



Integration technology that makes sense.

What is SOA? Why is SOA Good for Business?

The Opportunity of Service-Oriented Architecture

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What is service-oriented architecture?

Service-oriented architecture is an architectural approach that emphasizes well-defined, loosely coupled, coarse-grained, business-centric, reusable shared services.

- Services are well-defined encapsulations of business assets.

Business functions can be implemented in a service-oriented architecture by accessing business services through messaging and composite applications.

Service-oriented architecture?

“We have a difficult time finding ways to talk with the business about the idea without it sounding like religion or a rehash of stories they have heard before.”

– Dave Ploch, Novus International

Merriam Webster provides insight

It *does* sound like a religion and it *is* somewhat of a rehash of stories they've heard before.

Definition 4 for **religion**:

- *a cause, principle, or system of beliefs held to with ardor and faith*

Definition 1 for **rehash**:

- *to talk over or discuss again*

What are we talking over again and what is this system of beliefs we hold with ardor and faith?

Speaking “porpoise” (all clicks and squeaks)



For years, whenever Wisconsin state CIO Matt Miszewski tried to discuss systems integration with agency heads, he sensed a fog settling over the room. "You could see it in their eyes," he says. "They tuned out."

Worse, when the fog cleared, it was replaced with anger.

Difficulty with integration, Miszewski could tell they were thinking, was just another IT excuse for slowness, inflexibility and inability to give them what they wanted.

Source: CIO Magazine “Integration’s New Strategy” 9-15-2005

A brief history of reuse

We have tried and succeeded to some degree:

- Rubber band on the card deck of a Fortran IV subroutine
 - reuse the routine without modification
- Assembler Macros
 - reuse the logic in multiple contexts, multiple programs
- COBOL CopyBooks/CopyLibs, VMS text libraries
 - reuse the code fragment in multiple programs
- Object Orientation – Class inheritance
 - reuse the common methods and fields in multiple objects
- Components – JavaBeans, COM, .Net
 - reuse the encapsulated code and data without modification

And integration ...

- Flat files, “sneaker-net”, and scripts
- Database integration and ETL
- Integration APIs and RPC
- Point-to-point messaging
- Message queuing
- Enterprise application integration
- DCOM, CORBA, RMI
- EDI and VANs
- XML and TCP/IP

ETL - extract, transfer, load; API – application programming interface; RPC – remote procedure call; DCOM – distributed component object model; CORBA – common object request broker architecture; RMI – (Java) remote method invocation; EDI – electronic data interchange; VAN – value-added network; XML – eXtensible markup language; TCP/IP - transmission control protocol/Internet protocol



So what's new?

- In SOA, IT and business work together – *across business functions* – to implement business processes, not just transactions.
- SOA uses messaging for loosely-coupled, platform-independent integration.
- Business functions are exposed as service objects – that are re-used **in place!**
- Applications are composed from the services, not “developed” by writing code.

The new IT-business partnership

SOA is a business opportunity, not merely a better way to do application integration.

- Start with business process design, which provides the right context for business service design.
- Ensure that both business and IT stakeholders understand service delivery and operation.
- Address funding and buy-in by demonstrating the strategic value of SOA while showing how a move to SOA can be *evolutionary*.

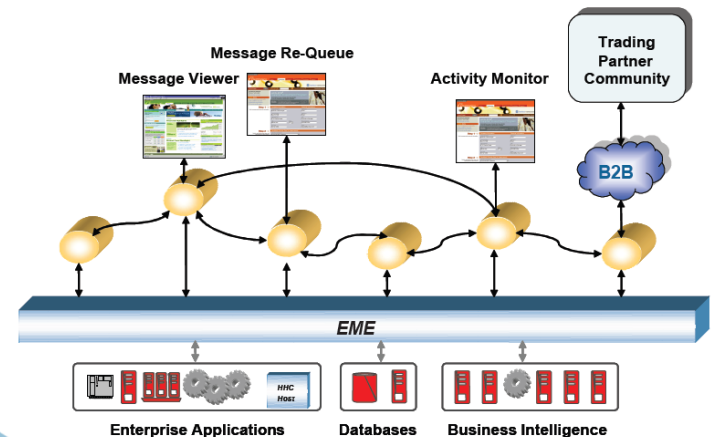
Unprecedented?

- No, this is a “precedented” consensus and convergence of technology.
- The last time all the major players agreed on the protocol, formats, architecture, and process, it was TCP/IP, HTTP, HTML, and HTTPD.
 - The Web was born. Life will never be the same again.
- BEA, IBM, Oracle, Microsoft, SAP all agree – SOA technology is about standards-based technology for **messaging** and **composite applications**.
 - This changes everything in information technology.

Messaging

Messaging infrastructure is like a good executive assistant, translating, routing, and monitoring information from different systems without these systems needing to connect directly.

Adding, changing, or removing a system becomes a matter of modifying a single link, rather than ripping apart connections to all the different systems with which it may need to communicate.

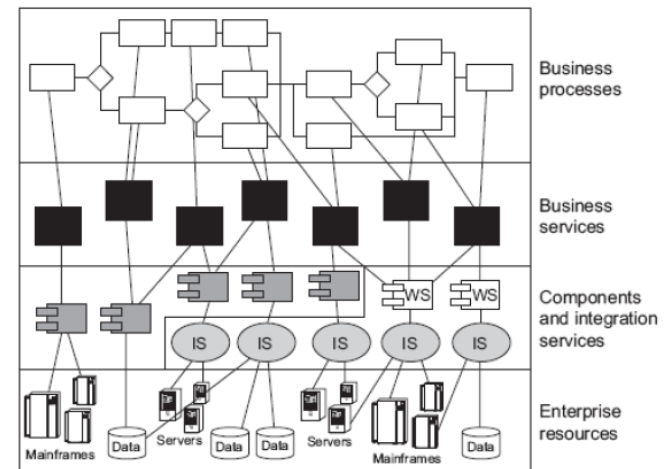


Composite applications

SOA creates multiple definitions of “application” as different combinations of interaction layer and business services layer modules.

Composite applications bring the pieces together, leveraging business process definitions to increase the flexibility and agility of enterprise applications.

- Business services, events, rules, and human interaction – typically “long-running”
- Orchestrated by process flows – “asynchronous”
- Executed and deployed in heterogeneous, distributed environments – “loosely coupled”



Strategic implications

When core business functions are service-enabled, you have a map of the business expressed in technology – a service-oriented architecture.

- For IT, an SOA is the blueprint that guides the development of the integration layer and its two major components: messaging infrastructure and services.
- For business, an SOA is the big picture of all the business processes and flows of a company.

Businesspeople and IT can understand how their businesses are constructed in terms of their technology – and how to make it better.

Why is SOA good for business?

IRACIS – SOA can help a business:

- **I**ncrease **R**evenue by implementing innovative business processes that drive business development.
- **A**void **C**ost by reusing business services across business functions and units, extending the useful life of legacy IT assets.
- **I**mprove **S**ervice by efficiently and effectively integrating the business services that serve customers.

Revolution? Maybe. But without the blood.

Unlike previous technology revolutions and software methodology innovations, SOA does not require an enterprise to “start over and get it right this time”.

- Initial SOA efforts can be *tactical* and have high impact without huge adoption costs and lengthy implementation cycles.
- Even *strategic* SOA can leverage and extend the life of legacy applications by “service-enabling” their core business functions and weaving them into new and innovative composite applications.



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Service-oriented architecture

Something to get *religious* about!

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