

IBM SOA Architect Summit



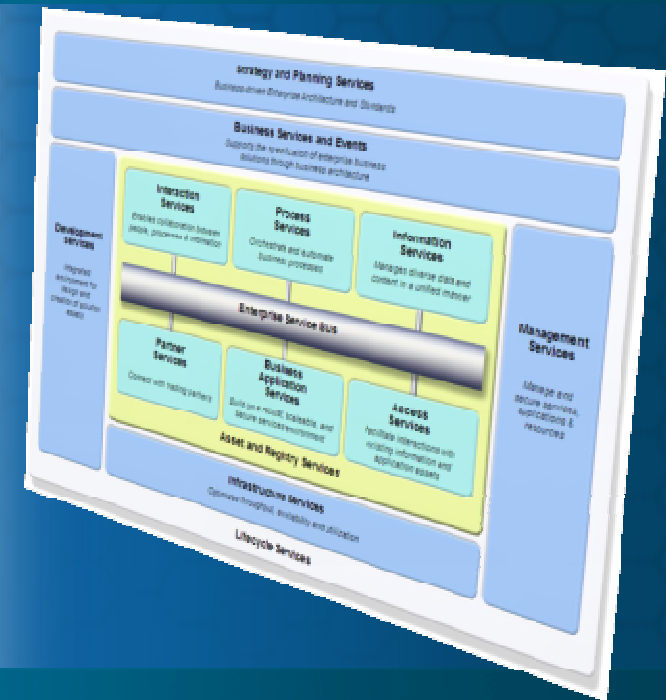
SOA on your terms and our expertise



IBM SOA Architect Summit

Developing SOA Solutions

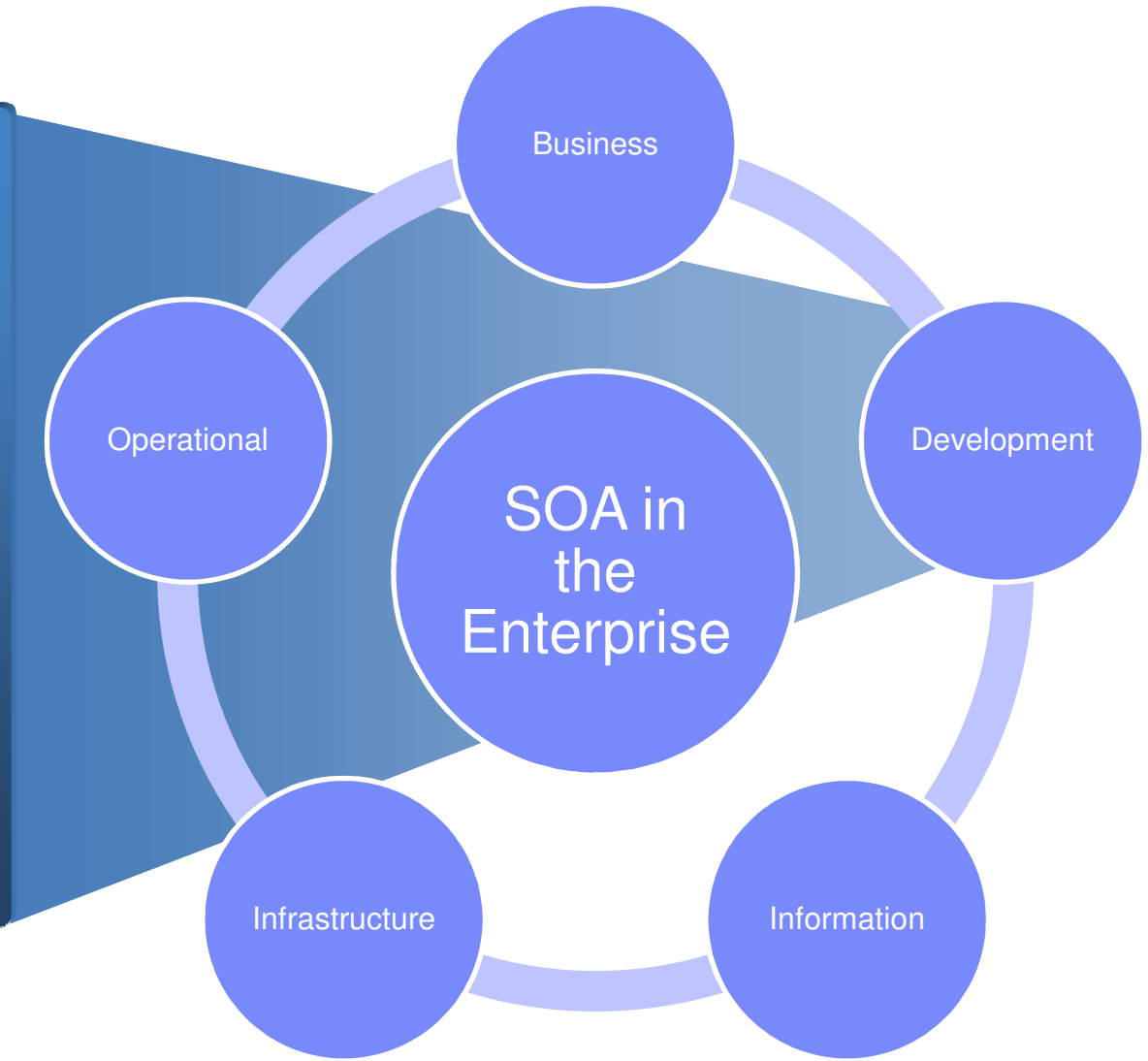
Manuel Rodríguez Rodríguez
Software IT Architect
manuel.rodriguez@es.ibm.com



Service-Oriented **Architecture** in the Enterprise

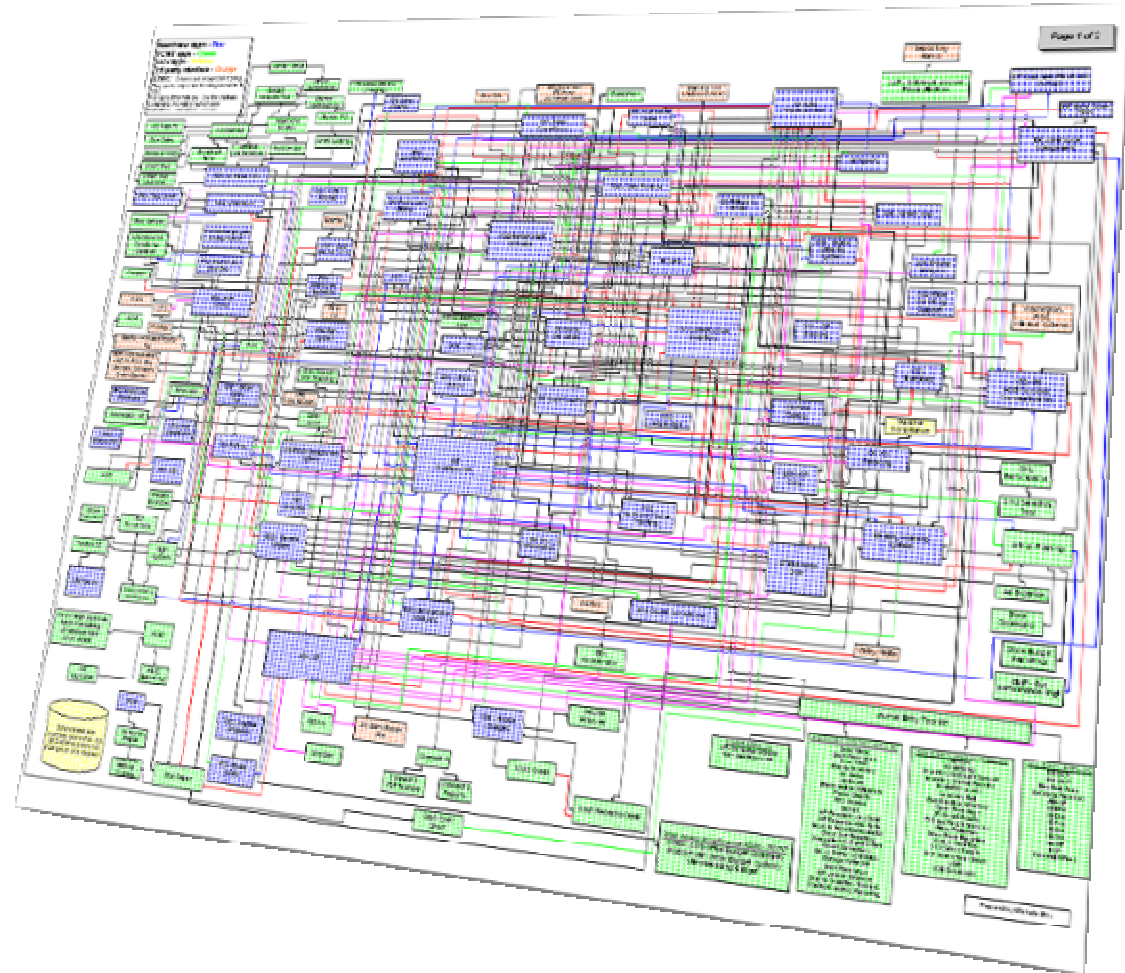
As a software delivery team, how do we

- ...leverage our valuable IT assets from the silos?
- ...extend the reach and flexibility of our services to satisfy a wide audience?
- ...enact business models thru interconnected services?
- ...realize agile SOA software to run our agile business?
- ...collaborate smartly across geographic, social and organizational boundaries to efficiently deliver software?



Barriers to Business IT Reuse and Flexibility

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



Barriers to Effective Software Delivery



*“Only **37%** are satisfied with the speed of software development”*



*“Only **42%** of users are satisfied with quality”*



*“**50%** of outsourced projects are expected to under perform”*

Silos of people, process, and projects

Geographic Barriers

- Poor communication
- Language, culture, time
- Process gaps resulting in rework
- High degree of friction

Organizational Barriers

- Lack of meaningful collaboration
- Weak project governance
- Lack of domain expertise
- Poor LOB oversight
- Security of IP when outsourcing

