



# Unternehmensarchitektur im SOA Hype



**Axel Jacobs, VP Consulting**

# SOA is not only about technology!

- Technologies (web services, SOAP, UDDI, etc.)
- Tools (ESB, Repositories)
- Development Tools
- Vendor selection

Technology

- How to identify services?
- How to ensure correct granularity and low coupling?
- When to select/define services?

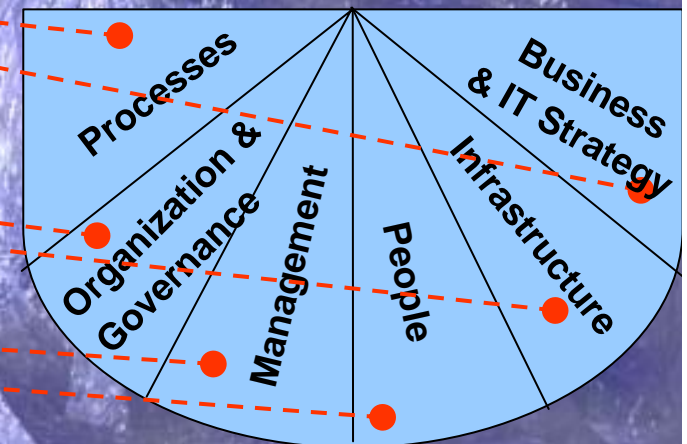
- How is the IT organization impacted? e.g. consumer, provider, producer approach.
- How to allocate costs?

- Permissions?
- SLA (definition, prioritization, fail-over)?
- Security?
- Service monitoring?

- Impact on business processes?
- Business case for SOA?
- Link to business drivers?

- Integration middleware?
- Impact on information management?

- How to promote reuse?
- Skills & Training?
- Communication?



# Unternehmensarchitektur im SOA Hype

## Agenda

- IT Architektur, Unternehmensarchitektur – wie ist beides miteinander verknüpft?
- Was ist Service-orientierte Architektur (SOA) wirklich – und welche Aspekte sind für die Gestaltung von Unternehmensarchitekturen besonders relevant?
- Welche Ansätze zur „service-orientierten“ Architekturentwicklung setzen sich aktuell in der Praxis durch?

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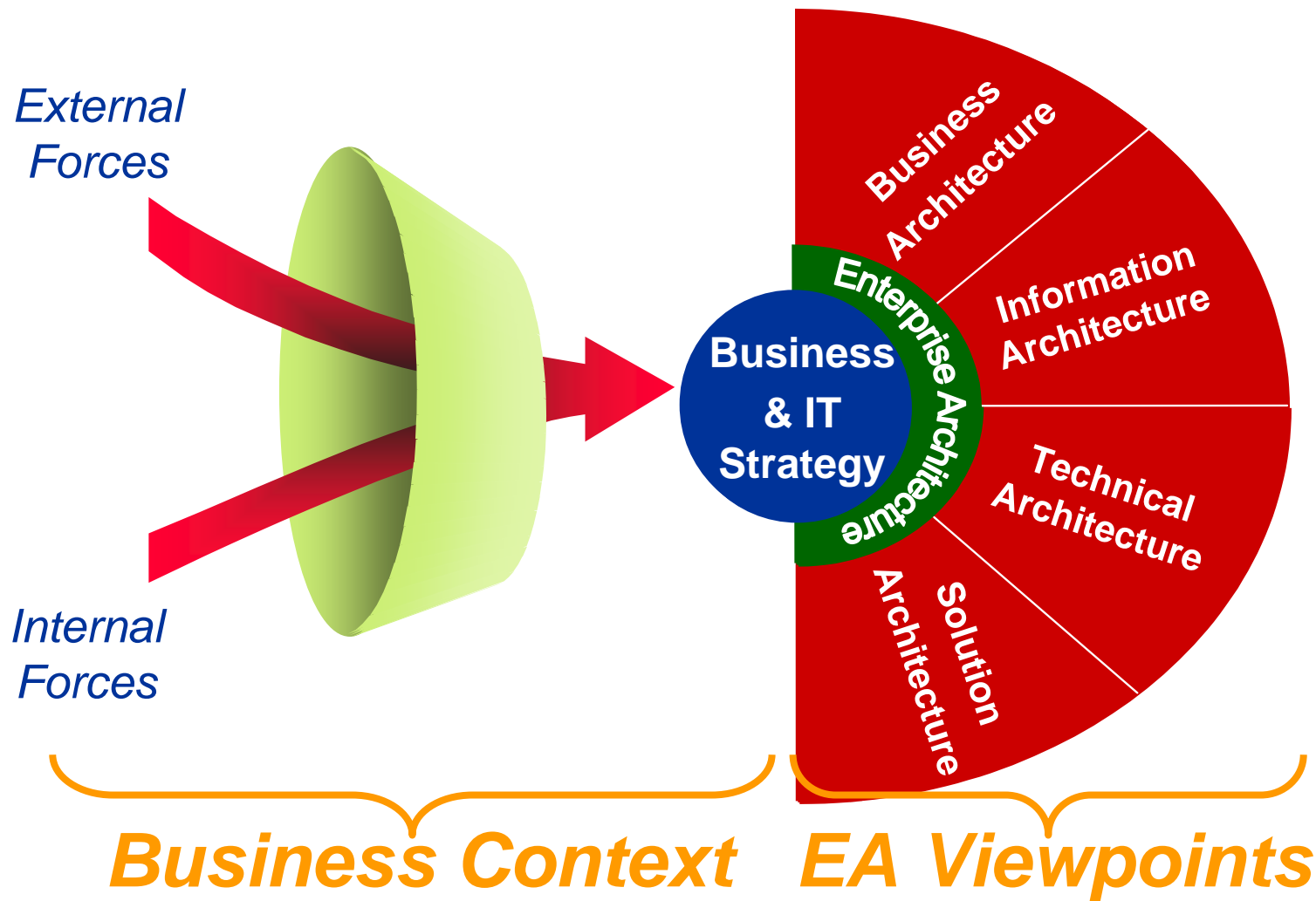
# What is Enterprise Architecture?

