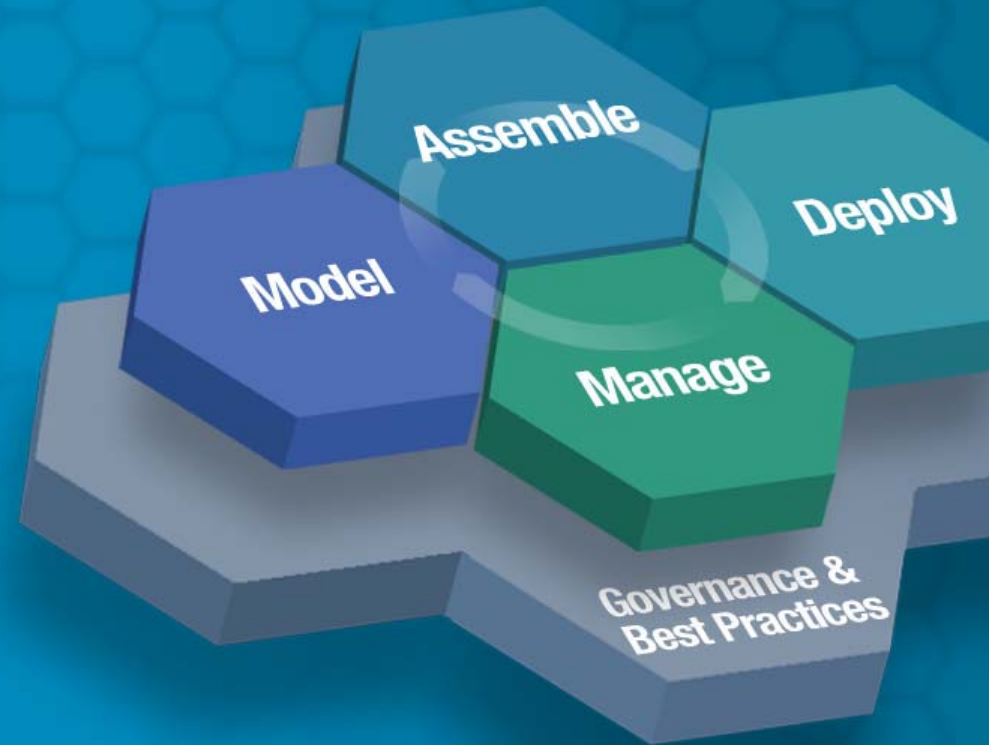


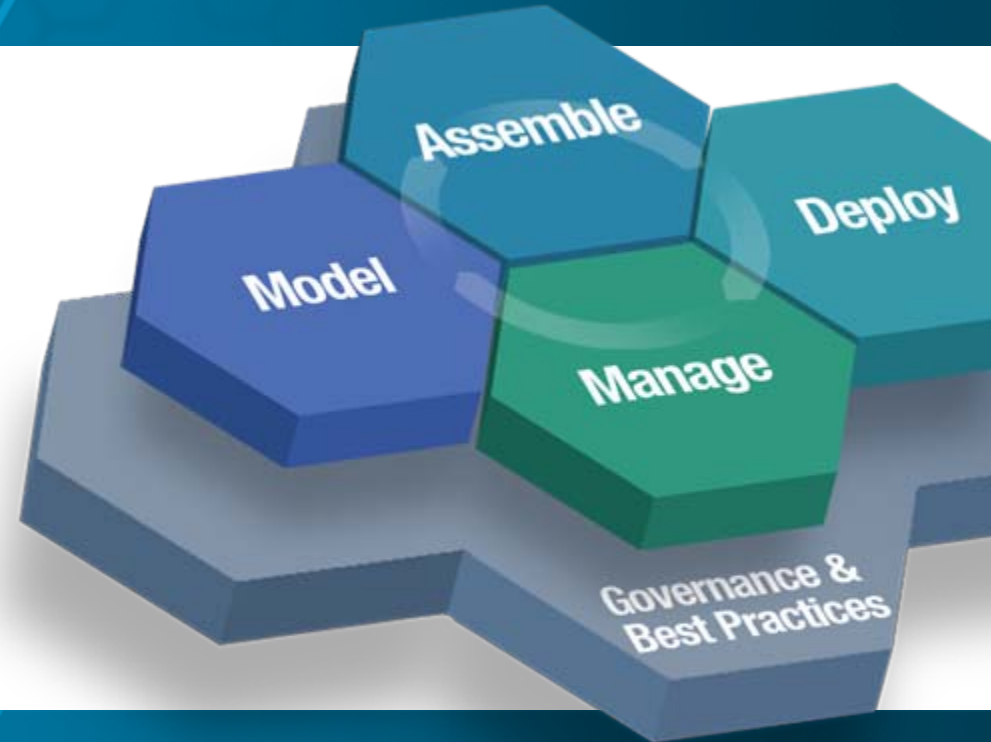
IBM SOA Architect Summit



SOA on your terms and our expertise

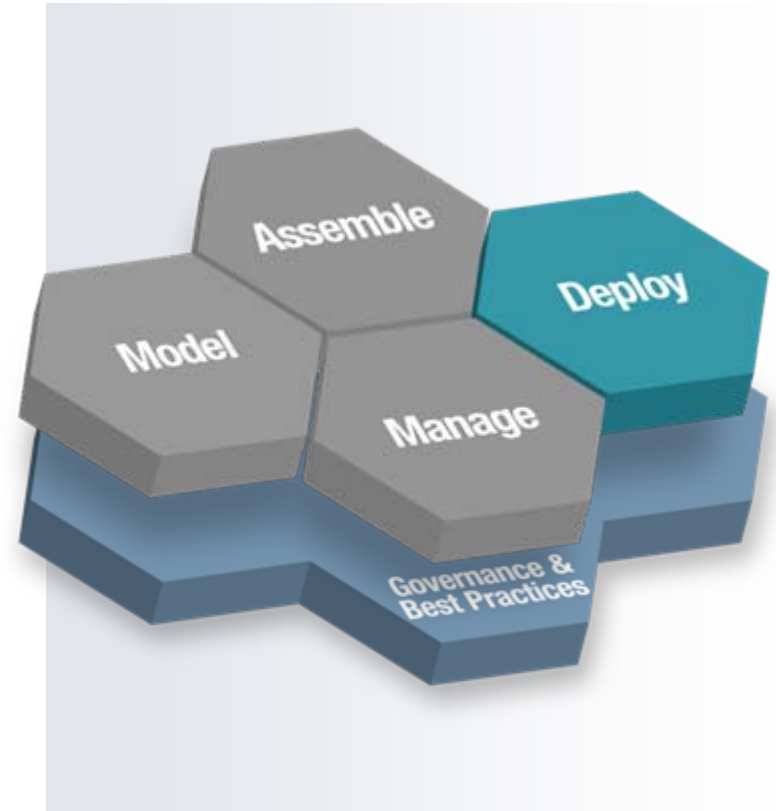
Deploy: The SOA Operating Environment

**A Presentation for the
Enterprise Architect**



Agenda

- SOA Operating Environment Requirements
 - What is unique about an SOA Operating Environment?
- SOA Operating Environment Key Principles
- Mapping to the IBM Products



SOA Brings New Operating Environment Requirements

Model

Assemble

Deploy

Manage



“What *new* capabilities do I need to deploy SOA solutions?”



“How can I manage the flexible work load, while keeping the SLA?”

**“Why do I need an ESB?
How is it different from EAI?”**

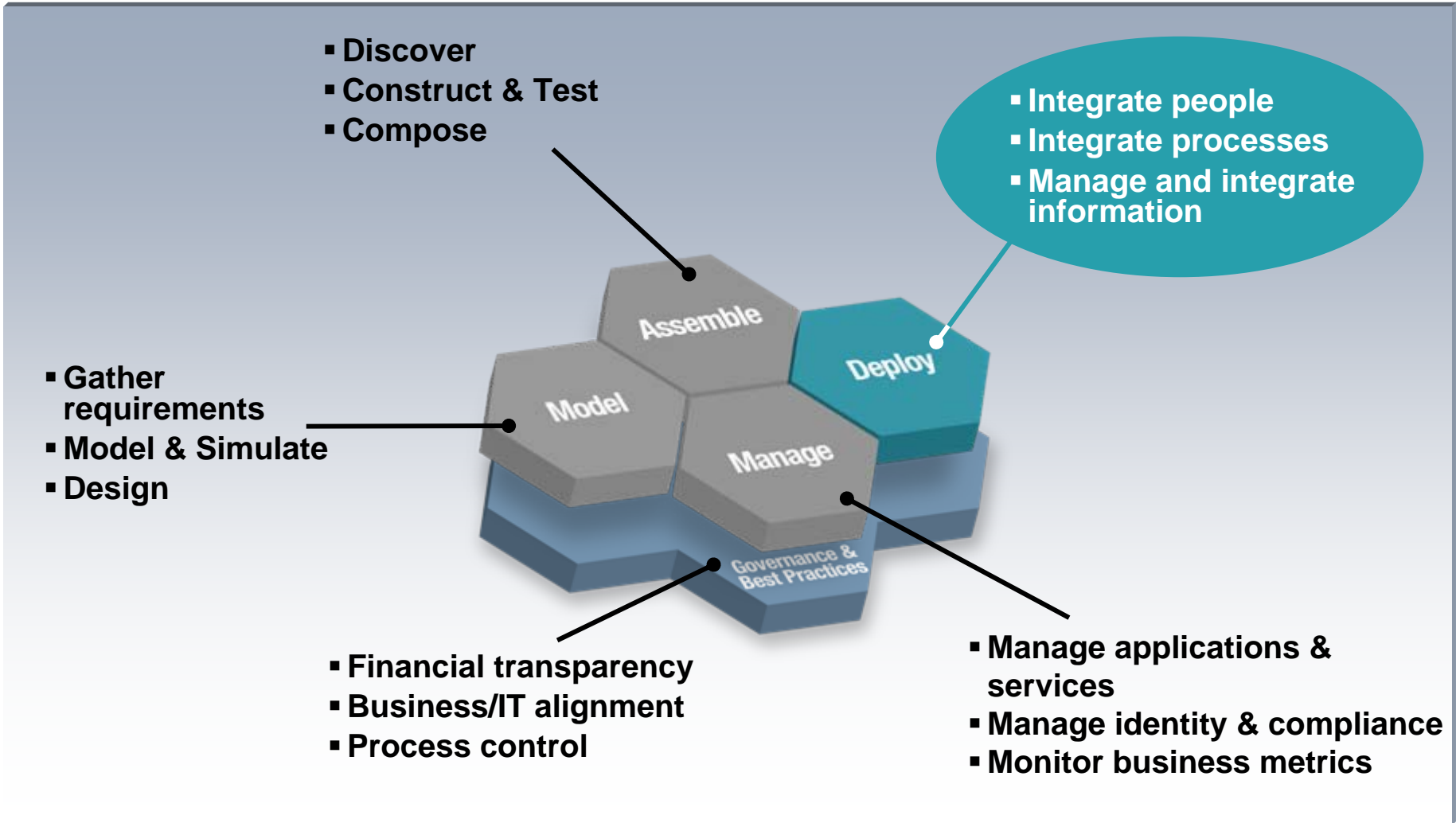
**“Do I need a registry / repository infrastructure?
What is it?”**



“Some of our services are used by our partners. Where do I place them in the Operating Environment?”

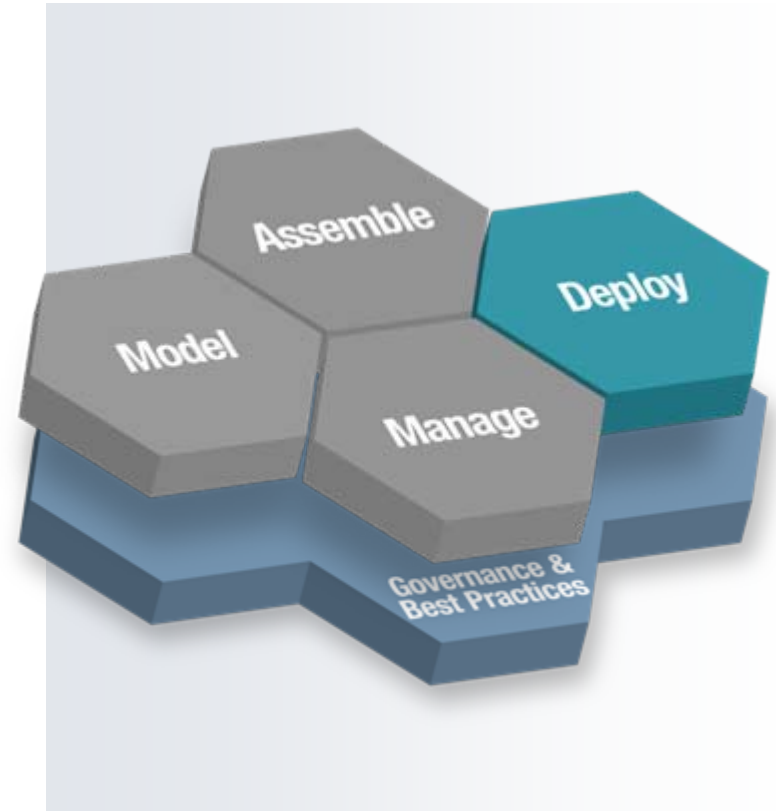
“What capabilities do I need to effectively reuse existing assets?”

