

*Aligning Business Goals with Cost-Effective,  
Highly Responsive Information Technology  
Solutions and Services*



# **Corporate Capabilities and Business Value of Service-Oriented Architecture**

- Mission Statement
- Technology and Services Goals
- Core Competencies
- Vendor Neutral Approach to SOA Technology
- Adding Business Value via SOA Technologies
  - Example Business Goals
  - SOA Technology Application to the Business Goal
  - Example Seros SOA Application
- Seros Advantage

To provide our customers with the technology solutions and services needed to align your business goals with cost-effective, highly responsive information technology.

- To define an Open Standards based SOA Reference Architecture that provides your Enterprise:
  - Vendor Neutrality, Interoperability, and Capability Federation
  - Ability to exploit open source capabilities
- To avoid the time-intensive, high labor costs associated with SOA Infrastructure Product Integration
  - To preserve existing commercial product and legacy investments
  - Achieve agility and flexibility in IT to increase overall growth and revenue opportunities, while reducing overall IT costs by leveraging Industry Standard Infrastructure
- To reduce response times to market forces
  - To launch new, revenue-producing products that have a quick Time-to-Market
  - To rapidly provide unique capabilities that complement the generic capabilities provided by enterprise applications (e.g., CRM, ERP, etc.)
  - Provide business processing capabilities in a commodity manner that makes the capabilities rapidly consumable by internal users, external users, and other partnerships
- To federate information and critical analytics from across the Enterprise
- To provide a governance layer between business needs and IT to balance organizational IT standards, information security, and other regulatory requirements with required business capabilities

- Vendor neutral technology and open standards based brokers to provide interoperability and federation
  - Treat a homogeneous SOA environment as a pattern to be achieved – not as an off-the-shelf product capability
    - Heterogeneous technology is more common than not in large organizations
    - Reduce duplication by focusing on interface standardization and format translation instead of the elusive homogenous solution
  - Use open standards to enable interoperability and federation
    - Allows a focus on the SOA Patterns (e.g., messaging, security, data publishing and discovery, etc.) to be implemented rather than products
    - Create a SOA infrastructure that is transparent to the consumer from a product perspective
    - Where possible, exploit open source capabilities
  - Use Governance and Policy Enforcement to achieve homogeneous life cycle management

**SOA and Web Services are Treated and Implemented  
as Commodity Capabilities**

- End-to-End Security Solutions
  - Architecture, design, and implementation of effective and efficient security solutions
  - Security product trade studies and security product integration
  - Single Sign-On (SSO) and Federated Identity Management (FIM)
  - XML Appliances (e.g., IBM DataPower and Layer 7)
  - Security hardening and compliance testing
  - Regulatory compliance for personal and credit card information

- Consulting Services
  - Needs assessment and architecture studies
  - End-to-End development processes to include Governance
  - Installation and deployment of technology capabilities
  - Software development and deployment
- Develop Organic Knowledge and Expertise within your organization
  - End-to-End process mentoring and development
  - Architecture, detailed design, and implementation training
  - Establish Competency Centers

# Vendor Neutral, Open Standards Based Approach to SOA Technology

Single Vendor Monolithic Stack



- Proprietary and Embedded
- Inflexible
- Vendor Lock-in
- High Product License Cost

Custom Integration of Multiple Vendors



- Proprietary and Embedded
- High Labor Cost
- Time Intensive
- Difficult to Maintain

