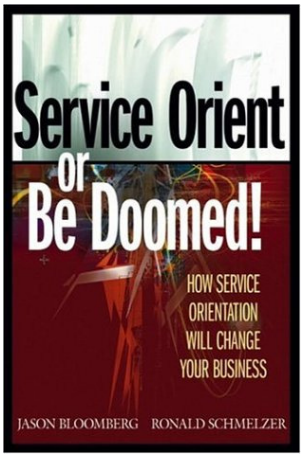
NetAcademy
"Learning Anywhere Anytime"

Service Orient or Be Doomed!

How Service Orientation Will Change Your Business



Authors: Jason Bloomberg and Ronald Schmelzer
Publisher: John Wiley & Sons, Inc.
ISBN 13 978 0471 76858 6
258 pages

About the Authors

Jason Bloomberg is a thought leader and helps organizations around the world leverage their IT resources to meet changing business needs. His book, Service Orient or Be Doomed! , is recognized as the leading business book on Service Orientation.

Ronald Schmelzer, senior analyst and founder, is a well-known expert in the field of Service-Oriented Architecture (SOA), Ron has been featured in and has written for periodicals, and has spoken at numerous industry conferences and in front of some of the largest businesses in the world.

■ The Big Idea

A company's failure to innovate sends customers to other organizations that provide better value and convenience. Today's companies need a go-to resource that will help them maximize their use of information technology (IT) and understand it for what it is: an integral resource upon which business productivity, profitability, and efficiency depend if it is to succeed.

Introducing service orientation as a vision and philosophy that can greatly impact a business, this innovative new book equips the reader to:

- Best use technology resources to meet goals
- Unleash their "inner nerd" to embrace IT as part of their business as a whole
- Address the "mother of all business problems": inflexibility
- Know the technological factors that pressure a business to innovate
- Understand buzzwords with Jargon Watch sidebars

Published by BusinessSummaries, 7891 W Flagler St, # 346 Miami Florida, 33144

Why You Need This Book

This book offers a magna carta to CEO's and small business owners that teaches them to erase the line between business and technology, toward a new service-oriented approach which is a synergy of both.

IMPEDIMENTS TO AGILITY

Here are the key impediments to making business agility happen in today's companies. Most of these impediments fall into three broad categories:

1. **Complexity**. Today's enterprise environment contains many different people, processes, and departments that work in many different, and often conflicting, ways. Considering that many large organizations have been layering on such complexities for decades, it's no wonder that many enterprises have an intractable mess on their hands.

2. **Inflexibility**. Companies tend to fall into the "if it works, don't screw with it" mode of thinking, which works well when business requirements don't change but significantly impedes agility when companies are faced with new situations. If businesses don't change, they stagnate and their processes become stale.

3. **Brittleness**. This is the risk of failure and other problems that result from excessive complexity and inflexibility - the company cracks with the slightest of pressure.

Many small companies can't deal with unplanned change because they simply have insufficient resources, they're operating at their maximum capacity, or their centralized management is simply resistant to change. The challenge for companies both large and small, then, is to develop a culture, infrastructure, and resources that enable them to change on a dime as changing needs emerge.

Published by BusinessSummaries, 7891 W Flagler St, # 346 Miami Florida, 33144

WHY CROSSOVER PROFESSIONALS ARE SO IMPORTANT

The reason why we're taking the time to discuss the issue of business-savvy techies and tech-savvy businesspeople is because the long-term trend in the business world is toward a future where there's no separation between business and technology in the typical operations of an enterprise.

In this vision, all technology is simply a business resource to meet business needs, just like office furniture or human resources or finance. Furthermore, the day-to-day work of businesspeople will become steeped in technology – a trend we're actually seeing today, with all the phones, Crackberries, and the like that today's business executive have to carry with them at all times.

It will simply become impossible for businesspeople to run their daily lives without deep immersion in technology, and it will be impossible for the technical part of a business to operate without a strong business mandate. The two are bound to be intertwined.

LOOSE COUPLING AND COMMON KNOWLEDGE

What makes the IT world bound to another is the level of common knowledge that the people controlling the two ends of a distributed computing exchange. Some connections are very close and rigid, such as the connection between an axle and a tire on a car, while others are more peripheral or on a tangent, such as the effect of emissions on a global warming.

Yet other things don't seem to be connected at all, such as opening the window and changing the television channel. How do we know that one thing is connected to another? By making some change to one entity and observing if a change is made, or must be made, to the other. We determine correlation through experiment and trial and error. Moving the axle will necessarily move the wheel, and thus they are connected. But opening the window doesn't (or at least shouldn't) have any impact on the current television channel.

Contracts between providers and consumers of IT functionality work the same way. Even when the same company (or department) controls the provider and consumer in a particular interaction, it often still makes sense to put only enough detail in the contract to stipulate how systems interact at an arm's length, without going into detail as to how each party will perform its obligations.