- According to Gartner, Enterprise Architecture is:

“Enterprise Architecture is the process of translating business vision and strategy into effective enterprise change by creating, communicating and improving the key principles and models that describe the enterprise’s future state and enable its evolution”

- ✓ **Process**
- ✓ **Translates business vision and strategy**
- ✓ **Change agent**
- ✓ **Creates principles and models (artifacts)**
- ✓ **Future State oriented**
- ✓ **Enables evolution**

# Enterprise Architecture (EA)



# Enterprise Architecture Deliverables

**EA is easiest to see in the form of actual *deliverables* in hand**

Enterprise Architecture ("viewpoints")	Enterprise Architecture Deliverables		
	Descriptions of Models		Guidelines
	Current State	Future State	Rules for Design
Business Architecture	"What we have"	"Where we are going"	"How do we get there"?
Information Architecture			
Technical (infrastructure) Architecture			
Solution (applications) Architecture			
Current Environment in Place			Sphere of Architecture Governance

# Unternehmensarchitektur im SOA Hype

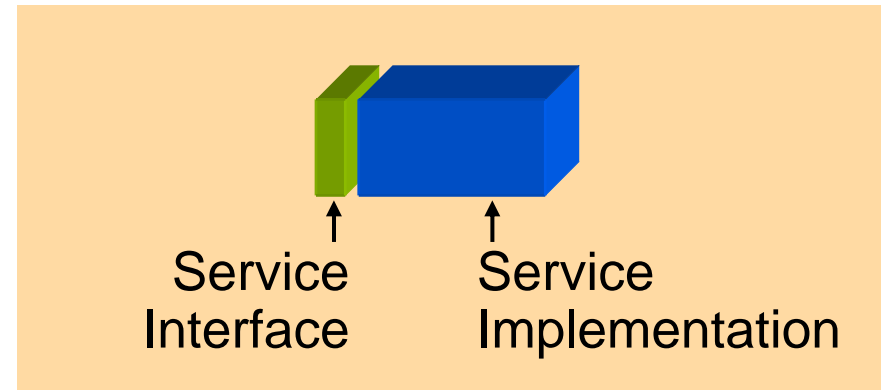
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# SOA Definition by Gartner

