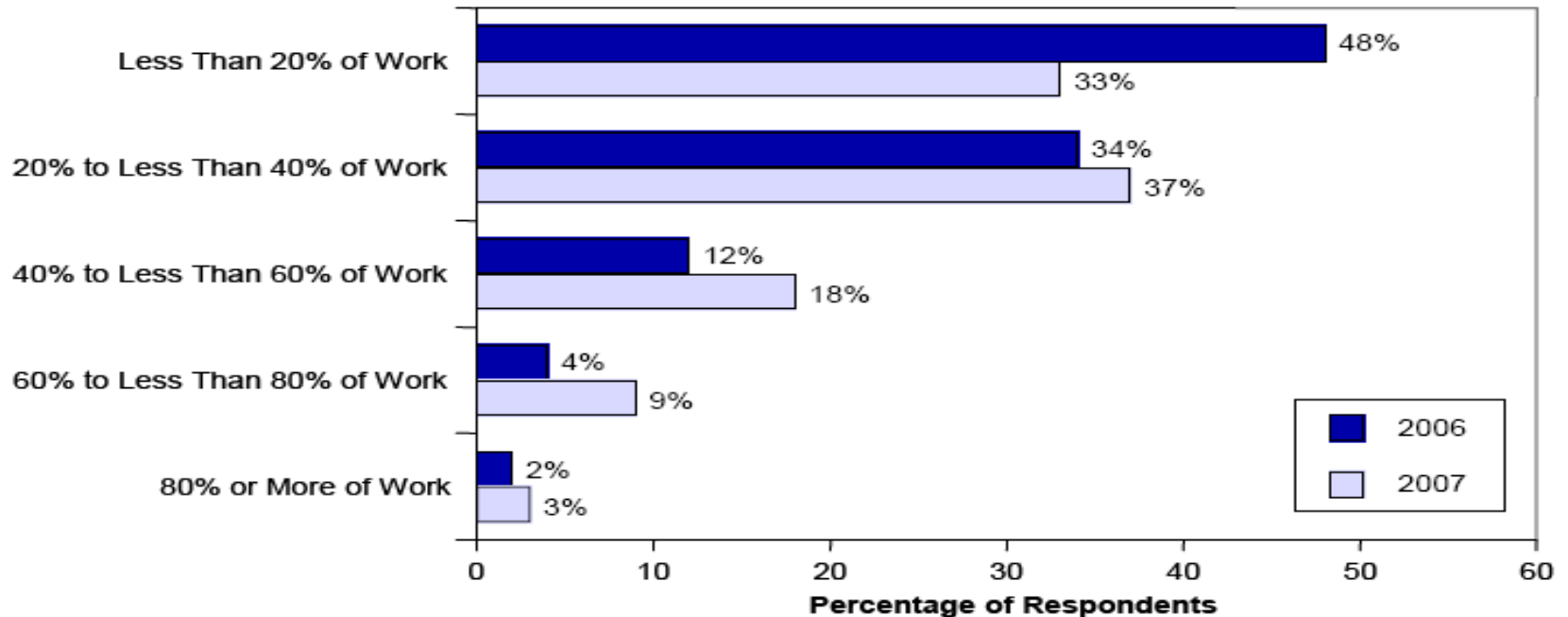


# Moving towards Enterprise SOA: How do you do that?

Massimo Pezzini

# How Do Commercial Organizations Use SOA Today?

Figure 2. Percentage of Application Work Using SOA and Web Services



Source: Gartner (October 2006)

*Spending on Web Services related projects is now 12.9% of IT budgets*

***Service oriented is becoming the default architecture***

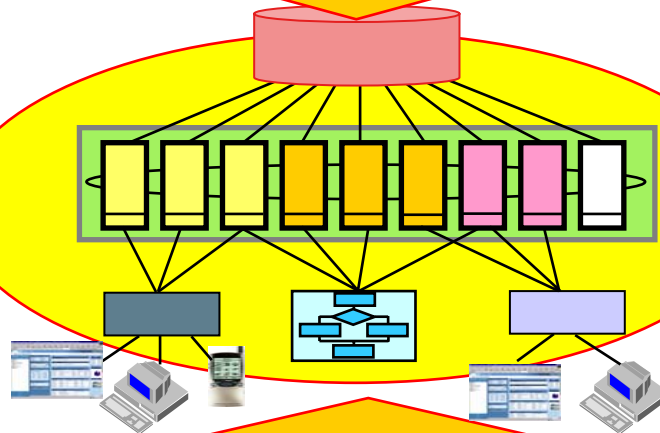
# Why Service-Oriented Architecture?

## Business Drivers Prevail Over IT Drivers

- M&A/divestitures
- Multichannel sales/support
- Time to market
- Continuous innovation
- Process flexibility
- Process visibility

