



IBM SOA

# Mission Critical SOA with Reuse and Connectivity

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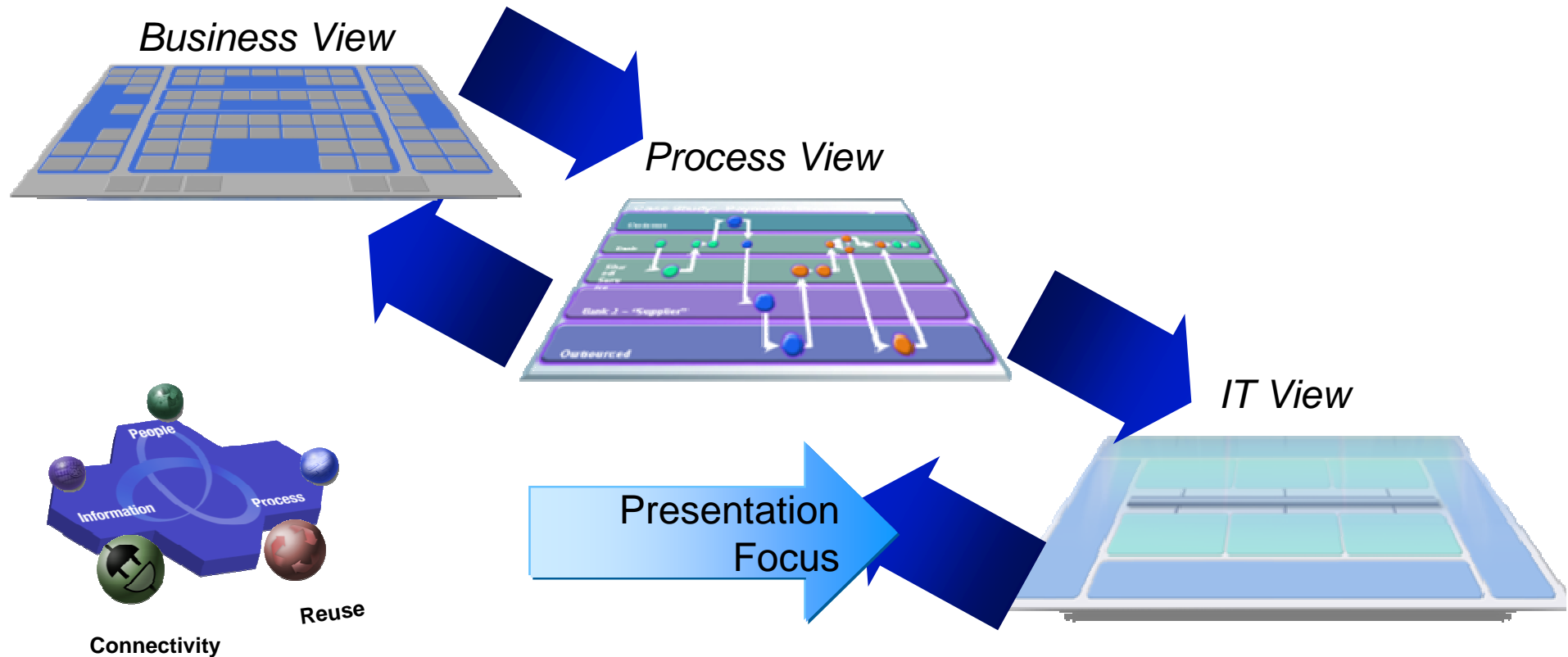


6/6/2007

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# Mission Critical SOA Drives Greater Alignment Between Business and IT

Creating an Enduring Impact through Reuse and Connectivity



# Pain Points for the IT Exec

## Business Challenge

- How flexible and responsive are you in addressing new business opportunities?
- What is your productivity rate in rolling out new projects?
- Can you show how IT functions deliver value to business?
- Can you reduce the risk associated with IT projects?



## Technical Challenge

- How much are you spending on your IT budget today, and where is it spent?
- What is your plan for creating new IT assets using the latest standards
- How can you make the modernize existing assets to increase return on investment?
- How much reuse are you currently achieving?
- Can our key business applications exchange information with other critical systems?

## Personal Challenge

- How do you make the most of your current IT skills and resources?
- How can you improve your Service Level Agreements?
- Can you demonstrate effective governance and control of your infrastructure?

# Mission Critical SOA from IBM

*Take your SOA from Playtime...*

*...to Showtime!*



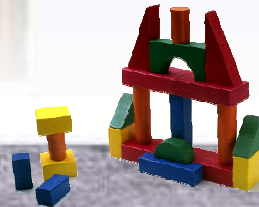
# Mission Critical SOA from IBM

- Scalable
- Flexible
- Robust
- Connected
- Secure
- Governable
- Reusable
- Manageable

SOA

Can your SOA be described as Mission Critical if it can't match your business needs?

Will it stay as a toy in the sandbox?



# Mission Critical SOA from IBM

## **Scalable**

- Projects of any size from small trials to entire enterprises
- Virtualized resources to match workload

## **Flexible**

- Respond faster to any business need
- Not rip-and-replace, but enhance and grow
- Maximize reuse, minimize disruption

# Mission Critical SOA from IBM

## Robust

- Founded on market leading technologies
- Transactional co-ordination offering end-to-end integrity across multiple resources
- Proven by 10000's of customers

SOA

## Well Connected

- Universal connectivity to virtually any commercial IT system from sensors to mainframes
- Hardware and software ESB deployment options optimised for SOA

ESB



The diagram illustrates the SOA architecture. A central brown skyscraper labeled 'SOA' is supported by a white lattice structure labeled 'ESB'. To the left, a small structure of colorful blocks is shown. To the right, a grey horizontal bar with a white arrow pointing right is shown, with a red rectangular block on top of it. The background is a blurred cityscape.