Infrastructure Barriers

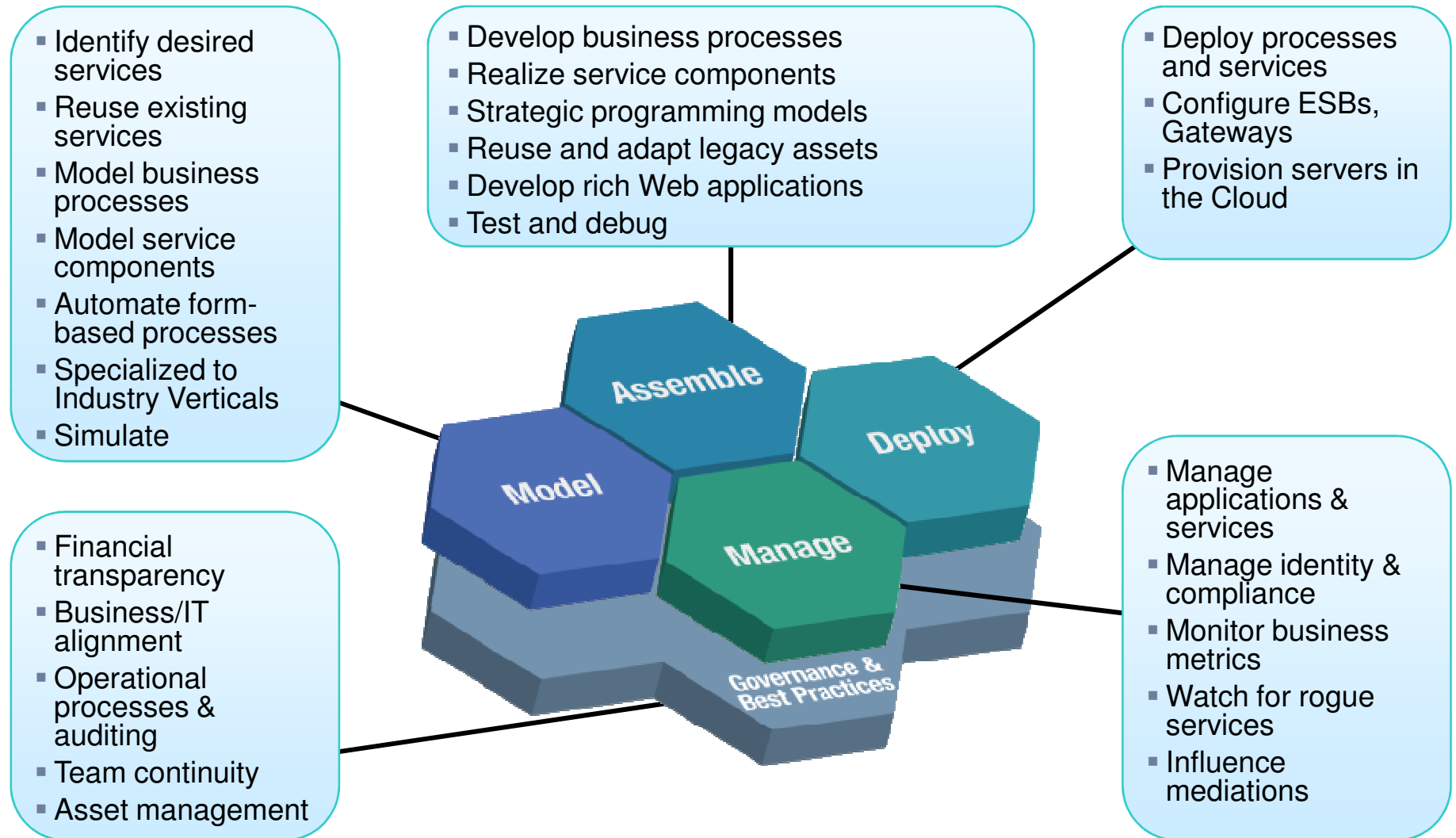
- Incompatible tools / repositories
- Unreliable access to artifacts
- Lengthy on-boarding
- Inflexible tooling integration

Agenda

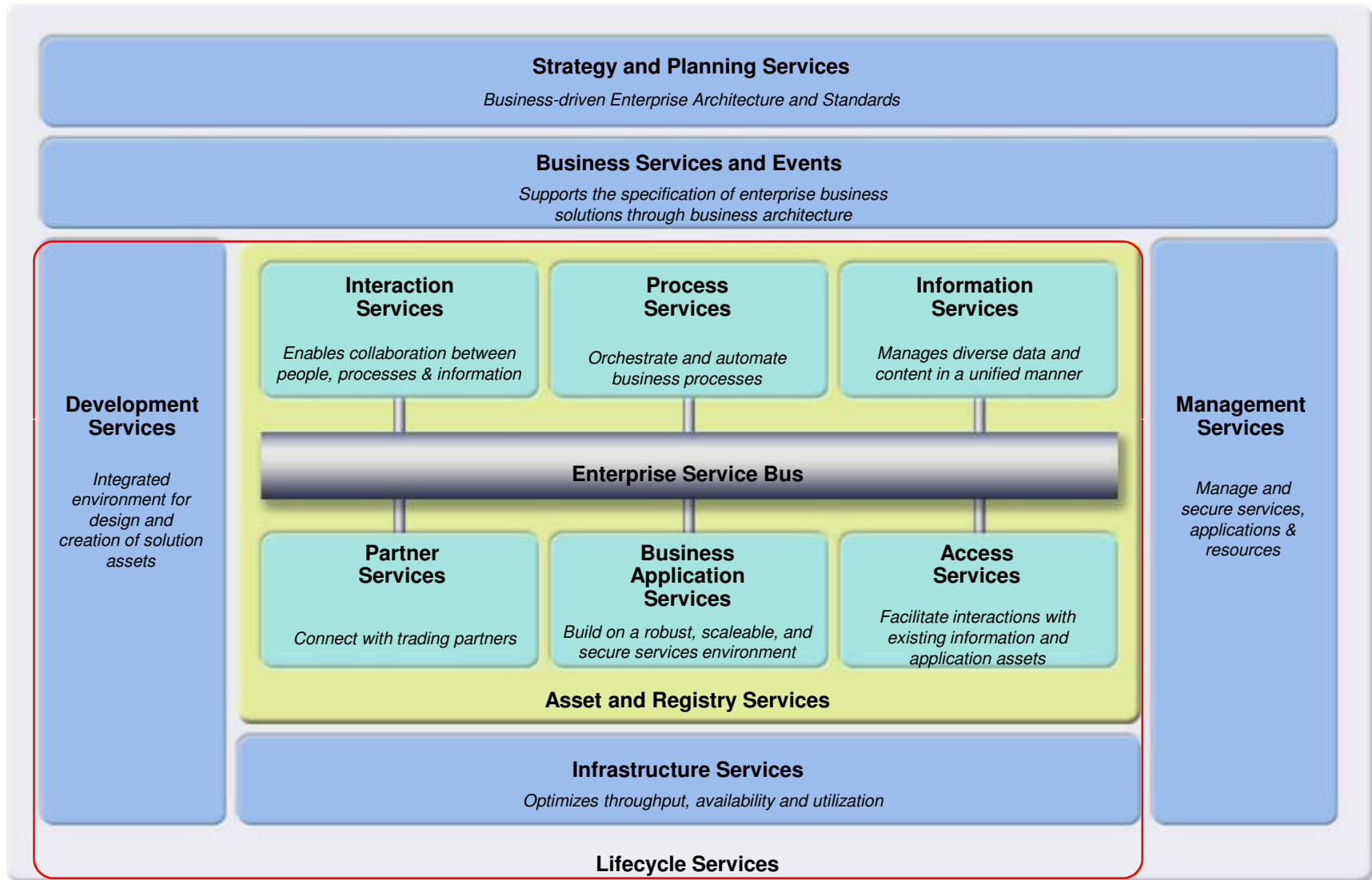
- **A Foundation for SOA Development**
- Entry Points and Service Patterns
- Model, Assemble, Deploy, Manage
- Development is a Team Sport
- Summary



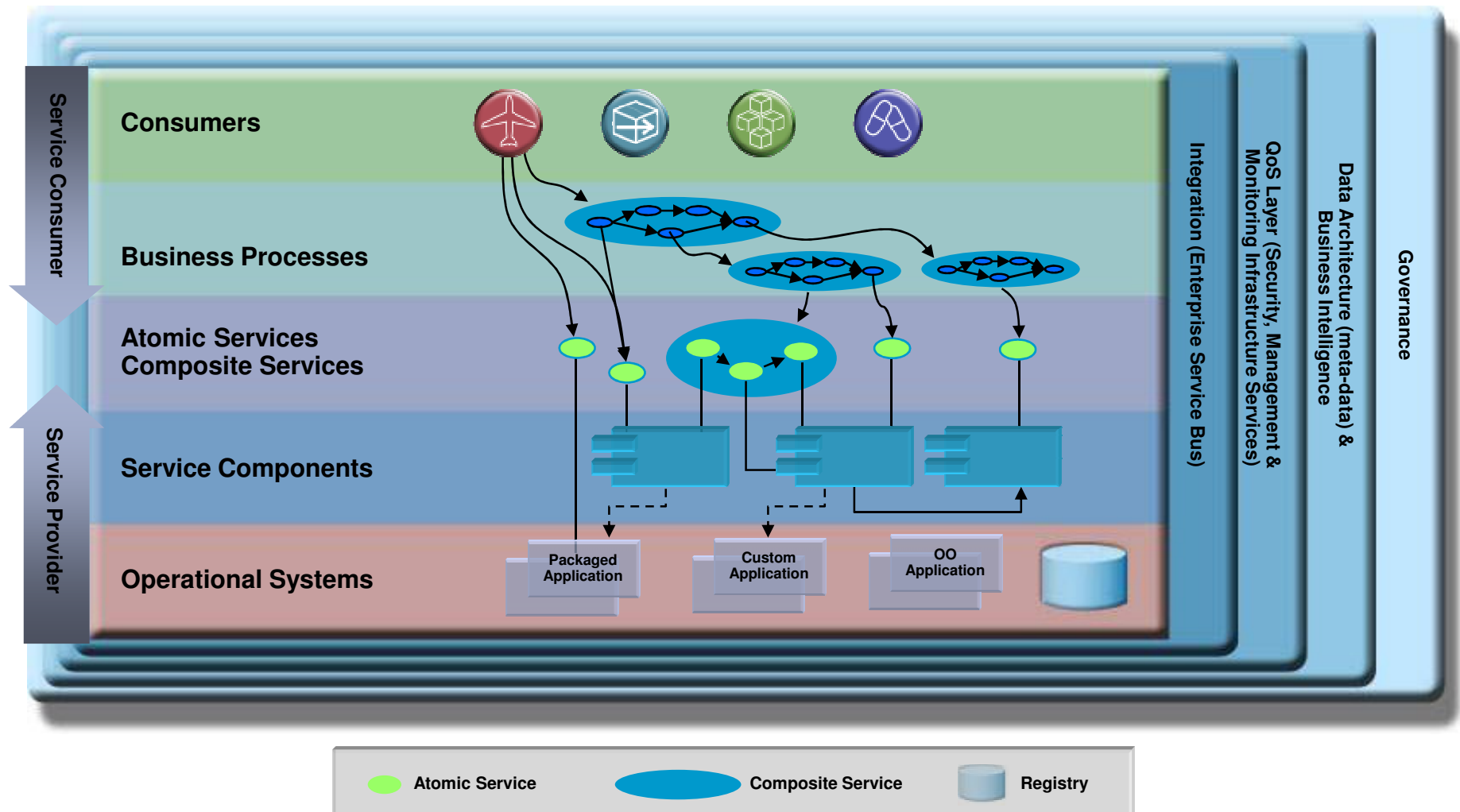
SOA Development and Governance Lifecycles



SOA Foundation Reference Model



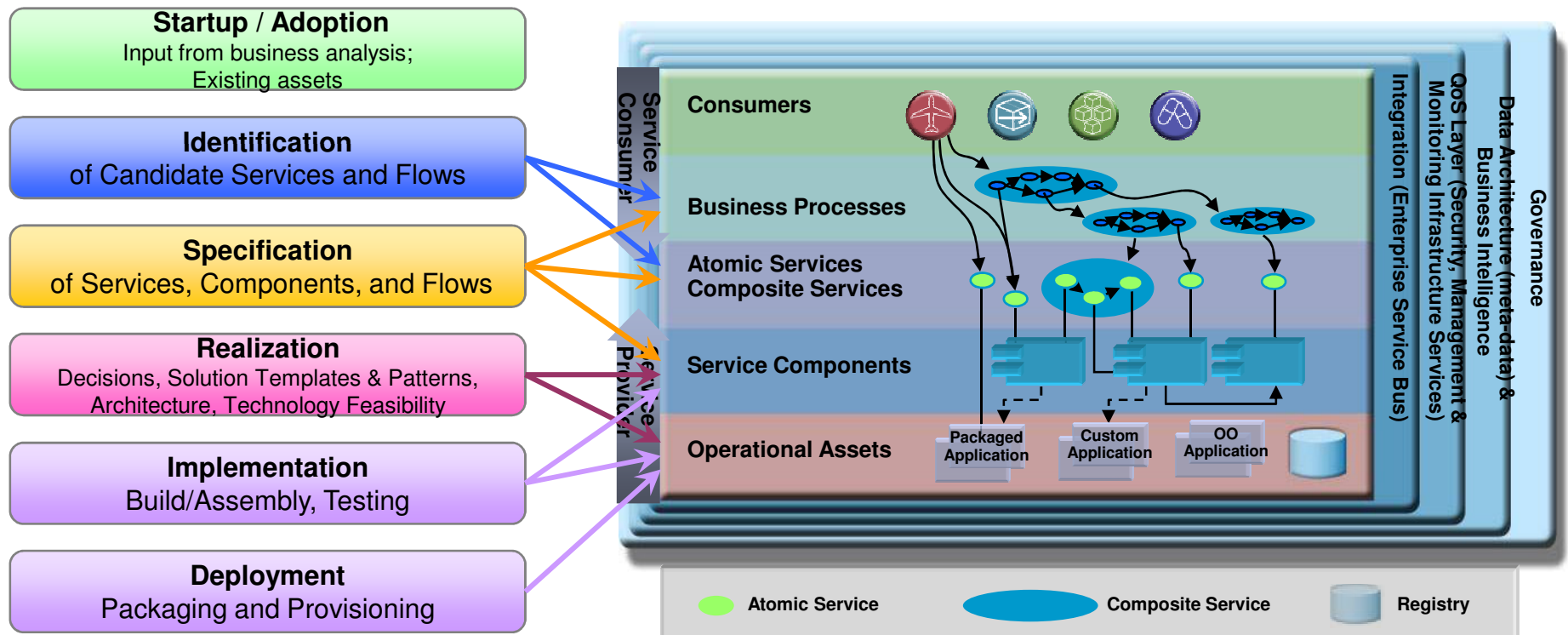
SOA Solution Layering – Realized by Development



SOMA – Service Oriented Architecture & Modeling

Bridges the gap between business intent and IT deployment

SOMA is all about the identification, specification, realization, implementation, and deployment of services, components, and flows.



