



WebSphere Software

# Services Oriented Architecture and Business to Business Integration

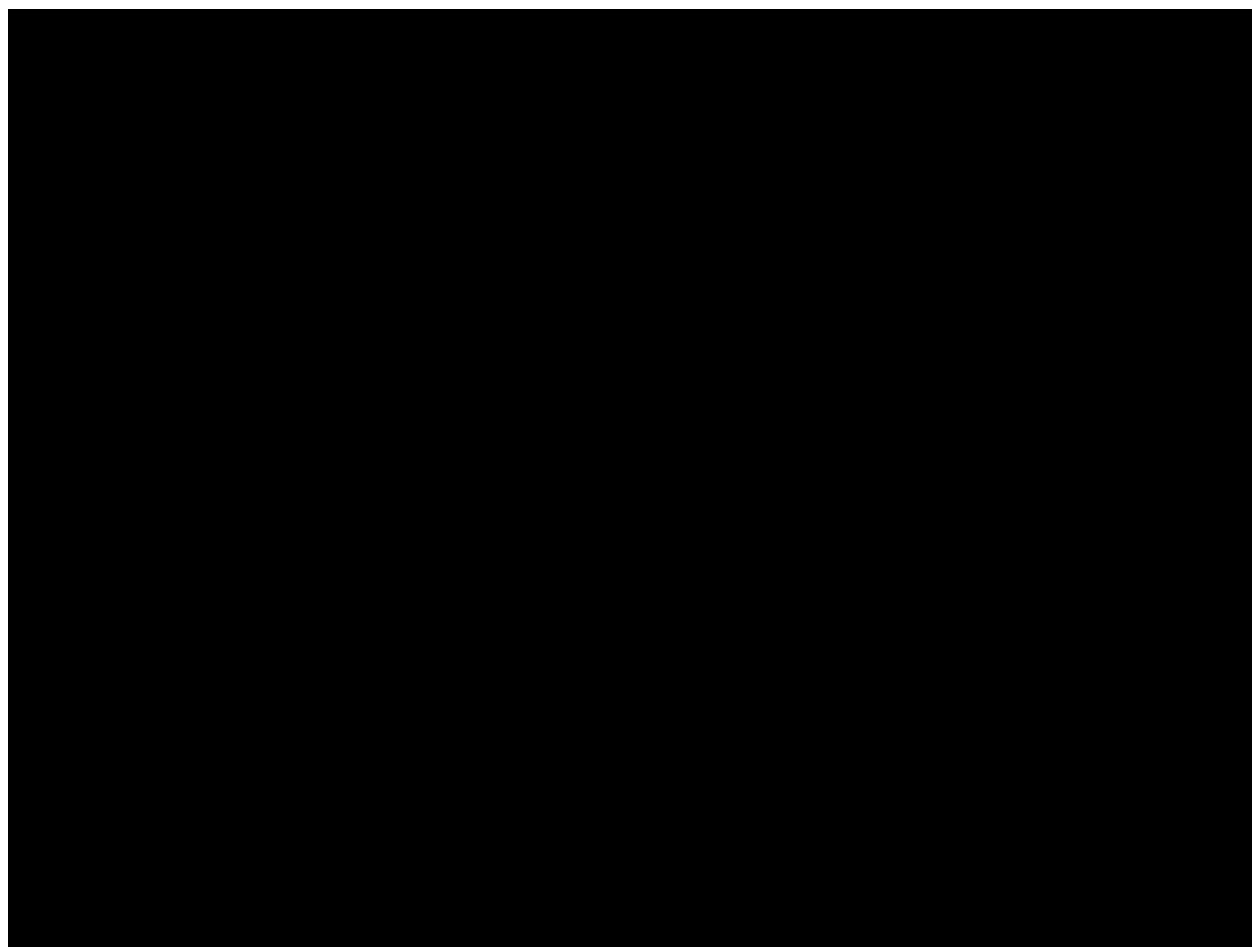
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*SOA on your terms and our expertise*



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- The Flexible Business Imperative
- Today's Challenges
- Service Oriented Architecture
- Service Oriented Architecture and Trading Partner Integration



## Responding More Effectively to Changing Market Conditions is a CEO Imperative

*“Four out of five CEOs are focusing on revenue growth for the next three years while maintaining a tight control over costs.”*

- 75% of CEOs place a high or very high priority on the ability to respond rapidly
- Only 1 in 10 CEOs believe that their organization has the ability to be very responsive to react to changing market conditions
- CEOs recognize the need to establish effective, real-time response capabilities
- CEOs are aware of the power of IT and the weaknesses that result from lagging behind

### Responsiveness: the new key competence

So growth is back on the agenda – but it won't just happen by itself. CEOs all over the world have identified organizational responsiveness, agility and flexibility as necessary competencies. Developing the ability of the organization to not just sense, but to anticipate and respond to the changing marketplace and subsequent customer requirements is one of the great challenges for today's CEO.

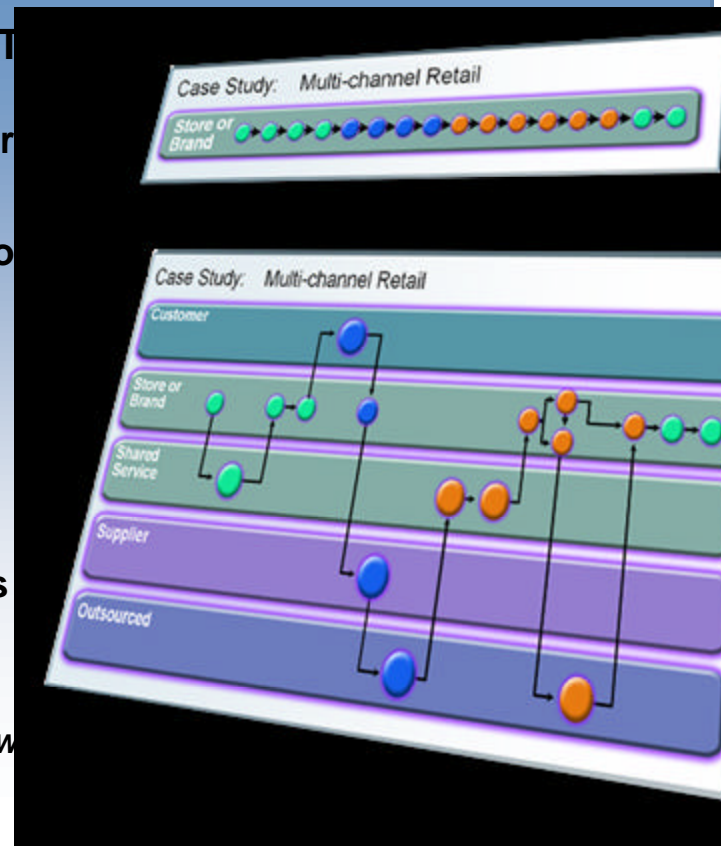
CEOs are now focusing on how their organizations read, listen and react to dynamically changing external and internal conditions. As one CEO put it, “we have to implement a competitive

## Flexible Business Requires Flexible IT

### Flexible business requires flexible IT

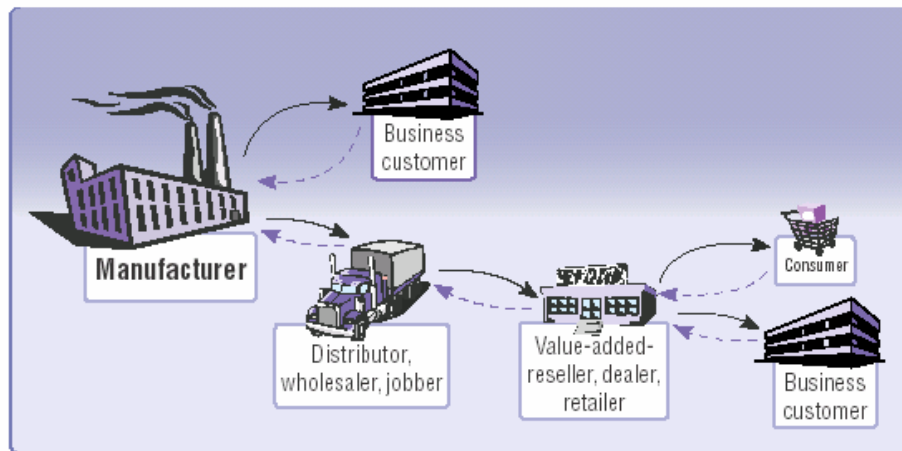
- **Economics:** globalization demands greater flexibility
- **Business processes** are changing more rapidly
- **Growth through flexibility** is at the top of the CEO agenda
- **Reusable assets** can cut costs by up to 20%
- **More companies** are looking for ways to outsource non-core services
- **Crucial for flexibility** and becoming an On Demand Business