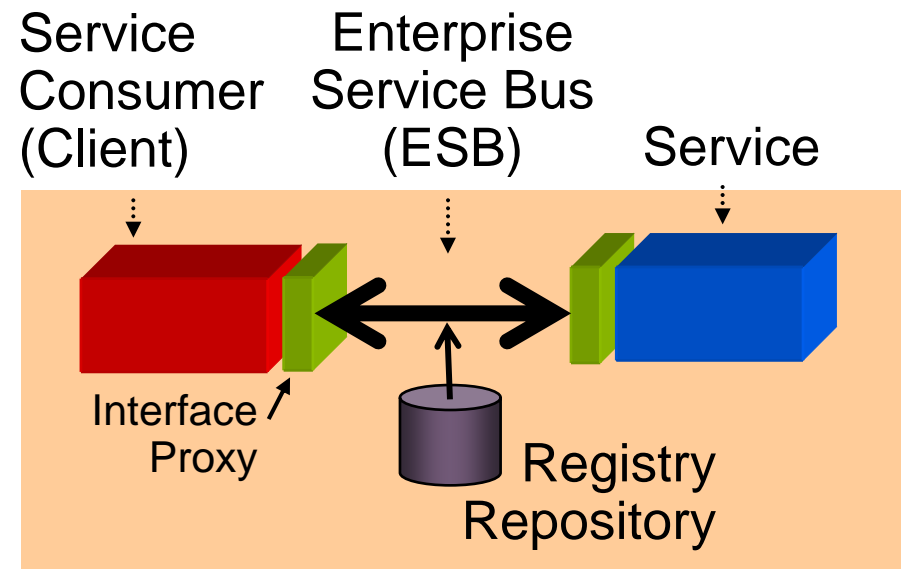
## Service in a SOA

*Business software* component, designed to be invocable by name from external contexts via a well-defined, programmatic interface.



## SOA

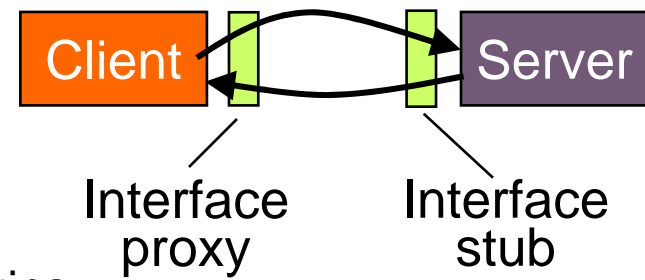
Software design pattern consisting of any number of registered services and service consumers (clients) in loosely coupled relationships.



# SOA versus Event-Driven

## Service-Oriented Architecture *Interaction*

- Uses interface metadata
- One-to-one connections
- Client directs flow
- Data flows are predictable and linear
- Closed to unforeseen input once process begins



## Event-Driven *Notification*

- Uses event descriptor metadata
- Many-to-many connections
- Sink (recipient) determines flow of logic
- Dynamic, parallel, asynchronous flows
- Can react to new external input while process is in flight