The "A" in SOA

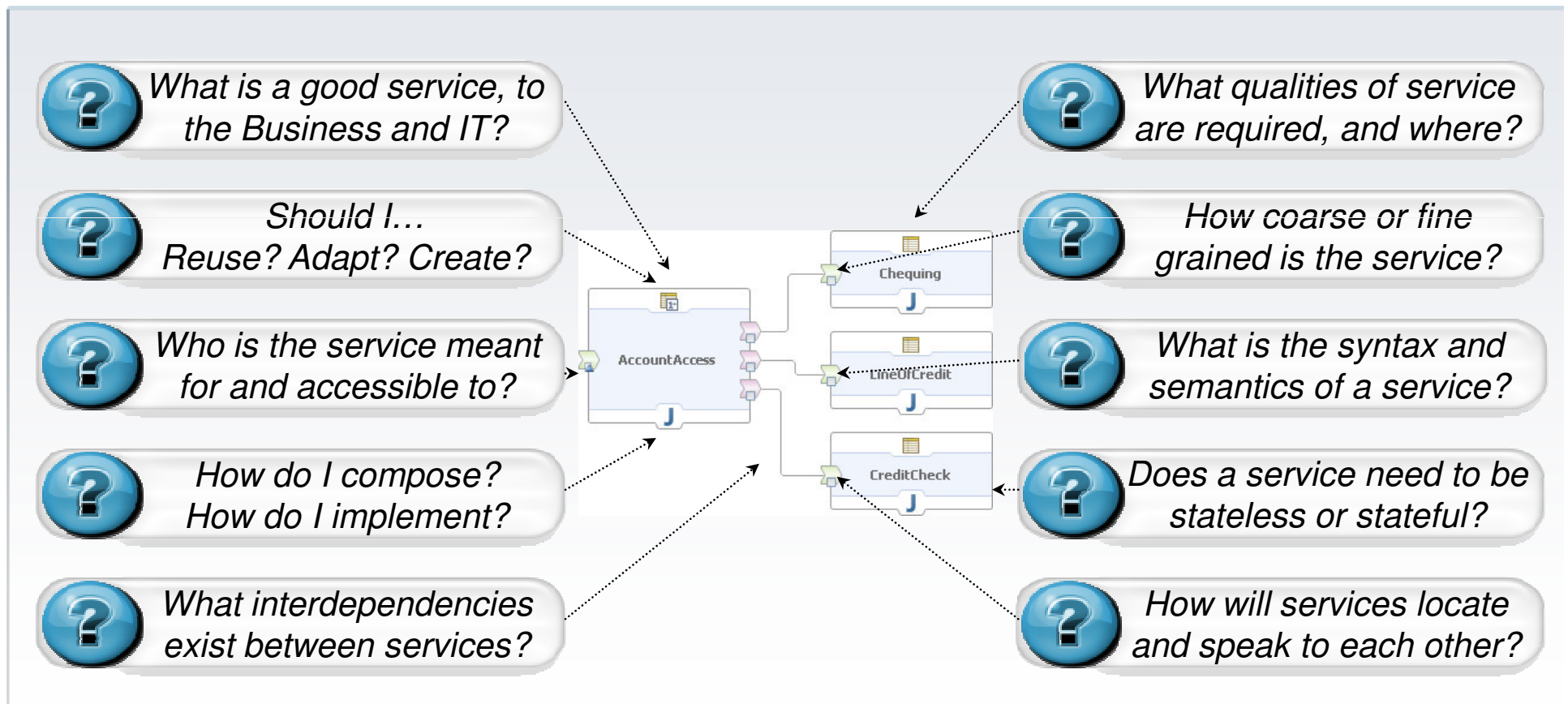


Software Architect

SOA is an architectural style, not an architectural decision maker.

What do I need to think about?

What decisions do I need to make?



Agenda

- A Foundation for SOA Development
- **Entry Points and Service Patterns**
- Model, Assemble, Deploy, Manage
- Development is a Team Sport
- Summary



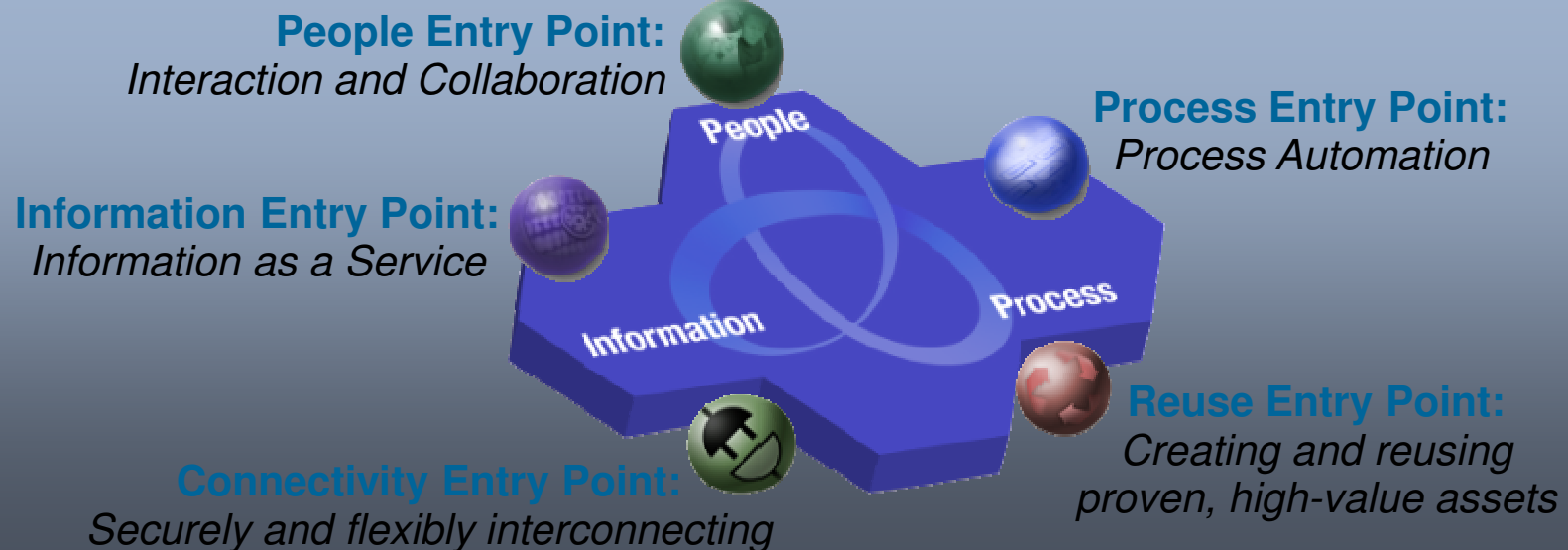
Efficient SOA Development in a Challenging Economy

There is no one-size-fits-all entry point into a SOA project.

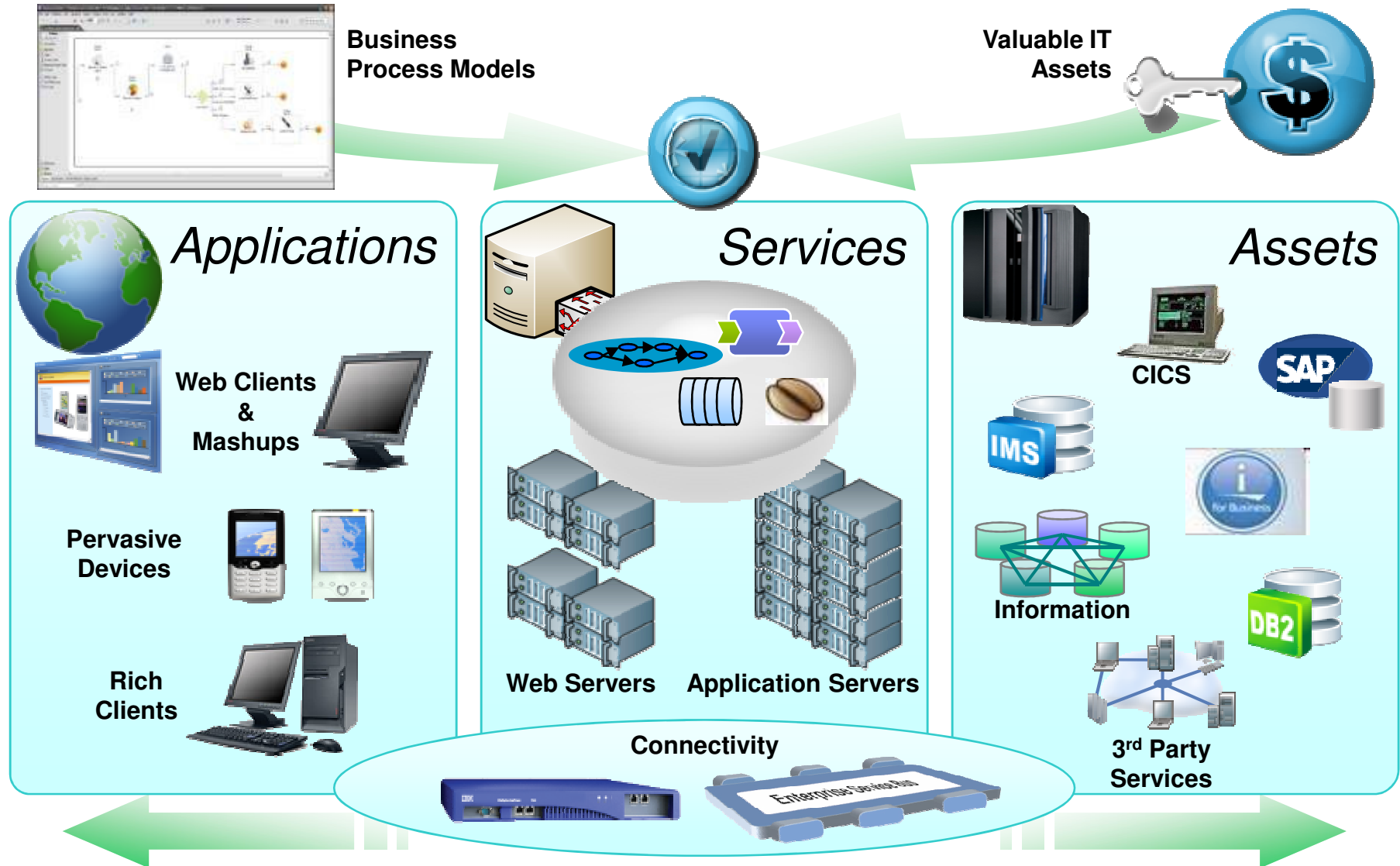
Therefore, there are many technical or operational ways to proceed.

