IBM SOA Summit

* Informations valorisées et SOA, le couple gagnant.

Introduction

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Moving towards Enterprise SOA: How do you do that?

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Gartner®

How Do Commercial Organizations Use SOA Today?

Figure 2. Percentage of Application Work Using SOA and Web Services
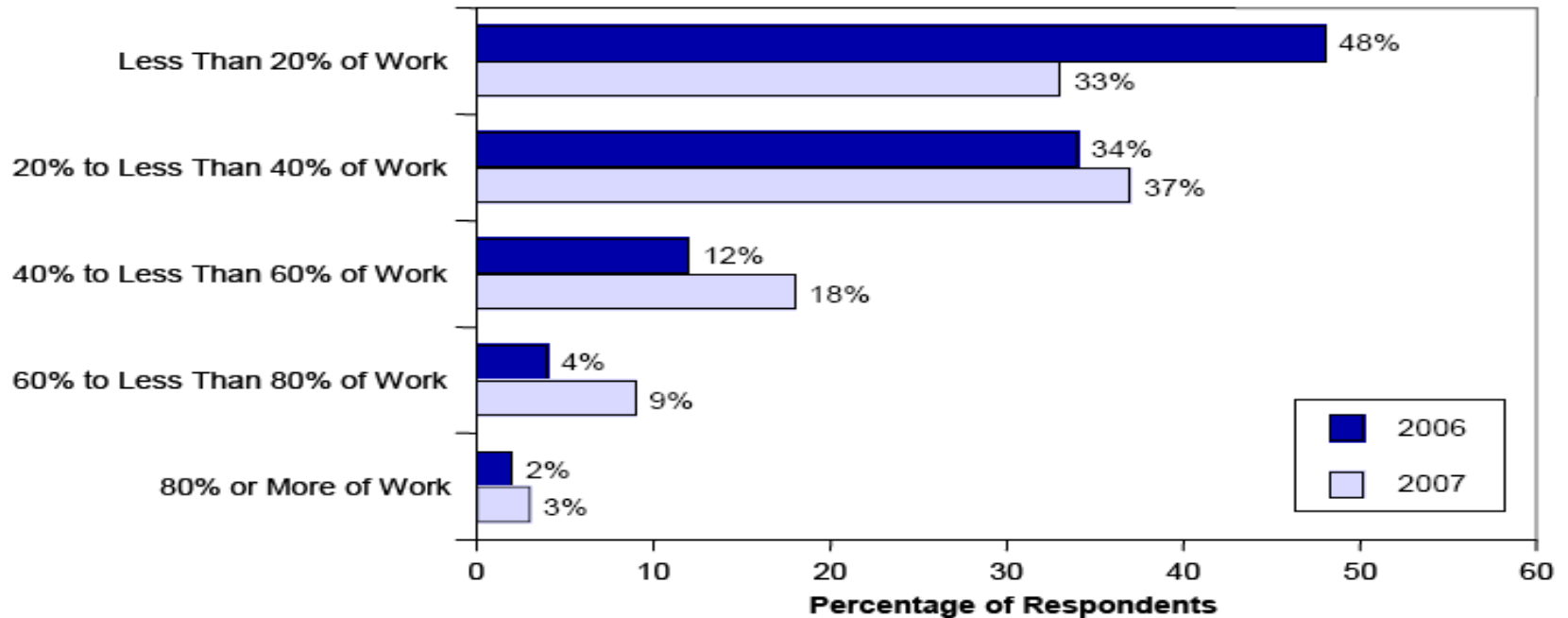
Source: Gartner (October 2006)

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
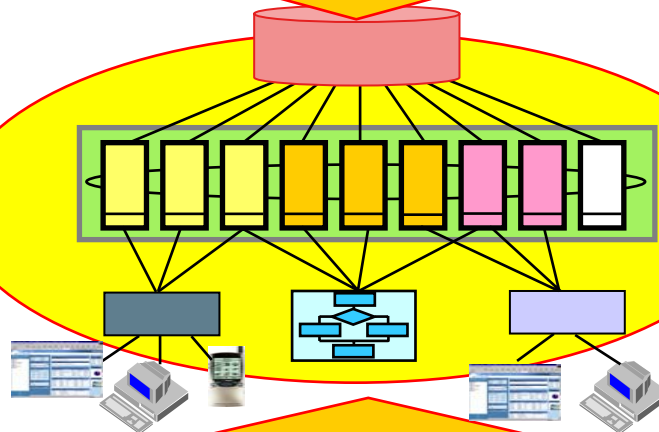
"Perennial" IT Challenges