Today's World

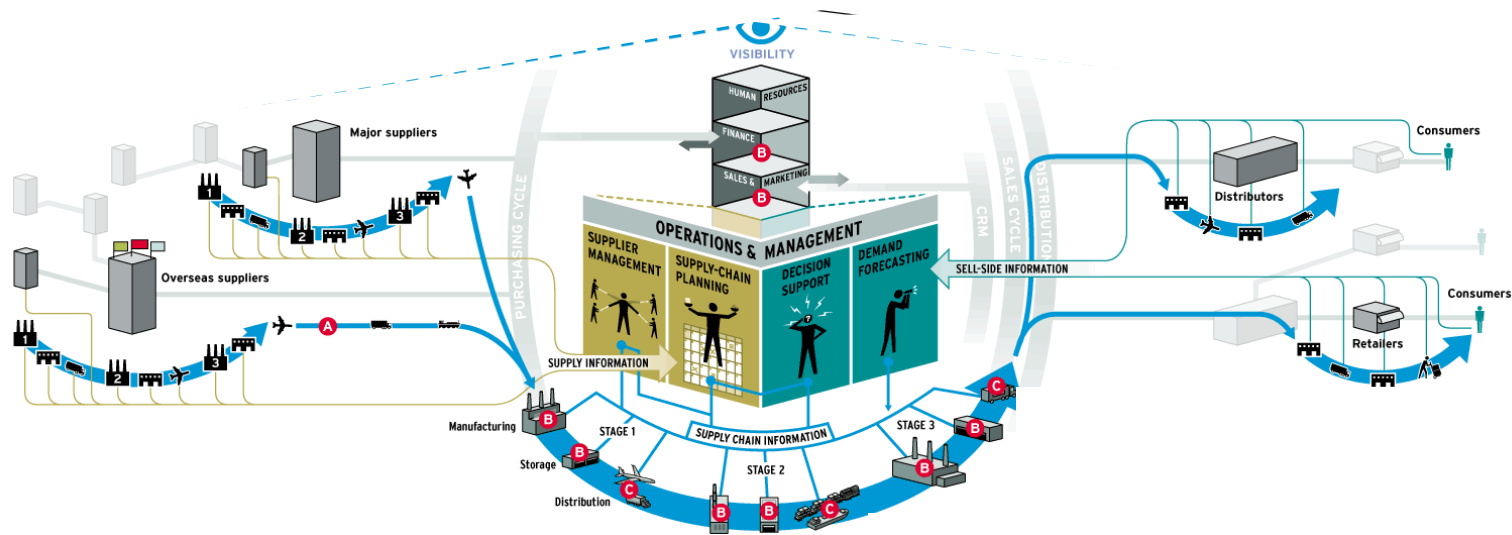


Enterprises depend increasingly on integration with other companies throughout the value chain. Expanding process integration beyond the enterprise.

- Business processes extended to include partners
- Visibility across the entire value-chain
- Improve and automate value-chain management
- Strengthen Partner Relationships through tighter business linkages
- Eases participation in and adoption of widely used market standards
- Standardized business processes behind and across the firewalls
- Quickly respond to changing value-chain requirements

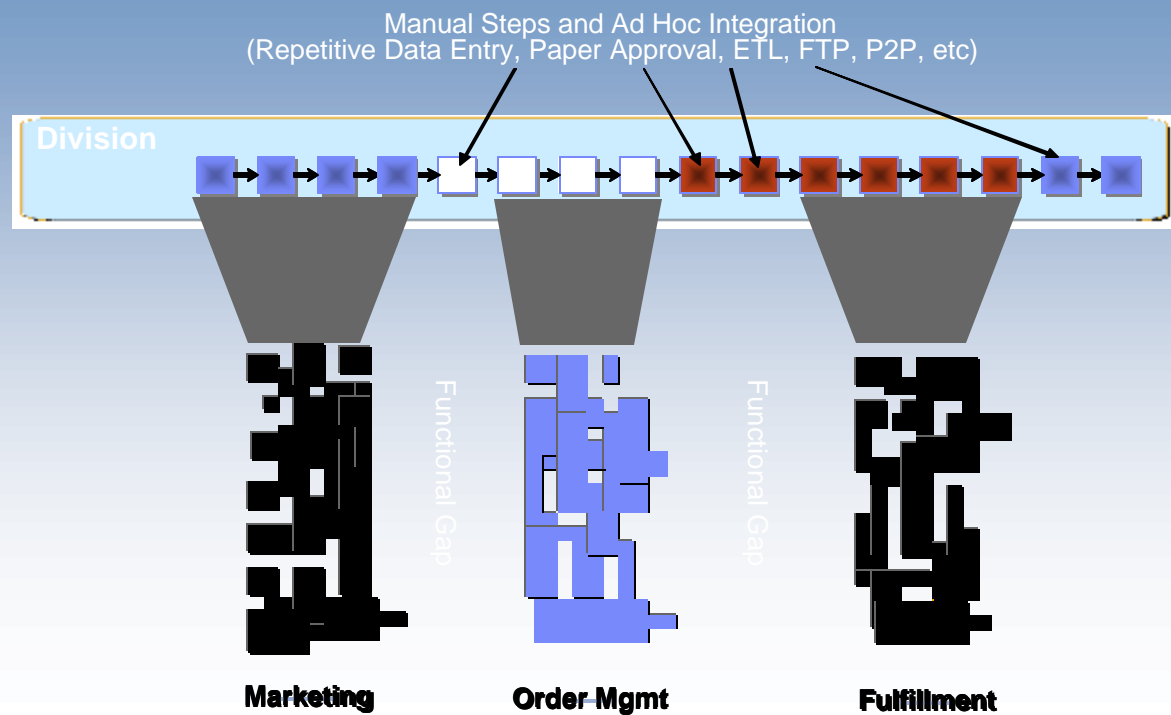


Many companies operate complex supply chains with increasing needs for near real time sharing of information across systems and enterprise boundaries



## The Process / Infrastructure Gap

**A siloed approach to architecting applications has prevented the business from achieving cross-organizational process effectiveness**

