

## Introduction

In late February, the SOA Consortium held a series of invitation-only, vendor-free, SOA Executive Summits, with leading CIOs and CTOs representing Fortune 1000 corporations, major government agencies and non-governmental organizations. The purpose of the Summits was two-fold. First, was to validate, augment or contradict the mission, vision, strategies and tactics of the newly formed SOA Consortium. Second, was to conduct a roundtable discussion on real-world Service Oriented Architecture (SOA) implementation opportunities and challenges with advanced SOA adopters.

The Summits were an overwhelming success. The conversation was lively, candid and packed with insights pertaining to both the SOA Consortium and Service Oriented Architecture. The insights on the SOA Consortium were incorporated into our mission, vision, strategies and tactics. To review those documents, please refer to the SOA Consortium website.<sup>1</sup>

In this special report, the SOA Consortium is sharing the executive insights on Service Oriented Architecture. The insights cover a variety of important topics, including business agility and SOA, business and IT collaboration, business-smart IT organizations, the relationship between SOA and business process management (BPM), organizing IT for SOA success, the operational implications of SOA, and how SOA changes the game for application providers.

For the privacy of Summit attendees, no company or individual names are used.

## Executive Insights on Service Oriented Architecture

The executive insights are presented in three categories. The first, “SOA Means Business,” contains insights pertaining to business-driven SOA. The second, “SOA is Pervasive,” contains insights regarding SOA in the broader business and IT context. The third, “SOA Changes the Game for Application Providers,” contains insights on the future of applications. To start, we share a brief context on the Executive Summit attendees.

### EXECUTIVE'S CONTEXT

#### Changing Role of CIO and IT

The CIO and CTO participants spoke of the changing roles of the CIO and his or her IT organization. For the last several years, the primary IT agenda has been cost-cutting and creating operational efficiencies. Now, in this time of economic growth, the IT agenda has expanded to include contribution to revenue growth. As such, the role of the CIO is expanding outside of IT, to participate in corporate strategy development. Specifically, CIOs and CTOs are identifying ways technology can spur business innovation and value generation.

These sentiments are supported by recent research from Gartner Group and the Economist Intelligence Unit:

*“According to recent CIO polls from research firm Gartner Inc., 50% of CIOs surveyed said they now have duties outside of core technology, such as helping to craft corporate strategy.”<sup>2</sup>*

*“IT-led teams have consistently found new ways to streamline enterprise business processes, vastly improving operating efficiency and reducing costs. Corporate leaders, however, are raising the bar: they expect IT’s core mission to expand from cost-cutting to enabling revenue generation within a short period of time.”<sup>3</sup>*

## SOA Scenarios

The vast majority of Summit participants are advanced SOA adopters, some with SOA experience at multiple organizations. These advanced SOA adopters are applying SOA strategies and practices for business value generation, most often cited as business agility, as well as for IT transformation.

Scenarios mentioned include opening new business channels for existing goods and services, electronic payment systems, disaster response and readiness, internet banking and multi-channel customer experience, safety and security services, business transformation, legacy application revitalization and replacement, and package application de-customization.

## SOA MEANS BUSINESS

All of the CIO and CTO participants were extremely business-focused, and in complete agreement with the SOA Consortium's underlying premises, that:

- Service Oriented Architecture adoption is a key enabler for the 21<sup>st</sup> century enterprise
- Service Oriented Architecture is perceived by business executives as an IT integration and productivity story, but is really a business agility story.
- Achieving the benefits of Service Oriented Architecture requires significant changes for both IT and business executives

## 21<sup>st</sup> Century Enterprise, Business Agility and SOA

For the CIO and CTO participants, the 21<sup>st</sup> century business environment of globalization, constant connectivity, dynamic value chains, continuous innovation, and incessant change translates to a requirement for increasing both business and IT agility. To meet the agility challenge, these executives are employing SOA principles, practices, and related technologies.

## SOA has a Business Story

Although the Summit attendees find the relationship between business agility and SOA to be self-evident, they expressed concern regarding the current industry focus on wire protocols and products, rather than business value generation and the necessary business and IT changes for sustainable SOA success. The industry – vendors, press and practitioners – must “elevate out of the technical weeds” in order to engage the business on SOA.

