



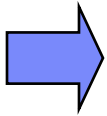
| *ISV and Developer Relations*

Service Governance and WebSphere Service Registry and Repository



Topics

- Introduce the concepts of a Service Oriented Architecture (SOA)
- Introduce the Enterprise Service Bus architectural pattern
- Evaluate the appropriate application of several ESB implementations
- Review a methodology for designing an SOA using an ESB
- Introduce the concepts of SOA governance and the role of a service registry and repository



Without proper management and governance of your SOA...

This could become...



The promise of SOA

... like this



A pile of services

... and so would go the promised benefits of SOA



A Registry Repository answers questions customer have about governing and managing their SOA

How do I eliminate “rogue services” and ensure control of my SOA?

How do I govern services as part of my SOA?

How do I manage the services lifecycle?

How do I increase service reuse?

How do I enable enforcement of policies across all internal and external services?



How can I help my ESB execute in the right context?

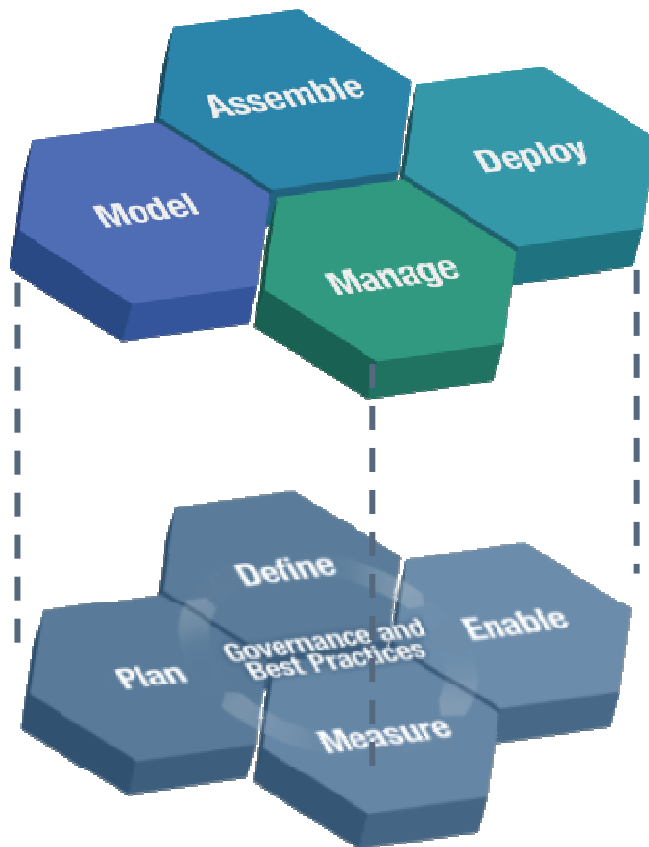
How do I help services interact efficiently and dynamically with each other?

How do I optimize service interactions to be better aligned with business process?



SOA Governance defined

Effective management of the Service Lifecycle



What is IT governance?

Establishing decision making rights associated with IT

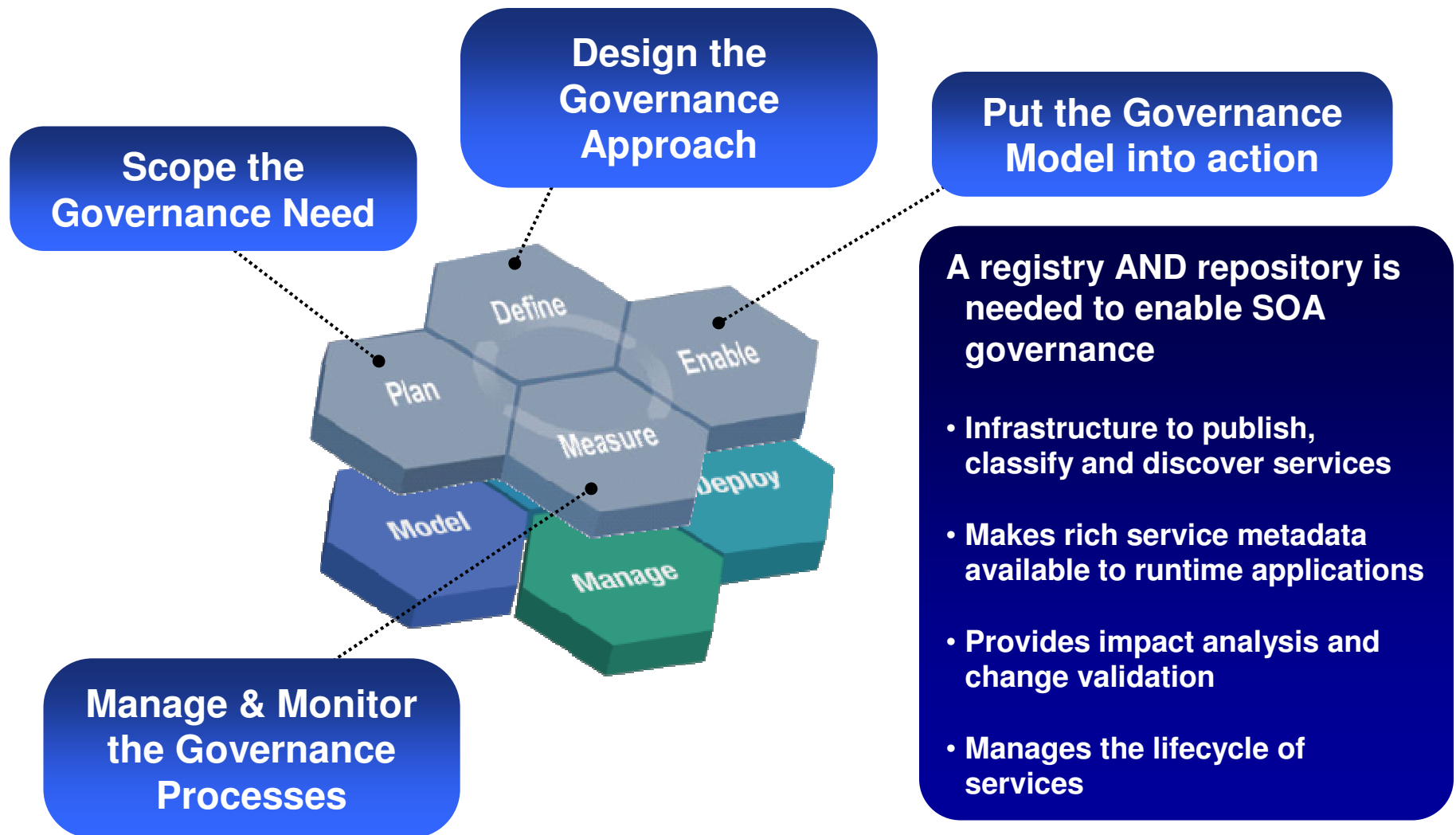
Establishing mechanisms and policies used to measure and control the way IT decisions are made and carried out