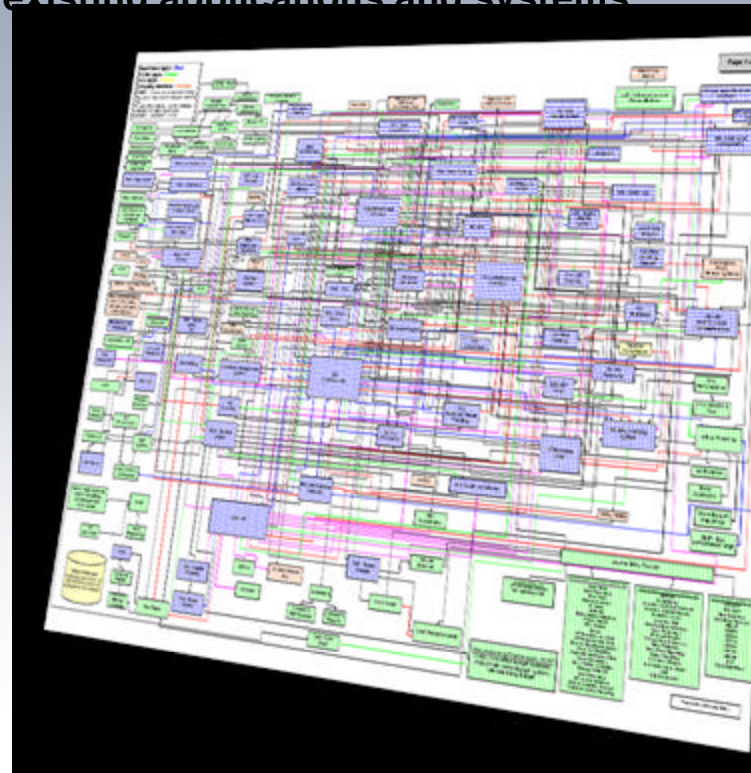




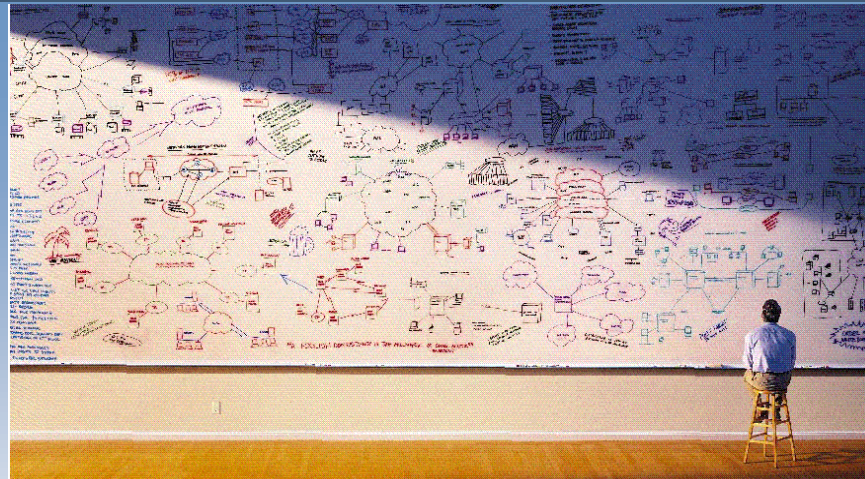
## What are the barriers to business flexibility and reuse?

**More than 70% of IT budgets are currently devoted to the maintenance and operations of existing applications and systems**  
*The Yankee Group, March 2005*

- Lack of business process standards
- Architectural policy limited
- Point application buys to support redundant LOB needs
- Infrastructure built with no roadmap



## Why are interfaces so expensive to build and maintain?



- Application interface logic is intertwined with business logic.
- The more tightly integrated the interface the more difficult the application is to change.
- The more interfaces that exist within a set of programs, the more complex the application becomes -- interface logic may, in many cases, exceed business logic.
- In such circumstances, re-use becomes difficult and impractical.

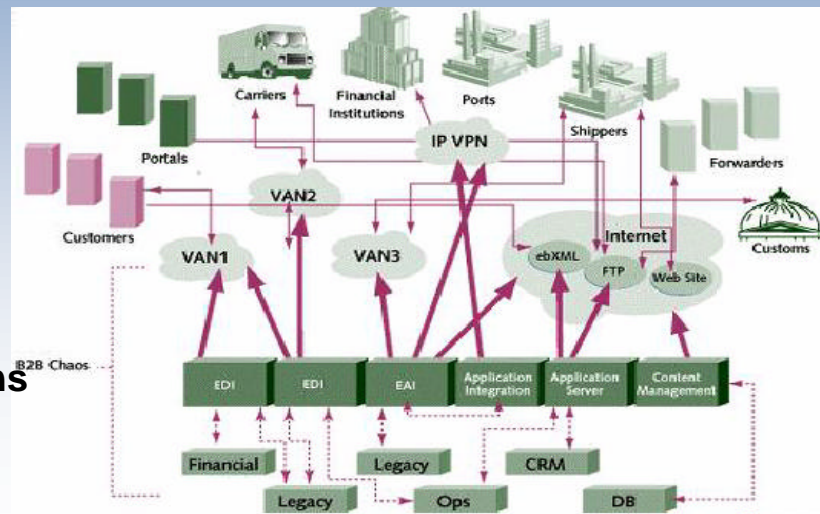
SOA is the methodology and architecture to solving this...

## The Challenge of Trading Partner Integration

Now, the increasing proliferation of point-to-point connections between trading partners is similarly producing "B2B integration spaghetti" with similar problems. — *Gartner Group*

- Proliferation of Industry and geographically oriented standards
- Diversity of trading partner profiles
- Point application buys to support redundant LOB needs
- History of legacy applications and architecture
- Organizational issues requiring change management

"1000's of partners each with their own unique requirements ..."



Source: Yankee Group

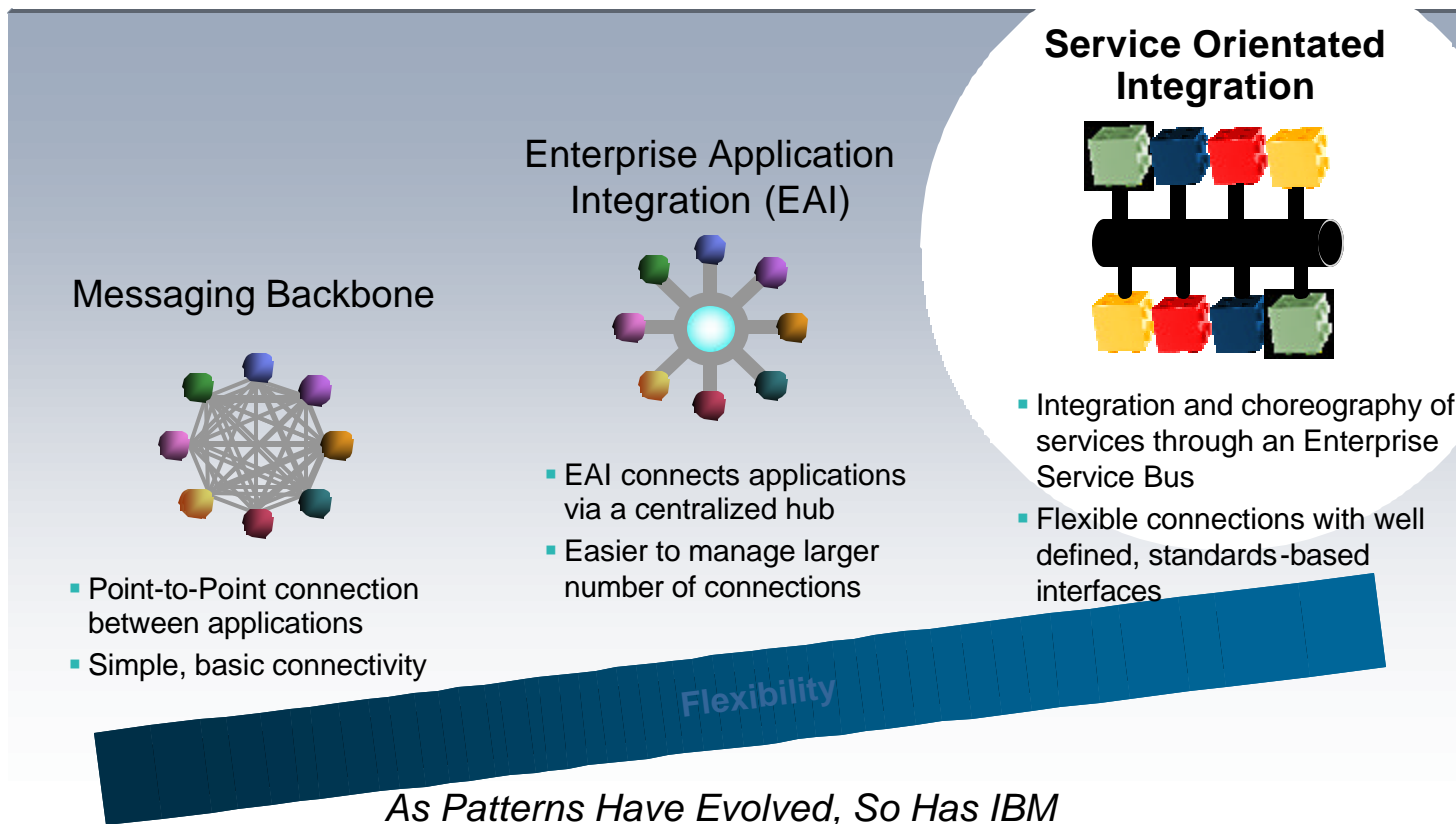
## Current B2B realities

Many inflexible, complex and costly point-to-point solutions have prevented customers from achieving the promise of B2B.