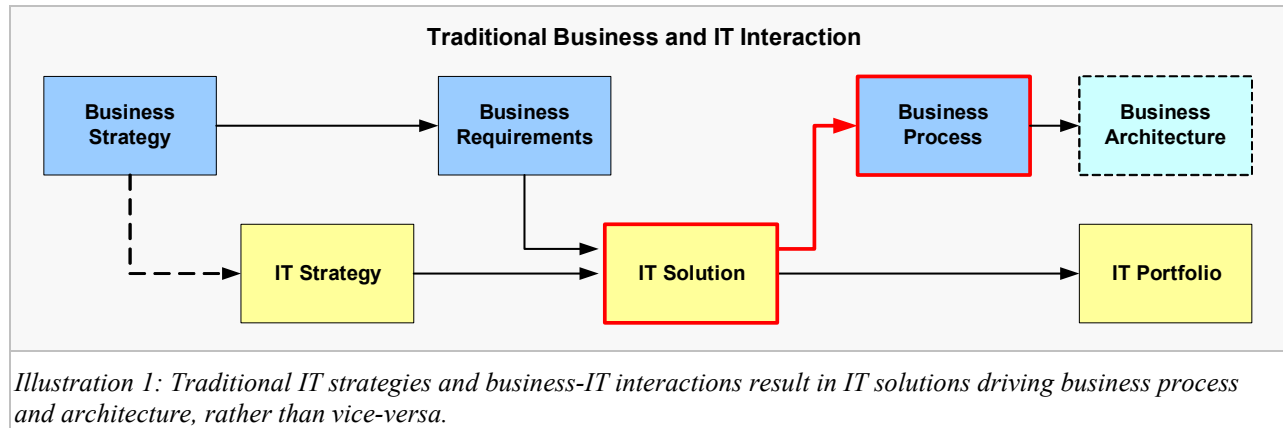
During an exchange of techniques on “selling SOA”, one CTO recounted early, failed attempts to interest her business executives in “a next generation architecture that provided IT flexibility and code re-use”. Her executives were not interested. Convinced that a service-oriented strategy was right for her business, the CTO changed her approach. She began speaking to business pain points, specifically in terms of business processes, activities, cost, quality and schedules. Gaining executive attention, she then explained how a service-oriented approach resolved these pressing business problems. That time, she received sponsorship and funding.

## SOA Success Requires Business and IT Collaboration

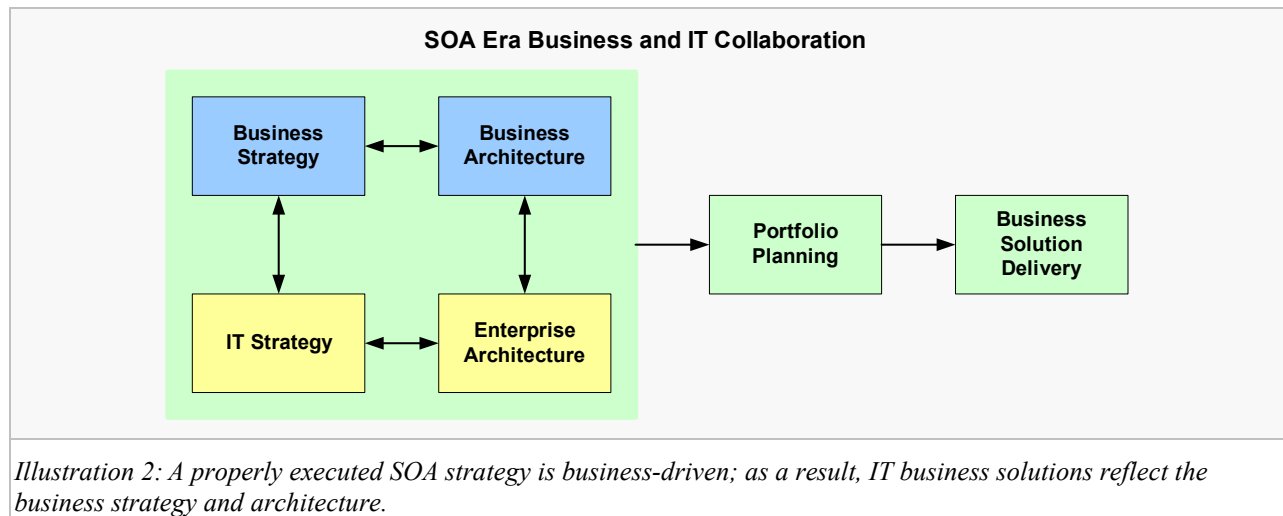
For SOA success, securing funding and sponsorship is only the start of business involvement. There must be true collaboration between business and IT from strategy through business solution delivery. In discussing this collaboration, the CIOs and CTOs compared and contrasted traditional business and IT interaction (Illustration 1) with SOA era business and IT collaboration (Illustration 2).