What is SOA governance?

Extension of IT governance focused on managing the lifecycle of services



SOA needs a registry and repository to enable governance





What is a registry ... a repository?



Registry?

Contains Service Metadata



Repository?

Stores service artifacts

An integrated Registry / Repository Solution is needed govern and manage SOA for maximum value



Business process vitality



New value through reuse of assets



Improved connectivity



Closer alignment of IT to business

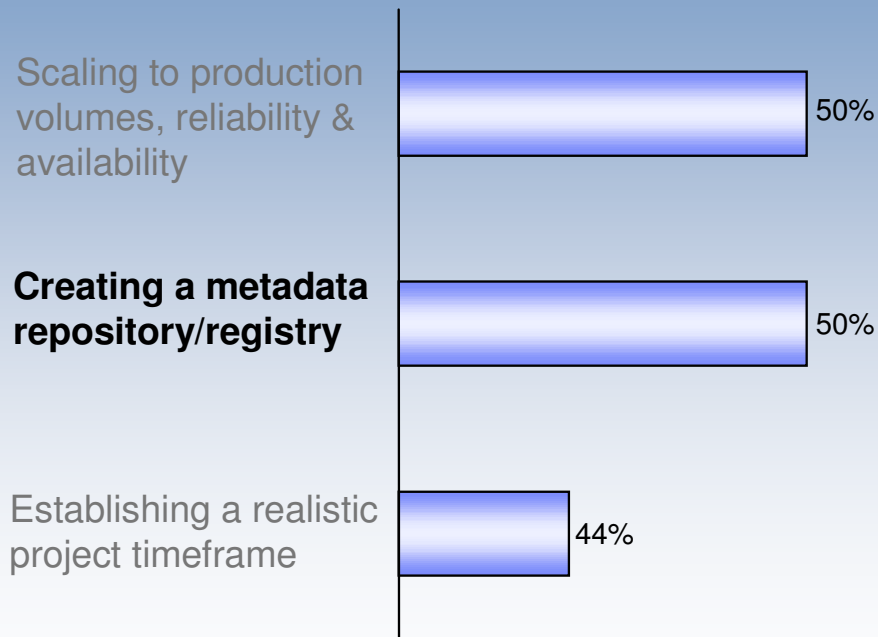


Business Flexibility

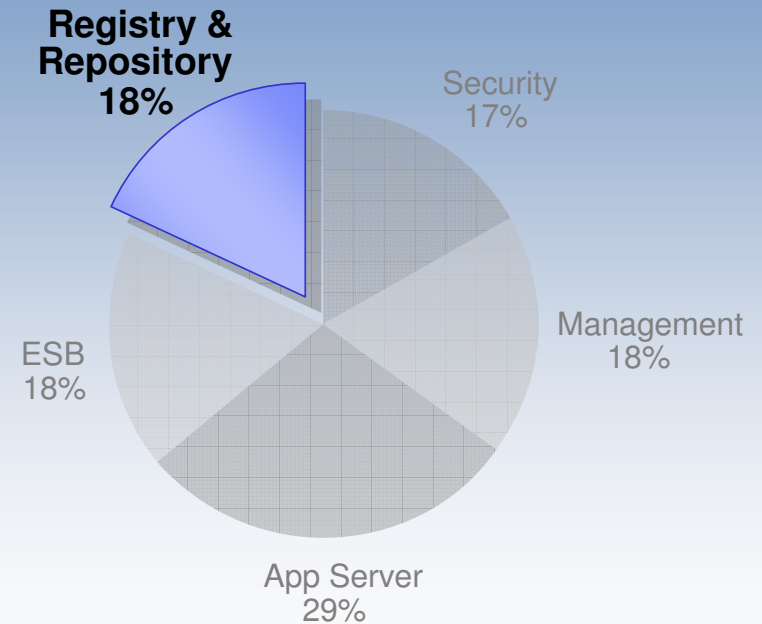


Customers recognize the importance of a registry and repository to answer their SOA questions

Top 3 Technological Challenges of Adopting SOA



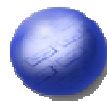
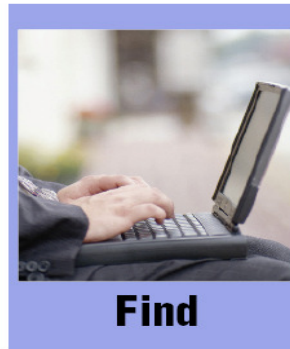
Middleware considered most important in an SOA



