



IBM Rational Software Conference 2009
As Real as It Gets!



IBM SOA Strategy with WebSphere and Rational: Making it Real

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Rational. software

Drivers for Smarter SOA

Building on Industry Expertise

Enabling Smarter Application Development

Critical Software Delivery Challenges

62%

of projects failed to meet their schedules¹

41%

of projects fail to deliver the expected business value and ROI²

Only

42%

of users are satisfied with project quality³

Today's Challenges:

Long deployment times

Lack of governance



Rigid infrastructure

Rising response times

Sources: (1) IBM CIO Study 2008, (2) IBM CEO Study, 2008, (3) "Corporate Software Development Fails To Satisfy On Speed Or Quality", Forrester Research, Inc., 2005.

IBM Vision at a Glance...

Smarter Planet

- instrumented
- interconnected
- intelligent

Green & Beyond

New Intelligence

Dynamic Infrastructure

Smart Work

Smart Work and Smart SOA

Dynamic
Business
Processes
and Models



Information



Smarter
Collaboration

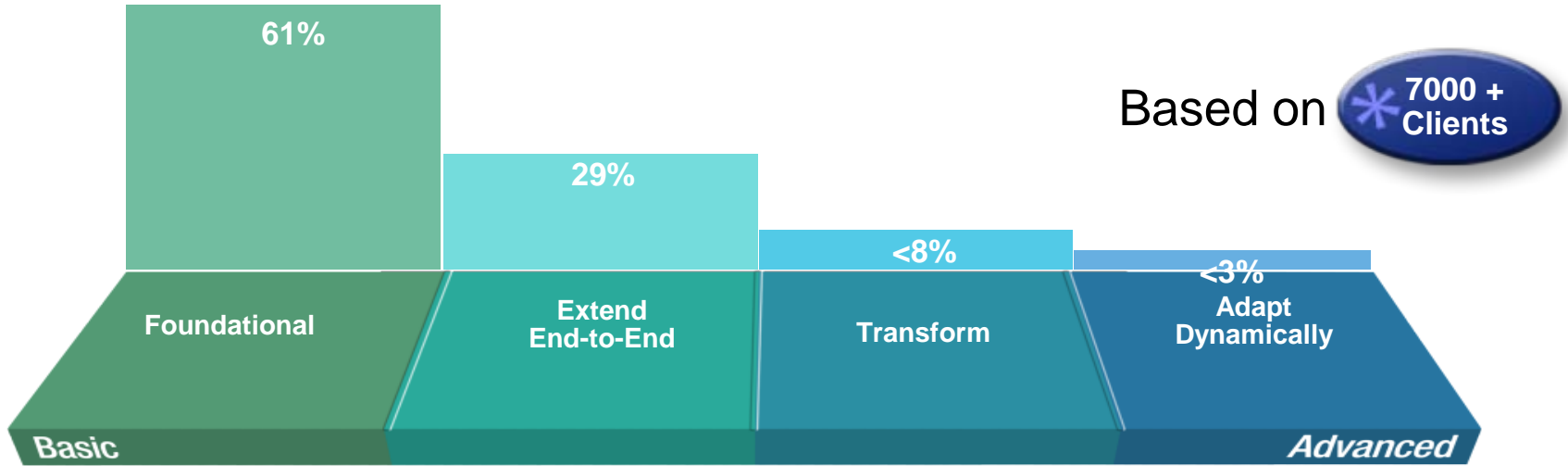
Smart
Work



Smart SOA

Adoption of SOA is evolving across the continuum

Increasing value from Industry Solutions



“Departmental, very focused projects for solving immediate and, likely, straightforward challenges, such as connectivity, reuse, collaboration, information access and automation, in a way that can segue into more substantial changes, should they become necessary in the future”

“Collaboration between business and IT to optimize and bring greater innovation to business processes that span the organization and extend beyond it.”

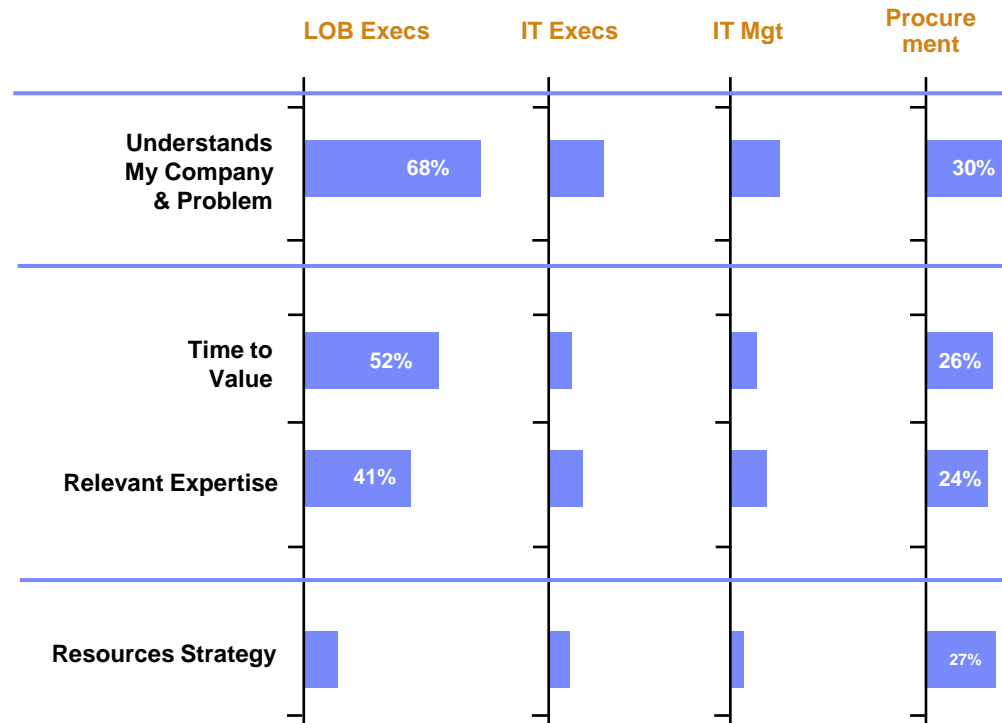
“Re-imagining your business, its markets, cost and revenue models and its interactions with your ecosystem — linking capabilities to insight to create innovation within the business.”