Traditionally, business and IT exchange information and requirements that influence each other's activities. Illustration 1 shows this flow of information, from business strategy, through IT solutions, to business architecture

and the IT portfolio. The long-standing problem with this approach is an enterprise’s business processes and business architecture, end up defined by the IT solution, rather than vice-versa. This is a frequent outcome when the IT strategy centers on purchasing application packages and/or extending monolithic legacy solutions.



By nature, SOA enables an enterprise to combine business services, rules and policies into business processes that actually match the intent of the business strategists and process owners. However, to realize this potential, business and IT must collaborate upfront on strategy and architecture. This collaborative view then drives portfolio planning and business solution delivery. (See Illustration 2.)



**Business-Smart IT Organization**

To collaborate effectively, business and IT professionals must speak a common language. Historically, business professionals have been encouraged to increase their IT literacy. This has proven successful at the project execution level. However, collaboration on strategy and architecture is a business conversation first.

*“Our entry is always the process and that’s what we actually talk about – how to optimize the process, how to drive the process...When I hear business people talk about systems and they mention System A, System B, System C, I know we’re in trouble. Because basically that means to me is that we are locked into the constraints of the environment.” – CTO during SOA Executive Summit*

The CIO and CTO participants encourage business-smarts in their IT organizations. IT professionals, particularly senior leaders and enterprise architects, must understand the business, and be able to relate IT capability to business value generation.

### SOA IS PERVASIVE

SOA is a strategy. As such, SOA practices, skills and related technologies cannot be isolated to a portion of the enterprise. SOA does not begin and end with technical protocols, SOA labeled products and composite applications. As one CTO shared, “SOA is a principle, it is pervasive”. Three examples of this pervasiveness follow.

