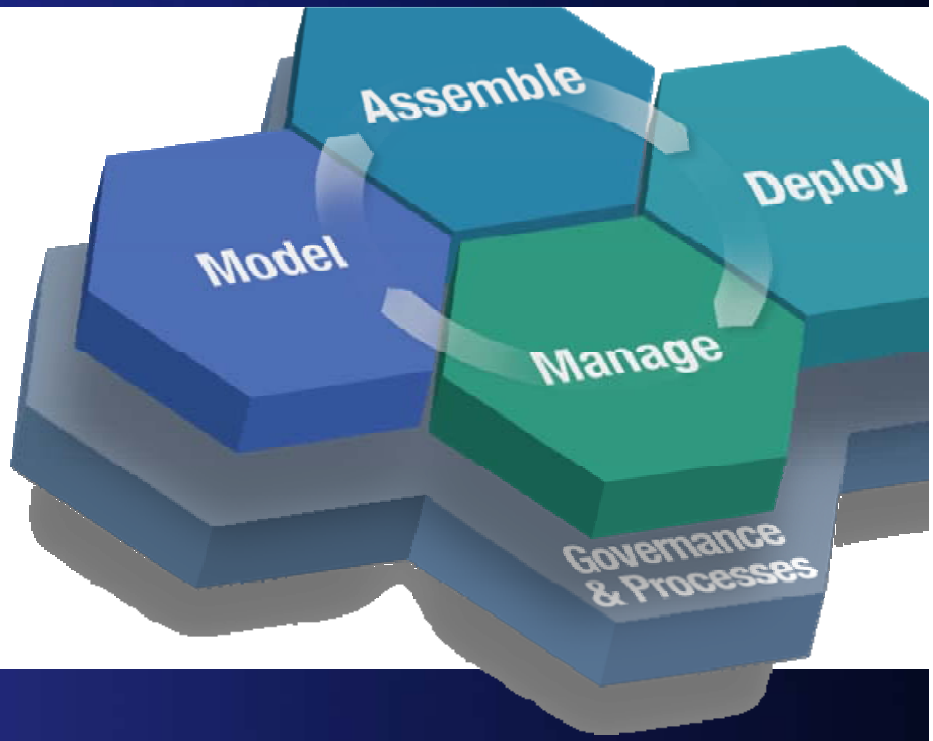
IBM SOA Architect Summit

SOA on your terms and our expertise

IBM SOA Architect Summit

Service Oriented Architecture

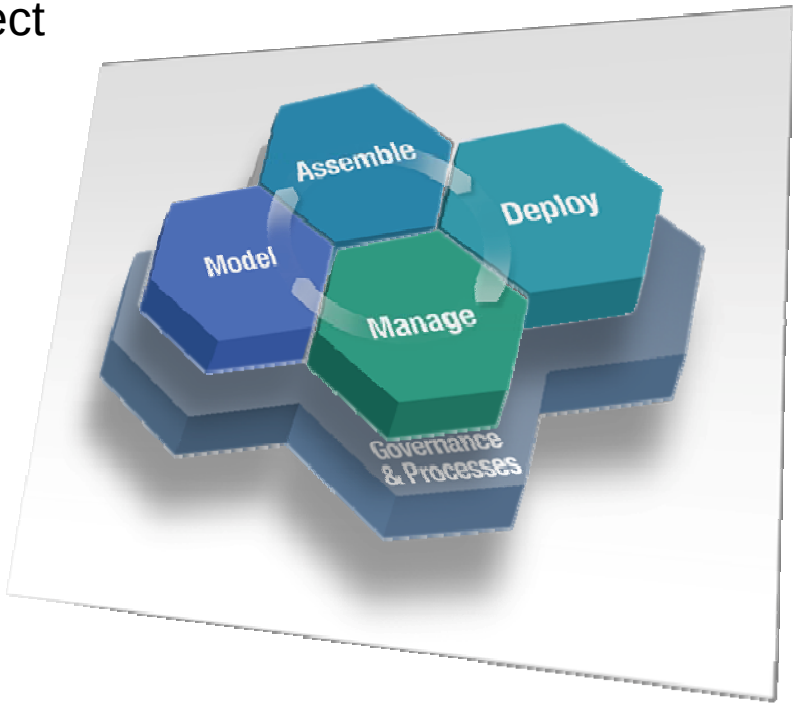


- An Overview for the Enterprise Architect

ON DEMAND BUSINESS™

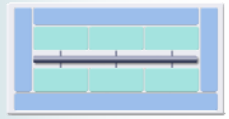
Agenda

- Introduction
  - Relating SOA to the Enterprise Architect
- SOA Reference Architecture
  - Providing a comprehensive model
- SOA Roadmap
  - Relating business and IT objectives
- SOA Governance
  - Executing for success
- Summary