Source: Aberdeen Group 2006. 600+ company respondents across 4 studies

IBM WebSphere Service Registry and Repository

Maximize Business Value of your SOA



• **Promote Reuse**

- Eliminate Redundancy
- Business and IT Alignment
- Change Management



• **Enhance Connectivity**

- IT Flexibility
- Version Management
- Policy Management
- (Externally) Expose Services

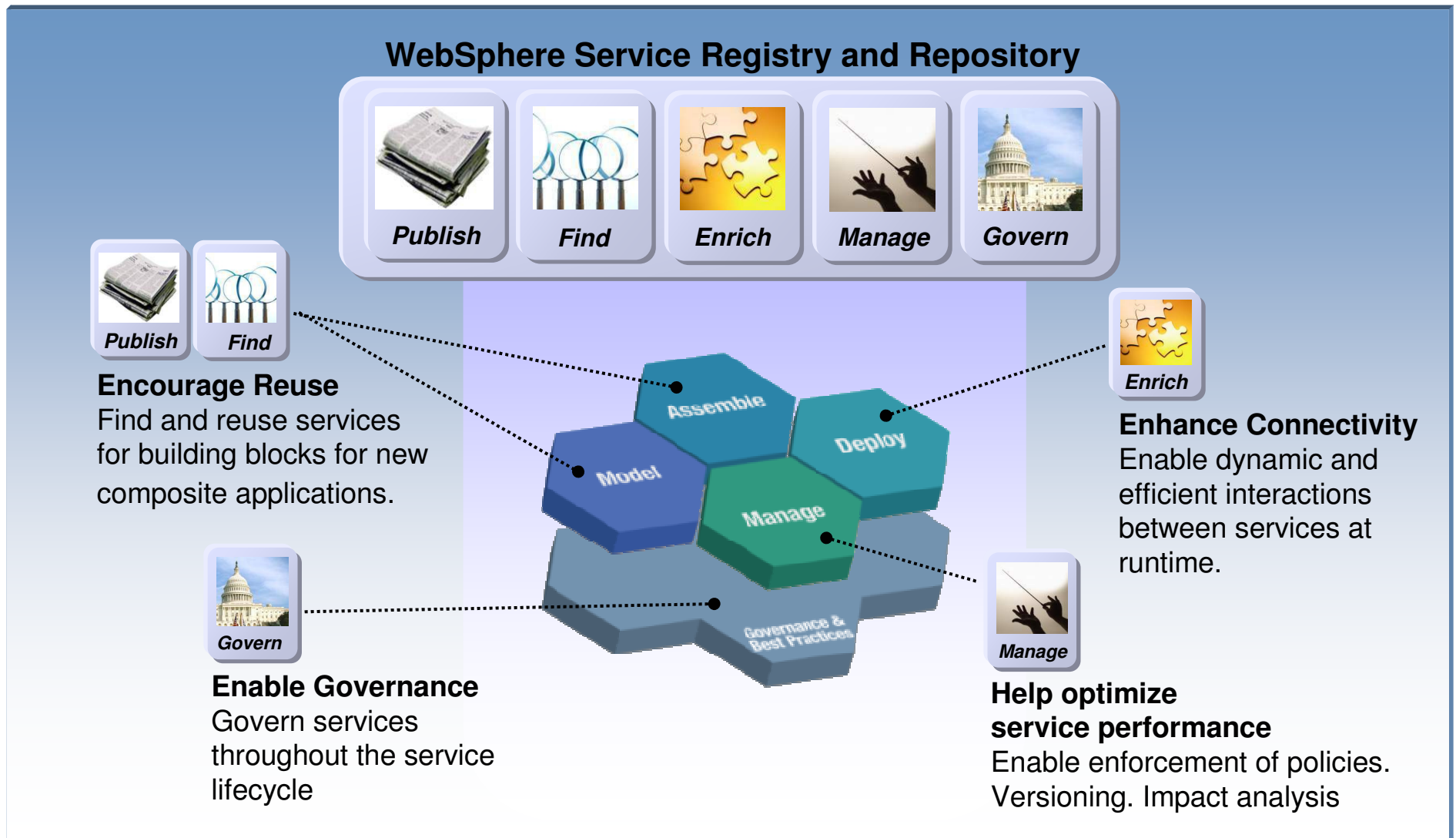


• **Enable Governance**

- Service Reconciliation
- Service Lifecycle Management

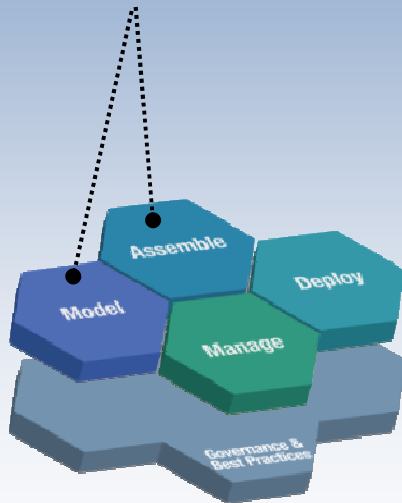


The WebSphere Service Registry and Repository provides value throughout the SOA lifecycle