#### No Artificial Separation of SOA and Business Process Management (BPM)

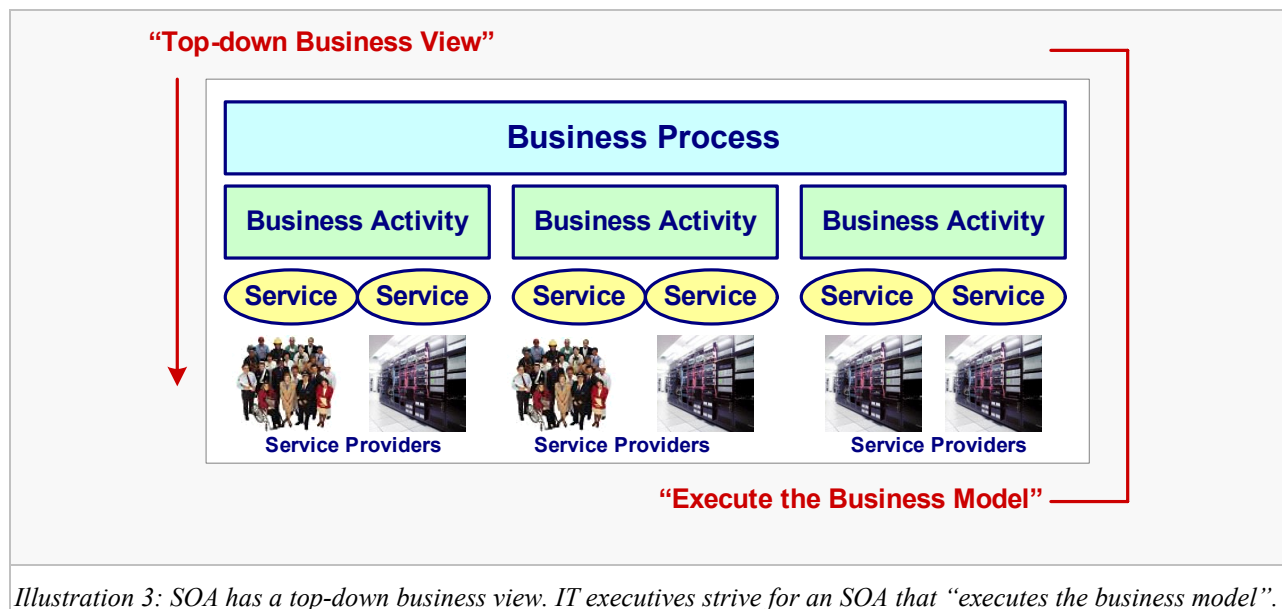


Illustration 3: SOA has a top-down business view. IT executives strive for an SOA that “executes the business model”.

*“SOA, BPM, Lean, Six Sigma are all basically one thing (business strategy and structure) that must work side by side”. – CTO during SOA Executive Summit*

The CIO and CTO participants think about SOA from a top-down business view. That view starts with business processes, expands into business activities, associates those activities to the balance sheet, and then considers the required business services to accomplish those activities. These business services are not at the discrete technical implementation level. Rather, the business services refer to services provided by humans, or machines. (See Illustration 3.)

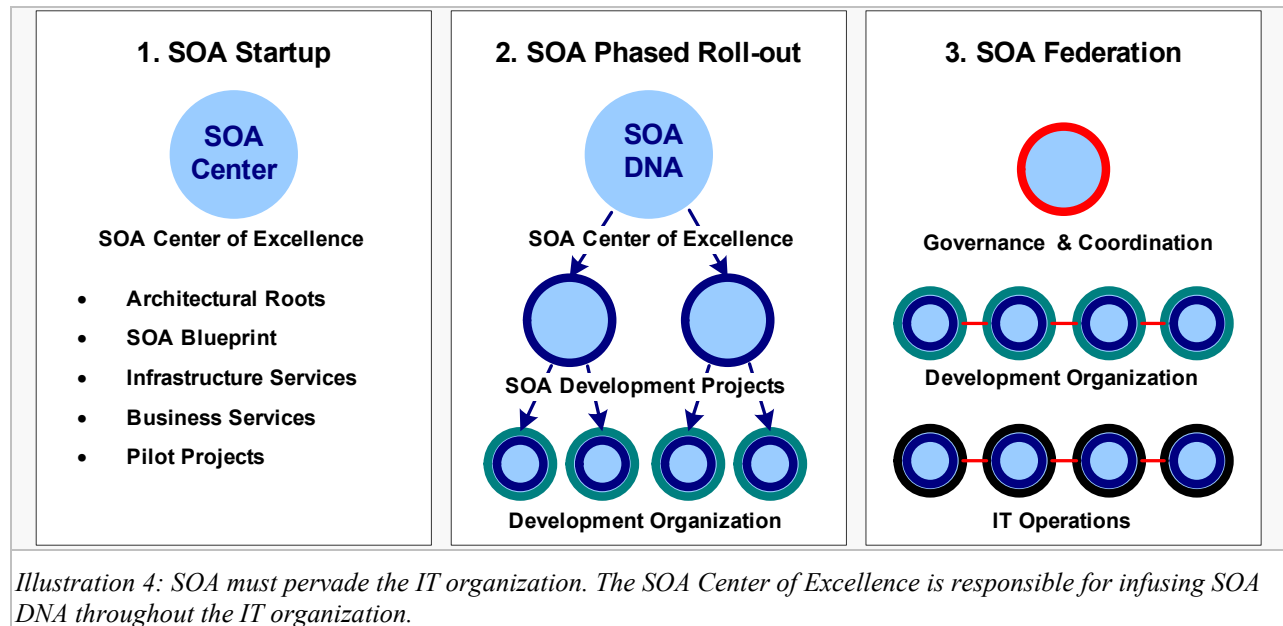
Essentially, these executives see SOA as the means to “execute the business model”. For this to transpire, the methods to define and record this executable business model, and the supporting technology must be seamless. In the minds of IT executives, SOA and BPM related products are used in concert to accomplish one goal, despite the discrete technology industry packaging.