# Mission Critical SOA from IBM



**Secure**

- Secure information end-to-end between applications and systems
- Visibility to security operations and management

**Planned & Governable**

- Assets located and accessible seamlessly anywhere in the enterprise
- Policy based definition and control of services



# Mission Critical SOA from IBM

## Reusable

- Maximized reuse of IT assets and skills
- Service enable more of your existing assets
- Not just new standards but any existing assets

# SOA



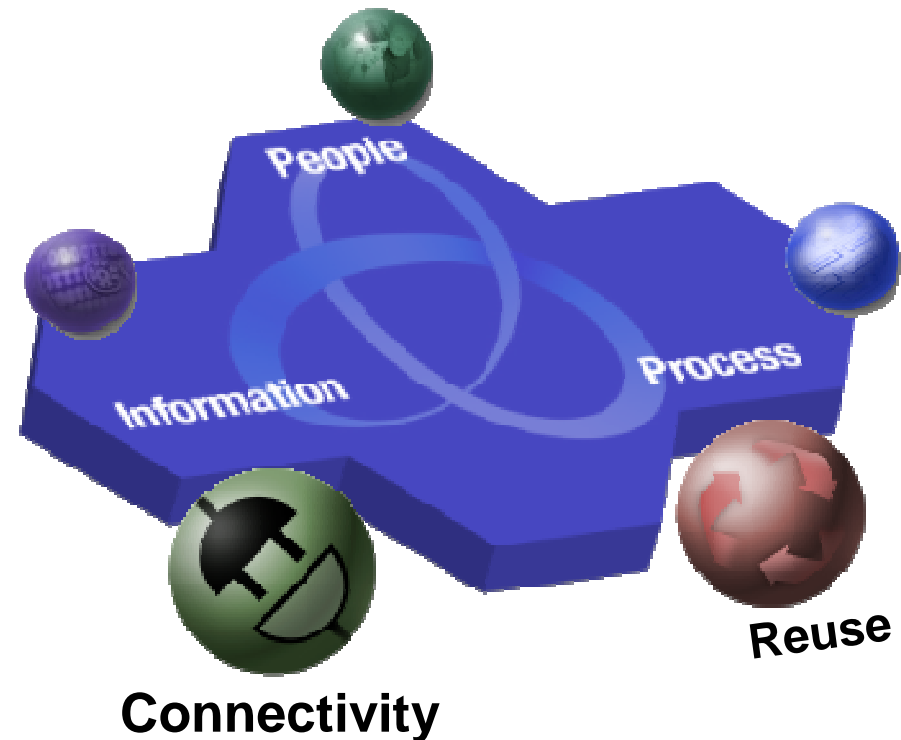
## Manageable

- Audit trails for compliance reporting without complexity
- Increased application management with reduced operator workload

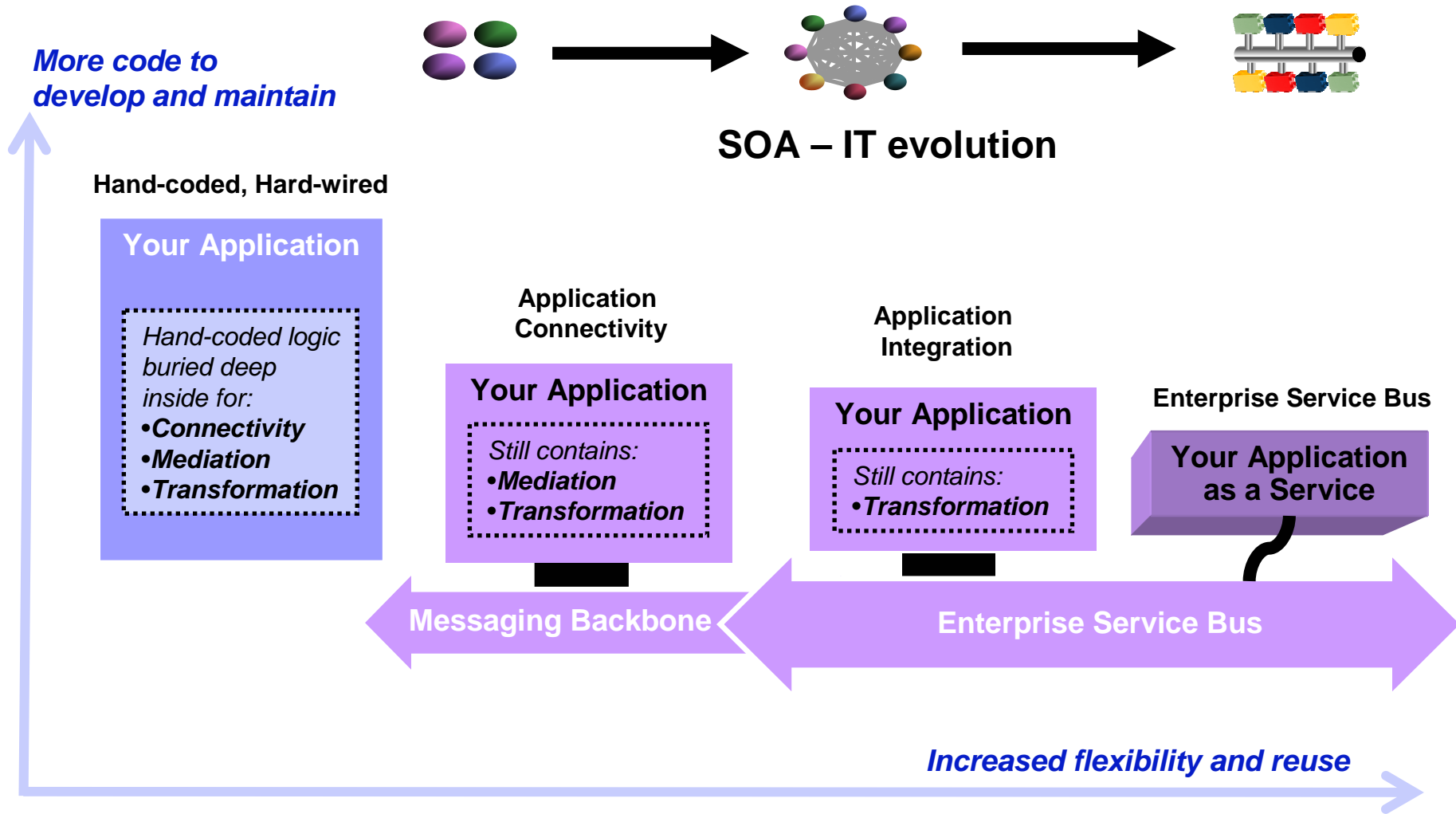
# SOA Entry Points – Reuse and Connectivity

*IT focused entry points to enable Flexible IT and deliver benefits to Business and IT*

