



IBM Software Group

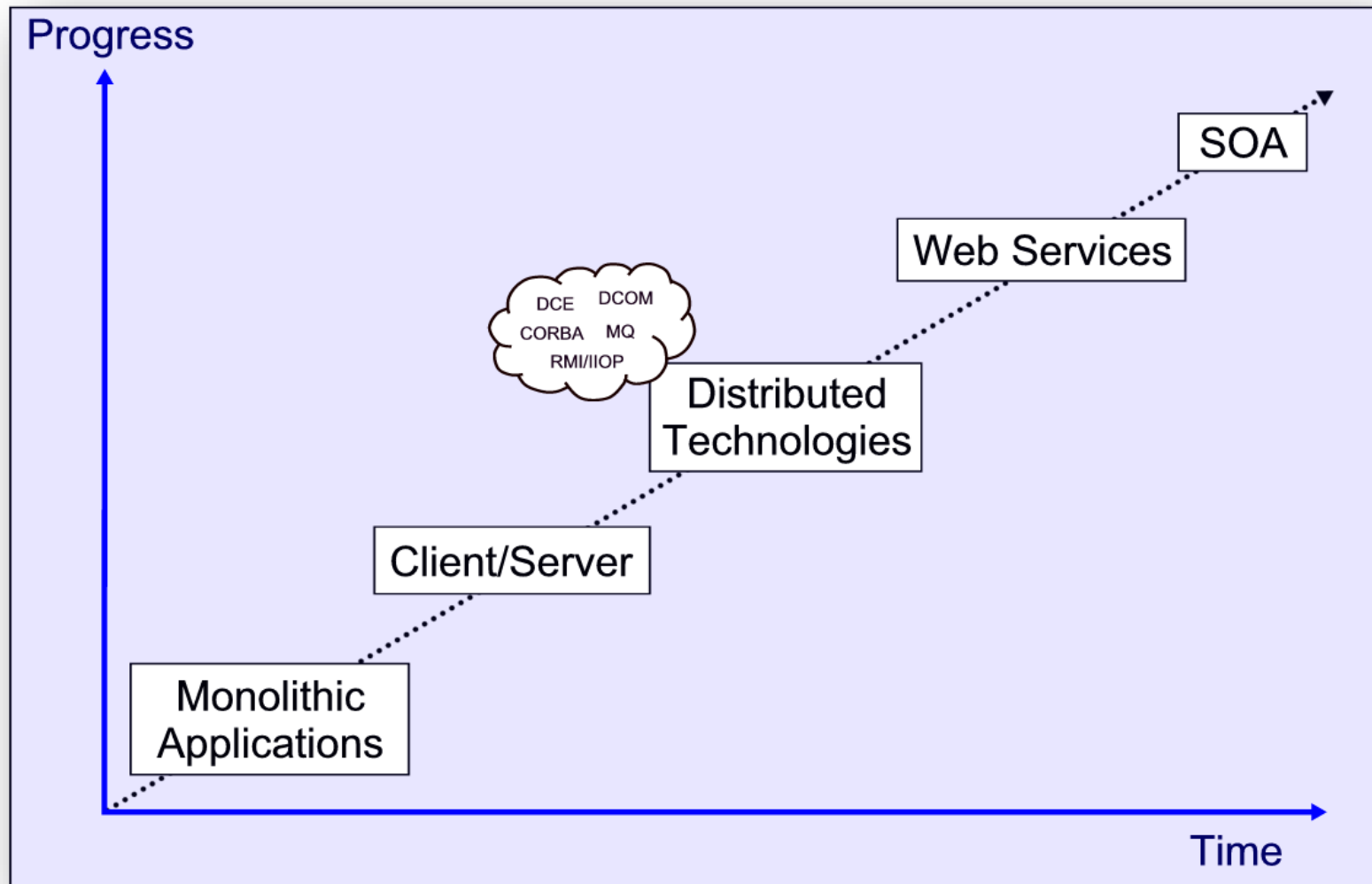
Einführungsstrategien für eine SOA

Markus Keppeler

IBM Deutschland GmbH



The History ...



Business Innovation

- Today it is about Business Flexibility
 - ▶ On-Demand Business
- Need to quickly react to changes in your business environment
 - ▶ Exploit new market opportunities
 - ▶ Adapt to customer demand
 - ▶ React to competitive threats
- Innovation is about change
 - ▶ SOA makes it easier to change

Business Flexibility involves bringing people, processes, and information together.



Customers & Analysts Agree:

SOA Enables Rapid & Incremental Change Leading to Innovation



Innovation That Matters *

*"The IBM and GenXus SOA-based solution has made our product **more innovative, expanded our market** and made us **more competitive**. It will let us grow our business significantly in the years to come."*



*"SOA is the **heart of the next wave of innovation**. The leaders that do this well are able to **rapidly change** ..."*



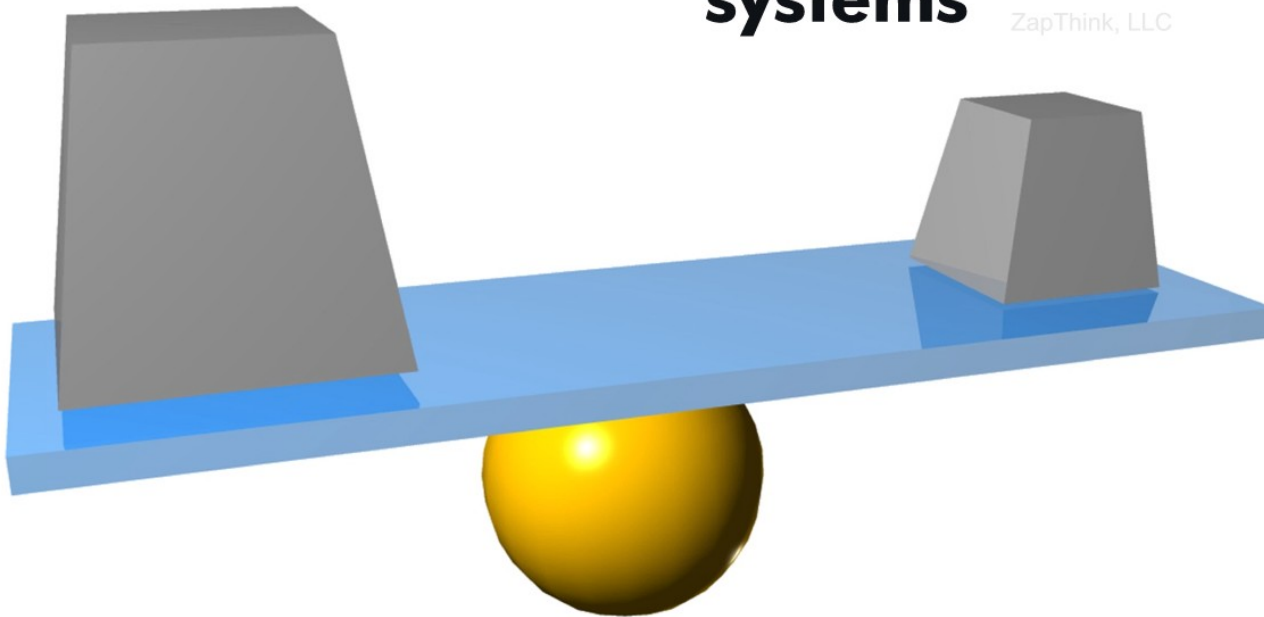
*"SOA is critical for ... executing the on-demand vision and in preparing ... for the **incremental changes** ... over time. Companies ... make better decisions."*



The Cost of Business Integration ...

