

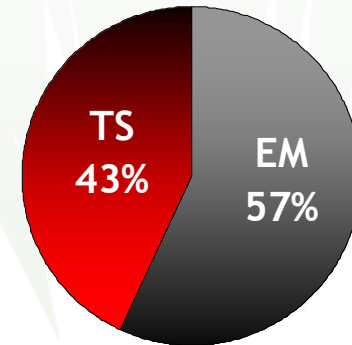
# Performance-Driven SOA Adoption: Gaining Momentum from One Project to the Next

Sean Valcamp  
Enterprise Architect and IT Director  
Avnet, Inc.

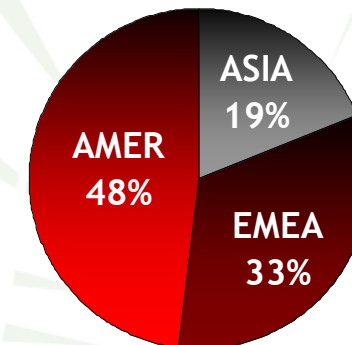
**SOA09**  
SOASUMMIT2009

## Avnet, Inc.

- Important Dates
  - Founded in 1921
  - Incorporated in 1955
  - NYSE: AVT (in 1959)
  - Relocated headquarters to Ariz. in 1998
- FY '08 Annual Revenue
  - Avnet, Inc. - \$17.95 billion
  - Electronics Marketing - \$10.32 billion
  - Technology Solutions - \$7.63 billion
- No. 144 on Fortune 500
- Global Presence
  - ~ 300 locations in over 70 countries
  - 300 suppliers/100,000 customers



As of FY 2008



As of FY 2008

# “Why measure your SOA?”

Focusing on approval and adoption

## Approval and Adoption

- Gaining Approval
  - Starts at the executive level (CIO, CTO)
  - Aligns the benefits to the business strategy
  - Open to new / old ideas
  - Leverages parallelisms
  - Collaboration and communication
- Gaining Adoption
  - This takes time and requires patience
  - Invest in knowing your teams
  - Seeks to understand
  - Educates, no debates
  - Collaboration and innovation



## “What should I measure?”

Knowing the types of measures shows us where to look

# Types of Vertical Measurements

## Financial

Budget

Expense / Capital

Return



## Functional

Infrastructure

Services

Efficiencies



## Behavioral

Approval

Adoption

Culture



## Types of Horizontal Measurement

Strategic	<p>Relates to culture</p> <p>Focuses on efficiencies</p> <p>“Internal” dollars</p>
Tactical	<p>Relates to assets</p> <p>Focuses on implementation / decommission</p> <p>“Green” dollars</p>

# The Measurement Matrix

	Financial	Functional	Behavioral
Strategic	Typical Measurement (internal dollars)	Typical Measurement (conceptual)	Atypical Measurement (approval & adoption)
Tactical	Typical Measurement (green dollars)	Typical Measurement (tangible)	Atypical Measurement (implementation)