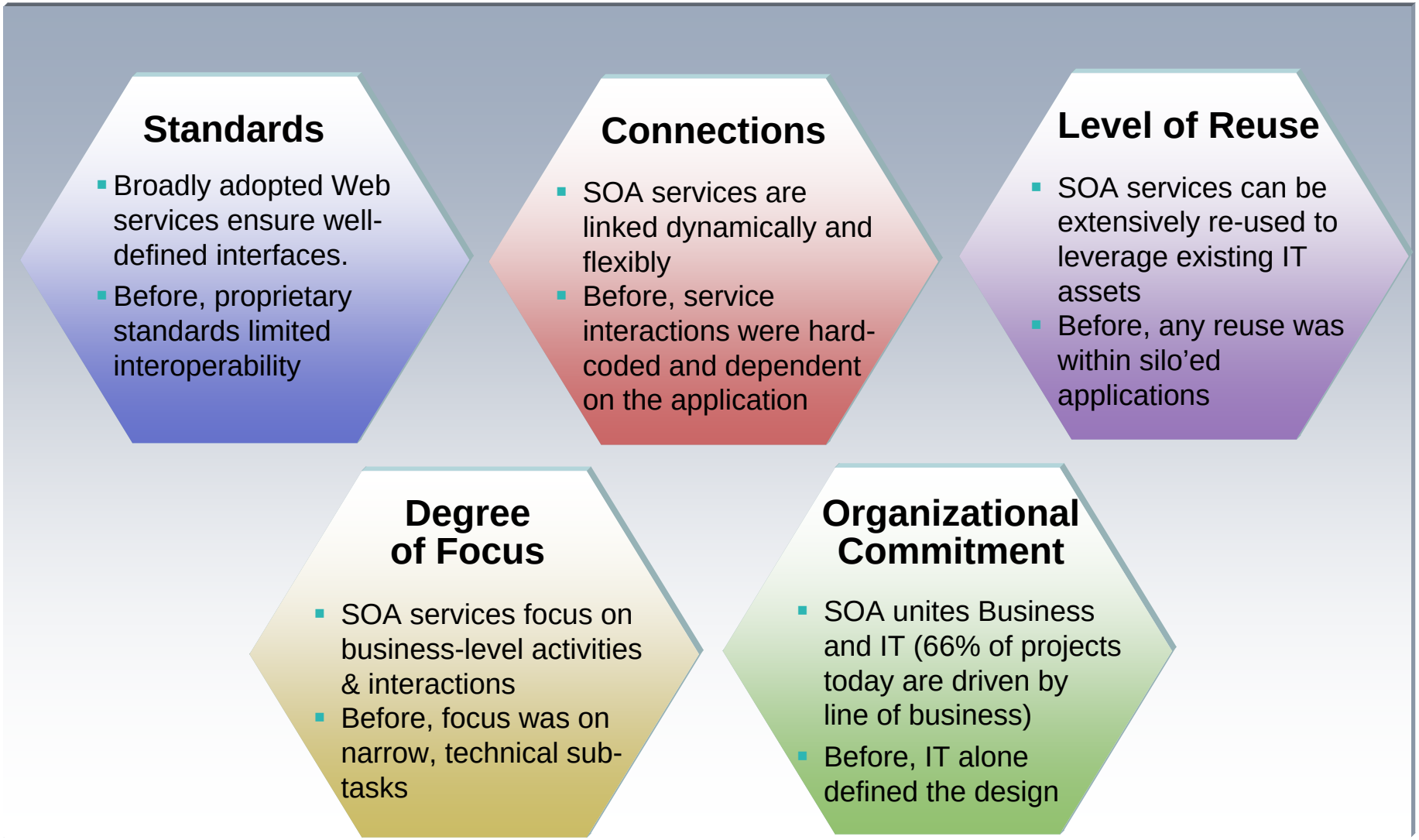


Service Oriented Architecture

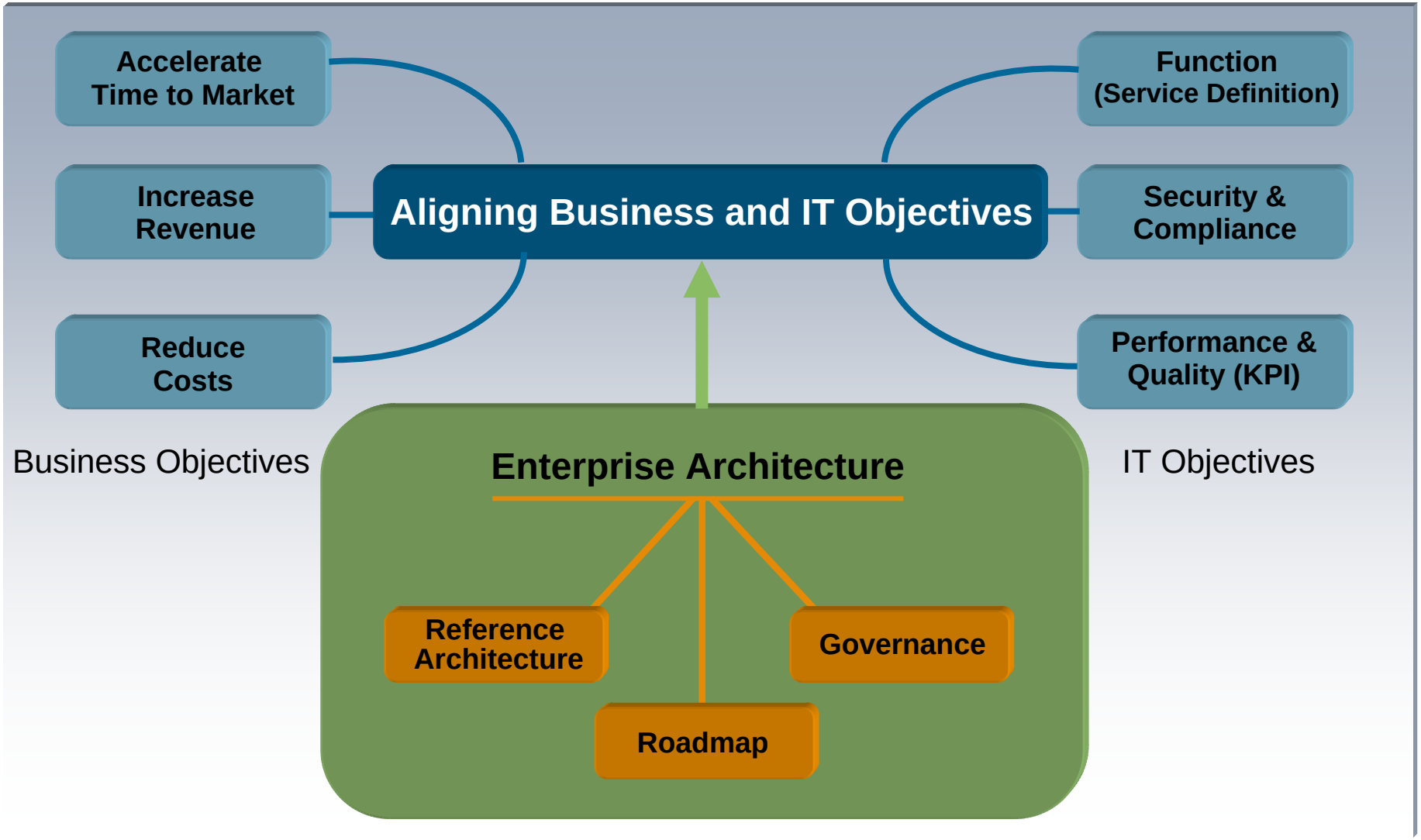
Different Things to Different People

	Roles
A *set of services* that a business wants to expose to customers and clients	**Business** 
An *architectural style* which requires a service provider, requestor and a service description A *set of architectural principles and patterns* which address characteristics such as modularity, encapsulation, loose coupling, separation of concerns, reuse, composable and single implementation	**Architecture** 
A *programming model* complete with standards, tools, methods and technologies such as Web services	**Implementation** 

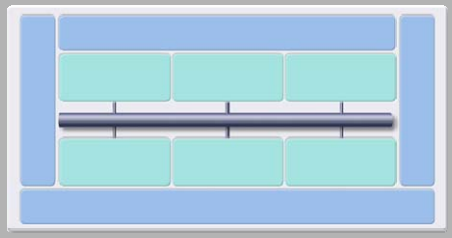
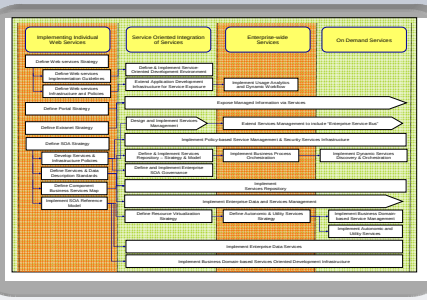
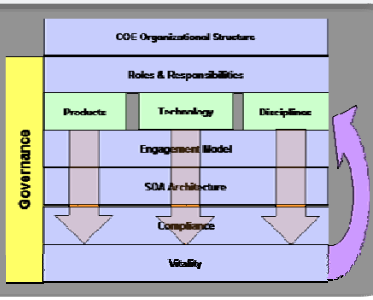
SOA: Different from the Past



SOA and Enterprise Architecture: A Common Goal



SOA: The Focus of the Enterprise Architect

Deliverable	Description	Overview
SOA Reference Architecture	The SOA Reference Architecture defines a reference framework and corresponding IT principles for SOA implementation projects	
SOA Roadmap	The Roadmap is used to create a tailored transition plan for moving toward the SOA Reference Architecture.	
SOA Governance Model	The SOA Governance Model defines governance team mission, roles and responsibilities, compliance and vitality processes, method based checkpoints, checkpoint–compliance criteria, technology usage templates	

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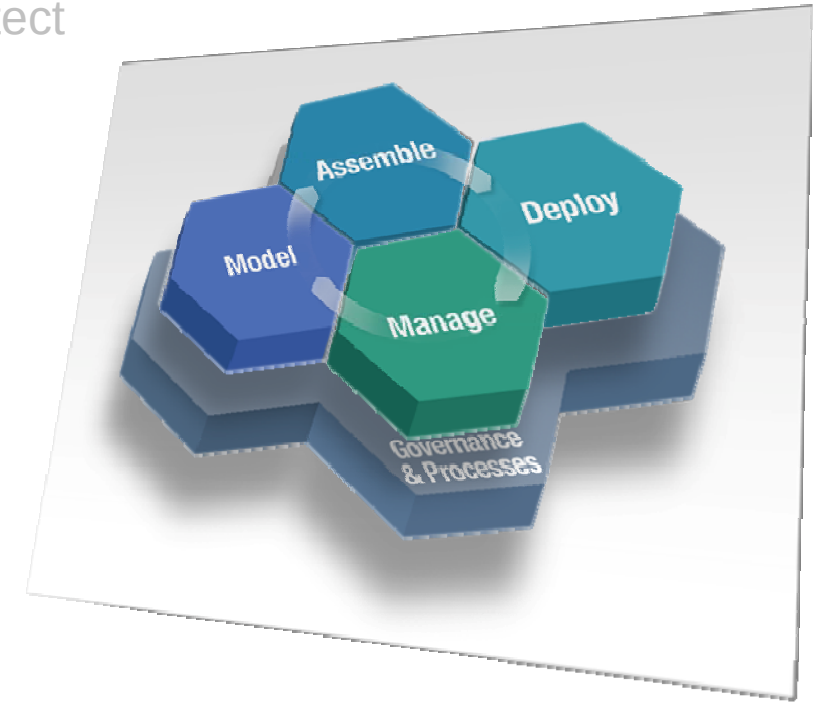
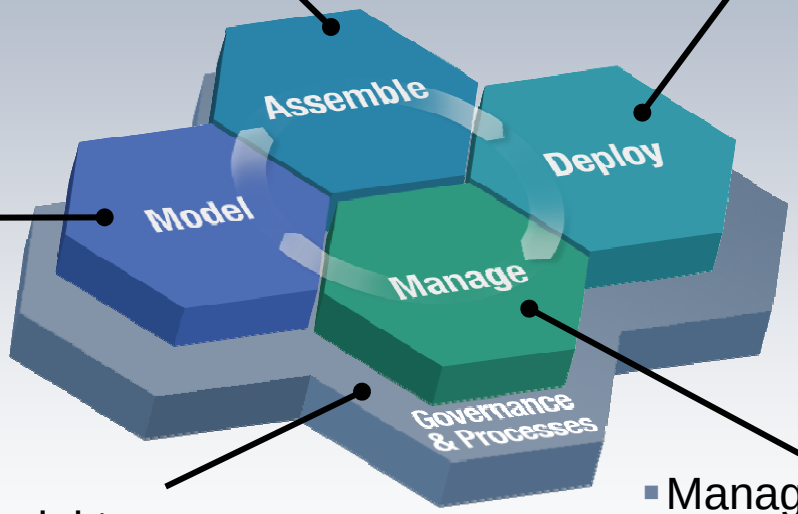


The SOA Lifecycle

- Discover
- Construct & Test
- Compose

- Integrate people
- Integrate processes
- Manage and integrate information



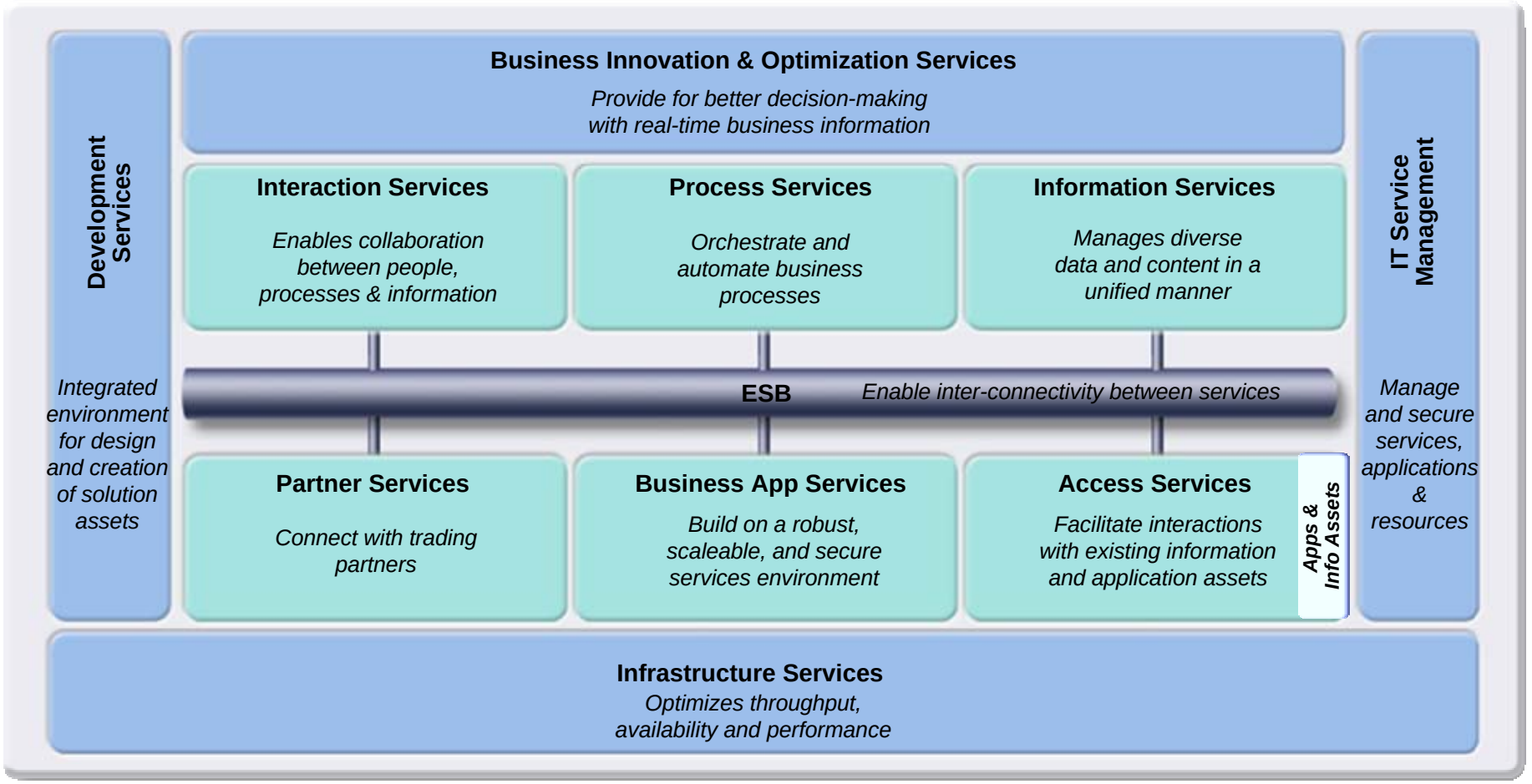
- Gather requirements
- Model & Simulate
- Design

