoperability across management products,” Doshi said.

“And I think with the upcoming acquisition of Mercury, I believe HP actually becomes a top-tier product vendor for SOA management quality and governance,” Doshi says.

For more information on HP's SOA solutions, see <http://www.hp.com/go/SOA>

To hear a more detailed podcast with Parag Doshi, visit <http://www.ebizQ.net/103> or listen to the entire series at

<http://infoworld.com/soapodcasts>



'Reuse' as a Value Driver for SOA

SCALABILITY

By Joe McKendrick

Washington Group International, a construction and project management company, is finding one of the most visible benefits of its emerging service-oriented architecture is service reuse.

A number of the firm's applications now can access its document management system through a single service. "In the past, we had to build point-to-point connections between every application and the document management backend," relates Rich Colton, application integration manager for the Boise, Idaho-based company. "With Web services, we've only had to implement an API in one place. Then we built a series of components around a Web service that our applications can use."

The benefits of this service reuse cut across both the information technology and business sides, Colton explains. "If the vendor upgrades its API, we only have to upgrade

that API in one place. For the business, there's better quality of data, and avoiding the cost of managing multiple processes."

Hewlett-Packard — which has been applying service-oriented architecture to its own infrastructure — reports enormous savings as a result of service reuse. To date, the IT company has 30 composite and 68 discreet or component SOA services in production, shared across 88 internal organizations across the globe. To measure the value of its service reuse, HP performs a what-if analysis against a scenario in which SOA-based reuse is not implemented. "Compared with a non-SOA approach, we've actually estimated a savings of \$30 million dollars already just in the last two years," says Parag Doshi, practice principle for HP Consulting's SOA Practice. "We project over \$70 million in savings in four years."

"Companies need an incremental, cost-effective way to insert some minimal technology into the current environment that helps service-enable the investments they've already made."

Eric Newcomer, CTO, IONA Software



IONA Details a Cost-Effective Approach

IONA Technologies' customers include early adopters that began pioneering CORBA-based SOAs a decade ago and large practitioners like Credit Suisse, which has 1500 services in production.

But the majority is still just getting started with SOAs, and IONA CTO Eric Newcomer has some advice for them.

After three decades of spending on IT "without really knowing how that spend contributed to the bottom line or an overall business strategy, companies now want a scientific approach to calculating the cost of reuse and allowing multiple clients to access the same service or backends via service abstraction," Newcomer notes.

In the past, "hurry-up phase" of automation, decisions were decentralized around the technologies used and how they were run and staffed, rather than around the entire enterprise architecture.

But SOA now entails "realigning all those old boundaries, changing how projects are done and supervised and so on," Newcomer says. "Nobody really needs a lot more features and functions; everybody's paid for a lot of software over the last decade that they don't even use — and nobody can do that again."

Instead, companies "need an incremental, cost-effective way to insert some minimal technology into the current environment that helps service-enable the investments they've already made over the past few decades," Newcomer maintains.

IONA's approach is to "fit into the SOA movement by reducing the upfront costs of getting started with SOA and allowing people to build up their infrastructure in a good distributed way as they build up their project," Newcomer adds.

For more on IONA's SOA offerings, visit <http://www.iona.com>

To hear a more detailed podcast with Eric Newcomer, visit <http://www.ebizq.net/104> or listen to the entire series at

<http://infoworld.com/soapodcasts>



iTKO: Three Camps, One Problem, Two Challenges

iTKO Software's Chief Scientist John Michelsen sees his clients falling into three camps:

- Large financial institutions and logistics companies convinced "that they're already fully SOA and are embracing some of the newer ideas in an evolutionary rather than revolutionary way."
- Others who have "renewed their efforts and their investment — and they've brought the business side into that conversation, which is the difference between success and failure."
- Those convinced, "OK, I've got to get into this, and I've been reading the books that say, 'SOA or fail,' so I'd better take a look at what this whole SOA thing is about."

"Fully implemented SOA is a business process modeling exercise where we view IT assets as components or sub-processes of a business processes," notes Michelsen, who cites ineffective IT-business side alignment as a persistent obstacle to SOAs.

Another key problem is that "systems that ran on their own just fine, once connected, start creating issues. Secondly, we're creating dependencies between organizations and their partners, but they are not on the same development lifecycle," Michelsen adds.

"You might be an application developer within a company and I build services that you reuse. I have unintended consequences every time I change my services on you, and you have very little control, organizationally or politically over my lifecycle," he notes.

Michelsen says iTKO's solutions include "the right amount of process best practice coaching, and the delivery of the right technology capable of testing across all these heterogeneous technologies... so we can have the business agility with the early-warning detection system when there are unintended consequences."

To learn more about iTKO's solutions, go to

<http://www.itko.com>.