IBM WebSphere Service Registry and Repository Capabilities



Encourage Greater Reuse

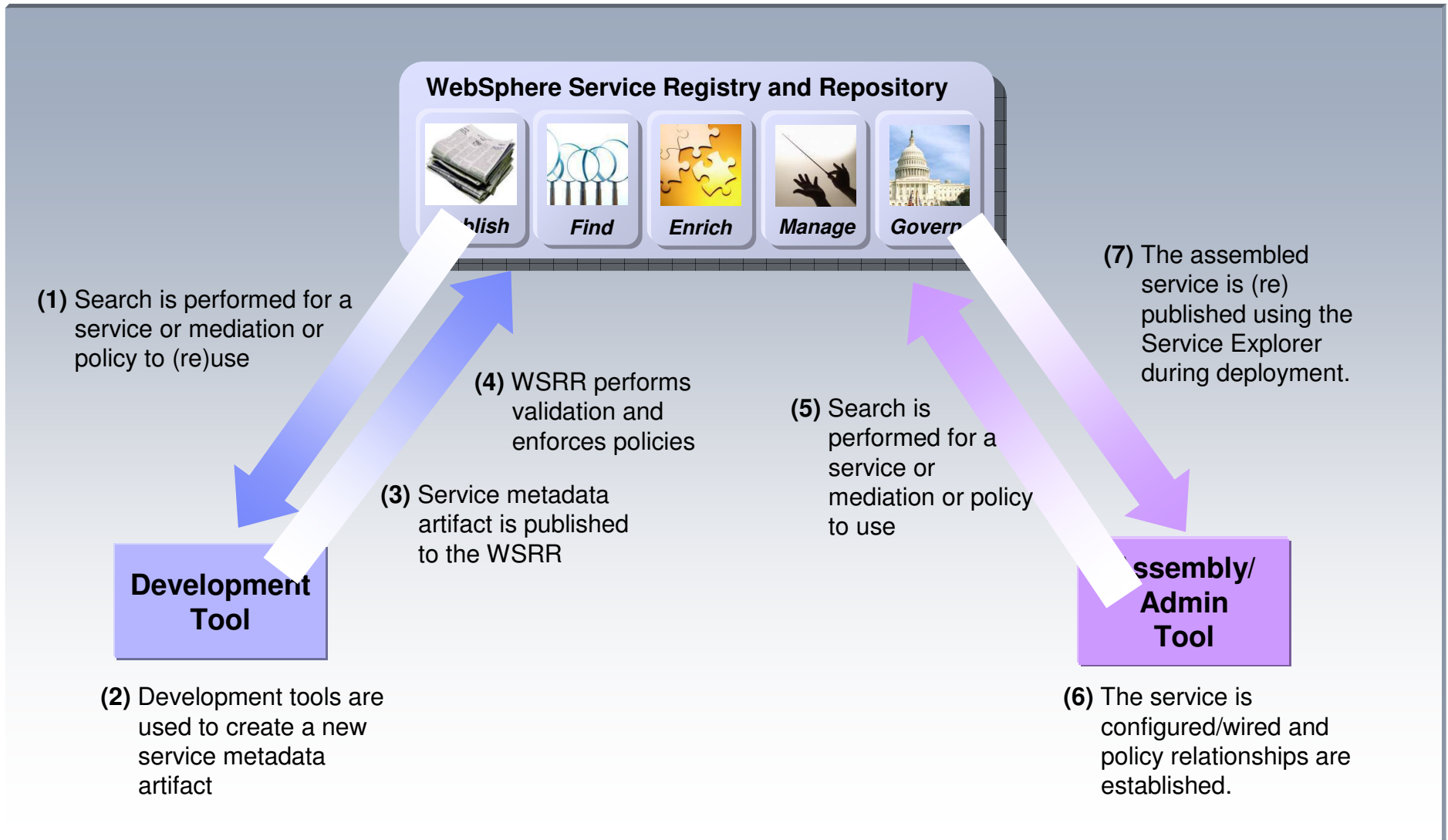
Find and reuse services for building blocks for new composite applications.

Publish and find...

- **Services descriptions and capabilities**
- **Service interactions, dependencies and redundancies**
- **Service lifecycle stage**
- **Policies for service usage**



How it works: Publish and Find Interactions



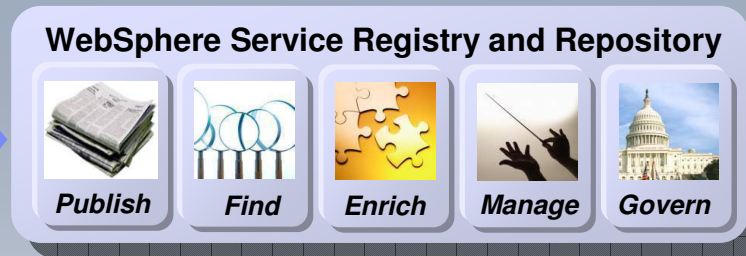


How it's used: Greater reuse of services

Business need for a service is initiated



“Find” for availability



If the service exists...

- 1) Service owner contacted
- 2) Owner performs impact analysis
- 3) WSRR updated
- 4) Service is reused

If the service exists but requires modification...

- 1) Service owner agrees to modify the service
- 2) Performs impact analysis
- 3) Service is altered and a new version is published
(owner may also trigger a custody transfer)
- 4) Services asset is reused

If the service does not exist...