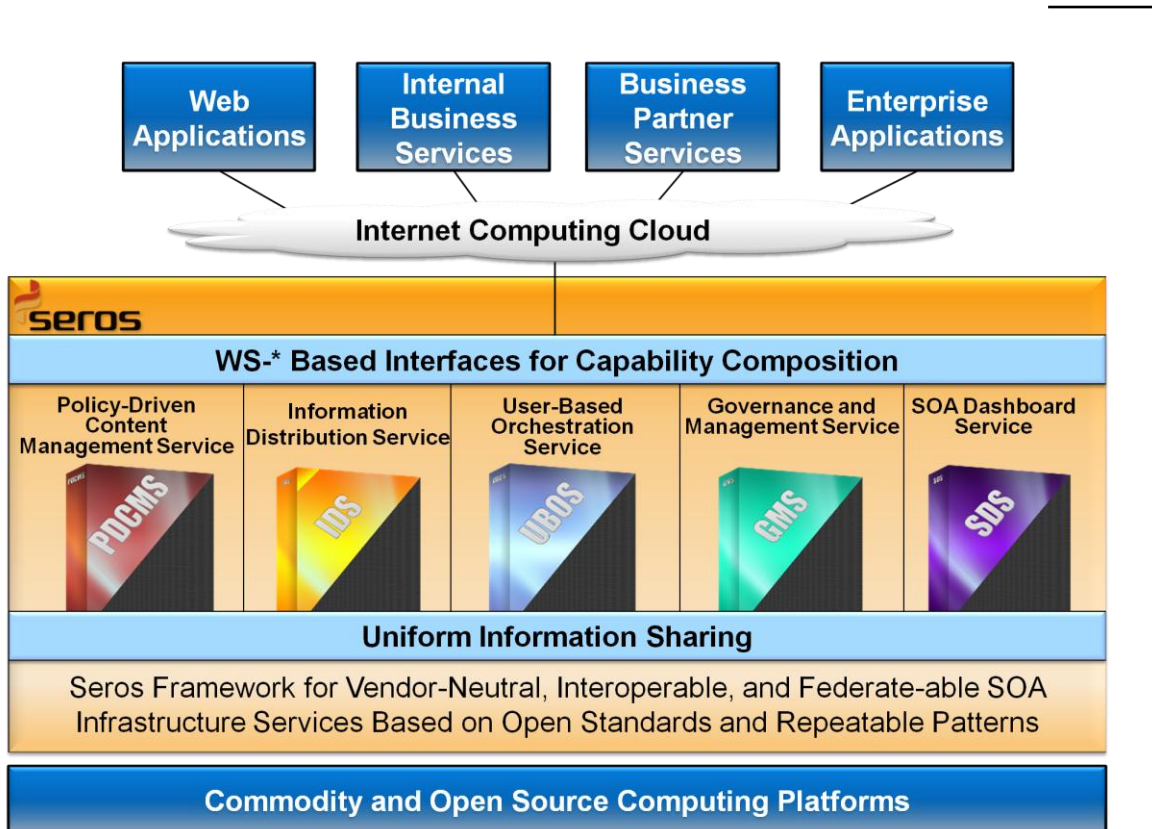
WS-\* Open Standard Based Integration of Multiple Vendors



- Open Standards Framework
- Avoids Vendor Lock-in
- Reduced Time & Labor Costs
- More Time for Business Services and Applications

**Maximize Return on Investment (ROI)  
by Minimizing SOA Implementation and Maintenance Costs**

# Vendor Neutral, Open Standards Based Approach to SOA Technology (Cont'd)



## Business Goals:

- Contract/Interface driven basis for business partnerships
- Uniformly share and aggregate business information and analytics
- Quick time to market for innovative revenue producing products

## IT/Architecture Goals:

- Reference architecture to guide future migration and integration of next generation technologies
- Reduced costs and achieve other efficiencies by using shared, reusable services over point to point interfaces
- Rapidly augment generic capabilities provided by enterprise applications
- Commodity-based business processing capabilities
- Integrate business with enterprise architecture, design engineering, embedded capabilities, and operations