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

SOA

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

"Bottom Up" Business Unit Drivers

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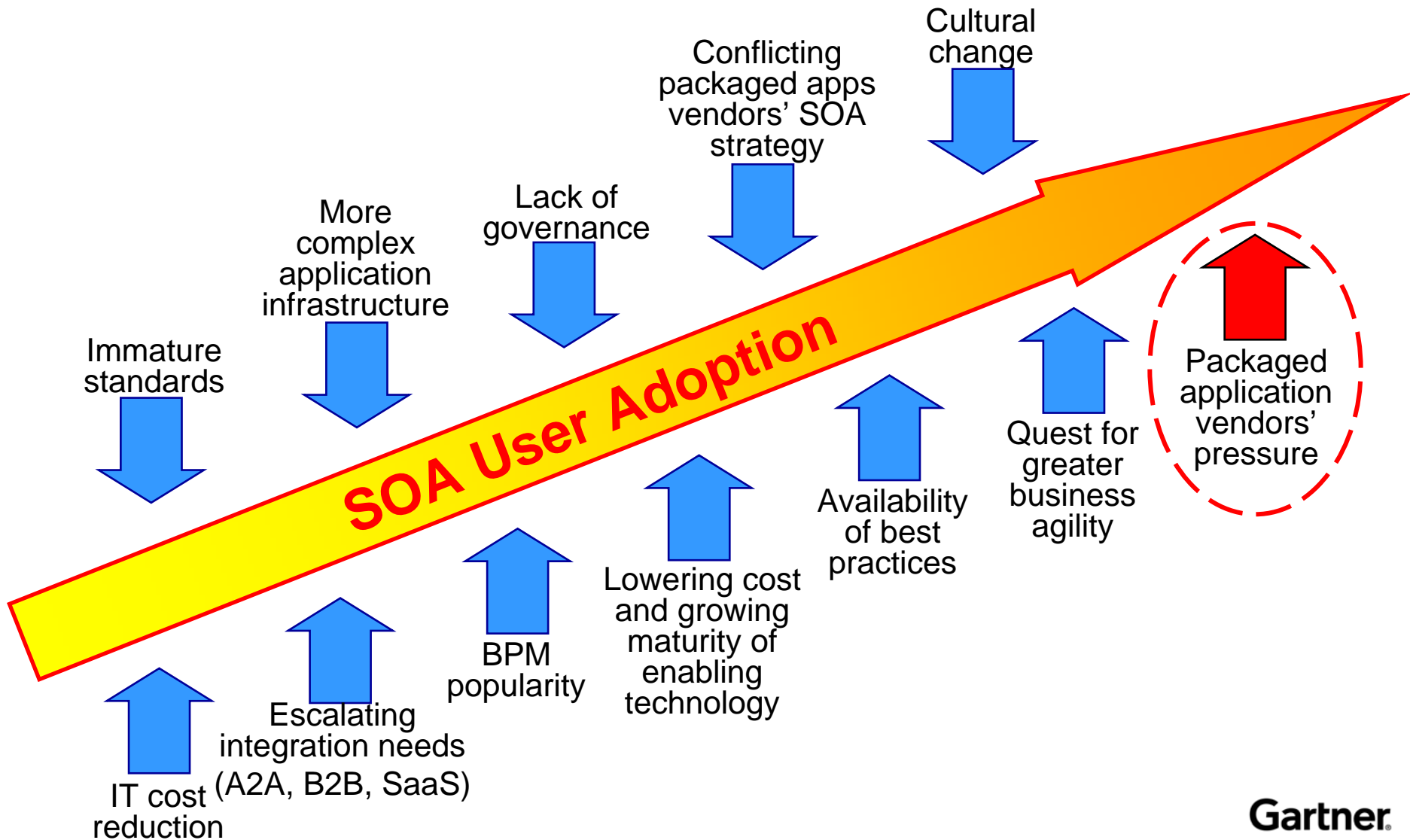# Irresistible Forces Push Organizations Towards SOA Adoption

SOA User Adoption

- IT cost reduction
- Escalating integration needs (A2A, B2B, SaaS)
- BPM popularity
- Lowering cost and growing maturity of enabling technology
- Availability of best practices
- Quest for greater business agility
- Packaged application vendors' pressure

- Immature standards
- More complex application infrastructure
- Lack of governance
- Conflicting packaged apps vendors' SOA strategy
- Cultural change

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Stages of SOA Adoption

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

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SOA Best Practices: What you Need to do to Succeed

	Stage 1 Introduction	Stage 2 Spreading	Stage 3 Exploitation	Stage 4 Plateau
Required Management Buy-in				
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**
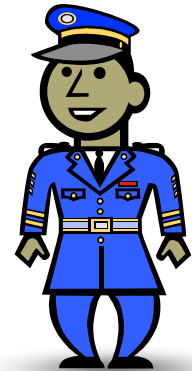✗ = **Recommended**