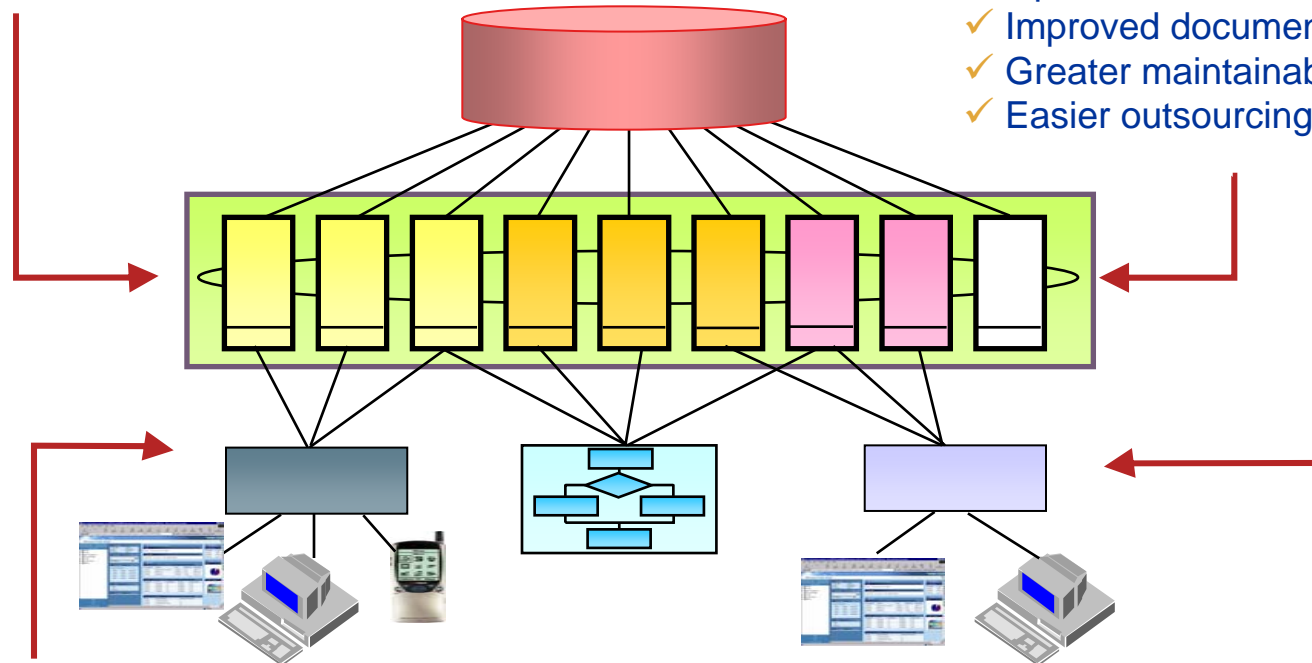
# Beyond the Hype: The Fundamental Benefits of SOA Are Few, but Compelling

## 2 – Incremental Deployment and Maintenance

- ✓ Gradual migration to SOA
- ✓ Cost "spreading" across multiple projects
- ✓ Reduced maintenance cost

## 1 – Architectural Partitioning

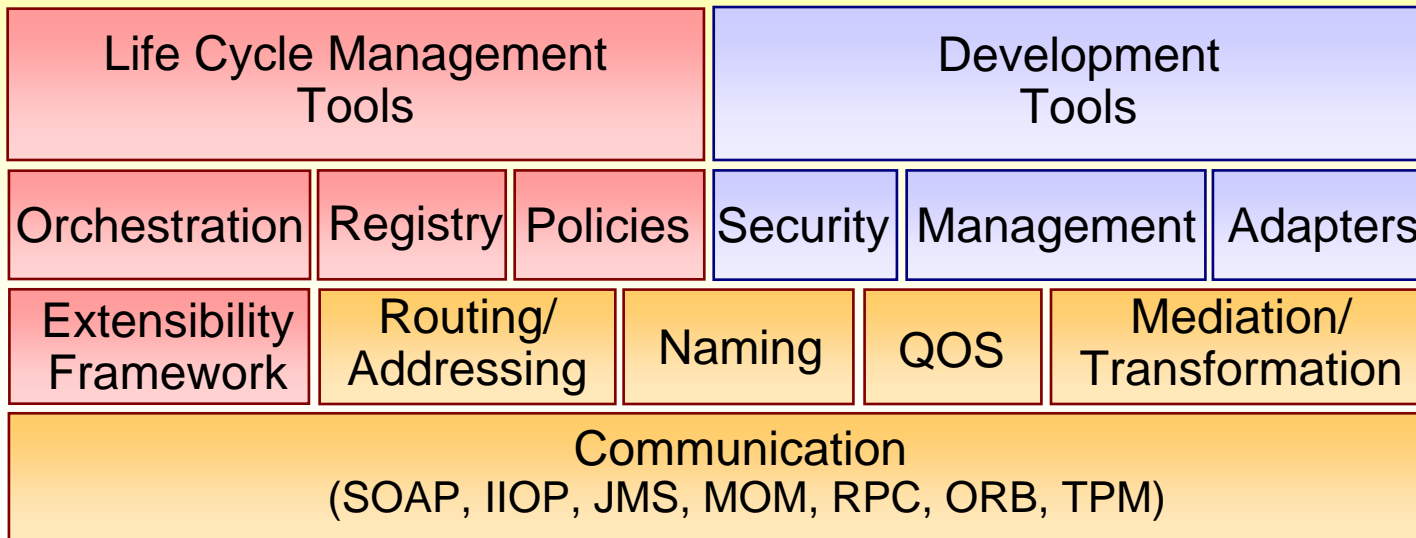
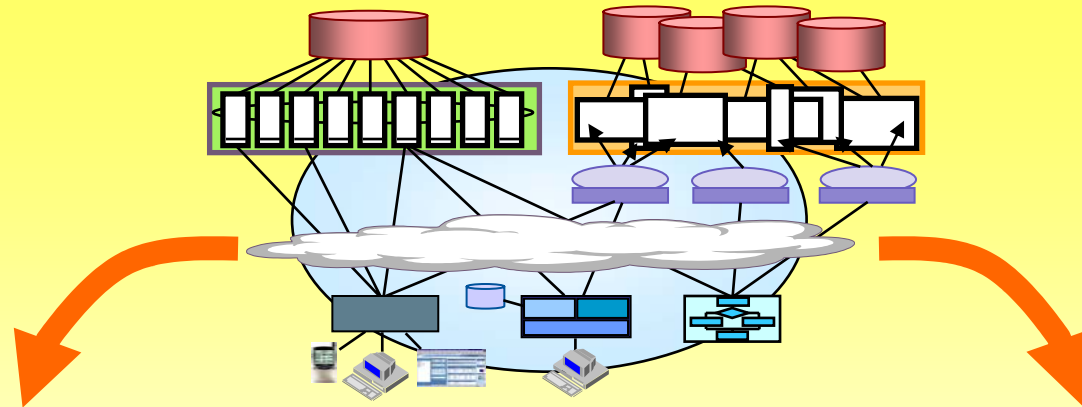
- ✓ Diverse life cycle "speeds"
- ✓ Synergy of different technologies
- ✓ Optimal tech skills allocation
- ✓ Improved documentation
- ✓ Greater maintainability
- ✓ Easier outsourcing