The SOA Lifecycle



Agenda

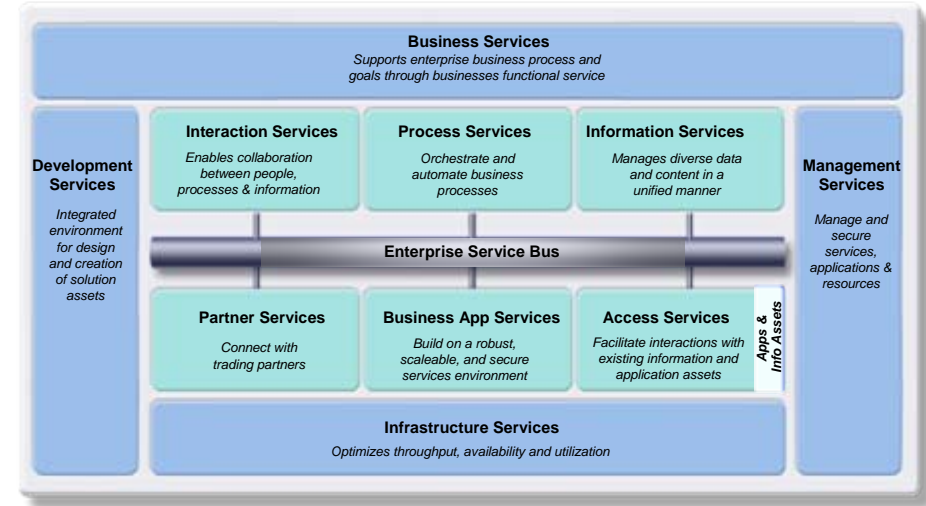
- SOA Operating Environment Requirements
- SOA Operating Environment Key Principles
 - Separation of Concerns
 - Loose Coupling
 - Composite Applications
 - Quality of Service
- Mapping to the IBM Products



IBM's SOA Reference Architecture

Key Principles for IT Flexibility

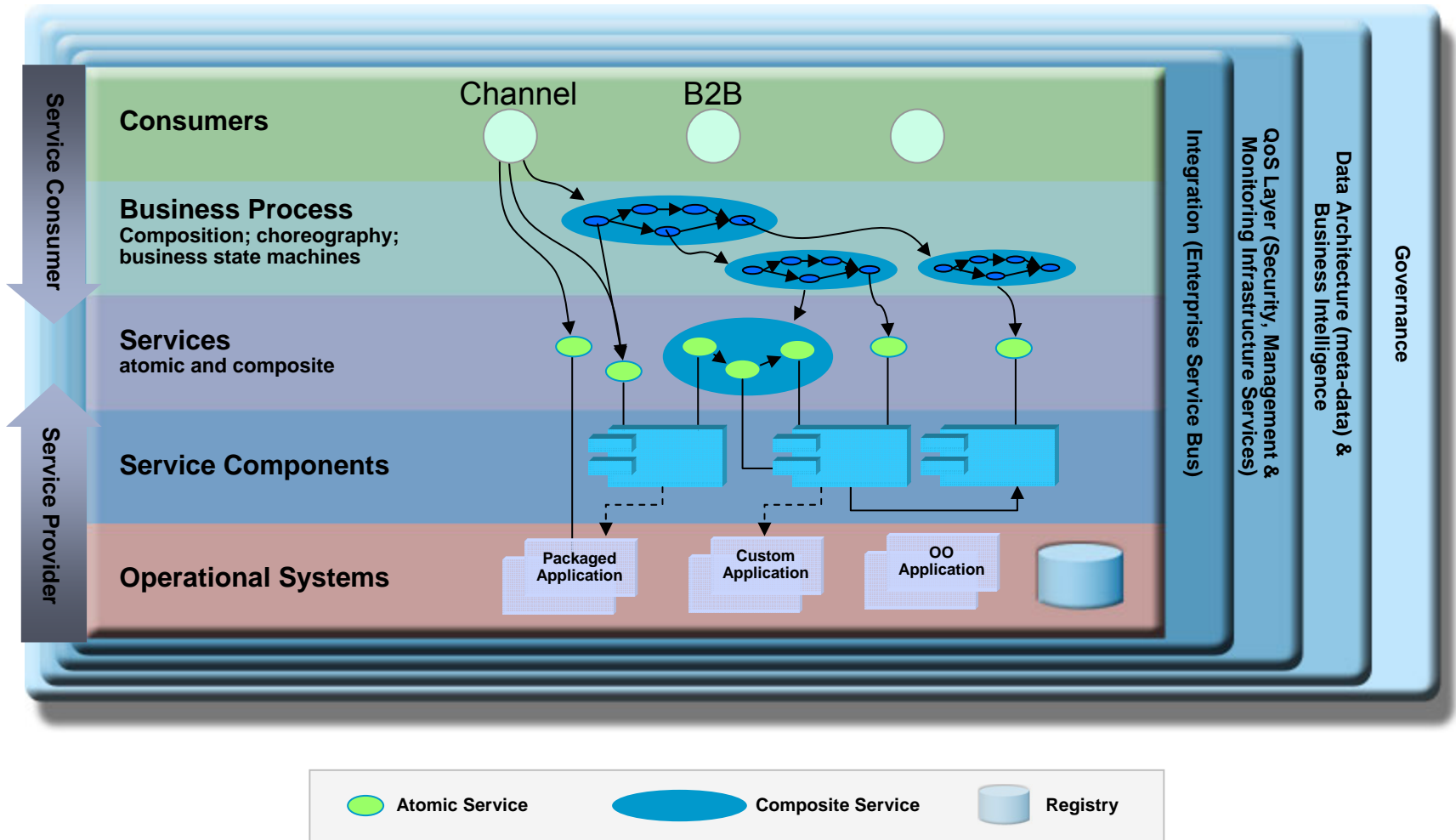
- Open Standards
 - Linkage between business and IT
 - Component based programming and solution development
- Separation of Concerns
 - Connectivity and Loose Coupling
 - Composite Applications
 - Quality of Service
- Business and IT level monitoring and management



The IBM SOA Reference Architecture provides the level of *IT flexibility* required to meet the demands of business