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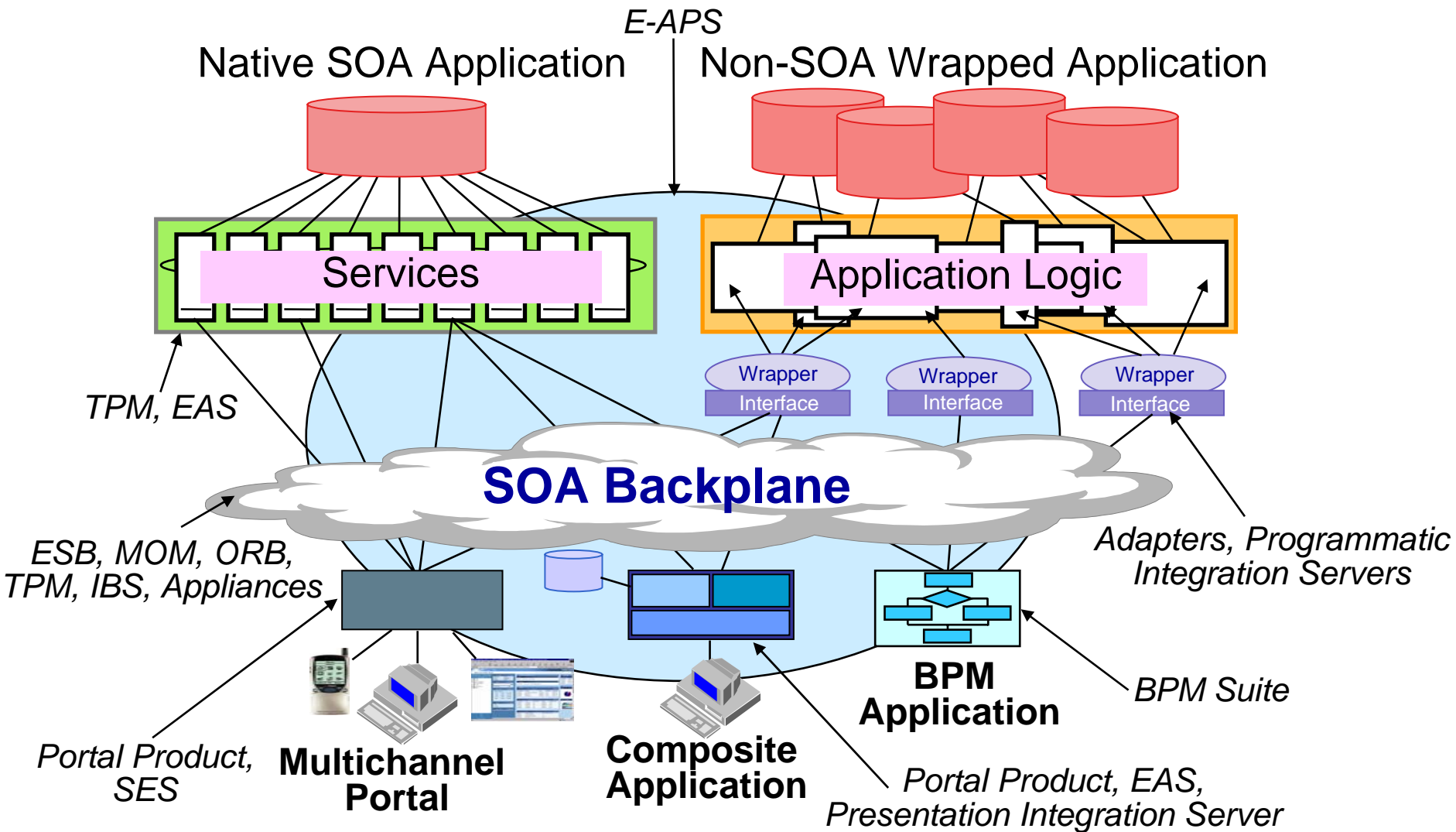# Why SOA Initiatives Fail: Technology or Governance?

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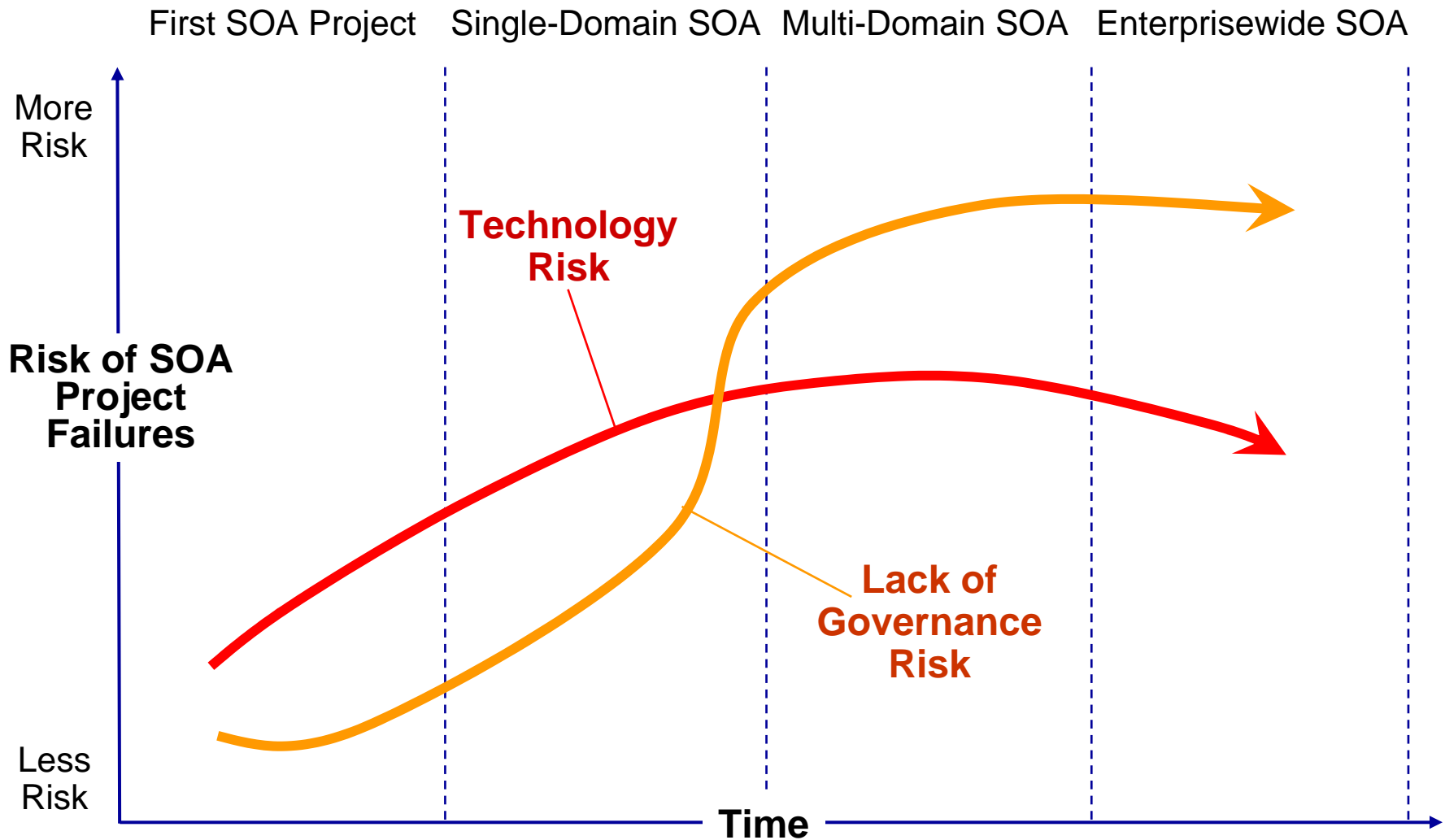
SOA Governance Defined