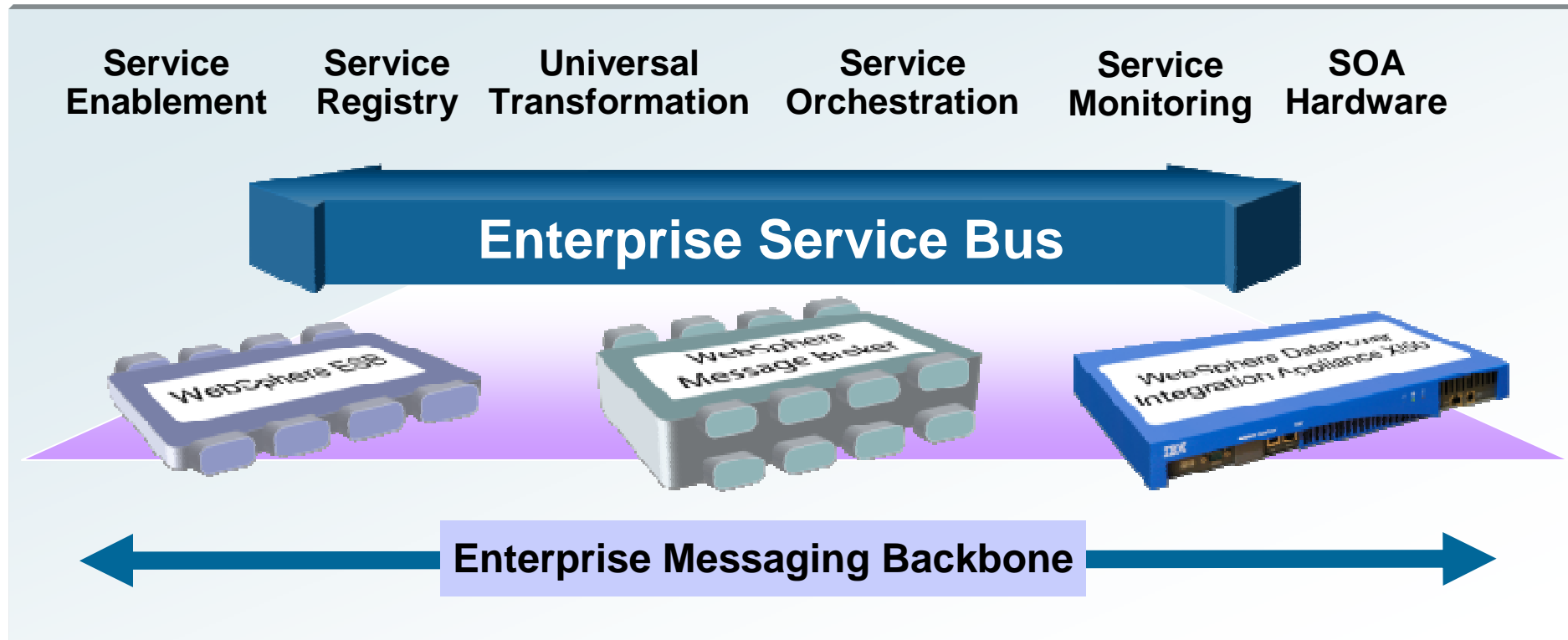
- **Reuse** creates new services from legacy assets to:
  - Extend the value of legacy systems by modernizing application infrastructure
  - Reduce development costs by reusing the decoupled services and connections
  - Leverage existing systems and infrastructure to provide new functionality
- **Connectivity** establishes links between applications and services using an Enterprise Service Bus to:
  - Deliver a robust and resilient connectivity infrastructure
  - Provide integration between different Lines of Business without adding complexity
  - Bring together new and existing IT assets with high performance, available everywhere



# SOA and ESB – Connecting your Business



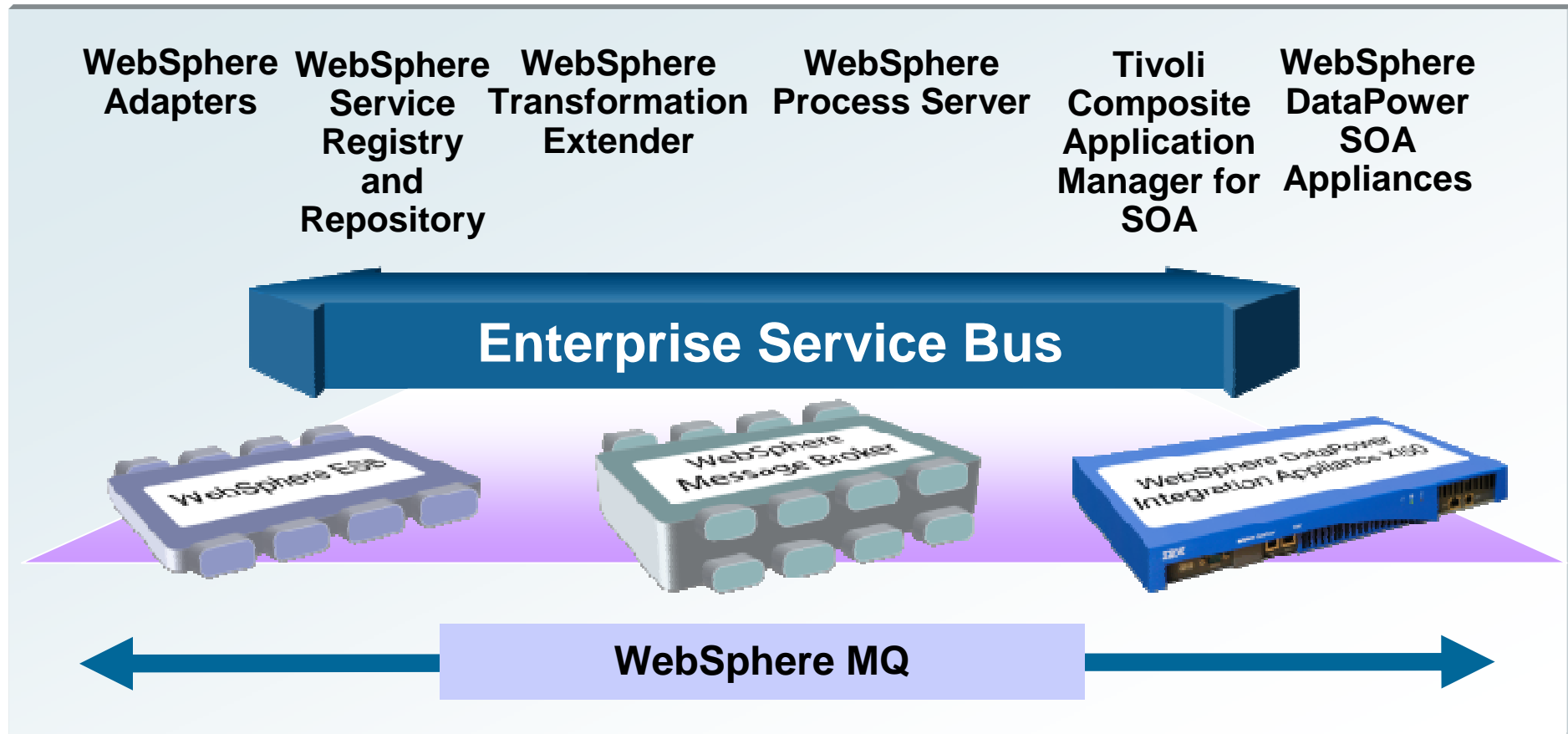
## Extending Connectivity for Mission Critical SOA



An **ESB without limits** breaks down the barriers by providing a solution with greater...