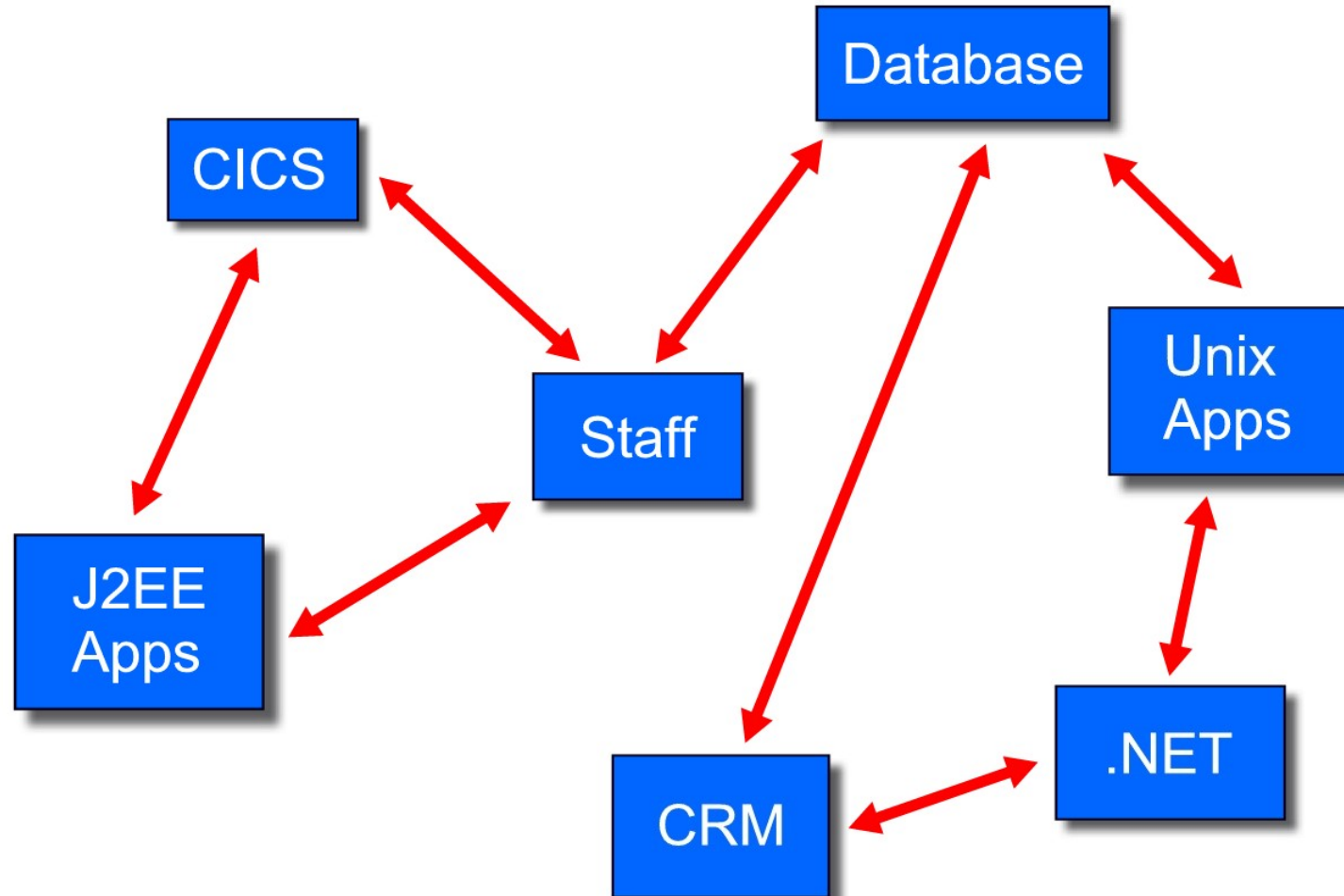
70% of IT development
budgets are spent on
integrating different
systems

ZapThink, LLC

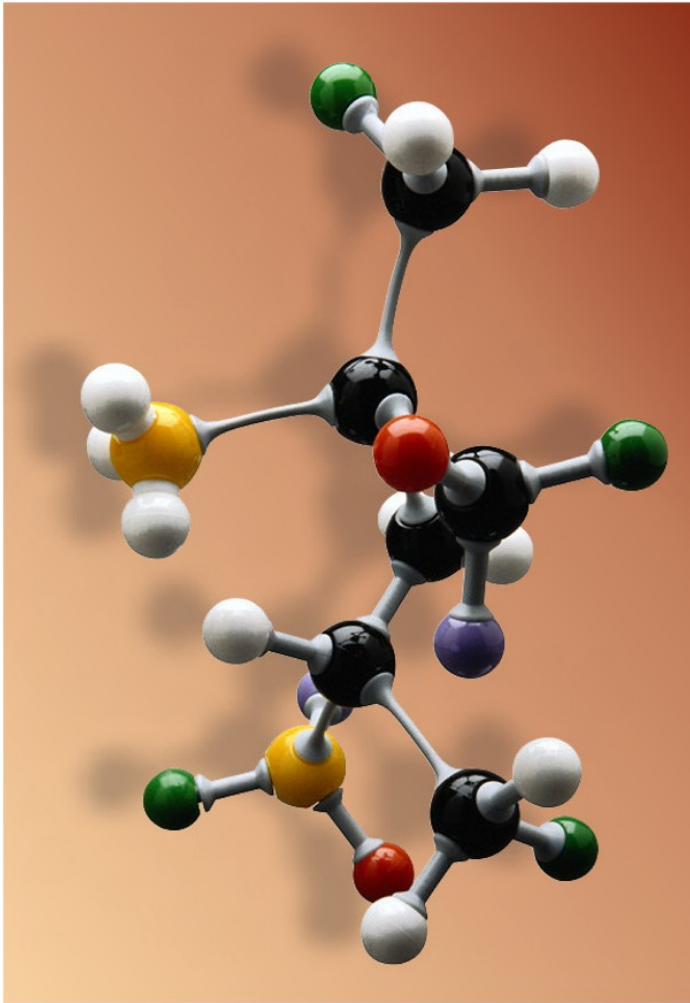


Solutions are composed ...