Published by BusinessSummaries, 7891 W Flagler St, # 346 Miami Florida, 33144

Loose coupling results from having contracted interfaces that make it much easier to update how each piece of software works independently of the others, since the contract specifies all the information about how each component must interact with other components. In other words, contracted interfaces provide increased flexibility, without giving out too much insider information.

METADATA: THE SECRET SAUCE

Just as legal contracts make for solid business relationships, software contracts make for solid, loosely coupled distributed computing. Here's what goes into a contract, especially the kind that computers, rather than people, need to understand:

- Contracts should describe what a provider will give to any consumer that chooses to abide by the terms of the contract. The contract should define what functionality the provider provides, what data it will return, or typically some combination of the two.

- Contracts must have information both about the responsibility of the providers for providing their functionality and/or data as well as the expected responsibilities of the consumers of that information and what they will need to provide in return.

- Contracts also specify the rules of engagement between consumers and providers, known as policies, that govern who can access a provider, what security procedures the participants must follow, and any other rules that apply to the exchange.

ENTER SERVICE ORIENTATION

In the Service-oriented approach to integration, however, we're not simply leveraging open standards -- in fact, we're not really integrating at all per se. service-oriented integration is a side effect of building composite, loosely coupled, Service-oriented processes. We're composing processes out of Services and then exposing these processes as Services so other processes can consume them.

Published by BusinessSummaries, 7891 W Flagler St, # 346 Miami Florida, 33144

There's no assumption that Services must be on the same system or even in the same country. Rather, the whole idea of Service-oriented integration is to compose Services regardless of their underlying technology. If we can compose Services together in an agile way such that changing business assumptions simply changes the composition, rather than the implementation, we can get away from having to spend money in times of change, let alone during routine maintenance.

ENTERPRISE ARCHITECT'S ROLES AND RESPONSIBILITIES

What we are looking for is an enterprise architect who is able to merge the worlds of business and IT in order to make Service orientation a reality. Such an architect should be able to perform these functions in the organization:

- **The Great Communicator**. An architect can translate ill-defined, abstract, or incomplete business requirements into a set of Service definitions or a model for how to define those Services in spite of ongoing, unpredictable change.

- **The Simplifier**. The architect needs to simplify the complicated morass of IT technologies and infrastructure into a set of reusable Services and contracts that define the obligation of IT to meet ongoing, changing business requirements.

- **The Evolutionist.** Architects need to be able to implement technologies and approaches that help them encapsulate changing requirements into metadata as well as maintain the evolving set of Services in the company.

- **Champion of Thrift**. They must be able to find ways to reduce the need to invest in unnecessary technology and allow companies to build systems that can evolve with changing needs.

- **The Pragmatist**. Good architects must be more than great communicators, simplifiers, and economic magicians – they must also be able to make realistic, stepwise improvements to the business use of IT.

Published by BusinessSummaries, 7891 W Flagler St, # 346 Miami Florida, 33144

- **Master of Best Practices**. Good architects will have the opportunity to not only define a business' overall approach to architecture for the years, and perhaps decades, to come, but might even have an impact on the IT industry as a whole.

SOA (SERVICE ORIENTED ARCHITECTURE) FILLS THE GAP FOR INTERNET B2B

The business benefits of Service-oriented B2B integration over the previous, tightly coupled approaches of EDI are clear:

- Enterprises can reduce the costs of integration because they have agreed on the interfaces between their systems and businesses in advance – reducing the dependency on complex, expensive, and/or custom integration approaches.

- Enterprises can reduce the total cost of ownership of heterogeneous systems since standards-based, interoperable systems give businesses more choice of vendors and the flexibility to solve their specific business needs.

- Enterprises can realize a significantly expanded market opportunity since rather relying on partners and suppliers to implement specific, proprietary technology approaches, vendors can provide solutions that will work in their customers' environments, allowing them to reach partners and business opportunities that may have been inaccessible in the past.

- Enterprises can reduce their time-to-market because they can increasingly depend on critical architectural and infrastructural elements to exist in their partners' IT environments and rely on the interoperability of those elements to reduce their need to develop time-intensive, expensive, and proprietary solutions.

Companies are finding that SOA provides not just a framework for dealing with their short-term B2B integration challenges, but also gives them a way to increase their competitiveness in all industries, particularly where margins are slim.

Published by BusinessSummaries, 7891 W Flagler St, # 346 Miami Florida, 33144

WHO IS THE SOA CHAMPION?

A champion is usually an individual, or sometimes a small team, who understands the benefits of SOA, can communicate those benefits to both business and technical audiences, and is committed to bringing SOA to the organization. The champion essentially plays the role of an evangelist who uses the power of persuasion to get all involved parties on the same page with respect to the goals of the SOA initiative, the funding and management issues, and the long-term SOA plan.