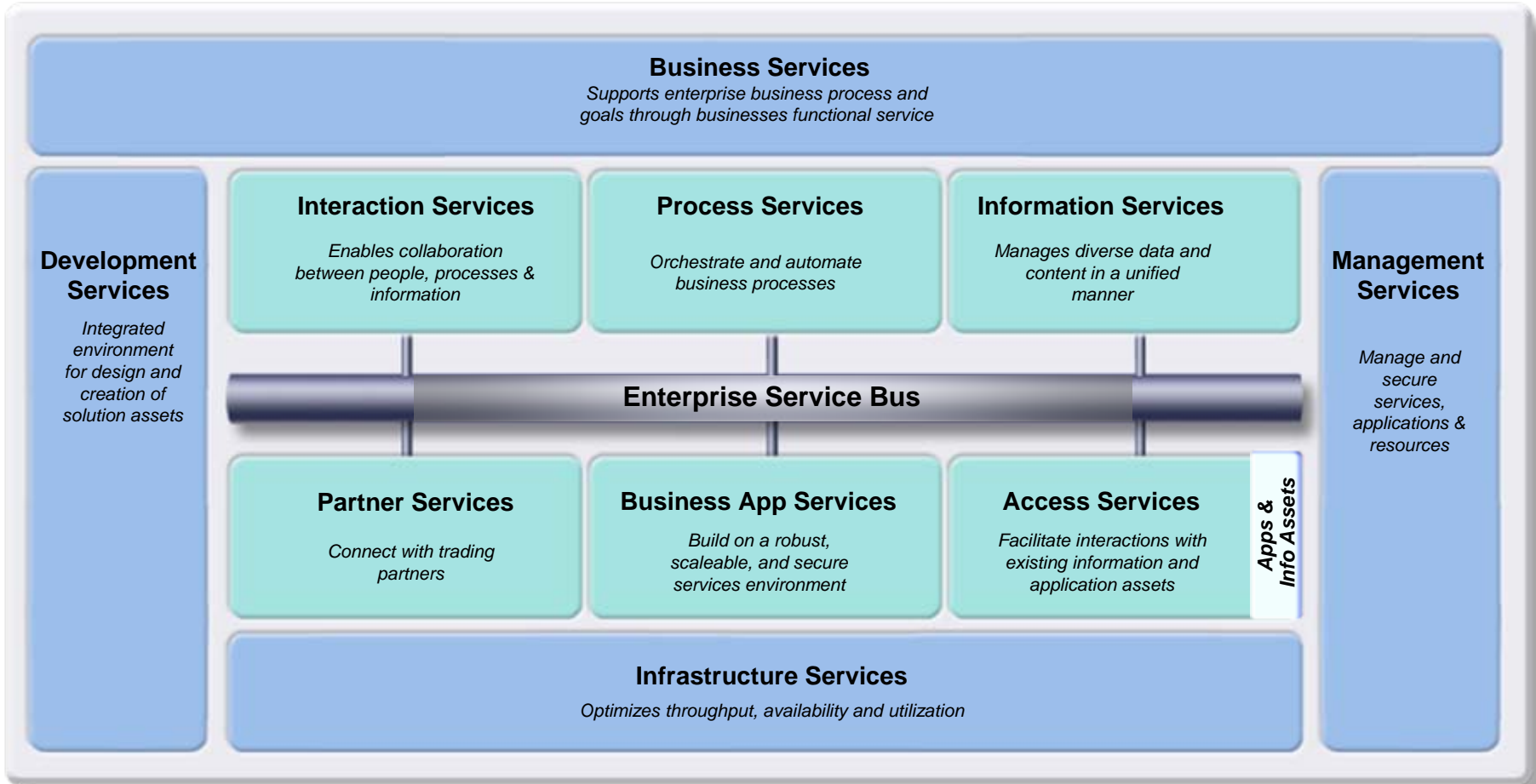
SOA Solution Layers

Layers Connecting the Service Consumers and Providers



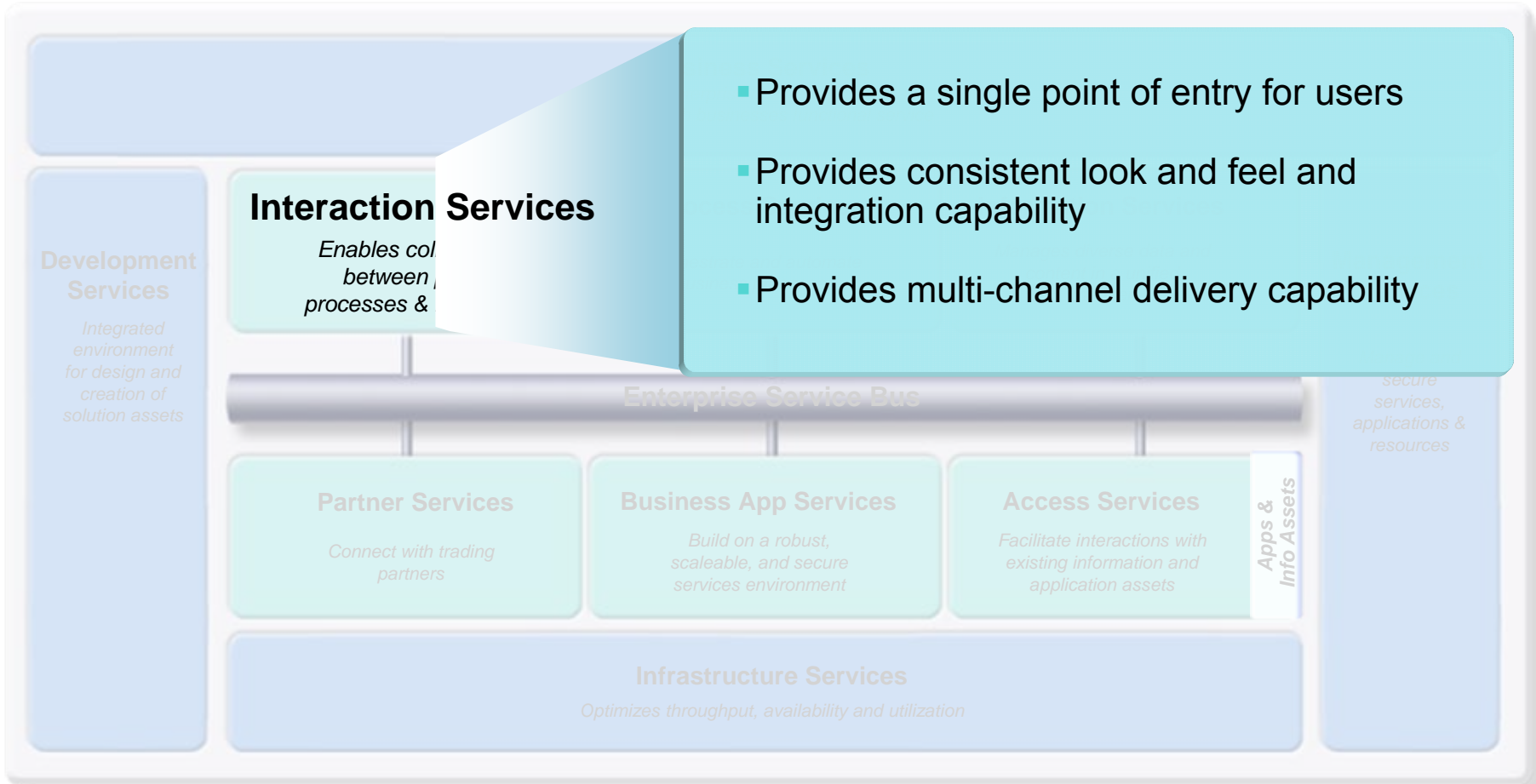
SOA Reference Architecture

Supporting the SOA Lifecycle



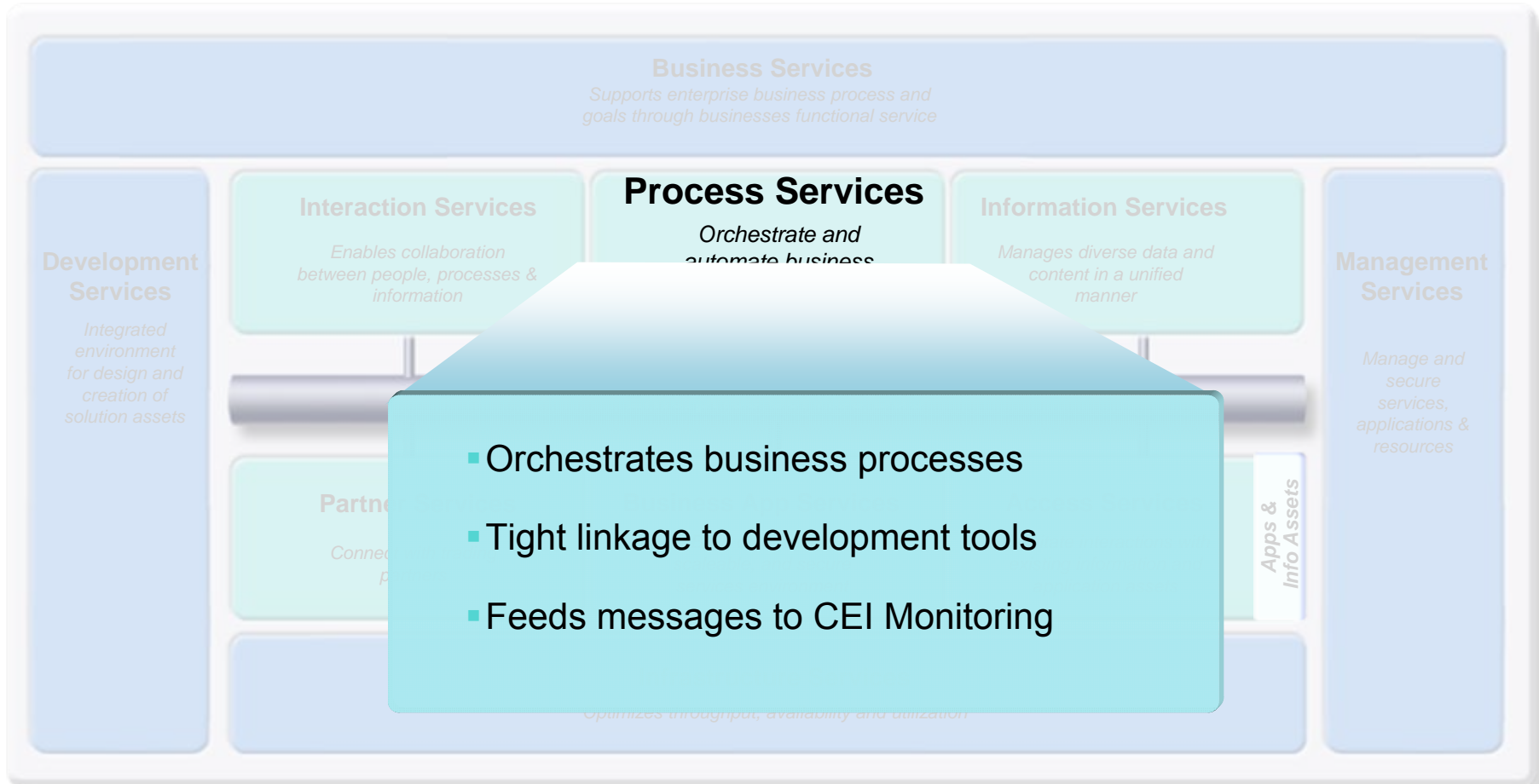
Mapping Solution Layers to SOA Reference Architecture

Supporting Separation of Concerns



Mapping Solution Layers to SOA Reference Architecture

Supporting Separation of Concerns



Mapping Solution Layers to SOA Reference Architecture

Supporting Separation of Concerns

- Provides unified access to trusted information
- Enables the creation and ongoing maintenance of trusted information
- Provides insight & understanding across diverse sources