- Financial transparency
- Business/IT alignment
- Process control

- Manage applications & services
- Manage identity & compliance
- Monitor business metrics

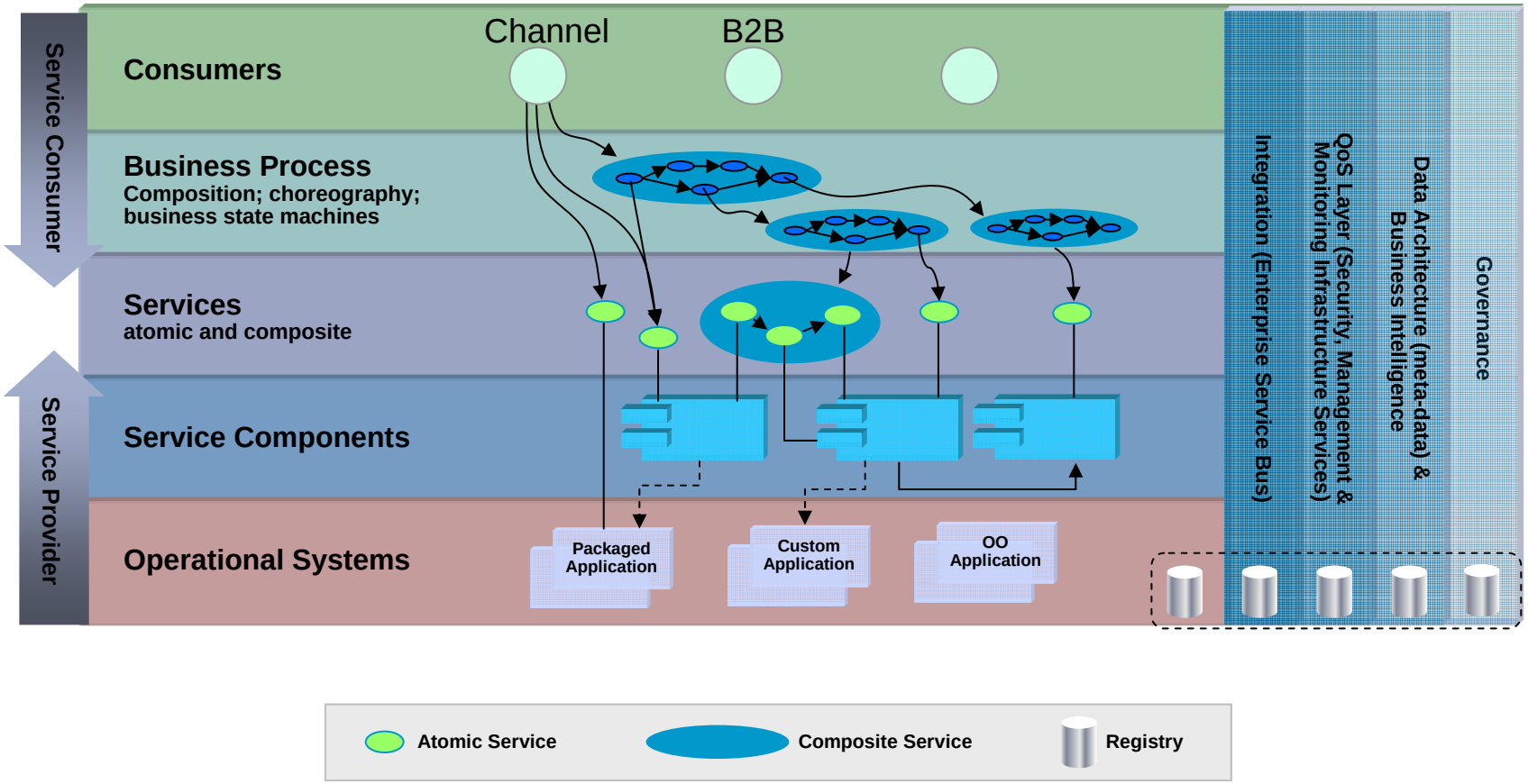
SOA Reference Architecture

Model of the Logical Architecture



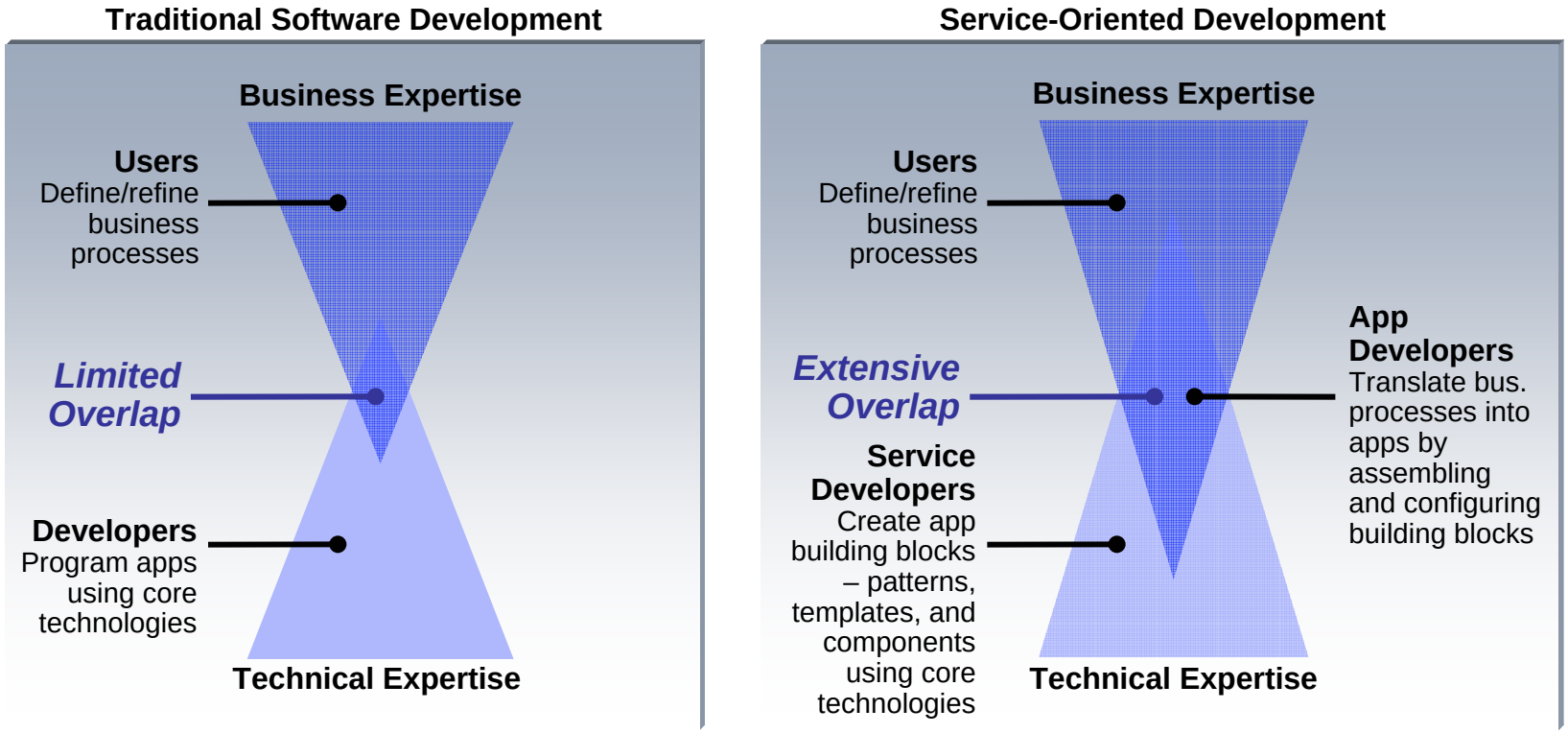
SOA Solution Abstraction Layering

Leveraging the SOA Reference Architecture



A New Programming Model

Supporting the SOA Abstraction Layering

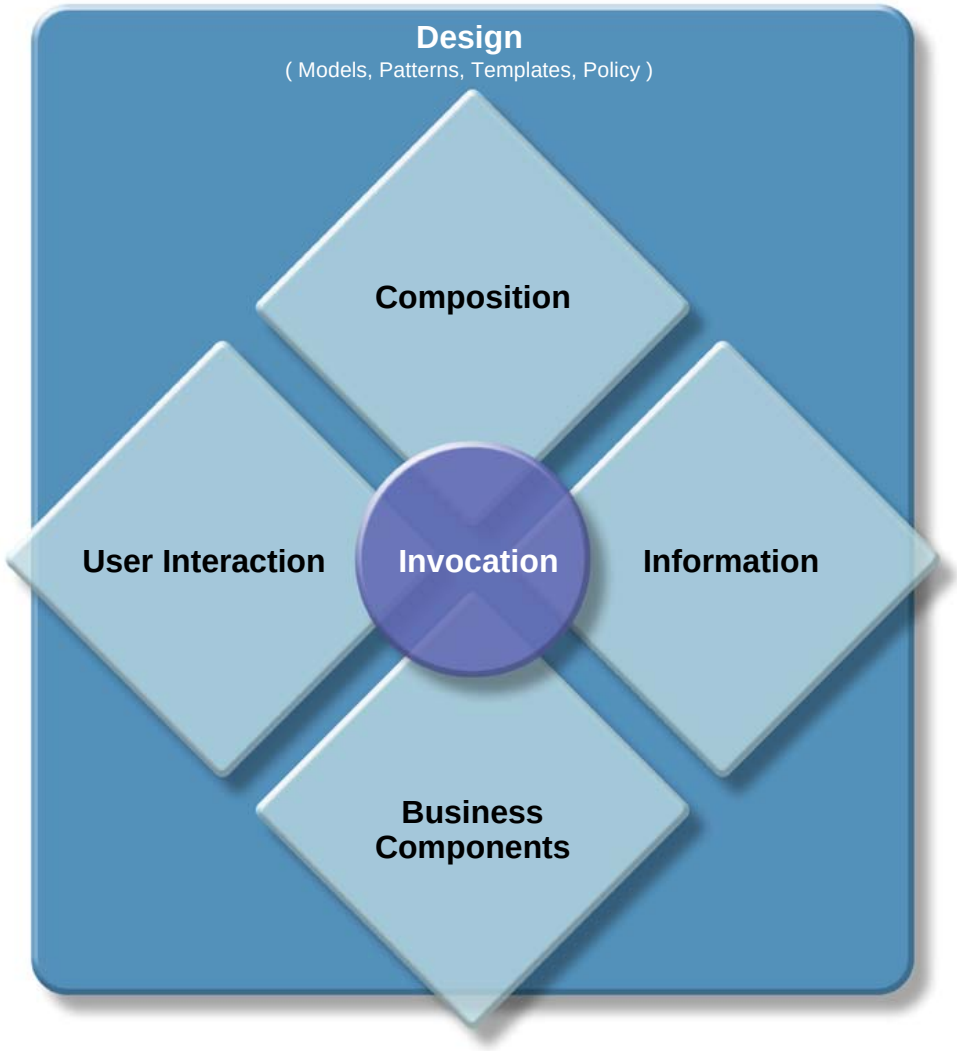


- The IBM SWG Programming Model derives its SOA technical strategy and vision from the basic concept of a *service*:
  - "A service is merely an abstraction that encapsulates a software function."
  - "*Developers* build services, use services and develop solutions that aggregate services."