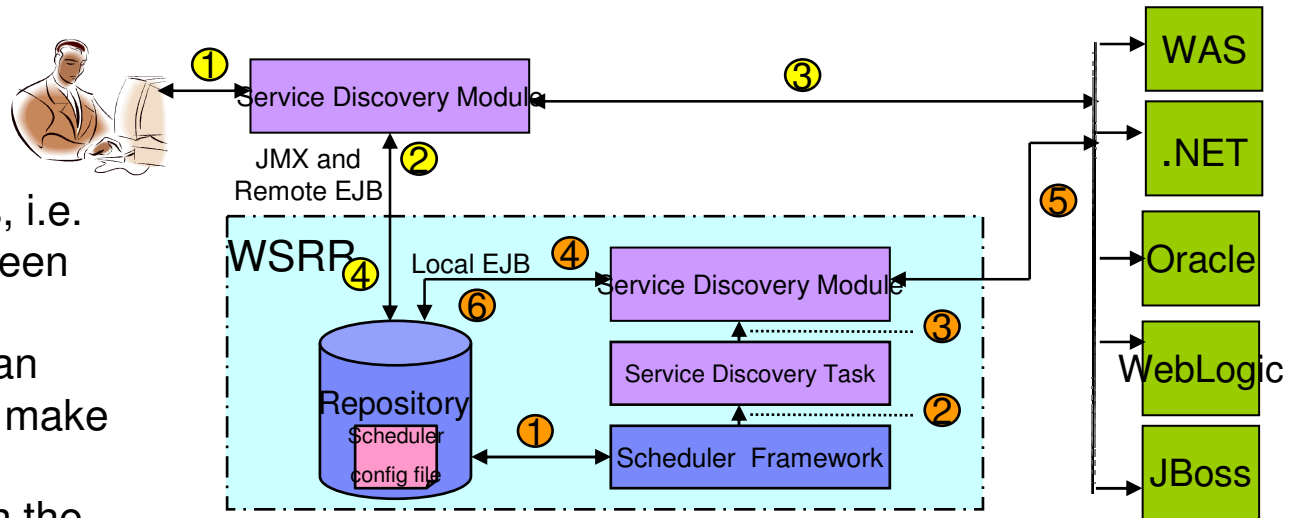
- 1) Governance process initiates new service development
- 2) “In-progress” service is recorded in the WSRR
- 3) Community is notified to eliminate redundant service development



Service Reconciliation

You want to ...

- Discover rogue services, i.e. services that have not been deployed in a controlled manner and therefore can pose business risk, and make sure that the registered services are in-sync with the deployed services.



IBM Solution

- WSRR make it easy to discover and reconcile deployed services
 - Service Discovery** to discover deployed services on .NET, Oracle, BEA WebLogic, JBoss, and WAS servers
- WSRR can easily integrate with service monitoring products
 - Integration with ITCAM for SOA**

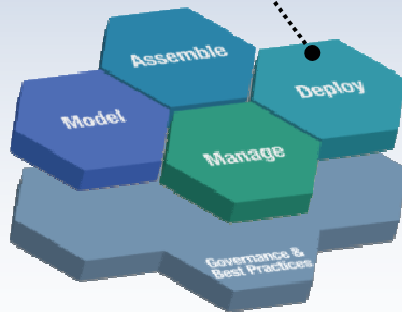
IBM WebSphere Service Registry and Repository Capabilities



Enhance Connectivity

Enable dynamic and efficient interactions among services at runtime.

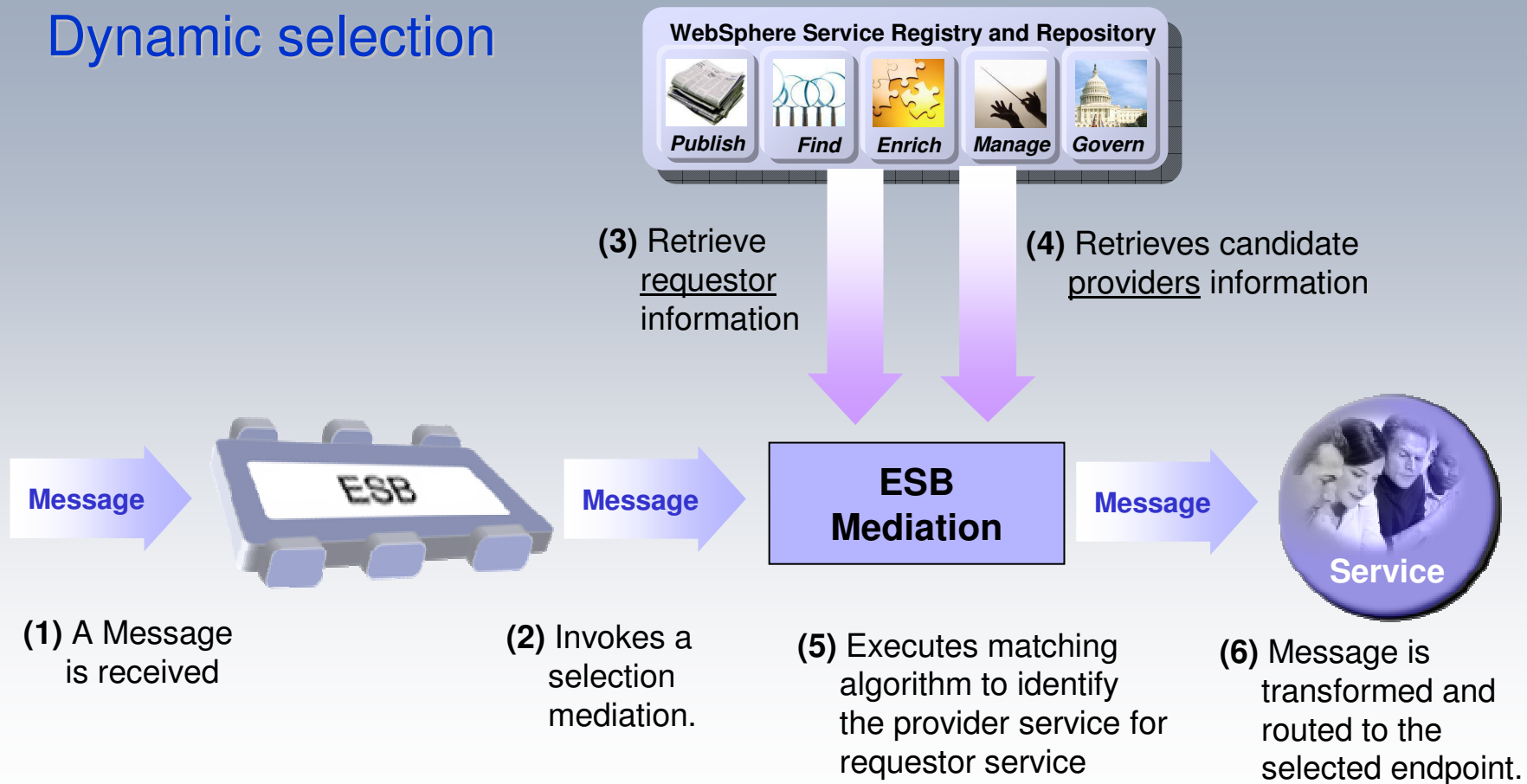
- **Manage dynamic and efficient access to services information by runtimes**
 - **Service endpoint selection**
 - **Service availability management**
 - **Policy enforcement**
- **Identify users of metadata**
- **Notify users of changes**
- **Securely transmit service information**