# “SO..uh” or “SOA”

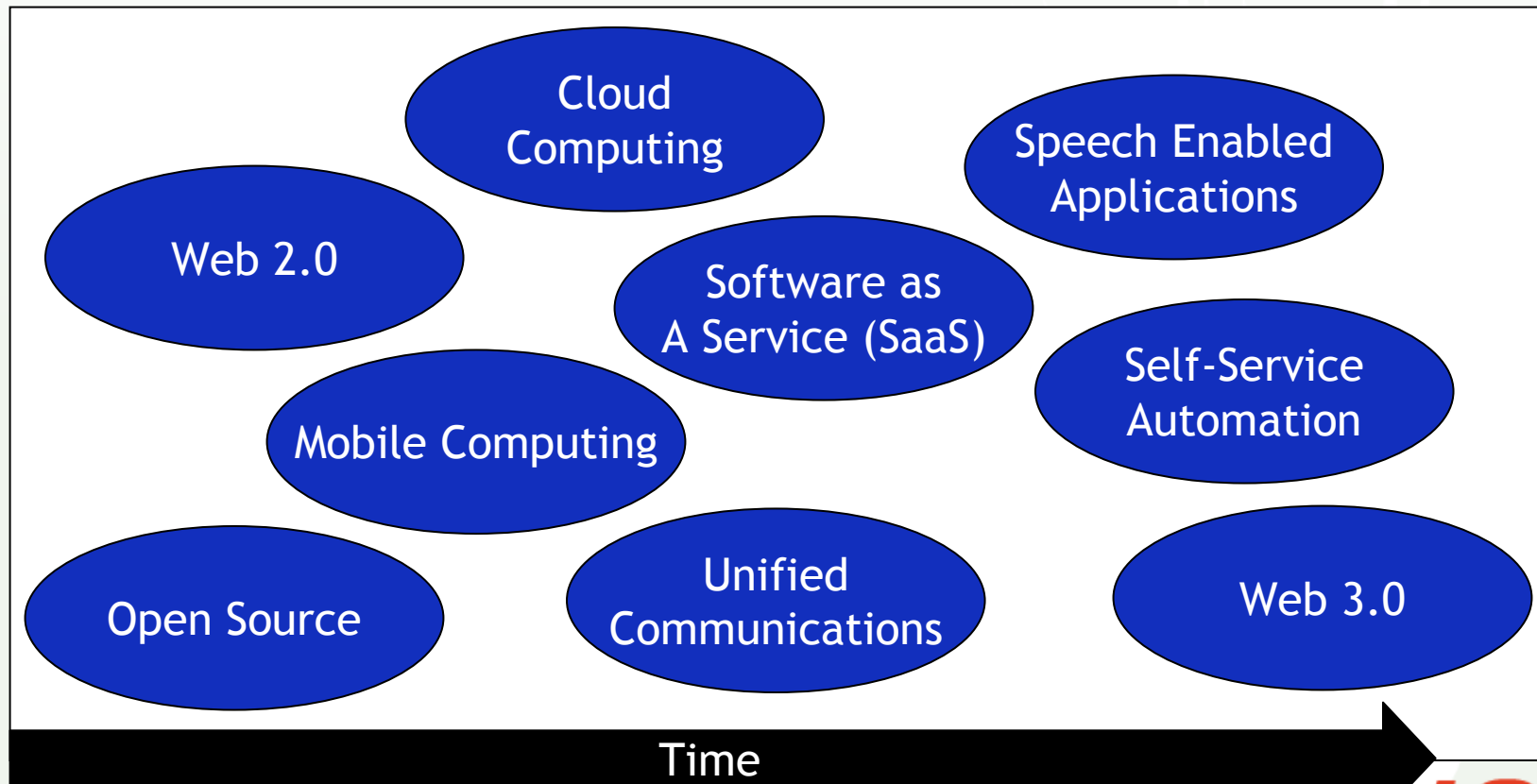
Identifying the need for a Services Oriented Architecture

## Challenges in the Technology Supply Chain

- Supply chain optimization
  - Over 300 suppliers and 100,000 customers
- Solution selling
  - Sharing knowledge to support solution sales
- Manage IT spend mix
  - Strategic sustaining and innovation spending
  - Operational excellence
- Globalization
  - Architectural whole is greater than its parts
- Regulatory requirements
  - Sarbanes-Oxley
  - Hazardous Materials
  - Denied Party Checking



## The Cool Stuff... Emerging Technologies



 software AG

## Spanning the Globe... A Diverse Landscape



 software AG



ORACLE®



Microsoft®

Tivoli. software

WebSphere. software



 RedPrairie®



SOA09  
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## Measurement Matrix - Identifying a Need