- IT Solutions are made from parts

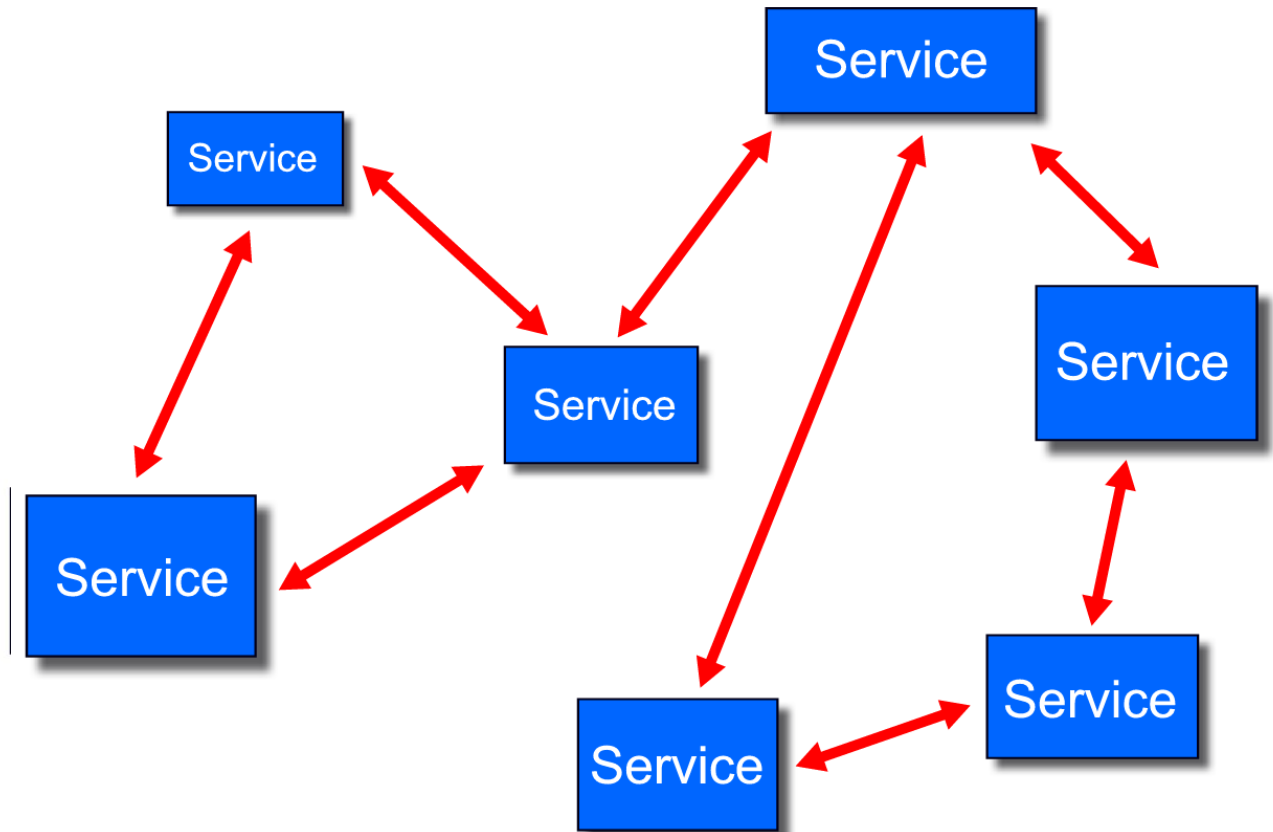


The Service ...

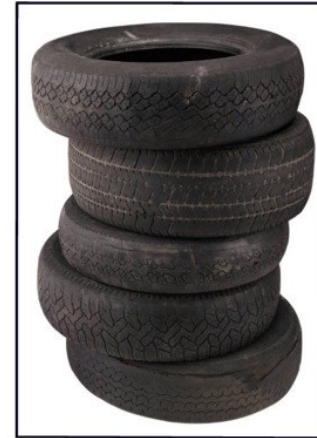


Solutions are composed ... of Services ...