**"Top Down" Enterprise Drivers**

**SOA**



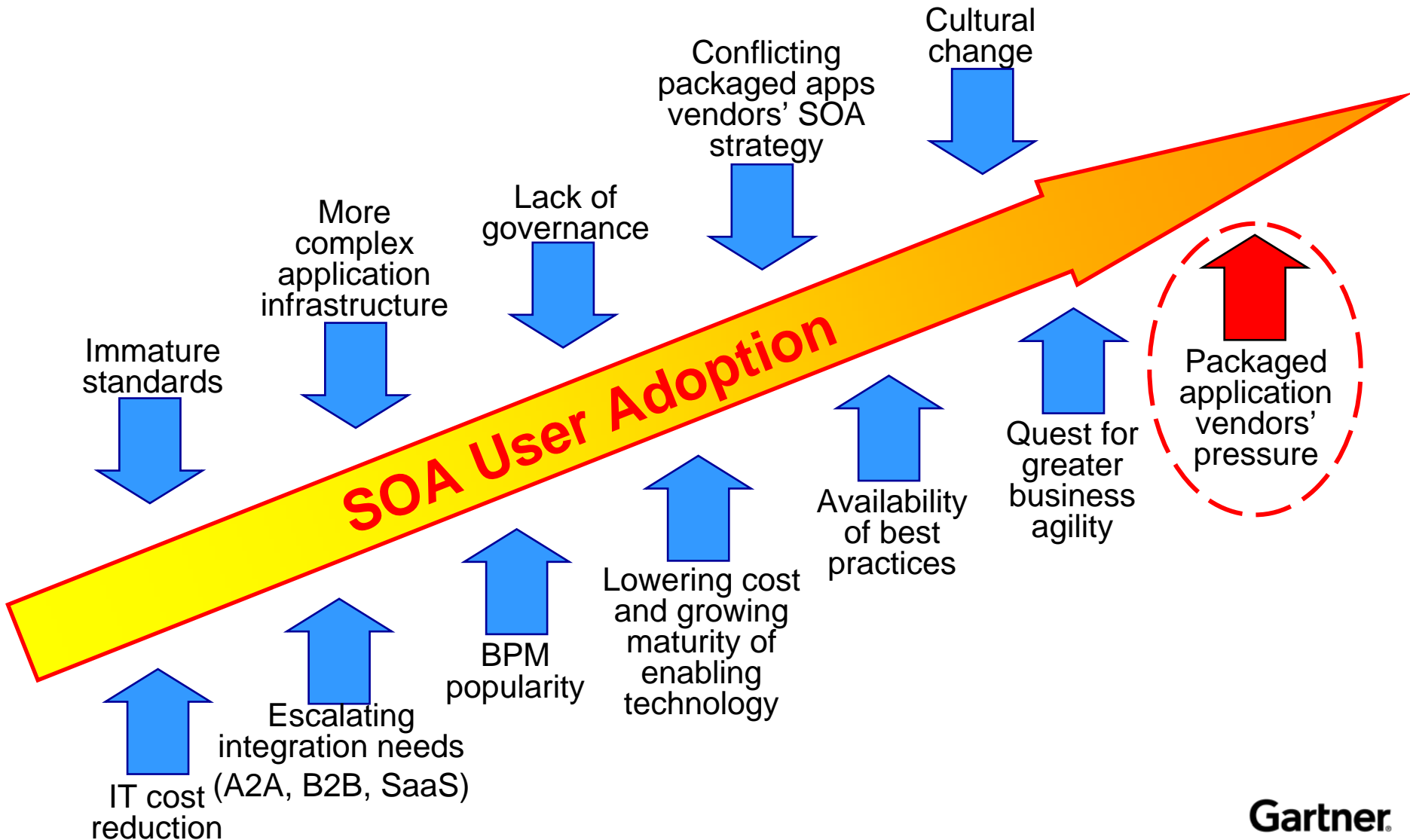
**"Perennial" IT Challenges**

- "Doing more with less"
- Business/IT alignment
- Data consistency/quality
- Time to deployment

- Call center integration
- Single face to clients, suppliers, employees
- Process integration
- Real-time B2B

**"Bottom Up" Business Unit Drivers**

# Irresistible Forces Push Organizations Towards SOA Adoption





# Stages of SOA Adoption

	<b>Stage 1 Introduction</b>	<b>Stage 2 Spreading</b>	<b>Stage 3 Exploitation</b>	<b>Stage 4 Plateau</b>
<b>Business Goals</b>	Address Specific Pain (e.g., Customer Portal)	Process Integration (e.g., B2B)	Process Flexibility (e.g., Time to Market)	Continuous Adaptation & Evolution
<b>IT Goals</b>	Proof of Concept	Establish Technology Platform	Leverage Services Sharing	Enterprise SOA Infrastructure
<b>Scope</b>	Single Application	Multiple Applications (Single BU)	Multiple Applications (Cross BUs)	Virtual Enterprise
<b>No. of Published Services*</b>	<25	<100	<500	>500
<b>No. of Service Consumers*</b>	<5	<25	<50	>50
<b>No. of Service Calls/Day*</b>	<10,000	<100,000	<1,000,000	>1,000,000
<b>No. of Service Developers*</b>	<10	<20	<100	>100
<b>Enabling Technology (cumulative)</b>	Application Server, Portal, Adapters	ESB, WSM Integr. Suite, B2B	SOA Reg/Rep BPM Policy Mgmt.	Enterprise SOA Backplane

\* =These figures represent typical scenarios, but they may vary considerably depending on the specific organization's requirements.

