

**ORACLE®**

## **Building a SOA Roadmap**

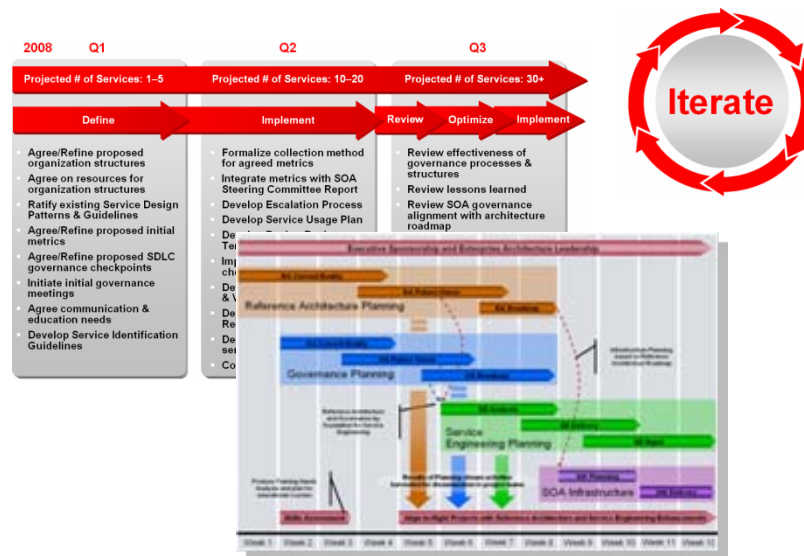
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# SOA Roadmap

## Providing Guidance and Coordination

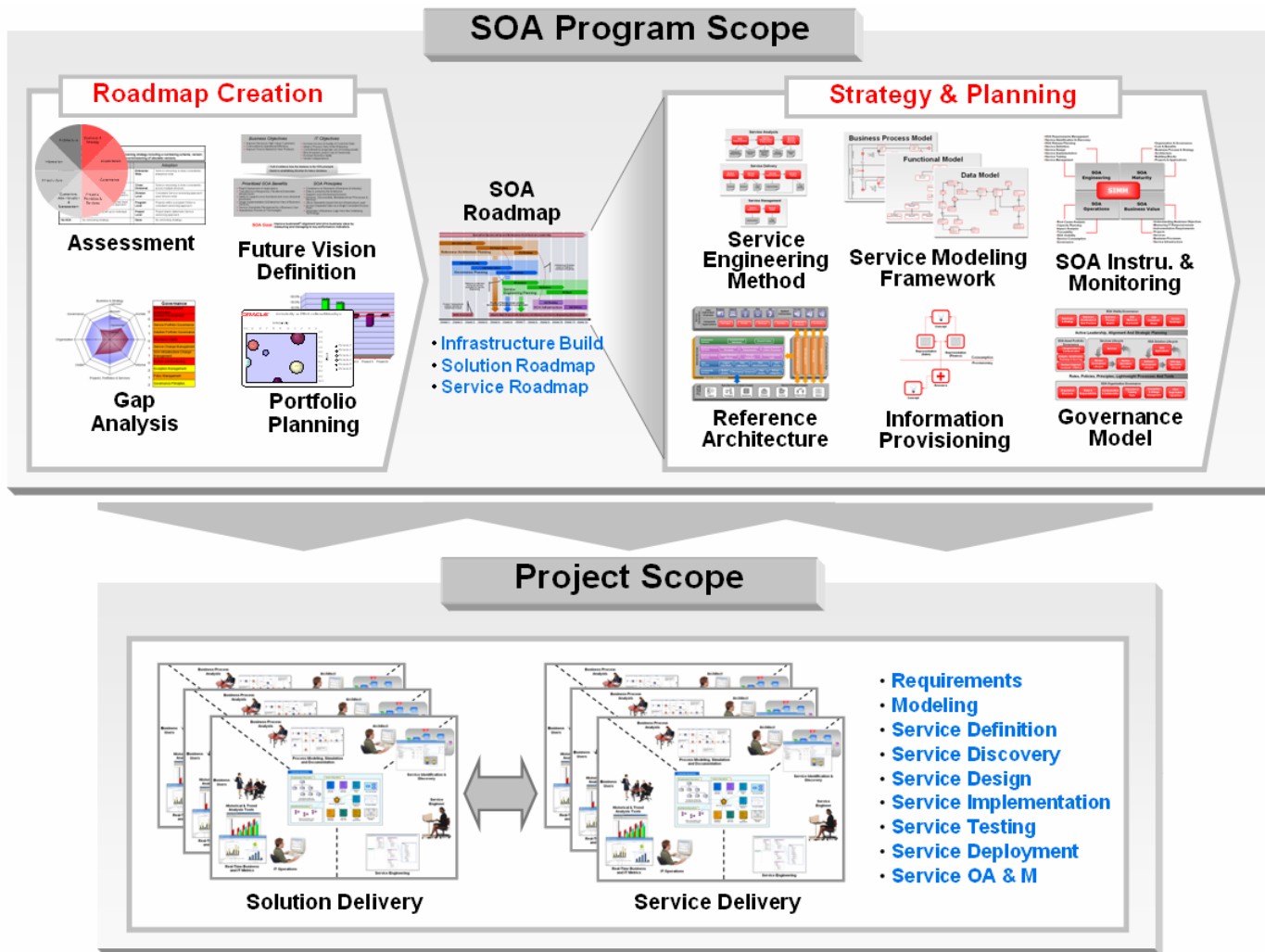
- Allow multiple projects to progress in parallel and remain coordinated
- Generally, time horizon is 2-3 years
  - Depends on enterprise planning cycles
  - Greater detail in near-term phase
- Regularly reviewed and updated
- Incremental improvement
- Course correction