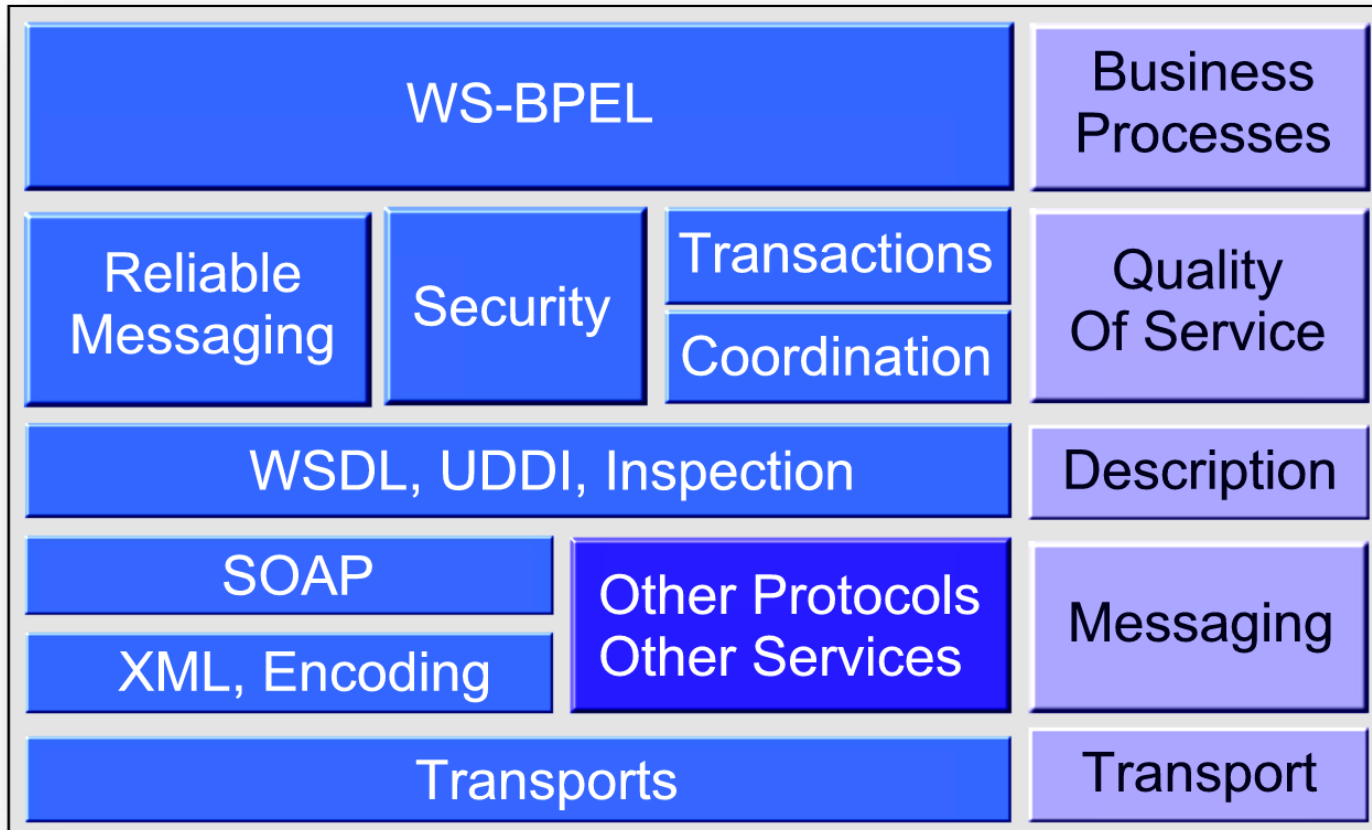
- IT Solutions are made from Services



Standards for interoperability ...

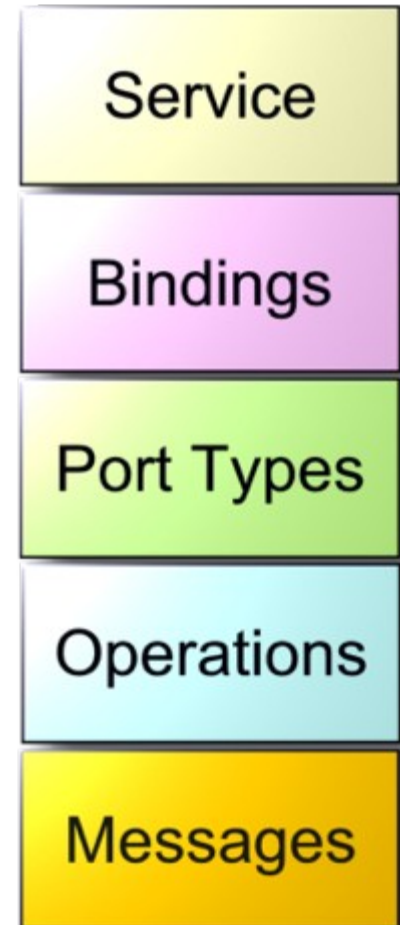


Summary of Standards ...

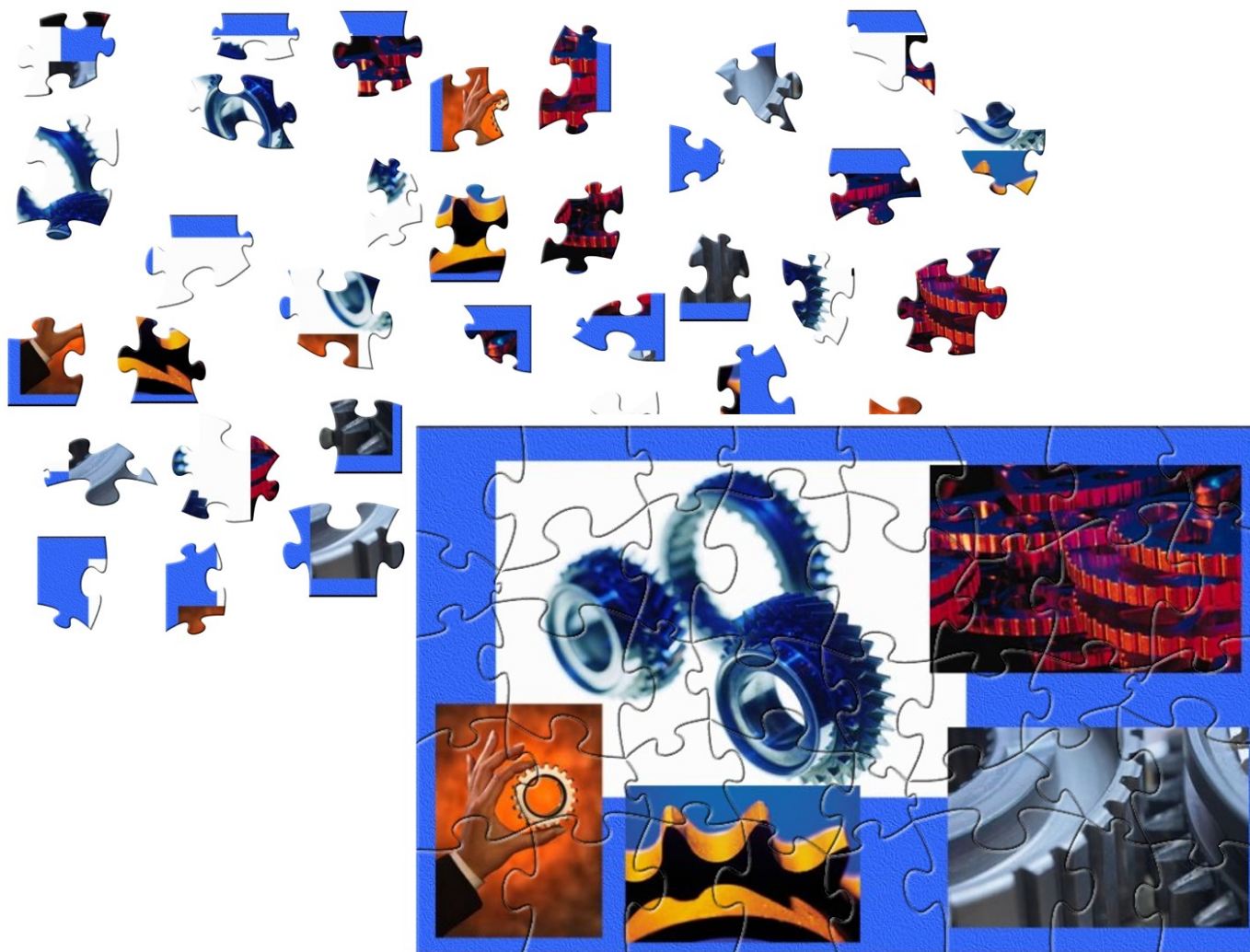
OASISWS-I
WEB SERVICES
INTEROPERABILITY
ORGANIZATIONW3C

WSDL ...