# SOA Best Practices: What you Need to do to Succeed

## Required Management Buy-in

	Stage 1 Introduction	Stage 2 Spreading	Stage 3 Exploitation	Stage 4 Plateau
Head of Development or Head of Integration	✓	✓	✓	✓
CTO/Head of Architecture	x	✓	✓	✓
Head of IT Operations		x	✓	✓
CIO/Business Units		x	✓	✓
CEO			x	✓

## Required Skills

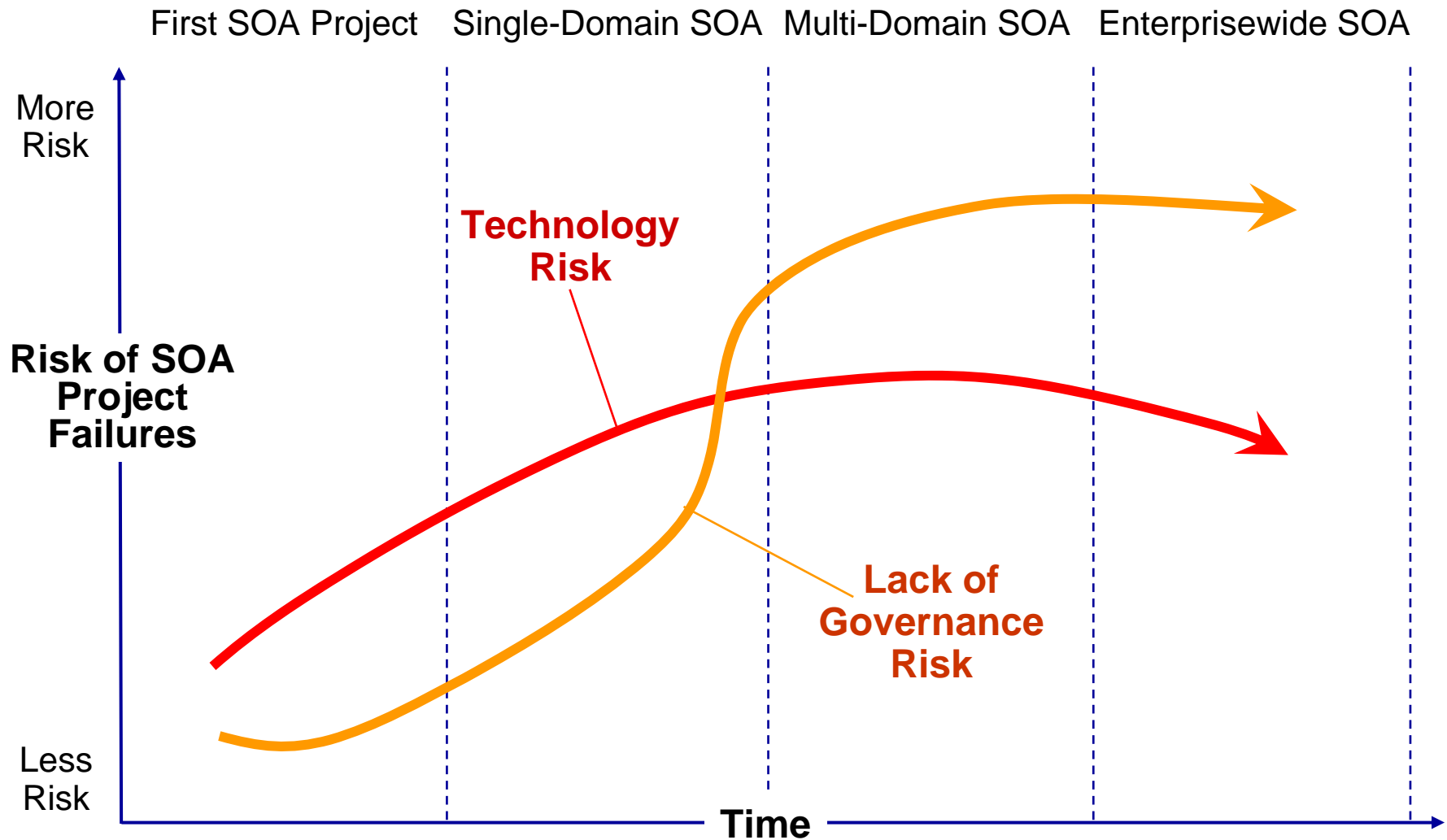
Basic Middleware	✓	✓	✓	✓
Web Services	✓	✓	✓	✓
Integration Middleware	x	✓	✓	✓
Service-Oriented Development of Applications (SODA)		x	✓	✓
Business Process Management		x	✓	✓
SOA Operations Management		x	✓	✓

## Required Organizational Capabilities

SOA Center of Excellence	x	✓	✓	✓
Service Life Cycle Management		x	✓	✓
Service Design Methodology		x	✓	✓
Planning Control and Quality Management		x	✓	✓
Service Reuse Methodolog		x	✓	✓
Operation Management		x	✓	✓
Domains			x	✓
Cost Allocation Schema			x	✓
Consistent Enterprisewide Governance Processes			x	✓
Enterprisewide SOA Backplane			x	✓