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

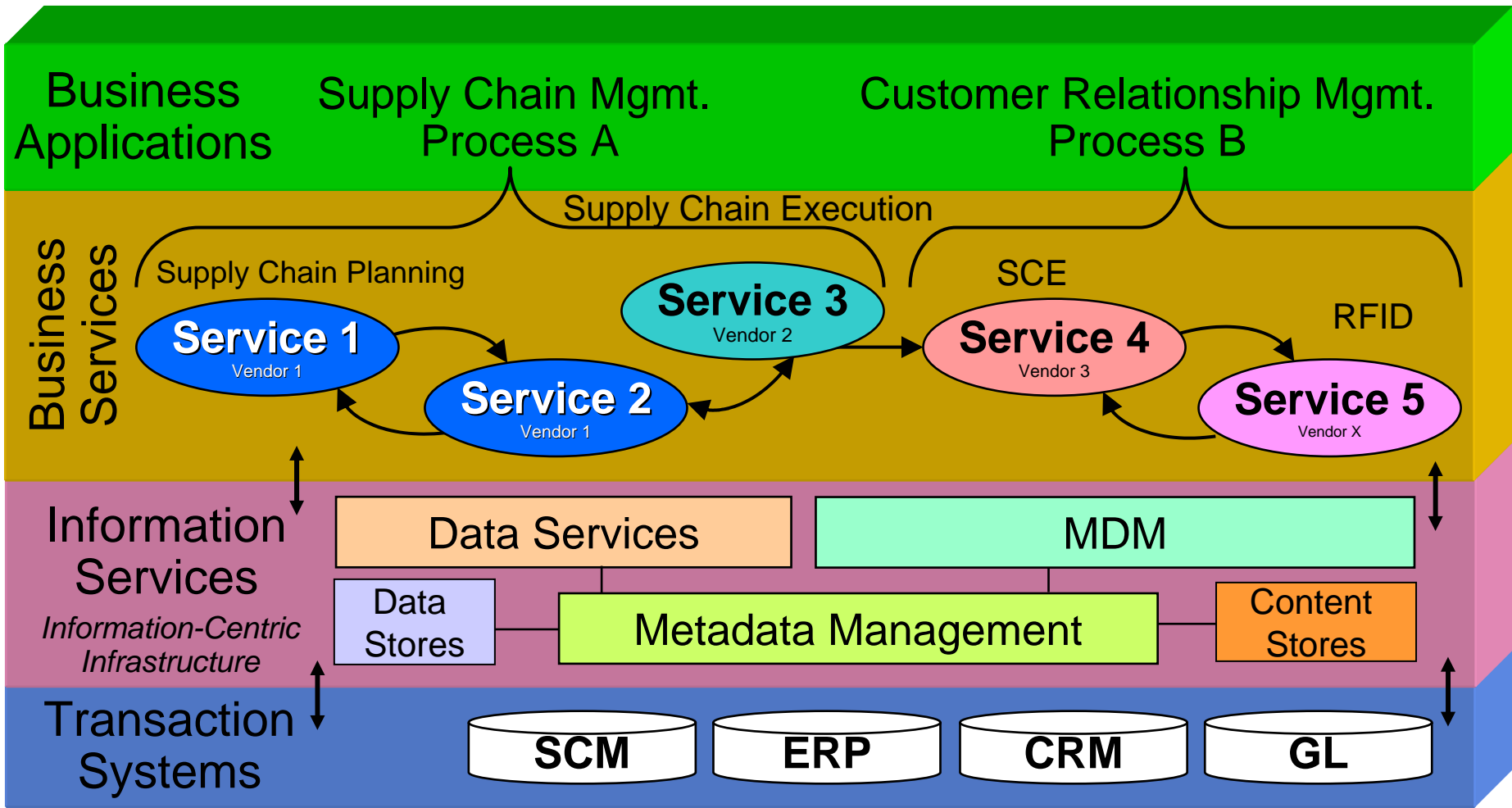- Measuring use and compliance, and specifying incentives to promote the adoption of those rules