- B2B integration has **not met ROI** expectations
  - Too hard, too long, too expensive
- Most B2B is based around **disjointed point-to-point** connections
  - Only addressing specific business processes or domain expertise
- Partners use a **variety of standards**, protocols and transports
- Today's B2B solutions are **not addressing complete integration** problem

# SOA builds flexibility on your current investments

*The next stage of integration*



*As Patterns Have Evolved, So Has IBM*



## SOA Definitions

### What is a service?

A repeatable business task  
– e.g., check customer  
credit; open new account

### What is service oriented architecture (SOA)?

The IT architectural style  
that supports  
service orientation



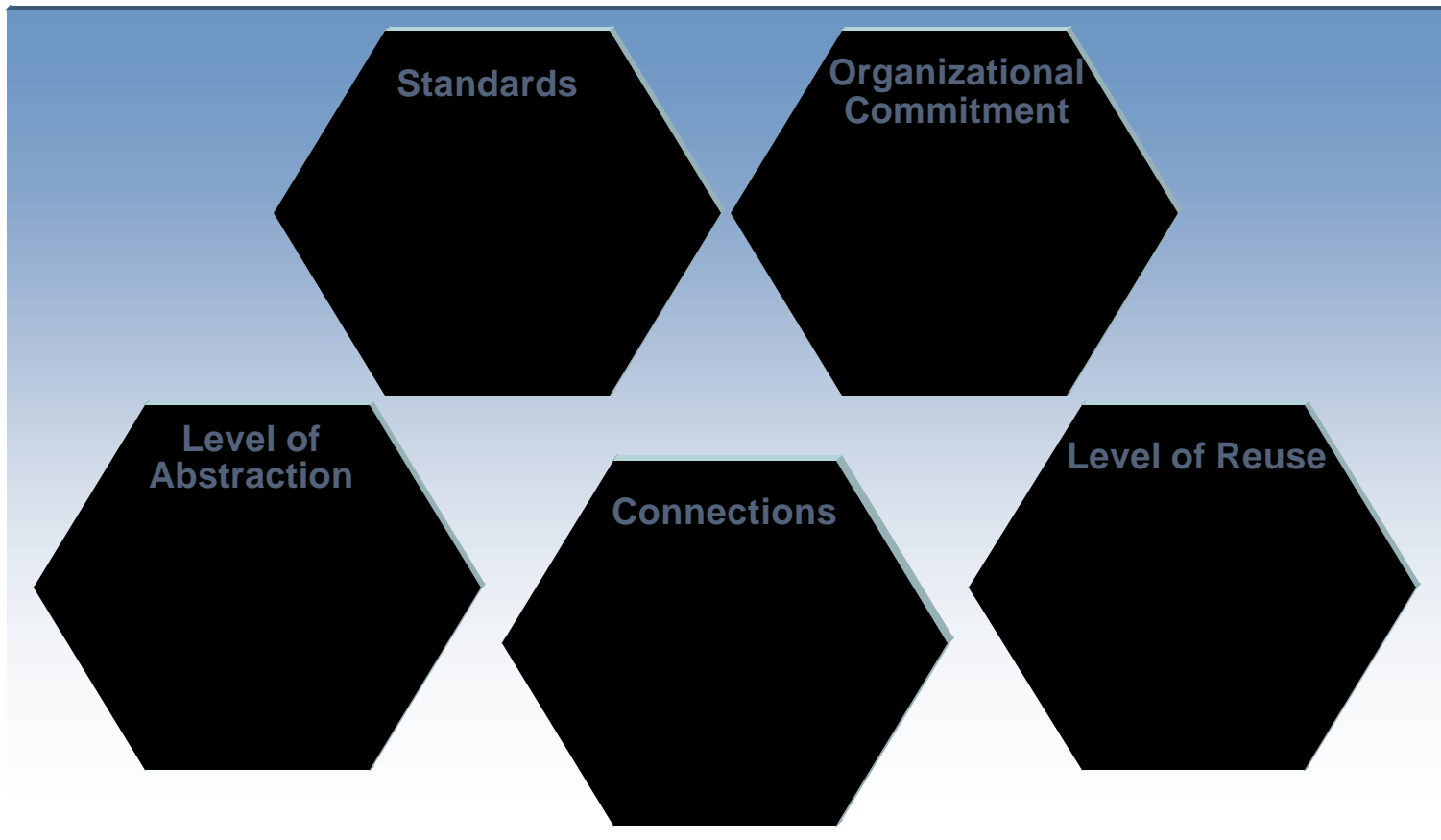
### What is service orientation?

A way of integrating your  
business as linked services  
and the outcomes that  
they bring

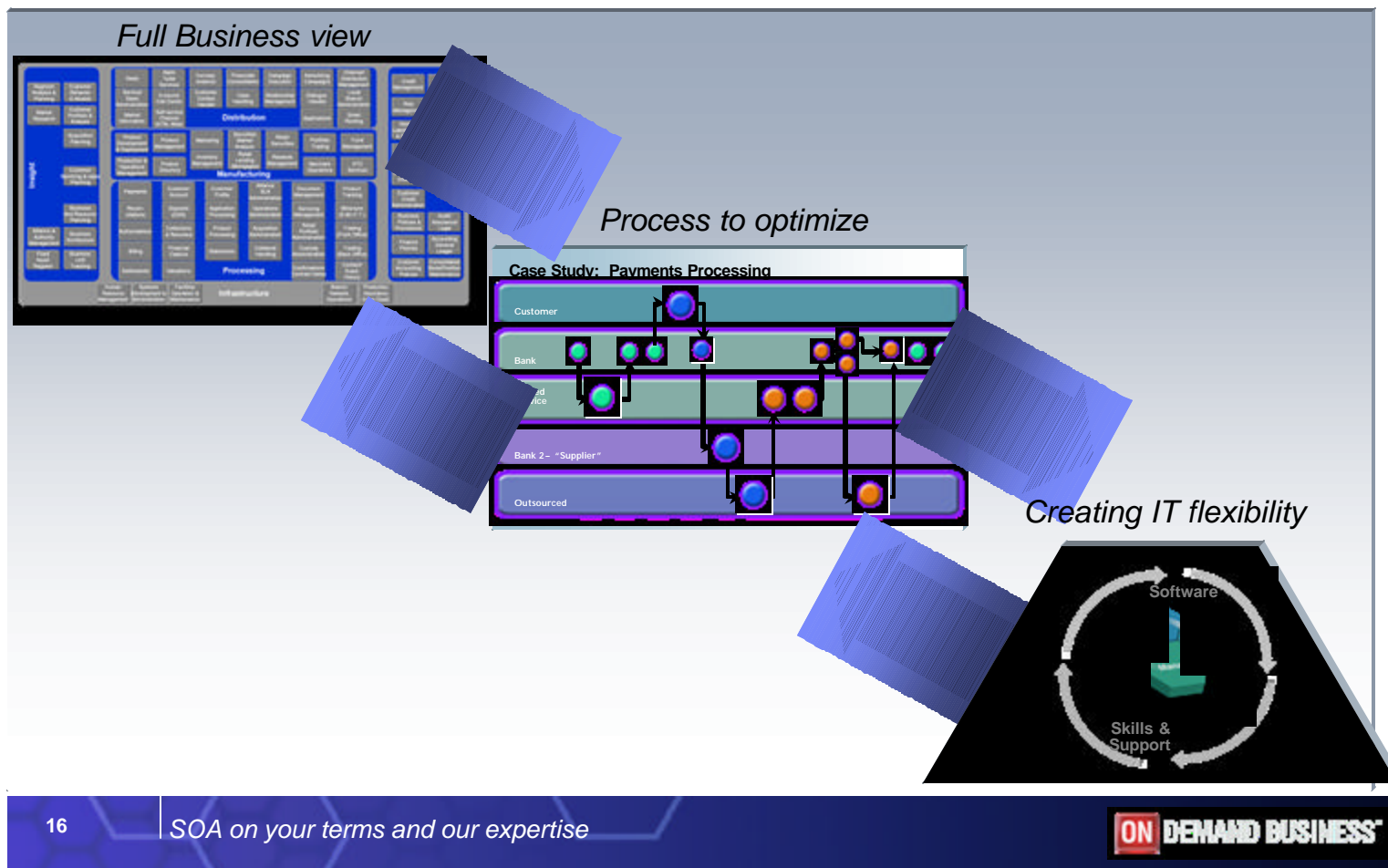
### What does SOA mean to business?

Business flexibility  
Improved customer service  
Lower costs and greater  
revenue

What differentiates SOA from claims like this in the past?