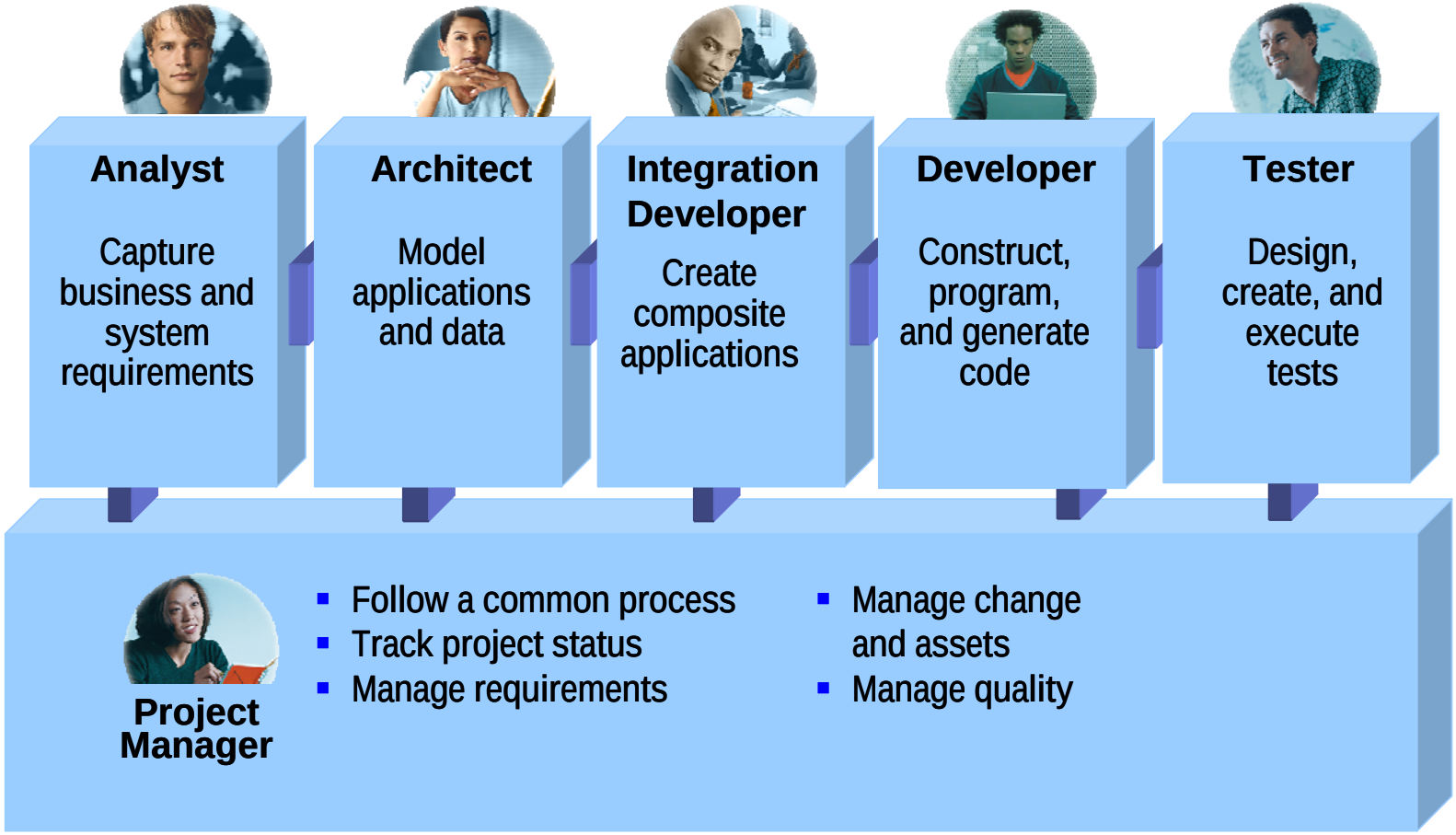
SWG SOA: Programming Model and Architectural Overview

SOA Programming Model Aspects

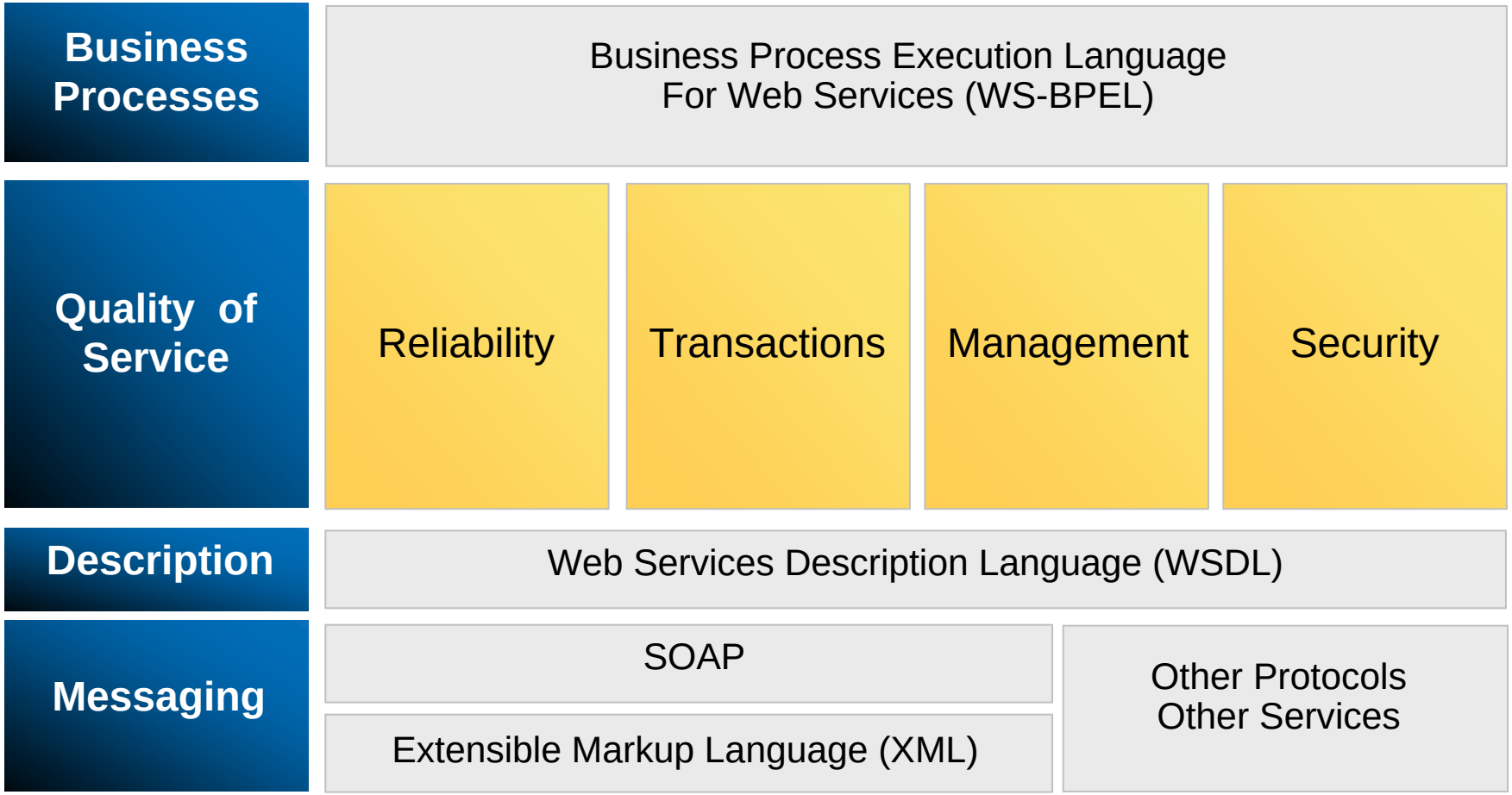
- **User Interaction**
  - Dynamic support for people integration into the business design
- **Business Components**
  - Composable and reusable services
- **Information**
  - Built-in access to service state, disconnected service-data exchange, information composition and transformation
- **Composition of Business-level Applications**
  - Wired assembly of services to form business-level applications, workflows, and business orchestration
- **Invocation**
  - Loosely-coupled call-style and event-driven interconnection of services with built-in support for topology transparency, mediation, and brokering featuring standards-based interoperability
- **Design**
  - Focus on business design modeling, simplification, and role-based collaboration
  - Use of declarative policy to control execution behavior and relationships