However, all tend to involve...

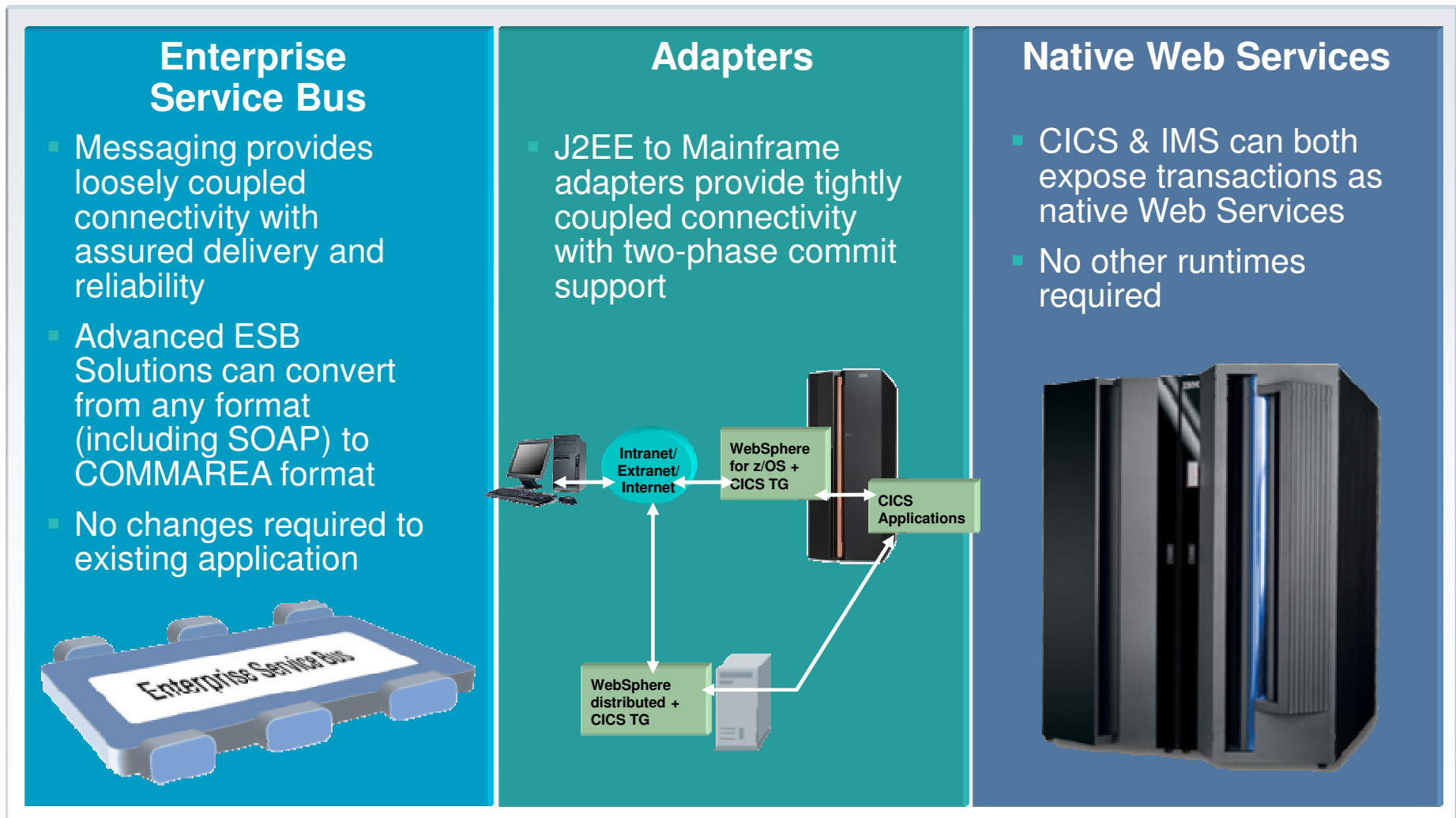
- Recognition of multiple roles with tooling tailored to those roles.
- Progression thru the phases of the SOA lifecycle.
- Realization of different logical kinds of services.
- Realization of the solution layering.
- Governance over the software delivery lifecycle.
- Collaborative teamwork.



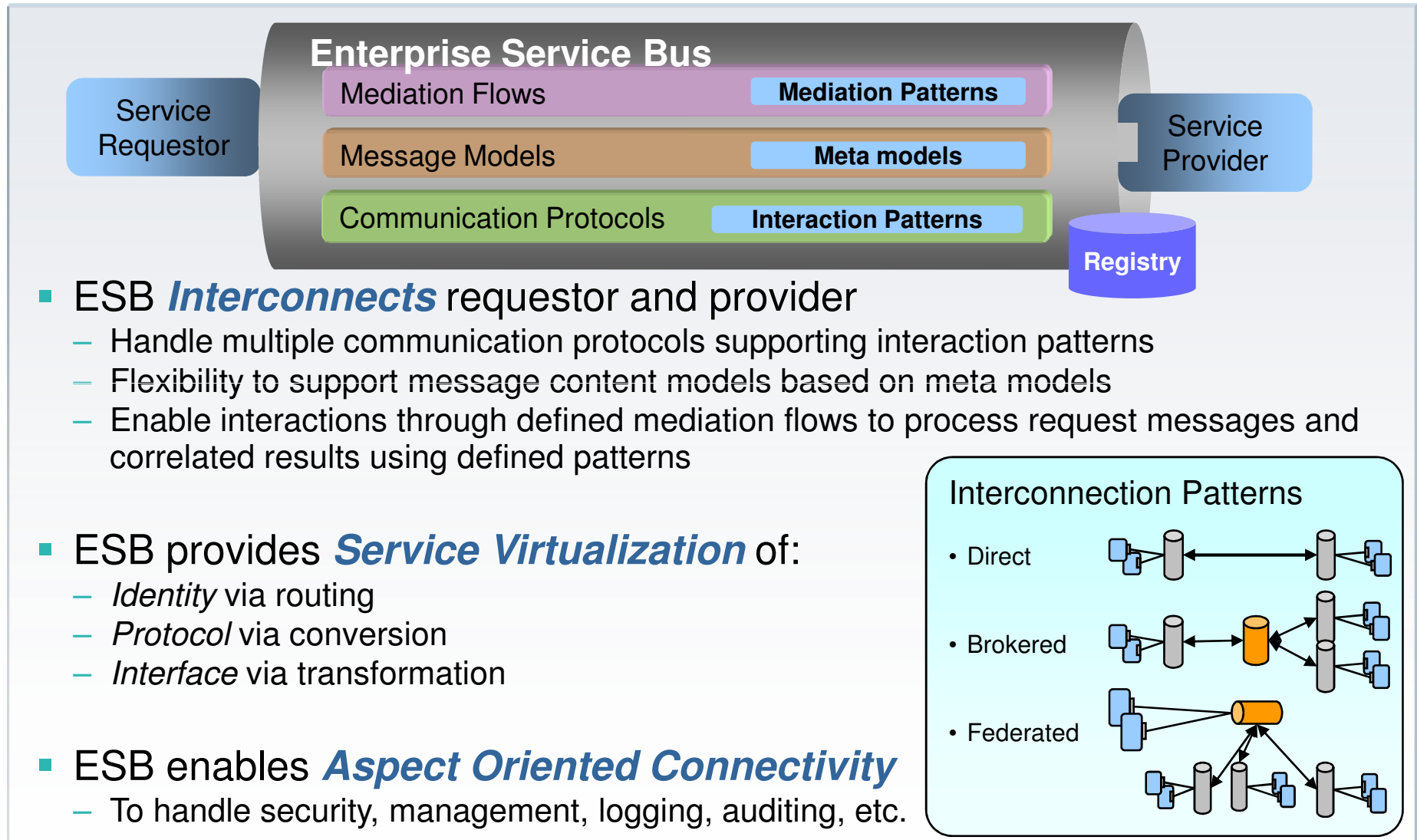
Reuse Opportunities Abound



Adaptation of Legacy Assets to Services



Connectivity – The ESB Architectural Pattern



Agenda

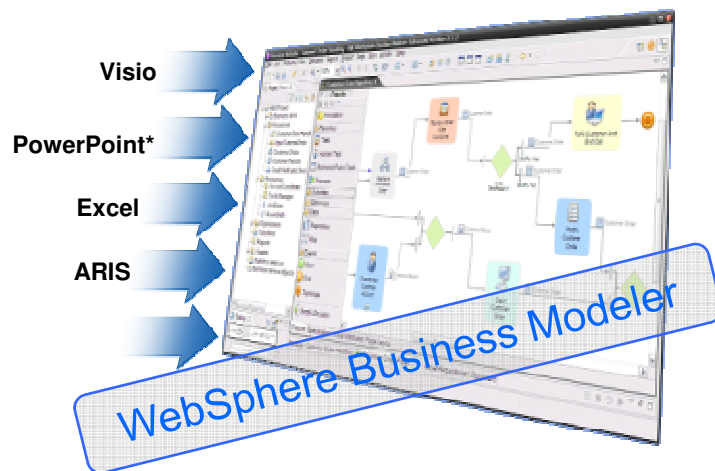
- A Foundation for SOA Development
- Entry Points and Service Patterns
- **Model, Assemble, Deploy, Manage**
- Development is a Team Sport
- Summary



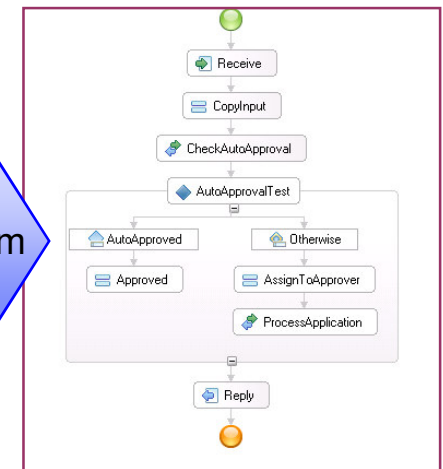
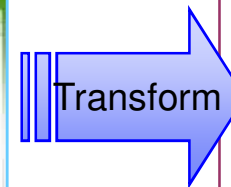
The “B” in BPM – From Business to IT



- See and learn about the business value of BPM through business relevant BPM content
- Experience BPM by creating business strategies and processes in the cloud
- Accelerate BPM with free pre-built accelerators
- Connect and network with the BPM Business Community through online collaboration services
- Capture business intent and high level business processes in a hosted environment



- Model...
- Simulate...
- Analyze...
- Storyboard...
- Collaborate...
- Realize...