Information Services

Aggregates diverse content in a unified manner

Management Services

Manage and secure services, applications & resources

Enterprise Service Bus

Partner Services

Connect with trading partners

Business App Services

Build on a robust, scaleable, and secure services environment

Access Services

Facilitate interactions with existing information and application assets

Apps & Info Assets

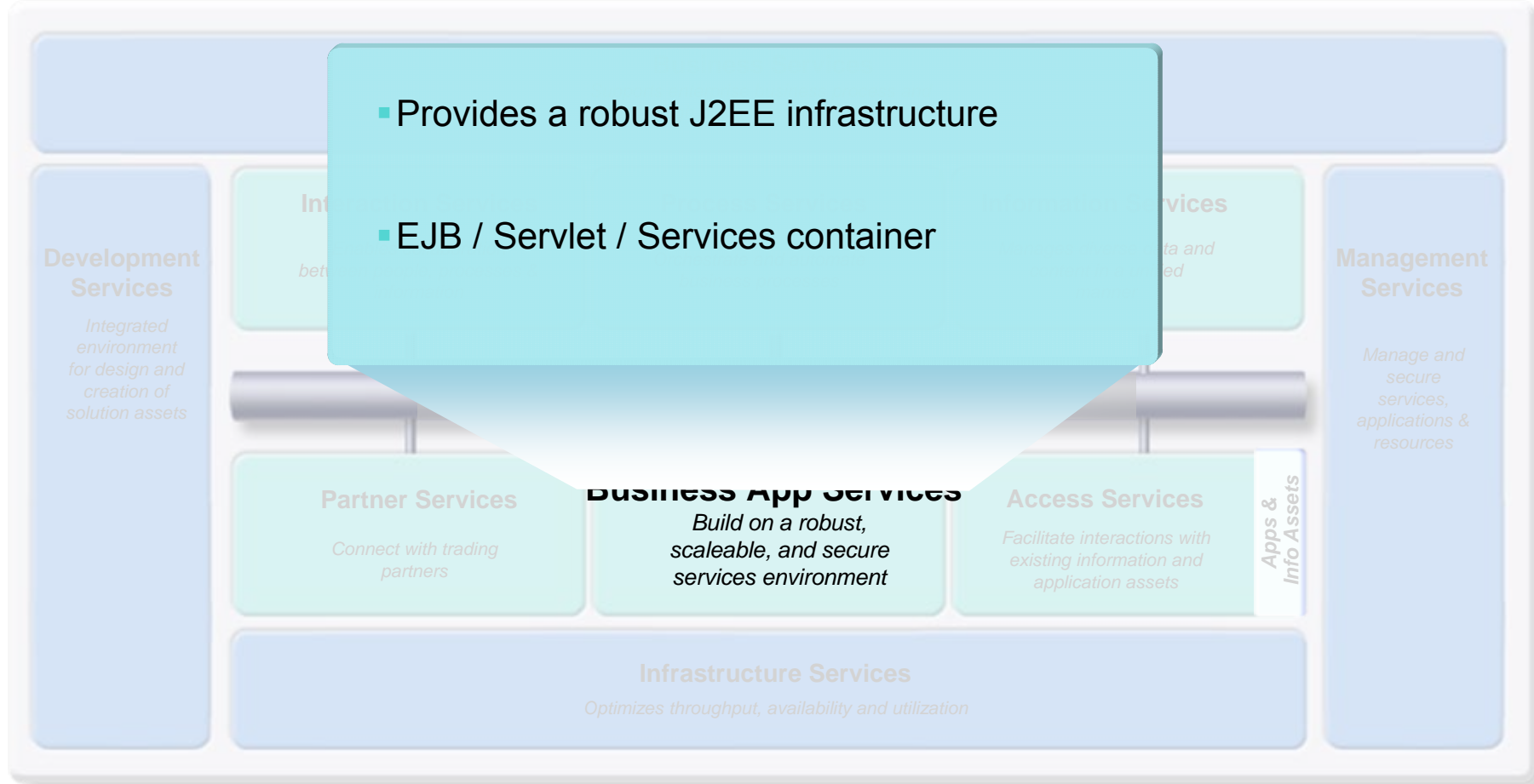
Infrastructure Services

Optimizes throughput, availability and utilization

Supports the creation of solution assets

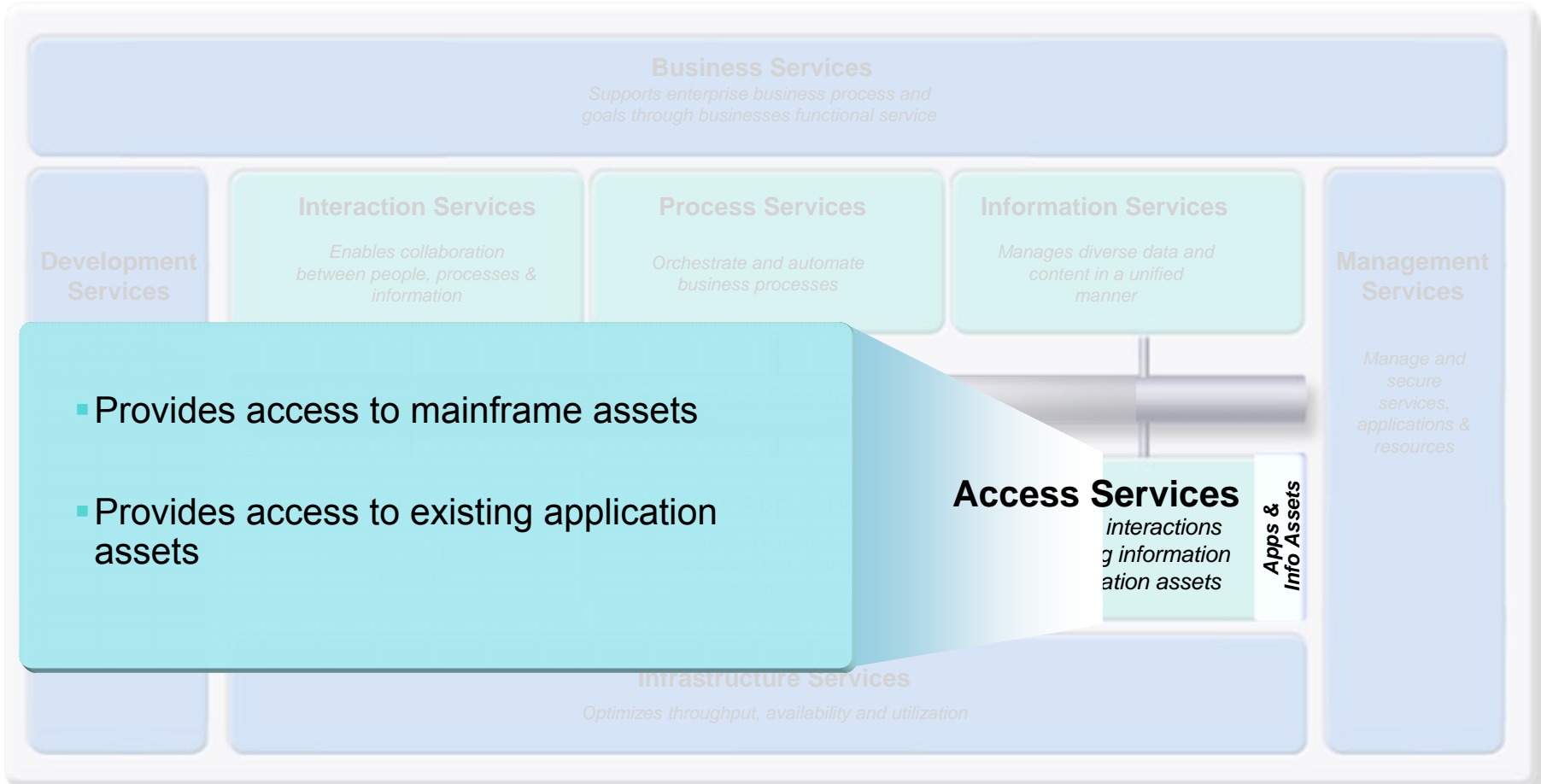
Mapping Solution Layers to SOA Reference Architecture

Supporting Separation of Concerns



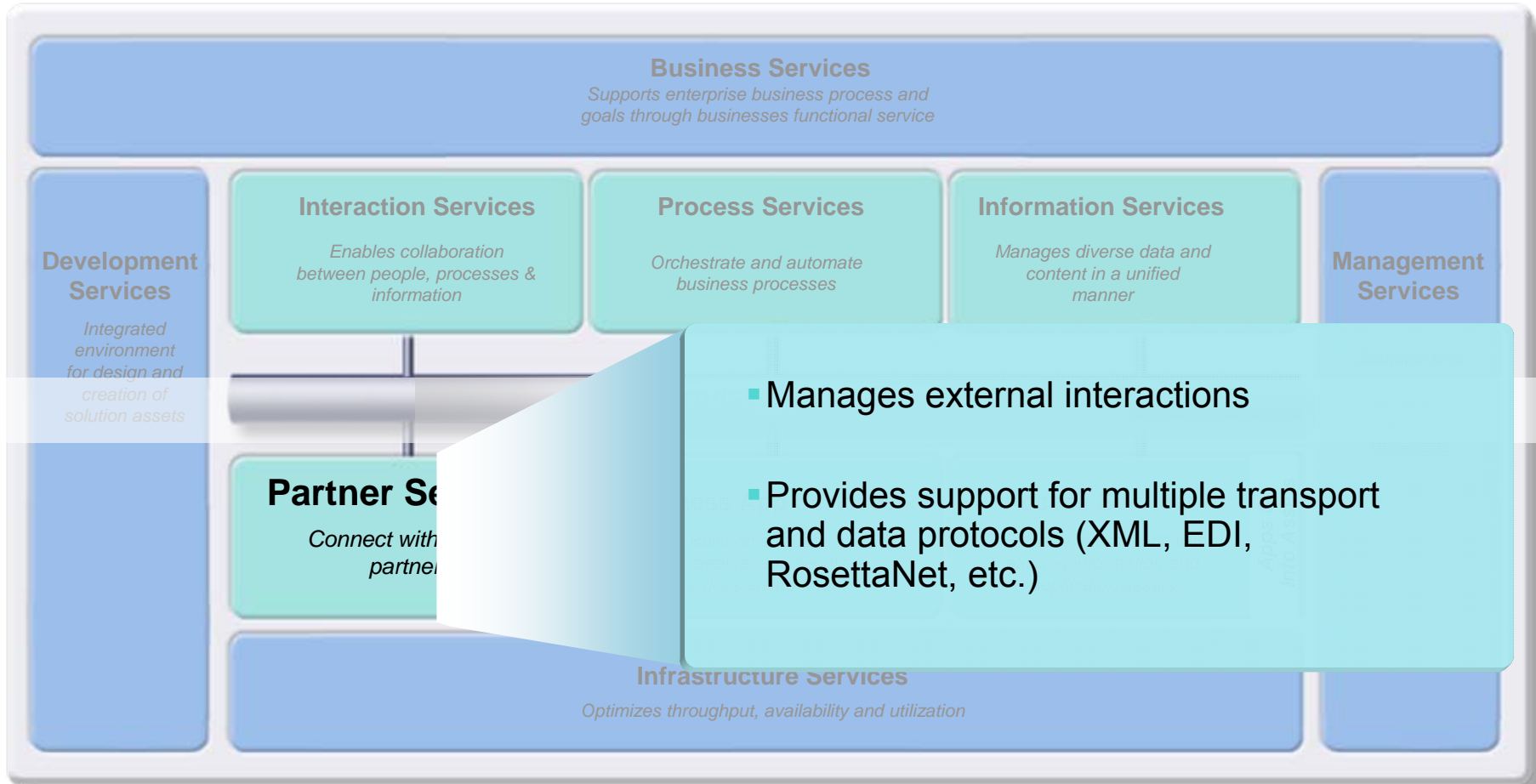
Mapping Solution Layers to SOA Reference Architecture

Supporting Separation of Concerns



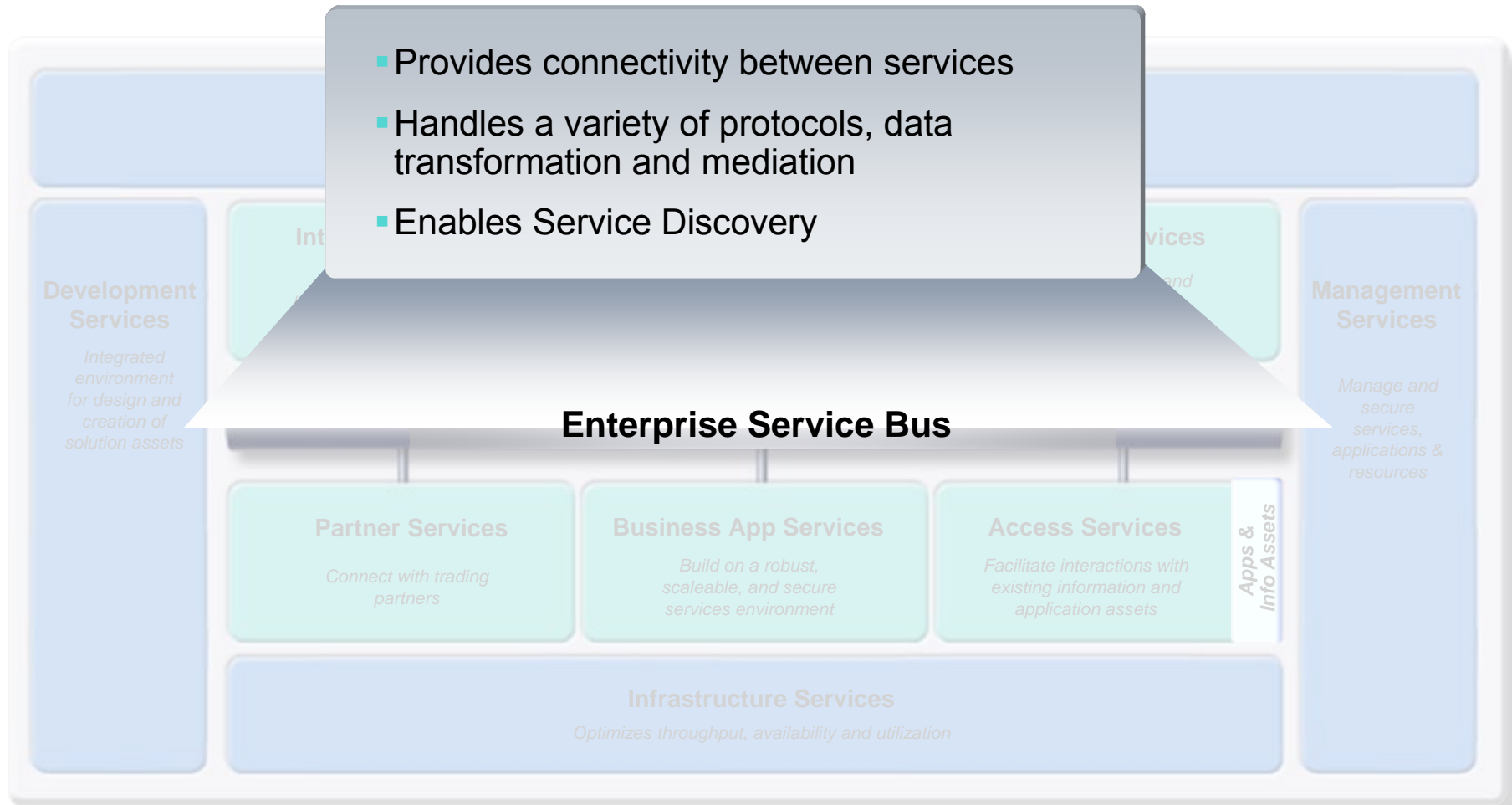
Mapping Solution Layers to SOA Reference Architecture

Supporting Separation of Concerns



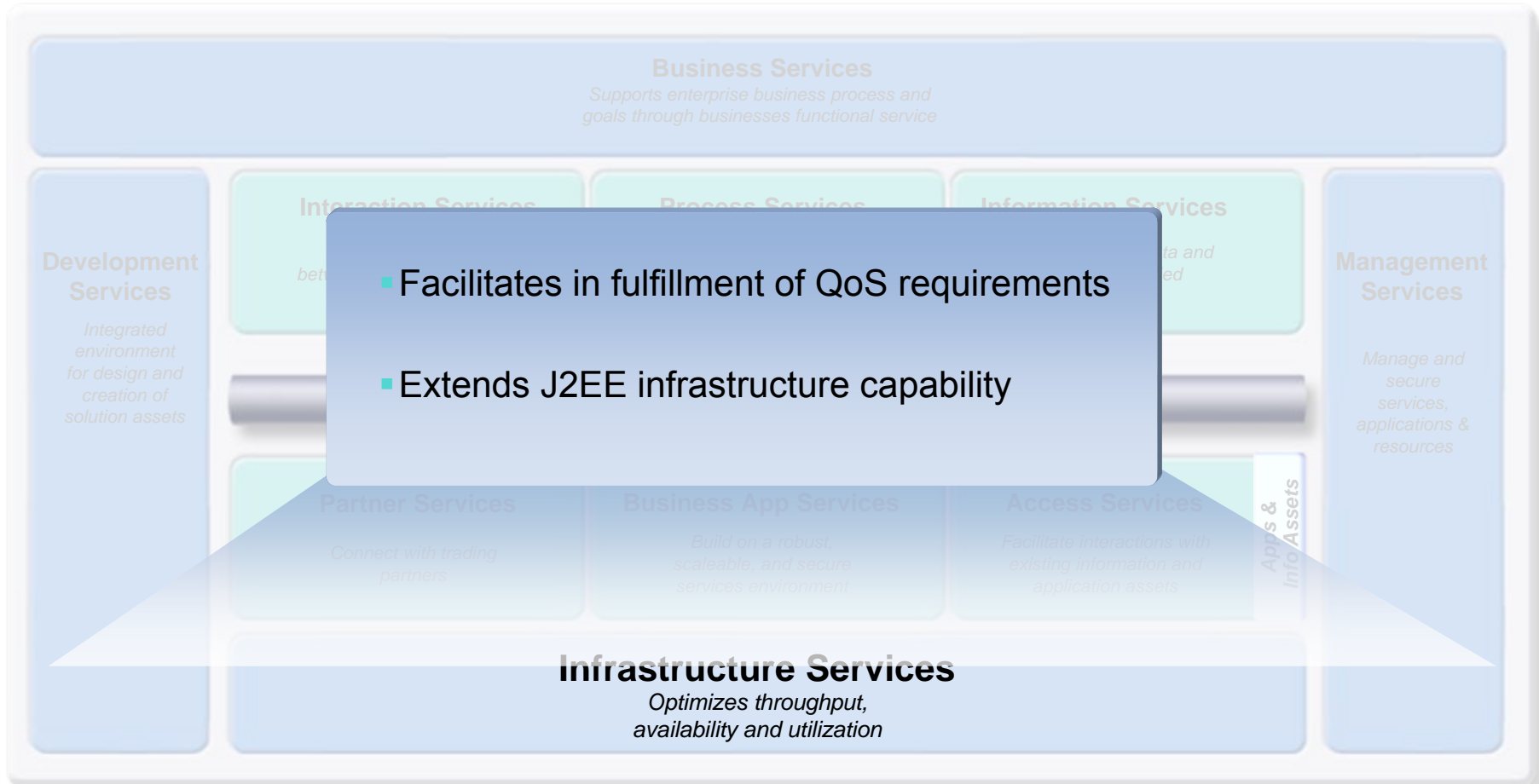
Mapping Solution Layers to SOA Reference Architecture