## 3 – Reuse of Services:

- ✓ Faster time to deployment
- ✓ Lower development cost
- ✓ Greater adaptability of applications

# Building the SOA Backplane

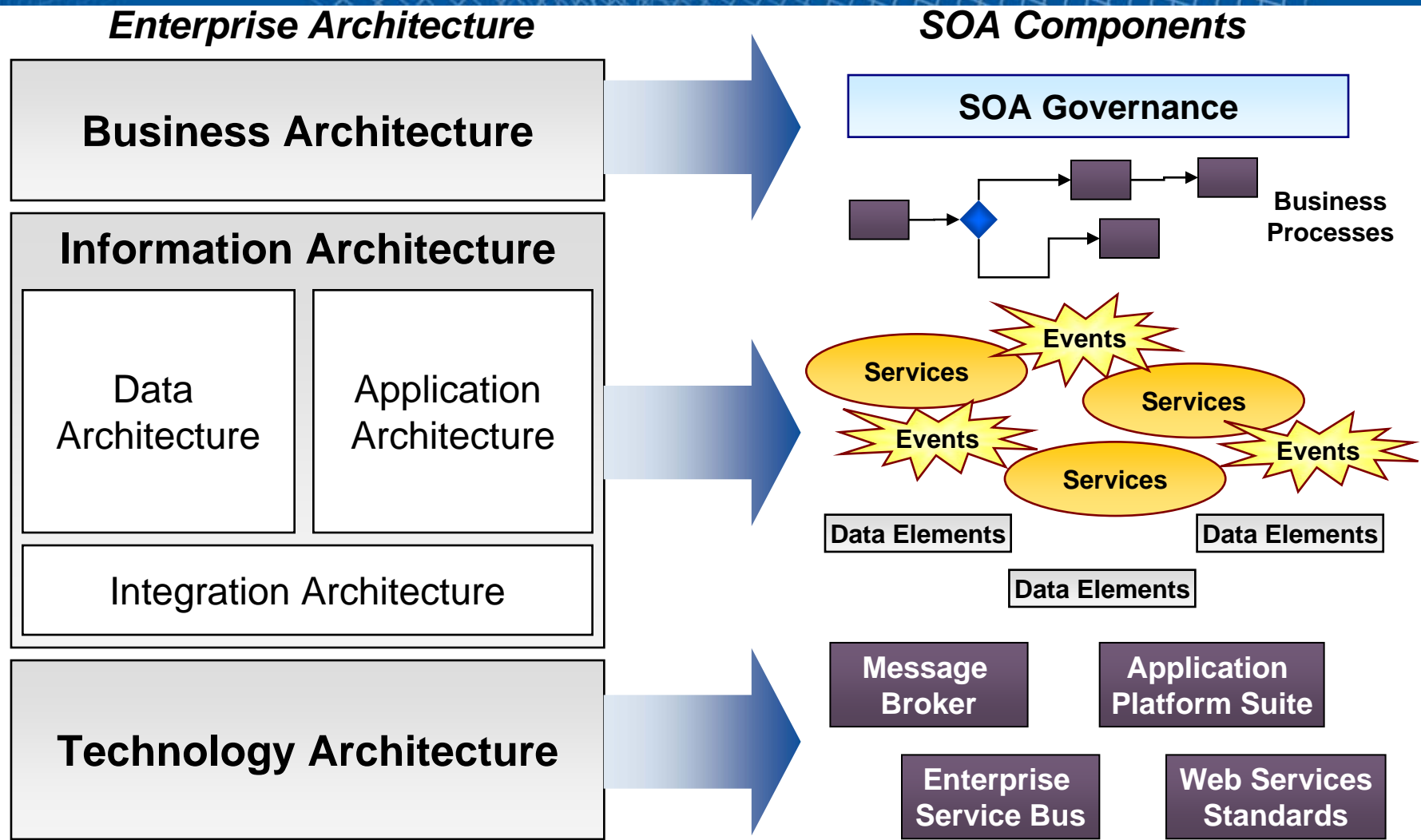