✓ = Imperative  
x = Recommended

# Why SOA Initiatives Fail: Technology or Governance?



# SOA Governance Defined

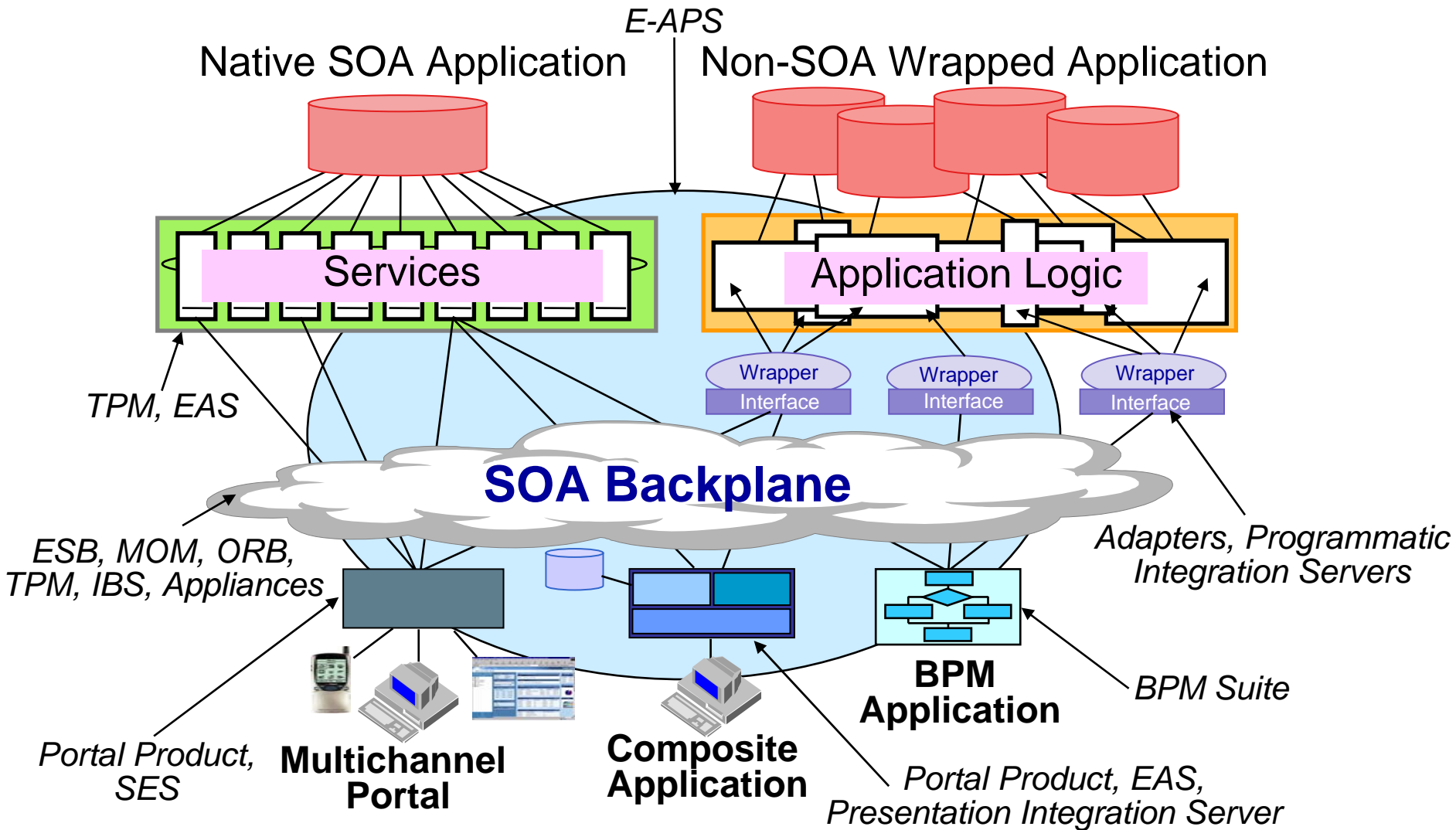
SOA governance identifies decision-making authority for:

- Defining or modifying the business processes that will be supported with SOA techniques
- Defining, designing, accessing, executing, operating and maintaining reusable services
- Identifying the service levels (including performance) required and the access rights
- Determining service ownership and cost allocation
- Setting policies, responsibilities and rules for all of the above
- Measuring use and compliance, and specifying incentives to promote the adoption of those rules