Supporting Separation of Concerns

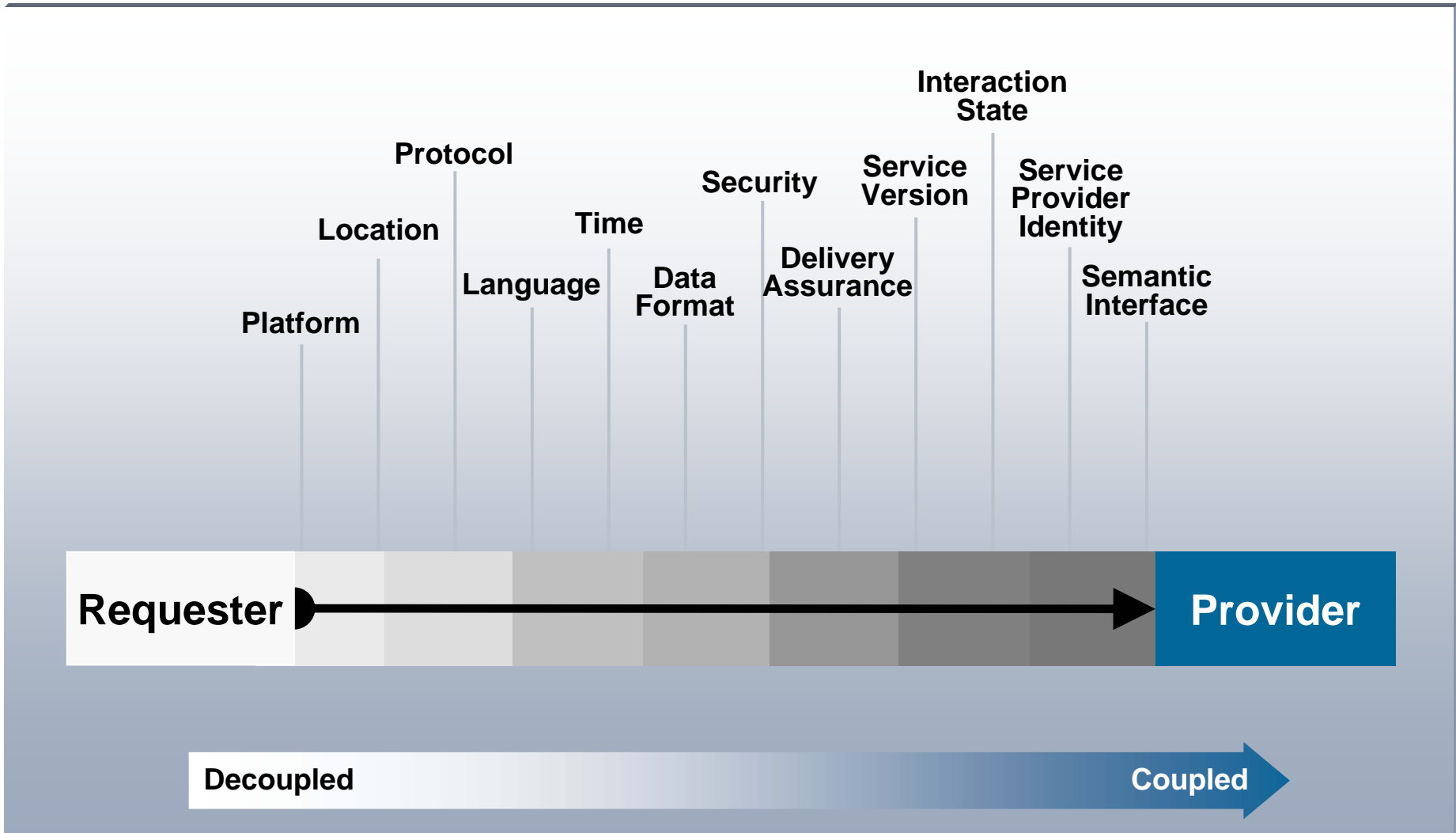


Mapping Solution Layers to SOA Reference Architecture

Supporting Separation of Concerns

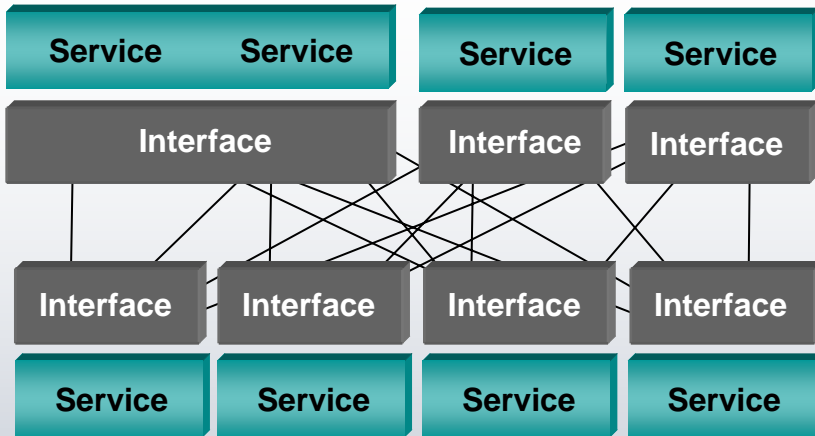


Degree of Coupling Impacts Service Flexibility

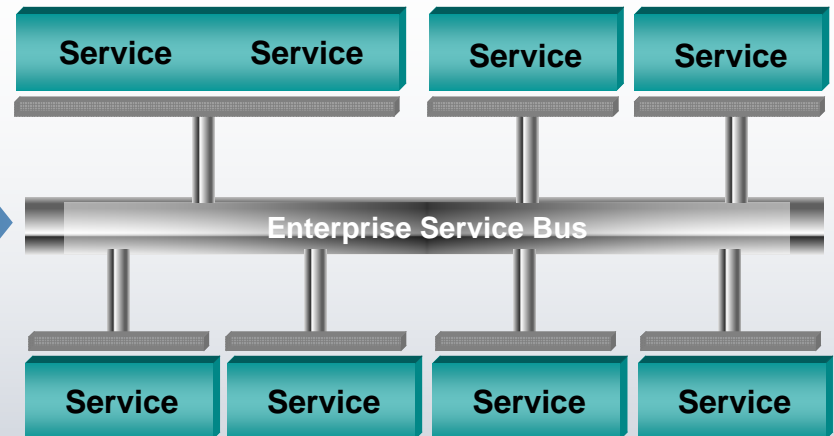


Loose Coupling: Increases Flexibility and Reuse

Turn this...



...into this



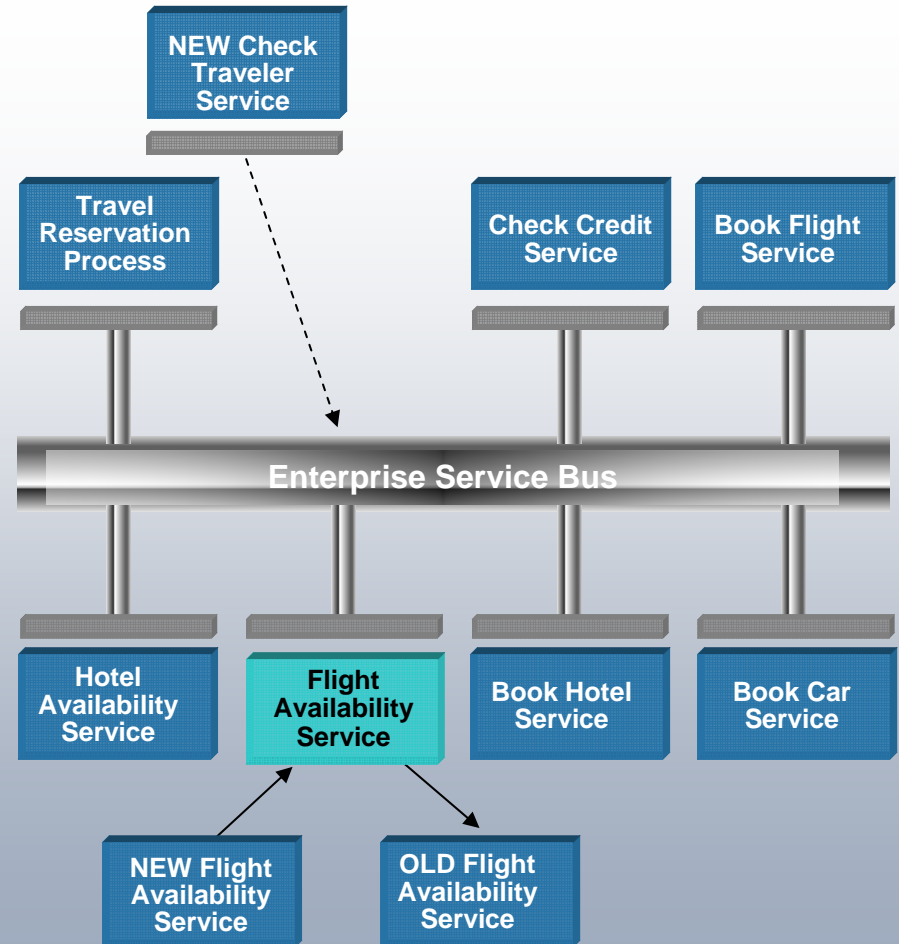
- Decouples the point-to-point connections from the interfaces
- Allows for dynamic selection, substitution, and matching
- Enables more flexible coupling and decoupling of the applications
- Enables you to find both the applications and the interfaces for re-use