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

E-APS

Native SOA Application

Non-SOA Wrapped Application

Services

Application Logic

Wrapper
Interface

Wrapper
Interface

Wrapper
Interface

TPM, EAS

SOA Backplane

ESB, MOM, ORB,
TPM, IBS, Appliances

*Adapters, Programmatic
Integration Servers*

BPM Suite

**BPM
Application**

*Portal Product,
SES*

**Multichannel
Portal**

**Composite
Application**

*Portal Product, EAS,
Presentation Integration Server*

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Management and Architecture of Information Assets

Business Applications
- Supply Chain Mgmt. Process A
- Customer Relationship Mgmt. Process B

Business Services
- Supply Chain Execution
- Supply Chain Planning
- SCE
- RFID
- Service 1 (Vendor 1)
- Service 2 (Vendor 1)
- Service 3 (Vendor 2)
- Service 4 (Vendor 3)
- Service 5 (Vendor X)

Information Services
Information-Centric Infrastructure
- Data Services
- MDM
- Data Stores
- Metadata Management
- Content Stores

Transaction Systems
- SCM
- ERP
- CRM
- GL

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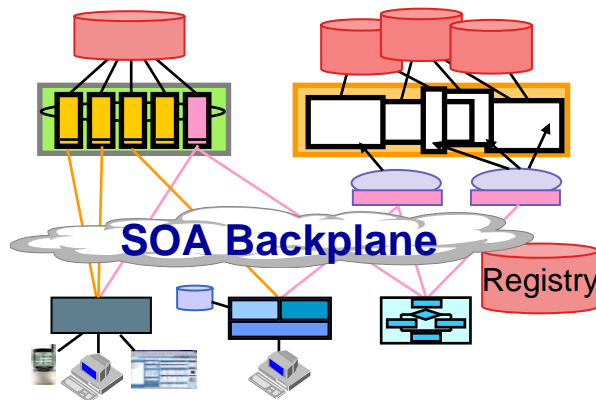
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SOA Adoption Path

Wrapped-SOA
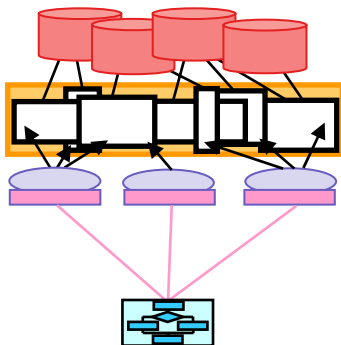
Pre-2007

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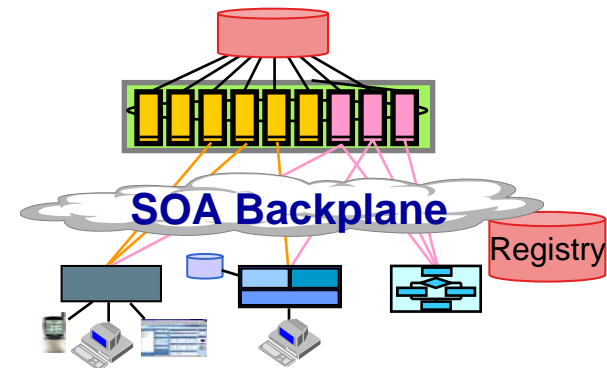- Informal registry and governance

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
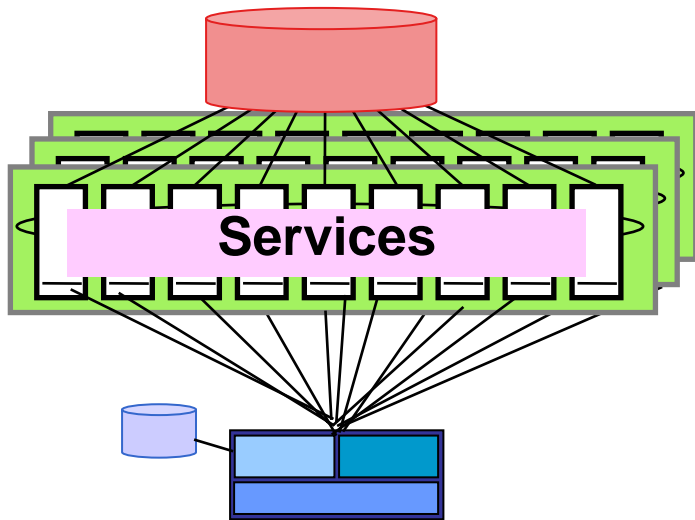- Formal registry and governance