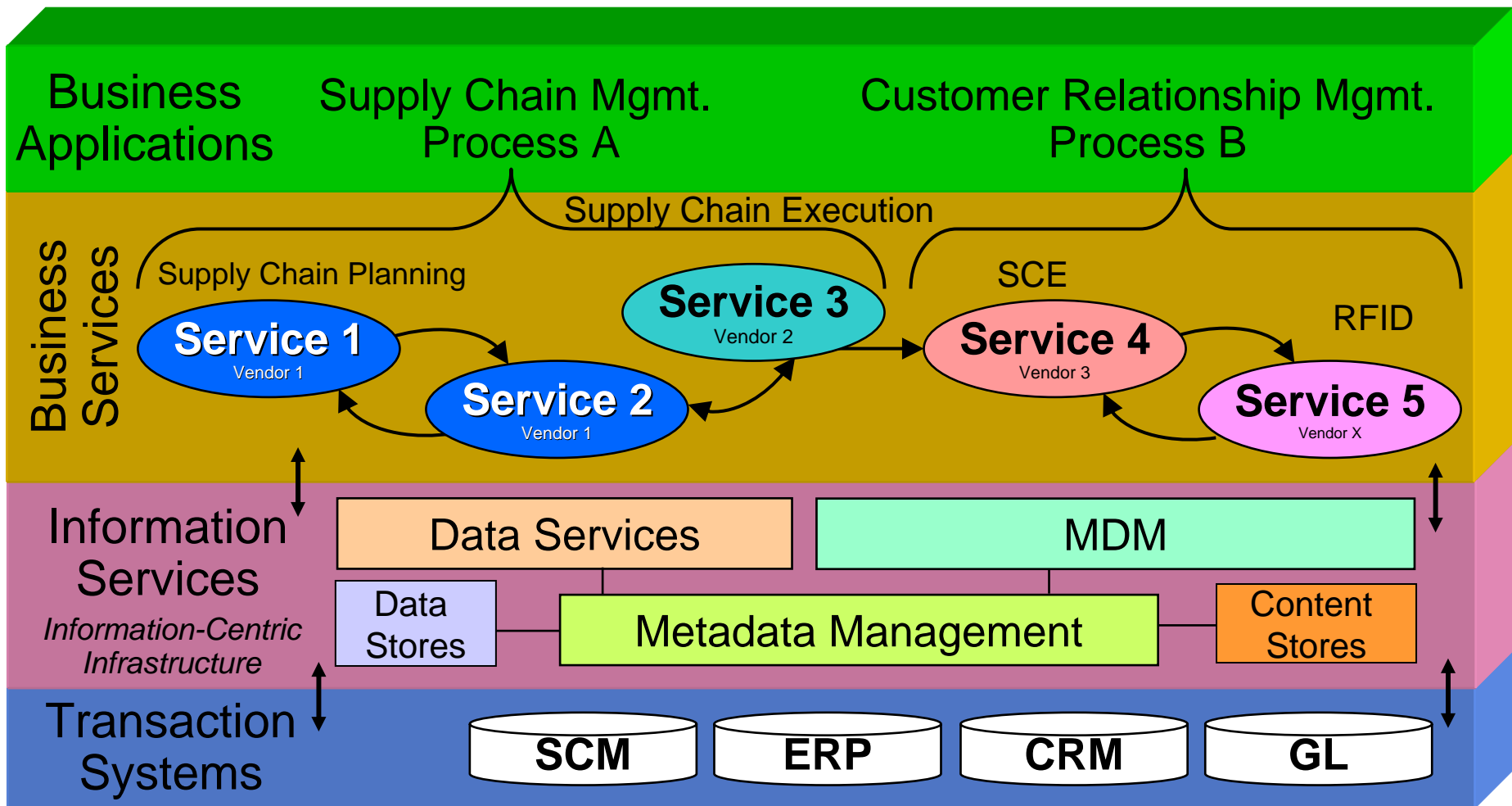




# SOAP and WSDL Are Not Enough: Orient Yourself Through the Middleware Bazaar



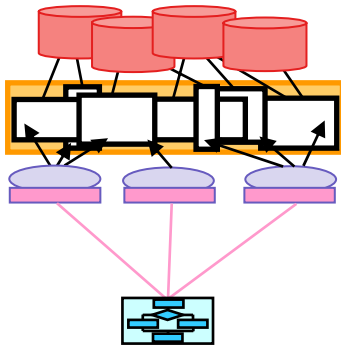
# SOA Demands New Approaches for Management and Architecture of Information Assets



*You need to know where data is, what it means, how it's used and who's involved*

# SOA Adoption Path

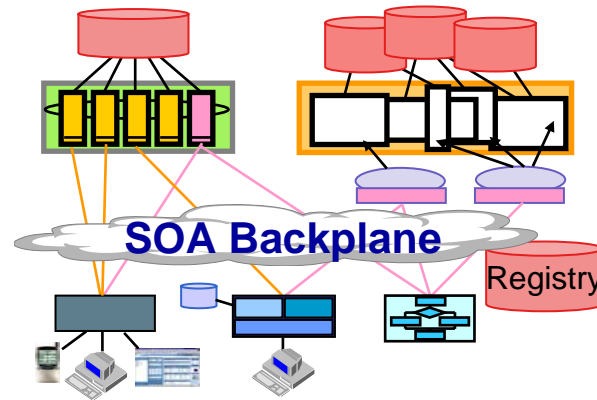
## Wrapped-SOA



**Pre-2007**

- Pre-SOA packages/custom apps
- Vendor-provided or custom service wrapped interfaces
- Packaged and custom processes and composite applications
- Minimalist or no SOA Backplane
- Informal registry and governance

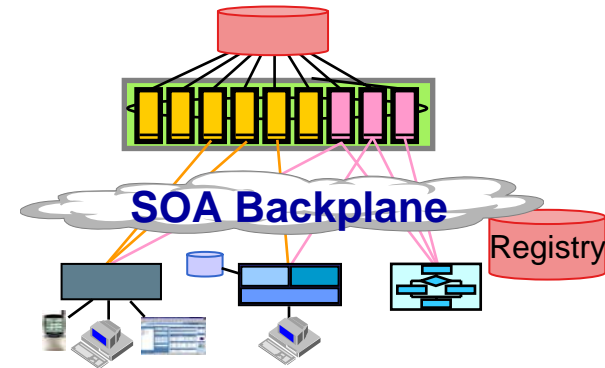
## Hybrid-SOA



**2007 - 2012**

- Coexistence of full-SOA and pre-SOA packages/custom apps
- Coexistence of vendor standardized interfaces and wrapped interfaces
- Packaged and custom processes and composite applications
- Full SOA Backplane
- Formal registry and governance

## Full-SOA

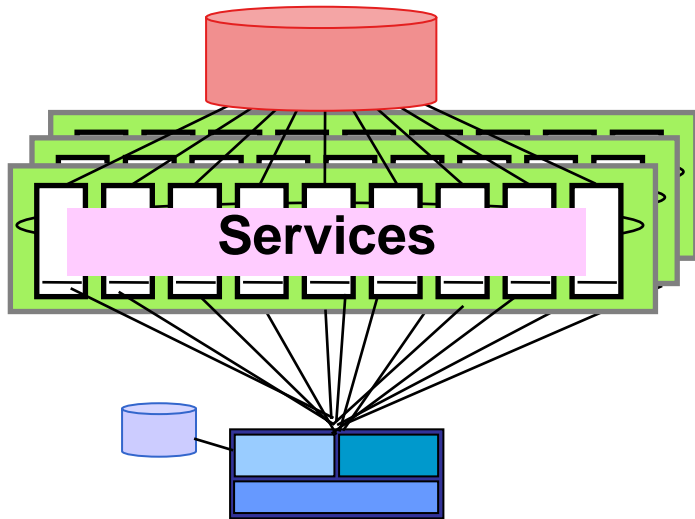


**Post 2012**

- Full-SOA packages/custom apps
- Standardized interfaces
- Packaged and custom processes and composite applications
- Full SOA Backplane
- Formal registry and governance