Result → Greater Business Responsiveness

Loose Coupling: Makes it Easier to Add & Change Services

Add new services faster

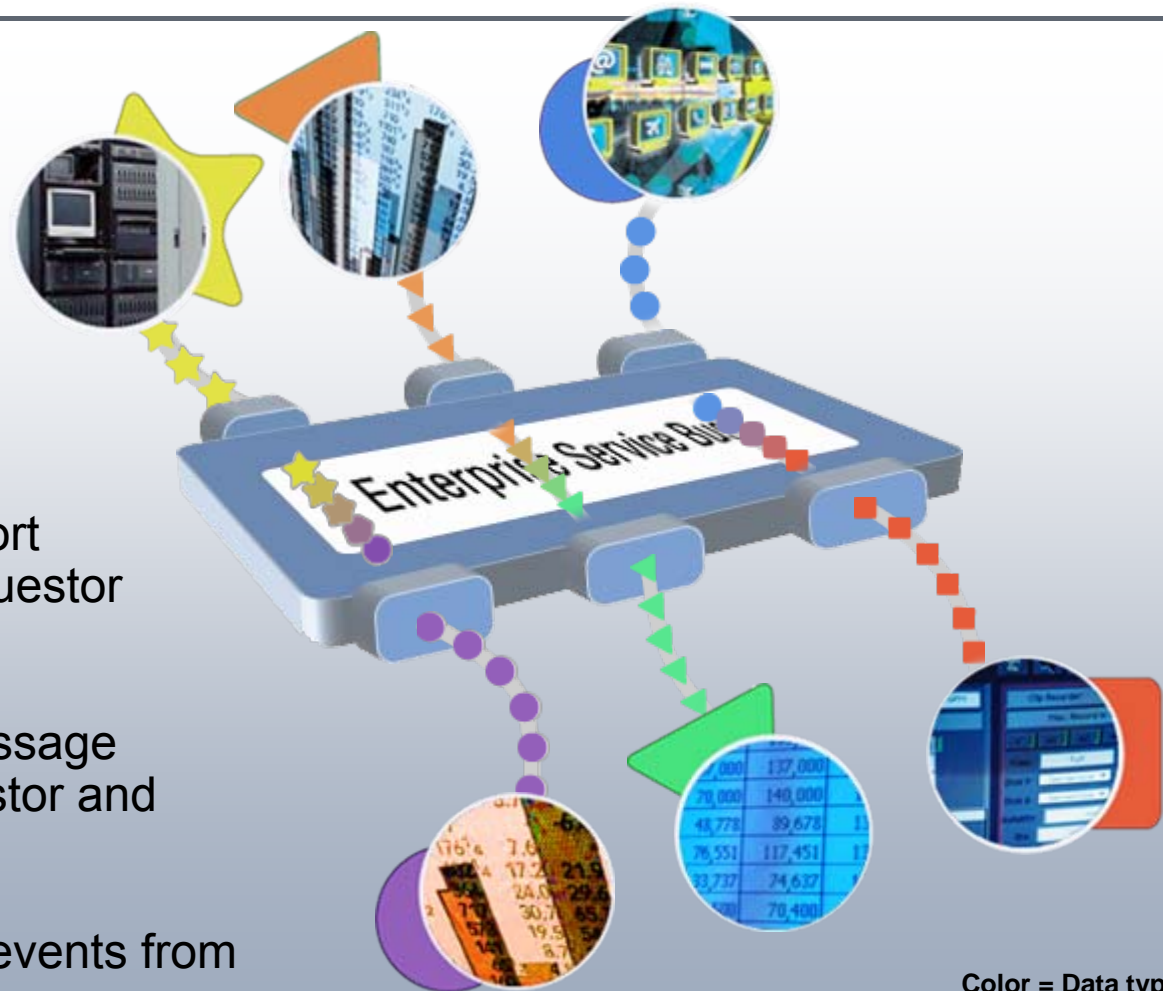
Change services with minimal impact to existing services



What is an Enterprise Service Bus (ESB)?

Flexible connectivity infrastructure for integrating applications and services to power your SOA

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



Color = Data type
Shape = Protocol

ESB Portfolio

ESB:

Provides Web Services connectivity and data transformation

Advanced ESB:

Provides universal connectivity and data transformation

ESB

Advanced ESB

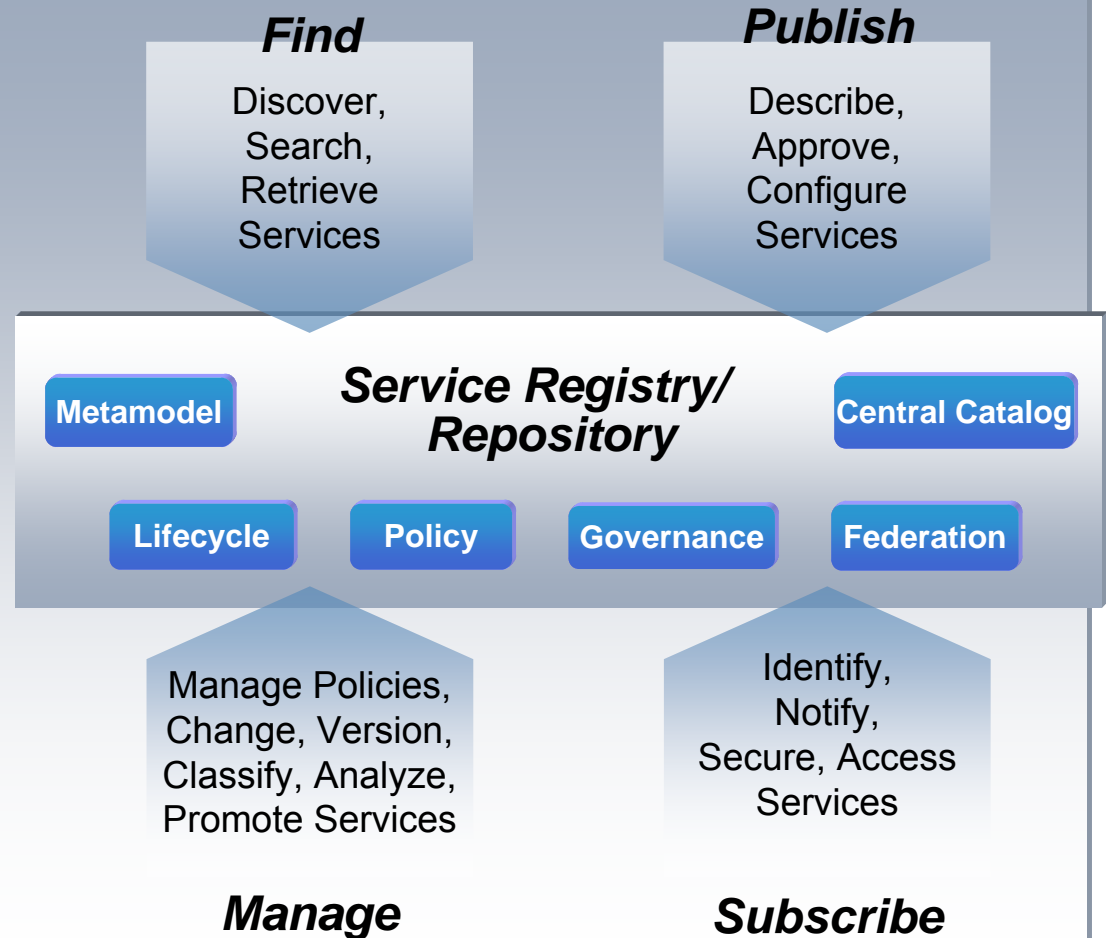
SOA Appliance

SOA Appliances:

Enhances security, simplifies and accelerates processing for the ESB

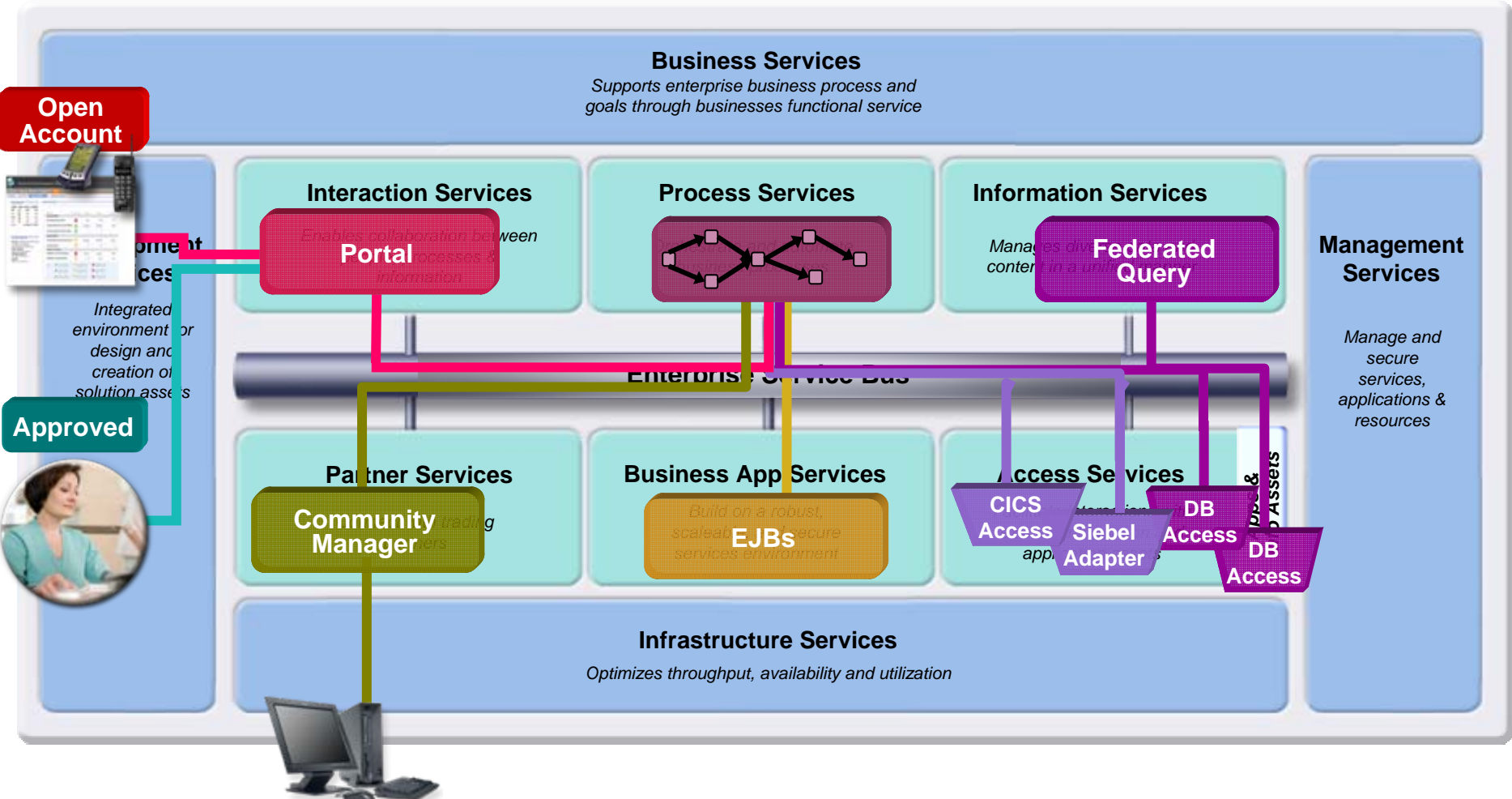
A Service Registry/Repository Helps Manage Services

*A Registry/Repository is an enterprise-wide system for **Storing, Accessing, and Managing SOA Metadata** to provide for service virtualization and management of the service-based environment*

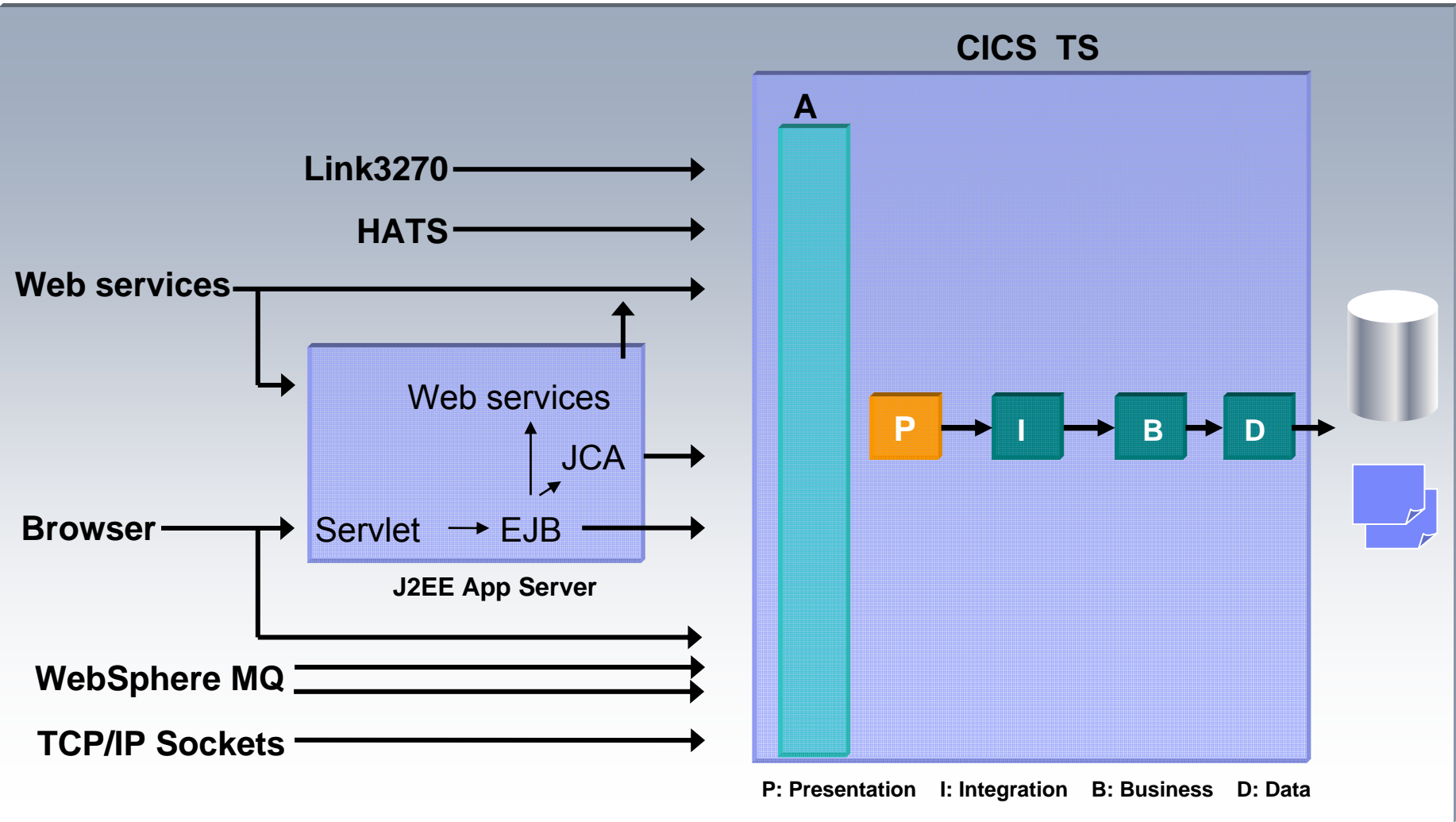


Composite Applications

Solutions built around processes combining multiple services, which may be both new services and existing business assets