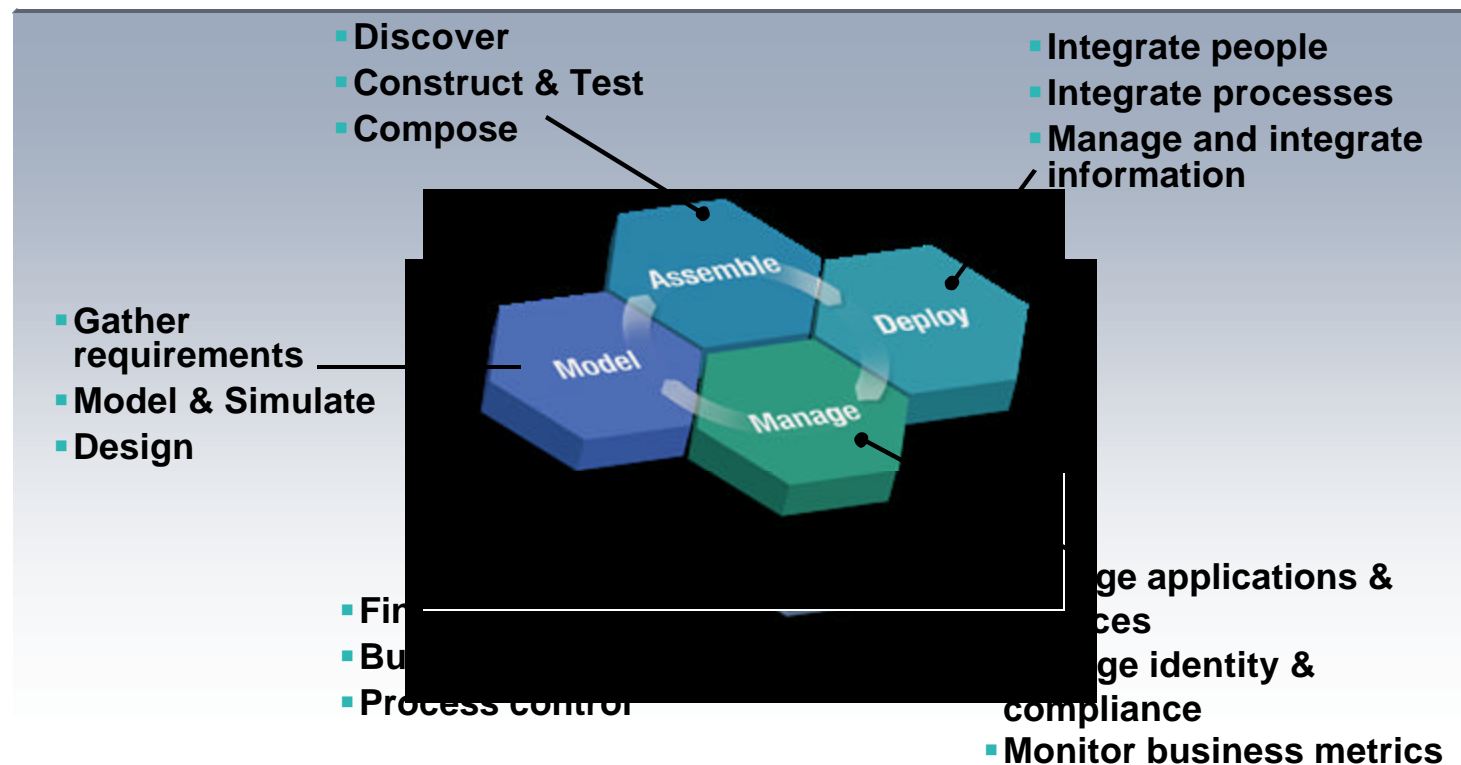
## Flexible business requires flexible IT





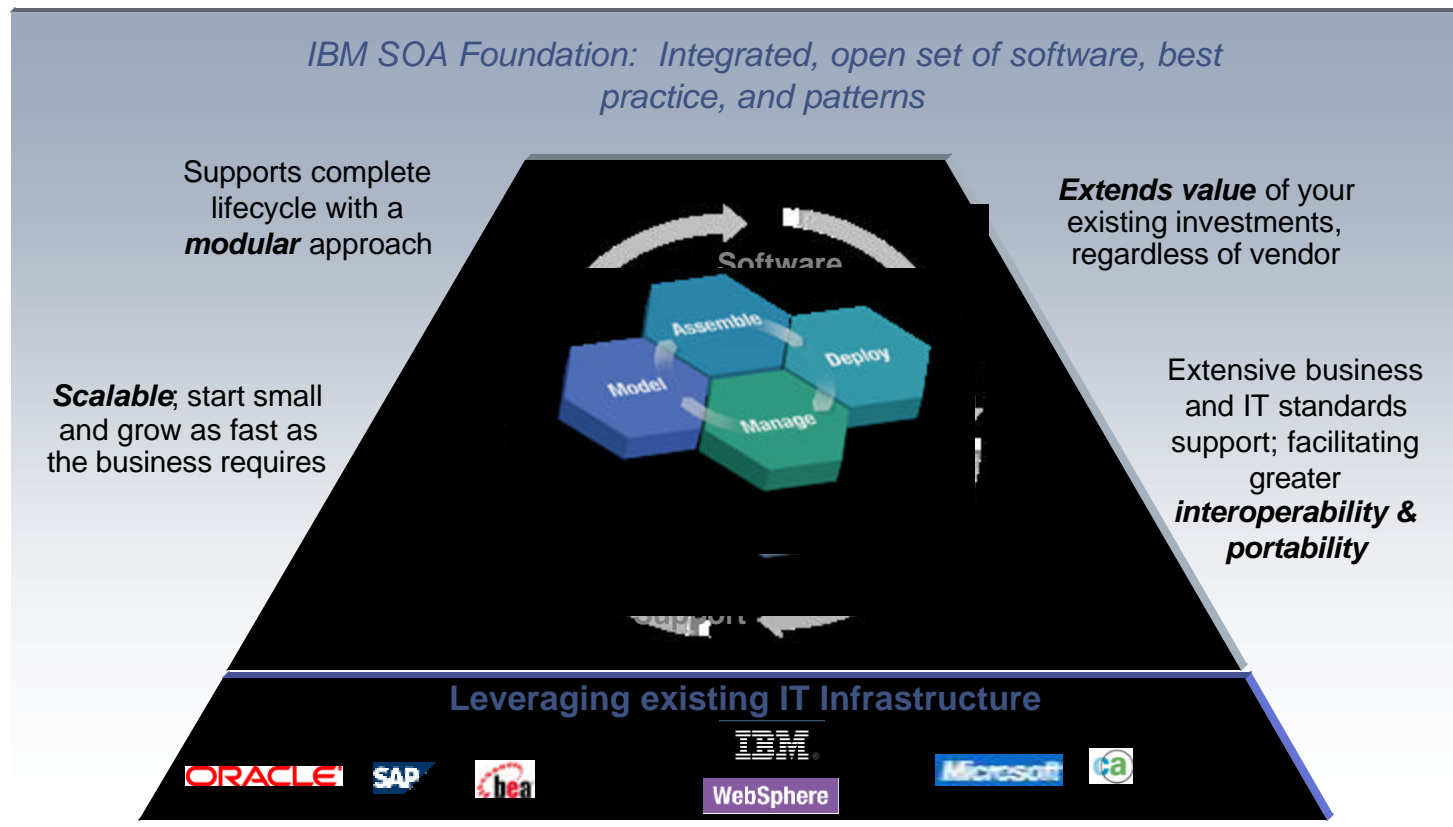
# How are customers thinking technically about flexible IT through SOA?