= Minimal Features

= Common Features

= Advanced Features

# SOA driven by Enterprise Architecture

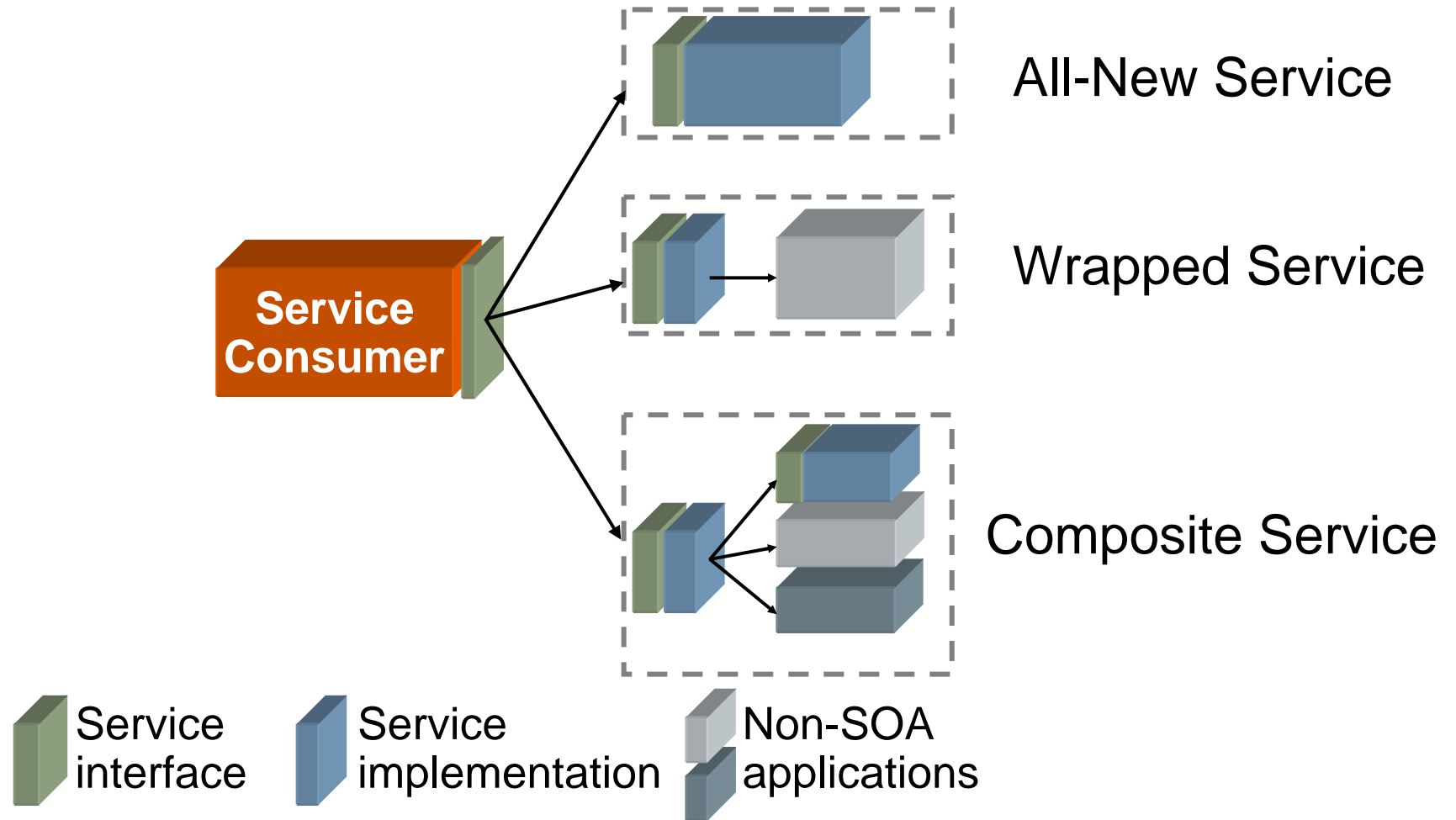