“The emerging ideal of rapid transformation in a semi automated way becoming possible as a critical mass of service providers in the ecosystem adopt SOA to enable the business to respond with agility to business opportunities.”

What do our clients need from us?

Our clients are asking for:

- ▶ Increased flexibility
- ▶ Faster time to value
- ▶ Reduced risk
- ▶ Industry-specific skills & offerings
- ▶ More modular offerings & solutions



Drivers for Smarter SOA

Building on Industry Expertise

Enabling Smarter Application Development

Industry Solutions are a Reflection of Our Expertise

Marketplace Drivers:

- Customers are looking for their business commitments to be met at market speed, or better
- Managing project costs into bite-sized bits is now a requirement
- Customers want to utilize the technology that best supports their strategy, independent of vendor

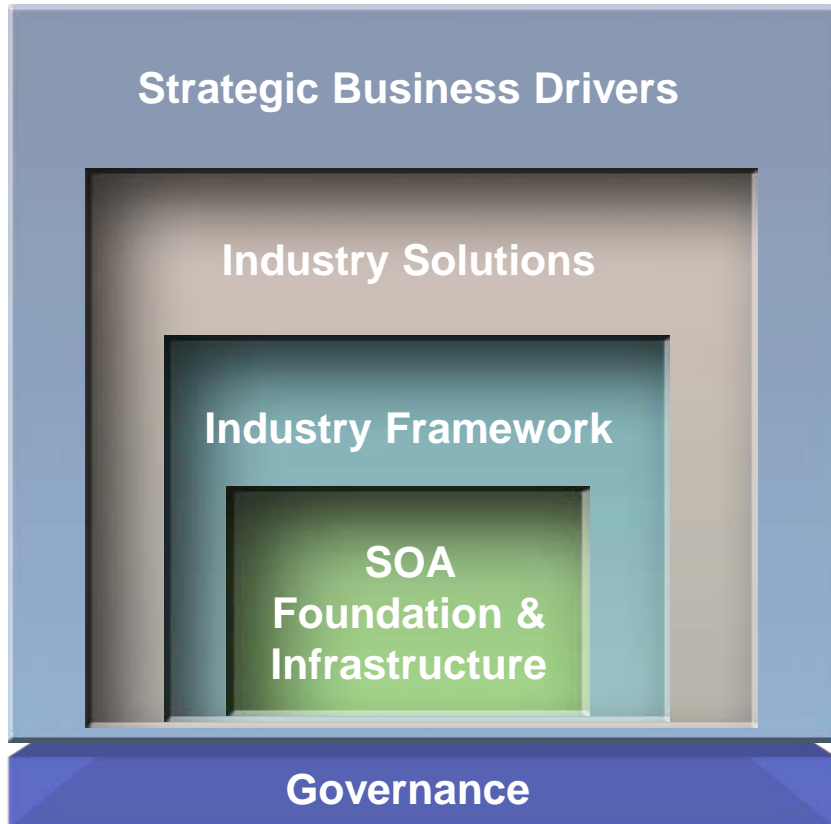


Our Strategy:

- Combine industry assets and best practices into offerings focused on core and connected business problems
- Design for re-use
- Incubate an ecosystem of industry ISVs, pre-integrate
- Be prescriptive about a platform, emphasize best practices, better utilize our industry expertise

IBM Industry Solutions and Frameworks

Industry Solution

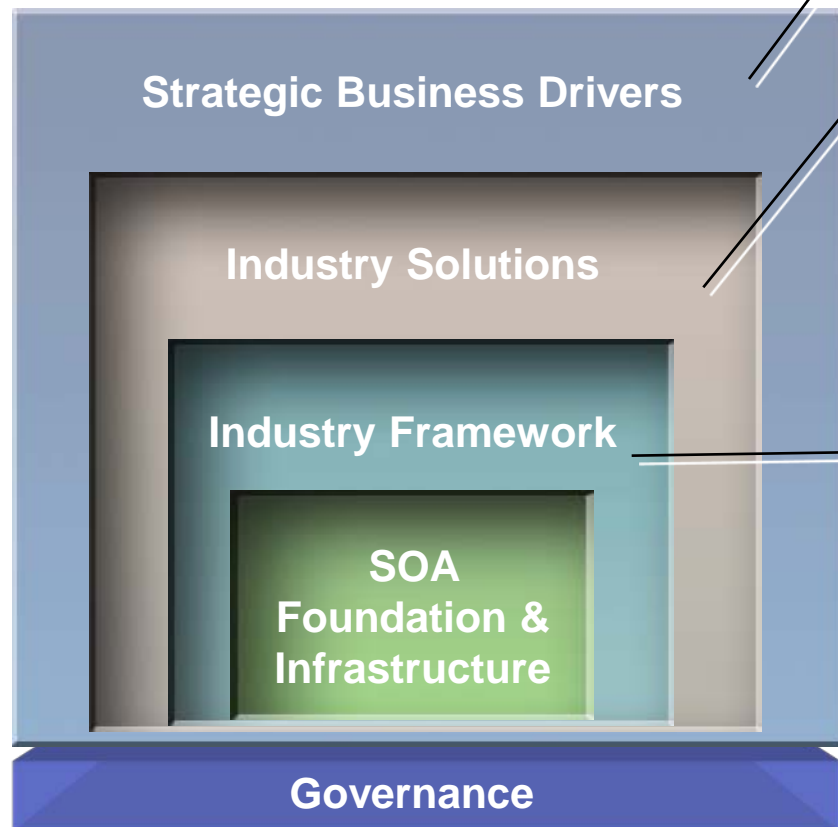


- Industry and subject matter expertise
- Defined IP, applications, tools, and methodologies
- Business Partner content
- Global delivery model