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

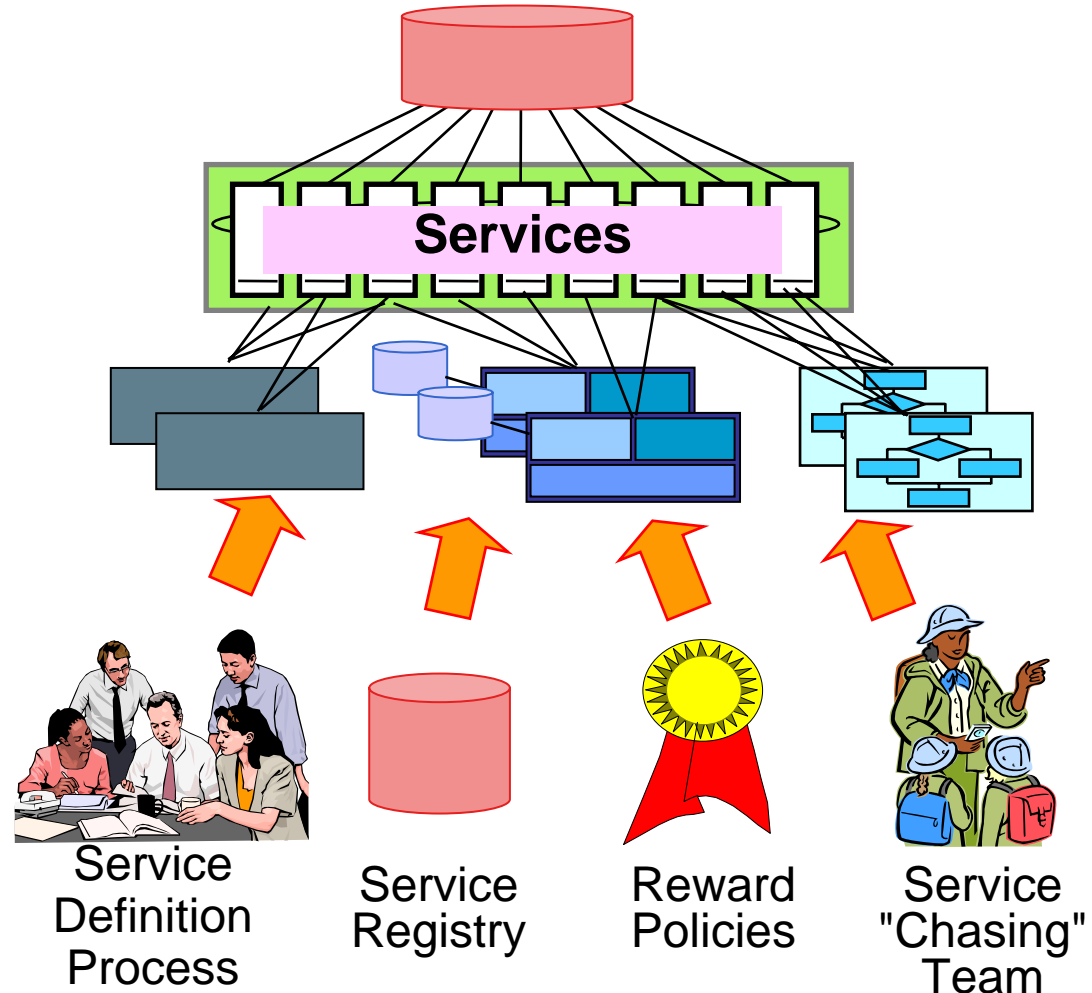Gartner.

How Do You Enforce Sharing of Services?

"Bad" SOA

Services

Metrics:
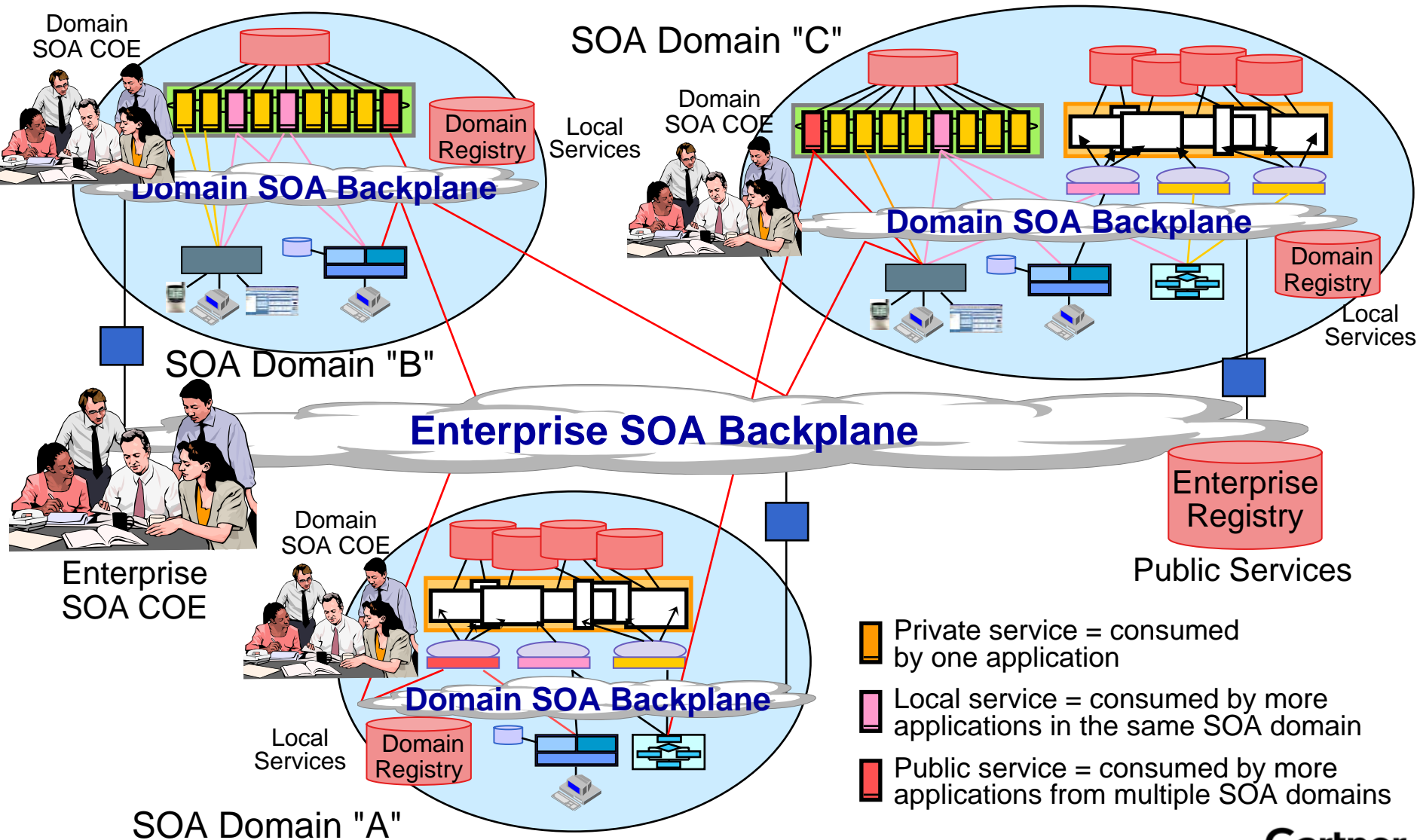
- # Services/# Consumers >>20
- # of reused services <10%