However, the SOA champion need not be the person who is driving the overall SOA effort, or even the buyer or the buyer's boss. Indeed, SOA champions might in fact fill other roles in the organization. The role they play also impacts how they must go about their champion duties:

- **The chief information officer**. CIOs have responsibilities on both the business and technology aspects of a company, as well as the power and budget to make things happen. The downside to having the CIO as champion is that these executives have a lot on their plates, and generally they won't be able to devote large amounts of time to championing SOA.

- **The chief architect**. The chief architect is either responsible for the overall corporate IT architecture strategy or is the member of the enterprise architecture team who has executive-level responsibility for the overall IT architecture and how it should meet the needs of the business.

- **An LOB executive**. Business executives have the combination of technical depth and architectural vision to champion SOA. In organizations lucky enough to have such a person, he or she often can derive substantial business value out of the SOA initiative.

- **A senior architect**. These individuals must take the role of evangelists, communicating the value of SOA to every audience that will listen. They must be charismatic, thick-skinned, and determined.

- **An IT manager**. These managers tend to work within a particular department or IT silo, and can drive SOA initiatives from within their group due to their technical expertise.

Published by BusinessSummaries, 7891 W Flagler St, # 346 Miami Florida, 33144

Therefore, such champions must have some sort of political edge: the authority to drive such cross-departmental change, a special advantage due to their communication or technical capabilities, or some other asset or expertise that they can bring to the table and push the SOA initiative to its fruition.

BUILDING CROSS-FUNCTIONAL TEAMS

IT departments must make a few additional organizational changes to ensure that the new cross-functional teams are effective:

- **Employ an IT-dedicated financial officer**. It is probably fair to say that most folks in IT don't have an adequate understanding of finance and business economics in the first place to understand how their department will positively impact the business. A service-oriented organization will have to broaden the financial knowledge of the people responsible for defining and measuring Services to include financially savvy individuals who can make say whether a Service is really contributing value to the company.

- **Give architects dotted-line responsibility to the CIO**. Architecture is one activity within IT that is not focused on the tactical issues of implementing technology or meeting short term business requirements. Rather, architecture is the practice of dealing with ongoing and unpredictable business change. Companies should give the architecture team the highest possible visibility to the executive in charge of the IT organization, usually the CIO.

- **Implement metrics for each Service**. Services represent current and future business requirements. Therefore, companies should measure the effectiveness of a Service by how well it meets the business requirements, instead of evaluating the underlying IT systems that implement that Service. Specific standards must be in place that would properly and fairly evaluate the Service.

- **Compensate IT right**. It's important to compensate IT employees on key business metrics, such as financial performance, customer satisfaction, the ability to meet deadlines, the reduction of overall business spending,

Published by BusinessSummaries, 7891 W Flagler St, # 346 Miami Florida, 33144

and quality metrics. Once executives tie compensation to these goals, it's amazing how quickly behavior changes and how the SOA initiative is used all across the organization.

- **Aim for transparency**. In order for IT to enable businesses to respond in an agile, flexible fashion, IT must be sufficiently transparent to the business so that it can see where the bottlenecks and opportunities are.

FOUR PILLARS OF SERVICE-ORIENTED DEVELOPMENT

Specifically, companies must understand four pillars of Service-oriented development:

- Pillar 1: Interactive Development. Business analysts must work iteratively with business users, both to satisfy the original requirements and to maintain agility as those requirements change. Likewise, developers must continually iterate their code to satisfy ongoing changes to the Service contracts.

- Pillar 2: Use involvement. The meta-requirement is for a system that responds well to change, and as a result, the requirements definition phase of any Service-oriented project is actually a set of ongoing activities. At no point does design stop and deployment begin. Rather, development is ongoing, as is user involvement.

- Pillar 3: Contract-first development. Business analysts work with users to distill requirements into contracts that then act as marching orders for the developers. Such metadata represent both the requirements and the test plans that analysts can execute to guarantee that Services meet their requirements.

- Pillar 4: A Service-oriented company should become more efficient, flexible, and agile over time as they squeeze out necessary complexity, redundancy, and costs iteratively over time.

Published by BusinessSummaries, 7891 W Flagler St, # 346 Miami Florida, 33144

WHAT DOES IT ALL MEAN?

If other parts of the business can facilitate agility, so too can IT. Agility requires a fundamental change in IT, and that change is on its way. Companies that can negotiate this change successfully will have significant advantages over their lumbering, inflexible competition. Those can adopt SOA successfully will thrive and flourish, and those that don't will be doomed.

***

Published by BusinessSummaries, 7891 W Flagler St, # 346 Miami Florida, 33144