Industry Framework

- Includes industry-specific extensions
- Business and technology standards
- Based on an SOA
- Leverages an ecosystem of independent partner assets

Aligning Our Strategy with Our Customer's Needs



- IBM's industry-specific services + software + hardware offerings (solutions) are built in context of an industry's strategic business drivers

- Where there is high value and demand, IBM pre-composes composite business services & other IP into re-usable Industry Solutions leveraging ISV capability
- Where demand & opportunity is not sufficient, IBM addresses our customer's business needs with customized solutions

IBM Global Business Services

Industry ISV

- Where there is high value and demand, IBM is compiling and enhancing software offerings into Industry Frameworks based on an SOA that supports the unique needs of each business domain, leveraging ISV capability
- In business domains where demand or opportunity does not (yet) justify creating a new Industry Framework, customers can directly leverage IBM's strong software portfolio and ISV assets embodied by the SOA Foundation

WebSphere.

Rational.

Tivoli.

Information Management

Lotus.

Industry ISV

IBM Global Technology Services

Selected Business Solution List

Communications Sector	Distribution Sector	Financial Services Sector	Industrial Sector	Public Sector
Telco <input checked="" type="checkbox"/> <ul style="list-style-type: none"> Services Innovation OSS Transformation BSS Transformation 	Consumer Products <ul style="list-style-type: none"> Information on Demand Innovation and Sustainability Globally Integrated Enterprise Workforce Effectiveness 	Banking <input checked="" type="checkbox"/> <ul style="list-style-type: none"> Front Office Optimization Back Office Operations Risk and Compliance Workforce Effectiveness Financial Management 	Automotive <input checked="" type="checkbox"/> <ul style="list-style-type: none"> Marketing Sales and Service Manufacturing Productivity Product Lifecycle Management 	Government <input checked="" type="checkbox"/> <ul style="list-style-type: none"> Citizen Service Delivery Modernization Network Centric Operations (NCO) Customs, Border & Revenue Mgmt Govt Shared Service Center Intelligent Transportation Systems
Media & Ent <ul style="list-style-type: none"> Production and Distribution Transformation -- Workflow Transformation Production and Distribution Transformation – Digital Consumer 	Retail <input checked="" type="checkbox"/> <ul style="list-style-type: none"> Retail Business Intelligence Merchandising & Supply Chain Multi-Channel Retailing Total Store 	Financial Markets <input checked="" type="checkbox"/> <ul style="list-style-type: none"> Trade Process Transformation Risk and Compliance Workforce Effectiveness Financial Management 	Electronics <input checked="" type="checkbox"/> <ul style="list-style-type: none"> Product Life Cycle Management Supply, Demand & Global Integration Electronics MES Marketing, Sales & Service Transformation 	Education <ul style="list-style-type: none"> Effective and Efficient Admin Open and Aligned Learning
Utilities & Energy <input checked="" type="checkbox"/> <ul style="list-style-type: none"> Power Generation Optimization Utilities Network Revitalization Customer Operations Transformation Corporate Shared Services 	T&T <ul style="list-style-type: none"> T&T Cust Insight & Loyalty Mgmt T&T Operational Excellence T&T SOA and IT Transformation 	Insurance <input checked="" type="checkbox"/> <ul style="list-style-type: none"> Core Insurance Insurance Front Office Risk and Compliance 	Aerospace & Defense <input checked="" type="checkbox"/> <ul style="list-style-type: none"> Supply Chain and Aftermarket Product Life Cycle Management 	Healthcare <input checked="" type="checkbox"/> <ul style="list-style-type: none"> HealthCare Provider Transformation Healthcare Payer Transformation HealthCare Pub Health Surveillance
			Chemical & Petroleum <ul style="list-style-type: none"> Upstream Petroleum Supply Chain Optimization Downstream Petroleum/Chemicals Enterprise Transformation 	LS/Pharma <ul style="list-style-type: none"> R&D Transformation Supply Chain Transformation Sales and Marketing Transformation Back-office Transformation



Framework in market

What is an Industry Framework ?

- **A software platform based on business specific usage pattern, and :**
 - ▶ Includes Industry-specific extensions / business & technology standards
 - ▶ Based on service-oriented architecture
 - ▶ Leverages an ecosystem of independent partner assets
- **For our clients, Frameworks are ...**
 - ▶ IBM's recommended approach to solving key industry challenges
 - ▶ A more digestible way to introduce standards and efficiency into the business
 - ▶ A faster and more cost efficient way to get to business value
 - ▶ A way to reduce risk by re-using platform investments for multiple projects
 - ▶ An easier way to consume the power of IBM's offerings
- **For IBMers, Frameworks are ...**
 - ▶ An instantiation of IBM & Business Partner assets
 - ▶ An industry-specific version of our service-oriented architecture offerings
 - ▶ A way to combine the value of IBM's software and services offerings into a single value proposition for our customers

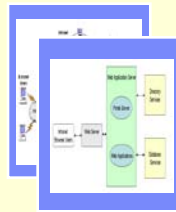
Components of an Industry Framework Toolkit

Solution Overview

Helps you understand solution concepts, business value, and system architecture considerations



Solution use-cases & business value



Solution architecture

Solution Size	Solution Complexity	Solution Prerequisites	Suggested Hardware
Small	Low	IBM Rational Software V7.5.0	IBM System x3500
Medium	Medium	IBM Rational Software V7.5.0	IBM System x3500
Large	High	IBM Rational Software V7.5.0	IBM System x3500

Recommended SW, HW, tools

Solution Planning Guide

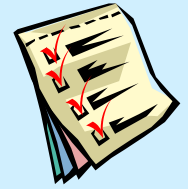
Helps you identify skill requirements and plan your customer engagement

- ✓ Skill 1
- ✓ Skill 2
- ✓ Skill 3
- ✓ ...