Potential Issues:

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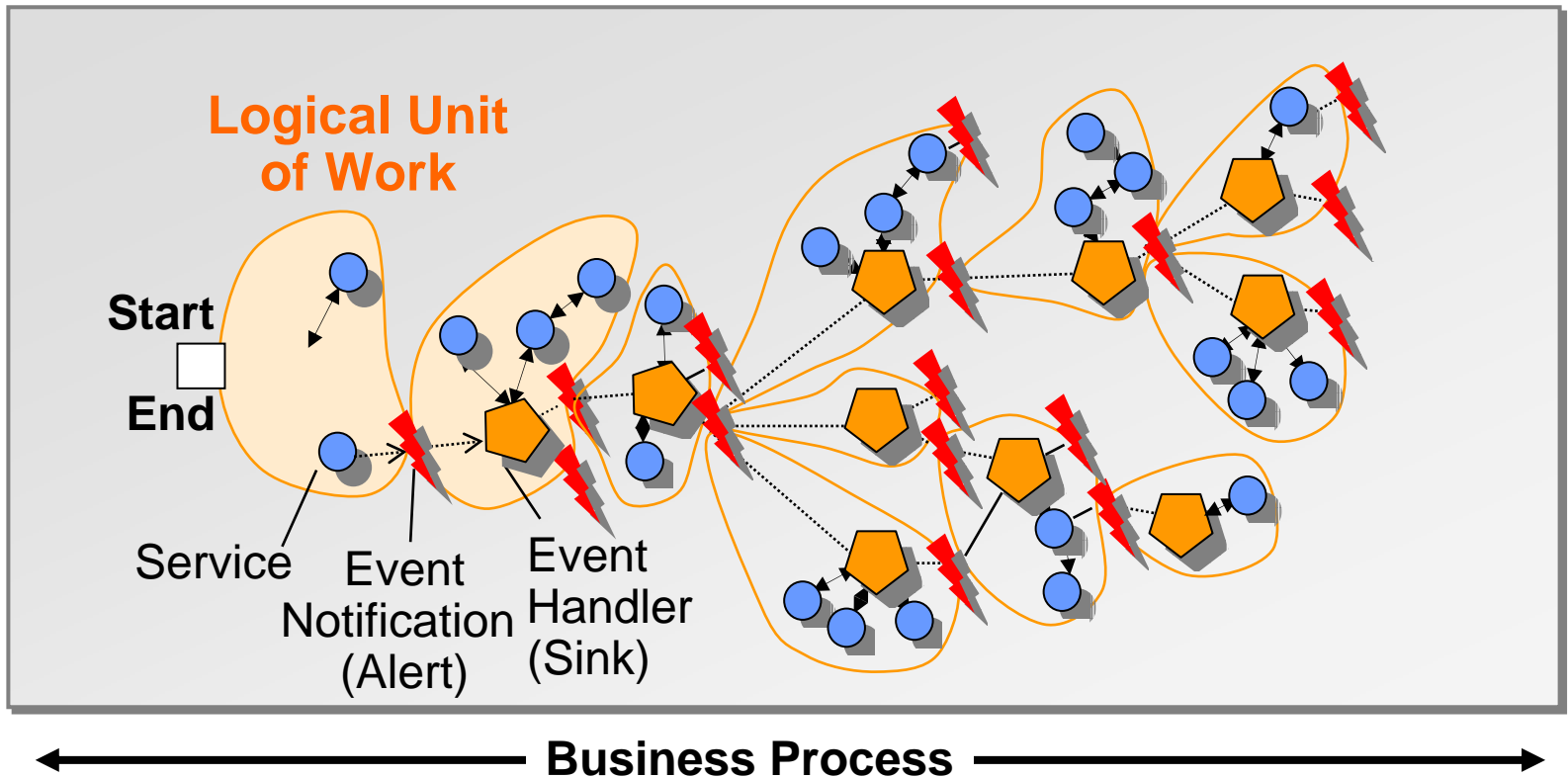- *Over-specified SOA*