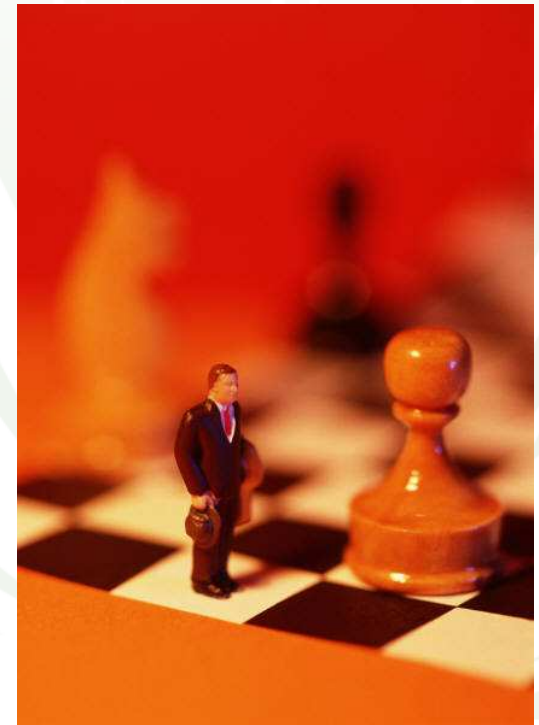
	Financial	Functional	Behavioral
Strategic	Target Investment Target ROI	Business Plan Goals Vendor SOA Maturity	Understanding Biases
Tactical	IT Spend % Vendor Spend	Number of Partners Vendor Services	Existing Culture Challenges

# “Where do I begin?”

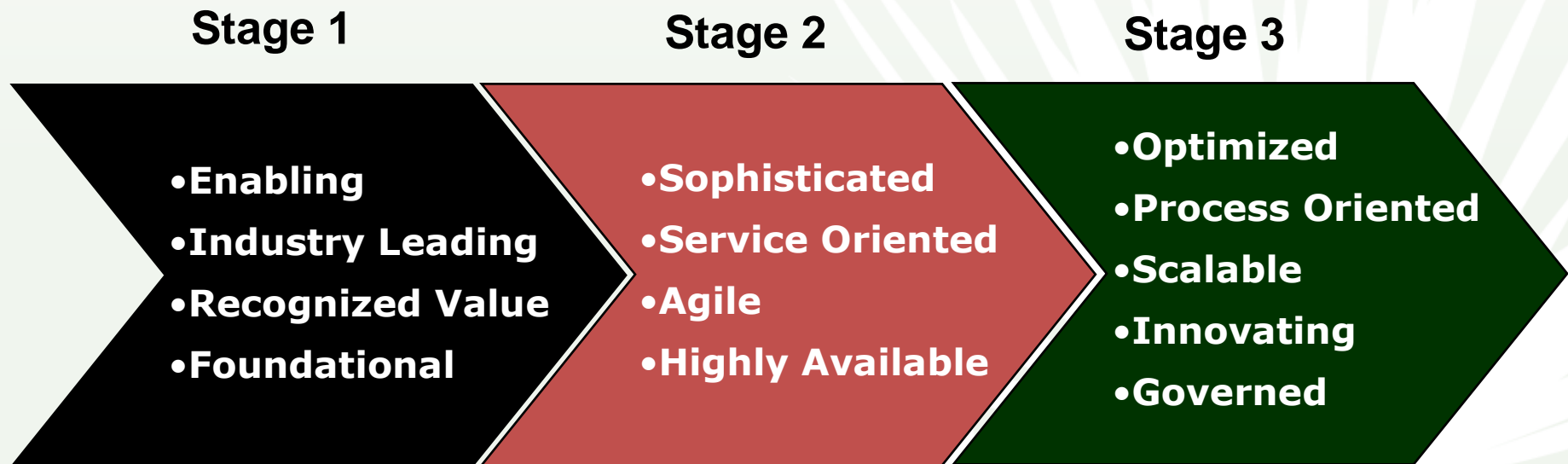
Assessing your SOA strategy and maturity

## SOA Strategy

- Scope Statement
  - SOA is a vast area, scope out what is needed
- Timeline
  - Establish when you need each SOA component
- Organizational Hierarchy
  - SOA Champion and Center of Excellence
- Cost Analysis
  - Validate model (Enterprise or Project Based)
- Business / Customer Alignment
  - Do what will benefit your business / customer
- Communication Plan
  - Market what you are doing
  - No surprises!!