## *The SOA Lifecycle*



# Introducing the IBM SOA Foundation

*Provides What You Need to Get Started with SOA*



*Part of a broader portfolio to meet your every need*



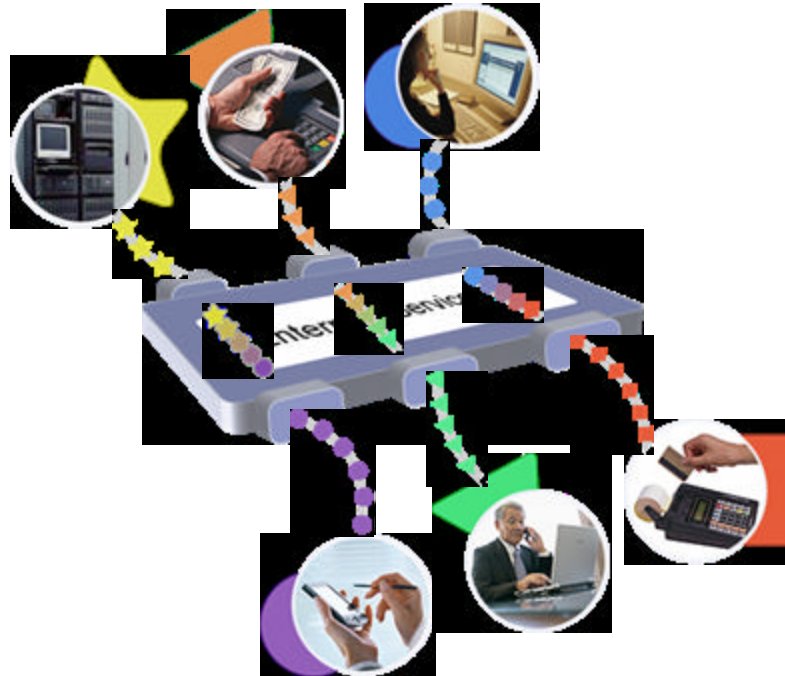
## Common Connectivity: Enterprise Service Bus

***An Enterprise Service Bus (ESB) is a flexible connectivity infrastructure for integrating applications and services.***

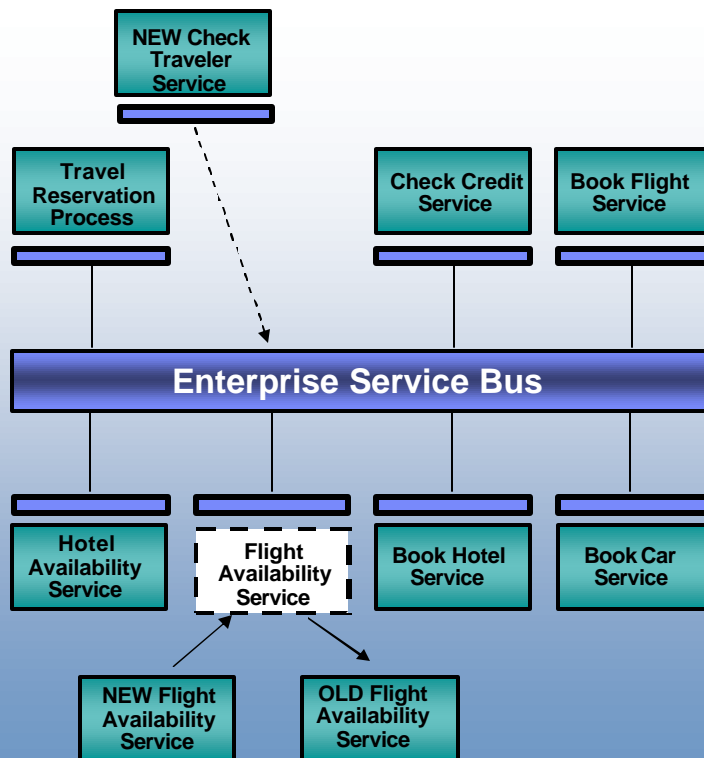
*An ESB powers your SOA by reducing the number, size, and complexity of interfaces.*

*An ESB performs the following between requestor and service*

- **ROUTING** messages between services
- **CONVERTING** transport protocols between requestor and service
- **TRANSFORMING** message formats between requestor and service
- **HANDLING** business events from disparate sources



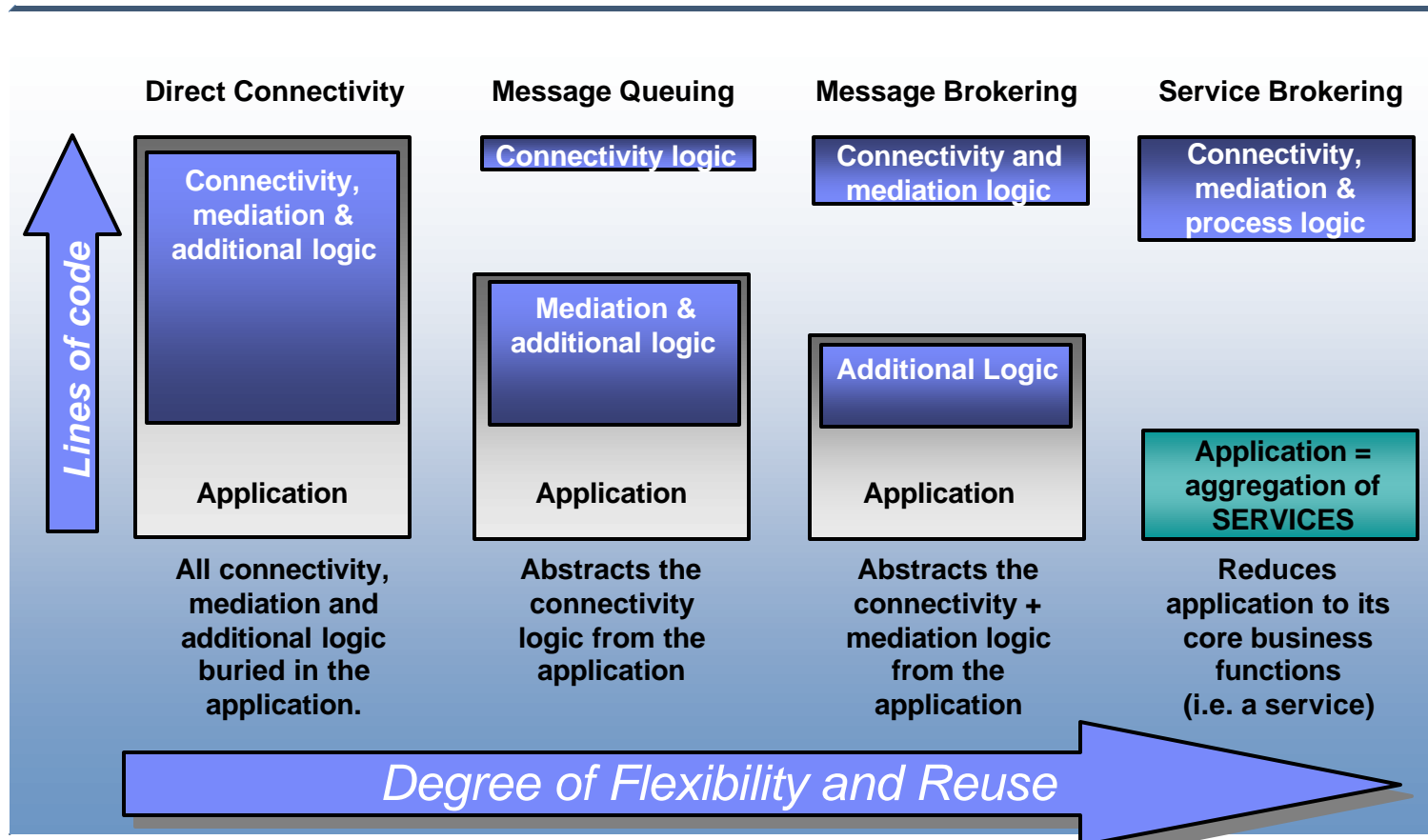
## Internal Integration: The ESB allows you to focus on your core business rather than your IT



**Add new  
services faster**

**Change services with  
minimal impact to  
existing services**

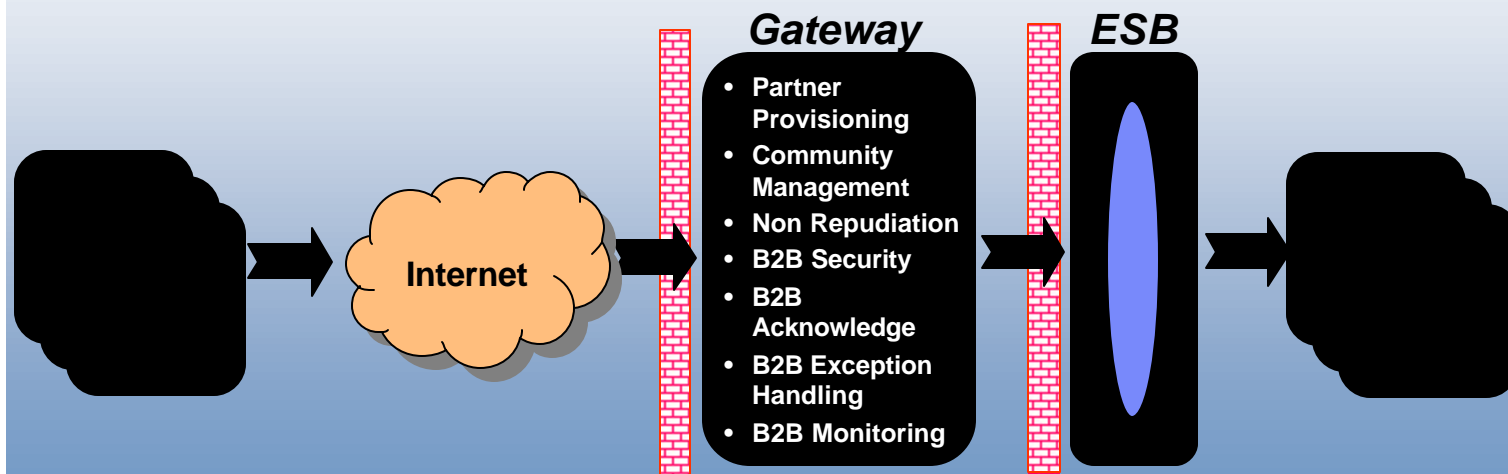
## SOA is the next step on the connectivity evolution