Skills required to implement the solution



Assumptions & task list with time estimates to plan services engagement



Task descriptions & best practices

Implementation Guide

Structured learning opportunity showing how to quickly set up an instance of the solution and important techniques to develop and deploy a custom solution

Table No	Title	Page
1	Getting Started	1
2	Installation	2
3	Configuration	3
4	Deployment	4
5	Customization	5
6	Integration	6
7	Support	7

Implementation checklists



Instructions & tips for solution installation



Customization information



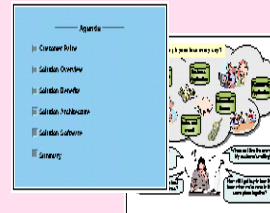
Sample code, data, scripts



Use cases for demo & education

Deployment Guide

Provides customizable demonstration assets to help you sell the solution



Customizable presentation with solution benefits & overview



Video clips of the solution

Development Solution	Use	Solution Prerequisites	Suggested Hardware
IBM Rational Software V7.5.0	Customer training, deployment, and support	IBM System x3500 or higher	IBM System x3500 or higher
IBM Rational Software V7.5.0	Customer training, deployment, and support	IBM System x3500 or higher	IBM System x3500 or higher

How-to document to assist with using & customizing the assets

Sharing patient medical information using components of IBM's Health Information Network solution framework

- **Client**
 - ▶ Small company, aims to provide comprehensive disease management, care surveillance and wellness monitoring services for people with chronic disease and complex needs
- **Objective**
 - ▶ Demonstrate ability to share information with other health care providers in a loosely coupled manner via a Health Services Bus (HSB) and that the infrastructure fits with a proposed E-Health Strategy.
 - ▶ Demonstrate security, authentication, authorisation, non-repudiation, confidentiality
- **Solution**
 - ▶ Leverage components of IBM's Health Information Exchange (HIE) asset and IBM's Health Information Network (HIN) solution framework
 - ▶ Leverage resources from IBM's China Development Lab

The OSS/BSS Fulfillment Framework contains a variety of assets

Telecom Operations Content Pack

**Telecom Operations
Capability-Process
Maps**

[eTOM]

**Telecom Operations
Business Services
Templates**

[TAM, eTOM, Best Practices]

**Telecom Operations
Service Interfaces**

[NGOSS SID, Best Practices]

**Telecom Operations
Common Services**

[NGOSS SID, OSS/J, MTOSI]

**Telecom Operations
Business
Object Model**

[NGOSS SID]

**Telecom Operations
Business Glossary**

[NGOSS SID]

Knowledge Assets

Using Telecom Operations Pack Assets in a SOA Solution

MODEL

**Telecom Operations
Capability-Process
Maps**

Rational Software
Architect (UML)

**Telecom Operations
Business Object
Model**

Rational Software
Architect (UML)

**Telecom Operations
Business Glossary**

Fabric Modeling
Tool (UML/FCA)

**Telecom Operations
Business Service
Templates**

Fabric Composition
Studio (FCA)

ASSEMBLE

**Telecom Operations
Business Service
Templates**

WebSphere
Integration Developer
(SCA Modules)

**Telecom Operations
Service Interfaces**

WebSphere
Integration Developer
(SCA Libraries)

**Telecom Operations
Common Services**

WebSphere
Integration Developer
(SCA Modules)

DEPLOY

**Telecom Operations
Common Services**

WebSphere
Process Server
(EAR Files)