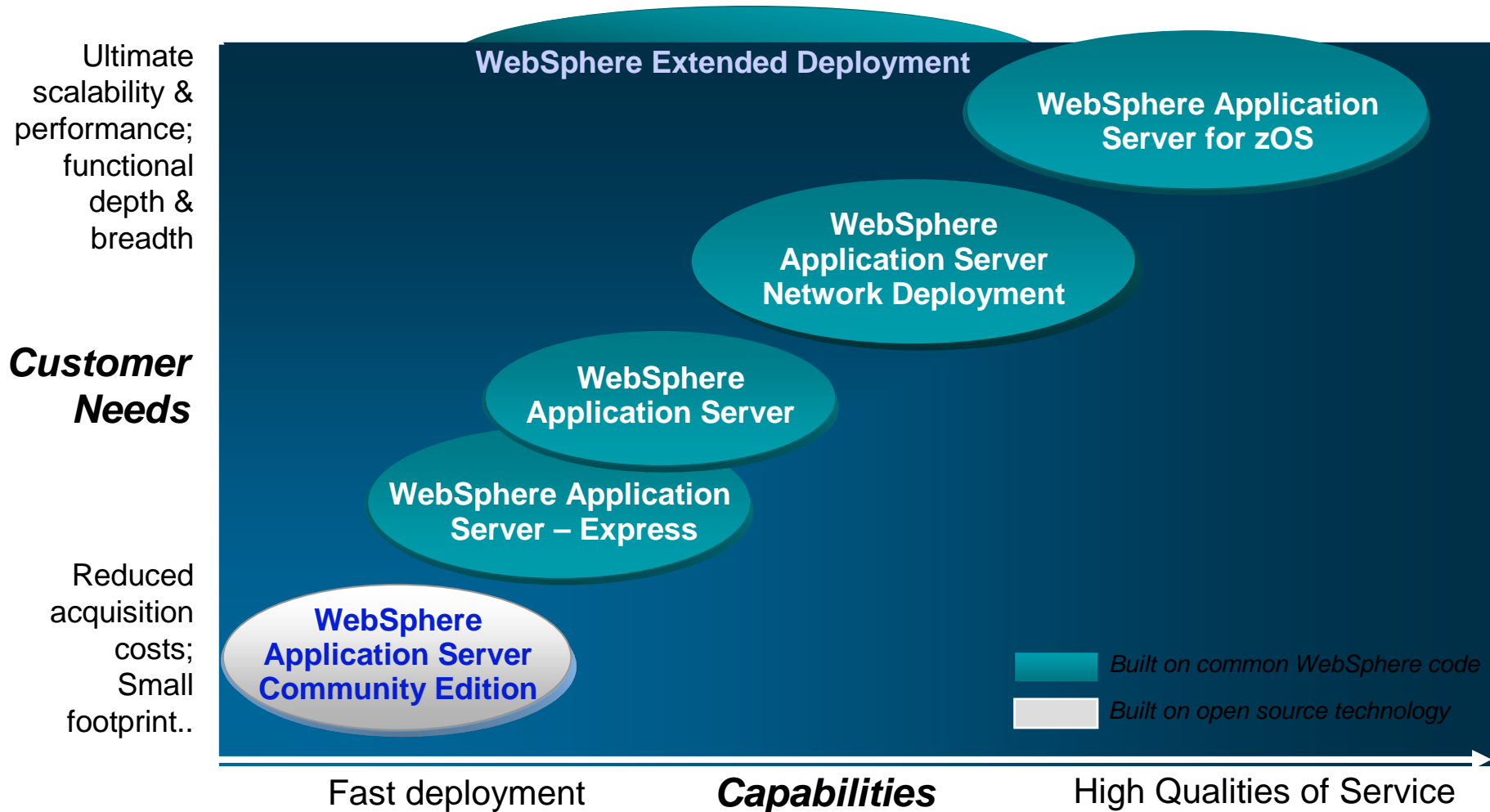
- Breadth: Three ESB product offerings optimized for various connectivity scenarios
- Depth: Complete set of connectivity capabilities beyond those delivered by an ESB

# Product offerings from IBM for SOA Connectivity

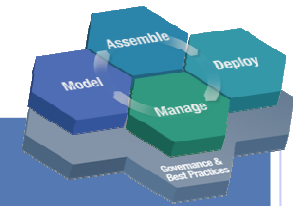


# Flexible Infrastructure

*Meeting the Broadest Range of Quality of Service Needs*



# Connecting Systems, offering new services HypoVereinsbank AG (HVB)



## ▶ Business Challenge:

Improve ability to offer new services to customers

Lack of a standard integration solution impacted response time to new market opportunities, customer demand and business strategies

- ▶ **Solution:** Deployed an ESB-based infrastructure using WebSphere and Tivoli Software. Delivers a cost-effective connection environment to simplify the trading process and gain a competitive advantage through time to market
- ▶ **Results:** Achieved 35% reduction in time to implement integration scenarios linking new and existing applications. Rapidly connected to Euronext Stock Exchange. Implementation and operational costs down and ROI up.
- ▶ **Implementation Details:** WebSphere Application Server on z/OS, WebSphere Message Broker for Multiplatforms, WebSphere MQ, WebSphere MQ for z/OS; Tivoli Monitoring for Business Integration, Tivoli Monitoring

*"The ESB provides a flexible infrastructure for HVB's agile investment banking. Our business is changing very fast, and the ESB enables us to support upcoming business opportunities immediately by connecting new market places and new dealing systems to our existing system landscape. The ESB accelerates the adaption of new business processes and the launch of new products and services." Michael Dietze, Head of Business Development*

## Infrastructure Architecture requires End-to-end Approach along with Implementation of Key Technologies



- *Identify opportunities to apply SOA innovations to meet business and IT objectives?*
- *Understand how SOA infrastructure management and service management will support the SOA environment?*
- *Determine IT readiness to incorporate SOA technologies into the environment?*