## Process/Governance Goals:

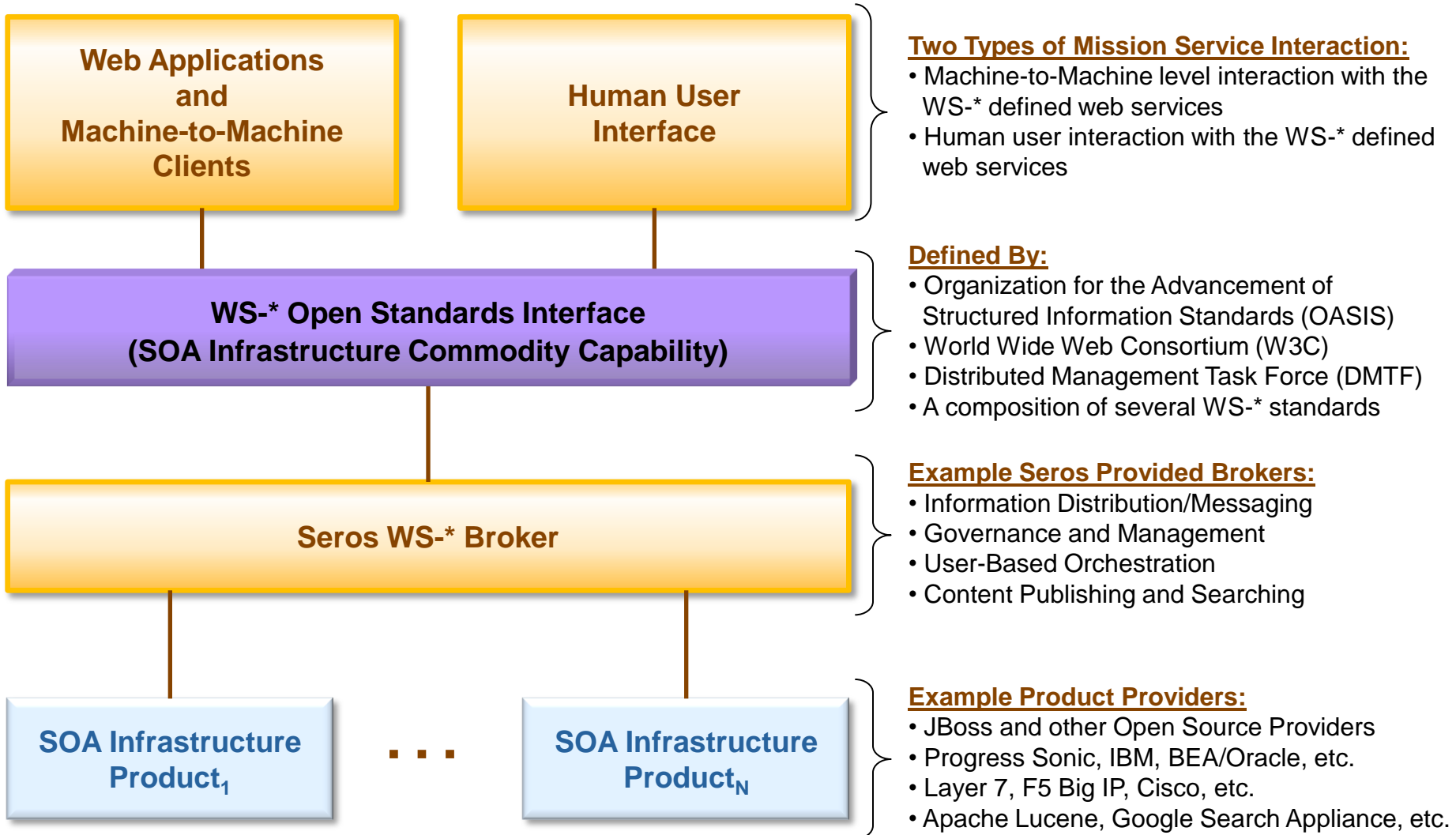
- Balance business needs with IT standards and other regulatory requirements
- Leverage existing investments and reduce duplication
- Incorporate industry/open standards on commodity and open source computing platforms