**Telecom Operations
Reference
Implementation**

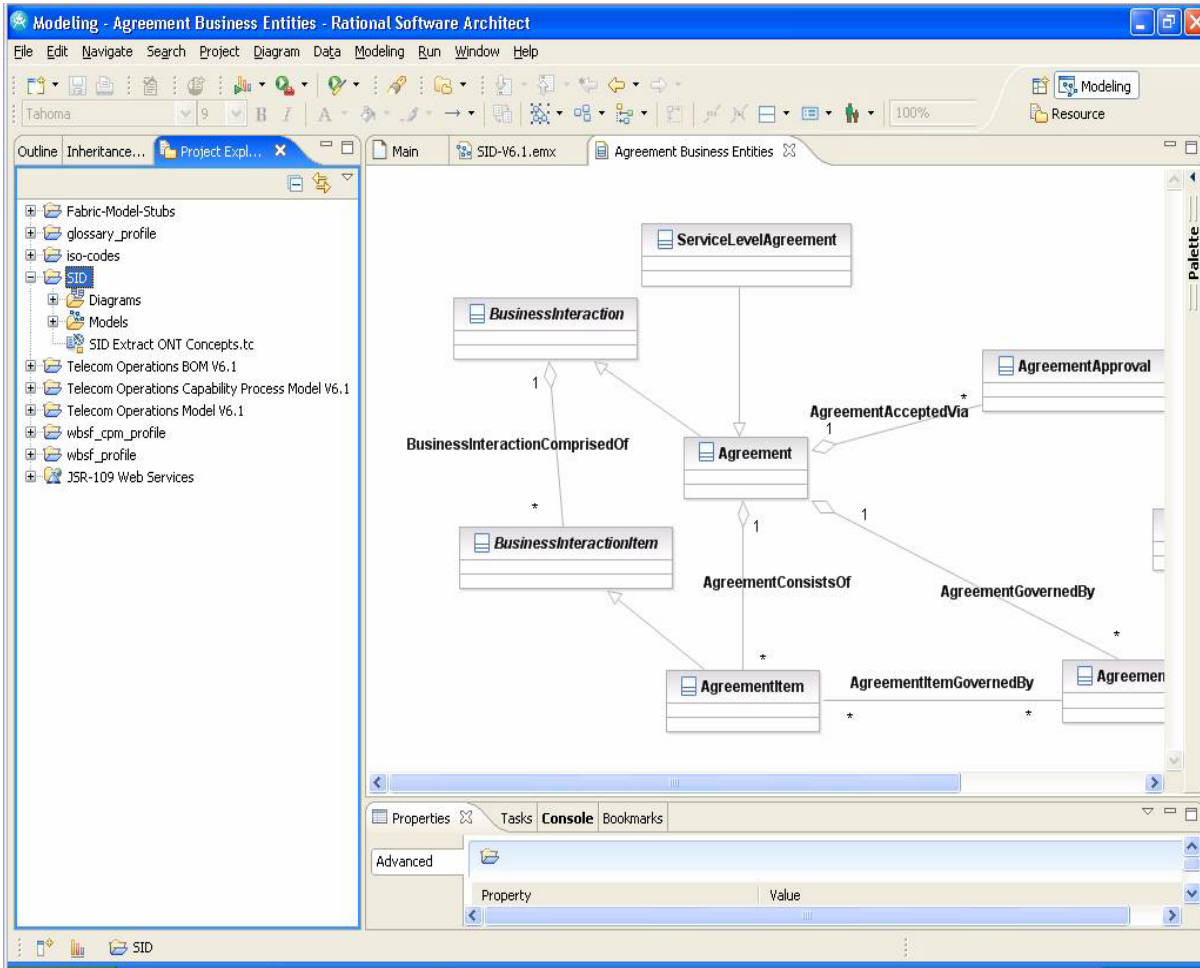
WebSphere
Process Server
(EAR Files)

Customers can
define their unique
KPI metrics
analysis in
WebSphere
Business Monitor

Customers can
define their
unique process
flows in
WebSphere
Business
Modeler

Telecom Operations Business Object Model

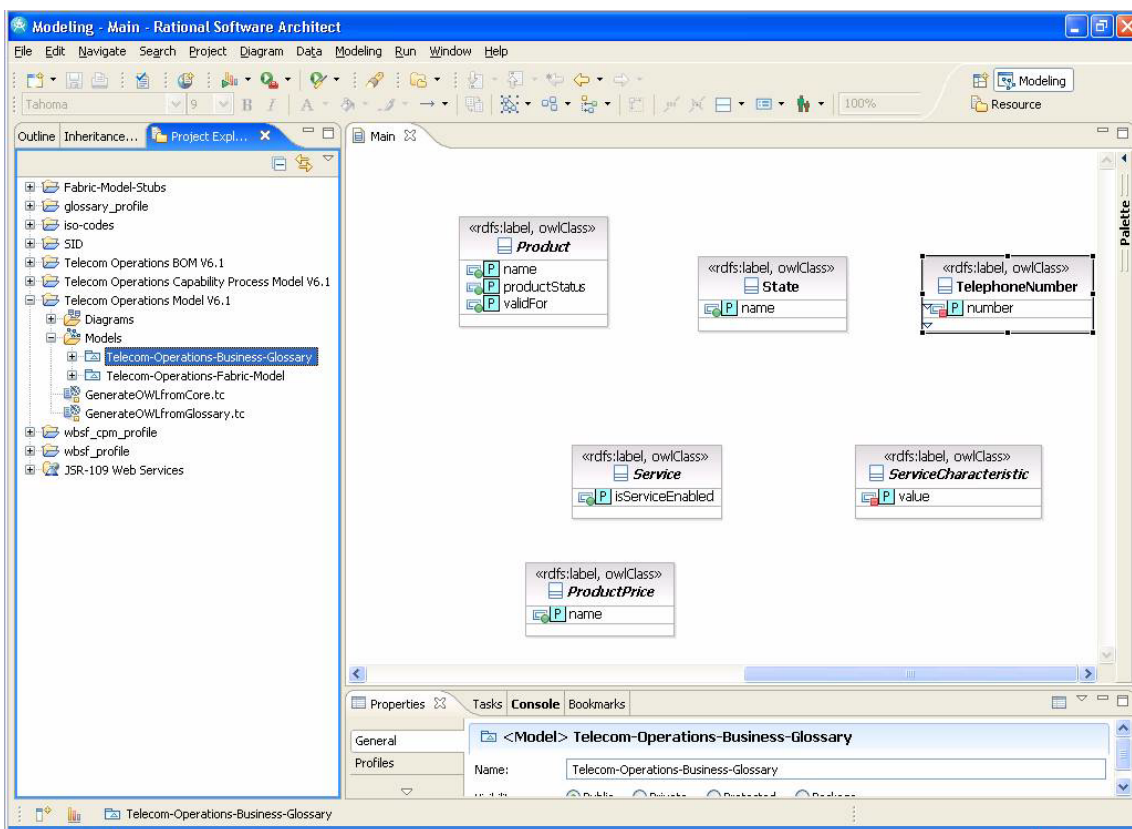
Sample Artifact



- Source
 - ▶ Based on Shared Information Data (SID) Model of NGOSS
- Usage
 - ▶ To create a logical data model and/or operational data stores for telecom business services
- Extensibility
 - ▶ Can be extended with any custom definitions and/or relationships and/or properties and then export it to a logical model data format from which stage a customer-specific operational data store can be created