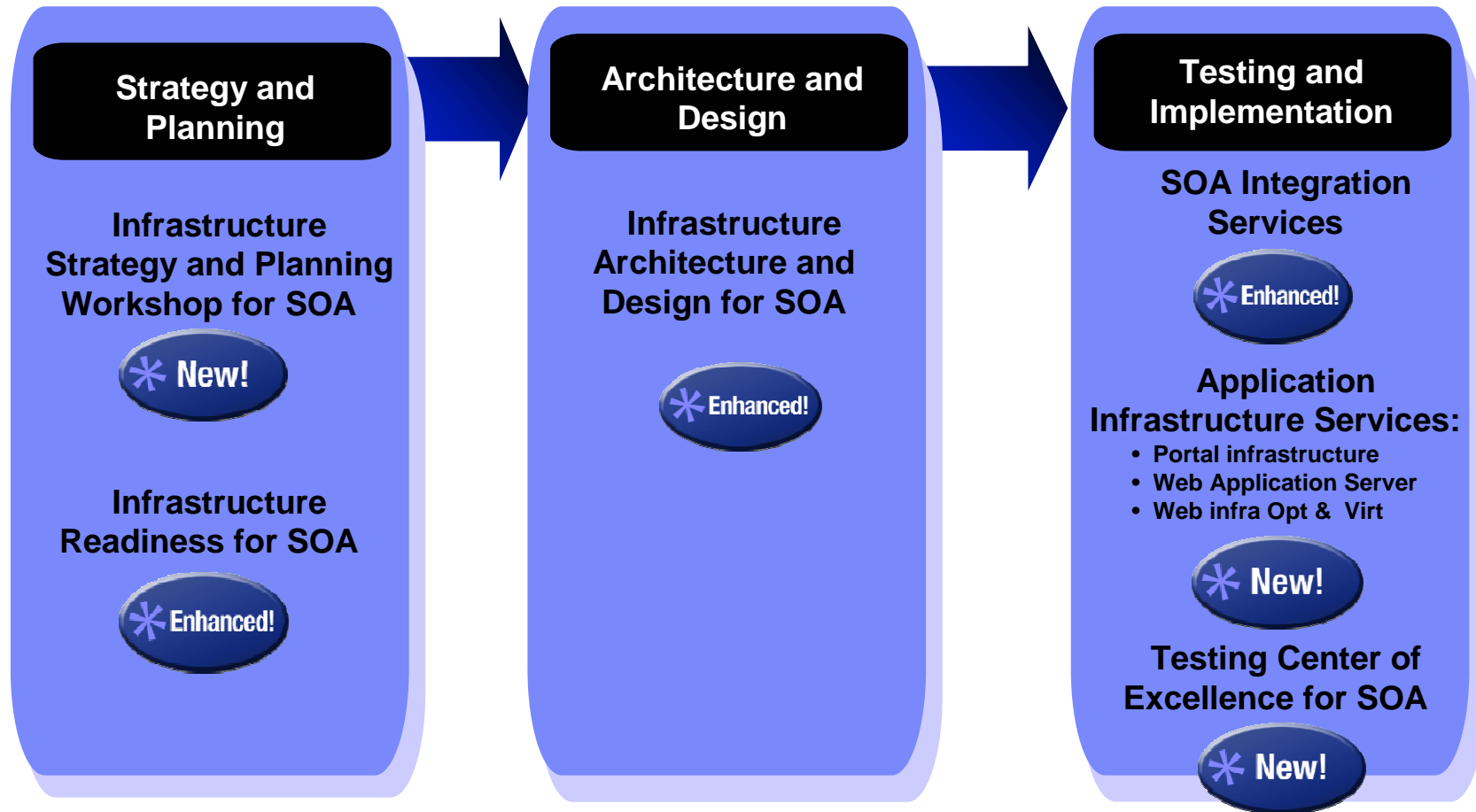
### How do you :

- *Create an architectural framework and the infrastructure designs to support SOA?*
- *Accelerate and refine the SOA architecture and design process and transition plan?*
- *Develop SOA infrastructure solution plan including business case, detailed designs, operational model ?*

- *Integrate siloed applications and value net through an extensible infrastructure foundation*
- *Optimize, scale and automate your SOA foundation?*
- *Integrate with your existing middleware infrastructure?*
- *Ensure your new SOA services respond under normal and peak conditions?*



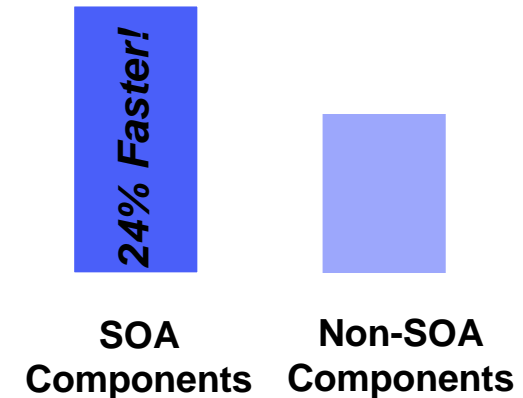
# Infrastructure services from IBM bringing in expert SOA skills everywhere in the lifecycle



## What is the Value of Reuse ?

- As SOA moves out of the sandbox, results become critical to business
- SOA results have been successful in early studies
  - 100% of customers show increased flexibility
  - 97% show reduced costs
- Reuse is key to benefits of SOA
  - Cost-savings multiply with ongoing reuse
  - Each reuse saves additional amounts

**24% Faster ROI  
using SOA!**



Source: *The ROI of SOA*. Poulin & Himler – LogicLibrary Inc White Paper 2006 - [http://www.logiclibrary.com/pdf/wp/ROI\\_of\\_SOA.pdf](http://www.logiclibrary.com/pdf/wp/ROI_of_SOA.pdf)

**"I can guarantee there's a cheaper way to build your next product,  
but there's no cheaper way to build your next 20 products."**

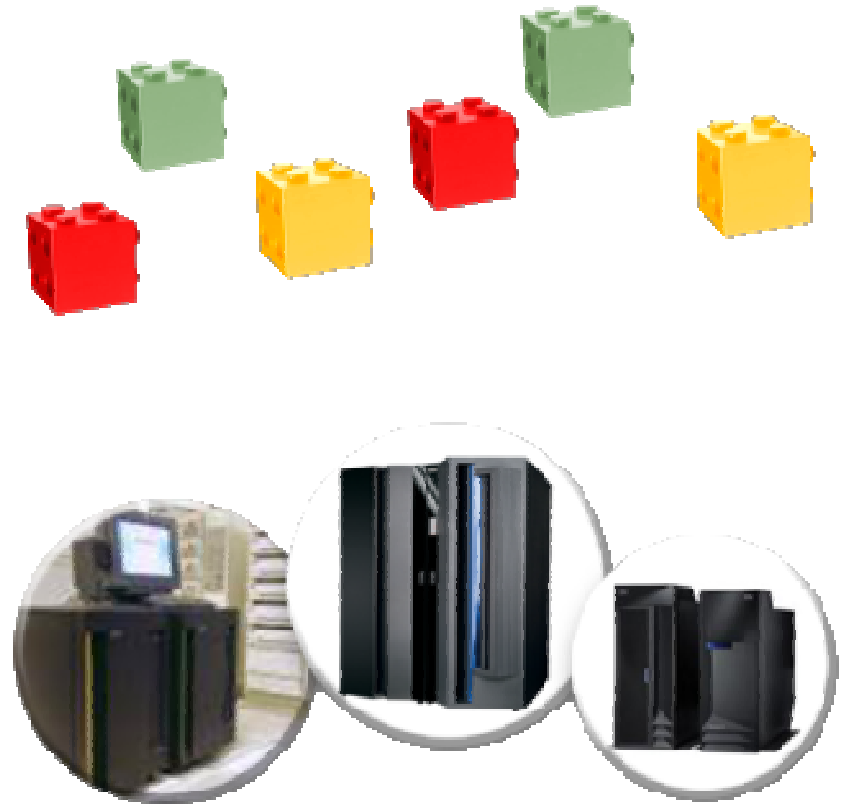
Christopher Crowhurst, vice president and principal architect at Thomson Learning.