- Web Services Description Language
- Open Standard for describing Interfaces to Services
- Characteristics
 - ▶ Describes data expected to be sent and received
 - ▶ Describes what the Service can do
 - ▶ Describes how to reach the service
- WSDL description is an XML document that conforms to the WSDL standard
- If you have a WSDL file, you **know** how to interact with a service!!



Assembling the Services ...



BPEL ...

- **B**usiness **P**rocess **E**xecution **L**anguage
- A specification for Business Process description **and** execution
- Invented by a core set of companies led by IBM and Microsoft
- Now progressing towards standard through OASIS

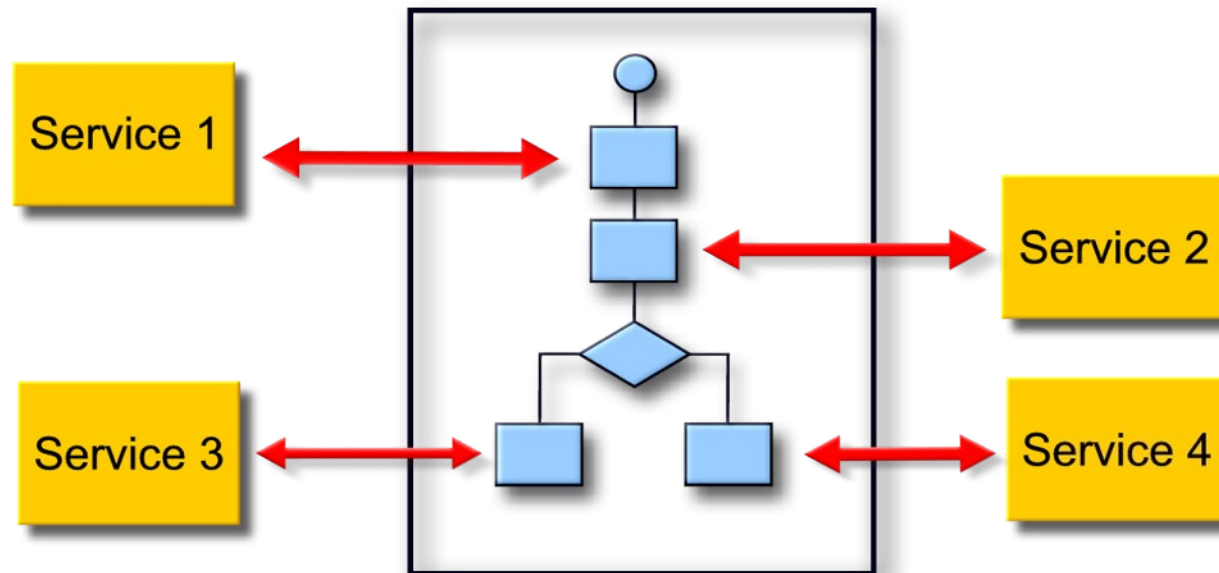


- Current Technical Committee

BEA Systems Inc	Hewlett-Packard	IBM
Microsoft Corporation	NEC Corporation	Novell
Oracle	SAP	SeeBeyond Corporation
Sterling Commerce	Sun Microsystems	Tibco
webMethods Inc.		

Process Choreography ...

- The decision of which Services are invoked
- The decision of what order Services are invoked
- The transformation of data output from one Service and input to another

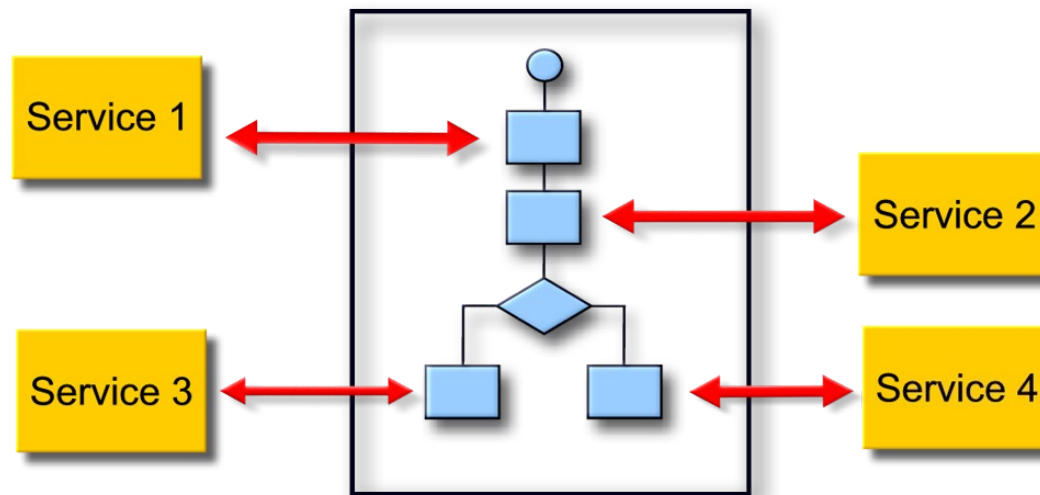


Process is a “Flow Chart” of execution paths!!

What is SOA? ...

SOA is the architectural style that supports loosely coupled services to enable business flexibility in an interoperable, technology-agnostic manner. SOA consists of a composite set of business-aligned services that support a flexible and dynamically re-configurable end-to-end business processes realization using interface-based service descriptions.

Or



Services Oriented Architecture Changes the Game ...

What is...

... a service?

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

... service orientation?

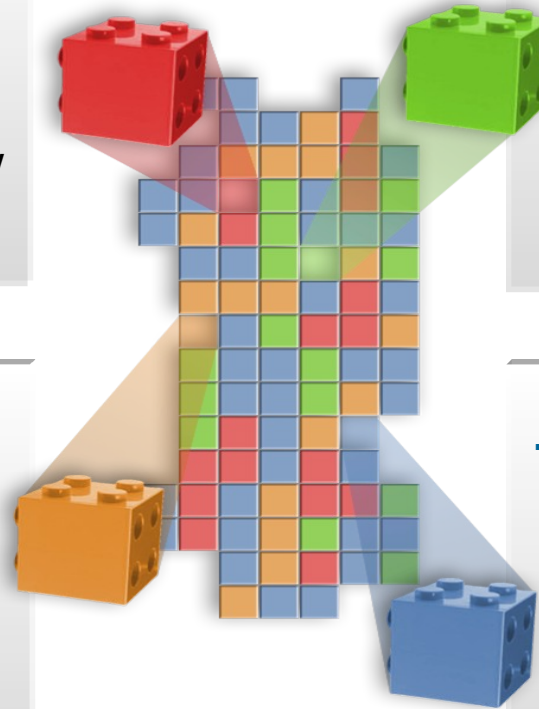
A way of integrating your **business as linked services** and the outcomes that they bring

... service oriented architecture (SOA)?