## SOA Maturity Model



# Measurement Matrix - Strategy and Maturity

	Financial	Functional	Behavioral
Strategic	<p>Target Savings</p> <p>SOA Project Costs</p>	<p>Efficiencies / Benefits</p> <p>Timeline / Growth</p>	<p>Adoption</p> <p>Attendance</p>
Tactical	<p>IT Expenses / Capital</p> <p>Business Financials</p>	<p>SOA Maturity</p> <p>SOA Capacity</p>	<p>Approval</p> <p>Reactions</p>

“I need SOA but what truly is it?”

Creating a definition of your SOA

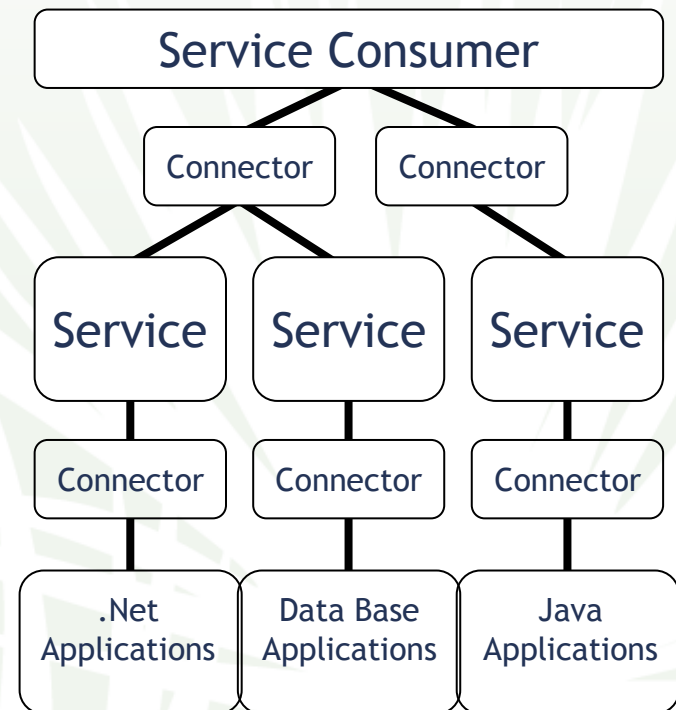
## Defining an SOA

- “... is a **collection of services** with a communication mechanism (usually called a **connector or transport**) that enables the services within the collection to **pass data** and or **coordinate activities** between members”
- “... and includes **governance** and **policies** to regulate the environment.”