# Identify and Modernize existing IT assets using SOA

*Making increased and effective use of past investments*

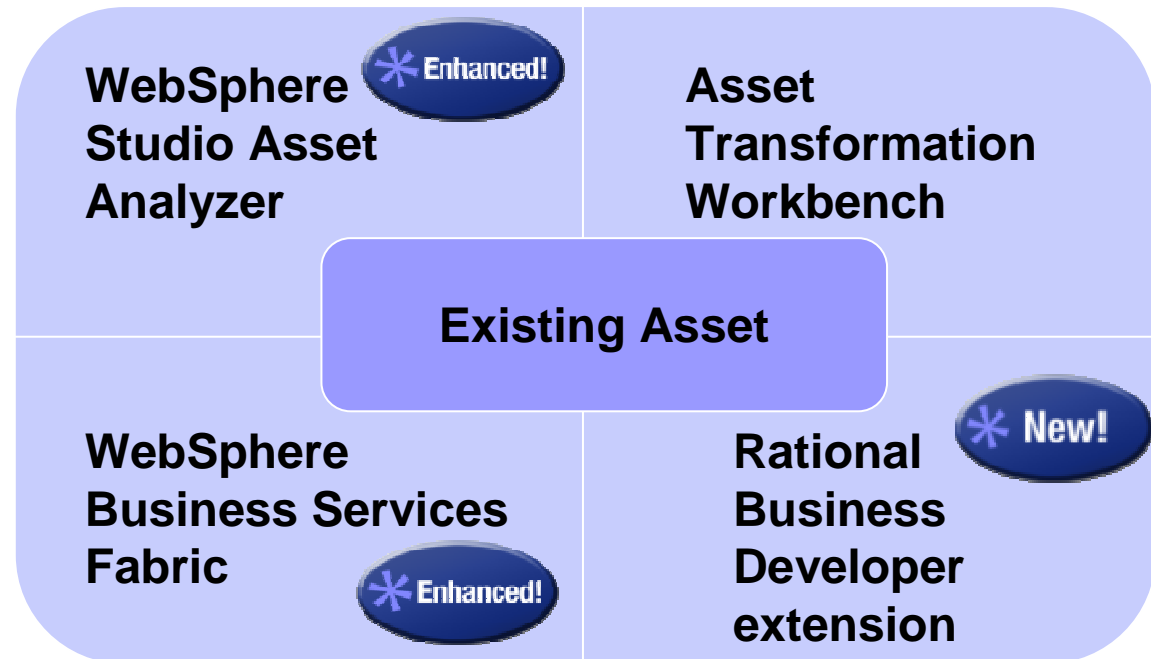
## Key Benefits of Modernization

- Eliminate expense, confusion, and risk associated with redundancy
- Make systems that previously required specialized skills accessible to a broader pool of users
- Combine functions that come from several sources and treat them as a single logical reusable service
- Automatically identify candidate assets for service-enablement



# IBM Software Products to Assist Identifying IT Assets for Reuse and Modernization

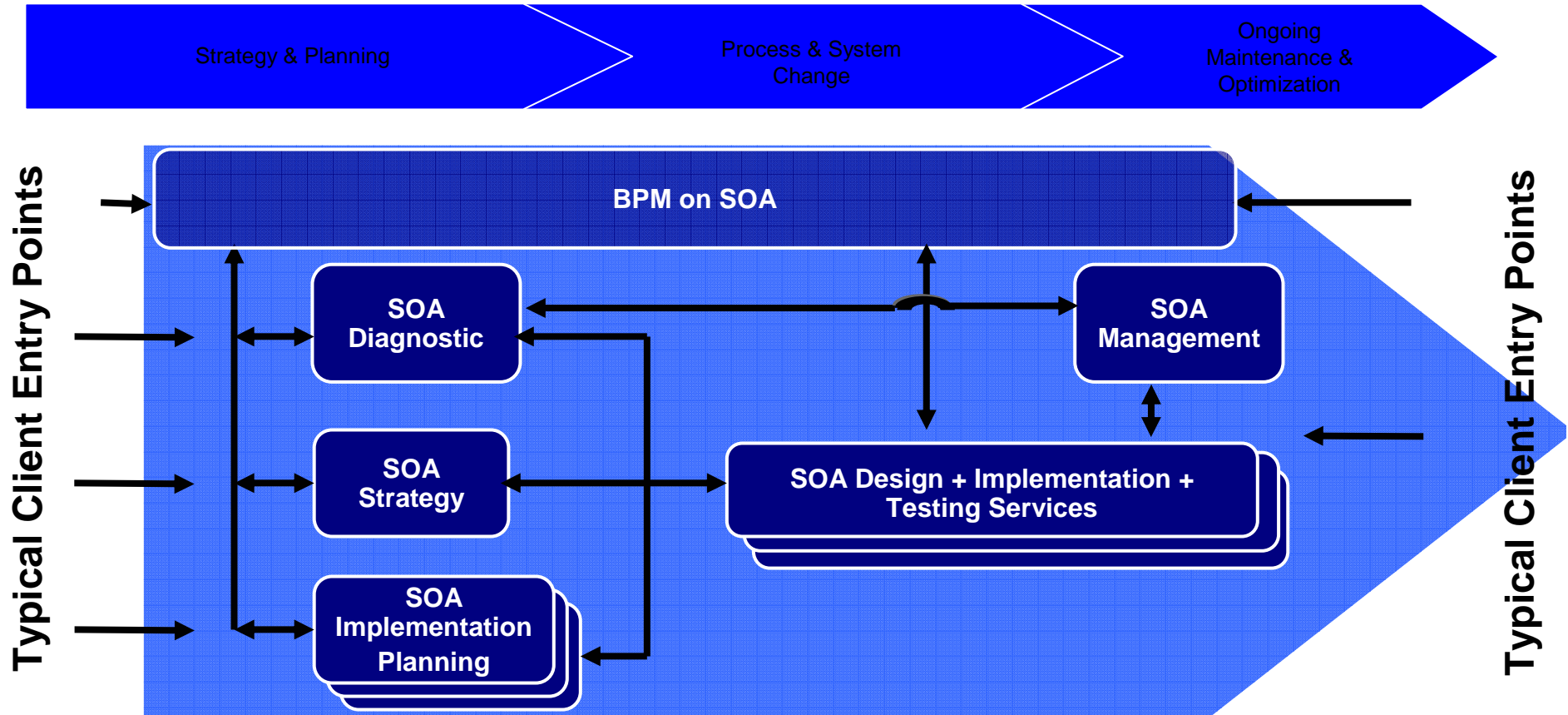
- Selecting your key assets for reuse is a critical task
- Help reduce the time and cost of the analysis phase of a project
- Show dependencies within and among applications
- Enhance productivity for analysts and developers