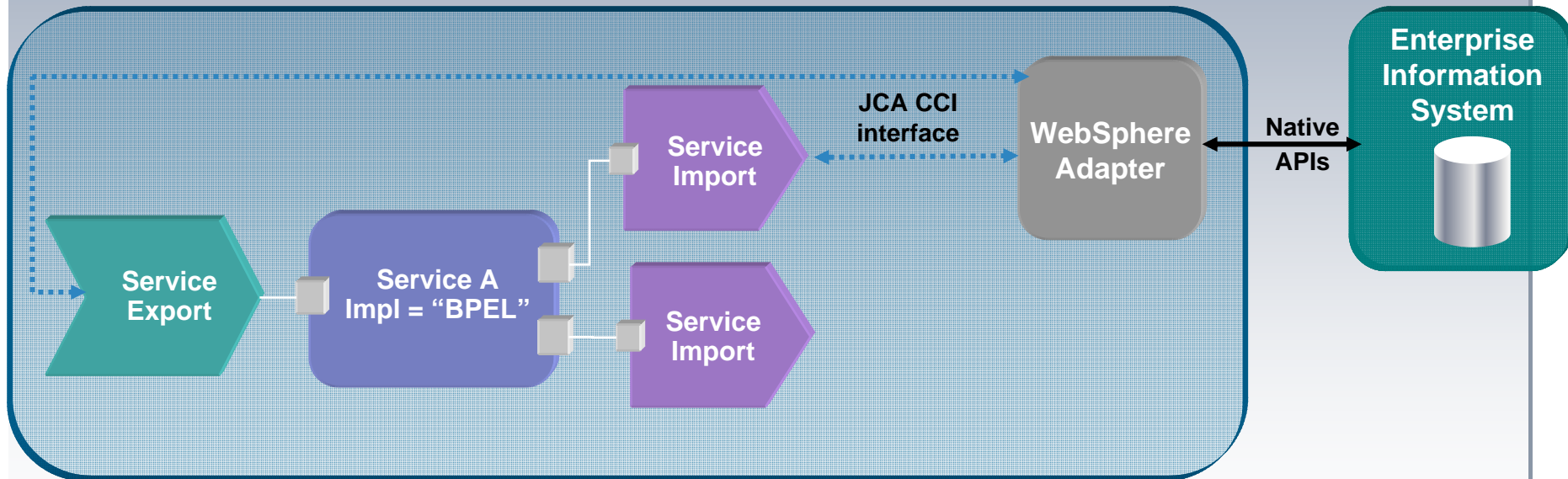


Integrating with Mainframe Applications

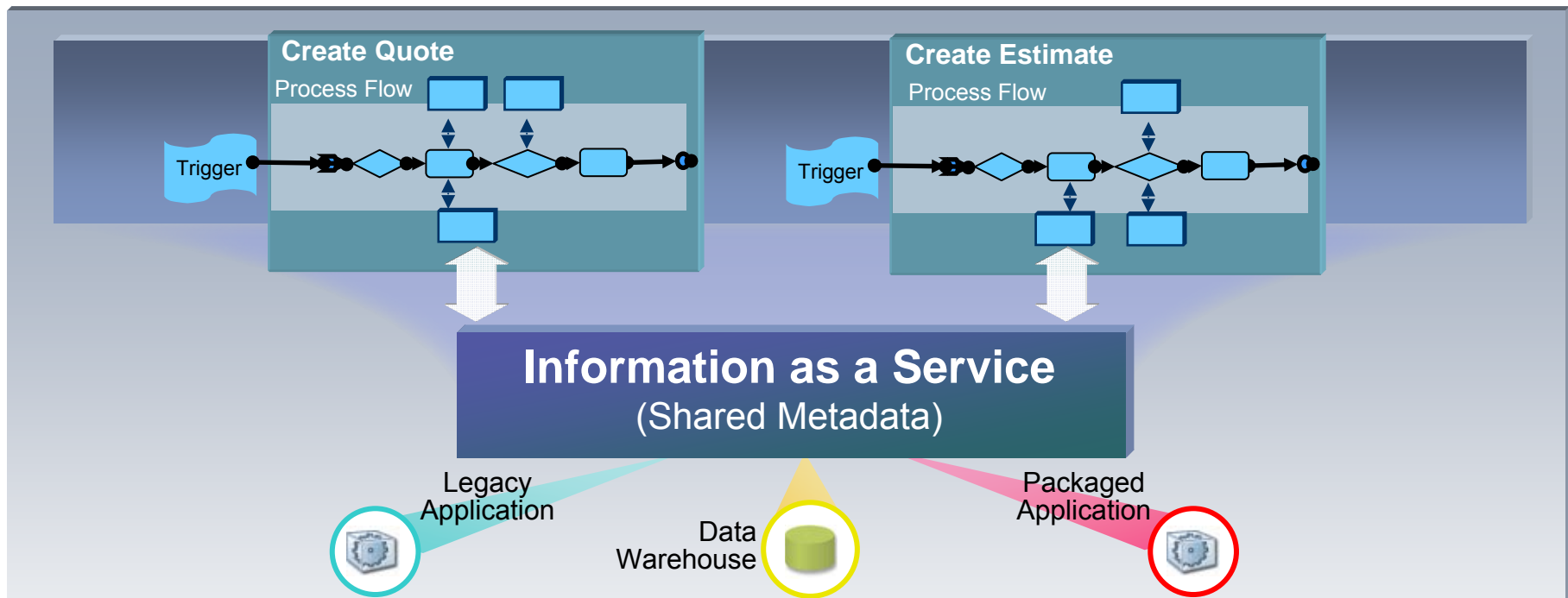


Integrating with Assets in Distributed Applications

JCA 1.5 Adapter Deployment Architecture



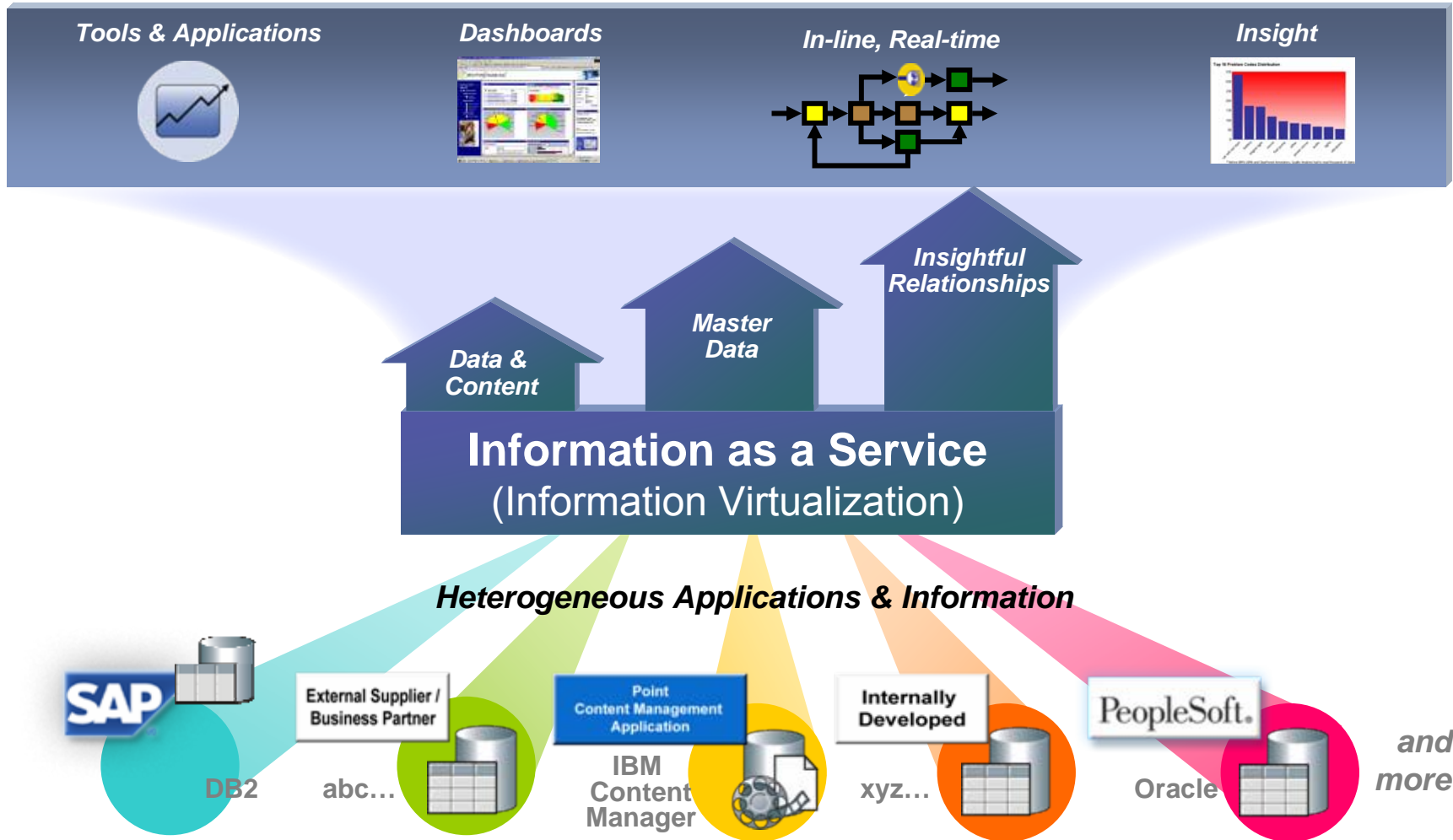
Integrating with Information



- Consistent packaging of data
- Leverages understanding of metadata relationships
- Applies consistent rules to data
- Centralized control and maintenance
- Flexibility to change information sources and formats

Information as a Service

Moving From a Project-Based to a Flexible Information Architecture



Quality of Service Considerations

Dynamic Operations

- Adapt to business changes automatically
- Performance goals for differing workloads
- Apply IT intelligence to reduce the need for manual intervention