# Vendor Neutral, Open Standards Based Approach to SOA Technology (Cont'd)

SOA Foundation Infrastructure Service	Short Description	Supported WS-* and other Open Standard Interfaces	Interoperable Products
Policy Driven Content Management Service (PDCMS)	Provides the capability to rapidly configure dynamic content on websites via an intuitive policy editor and to manage that content through lifecycle phases in one intuitive user interface.	<ul style="list-style-type: none"><li>• XML-Based Metadata Definitions</li><li>• WS-Management</li><li>• WS-Policy</li><li>• WS-Security</li><li>• WSRP and JSR168/286</li></ul>	<ul style="list-style-type: none"><li>• Liferay™ Portal</li></ul>
Information Distribution Service (IDS)	Provides a secure and guaranteed delivery messaging capability	<ul style="list-style-type: none"><li>• WS-Notification<ul style="list-style-type: none"><li>• WS-BaseNotification</li><li>• WS-BrokeredNotification</li><li>• WS-Topics</li></ul></li><li>• WS-ReliableMessaging</li><li>• WS-Addressing</li><li>• WS-Management</li><li>• JSR-168 (Portlets)</li></ul>	<ul style="list-style-type: none"><li>• Apache™ ActiveMQ™</li><li>• JBoss®,</li><li>• Oracle® ESB</li><li>• IBM® Websphere®</li><li>• Progress® SonicMQ®</li></ul>
User-Based Orchestration Service (UBOS)	Provides the capability for users to dynamically modify business process orchestrations without requiring the involvement of programmers	<ul style="list-style-type: none"><li>• WS-BPEL</li><li>• EXT-JS/GWT</li></ul>	<ul style="list-style-type: none"><li>• Apache™ ODE</li><li>• ActiveVOS™</li></ul>
Governance and Management Service (GMS)	Provides the capability to govern, monitor, and manage web services and other types of network resources	<ul style="list-style-type: none"><li>• WS-Management</li><li>• WS-Policy</li><li>• WS-Transfer</li><li>• WS-Enumeration</li><li>• WS-Notification</li><li>• WS-Addressing</li></ul>	<ul style="list-style-type: none"><li>• IBM® DataPower® and Layer 7®</li><li>• JAMon</li><li>• Microsoft® Operations Manager</li><li>• Oracle® AmberPoint®</li><li>• Hewlett Packard® Systinet™</li></ul>
SOA Dashboard Service (SDS)	Provides a unified user interface to the WS-* based capabilities	<ul style="list-style-type: none"><li>• JSR-168</li><li>• Web 2.0</li><li>• Section 508 Compliance</li></ul>	<ul style="list-style-type: none"><li>• LifeRay™ Portal</li></ul>

# Vendor Neutral, Open Standards Based Approach to SOA Technology (Cont'd)



# Adding Business Value via SOA Technologies

- **BUSINESS GOAL:** *To reduce response times to market forces*
  - *To launch new, revenue producing products that have a quick time-to-market*
  - *To rapidly provide unique capabilities that complement the generic capabilities provided by enterprise applications (e.g., CRM, ERP, Content Management, etc.)*
  - *To provide business processing capabilities in a commodity manner that makes the capabilities rapidly consumable by internal users, external users, and other partnerships*
- **SOA Technology Application:**
  - SOA provides the capability for the rapid composition of technology independent shared, reusable services
  - Composition of services represent business process flows that correspond to how products are offered to customers
  - Decoupling of the business processes from the business logic allows for the rapid composition and recomposition of the web services to quickly react to business process changes that reflect both external and internal market forces
- **Example Seros Customer Solution:**
  - For a commercial customer Seros implemented a library of over 40 shared, reusable services created to support membership information, billing and payments, and insurance policies/claims
  - For a commercial customer Seros implemented a set of 6 utility services to validate and control the integrity of business transaction processing (logging, secure file staging, event-based triggering of processing, correlation identifiers to link related transactions, etc.)
  - For a commercial customer Seros extended the data model for a large enterprise application to incorporate customer unique data and business logic