An IT **architectural style** that supports service orientation

... a composite application?

A set of **related & integrated** services that support a business process built on an SOA



IBM WebSphere Software for SOA ...

WebSphere Integration Developer

Easy-to-use integration to simplify
and speed the assembly of
composite applications

WebSphere Process Server

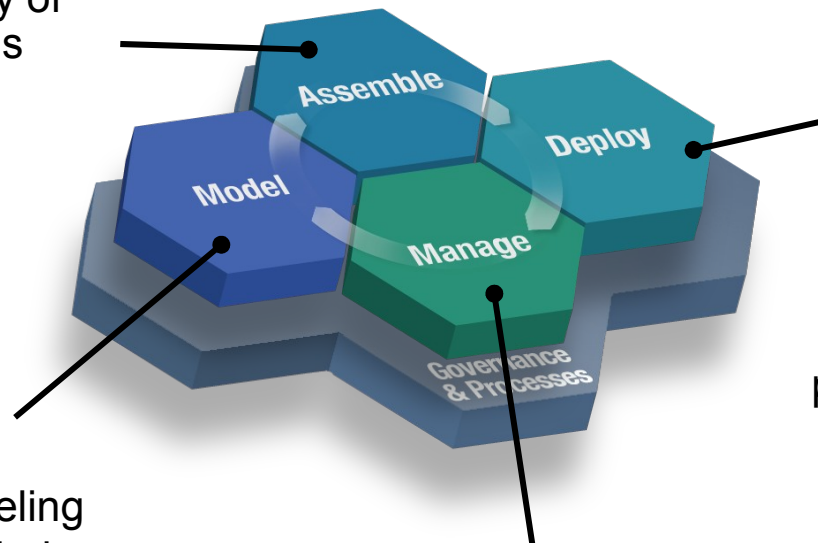
Flexible deployment of
business processes,
making plug-and-play of
components a reality,
powered by **WebSphere
ESB**

WebSphere Business Modeler

Simple to use process modeling
for the business analyst to help
maximize process and business
resource re-use

WebSphere Business Monitor

Real-time visibility into process
performance enabling process
intervention and continuous improvement

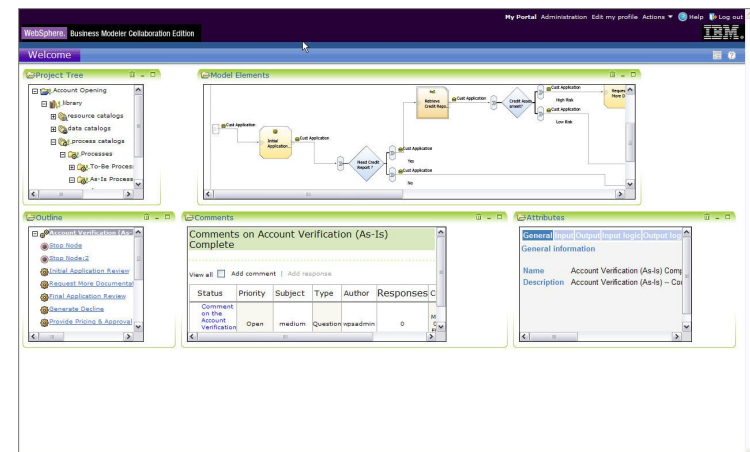
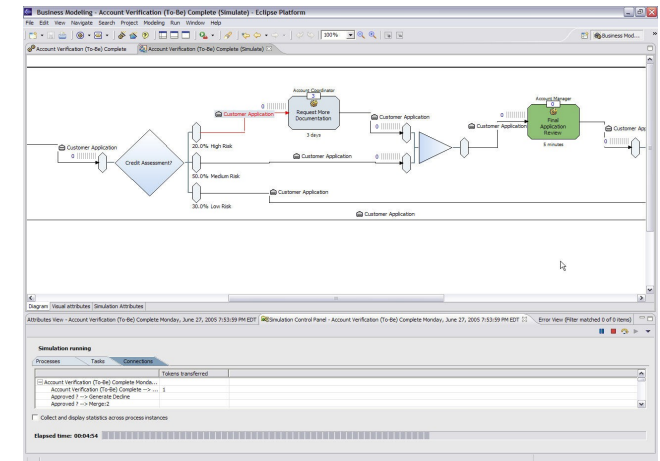


IBM WebSphere Business Modeler ...

Best In Class Business Modeling, Simulation and Analysis

- Simple to use business modeling tool
 - ▶ Allow the people who know the business to model the business
 - ▶ Attach resource, roles and costs to each activity
- Sophisticated simulation and analysis
 - ▶ Understand your business models and make informed decisions before deployment
 - ▶ Compare simulations against historical actuals
- Collaborative modeling
 - ▶ Enable communication and participation across your enterprise via web based collaboration
- Visio import
 - ▶ Import existing process pictures previously created in Visio as a starting point for true business Modeling
- Clean hand-off to I/T
 - ▶ Rapid and accurate deployment of your solutions
 - ▶ Business modeling is the starting point for I/T deployment

IBM WebSphere Business Modeler



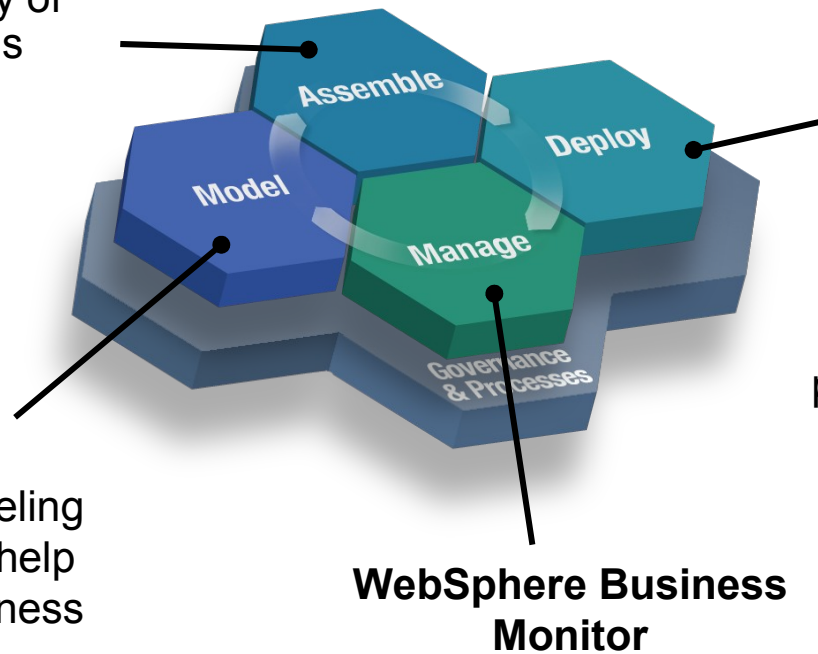
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Assemble-What Makes WebSphere Unique ...