How it works: Runtime selection and invocation interactions

Dynamic selection





How it's used: Enhancing Connectivity



WebSphere Service Registry and Repository

<i>Publish</i>	<i>Find</i>	<i>Enrich</i>	<i>Manage</i>	<i>Govern</i>

Dynamic Endpoint Selection

- 1) ESB mediation is invoked
- 2) Mediation queries WSRR for information about the requestor and candidate provider
- 3) Mediation matches requestor with best candidate provider
- 4) Message is routed

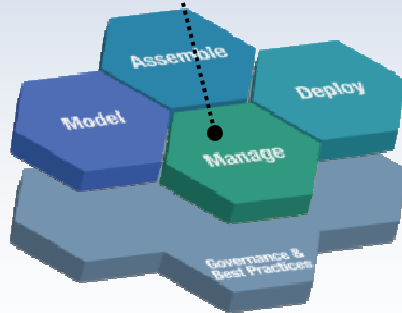
Availability Management

- 1) Selected provider fails to respond due to failure
- 2) Mediation queries WSRR to find other candidate providers
- 3) Mediation matches requestor with best candidate provider
- 4) Message is routed

Policy Enforcement

- 1) Mediation queries WSRR for information about the requestor and candidate provider
- 2) Mediation retrieves policy information from registry
- 3) Requestor and provider are matched based on these policies
- 4) Message is routed

IBM WebSphere Service Registry and Repository

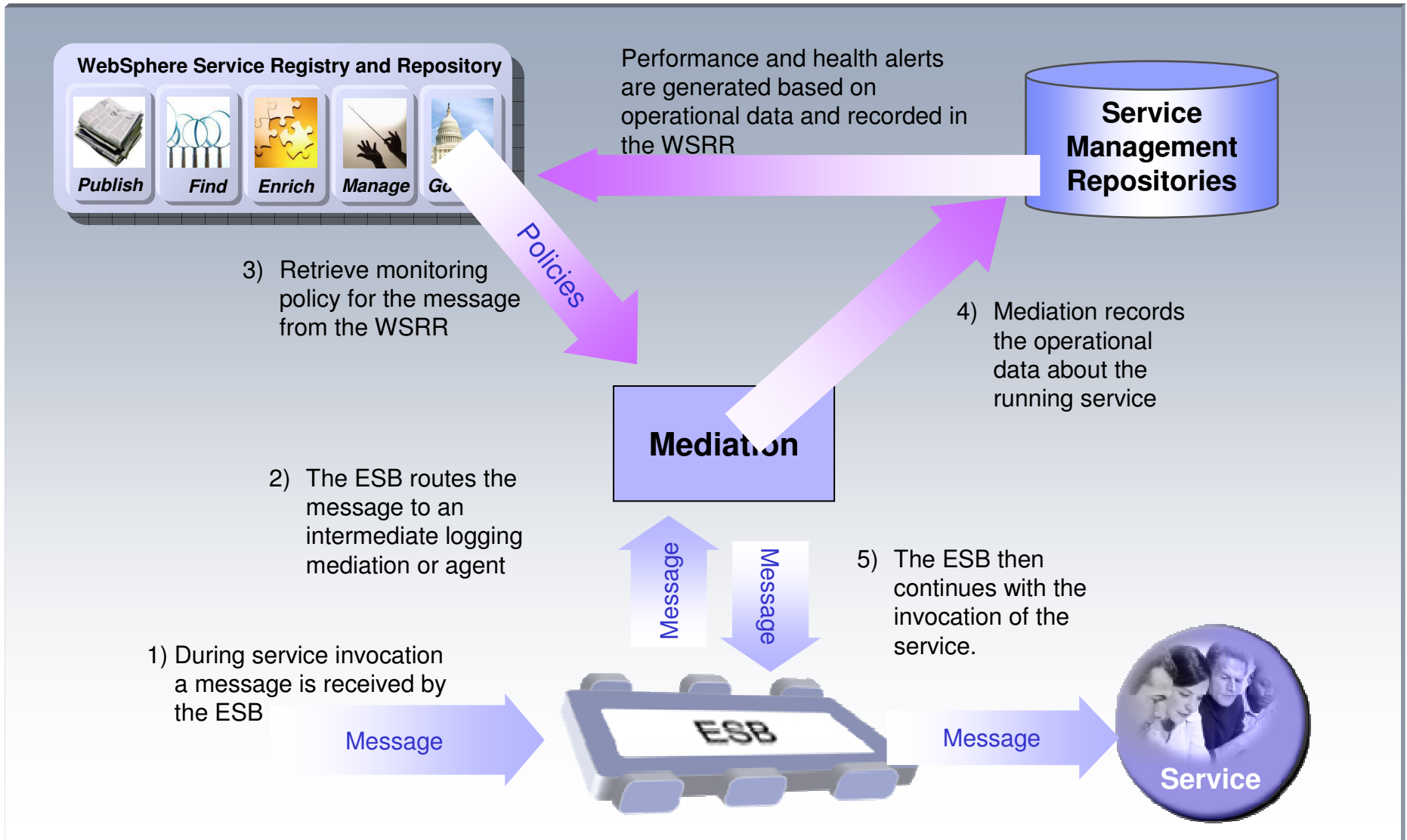


Help optimize service usage and performance

- Manage service interactions, dependencies, relationships and redundancies
- Classify services into meaningful groupings based on business objectives
- Manage policies for service usage and governance
- Manage change and versioning of services
- Analyze services usage, history and business impact
- Promote and encourage optimal services usage