Telecom Operations Business Glossary

Sample Artifact



- Source
 - ▶ Based on Shared Information Data (SID) Model of NGOSS
- Usage
 - ▶ As a canonical mode, provides a universal language for interoperability across disparate telecom systems
 - ▶ Used to define business services metadata (roles, channels, assertions, policies, notifications) and business process rules
- Extensibility
 - ▶ Can be extended with a new industry standard or a customer/vendor-specific domain model
 - ▶ Can be extended with any custom definitions and/or relationships and/or properties and use these new data types in arriving at a modified business services metadata model

Telecom Operations Service Interfaces

Sample Artifact

The screenshot displays the IBM WebSphere Integration Developer 6.1 interface. The main window shows the configuration for a WSDL Interface named 'Amend Service Order'. The configuration is divided into several sections:

- General Information:**
 - ID: u85e12a21-a0f8-4e94-8ee7-4cb256ec0ace
 - Visibility: Public
 - Namespace: Telecom - Operations Content Pack: WSDL NS
 - Author: system_user
 - Publisher: System
 - Name: Amend Service Order
 - Description: Responsible for amending status of a service order
 - Date Created: Dec 14, 2007 2:16:29 PM
 - Date Modified: Dec 14, 2007 2:16:29 PM
- Resource Information:**
 - Cost: (empty field)
 - Cost Modifier: (dropdown menu)
- WSDL Information:**
 - WSDL URI: file:///idepot/fabric/telecom/operations/scallibr... (with a Details... button)
 - Operations: 1
- Correlations:**
 - Find associated Applications
 - Find associated Business Services
 - Find associated Endpoints
 - Find associated Organizations
 - Find associated Policies

At the bottom of the window, there is an 'Overview WSDL' section with tabs for 'Validations', 'Servers', and 'Conflicts'. Below these tabs is a table with columns for 'Project N...', 'Subject', 'Message', and 'Hint', which is currently empty.

- Service Interface Name
 - Amend Service Order

- Service Interface Description
 - Responsible for amending status of a service order

- Operation Name
 - amendServiceOrder

- Input
 - serviceOrder

- Output
 - serviceOrder

Knowledge Assets

Sample Artifact

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Service design model overview	72
Service specification and message view	72
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- Knowledge Asset Name
 - ▶ Developer's Guide
- Knowledge Asset Description
 - ▶ Explains the technical details of various types of assets packaged in the Telecom Operations Content Pack . It describes the tooling, architecture, usage and extension details of these assets.
 - ▶ 150-page document

BSkyB utilised IBM's Telecom Operations Content Pack to implement New Voice Network Order Management

- **BSkyB Overview**
 - ▶ 9.24 million customers
 - ▶ UKs fastest growing broadband provider with 1.96M customers
 - ▶ UKs fastest growing home telephony service with 1.5M Sky Talk customers
 - ▶ Revenue UKP4.95B (2008)

- In May 2007, BSkyB engaged IBM to evaluate the functional and architectural suitability of current Customer Management (**CM**) and Operations Finance (**OF**) solutions to support existing and evolving business needs.

- The IBM Telecom Operations Content Pack for WebSphere Business Services Fabric was used to implement one of the first CMOF projects (New Voice Network (NVN) Order Management).

- **Key NVN solutions characteristics**
 - ▶ To utilise Business Process Management (BPM) techniques, powered by a Service Oriented Architecture (SOA) to create an agile solution
 - ▶ To integrate with existing Operational Systems (Product Catalog, CRM, Provisioning etc)
 - ▶ To adopt industry standard from NGOSS (SID, eTOM)
 - ▶ Deliver Business Activity Monitoring (BAM) capabilities to provide a business level view of the fulfilment process
 - ▶ Adopt a configurable Product Catalog based approach to decomposing product offerings

- **Key NVN Solution Components**
 - ▶ IBM Telecoms Reference Business Process Asset
Reference set of OSS/BSS business processes for use within WebSphere Business Modeler

 - ▶ WBSF Telecoms Operations Content Pack (TOCP)
Provides implementation of NGOSS System Information/Data Model (SID) and associated Telecom Applications Map (TAM) aligned interfaces for OSS/BSS.

 - ▶ WebSphere Business Modeler
Business modelling tool, enabling Business Analysts (BA's) to communicate their ideas graphically to a technical audience.

 - ▶ WebSphere Business Services Fabric (WBSF)
Provides a Business Process run-time platform, with the ability to select supporting services dynamically, based on business policies.

 - ▶ WebSphere Business Monitor
Delivers a real-time Business Activity Monitoring (BAM) capability, based on Key Performance Indicators (KPI) and derived metrics.