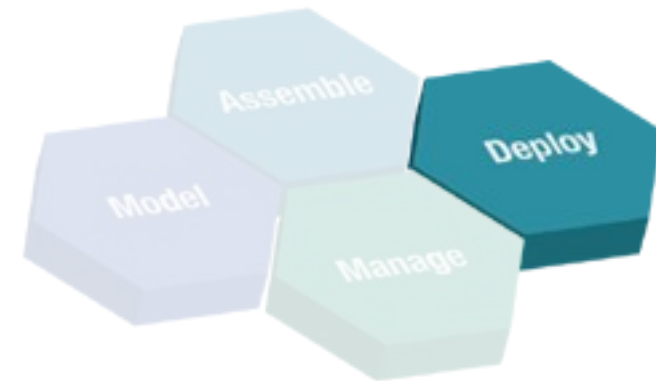
- ▶ BPEL Without Coding
 - Standards based process support
- ▶ Full Workflow Support
 - Built-in human task support
- ▶ State Machines
 - For complex transactions
- ▶ Dynamic processes and assembly
 - For flexibility and responsiveness
 - Business rules to determine the process flow
 - Selectors to determine which components are in the flow
- ▶ Assembly with WebSphere Integration Developer
 - Tooling and architecture for composite applications



IBM WebSphere Integration Developer

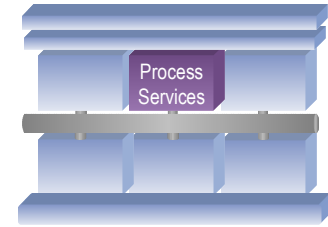
Deploy- What Make WebSphere Unique ...

- A Single Process Server
 - ▶ Integrated runtime for all SOA based process automation
 - ▶ Runtime engine for all the components defined in Assemble (Assemblies, BPEL, State Machines, Business Rules...)
 - ▶ Fully leverage the breadth and capability of IBM WebSphere Application Server
 - ▶ Reliable, scaleable, secure
- Integrated ESB For Range And Reach
 - ▶ Provides seamless access to all available services
 - ▶ Adapters provide the service on-ramp for existing applications
 - ▶ B2B to interoperate with your extended partner network
- Service Components and Business Objects
 - ▶ Build processes without knowledge of existing applications
 - ▶ Simplifying and accelerating, providing flexibility and reuse



IBM WebSphere Process Server

WebSphere Process Server – Components



Service Components

Business Processes

Human Tasks

Business State Machines

Business Rules

Supporting Services

Interface Maps

Business Object Maps

Relationships

Selectors

SOA Core

Service Component Architecture

Business Objects

Common Event Infrastructure

WebSphere Application Server, Version 6

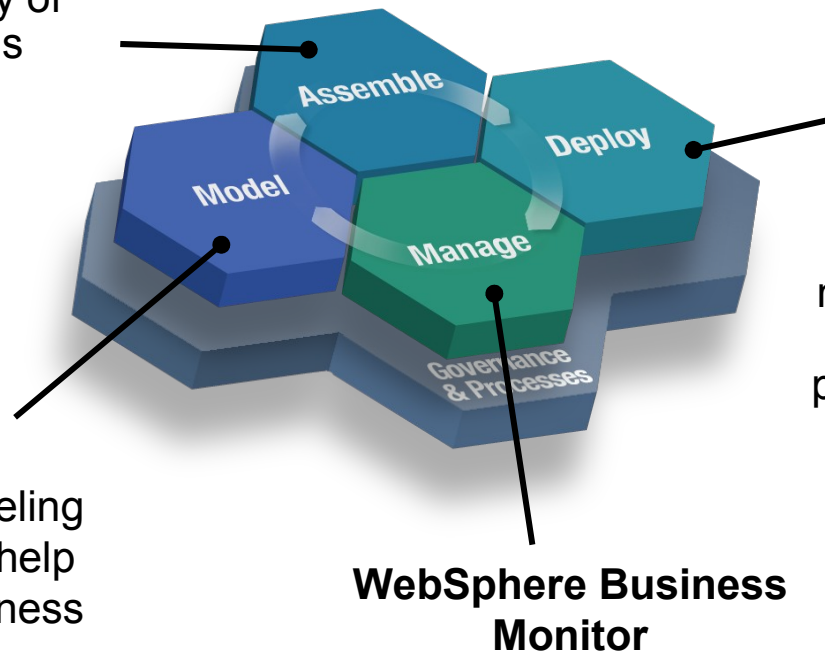
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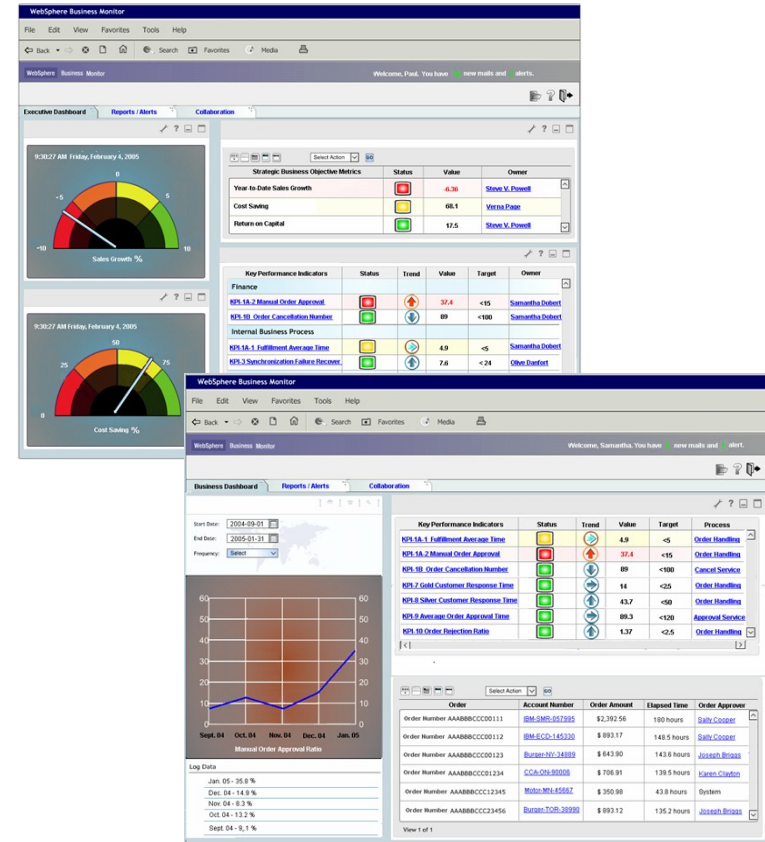


WebSphere Process Server

Flexible deployment of
business processes,
making plug-and-play of
components a reality,
powered by **WebSphere
ESB**

Manage – What Makes WebSphere Unique ...