- SOA Roadmap consists of 3 fundamental parts
  - Program-level efforts
  - Portfolio of projects that build specific business solutions
  - Portfolio of shared services

# SOA Roadmap

## Three Fundamental Parts



# Building an SOA Roadmap

All roadmap building follows the same four steps:

- Where are we now?
- Where do we want to be?
- What is the gap between the two?
- What is the path to get to where we want to be?

These steps require a consistent measurement to assess current state and progress toward the goal.



## SOA Maturity Model

# Oracle's SOA Maturity Model

## Key Concepts

- Oracle's SOA Maturity Model includes the following key concepts:
  - Capabilities
  - Domains
  - Maturity
  - Adoption
- SOA Maturity Model remains technology, standards and **product agnostic**.
- SOA Maturity Model includes over **90+ capabilities**.
- **Capabilities capture best practices** that Oracle has collected over many years working with a wide variety of companies
- Additional **capabilities are added** as more best practices emerge
- **8 Domains** classify & organize related capabilities
- Capabilities include a description for each level of maturity and each level of adoption

# SOA Capability Maturity Levels

Higher the Level – Higher the Capabilities

## Strategic Goals

Able to support business initiatives in a timely and cost-effective manner.

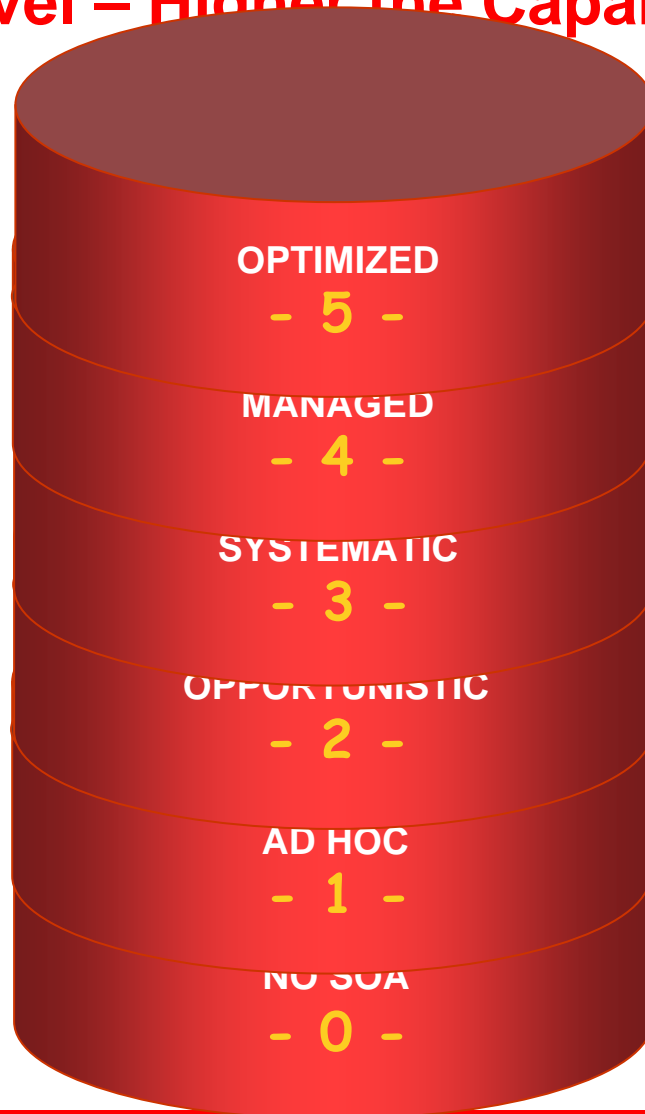
Processes and procedures quantitatively managed to drive business value.