How it works (How it's used): Operational Monitoring Interactions

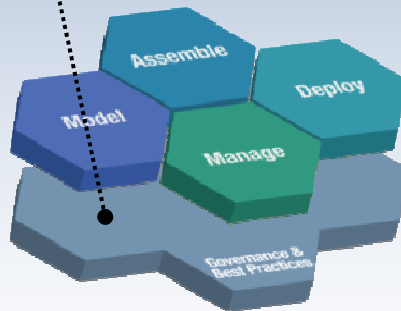




IBM WebSphere Service Registry and Repository



Govern



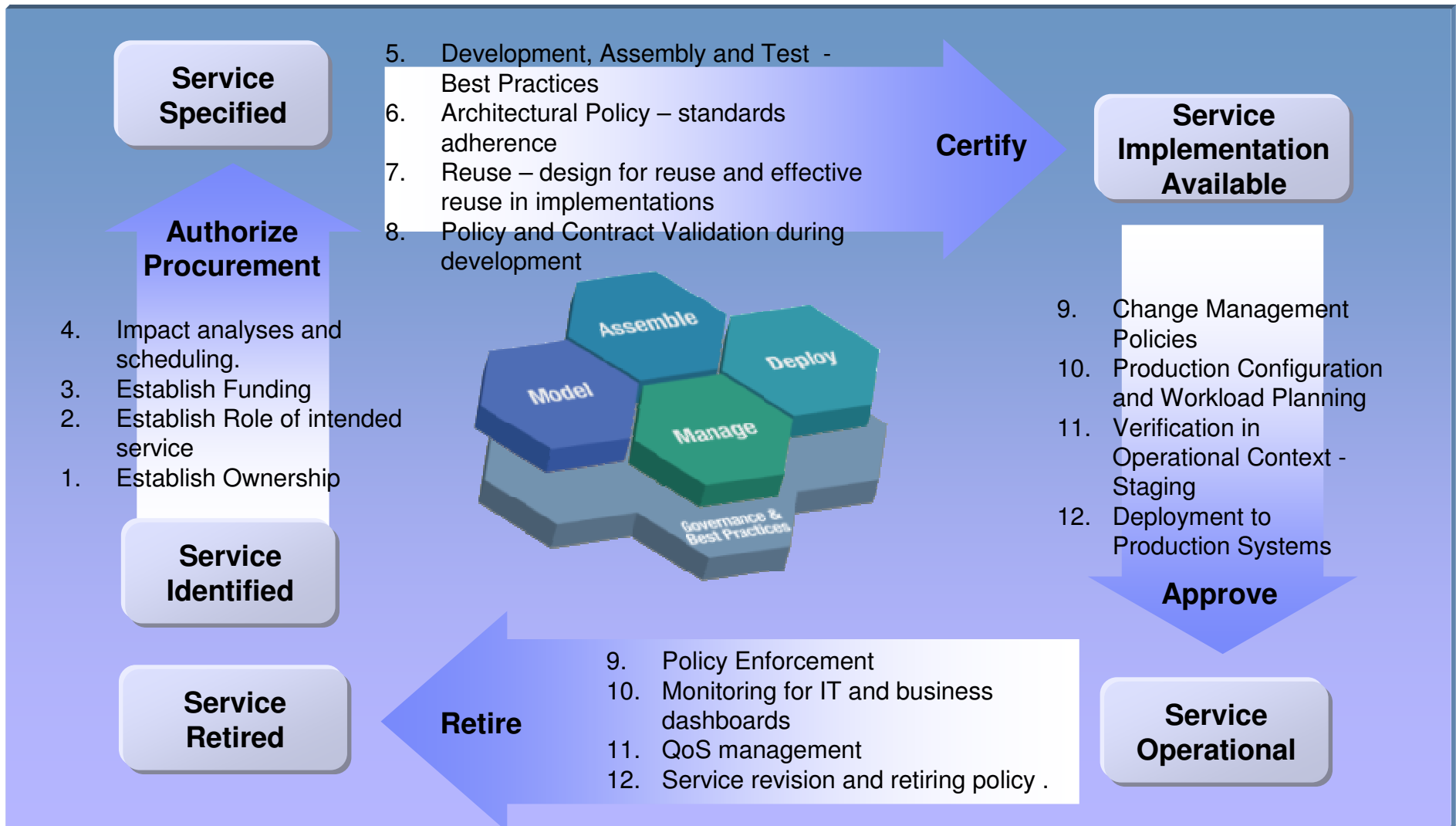
Enable Governance

Govern services throughout the service lifecycle

- **Infrastructure to help organize and discover services assets, govern access and monitor service vitality**
- **Classification of services by lifecycle phase**
- **Policies for publishing, using and retiring services**
- **Roles based access**