- Business Dashboards
 - ▶ Scorecards of Key Performance Indicators
 - ▶ Track cost, time and resources
 - ▶ Identify bottlenecks, balance workloads, reduce latencies
- Process Intervention
 - ▶ Business event triggers and notifications
 - ▶ Dynamic response to alerts
- Continuous Process improvement
 - ▶ Real data in WebSphere Business Modeler to understand your business performance
 - ▶ Real data in WebSphere Business Modeler to design the next release of your business process



IBM WebSphere Business Monitor

Integrated ESB for Range and Reach ...

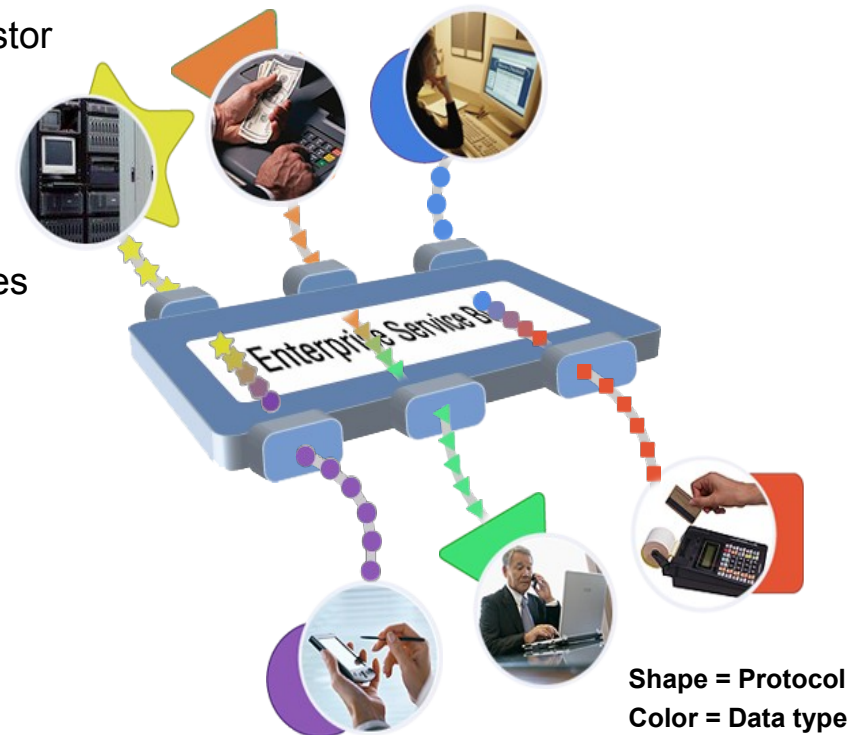
Enterprise Service Bus - extend the reach into your IT with flexible options

- **WebSphere Process Server is powered by ESB**

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

- **Standards based Integration**

- ▶ Web Services connectivity
- ▶ JMS messaging



Adapters provide the service on-ramp for existing applications ...

Enterprise-ready connections based on industry best practices

Broadest reach in the marketplace

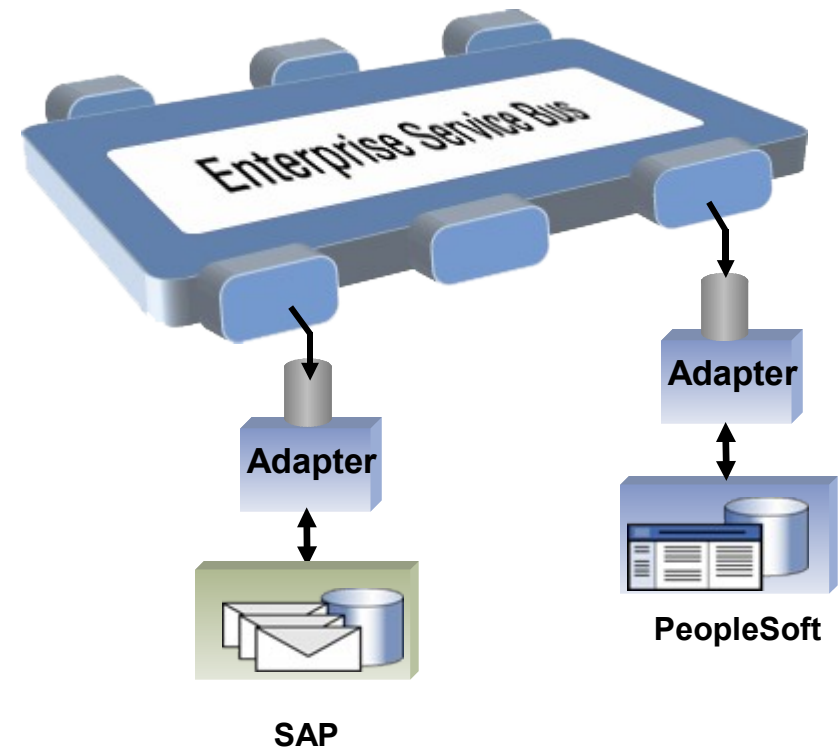
- Part of IBM's Access Services portfolio, which delivers reach to hundreds of integration endpoints

Enterprise Ready

- Mission-critical quality of service
- Full portfolio of integration products available through a single vendor

Best Practices

- First-class support for top ISVs
- Established relationships with top-tier ISVs
- Based on first-hand experience gained from integration services



Real Results From An SOA Approach To Processes ...

- **Flexibility**
 - ▶ Rapidly change process behavior to keep pace with business requirements
 - ▶ Adapt to changes with minimal operational disruption
- **Responsiveness**
 - ▶ Respond quicker and make proactive changes to processes dynamically
- **Optimization**
 - ▶ Powerful, intuitive tools to understand, analyze, and improve your business processes
 - ▶ Provides a true understanding of business operations as they are today and for predicting their future performance
- **Solution Building Efficiency**
 - ▶ Deploy business process solutions at lowest cost
 - ▶ Import and work with business process models directly from the business analyst

*Sources: CBDi



Thank You