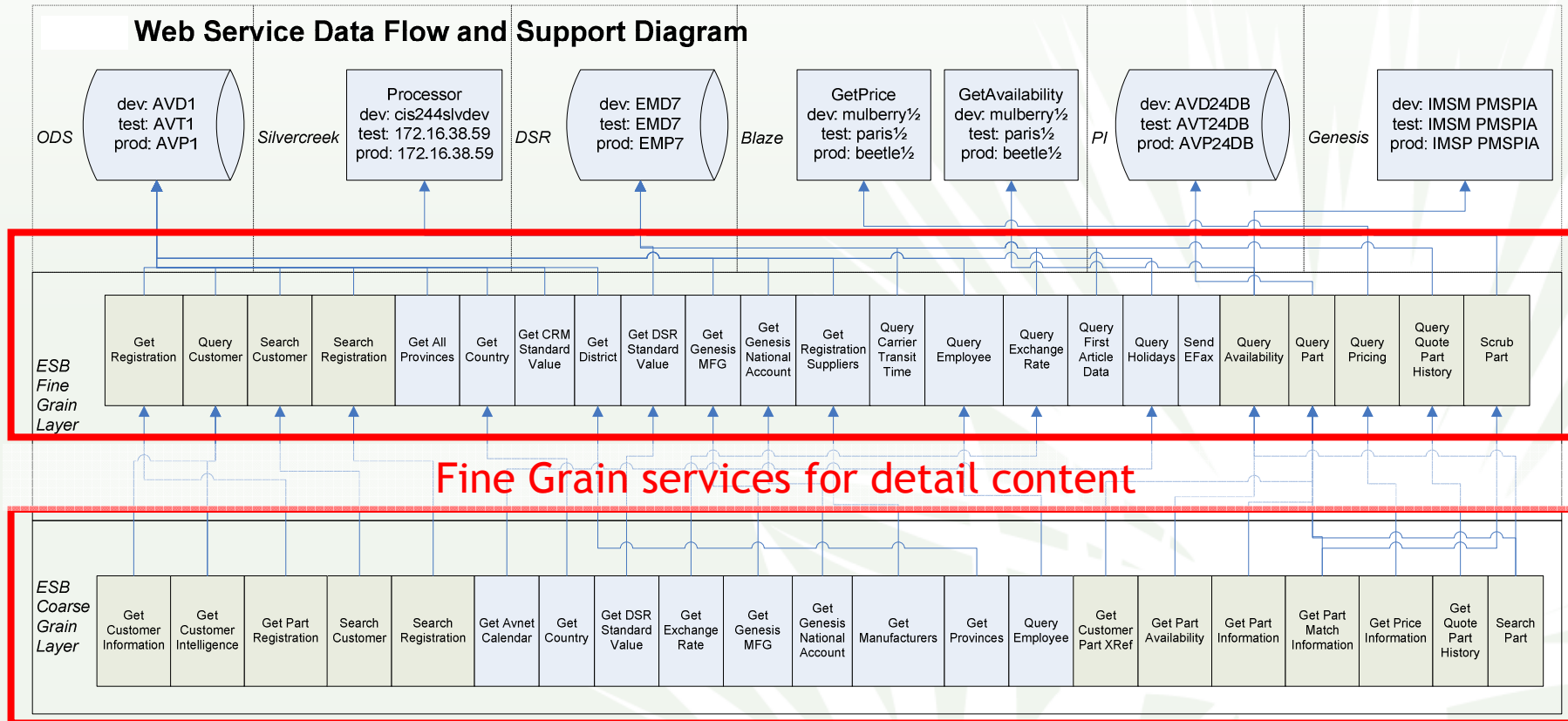
Source: Avnet Global Information Solutions

## Services and Connectors

- **Services** will be identified based on the following methods:
  - Domain decomposition
  - Goal (KPI) decomposition
  - Process decomposition
- **Connectors** will be selected based on the following criteria:
  - Types of connection points
  - Batch versus Near-Real Time
  - Performance
  - Reliability
  - Scalability



# Decomposition Model



Fine Grain services for detail content

Course Grain services for general information

## Measurement Matrix - Defining your SOA

	Financial	Functional	Behavioral
Strategic	<p>Project Savings</p> <p>Project Investment</p>	<p>Service Growth</p> <p>Solution Delivery Time</p>	<p>Independence</p> <p>Collaboration</p>
Tactical	<p>Expenses vs Delivery</p> <p>Customer Profitability</p>	<p>Number of Services</p> <p>Number of Connectors</p>	<p>Sensitivity</p> <p>Participation</p>

“Success, but what about SOA growth?”