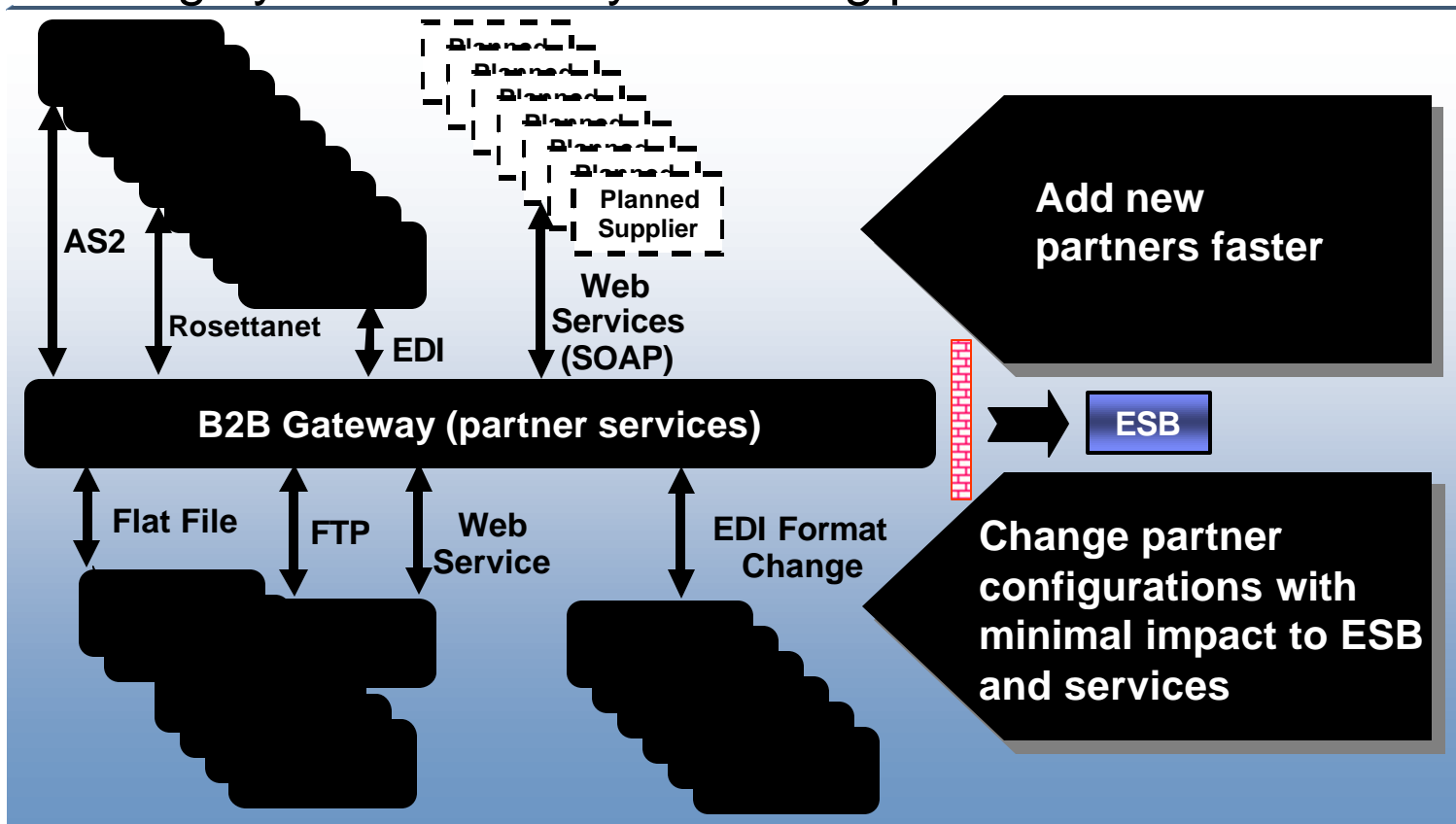
## End to End Integration

***A B2B Gateway makes the services of one organization available to others, and vice versa, in a controlled and secure manner.***

***A B2B Gateway provides capabilities such as partner provisioning and community management, which are distinct from ESB capabilities.***

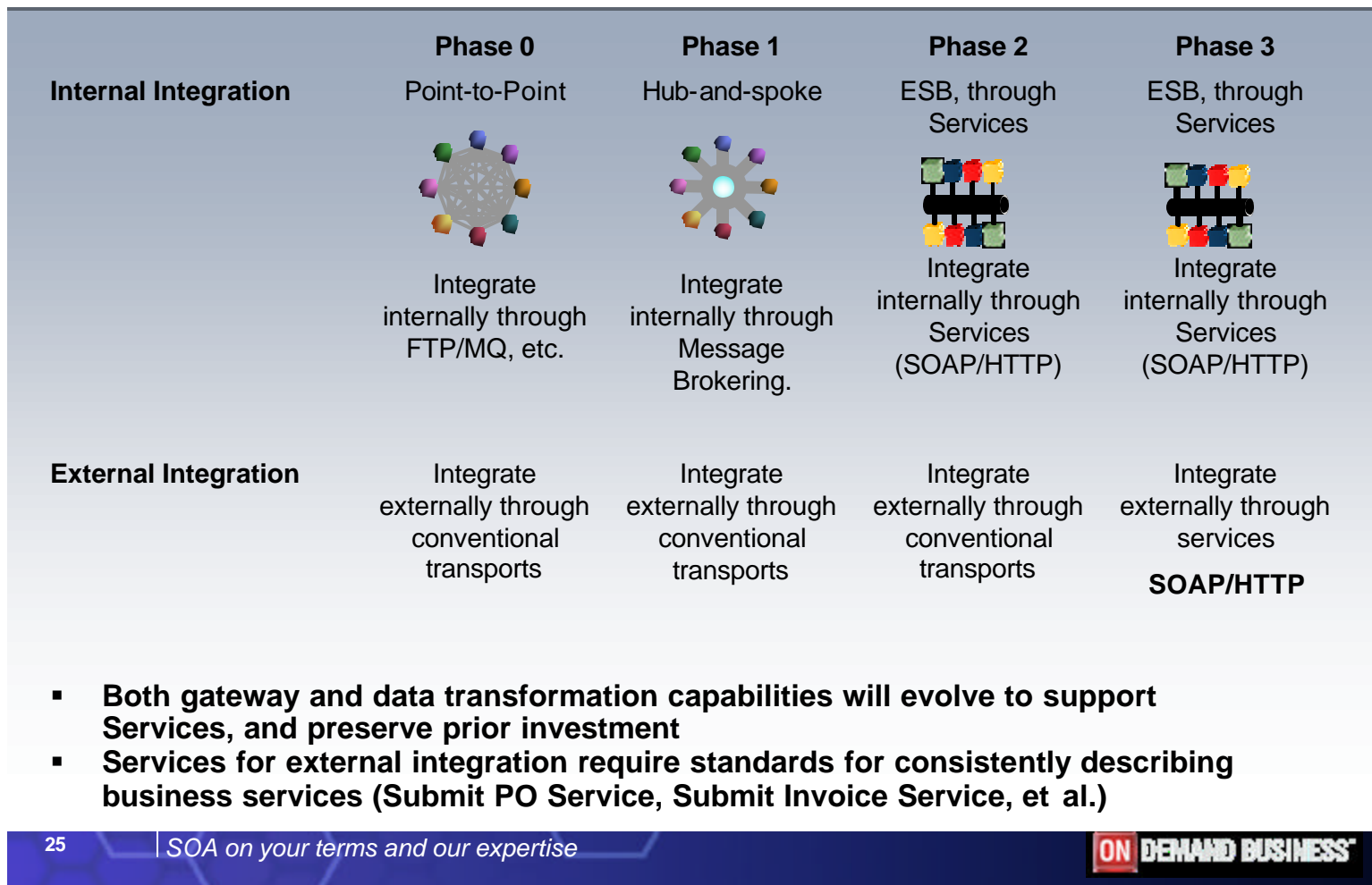


External Integration: The B2B gateway allows you to manage your community of trading partners