"Good" SOA

Services

Service Definition Process

Service Registry

Reward Policies

Service "Chasing" Team

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Enterprisewide SOA Is Multiowned and Multilayered

Domain SOA COE

SOA Domain "C"

Domain SOA COE

Domain Registry

Local Services

Domain SOA Backplane

Domain SOA Backplane

Domain Registry

Local Services

SOA Domain "B"

Enterprise SOA Backplane

Enterprise Registry

Enterprise SOA COE

Domain SOA COE

Public Services

Domain SOA Backplane

Local Services

Domain Registry

SOA Domain "A"

Private service = consumed by one application

Local service = consumed by more applications in the same SOA domain

Public service = consumed by more applications from multiple SOA domains

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

Business Process

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?
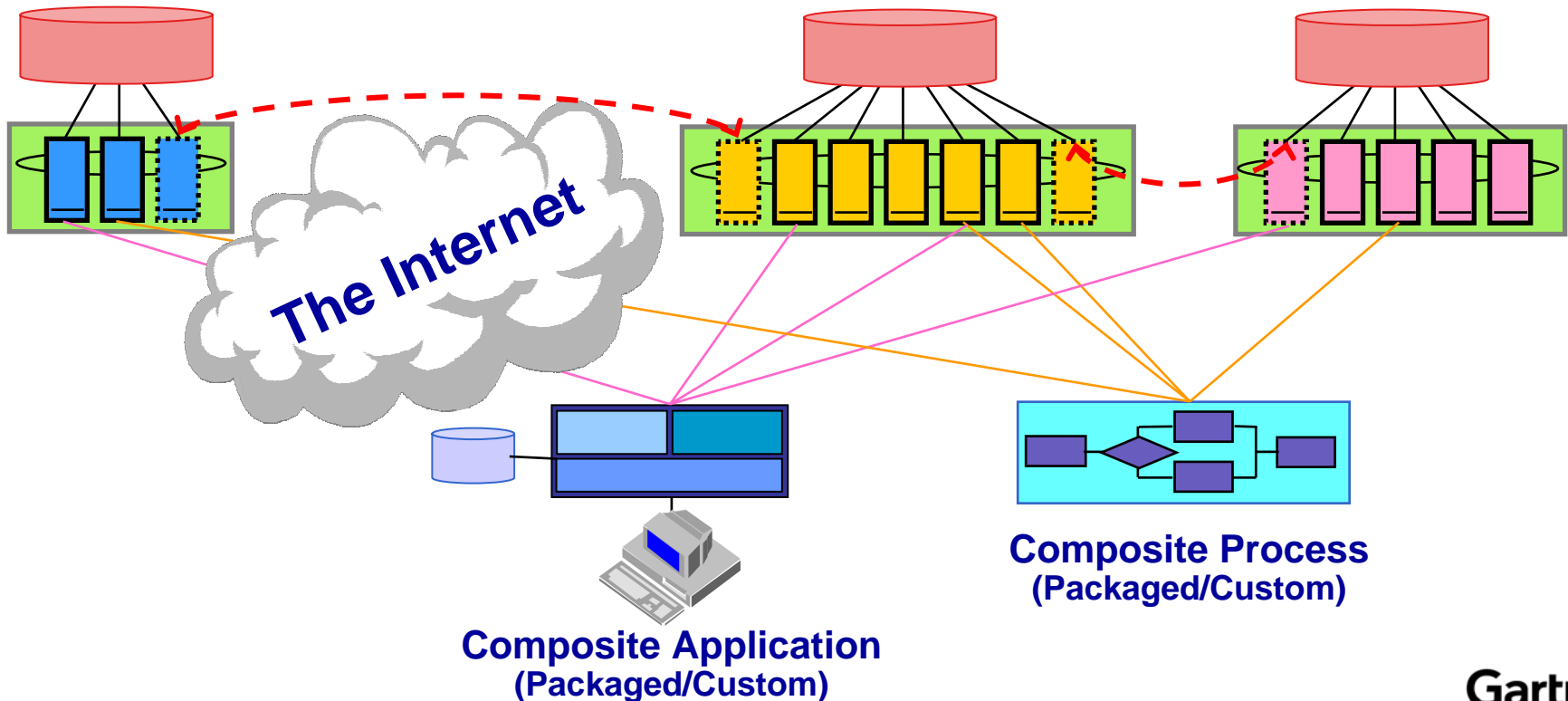
Business Impact of Services

TCO ←→ *Differentiation*

On Demand Services (SaaS)

Purchased Services (Packaged Apps)

Custom-built Services

The Internet

Composite Application (Packaged/Custom)

Composite Process (Packaged/Custom)

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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.

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