Key Development Roles for SOA



Key Standards for SOA

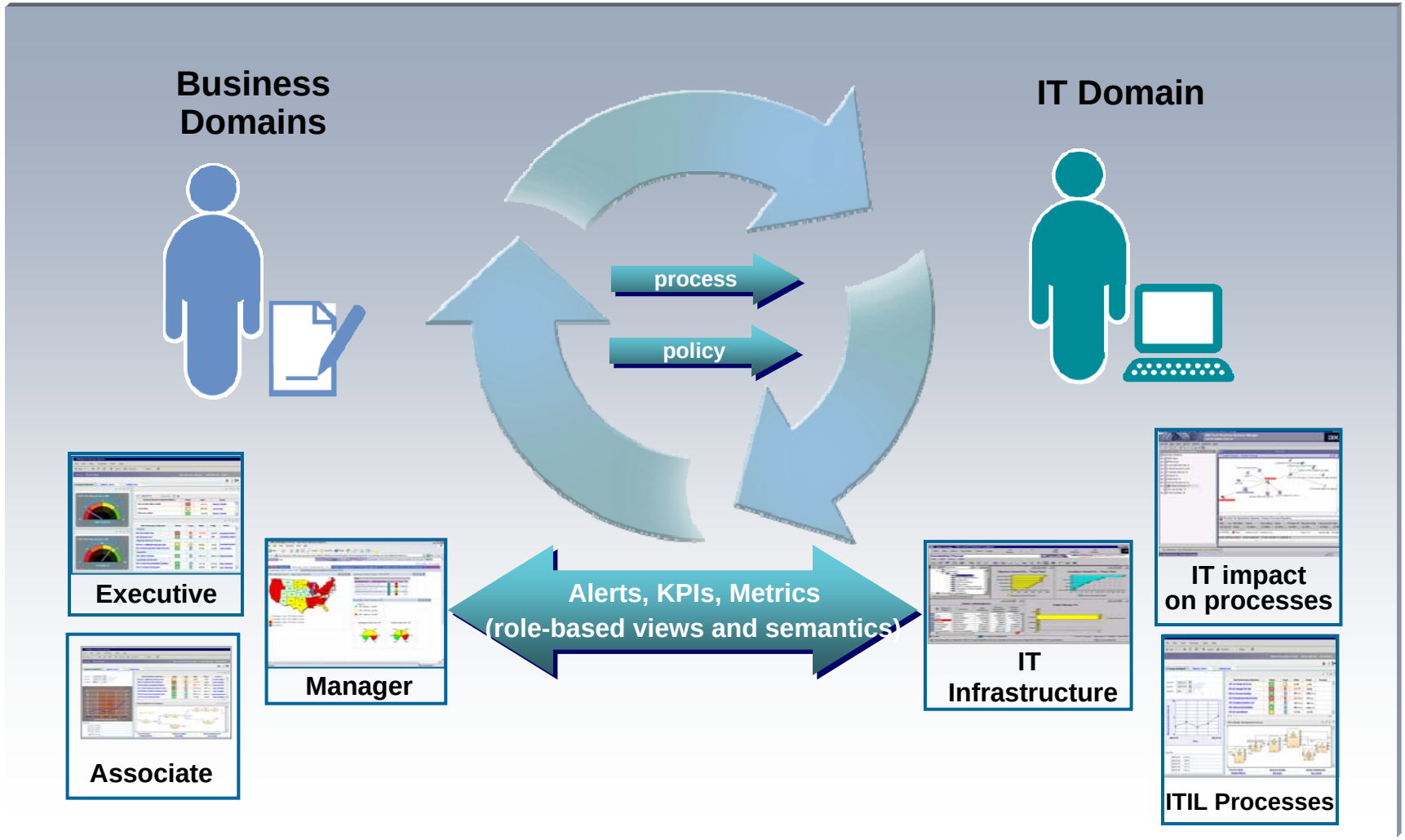


Key Standards for SOA

- Web Services provide for standard wire-level interoperation of service-oriented applications
- Web Services imply the semantics of the service-oriented programming model
- Web Services are essential to enabling a Service Oriented Architecture
- Service components, such as EJBs and other standard service component architectures, define the programming model for service implementation and usage

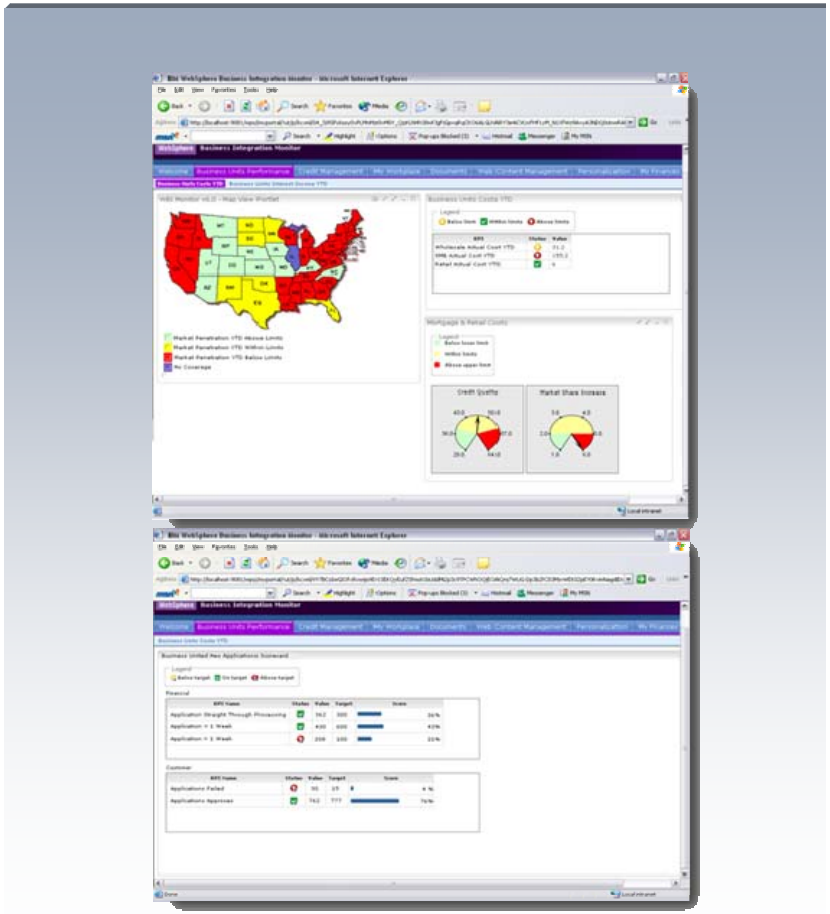
The Core of Business Performance

Is Cross-organizational Optimization and Innovation



Common Business Monitoring Goals

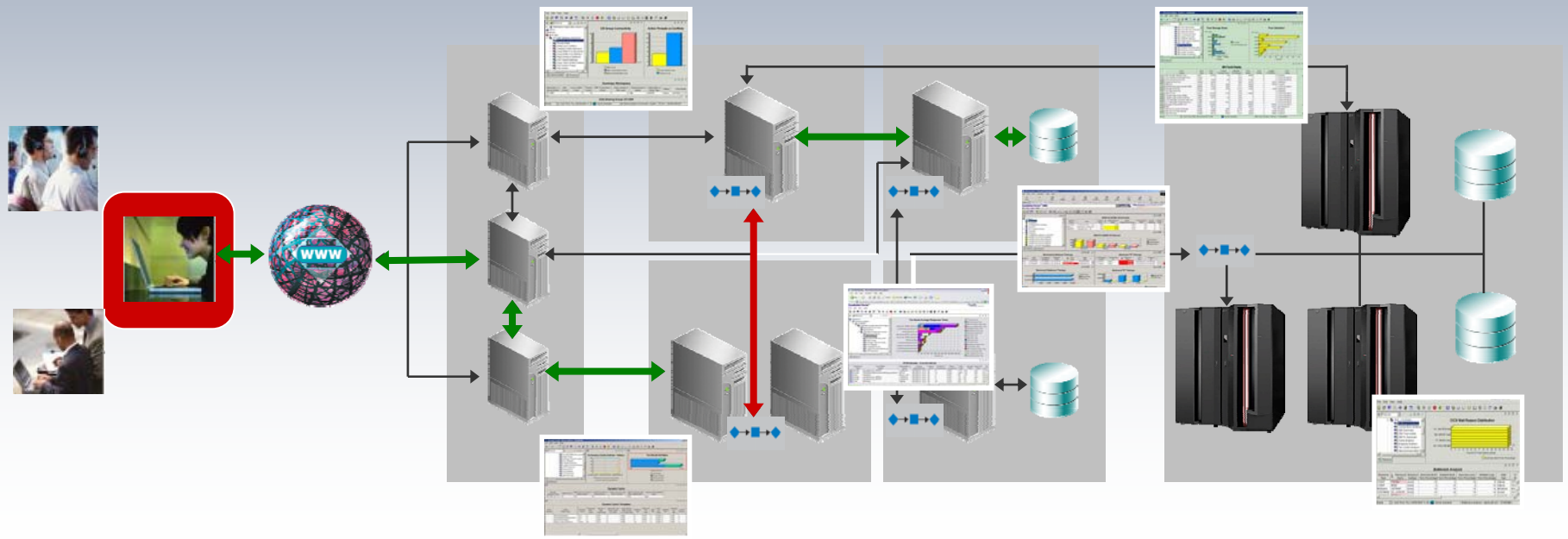
- Report on business performance measured against targets (scorecard)
  - Share growth and new product revenue
- Track business process flow
  - Status of particular insurance claim
  - Bottlenecks due to human tasks
- Monitor business process metrics
  - Duration, cost, branch ratios
- Business Analysis through aggregation and multidimensional reporting
  - Total monthly revenue by customer
- Detect and alert of anomalous situations
  - Gold customer order with no inventory and supplier decommitted