To hear a more detailed podcast with John Michelsen, go to

<http://www.ebizQ.net/105> or listen to the entire series at

<http://infoworld.com/soapodcasts>

For HP, such savings is due not only to retiring of assets, but also the reduced development costs and maintenance costs for duplicate services, Doshi says.

A growing number of companies are discovering the advantages of service reuse as a way to achieve cost reduction, simplification and more business agility. Many enterprises have long been wrestling with the complexities and duplication inherent in countless redundant systems across multiple business units. Ideally, a single instance of a service — centrally developed, maintained and tested — could be shared across an unlimited number of business units. This is the very core of SOAs value proposition, with services needing to be only developed once, and then made available to the rest of the enterprise through a registry.

"Systems that ran on their own just fine, once connected, start creating issues. Secondly, we're creating dependencies between organizations and their partners, but they are not on the same development lifecycle."

John Michelsen, Chief Scientist, iTKO Software

Experts and vendors say the reuse of SOA-enabled services can dramatically cut development costs and eliminate duplication of effort across the enterprise. "How many customer order-entry systems do we really need?" asks Thad Marcelli, SOA architect at Motorola. The company has more than 100 services in production that are available to the entire enterprise through a registry.

A recent survey of 400 enterprises conducted by Evans Data Corporation finds that code reuse was the most oft-cited cost-saving area delivered by SOA and Web services — surpassing integration, process automation and implementation speed. The survey also found that a majority of survey respondents — 54% — now say they share Web services with two or more business units across their organizations. This is an increase from 45% in last year's survey.

Examples of services that can be reused range from technical to broader business applications. Technical services may include security protocols, XML data caching, data transformation, data enrichment and routing services.

"Developers must achieve the level of reliability, scalability, manageability and security and even flexibility that you would have had in an old non-SOA world . . . you need all those 'ilities' — as well as the business agility."

Dan Foody, CTO, Progress Software's Sonic and Actional Product line



An example of a technical service everyone can reuse is security, notes Dan Foody, CTO of Sonic and Actional products for Progress Software. "Hand-coding security is really hard, really complex, and it takes a lot of training to get it right," he explains. "But what if there was already an infrastructure to which developers could just offload all that grunt work? What if they could just point and click to a service instead of doing all that code writing? That would make project delivery quicker."

Business-focused reusable services may include such functions as HR-based benefits lookups, purchase orders, customer lookups, and order processing.

Business situations with pressing integration issues, such as mergers or acquisitions, are also good candidates for reuse, says Belinda Hayes, vice president of professional services for the Systinet division of Mercury Interactive, now a part of HP. "Companies typically have a very short timeline into which they need to get access to get two systems talking to each other. Creating services allows the business processes of those companies to work together at the first level of integration to do financials and mission-critical business processes."

NOT AUTOMATIC

However, while reuse of SOA-enabled services has tremendous appeal to businesses seeking to streamline wasteful duplication, the process does not happen automatically. "Many assume that by going towards an SOA, reuse will automatically fall into place," says Theo Beack, deputy CTO for BEA Systems. "Sometimes, companies are surprised they don't see services being reused from their SOA, yet they don't look to see whether it's actually working. No one is actually measuring how services are being used and reused yet within organizations."

Reuse of services to achieve cost savings requires a system of governance that automatically manages reusable services, notifies the enterprise of availability and tracks usage. In addition, organizations may need to examine

Progress: A Philosophy for all the 'ilities'

"Some are just beginning, and some are doing very sophisticated things like self-tuning applications," is how Dan Foody, CTO of Progress Software's Sonic and Actional Product lines, describes his clients' SOA progress.

"It's important to recognize that SOA is a way to build applications; you don't build a SOA, and then you're done," he adds.

He notes philosophical and technical challenges to his clients' primary objectives of achieving business agility and controlling or reducing IT costs.

"How do you incent people to want to reuse services and get IT people to think about what the business cares about, like information and business processes, rather than the underlying technological infrastructure?" Foody asks. "You need to make sure project after project is following that philosophy."

On the technical front, developers "must achieve the level of reliability, scalability, manageability and security and even flexibility that you would have had in an old non-SOA world," Foody notes. "You don't want to sacrifice those, but you also can't afford to sacrifice the business agility you get out of SOA."

"So you need all those 'ilities' — as well as the business agility," Foody says.

Progress's own philosophy is to enable companies to quickly bring new applications into the SOA environment, "whether it's using application components not originally designed to work in a SOA environment, or making it easier to build a new applications by offloading developing teams from a lot of the work they would otherwise have to hand code," Foody says.

For more on Progress' SOA offerings, visit

<http://www.progress.com>

To hear an expanded podcast with Dan Foody, visit <http://www.ebizq.net/106> or listen to the entire series at <http://infoworld.com/soapodcasts>

and even transform aspects of their corporate culture, both in terms of SOA leadership and incentive plans for developers and IT professionals.