# Adding Business Value via SOA Technologies (Cont'd)

- **BUSINESS GOAL:** *To avoid the time-intensive, high labor costs associated with SOA infrastructure product integration*
  - *To preserve existing commercial product and legacy investments*
  - *Achieve agility and flexibility in IT to increase overall growth and revenue opportunities, while reducing overall IT costs by Incorporating Industry Standard Infrastructure*
- **SOA Technology Application:**
  - A SOA foundation provides industry best practices to ensure cross-program data, processing interoperability, data integrity, and secure processing of transactions
  - Leverage the WS-\* open standards to create a SOA Reference Architecture of composable components (e.g., Commercial, Open Source, etc.)
  - WS-\* open standards provide the ability to compose components with standards based connectors to provide commodity capabilities (or services)
- **Example Seros Customer Solution:**
  - Department of Defense customer utilized the Seros Information Distribution Service to create an enterprise-wide messaging capability while preserving their investment in over \$500K in existing enterprise license agreements
  - Department of Defense customer utilized the Seros Content Awareness Service for enterprise wide data publishing and searching while preserving over \$10M in licensing agreements and legacy application development costs
  - Aerospace engineering customer utilized multiple Seros products to create an enterprise wide SOA reference implementation that is being reused on multiple projects

# Adding Business Value via SOA Technologies (Cont'd)

- **BUSINESS GOAL:** *To federate information and critical analytics from across the enterprise*
- SOA Technology Application:
  - Data trends derived from business-oriented events can be further analyzed to create specific business analytics that can be shared throughout the enterprise
  - Customer transaction histories and other external data sources, can be analyzed for customer behavior patterns that can be used to predict future customer behavior
- Example Seros Customer Solution:
  - Department of Defense customers using Seros Information Distribution Service to federate multiple messaging capabilities (based on different commercial products) to create an enterprise wide messaging capability
  - Department of Homeland Defense using Seros Governance and Management Service to federate and interpret web service monitoring information being collected by multiple different commercial products
  - Intelligence Community customers using Seros User-Based Orchestration Service to dynamically connect to multiple information sources, analyze the aggregated information, and make future routing decisions for the aggregated information

# Adding Business Value via SOA Technologies (Cont'd)

- **BUSINESS GOAL:** *To provide a governance layer between business needs and IT to balance organizational IT standards, information security, and other regulatory requirements with required business capabilities*
- SOA Technology Application:
  - SOA is first and foremost a business strategy based on the rapid consumption of shared, reusable services (i.e., commodity services). Implies an organization's business model must be focused on exploiting the shared, reusable services.
  - SOA Center of Excellence to bring together business units with web services and SOA technology
    - Provides collaborative environment for business, enterprise architecture, engineering, and IT to exploit the library of shared, reusable services
    - Unites business needs with technology solutions in a collaborative and affordable manner that ultimately reduces risks, time to deliver solutions, and solution costs
- Example Seros Customer Solution:
  - For a commercial customer Seros defined and implemented a SOA Center of Excellence that included: an end-to-end development process, design patterns, design templates, code examples, web site/wiki for collaboration, etc.. Implementation resulted in:
    - Significant cost reduction in the production of service WSDLs – from weeks to days
    - More effective communication of best practices across the entire team
    - Improved transition of knowledge within the organization
    - Dedicates resources to determine how to satisfy a business need by directly reusing a service, reusing with extension, or creating a new service

# The Seros Advantage

- Substantial savings of up to 75% on both initial and continuing SOA product integration costs
- Enables your organization to maximize business value by focusing on creating and deploying business services, instead of allocating internal resources towards building SOA Infrastructure
- Reduces duplication via collaboration across business areas in the Enterprise
- Open-Standard Based Integration of Multiple Vendors that avoids vendor lock-in, cuts time and labor costs

**Accelerate Your SOA Implementation and Unlock It's Full Value**