 - ▶ WebSphere Integration Developer (WID)
Integration platform, for assembling WBSF solutions

Drivers for Smarter SOA

Building on Industry Expertise

Enabling Smarter Application Development

Enabling Smarter Application Development

Rapid Start

Reuse Existing Assets

Business Agility



Challenges for Getting Started Quickly

- Growing application backlog
- Takes weeks to set up application environments
- Up to 9 month deployment cycles
- 30% of all defects are caused by wrongly configured test environments



SOA-enabled Cloud Services For a Rapid Start



Use Private Clouds to Speed Application Deployments

WebSphere CloudBurst Appliance

- Fast deployment in minutes
- Pre-defined patterns
- Track usage for chargeback
- Cost-effective, secure appliance

WebSphere Application Server Hypervisor Edition

- Instantly run on a hypervisor
- Pre-configured virtual image



Enabling Smarter Application Development

Rapid Start



Reuse Existing Assets

Business Agility

Service Visibility & Governance *Plays Key Role in Accelerating Reuse*



30%

Increase in software reuse as organizations adopt Smart SOA

Source: Cross-industry averages based on estimates by IBM's Business Value Assessment Team



50+%

Companies use unreliable FTP to transfer business critical docs

Source: Software Strategies "Enterprise Integration Challenge" 2009



49%

Increase in customer data breaches in 2008 over 2007

Source: Identity Theft Resource Center, January 2009



"Unregulated duplicate services is the most pressing governance issue."

Source: eBizQ SOA Market Pulse, April 2008

Promote Reuse with Policy Driven Governance

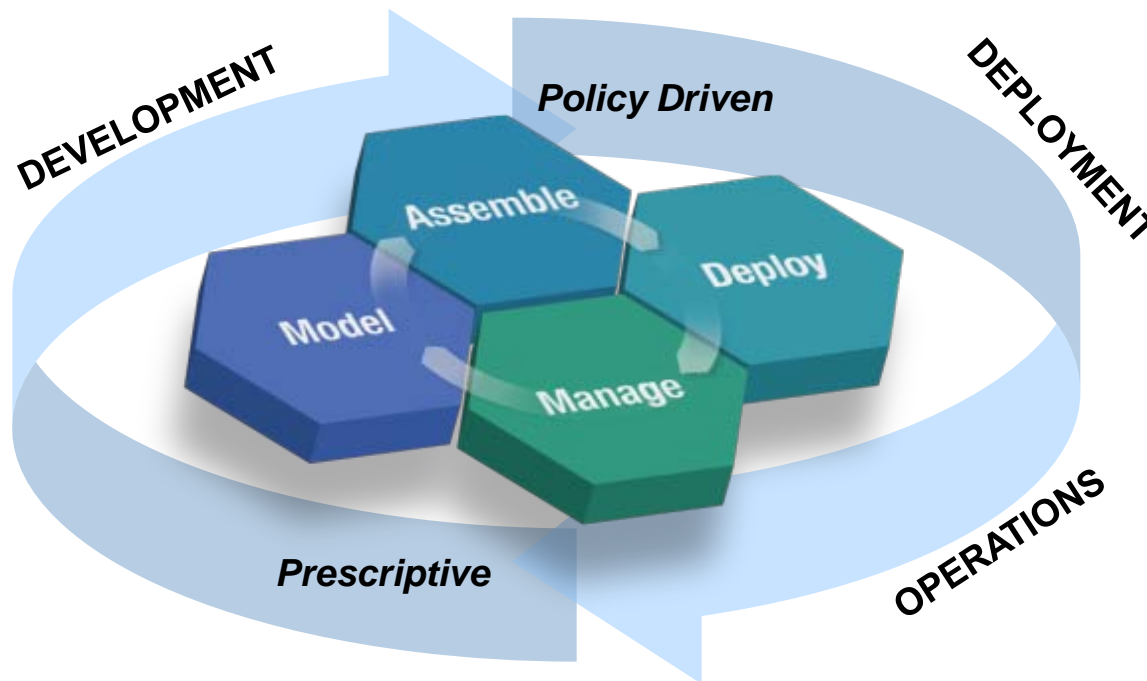
From Design to Runtime

- Automated metadata exchange across design and runtime
- Prescriptive lifecycle governance with out of the box policies

Enhanced!