# How Do You Enforce Sharing of Services?

"Bad" SOA



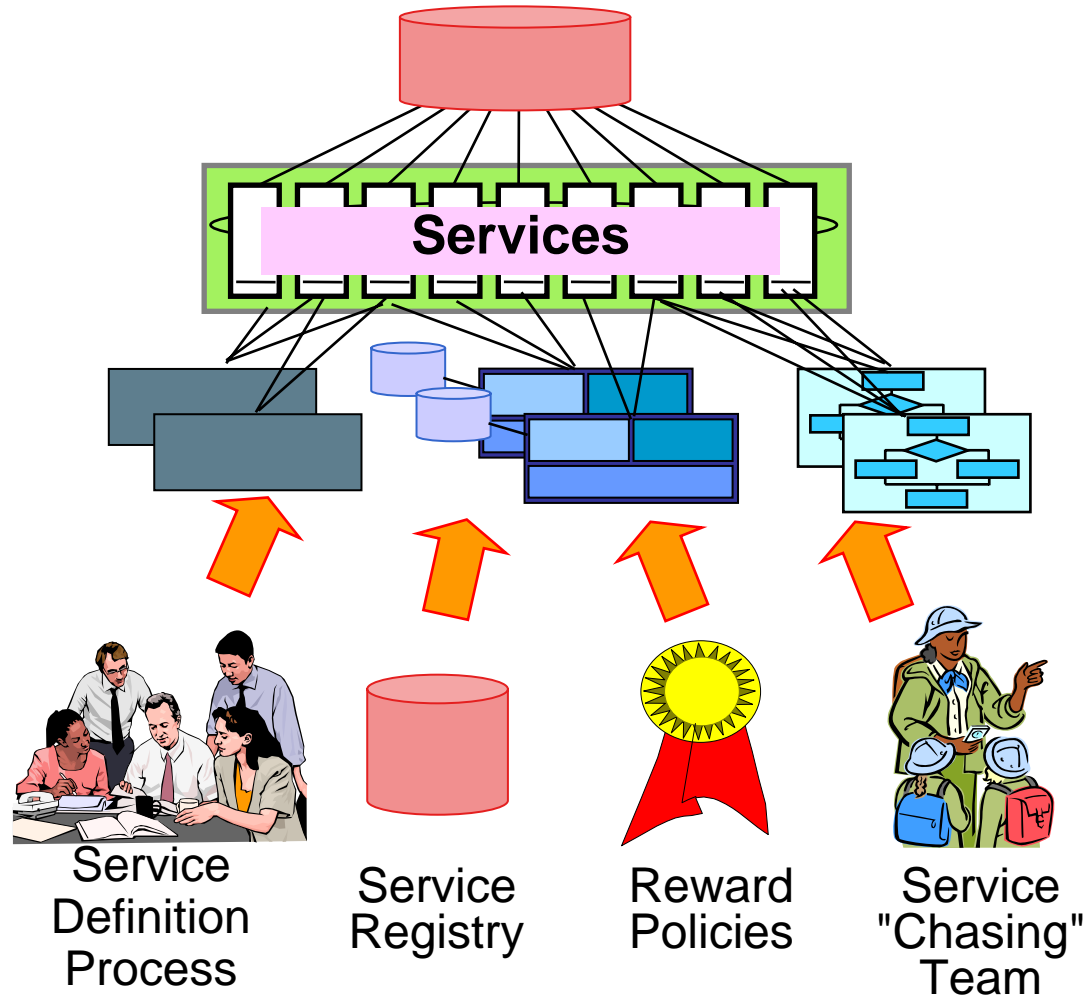
**Metrics:**

- # Services/# Consumers  $\gg 20$
- # of reused services  $< 10\%$

**Potential Issues:**

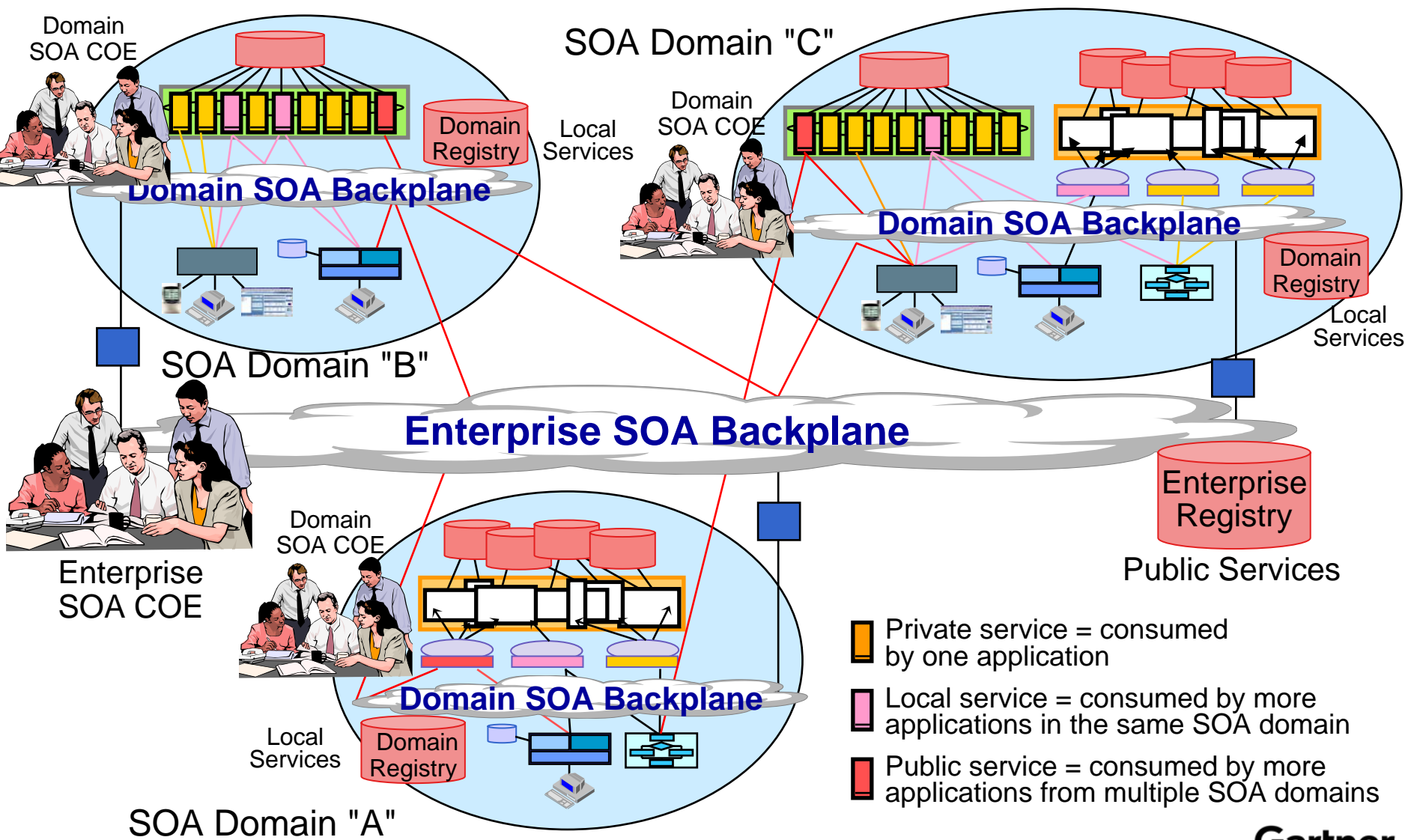
- *Too-fine services granularity*
- *Duplicated services*
- *Over-specified SOA*