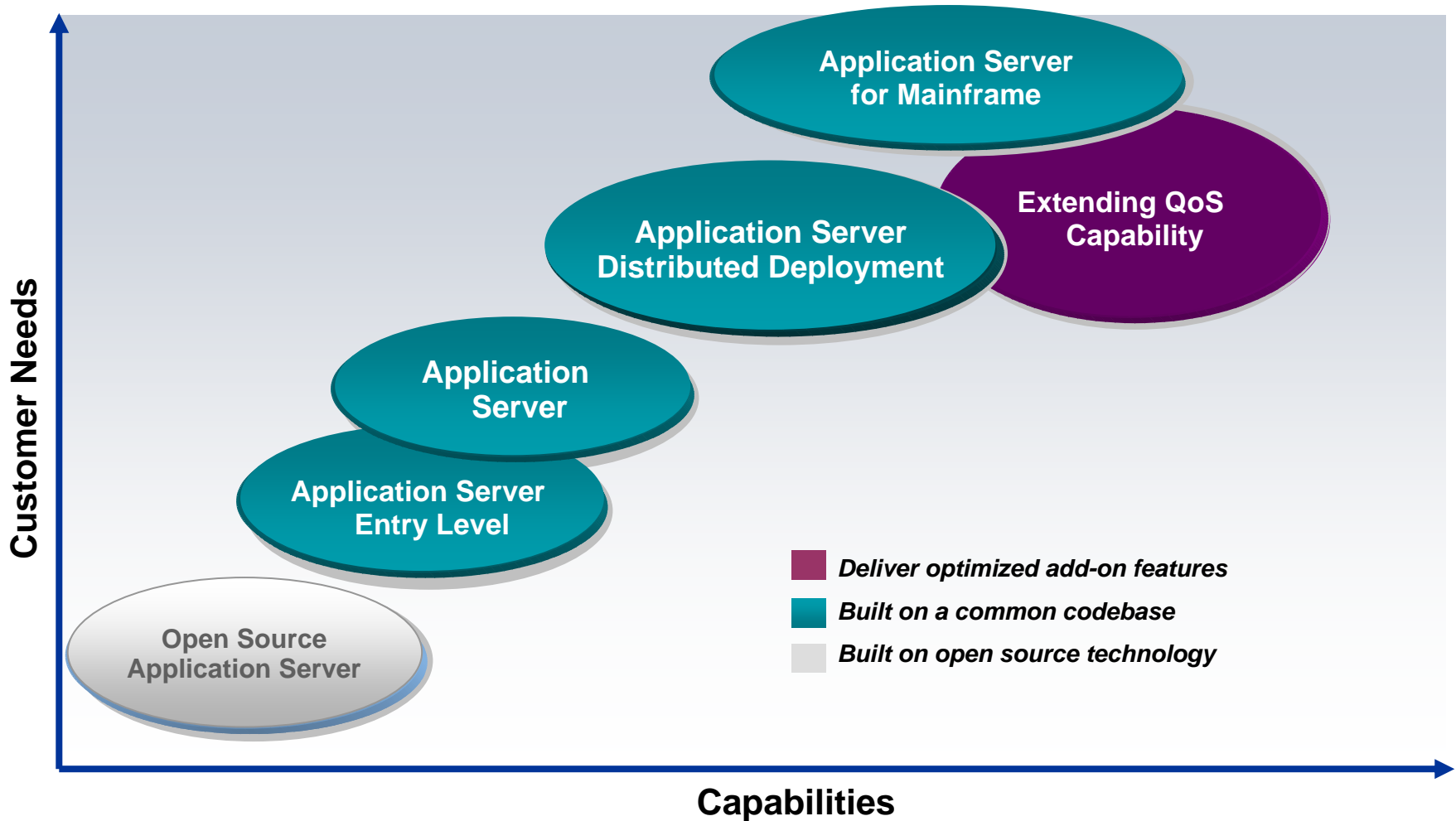
Extended Manageability

- At-a-glance system assessments for health and vitality

High Performance Computing

- Optimize your transactions for improved performance and availability

Middleware Suite Quality of Service Capabilities



Quality of Service Considerations

Leverage Middleware Infrastructure Capabilities

Flexibility for heterogeneous environment

- Efficiently support mixed workloads
- Effectively enable quality of service management for a mixed application servers and data sources

Optimizing the performance and throughput of transactions

- ObjectGrid, a caching fabric which enables object data to be shared among multiple clients
- Partitioning facility enables the development of highly scalable, high performance J2EE applications

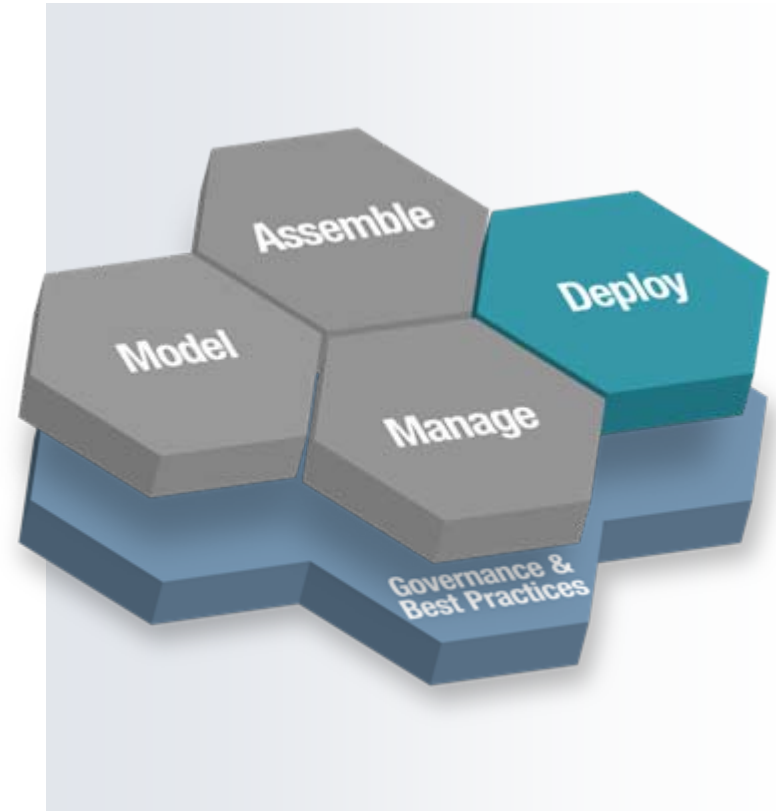
Enhanced manageability

- At-a-glance assessments of system vitality and improved application manageability
- Interruption-free application updates to manage the deployment of multiple application versions

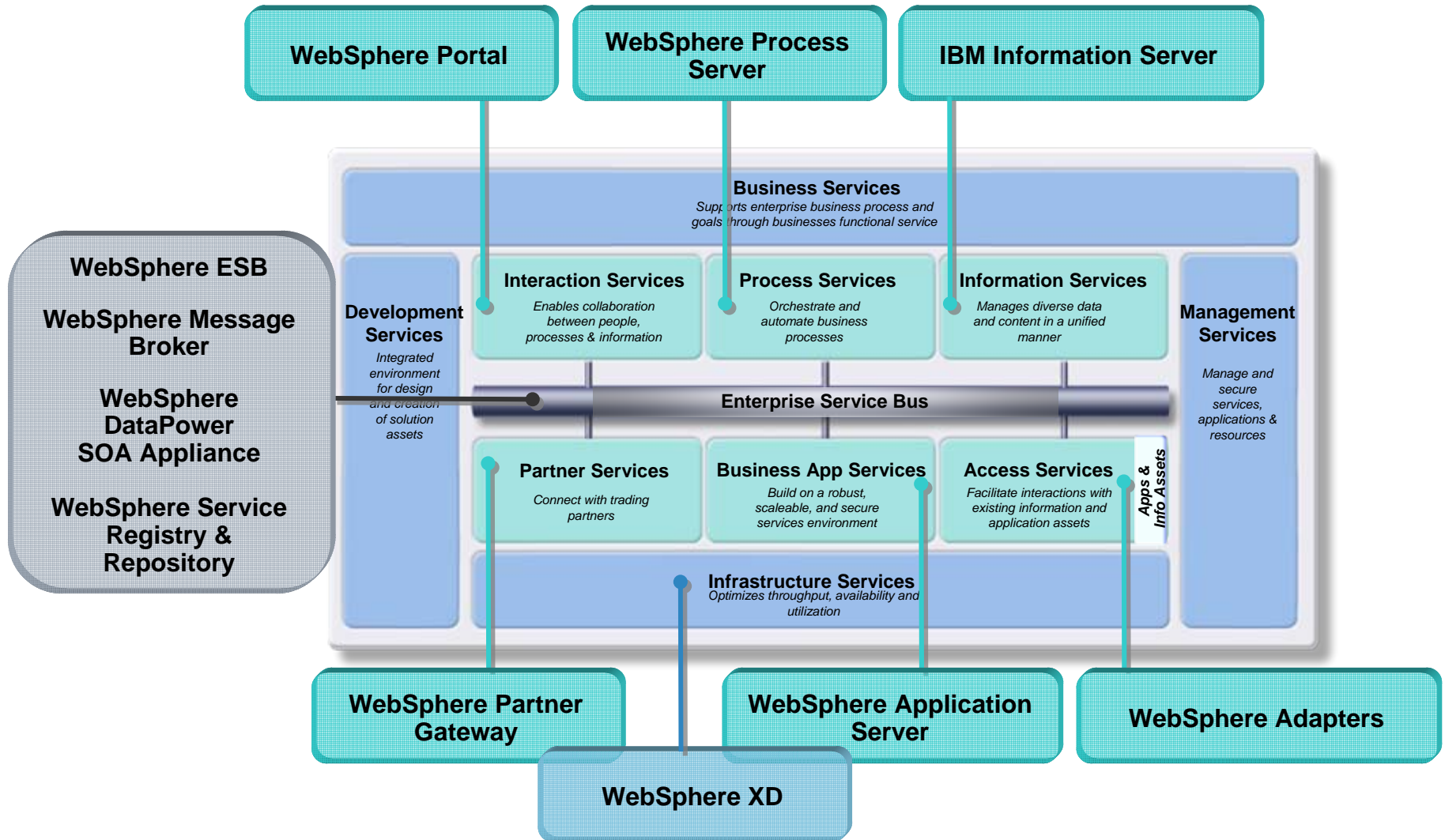


Agenda

- SOA Operating Environment Requirements
- SOA Operating Environment Key Principles
- Mapping to the IBM Products
 - Products in the Operating Environment



SOA Operating Environment – Mapping to IBM Offerings



Summary

- SOA Operating Environment brings in new considerations at deploy time
- SOA Reference Architecture enables separation of concerns
- ESB provides for loose coupling & flexibility
- Composite Applications enable the reuse of existing assets
- SOA Quality of Service considerations are same as traditional applications but may manifest differently in the infrastructure

धन्यवाद

Hindi

多謝

Traditional Chinese

Teşekkür ederim

Turkish

Спасибо

Russian

Gracias

Spanish

شكراً

Arabic

Thank You

Mange tak

Danish

Grazie

Italian

Danke

German

Merci

French

நன்றி

Tamil

多谢

Simplified Chinese

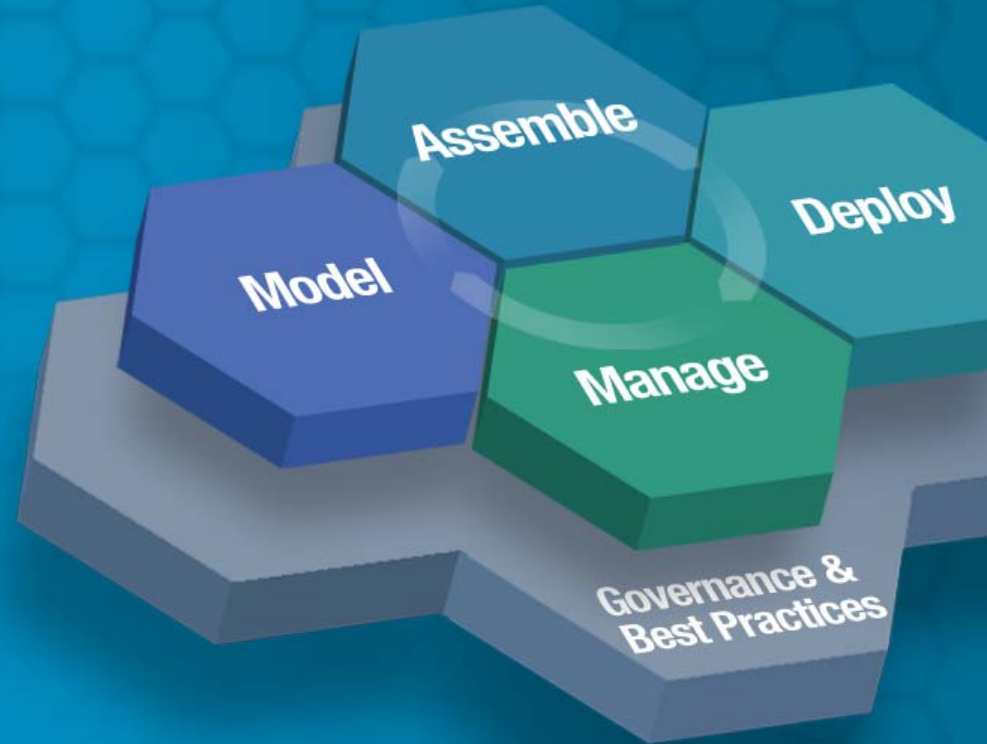
감사합니다

Korean

ありがとうございました

Japanese

IBM SOA Architect Summit



SOA on your terms and our expertise