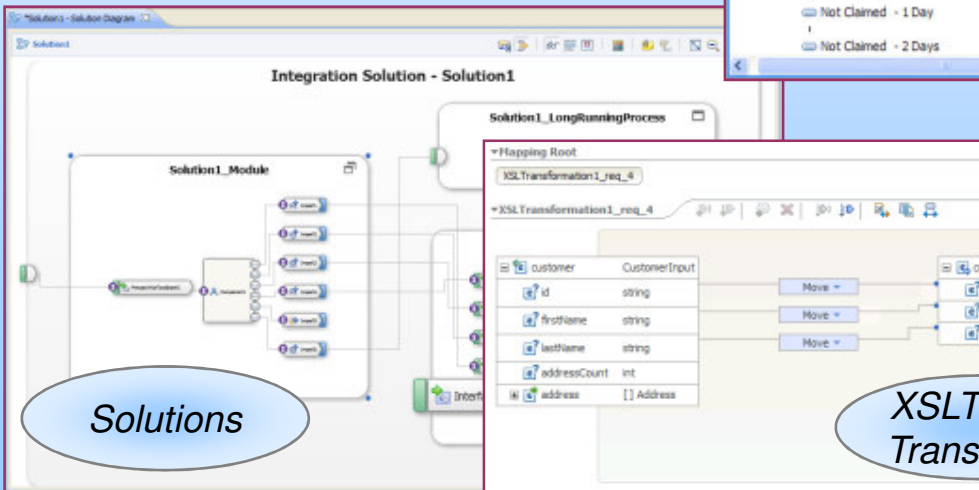
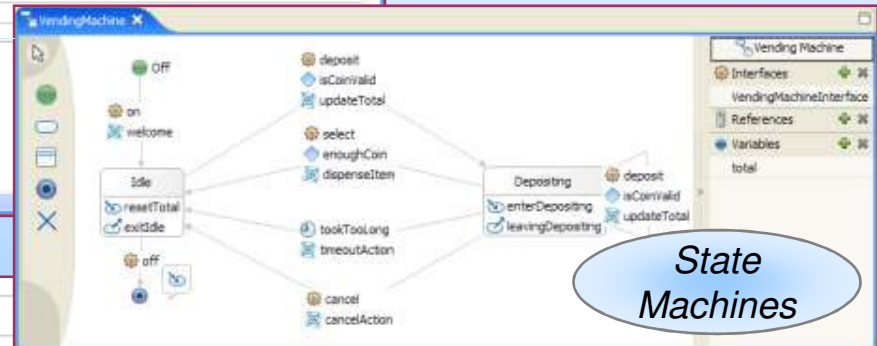
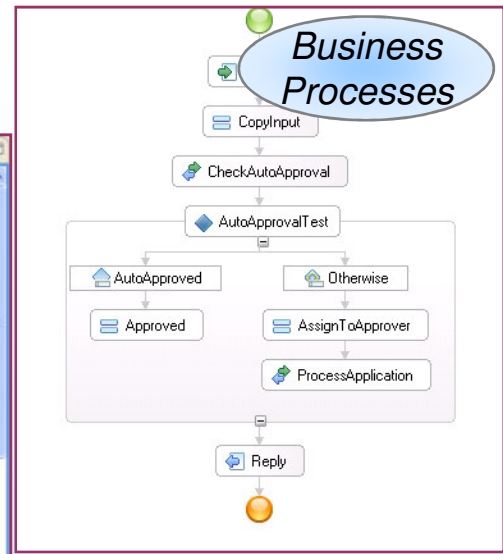


Technical Process Choreography

WebSphere Integration Developer

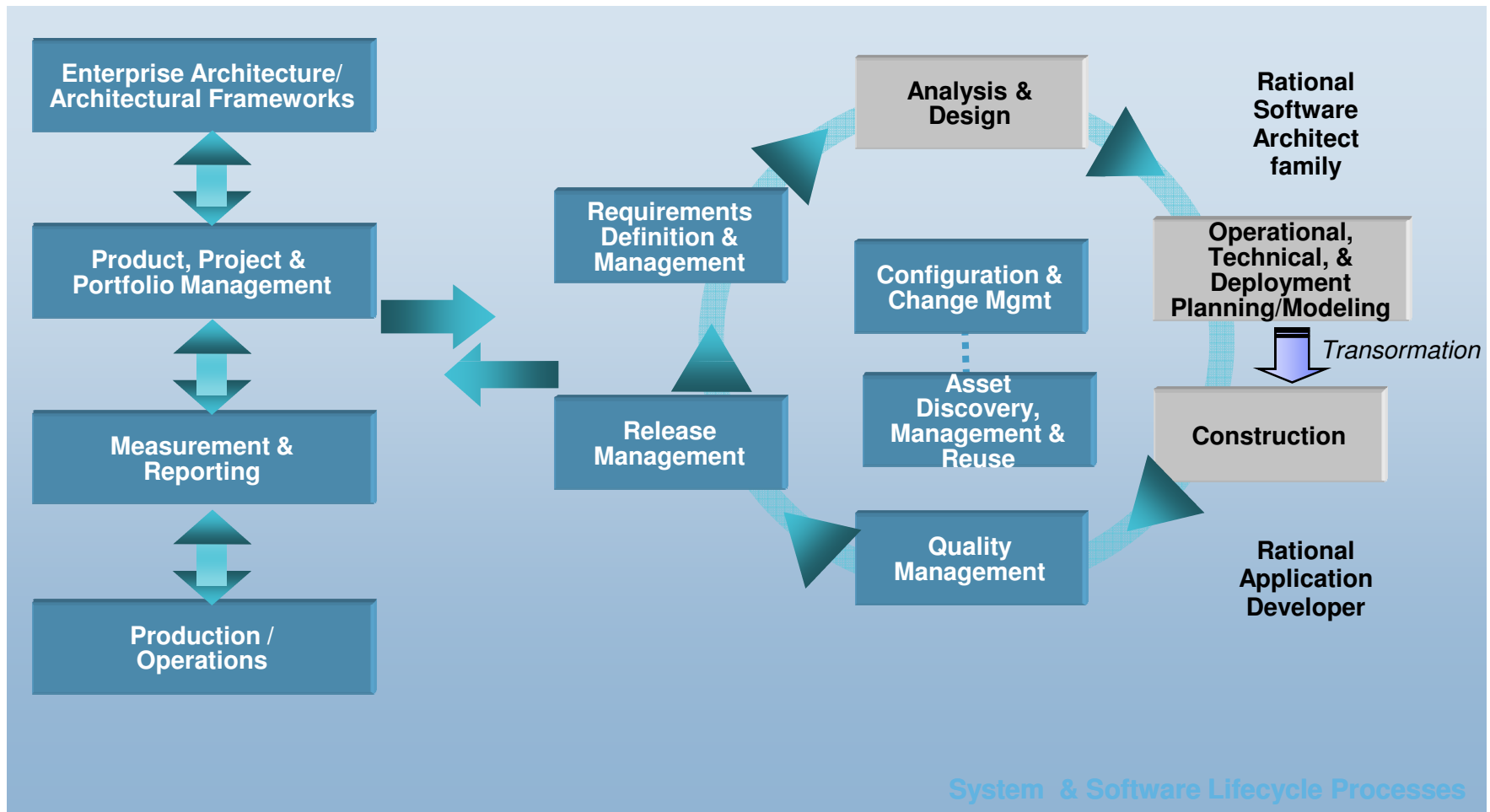
- Choreograph reusable assets into executable processes with automated and human tasks.
- Design processes, or import from WBM business models.
- Manage business rules.
- Define mediation flows.
- Map and adapt dissimilar service components.

Human Tasks

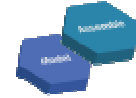


Business Rules

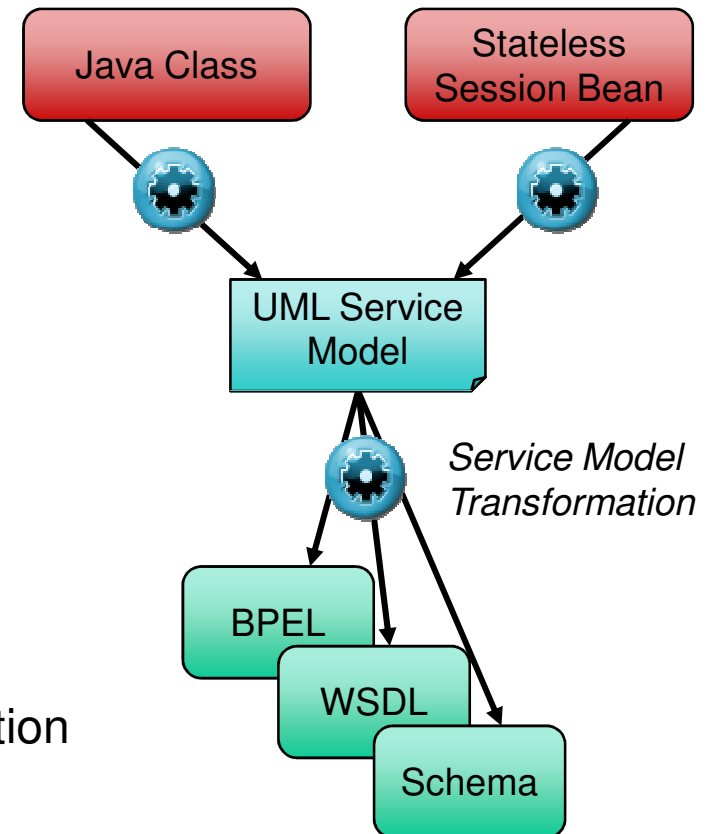
IT SOA Modeling



SOA Modeling and Transformation



- XSD visualization of individual XSD files
- XSD-to-UML
- Service modeling transformations
 - Java-to-Service Model
 - SessionBean-to-Service Model
- Software Services Profile tooling
- Merge enhancements
- UML-to-XSD, UML-to-WSDL support
- UML-to-BPEL support for Human Task generation
- SOA transformation extension sample

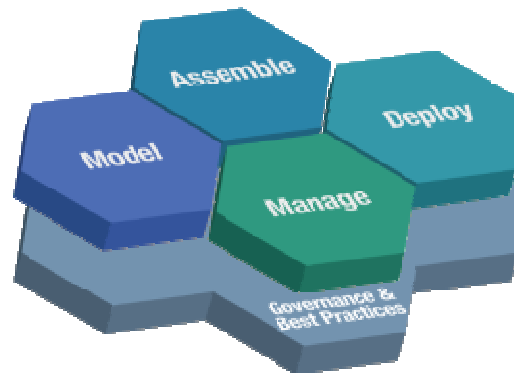




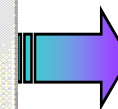
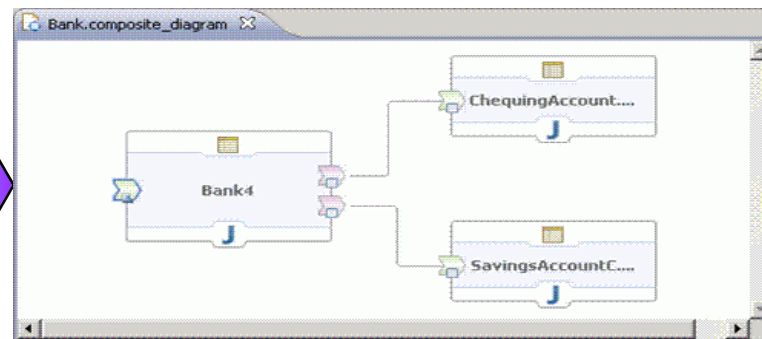
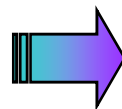
Open Service Component Architecture – SCA

An open, emerging standard programming model for assembling flexible SOA business solutions from diverse, reusable service enabled IT assets

- Define interfaces.
- Reuse implementations.
- Assemble components.
- Choose bindings.
- Declare policy intents.