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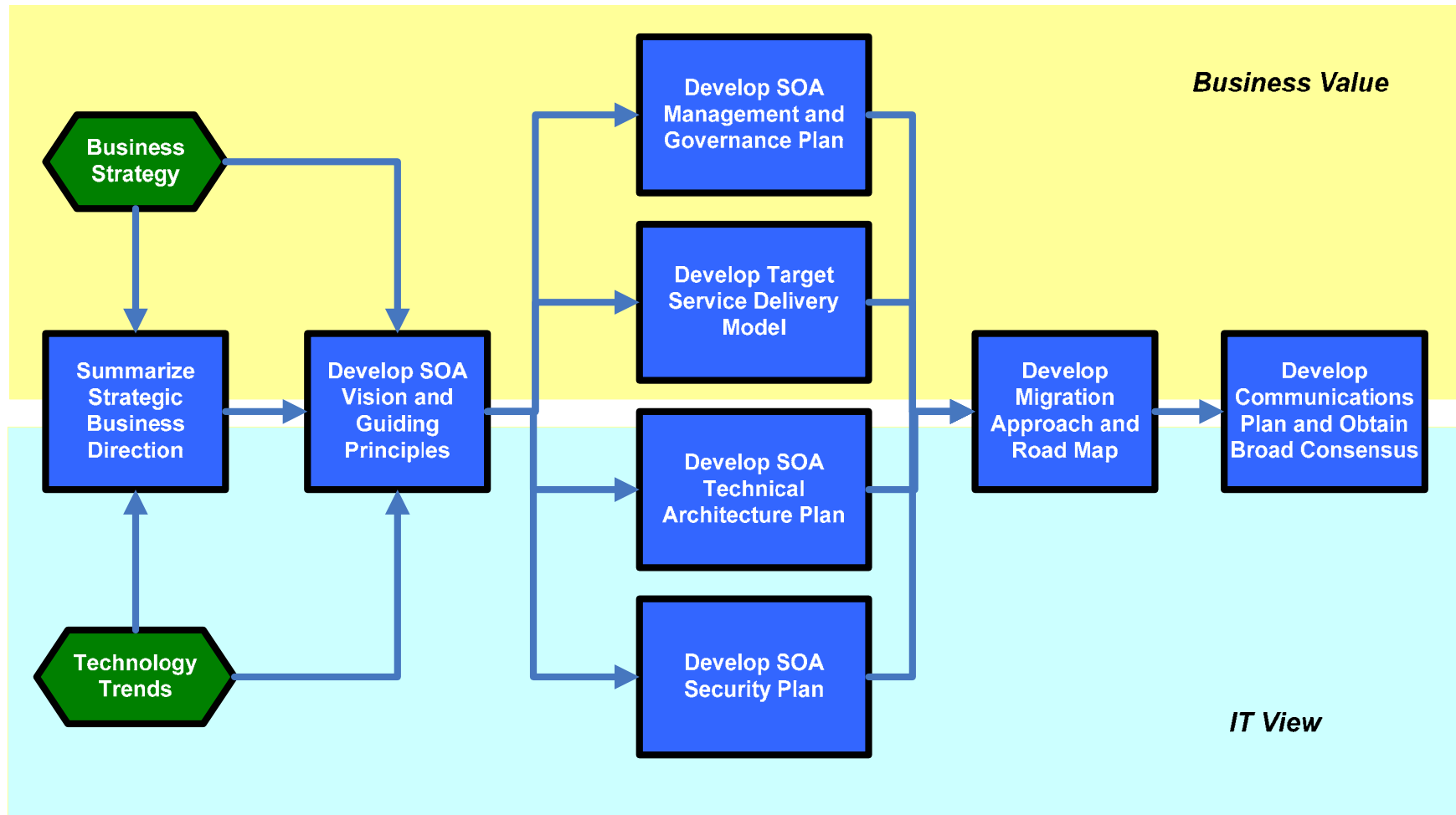
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# Service Implementation: What Happens Behind The Interface