#### On the IT Side, SOA must Permeate the Organization

In addition to discussing the need for business participation in SOA, the CIO and CTO participants spoke in-depth on the criticality of infusing SOA throughout the IT organization. Typically, an architectural group initiates SOA and forms a center of excellence (COE). This COE establishes the SOA blueprint, implements infrastructure services, develops the first business services, and delivers the pilot project(s).

Over time, if SOA is successful, the requests on the COE for new services far exceed its capabilities. To alleviate this bottleneck, the COE must alter its mission from SOA practitioner to SOA educator. This is accomplished through a “cell-division” approach, where the COE infuses SOA DNA to development project teams, and then, via the project teams to the development organization. (See the second panel of Illustration 4.)

Ultimately, the IT organization should strive for a SOA federation. (See the third panel of Illustration 4.) In a federation, the COE morphs into a governance and coordination body, senior development managers are responsible for SOA execution, and IT Operations is fully prepared to plan, monitor and manage a SOA environment.



### Substantial Operational Implications, Little Industry Emphasis

An area of concern for CIOs is the degree of operational implications for SOA, coupled with the lack of industry emphasis on this critical topic.

*“I’ve learned more about SOA in the last 180 days than you read in all the trade press and product information”*

*“If you truly have an SOA, you have a lot of services, you find a lot of shared services, you have a composite application environment which is very different than managing a vertical environment.”*

*“Managing an SOA Environment is fundamentally different for IT.”*

*“I don’t find the cost is in building the services, I think it’s in everything else.”*

*- CIOs on Operational Impacts of SOA*

In describing the operational challenges, CIOs noted the lack of common practices for service versioning, the complexity of testing shared services with multiple consumers, the challenge of identifying mission critical services, the reinvention of chargeback procedures, blind spots in capacity planning, and the need for “real-time releases”. The CIOs want best practices for these issues. Specifically, they mentioned an “ITIL for SOA”.

## SOA CHANGES THE GAME FOR APPLICATION PROVIDERS

The simple question of “Where will the services come from?” generated an interesting conversation on the future of applications. Three of the CIOs attending the San Francisco Summit offered related, yet varying points of view:

*“We’re going to completely change the IT execution model, it’ll be based on SOA principles...I’m not going to build any more monolithic applications. I don’t even want to buy any more monolithic applications. I want to use SOA to de-customize the ones I have spent the last 8 years customizing.”*

*“SOA fundamentally enables a change in the marketplace. The way we buy software today is changing and we are not going to buy software in the future. We are going to subscribe to services and you are going to deploy those services to develop and deploy your next generation applications.”*

*“Are we going to have software as a service? Yes. Is it a major part of our SOA? No. We’ll pick and choose things.”*

*- CIOs on future of applications*

What became apparent during this conversation is services will come from a variety of providers – internal builds, service-oriented application packages, software bundles, service marketplace subscriptions, and open source. CIOs believe the challenges of this “mix and match” environment will be service certification, business level interoperability and quality-of-service.

## Close

The CIO and CTO Summit attendees are enthusiastic about SOA and the SOA Consortium, however these esteemed individuals also expressed concern regarding the current industry focus on wire protocols and products, rather than business value generation and the necessary business and IT changes for sustainable SOA success. All participants agreed that organizations have a better chance at SOA success if the industry conversation shifts from technology underpinnings to business opportunities, and that conversation needs to emanate from a vendor-neutral, practitioner infused organization.

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<sup>1</sup> The SOA Consortium Core Document containing mission, vision, strategy and tactics can be found at <http://www.soa-consortium.org/collateral>

<sup>2</sup> CIO Jobs Morph From Tech Support into Strategy - [http://online.wsj.com/article/SB117193647410313201.html?mod=hps\\_us\\_editors\\_picks](http://online.wsj.com/article/SB117193647410313201.html?mod=hps_us_editors_picks)

<sup>3</sup> Mission Accepted: IT as Revenue Generator - [http://www.eiu.com/site\\_info.asp?info\\_name=eiu\\_Mission\\_accepted\\_IT\\_as\\_revenue\\_generator](http://www.eiu.com/site_info.asp?info_name=eiu_Mission_accepted_IT_as_revenue_generator)

## About the SOA Consortium

The SOA Consortium is a new Service-Oriented Architecture (SOA) advocacy group comprised of end users, service providers and technology vendors committed to helping the Global 1000, major government agencies, and mid-market businesses successfully adopt SOA by 2010.