SOA Governance in the Enterprise

# Importance of SOA Governance

## Service Consumer

Request service access

Workflow for service usage approval



## Service Provider

Provide service access

Make sure services adhere to policies



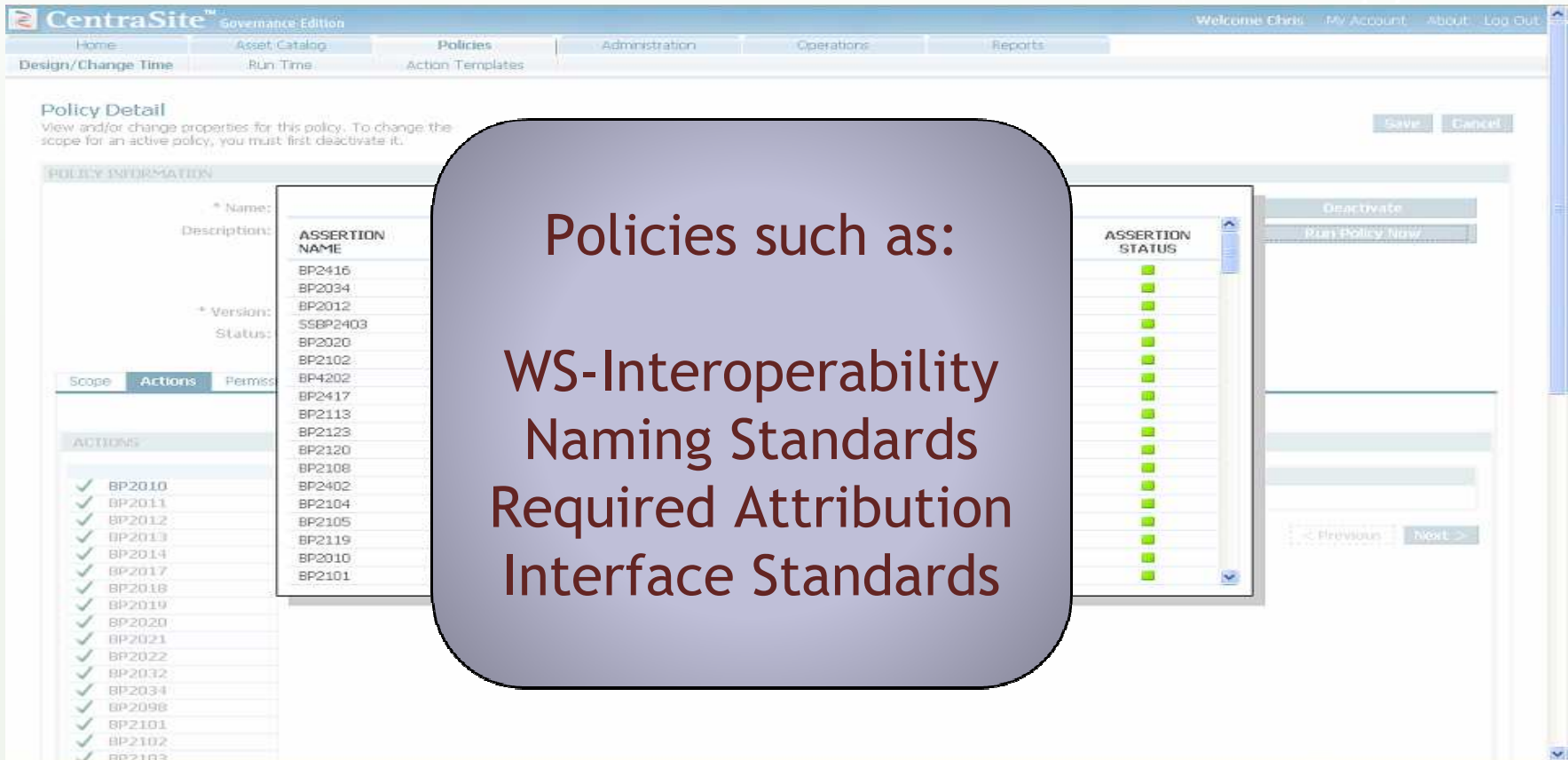
## SOA Administrator

Approve various requests

Implement and monitor policies



# Design-Time Policies



**Policy Detail**  
View and/or change properties for this policy. To change the scope for an active policy, you must first deactivate it.