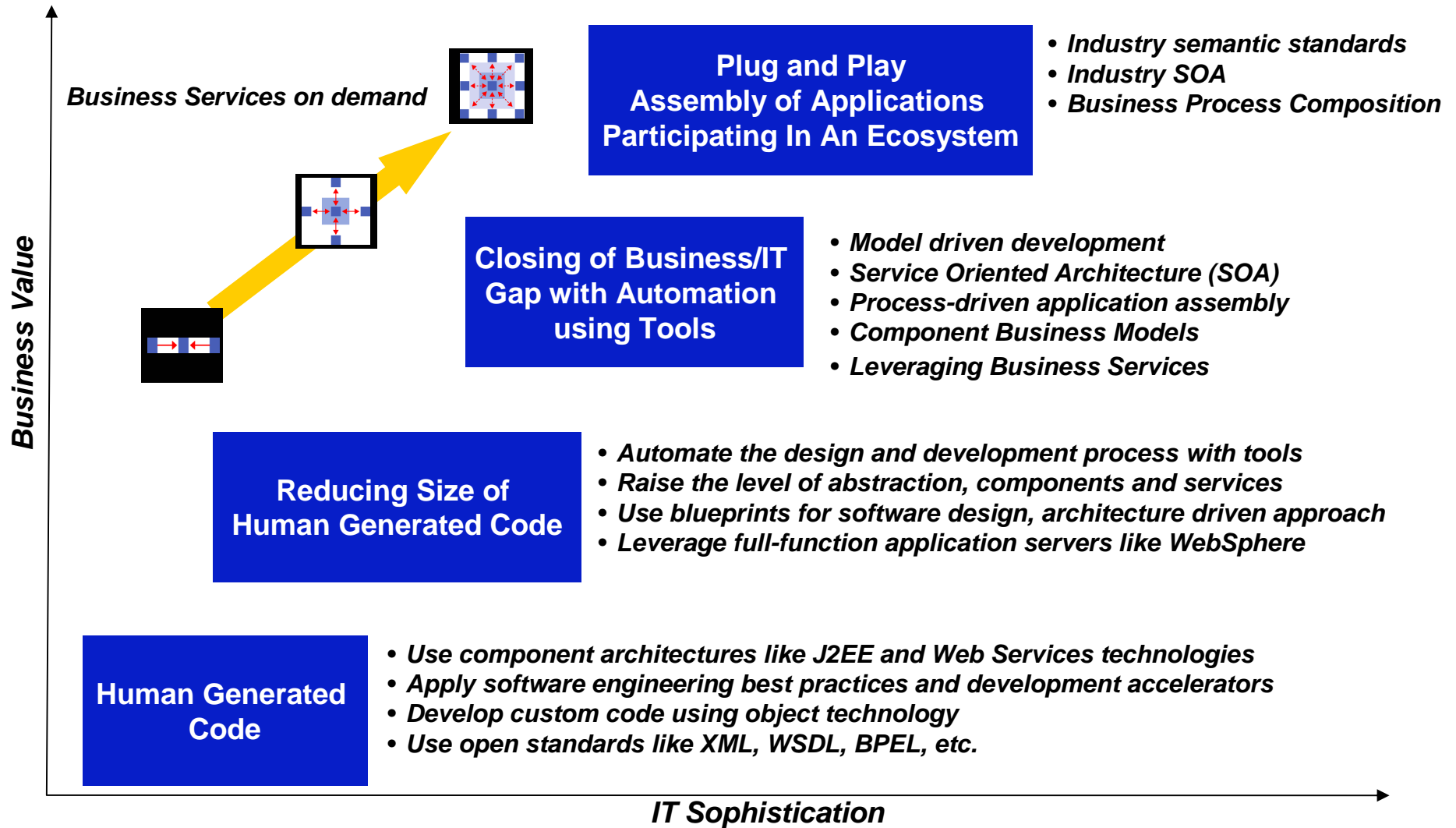
- Provide a means to move from today's monolithic applications to architectures that make composite applications possible

Business Services from IBM applying expert SOA knowledge anywhere in the lifecycle enabling reuse of assets.