The SOA Consortium mission, strategies, and tactics center on the following premises:

- Service Oriented Architecture adoption is a key enabler for the 21<sup>st</sup> century enterprise
- Achieving the benefits of Service Oriented Architecture requires significant changes for both IT and business executives
- Service Oriented Architecture is perceived by business executives as an IT integration and productivity story, but is really a business agility story
- Enterprise SOA practitioners would greatly benefit from a vibrant practitioner community to drive local, business-driven, SOA success, and to spur broader enterprise, and industry-wide, SOA adoption.

## Mission

The SOA Consortium mission is to ***“Promote and enable business agility via Service Oriented Architecture to allow businesses to compete, innovate & thrive.”***

## Goals

The SOA Consortium is working to achieve the following goals by 2010, that:

- 75% of the Global 1000 self-proclaim SOA Success
- 75% of Major Government Agencies self-proclaim SOA Success
- 50% of mid-size businesses self-proclaim SOA Success

The SOA Consortium defines SOA Success in terms of business value generation, business agility, IT agility, IT productivity, and business and IT collaboration.

## Strategies

In support of the SOA Consortium’s mission and goals are three strategies:

### **PROMOTING BUSINESS-DRIVEN SOA – “EXECUTIVE SUITE SOA”**

The Promoting Business-Driven SOA Strategy is focused on building awareness amongst C-level executives on the costs, benefits, challenges and success factors of moving to a Service-Oriented Architecture.

This strategy employs an ‘influence the influencer’ model. The SOA Consortium works directly with CIOs, CTOs, Business and IT Influencers, and Business and IT Trade Groups, who carry forward the message of business-driven SOA to the executive suite.

## **GENERATING BUSINESS VALUE FROM SOA – “BUSINESS OPERATIONS SOA”**

The Generating Business Value from SOA strategy is focused on providing methods, models, tools and connections for Business Process Owners, Business Operations Managers, and Business Project Managers who are considering, or actively applying, business process management and SOA practices to resolve their business scenarios.

Key constituents for the activities and deliverables of the Generating Business Value from SOA strategy include business process owners, business operations managers, business project managers, business analysts and architects, IT project managers and solution architects.

## **EXECUTING BUSINESS-DRIVEN SOA - “GROUND FLOOR SOA”**

The Executing Business-Driven SOA Strategy is focused on Architects (enterprise, solution, domain, operations), and Senior Development and Delivery Managers (project, portfolio, quality) that need to understand how to transition to, develop, exploit and support a SOA in practice.

The central tactic is a Community of Practice (COP), supported by SOA Consortium events and publications aimed at the COP and their constituents.

## **SOA Consortium Public Outreach**

In addition to the three strategies, the SOA Consortium conducts research, publishes reports and articles, issues newsletters, holds meetings and produces web casts to promote business-driven SOA awareness, practices and success stories.

## **Members**

SOA Consortium founding enterprise members are Fortune 200 companies in Financial Services, Travel and Real Estate, and Retail. Founding sponsors are BEA Systems, Cisco Systems, IBM, and SAP AG. Participants to date include:

Aberdeen Group	AT&T	Avis Budget Car Rental
Bank of America	CellExchange, Inc.	CSC
Federal Signal Corporation	General Services Administration	HP
Hurwitz & Associates	Interoperability Clearinghouse	Integration Consortium
Kohl’s Department Stores	Maryfran Johnson & Associates	Object Management Group
TethersEnd Consulting	WebEx Communications	Wells Fargo Bank

All organizations are welcome to participate. For more information, please visit the SOA Consortium website: <http://www.soa-consortium.org>.

The SOA Consortium is managed by the Object Management Group. The SOA Consortium is a time-boxed organization, with an end date of 2010.

SOA Consortium, 140 Kendrick Street, Building A, Suite 300 Needham, MA 02494

Phone: +1-781-444-0404, Fax: +1-781-444-0320

Email: [info@soa-consortium.org](mailto:info@soa-consortium.org) URL: [www.soa-consortium.org](http://www.soa-consortium.org)