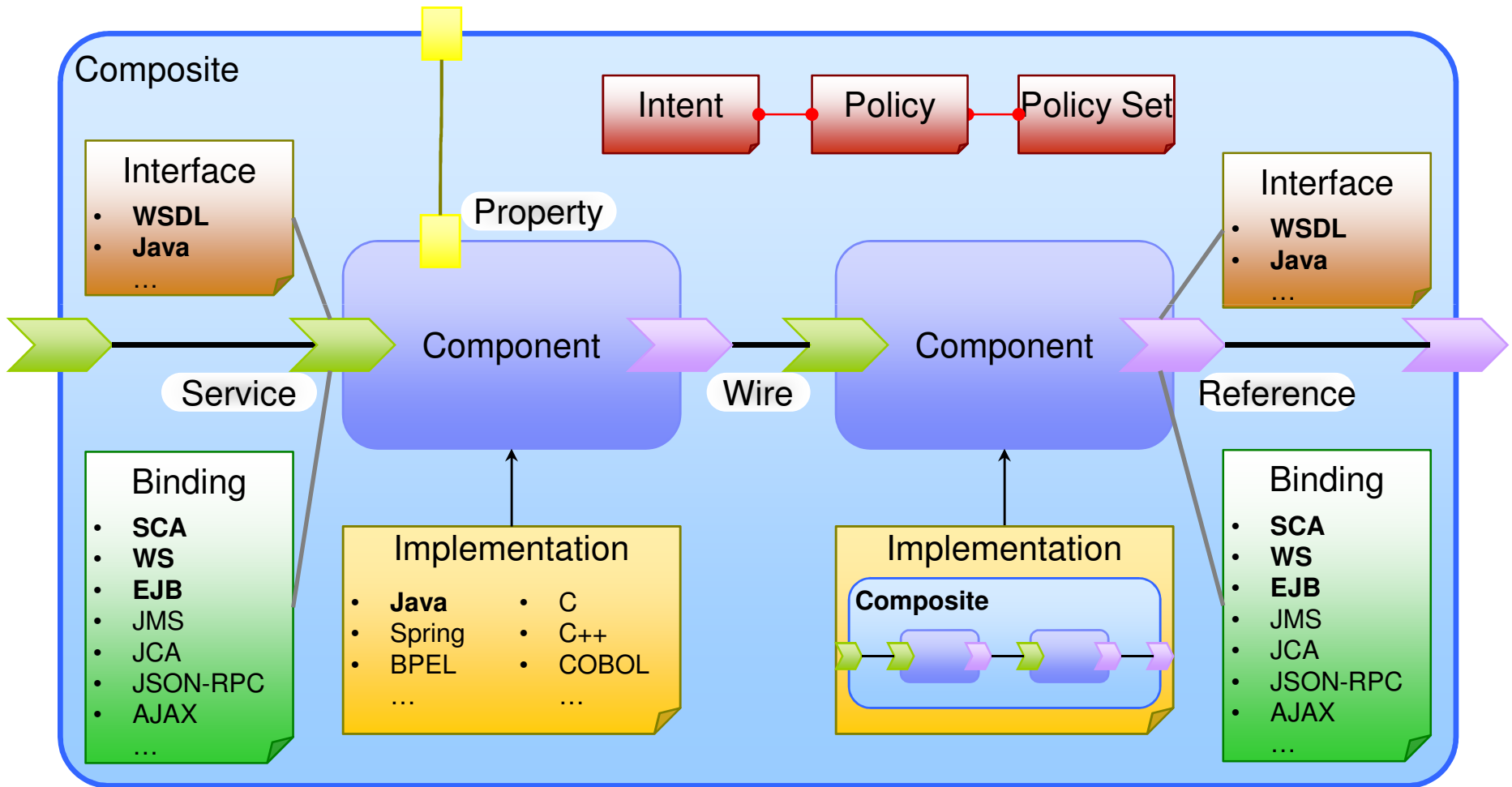


- Contribute composites.
- Deploy.
- Late binding.
- Debug.
- Run.
- Administer.



SCA

- *Assembly of SOA solutions from diverse implementations.*
- *Extend the reach of services thru multiple bindings.*
- *Embrace rapid change thru declarative style & late binding.*

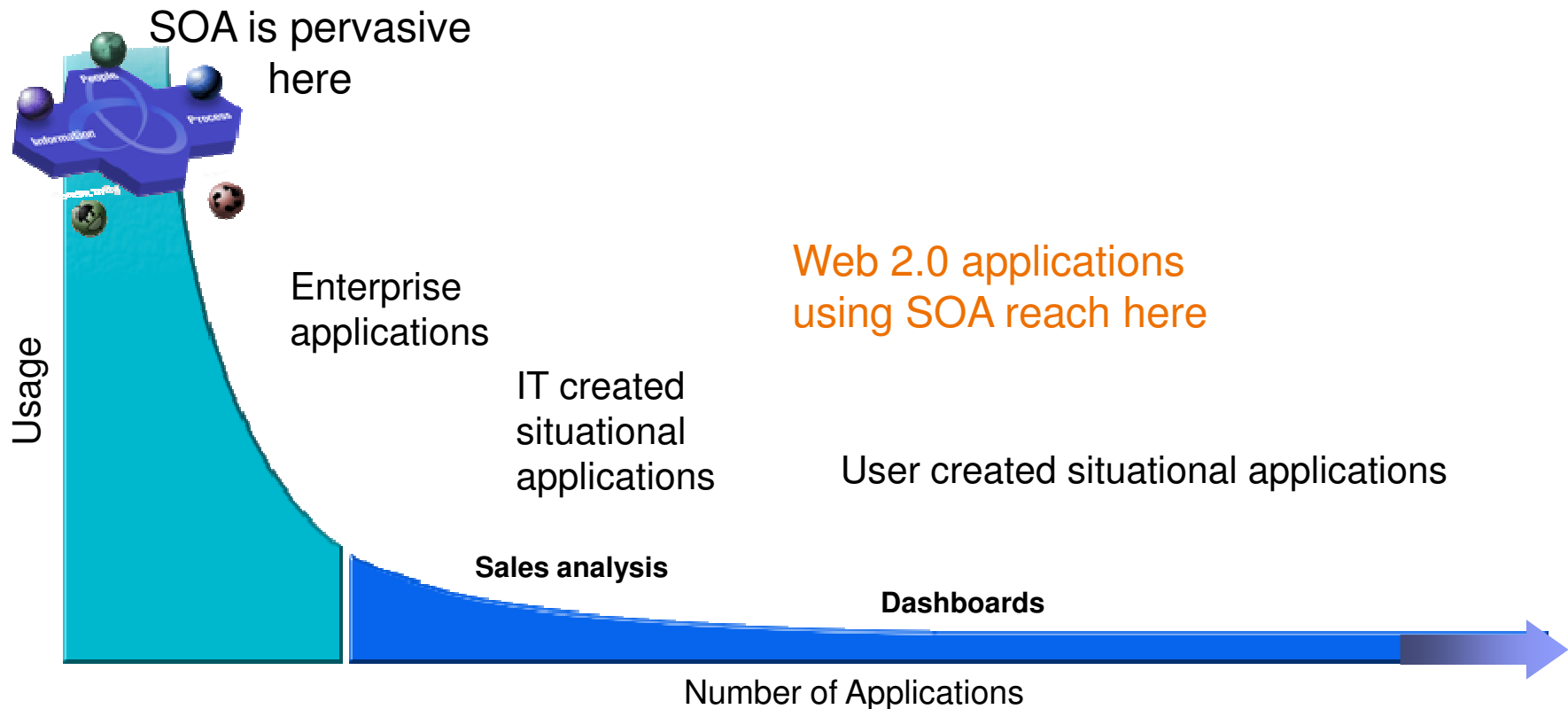


Web 2.0 Applications Use SOA

Serving New Markets with Specific Needs via Situational Applications



From dozens of markets of millions of users to millions of markets of dozens of people



WebSphere sMash: **Speed, Simplicity & Agility**



■ Speed

- Dynamic scripting languages (**PHP** and **Groovy** – with Java as system language)
- **Convention over configuration, pre-built services, templates**

■ Simplicity

- **Built-in browser-based composition tools: Visual tools** (for web page construction or scripting activities into a flow) and **scripting tools** (server-side dynamic scripting)
- **REST-style architecture** – simple ways to expose and consume services

■ Agility

- **Application-centric runtime** (application “is” the server)
- **Runtime Characteristics** (clean, cost effective, short-lived)

Lightweight platform with browser-based composition Tools



```

import zero.json.JsonType;
import stats.BlogStats;

def onGET()
{
    def wkxHistory = 24 // number of weeks
    def blogs = new BlogStats
    def allWeeks = blogs.getStats(wkxHistory)
    // print in allWeeks;
    displayBlogHits( allWeeks )
    displayBlogHitsStats( allWeeks )
}
    
```



WebSphere sMash is an **agile** platform for developing, assembling and executing situational apps **quickly** and **simply**.

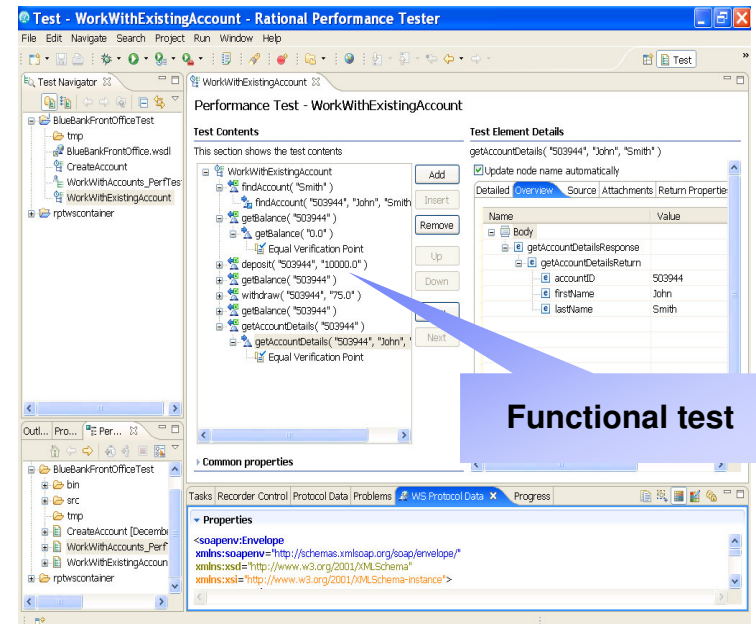
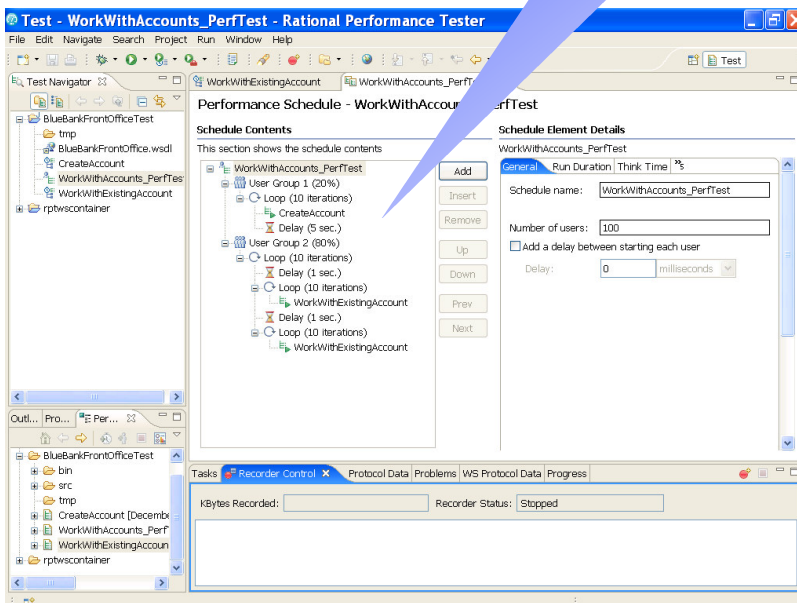