How it works: Enabling governance and management of the services lifecycle





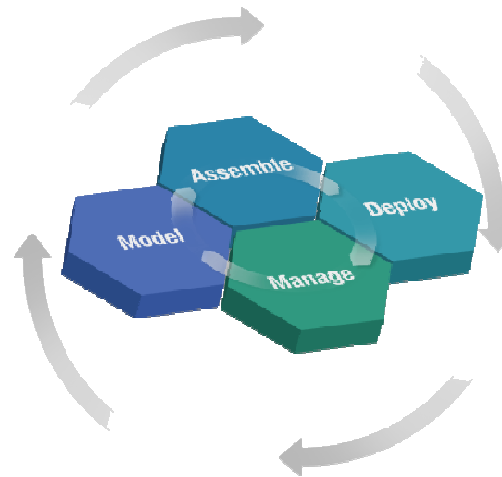
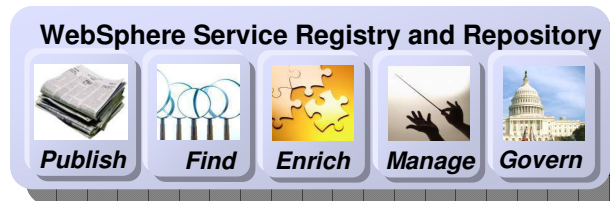
Open standards foundation for WebSphere Service Registry and Repository is necessary to support the entire SOA lifecycle

Requirements

Governance of entire SOA lifecycle

Integration with existing:

- Tools
- Runtime environments
- Management systems



Open Standards Foundation

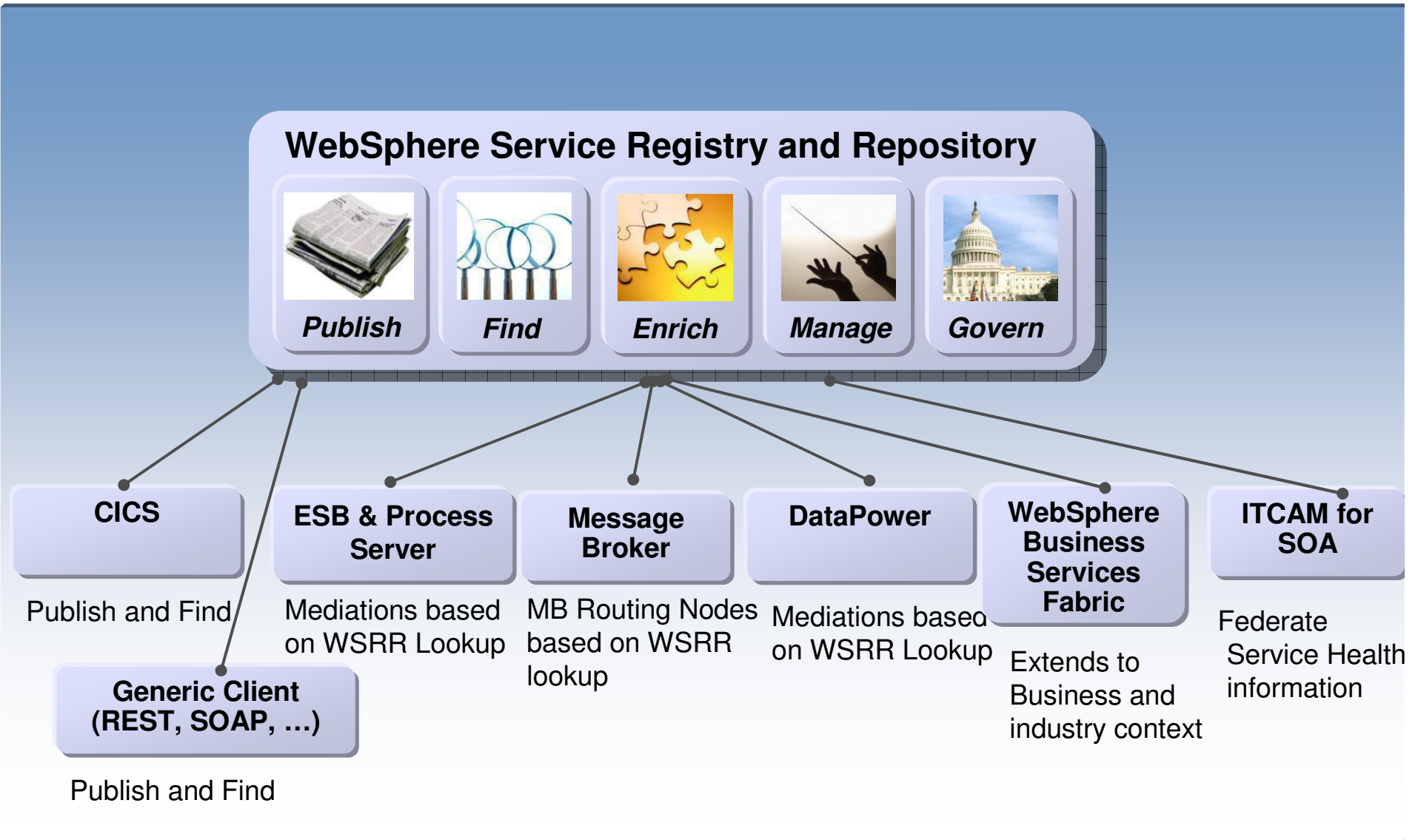
Store and search standard service artifacts
(WSDL, XSD, WS-Policy, OWL)

Existing Web services standards interoperability
(SOAP, WS-Security, ...)

Integration with UDDI



WebSphere Service Registry & Repository Integration with IBM SOA Products





Demonstration

- WebSphere Service Registry and Repository Demonstration



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धन्यवाद

Hindi

多謝

Traditional Chinese

ขอบคุณ

Thai

Спасибо

Russian

Gracias

Spanish

Thank You

English

شكراً

Arabic

Merci

French

Obrigado

Brazilian Portuguese

Grazie

Italian

多谢

Simplified Chinese

Danke

German

நன்றி

Tamil

ありがとうございました

Japanese

감사합니다

Korean