**POLICY INFORMATION**

\* Name: BP2010  
Description: **ASSERTION NAME**  
\* Version: 55BP2403  
Status:

ASSERTION NAME
BP2416
BP2034
BP2012
55BP2403
BP2020
BP2102
BP4202
BP2417
BP2113
BP2123
BP2120
BP2108
BP2402
BP2104
BP2105
BP2119
BP2010
BP2101

**ACTIONS**

Assertion Name	Action
BP2010	<input checked="" type="checkbox"/>
BP2011	<input checked="" type="checkbox"/>
BP2012	<input checked="" type="checkbox"/>
BP2013	<input checked="" type="checkbox"/>
BP2014	<input checked="" type="checkbox"/>
BP2017	<input checked="" type="checkbox"/>
BP2018	<input checked="" type="checkbox"/>
BP2019	<input checked="" type="checkbox"/>
BP2020	<input checked="" type="checkbox"/>
BP2021	<input checked="" type="checkbox"/>
BP2022	<input checked="" type="checkbox"/>
BP2032	<input checked="" type="checkbox"/>
BP2034	<input checked="" type="checkbox"/>
BP2098	<input checked="" type="checkbox"/>
BP2101	<input checked="" type="checkbox"/>
BP2102	<input checked="" type="checkbox"/>
BP2103	<input checked="" type="checkbox"/>