Test Services for Function and High Performance

IBM Rational Tester for SOA Quality

Automated regression and functional testing for GUI-less services

Performance schedule



Functional test

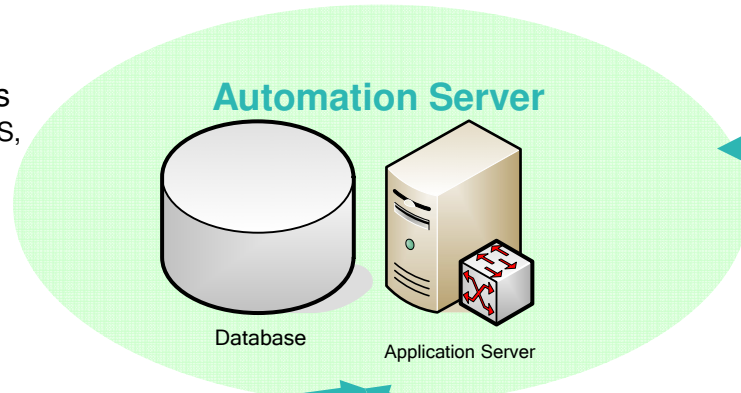
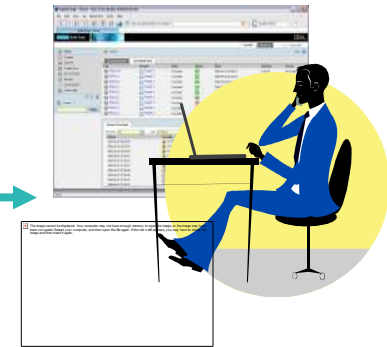
IBM Rational Performance Tester Extension for SOA Quality

Performance Testing for service - based applications

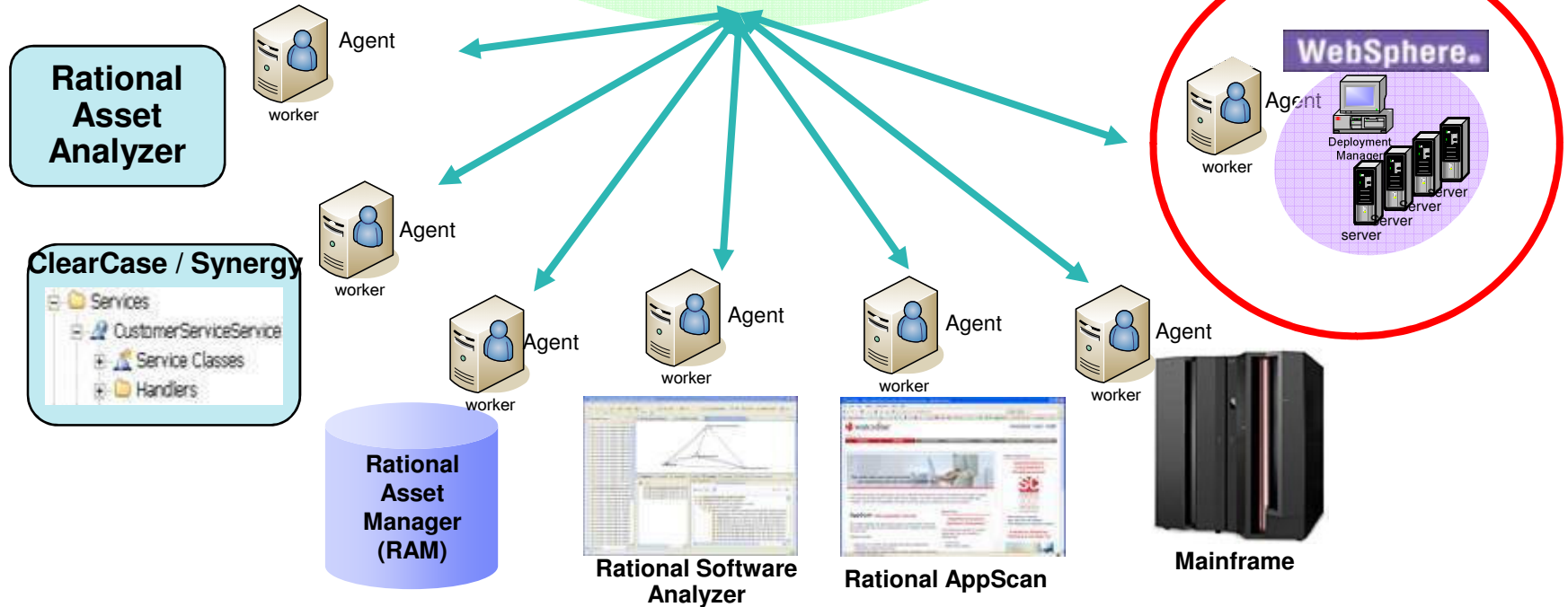
Automate Build and Deployment

- Centralized automation server oriented to software development activities
- Distributed automation system supporting huge variety of platforms
 - Windows, Linux, Unix, Mac, z/OS, i5/OS, zLinux, Tandem, etc.
- Enterprise Proven automation platform

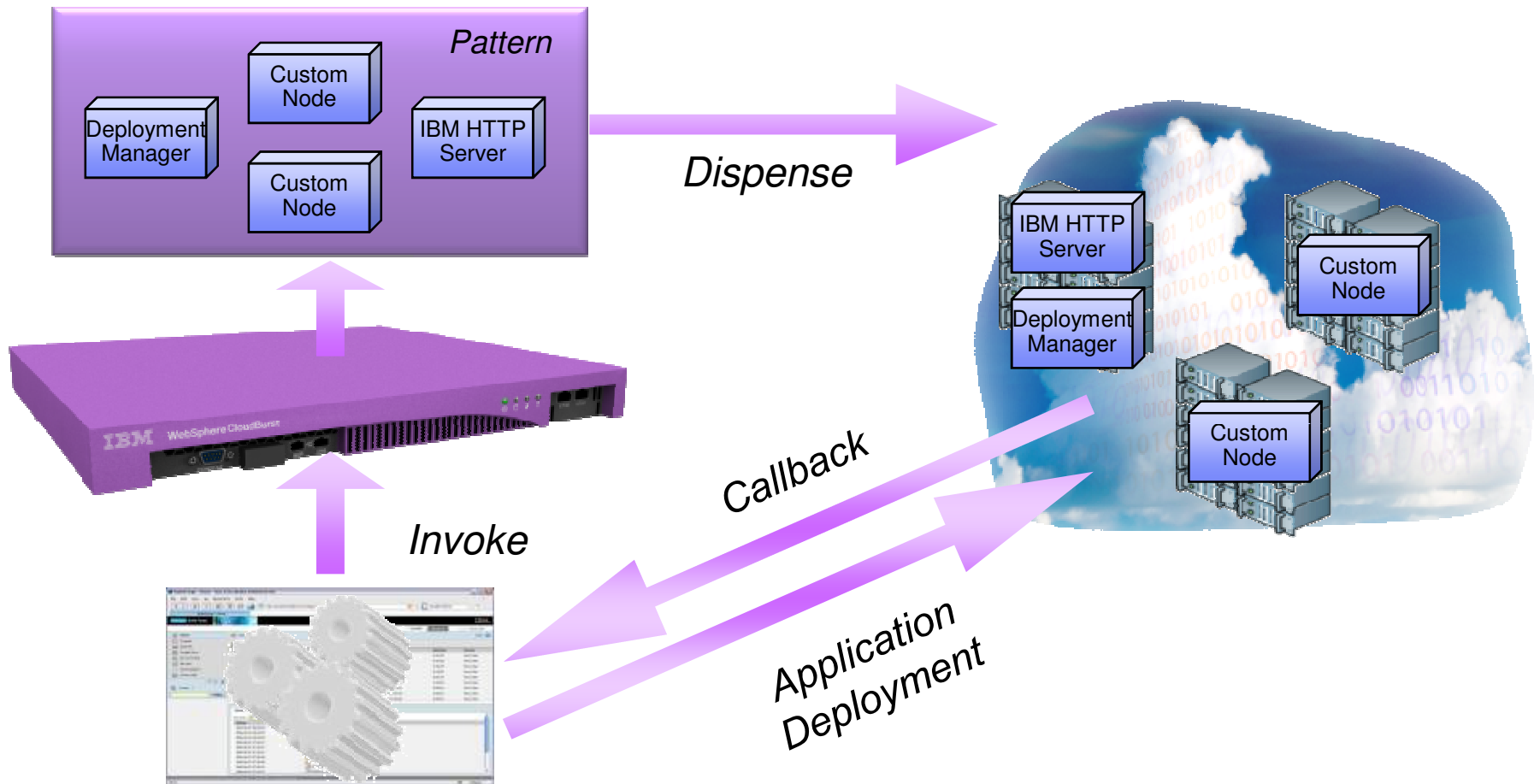
Clients



Automation Targets



SOA Development and Deployment to the Cloud



Rational Automation Framework for WebSphere

Agenda

- A Foundation for SOA Development
- Entry Points and Service Patterns
- Model, Assemble, Deploy, Manage
- **Development is a Team Sport**
- Summary



A Platform for Collaborative Software Delivery



An open technology initiative to *transform how people work together to deliver greater value and performance from their software investments*



- Robust, extensible and scaleable
- Globally distributed, fluid and dynamic
- Community-based and open at Jazz.net

Collaborate in Context

- Enable team transparency of “who, what, when, why”
- Build team cohesion and presence
- Automate hand-offs – so nothing falls through the cracks



Right-size Governance

- Automate team workflow improving productivity
- Automate data collection eliminating administrative overhead
- Real time reporting and alerts reduces project risk

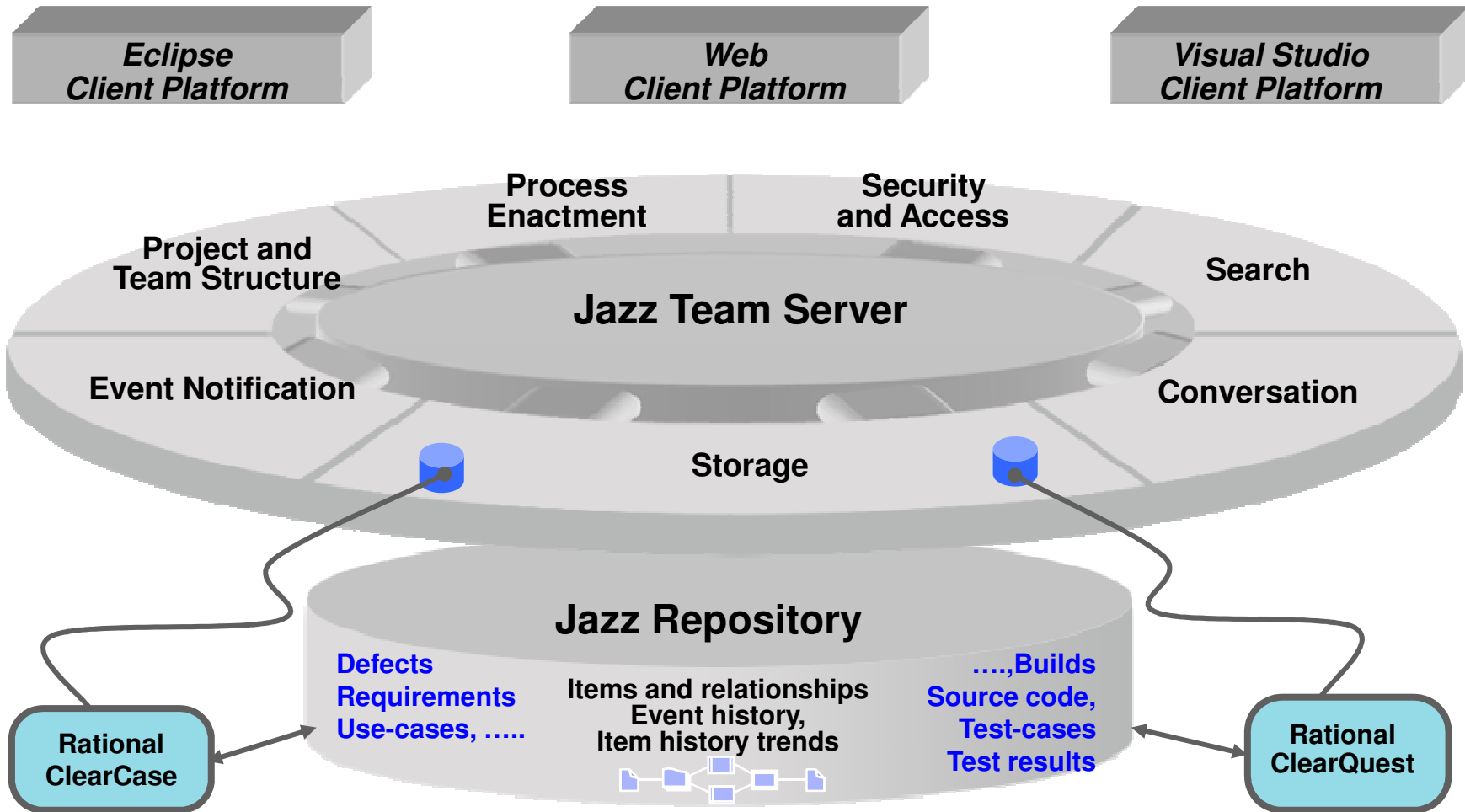


Day One Productivity

- Dynamic provisioning of projects and teams
- Real-time iteration planning and workload balancing
- Unify teams with tools choice