# SOA Strategy Approach - Overview



# SOA Implementation Strategies

## Project-by-Project SOA Rollout

### Pros

- Provides a means to prove a SOA concept prior to committing to an enterprise rollout.
- Ensures that the solution will be ready to adapt when an enterprise-wide commitment to SOA rollout can be made.
- Begins the development of SOA skills and capabilities.

### Cons

- Project level technology decision may not support enterprise directions.
- Interface designs and service granularity that is appropriate to a project may not be right for the enterprise level.
- Siloed SOA implementations may not lead to a cohesive enterprise architecture later.

## Enterprise-wide SOA Rollout

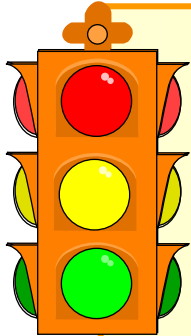
### Pros

- More cohesive, uniform implementation.
- Reduced risk of redundant service implementation.
- Better leverage of investments.
- The true benefits of SOA are realized when services are shared enterprise-wide.

### Cons

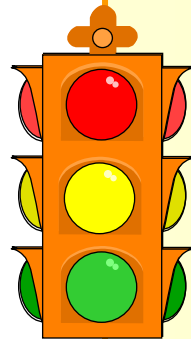
- Coordination of requirements, testing and interface change across service adds complexity to development processes.
- Enterprise commitment to SOA technology and approach involves significant up front investment without an immediate return.

# SOA is Not Always The Right Answer



## ***Use SOA when...***

- There is a compelling business case for reuse
- The project can accommodate the up-front investment and time required to build the SOA infrastructure
- Business rules are well understood and easily translated into services
- Process is divisible into independent components



## ***Exercise caution when...***

- The effort cannot accommodate the additional cost, time and risk of required for an initial SOA implementation
- The application is limited in scope and intended for short life
- The components being developed are highly specialized and reuse is not likely
- The organization is limited in scope and complexity and may be able to achieve reuse and flexibility without the full complement of SOA technology and practices

# Recommendations

- Evaluate core IT processes and modify them to support SOA – strategic planning, enterprise architecture, solution development and operations.
- Plan for the long-term commitment and investment required to fully realize the benefits of SOA. If the business justification is not clear, defer SOA implementation, but continue to plan for it.
- Implement SOA opportunistically, but guide implementation with a long-term vision. Enterprise architecture is a vehicle to define the long-term vision.
- Define a governance structure for SOA that is tailored to your organization and clearly allocates authority between central IT, individual projects and business owners.

The image features a blue background with a complex, fractal-like pattern in a lighter shade of blue. A dark blue horizontal band runs across the middle, containing white text. The text is bold and reads: "Gartner delivers the technology-related insight necessary for our clients to make the right decisions, every day." There are also some small red and green marks in the top-left corner of the image.

**Gartner delivers the technology-related insight necessary for our clients to make the right decisions, every day.**