“The number-one obstacle to reuse is even knowing, and finding, what is available for reuse.”

Sandra Rogers, SOA and Web services and integration, IDC

“It’s not actually enough to simply declare that you have to have a reuse program, or start building services and announce, ‘Here’s my reusable service, come and use it,’” agrees HP’s Doshi. “You need to create an environment to actually promote reuse. You need to have the right policies in place, make them very visible, and communicated well. Plus, you need to be able to automate the lifecycle of the development for these services, and have collaboration sites where these services are visible to all.”

BEEN THERE, DONE THAT?

The concept of reuse is raising just as many questions as the problems it purports to solve. Keeping reusable services aligned with constantly shifting end-user requirements is one key challenge, since a service creator will be focused at the task on hand, and not thinking about future deployment scenarios. “Predicting the future is something that very few people are very good at,” says Foody. “The reality of reuse in an SOA context is that you can’t even dream of all the possible reuses that might occur.”

The idea of reuse has been bandied about within the IT world ever since the days when object-oriented programming was first introduced. Yet the concept never caught hold on a widespread basis, because of the diverse requirements of enterprises and business units. “Our prior attempts at reuse in the 1990s were very much a ‘copy-and-paste’ kind of reuse,” says John Michelsen, chief scientist and co-founder of iTKO Inc. “We cloned code from this project into this other project, and then had a maintenance nightmare, where one copy was maintained on a different lifecycle, and always duplicated effort every time we found an issue or needed an enhancement.”

This time, Michelsen adds, things will be different. “SOA is supposed to deliver on in-place reuse. Which means we aren’t reusing it by copying it into some other place and leveraging it again on a separate path. We’re actually leveraging existing assets in place.”

There are other factors that may move reuse farther along in SOA than in previous technologies. “There are more open standards, and adoption of open standards by companies,” says Ashish Mohindroo, senior product director of Oracle Fusion Middleware. “All the major vendors are consolidating toward common open standards, across Web services and Java. Major vendors are adopting SOA within their technology stacks and applications layers. That enables a common language and definition of how things are defined, which makes it easy to reuse services.” The availability of high network bandwidth also makes reuse more feasible, Mohindroo adds.

In addition, the reuse ethic that may have been developed in earlier types of architecture is being carried forward into Web services and SOA — with some valuable lessons. “We have some customers that have been doing SOA for a decade based on CORBA,” observes Eric Newcomer, CTO of IONA. For example, Credit Suisse, a large financial services institution, has achieved reuse rates as high as 70% for various services, Newcomer relates. “They tell us they’ve got about 1,500 services now in their enterprise SOA, from mainframe to desktop,” he says. “They have a wide range of services that are consumed by few as two applications, and as many as 8 to 12 applications.”

LACK OF VISIBILITY

One of the most vexing problems with reuse is that developers and planners may simply not know what’s available for reuse from another part of the business. “The number-one obstacle to reuse is even knowing, and finding, what is available for reuse,” says Sandra Rogers, program director for SOA, Web services, and integration at IDC. “There’s not enough transparency from the parties that are developing services for people to understand where to find them, what they’re all about, and how to use them.”

New tools on the market, particularly registries and repositories, may help increase the visibility of services. However, for these tools to work to their potential, automation needs to be introduced to the process, Rogers says. “If a service is created and moved into production, you need an automated process to ensure that all the nec-

essary checks and balances are made," Rogers says. "You need assurance that everything has been caught, any versioning has happened, and that the service has been blessed by the powers that be as usable for production."

DISINCENTIVES TO REUSE

Corporate culture is another inhibitor to reuse within many enterprises. For example, developers may not have proper incentives to reuse services, says Ken Vollmer, principal analyst with Forrester Research. "Part of the issue here is you've got shops with huge numbers of programmers out there who are paid to code."

Some industry analysts say that at best, reuse may remain confined to IT-centric services. "Business reuse has always been hard to achieve, because there are so many different business scenarios and processes," says IDC's Rogers. This sentiment is echoed by David Chappell, principal of Chappell & Associates in San Francisco. Chappell argues that it will be very difficult for reuse to take hold on the business side. "I hear over and over again from architects and IT managers that reuse is not happening; that it's not working for them," he says. "In a majority of cases, I do not believe that one can make a credible business case to the businesspeople about reuse in SOA. I think it's primarily an IT initiative, and the benefits flow to IT." However, he observes, "That's perfectly fine."

Rogers feels that as SOA skills and approaches evolve and mature in enterprises, there may be more potential for business service reuse as well. "Being able to look at things from a business service point of view, at the right level, is a skill set that eventually comes over time with experience," she says. "People will begin to understand how they make something available to multiple resources to utilize."

FUNDING REUSE

Since SOA-enabled applications often cost more to develop the first time around than traditional applications, questions arise around who would fund the effort, who would take ownership of reusable services and provide availability, maintenance, and upgrades.