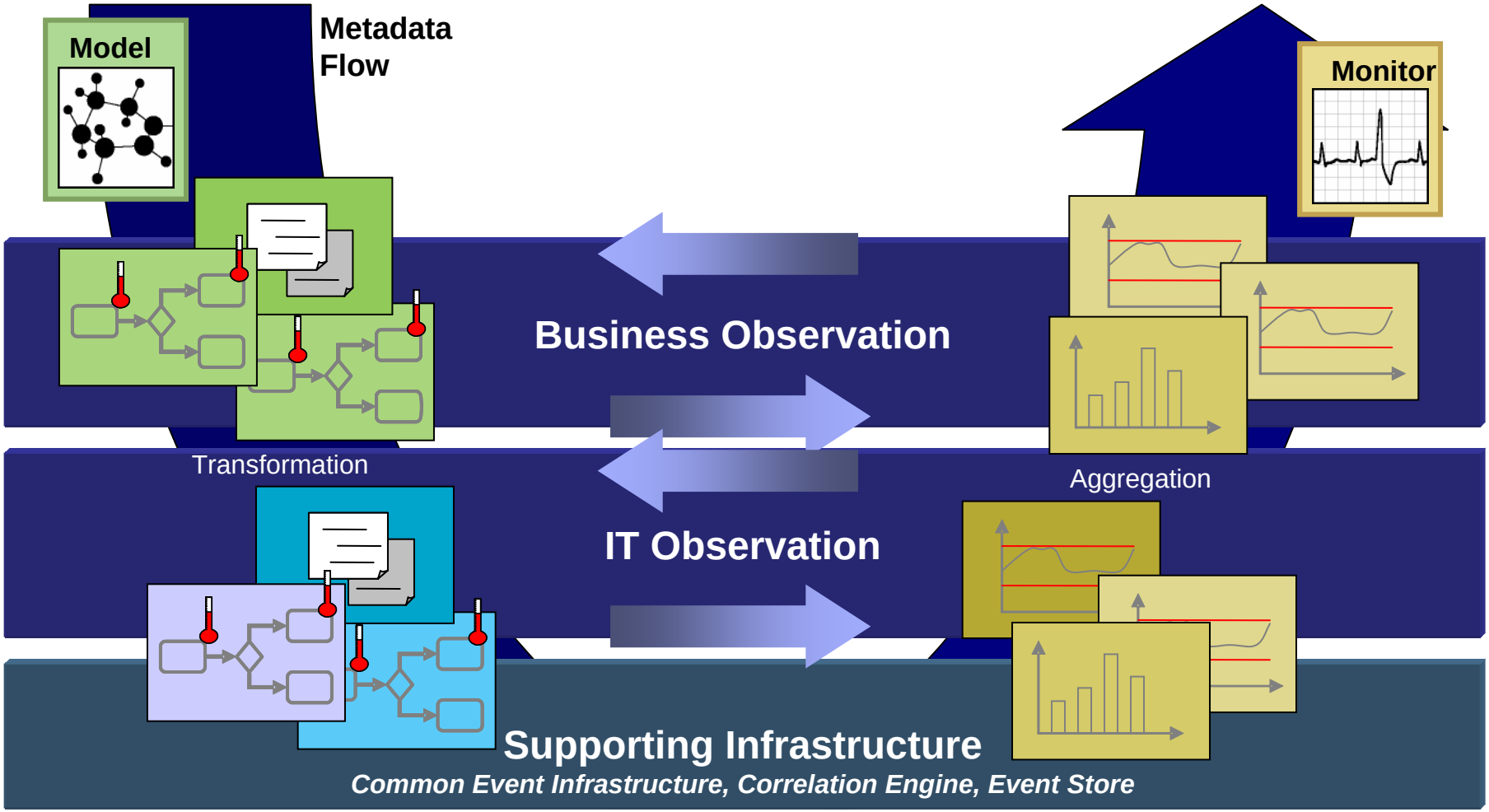
IT Management: 4 Principles

A repeatable approach to sense and respond to performance problems within the composite application infrastructure

Measure Response Time	Trace Transactions	Analyze Services	Adjust Resources

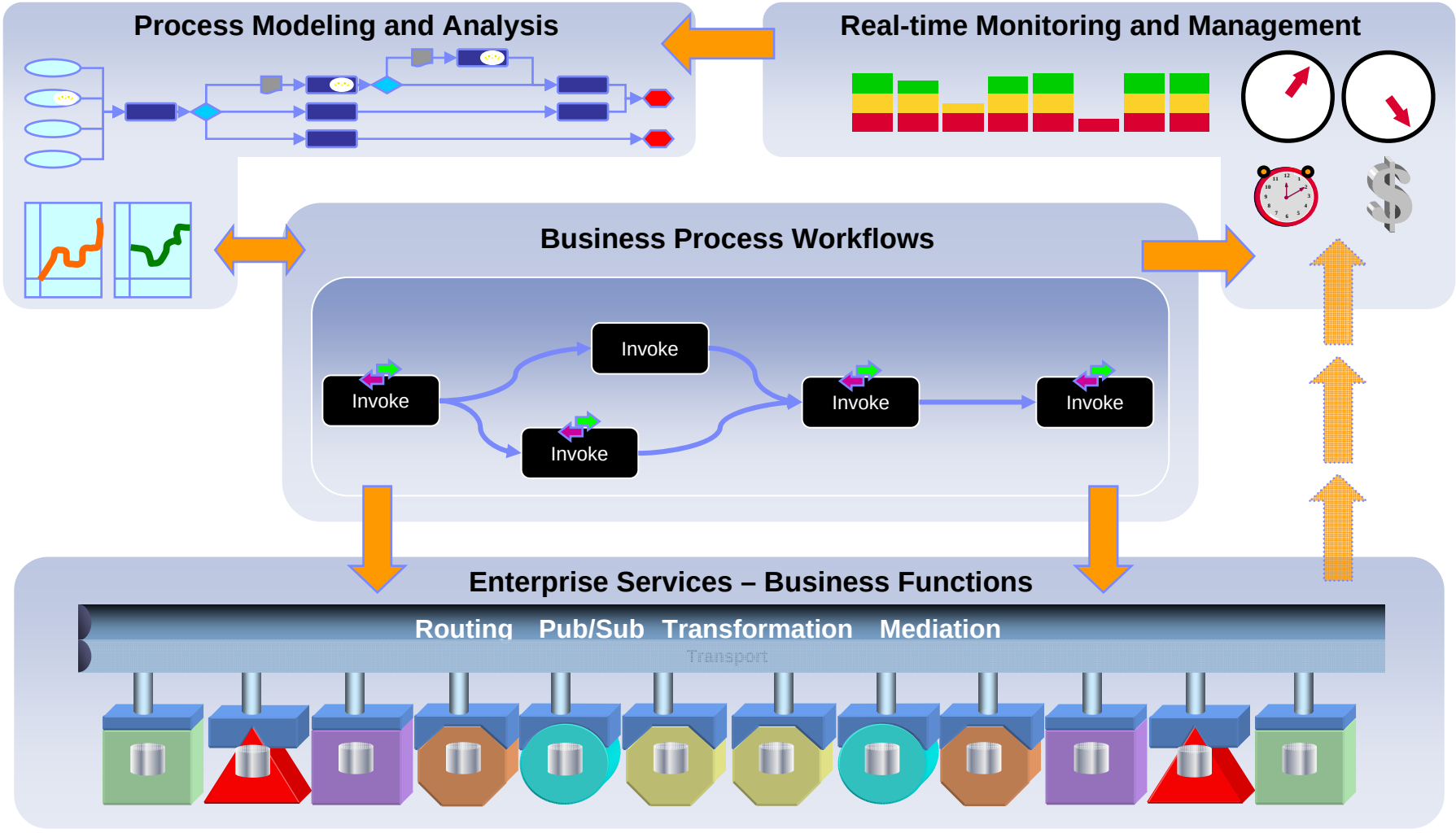


Monitoring in Action: Enabled by Standards

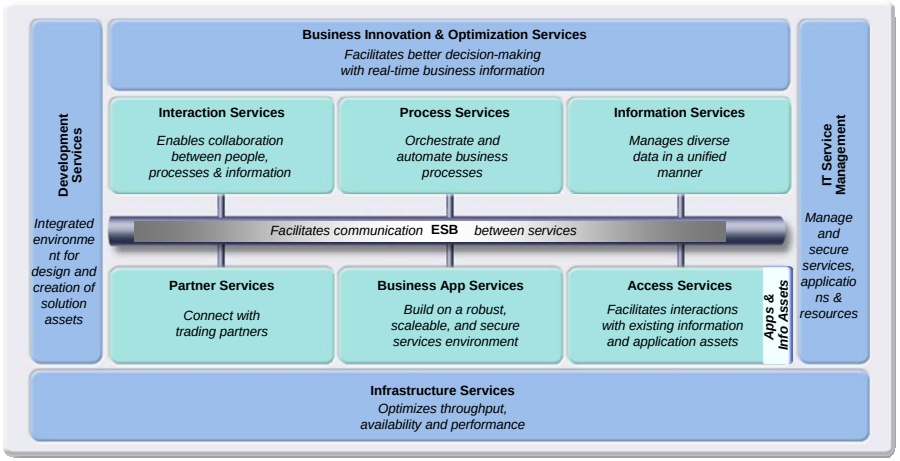


Based on OASIS Common Base Event (CBE) Standards

Business Performance Management in an SOA



Summary: The SOA Ref Arch and its Key Principles



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

- Linkage between business and IT through support of the entire SOA Lifecycle
- Connectivity and Service isolation through the Enterprise Service Bus
- Separation of Concerns/Modularity for incremental adoption
- Component-based Programming and Solution Development
- Open Standards
- Business and IT Monitoring and Management

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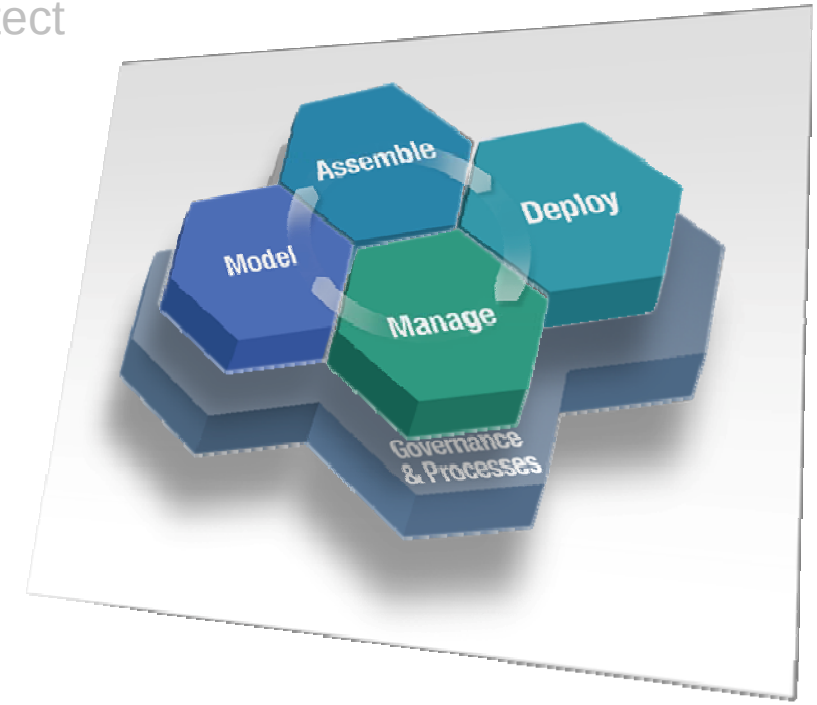
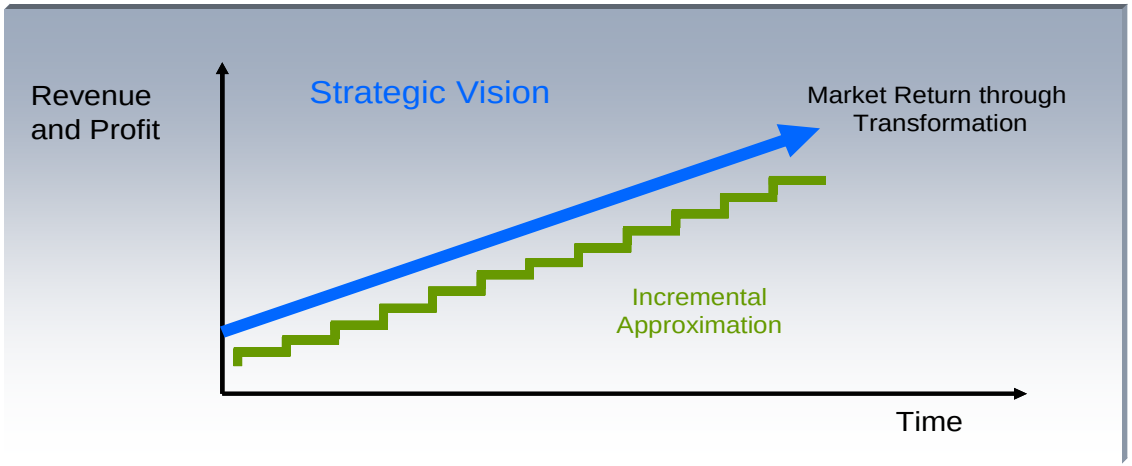