Real-time integration of people, process and projects across the lifecycle

Jazz Architecture

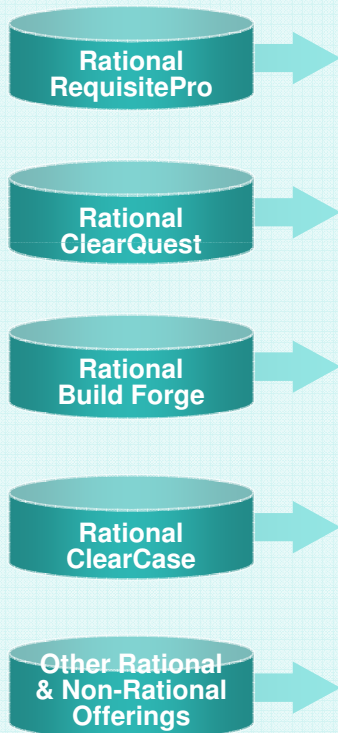


Evolution Towards Jazz

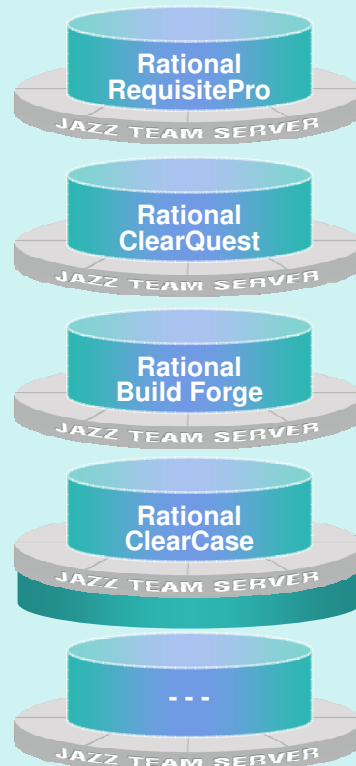


The Evolution of the IBM Rational Software Delivery Platform

Existing Offerings



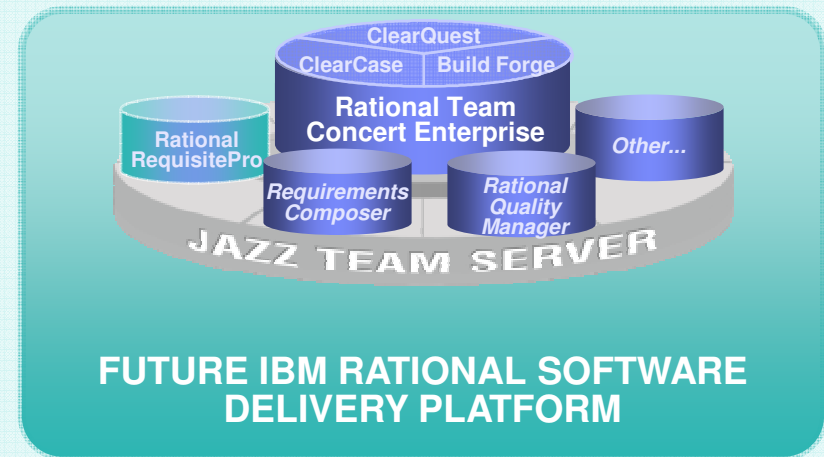
Evolution to Jazz Technology Platform



New Offerings



Built on the Jazz Technology Platform



FUTURE IBM RATIONAL SOFTWARE DELIVERY PLATFORM

Service Visibility and Governance



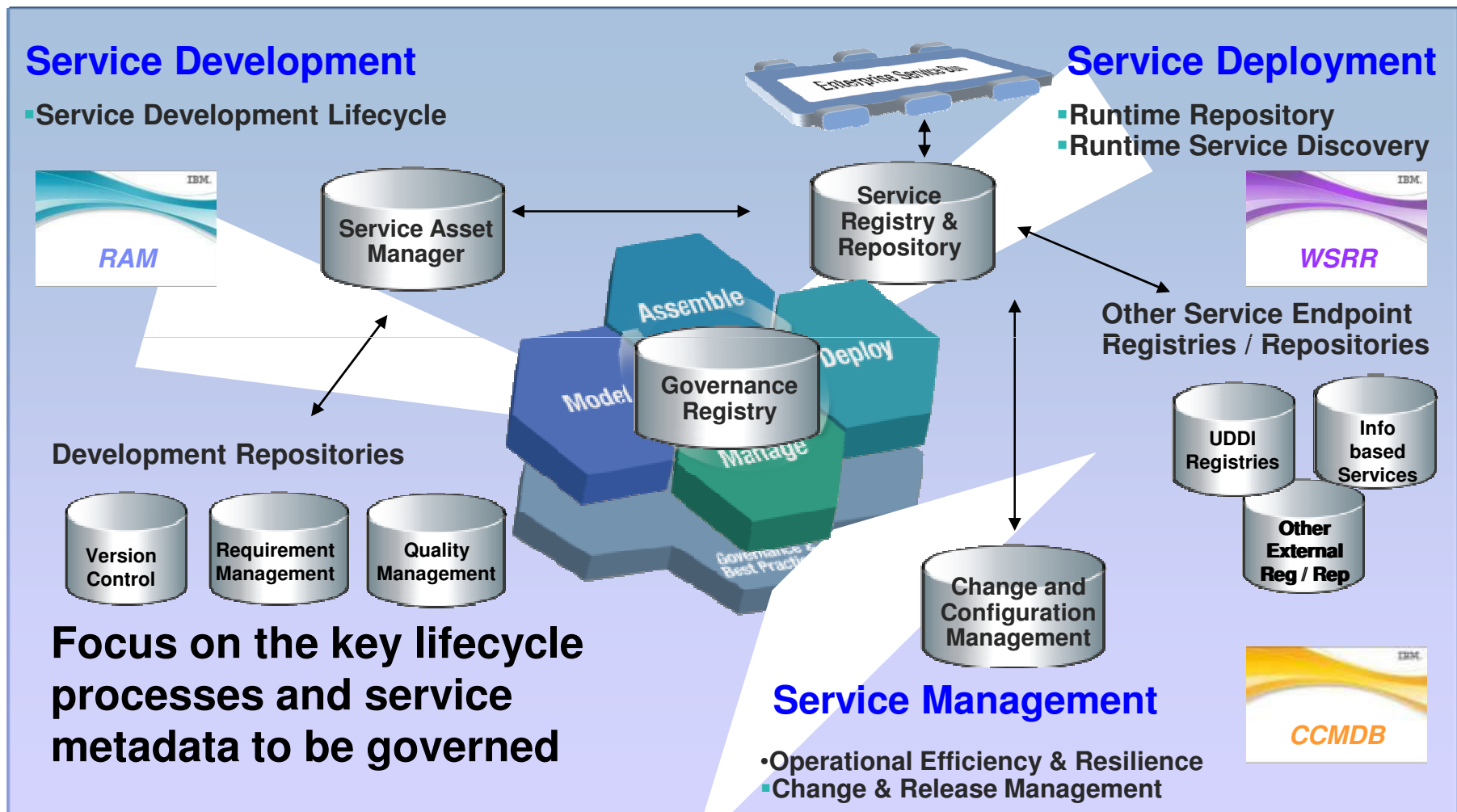
Manage what you have, no matter where

Secure mission-critical services & documents



Trust existing services, accelerate reuse & cut costs

Governance thru Federated Lifecycles



Agenda

- A Foundation for SOA Development
- Entry Points and Service Patterns
- Model, Assemble, Deploy, Manage
- Development is a Team Sport
- **Summary**



<http://ibm.com/soa> – Links to the SOA Sandbox and More...

The screenshot shows the IBM developerWorks website page for the SOA Sandbox. The browser window title is "IBM developerWorks : IBM SOA Sandbox - Mozilla Firefox". The address bar shows the URL "http://www.ibm.com/developerworks/downloads/soasandbox/". The page content includes a navigation menu on the left, a main heading "IBM SOA Sandbox", a sub-heading "Increase your SOA skills through practical, hands-on, online trials free of charge as a cloud service.", and a list of trial categories with links to software trials and info centers. The categories listed are: People, Process, Information, Reuse, Connectivity, Green, and SOA Disciplines. The right sidebar contains sections for "We're here to help", "Document options", "My developerWorks needs you!", "Tell your boss", and "Special offers".

developerWorks > SOA and Web services > Downloads >

IBM SOA Sandbox

Increase your SOA skills through practical, hands-on, online trials free of charge as a cloud service. Not only will you learn proven methods for implementing SOA efficiently, you will be using IBM middleware in a hosted environment, one you do not have to prepare. Each Sandbox trial is based on real customer experiences, and they are all supported by expert guidance in the form of documentation and other learning aids that help solidify your learning. By providing this comprehensive material to you via a low-risk cloud environment, we seek to make your learning experience easy and effective.

Even though our online trials are written for enterprise architects, integration developers and Web developers, the SOA Sandbox's "learn through play" cloud environment can benefit business leaders and non-technical roles. To start using the trials, all you need to do is complete a simple registration process. After registering, you will be able to access the hosted software images and associated assets dynamically -- tooling, online demos, best practice documentation, quick-start guides -- all for up to four hours. Start exploring SOA in a few simple clicks, courtesy of the SOA Sandbox.

Explore one or all of these trials in our cloud computing environment:

- **People:** Improve the user experience to drive innovation and greater collaboration, thus improving business productivity.
[Access the software trial](#) | [Visit the info center](#)
- **Process:** Gain a better understanding of business processes to confirm how best to improve existing business models to derive value quickly.
[Access the software trial](#) | [Visit the info center](#)
- **Information:** Leverage information in a consistent and visible way.
[Explore this entry point](#) | [Visit the info center](#)
- **Reuse:** Save time and money by extending existing services.
[Access the software trial](#) | [Visit the info center](#)
- **Connectivity:** Integrate your people, processes, and information into a flexible infrastructure.
[Access the software trial](#) | [Visit the info center](#)
- **Green:** Learn firsthand how SOA technology can be leveraged to make enterprises more efficient and eco-friendly.
[Access the software trial](#) | [Visit the info center](#)
- **SOA Disciplines:** Explore further the concepts introduced above to learn how best to tailor SOA to meet your business requirements.
[Access the software trial](#) | [Visit the info center](#)

Related links

Find: Next Previous Highlight all Match case

Done

धन्यवाद

Hindi

多謝

Traditional Chinese

Teşekkür ederim

Turkish

Спасибо

Russian

Gracias

Spanish

شكراً

Arabic

Thank You

English

Obrigado

Portuguese

Grazie

Italian

Danke

German

Merci

French

Multumesc

Romanian

多谢

Simplified Chinese

감사합니다

Korean

ありがとうございました

Japanese