WSRR Advanced Lifecycle
Edition v6.3

WebSphere DataPower
SOA Appliances v3.7.3



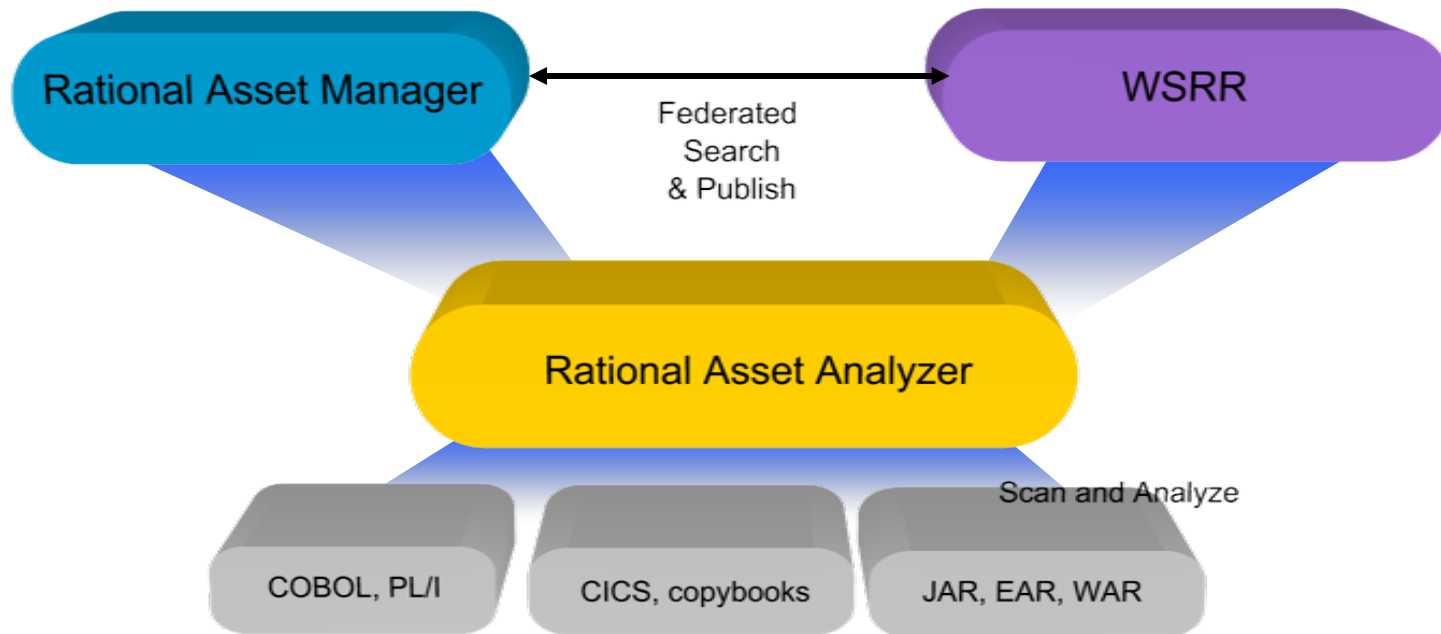
SOA Governance from Design to Runtime

Rational Asset Manager & WebSphere Service Registry and Repository

Extend Reuse to Mainframe & Web Applications

By Bridging Gap between Assets, Services & Transactions

- Gain clarity on application portfolio, assets and services
- Publish and manage assets across organizations
- Discern application impact of services and underlying processing



AMB Generali Optimizes Global Claims Process with Service Visibility and Governance



AMB GENERALI

Industry Pains

- Inefficient claims processes
- High admin expenses

Smarter Business Outcomes

- Projected savings of \$50 million
- Reduced inefficiencies
- Improved service quality



Why Smart Service Visibility and Governance?

Increased reuse and better strategic alignment of IT through effective governance leading to increased efficiency and improved service quality

Enabling Smarter Application Development

Rapid Start

Reuse Existing Assets

Business Agility



Enable Greater Business and IT Collaboration



Empower business users
Partner with IT

Automate business decisions
Quickly deploy changes



Business Rule Management

Capture New Insights for Dynamic Change

Business Event Processing



Event

In-store credit card purchase

Business Context

3rd in-store purchase
in 8 weeks and total
purchases > \$500



Action

Offer customer
an immediate
loyalty discount

- Actionable insights from real-time business events
- Patterns and correlations elevated to business users
- Broad range of event sources

Enhanced!

WebSphere Business Events

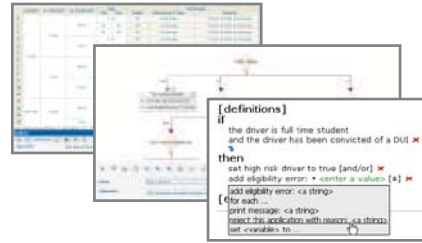


EXEC04

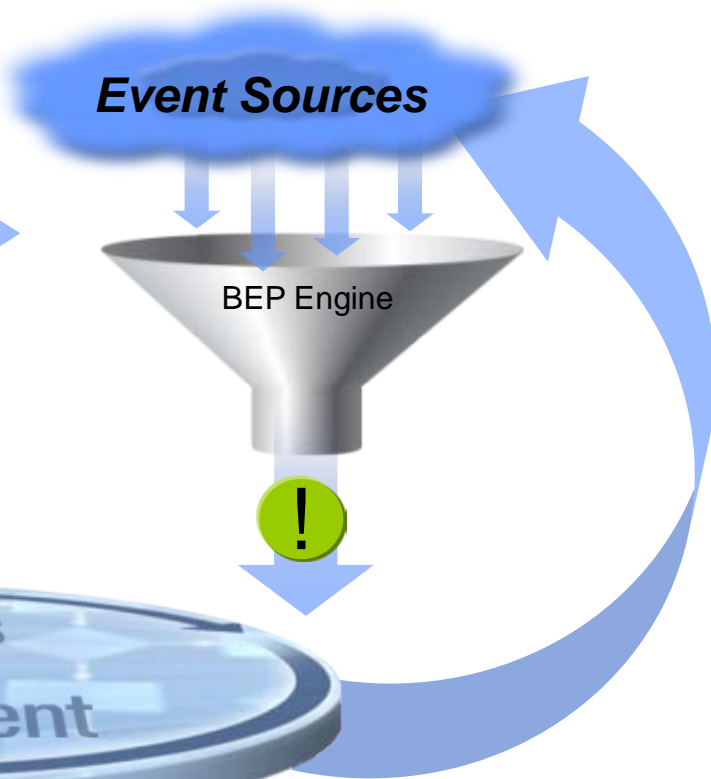
Actionable Real-time Insights and Responsiveness

Empowering Users, Increasing Business and IT Collaboration

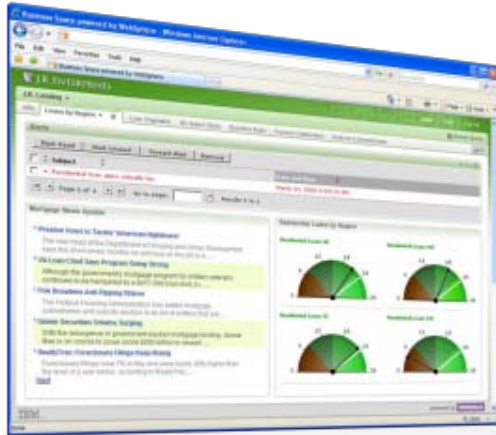
DECIDE (Business Rules)



DETECT (Business Events)



MONITOR (Activity Monitor)



ORCHESTRATE



Know What's Happening, When to Act, and What to Do

Drivers for Smarter SOA

Building on Industry Expertise

Enabling Smarter Application Development



Thank You

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