SOA Roadmap: A Plan for Adopting SOA

- SOA Goal
  - Market return through transformation: quicker time to production, lower costs, competitive differentiation



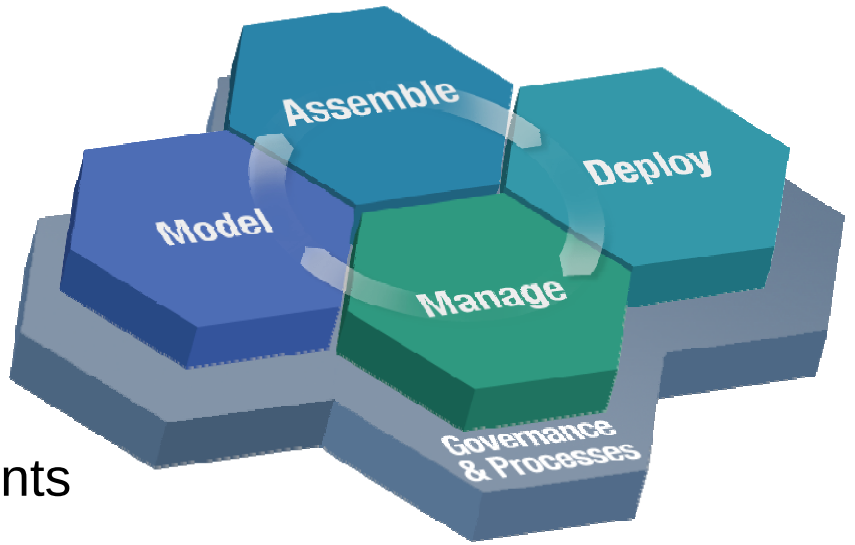
  - Two Primary Roadmap Perspectives
  - ✓ Strategic Vision

    Business and IT statement of direction which can be used as a guideline for decision making, organizational buy-in, standards adoption
  - ✓ Project Plans

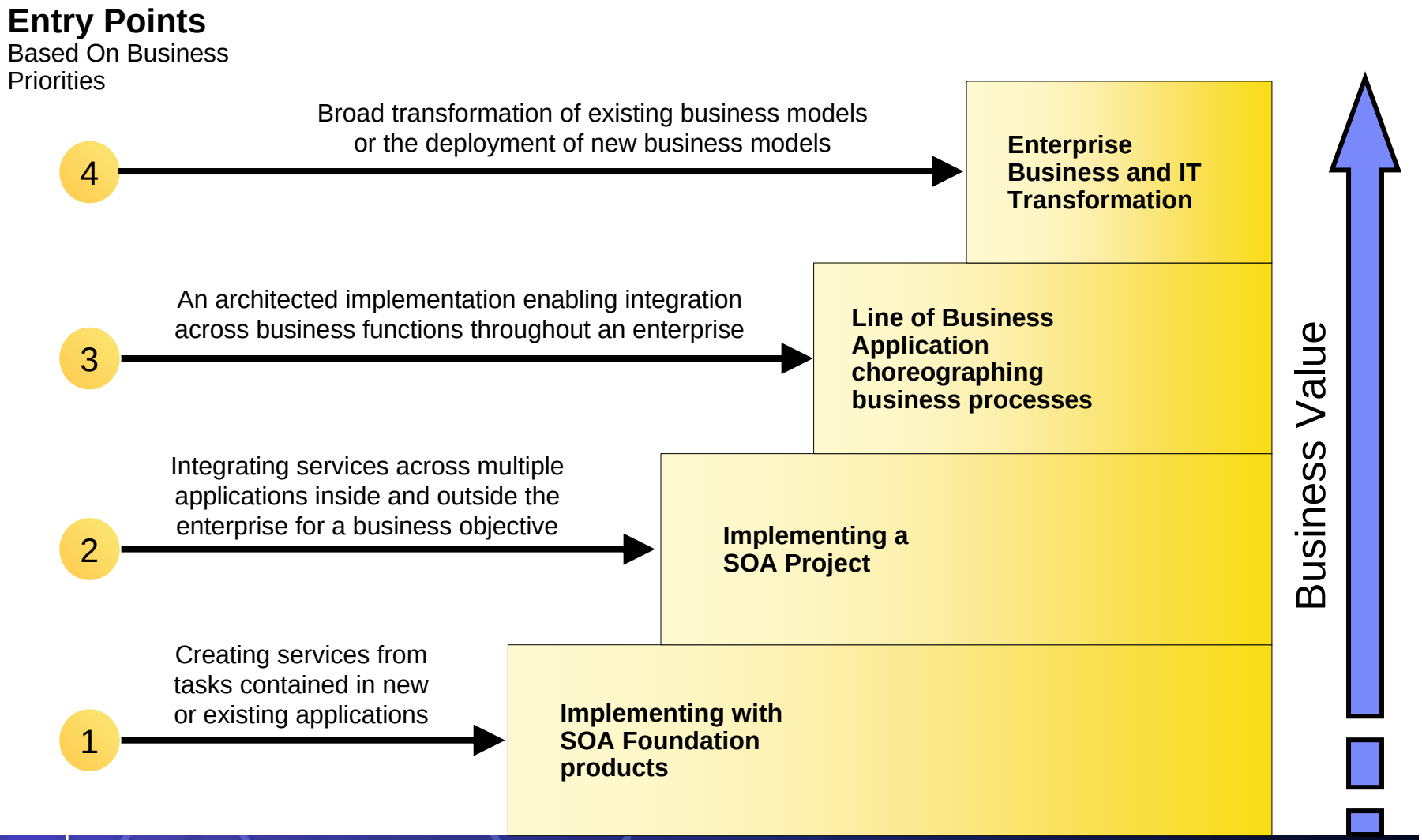
    Implementation projects to meet immediate needs of the current business drivers

SOA Adoption Considerations

- Business Drivers
  - Time to market
  - Reduce Costs
  - Increase revenue
  - Reduce risk and exposure
- Organizational readiness
  - Executive support and sponsorship
  - Skills
- Current architecture and environments
  - Build and Runtime
  - Degree of heterogeneity
- Operational readiness
  - Ability to monitor and manage current operations
  - Integration of monitoring functions into production environments



Organizations can take different paths to eventual adoption of SOA depending on your business goals and IT constraints.



Options for Getting Started

Example	*Entry Point*	*"How To Get Started"*
Fireman's Fund — A company of the Allianz Group	SOA a strategic initiative for application development and integration at an **Enterprise level**	**Component Business Modeling**
Cabela's	**Line of business level**, or across a set of related projects	**Client Architecture Readiness Evaluation**
Travelex worldwide money	**Single project** implementation at IT group level. "Testing the waters"… gradual adoption approach	**SOA Jumpstart**

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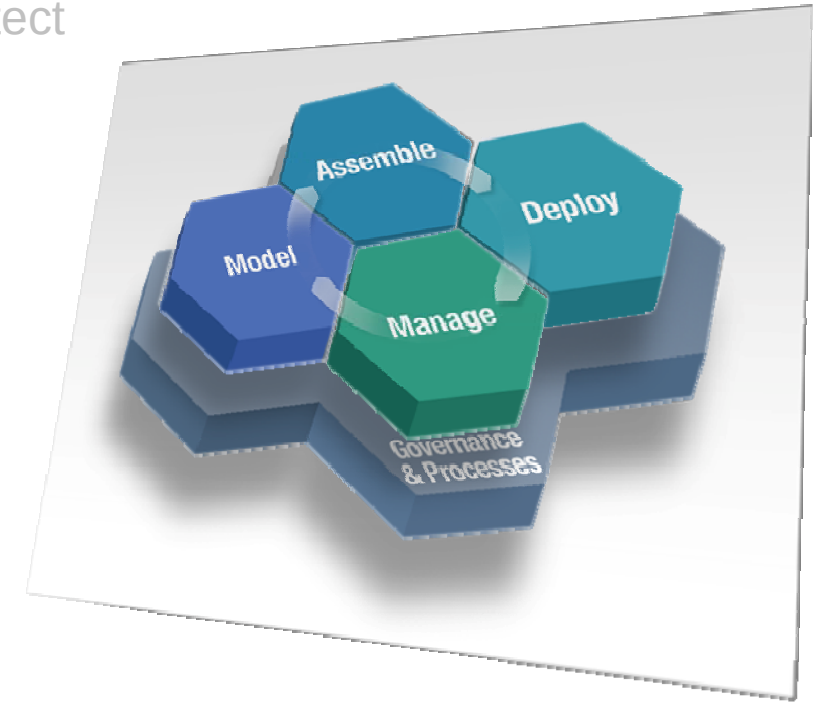
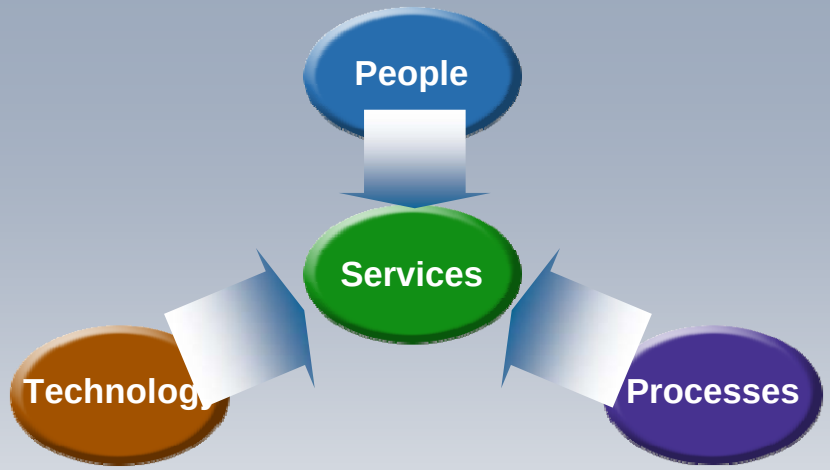


What Do You Really Mean by SOA Governance …

Governance comes from the root word ***"Govern"***.