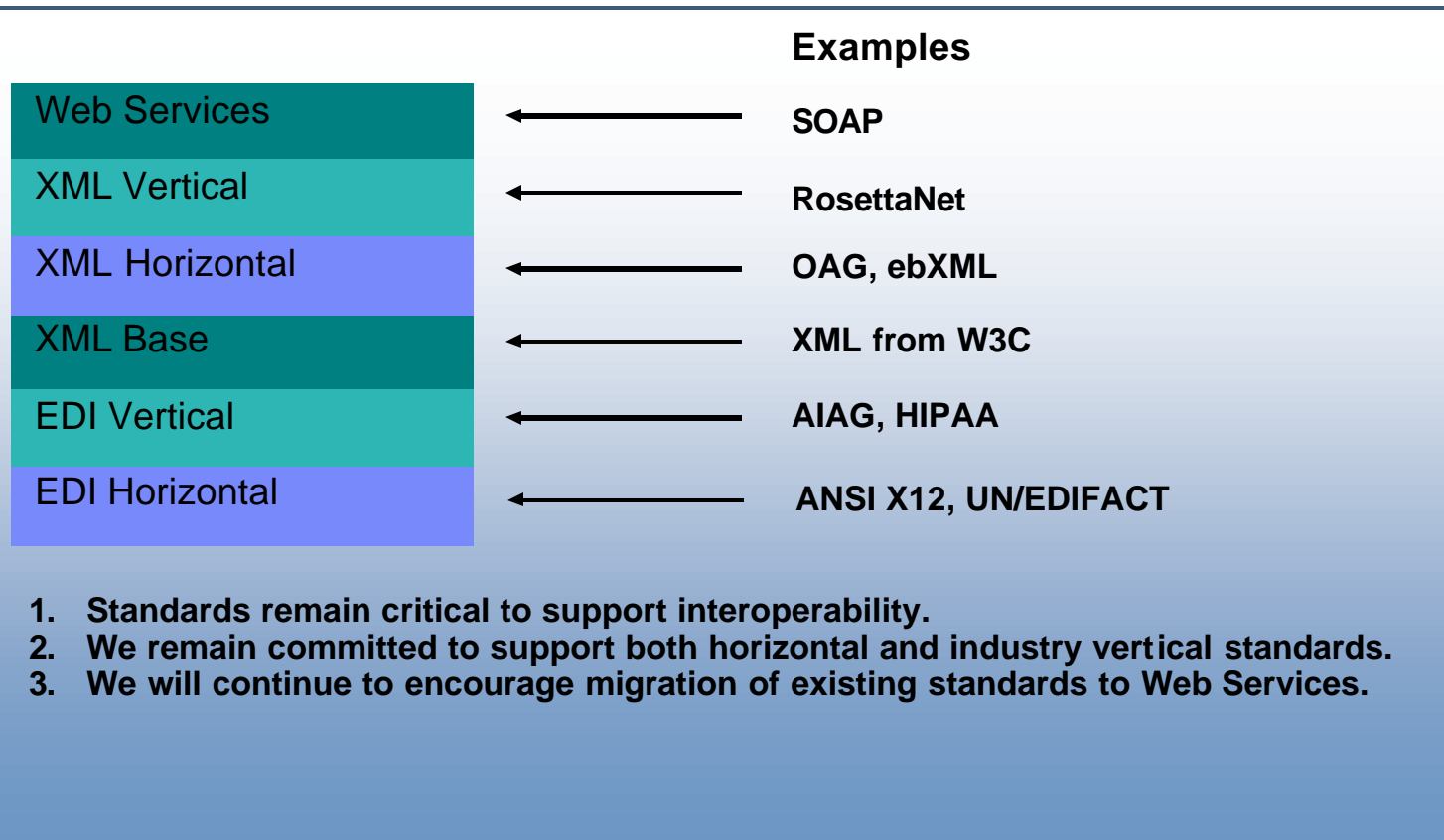




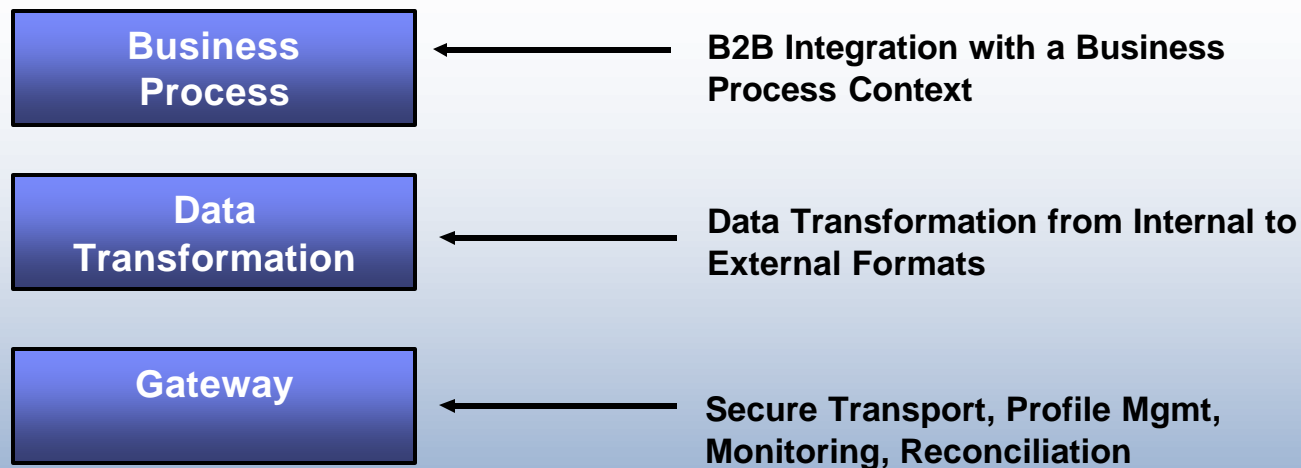
## Evolution in Internal and External Integration to Services



## B2B Standards Perspective



## Integrated Nature of B2B Building Blocks



1. Any specific B2B implementation involves an integrated combination of business process, data transformation, and gateway functions.
2. We remain committed to supporting all three functions, in an integrated manner, in our B2B products.

## IBM's B2B Software Vision

- **Best of Breed B2B Capabilities**

- Process, Transformation, Gateways
- Investment in Standards, Research, Development, Eco-System
- Leverage acquisitions: PureEdge (intelligent web-based EDI forms), Ascential (embeddable transformation)

- **Convergence of B2B with EAI and Business Process Management into a single unified middleware platform**

- Extending Internal Expertise to External and External Expertise to Internal
- Common technology framework emerges (SOA). Web services catalyze many software innovations.
- B2B leverages and extends common stack, supporting B2B standards and partner community integration

- **Enabler of End-to-End Process Integration**

- Partner exchanges will be integrated with the rest of the WebSphere BPM portfolio to model, monitor and manage those interactions
- Business Process Management for B2B will eventually encompass the entire process (i.e. Order to Cash) not just the edge-of-the enterprise sub process

- **Embedded into Industry & Middleware Solutions**

- Consolidated B2B Gateway
- Web Services Middleware
- Industry Specific Solutions (e-Distribution Solution, EVCM, GDS)
- Cross Industry Solutions (i.e. RFID)

## Summary

- Businesses conditions require flexibility throughout the entire supply chain.
- Service Oriented Architecture is an enabler of IT flexibility
- Extending SOA to Trading Partner Integration is a natural evolution
- IBM provides you with the standards leadership, products, industry expertise, and eco-system to assist you with driving B2B flexibility.



IBM and our customers connect with WebSphere Partner Gateway