Forrester's Vollmer recommends starting with an unofficial "skunkworks" type of effort, with seed funding pro-

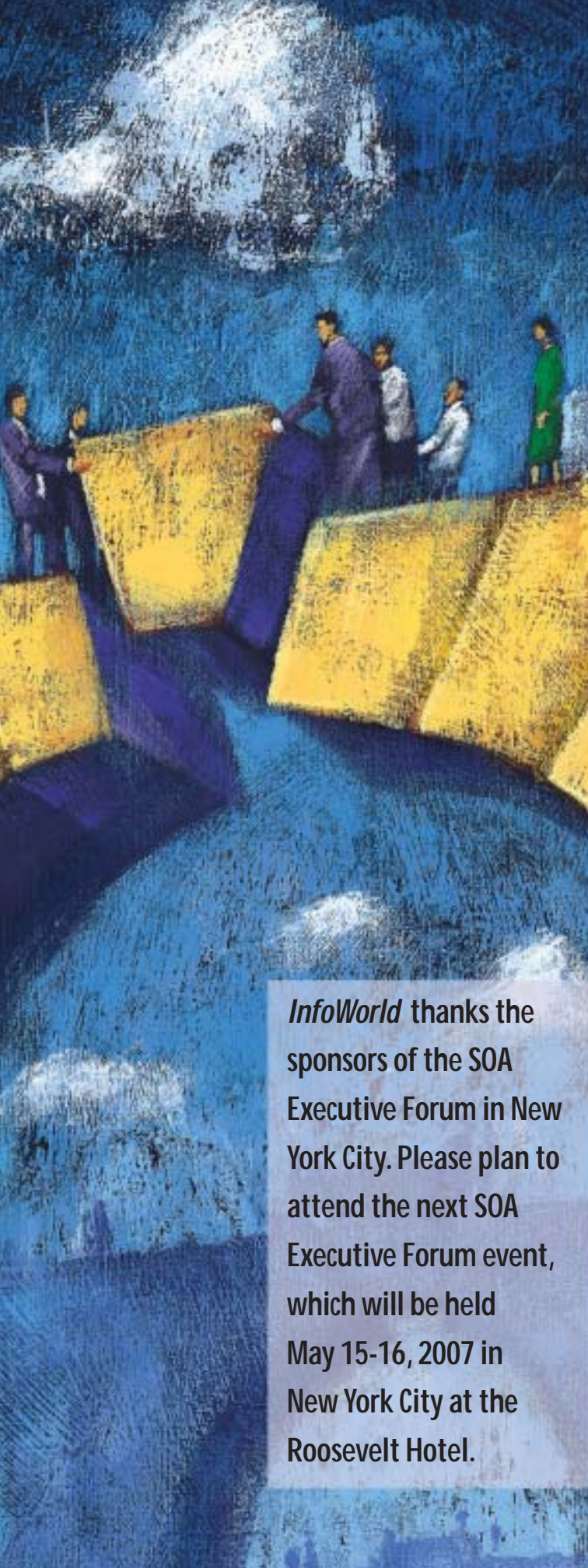
vided by the CIO's office. He recounted how one such SOA project started off with a \$50,000 budget, but because of reuse, was able to cut integration time in half. Word caught on, and within a year, "the team had a million dollars' worth of bookings. The businesspeople were lining up outside their door."

Systinet's Hayes says in many cases, service development and deployment gets funded along the same lines as existing IT projects. For example, she often sees standard IT chargebacks as mechanisms for funding services. "The companies that have already implemented chargeback models in their organizations for other purposes typically go ahead and use the chargeback model for reusable services and SOA. Companies haven't been creating whole new funding model for SOA projects."

In addition, questions around funding SOA projects may diminish as enterprises gain more experience with the approaches and methodologies, says Progress' Foody. "People are still learning what it means to build an SOA. There's a learning curve to it. So, yes, your first projects may be more expensive as people get up that learning curve, as people are learning a new way to do things. But there's nothing fundamental about SOA that makes it more expensive."

BEA's Beack also observes that the costs of service creation may vary widely. Often, services can be created from legacy applications within a matter of minutes, while starting from scratch is a more arduous process. "With some of the wrapping tools out there, it's very easy to take an existing a mainframe-based application based on CICS or CORBA and expose them as services," he explains.

Even without support from the very top, SOA can drive its own success, Foody adds. He recounts a case where a customer team had built a service, and was running into performance issues. "They thought the service was used by five applications, but we discovered there were actually 34 different applications using their service." The fact that the service was already bringing great value to the organization made it easier for the team to acquire a more robust budget to support the service, as well as future service roll-outs, he adds. "People are willing to give extra budget for success. Even if you can't get top-down buy-in, having the visibility into who's reusing your services is critical." ■



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