Governance is the structure of relationships and processes to ***direct*** and to ***control*** the SOA components in order to achieve the enterprise's goals by adding value while balancing risk versus return



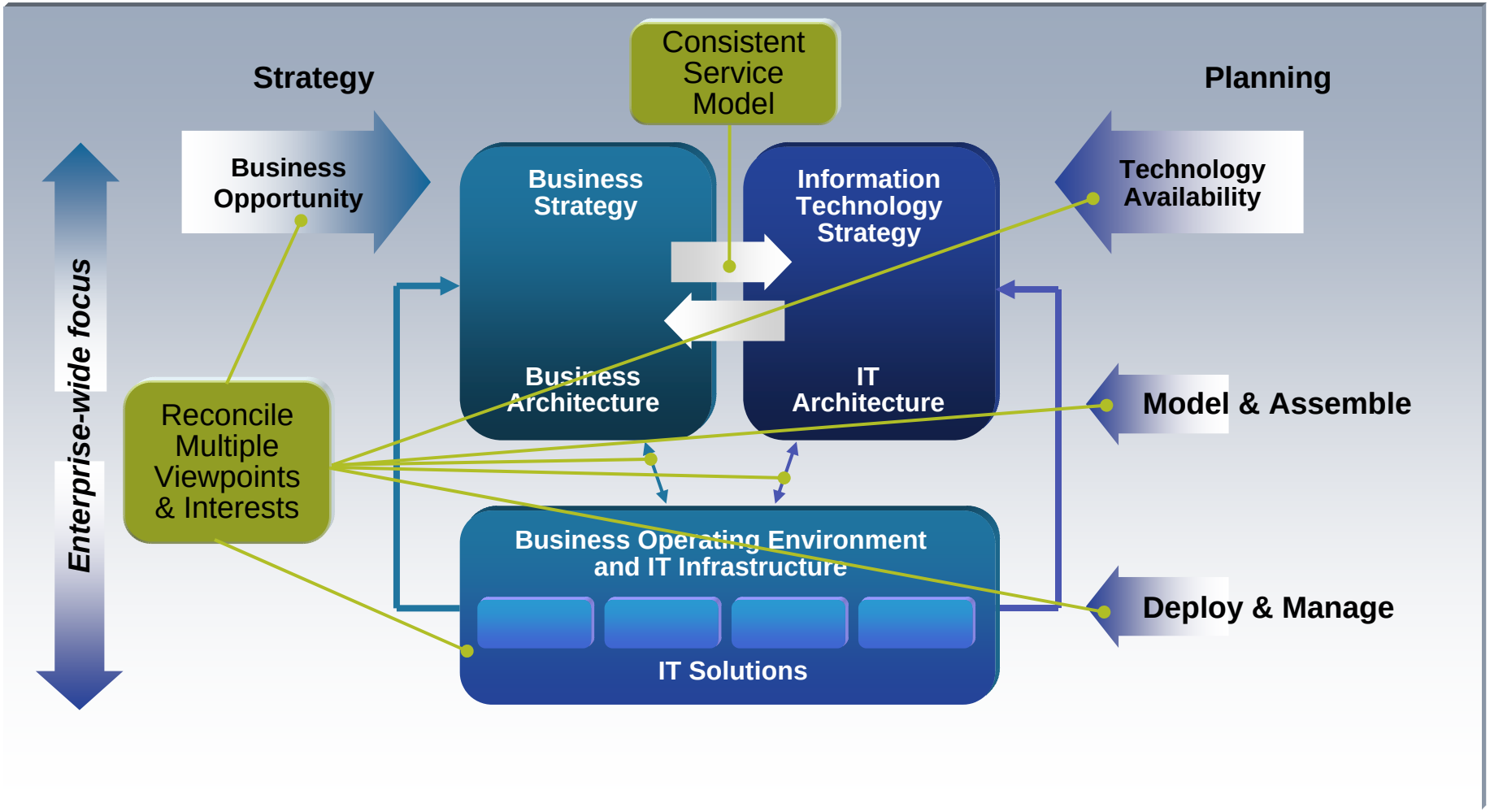
The focus of SOA is the *Services Model*

The governance model defines:

- *What has to be done?*
- *How is it done?*
- *Who has the authority to do it?*
- *How is it measured?*

SOA Governance in Context

IT and Operations Align with Business



What Does IBM Have to Offer? Business Enabling Services

IGS SOA Transformation Roadmap

Component Business Modeling (CBM)

IBM's Service-Oriented Architecture Services [new]

Design Services for SOA
- Web Services Assessment
- Architecture & Planning for Web Services
- Service-Oriented Modeling & Architecture (SOMA

Implementation Services for SOA
- Service- Oriented Development
- Service-Oriented Integration

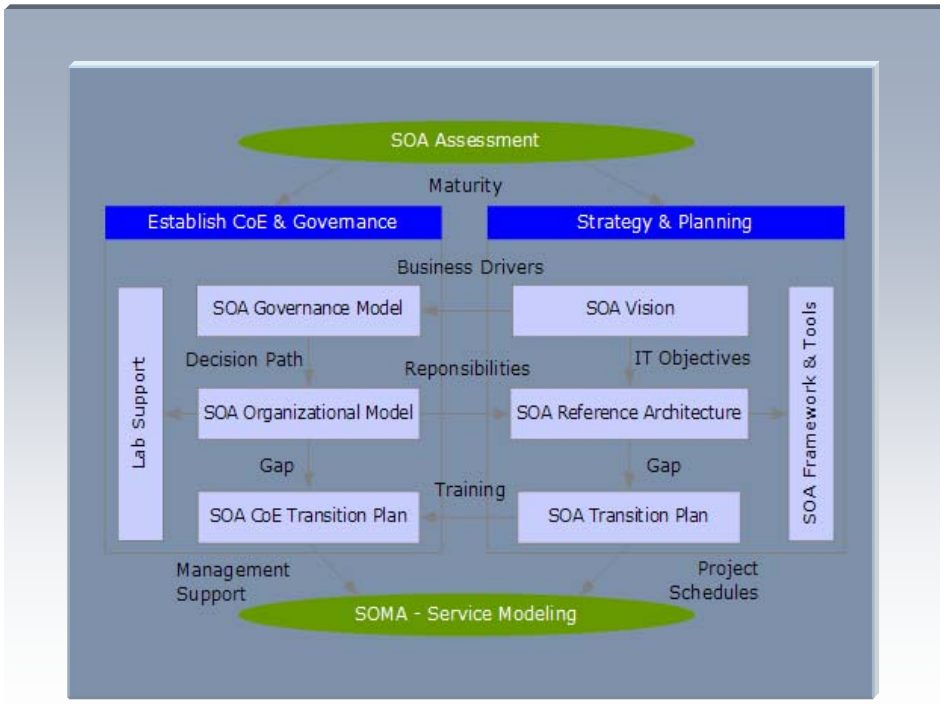
Management Services for SOA
- Service Monitor
- Service Security
- Service Performance
- Business Requirements Verification

Application Value Optimization Services [new]

Integrated Technology Services

Infrastructure Service Readiness Engagements
Infrastructure Services Architecture & Design

IBM Business Enablement Services integrate SOA into daily business life to achieve the desired agility and competitive advantage



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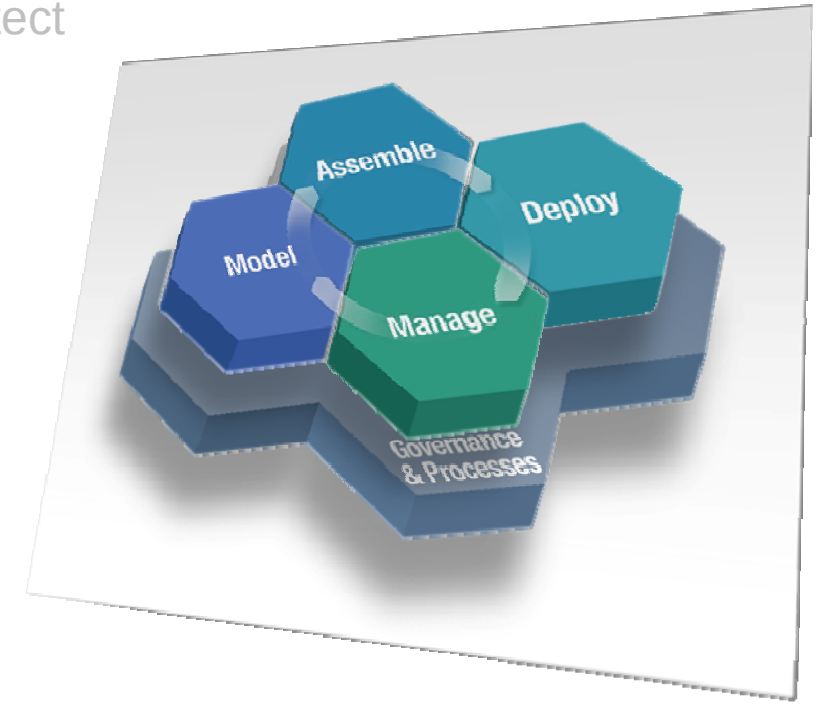


SOA for the Enterprise Architect …

- Understand your business goals, drivers, and context
- Understand your current environment
  - Development, Runtime, and Management
- Establish a Roadmap
  - Find appropriate starting point
  - Determine the development and runtime requirements
    - Leverage Separation of Concerns and the new Programming Model
- Establish Governance
  - Appropriate for your company culture and environment

Now … Imagine this scenario … JK Enterprises

On average, JK Enterprises takes 5 days to open a new account. This is 3 days longer than their competition. As a result, they are losing customers, revenue, and market share.

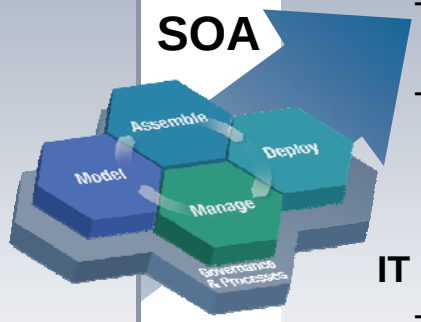
Current State

Business Perspective:

- Takes too long to open new accounts
- Losing business to competition
- Inconsistent status between Sales and Customer Service
- Multiple open-new-account forms confusing customers and frustrating Sales
- Wide range in response time during credit checks, etc.

IT Perspective:

- Individual connections between front end channels and back-end apps (complexity)
- Large operations expenses – manual data entry
- Redundant functions across apps
- Slow response to business demands



Desired State

Business Perspective:

- Consistent open-new-account process
- Instant approval 90% of time
- Common status available to Sales, Customer Service, and customer
- Streamlined credit check and other 3rd party actions

IT Perspective:

- Isolation between front-end channels and back-end systems
- Consistent data across applications
- Ability to re-use application functions
- Elimination of manual keying operations
- Reduce time to production by 30%

… How do they get to the desired state??

धन्यवाद
Hindi

多謝
Traditional Chinese

ขอบคุณ
Thai

Спасибо
Russian

Gracias
Spanish

Thank You

شكرا
Arabic

Obrigado
Brazilian Portuguese

Danke
German

Grazie
Italian

多谢
Simplified Chinese

Merci
French

நன்றி
Tamil

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