"Good" SOA

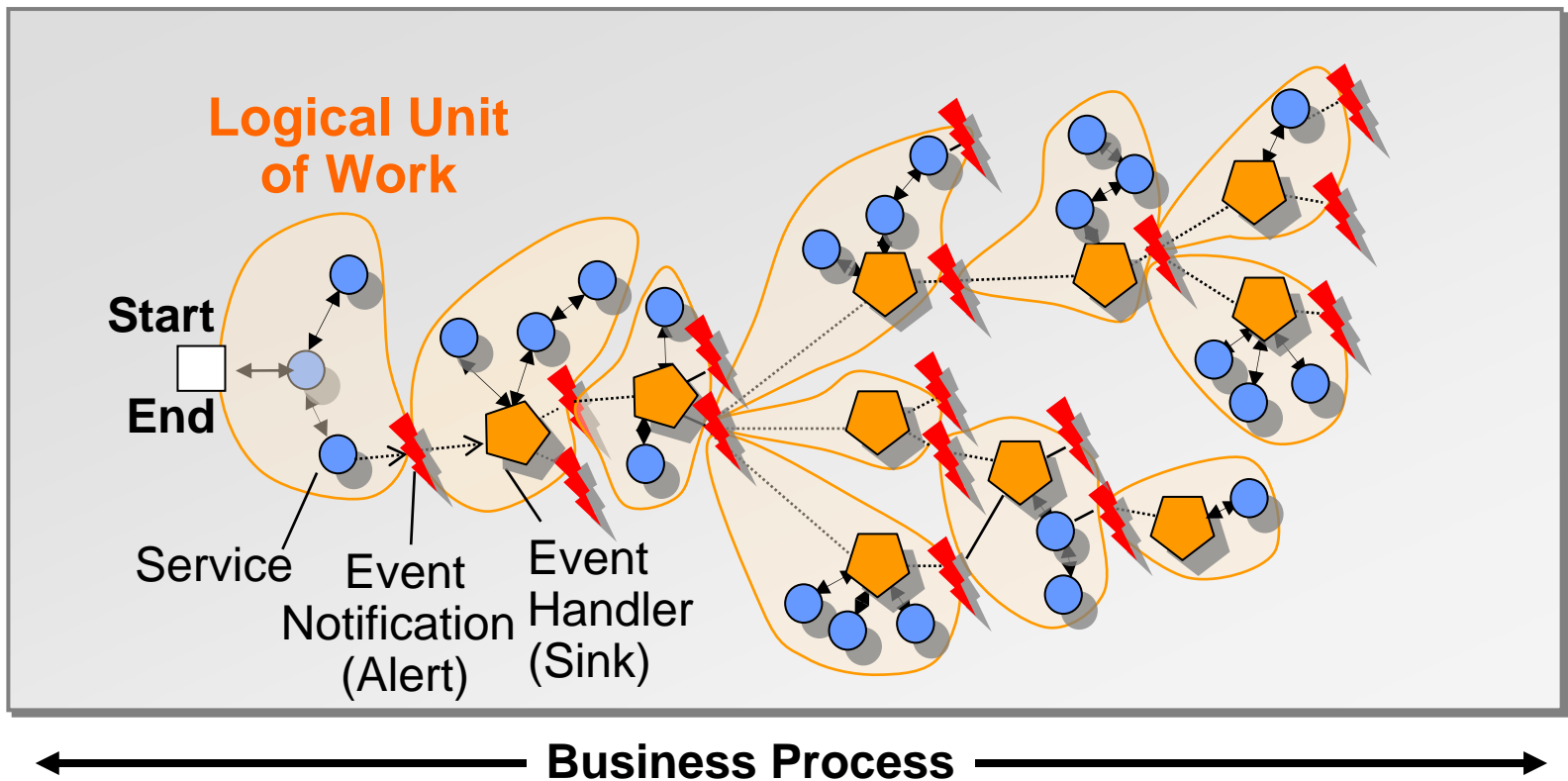




# Enterprisewide SOA Is Multiowned and Multilayered



# The future of SOA: Mixing Classic SOA, Events and BPM



**Event-Style Services:** Activated on managed schedule; intermediated; autonomous

**Request-Style Services:** Activated immediately by client request; direct; subordinate

# The future of SOA: Where will I Source my Business Services From?

## Business Impact of Services

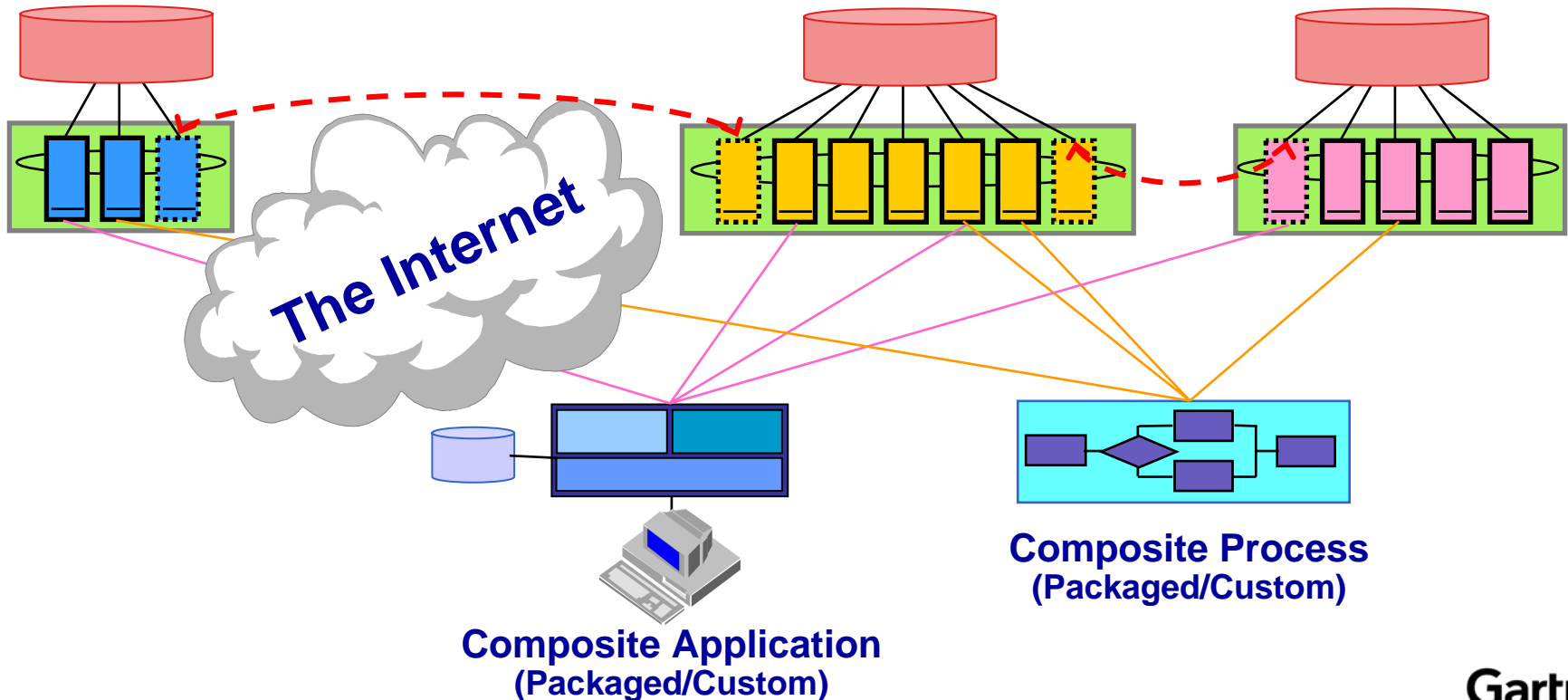
**TCO**

**Differentiation**

**On Demand Services (SaaS)**

**Purchased Services (Packaged Apps)**

**Custom-built Services**



# Recommendations

- ✓ **Be realistic about SOA.**
  - Quantify the benefit. Determine when and where it makes sense. Determine what you would you need to do to prepare
  - Understand what old problems SOA-based package applications solve and what new problems they create.
- ✓ **Start readying your software infrastructure for SOA.** Determine the steps that you need to take
- ✓ **If buying:** Talk to your package application vendors and find out their road maps for SOA. Determine when will they will really be ready and your attitude to early adoption
- ✓ **If building:** Start designing and building your business services and work out how you will create composite applications and processes.



# Moving towards Enterprise SOA: How do you do that?

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