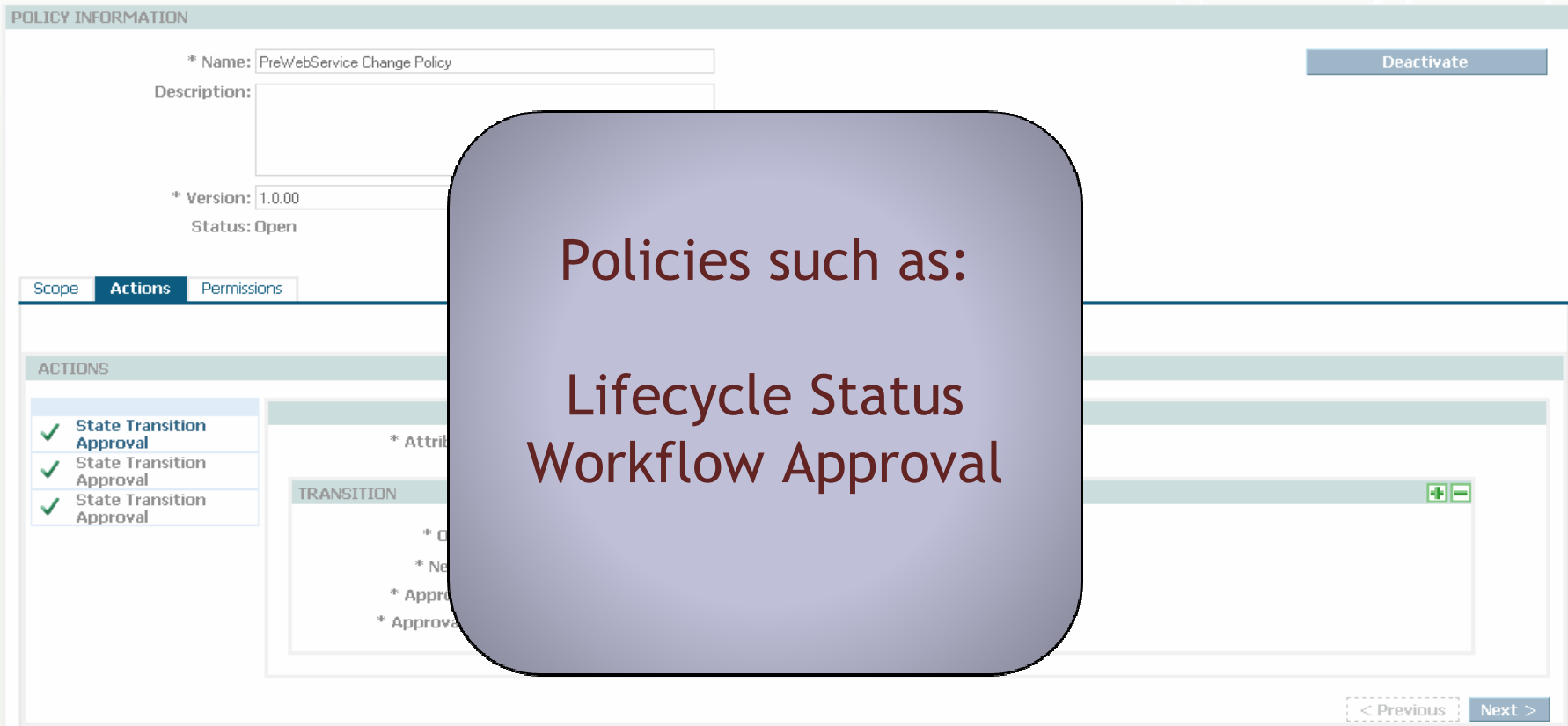
**ASSERTION STATUS**

Assertion Name	Status
BP2416	<input checked="" type="checkbox"/>
BP2034	<input checked="" type="checkbox"/>
BP2012	<input checked="" type="checkbox"/>
55BP2403	<input checked="" type="checkbox"/>
BP2020	<input checked="" type="checkbox"/>
BP2102	<input checked="" type="checkbox"/>
BP4202	<input checked="" type="checkbox"/>
BP2417	<input checked="" type="checkbox"/>
BP2113	<input checked="" type="checkbox"/>
BP2123	<input checked="" type="checkbox"/>
BP2120	<input checked="" type="checkbox"/>
BP2108	<input checked="" type="checkbox"/>
BP2402	<input checked="" type="checkbox"/>
BP2104	<input checked="" type="checkbox"/>
BP2105	<input checked="" type="checkbox"/>
BP2119	<input checked="" type="checkbox"/>
BP2010	<input checked="" type="checkbox"/>
BP2101	<input checked="" type="checkbox"/>

**Policy Examples:**

- WS-Interoperability
- Naming Standards
- Required Attribution
- Interface Standards

# Change-Time Policies



POLICY INFORMATION

\* Name: PreWebService Change Policy Deactivate

Description:

\* Version: 1.0.00

Status: Open

Scope **Actions** Permissions

ACTIONS

- ✓ State Transition Approval
- ✓ State Transition Approval
- ✓ State Transition Approval

TRANSITION

\* Attril

\* D

\* Ne

\* Appro

\* Approva

< Previous Next >

Policies such as:  
Lifecycle Status  
Workflow Approval

## Run-Time Policies



The screenshot shows a web-based management console. At the top, there are tabs for 'Scope', 'Actions', 'Permissions', 'Contracts', and 'Documents'. The 'Actions' tab is active. Below the tabs, there is a button labeled 'Edit Action List...'. A list of actions is displayed, each with a green checkmark: 'Routing:Advanced Routing', 'Consumer Identification', 'Security:Signature', 'Service Level Agreements', and 'Security:Encryption'. To the right, a 'SLARULE' configuration window is open, showing a text area with some text and a '+ -' button. At the bottom right of the window, there are '< Previous' and 'Next >' buttons.

Policies such as:

- Service Level
- Time / Quantity of Use
- Identification
- Authorization

## Measurement Matrix - SOA Governance

	Financial	Functional	Behavioral
Strategic	Project Savings Project Investment	Service Defects SOA Capacity	Self Fulfillment Innovation
Tactical	Return on Investment Customer Profitability	Managed Services Service Usage	Collaboration Work Redundancy

# “Take the good with the bad”

Lessons learned from Avnet’s measurements

## Taking A Look Back at Avnet's SOA History

- Keys to successful measurements
  - Be honest and open to feedback
  - Measure accurately and frequently
  - Make sure process is repeatable
  - Relate the measurements appropriately
  - Communicate success and failure
  - Focus on organizational success
- Focusing on continued improvement
  - Market the measurements
  - Manage various levels of adoption
  - Define measurement processes
  - Work with teams to understand measures
  - Succeed as a team



## Closing Points

- Know why you need measure SOA
  - Approval versus Adoption
- Know the types of measurements
  - Financial, Functional, and Behavioral
  - Strategic and Tactical
  - Leverage a Measurement Matrix
- Continuously measure SOA
  - Concept, Definition, Realization
- Define what you need to measure
  - Align to customer success
  - Align to SOA growth
- Measure for team success



Thank You!