**End to End Lifecycle**

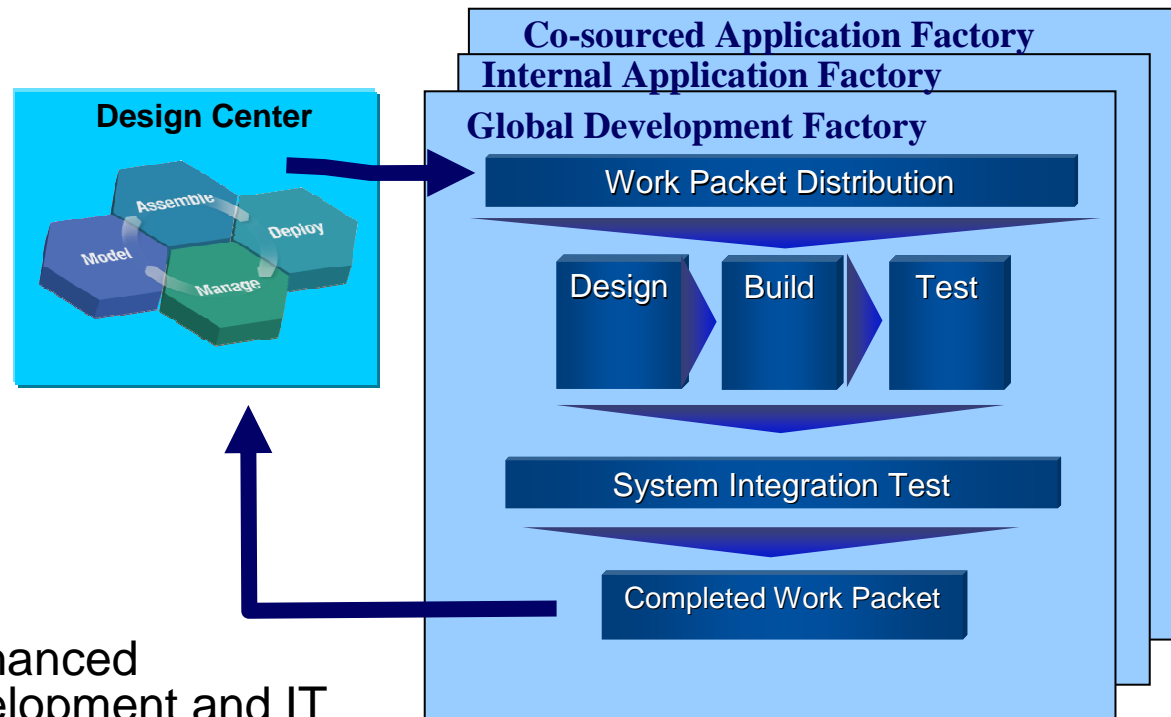


# Business Flexibility enhanced through evolving infrastructure and methods

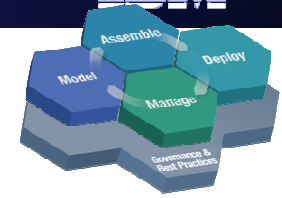


## IBM Application and Services Factory – delivering innovation & value

- High degree of reuse through standardization, processes, tooling and automation
- Standardized models, artefacts and metrics
- Formal collaboration between distributed teams
- Leverage assets from across the ecosystem
- Productivity and quality enhanced using proven software development and IT lifecycle management processes
- Repeatable, measurable results delivering real business benefits through SOA



# Integrating Airport Operations with IBM's SOA Platform - Malaysia Airports Technologies



## ▶ Business Challenge:

Existing disparate solutions no longer sustainable with growth in passenger numbers, flight frequencies and carrier numbers  
Need to flexibly roll out new applications to run alongside existing infrastructure

- ▶ **Solution:** A SOA solution to interconnect all the applications required to support their world-wide airport operations – without compromising security, reliability, or scalability. IBM GBS developed a roadmap for MAT to migrate to this new flexible service oriented approach.
- ▶ **Results:** Real-time information distribution from disparate sources; Replace individual components without compromising airport operation integrity; Unify employees across the entire organization
- ▶ **Implementation Details:** IBM Global Business Services – Application Innovation Services; IBM's Airport Integration Solution, built on IBM WebSphere and the SOA Foundation

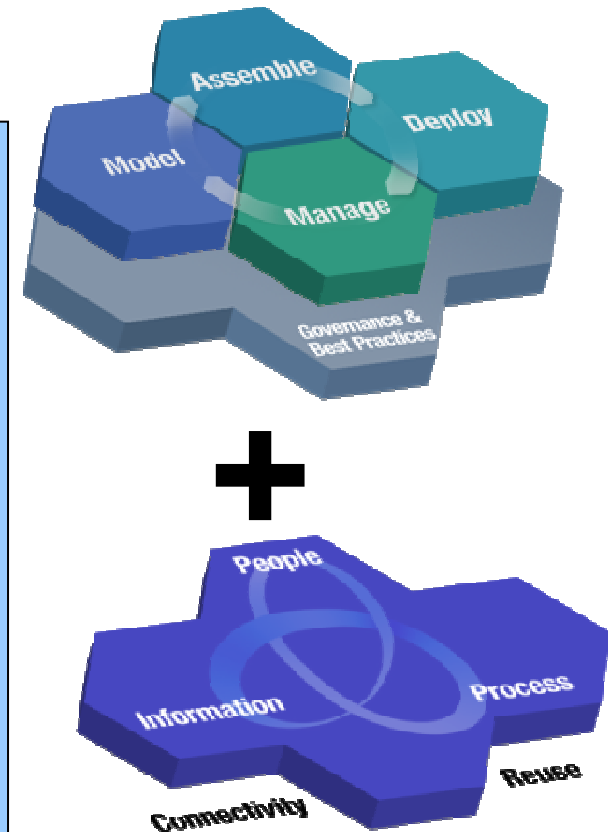
*“MAT can now distribute real-time information from disparate sources, communicating accurate and timely resource, planning, and operations information to essential departments.” — YBhg Dato' Azmi Murad, Senior General Manager*



# Mission Critical SOA – the foundation for your infrastructure

Flexible robust and secure infrastructure planned and deployed using best practices and maintained with available skills

- Qualities of Service matching the business need and transaction content
- Ensure end-to-end integrity with built-in transactional coordination
- Simplify your applications by connecting using an ESB
- Grow your business by modernizing existing applications leveraging latest standards for both new and old assets
- Match Workload to Resources with Virtualized SOA Infrastructure



**The right foundations will boost your SOA implementation.**

## Further enhancements for IBM SOA Reuse and Connectivity

 **New and Enhanced!**

### **Reuse enhancements**

Rational Business Developer extension  
WebSphere Business Services Fabric  
WebSphere Studio Asset Analyzer  
WebSphere Extended Deployment  
WebSphere Application Server V6.1 Feature Pack for Web Services

 **Enhanced!**

### **Connectivity enhancements**

WebSphere MQ  
WebSphere Message Broker  
WebSphere Transformation Extender  
WebSphere DataPower Integration Appliance  
WebSphere Service Registry and Repository

### **IBM Global Technology Services**

SOA Integration Services – connectivity and reuse  
Application Infrastructure Services – web application server  
Application Infrastructure Services – Portal infrastructure, Web infrastructure optimization and virtualization

 **New and Enhanced!**

## Leadership in SOA Reuse and Connectivity

*Uniquely providing **Mission Critical SOA** through depth and breadth of SOA software products, complemented by Business and Technical Services adding value by delivering SOA enabled solutions throughout the lifecycle*

**Broad Management Expertise  
Across Industries**

**55,000 employees trained  
as IT infrastructure  
experts in 164 countries**

**Contributors to over 50  
SOA-based standards  
committees**

**More than 3,600 SOA  
Business Partners**



**#1 SOA Marketshare  
(Wintergreen 2006)**

**Nobody invests more  
\$1B increase in investment  
over next 3 years**

**300+ SOA related patents**

**Over 4500 SOA  
Engagements**

**Primary SOA Research  
IBM Institute of Business Value**

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