SOA concepts consistently applied facilitating sharing and reuse

Focused on simple quick win projects to demonstrate value

Experimenting with and learning SOA concepts

SOA not being pursued



## Tactical Plans

Refine and improve standards and processes  
Exploit new business opportunities enabled by SOA

Establish key performance indicators and manage to those metrics  
Leverage BAM to improve business processes.

Standardize approach and products  
Drive widespread adoption  
Establish governance

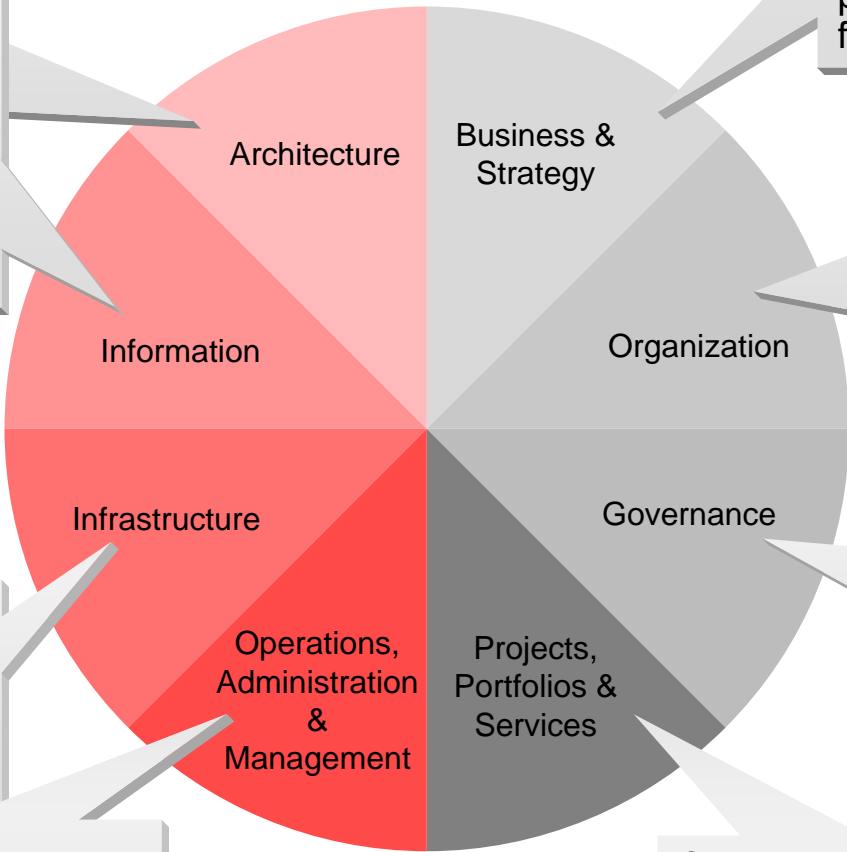
Apply SOA to simple integrations  
Select business-driven projects amenable to SOA (e.g. simple portals)  
Build confidence with business owners

Get experience building, deploying, and consuming services

Investigate applicability of SOA

# SOA Capability Domains

Capabilities concerned with the definitions of the overall Capabilities concerning information aspects of SOA, e.g. Information as a Service. This includes shared data models, message formats, schemas, MDM, content management, etc.



Capabilities that provide the high-level constructs that allow SOA initiative to proceed, i.e. Business motivation, guiding principles, expected costs, funding model, etc..

Capabilities concerning the development of corporate competency around SOA including the organizational structure and skills development

Capabilities concerning the service infrastructure and tools that provide the technical foundation for the SOA initiative.

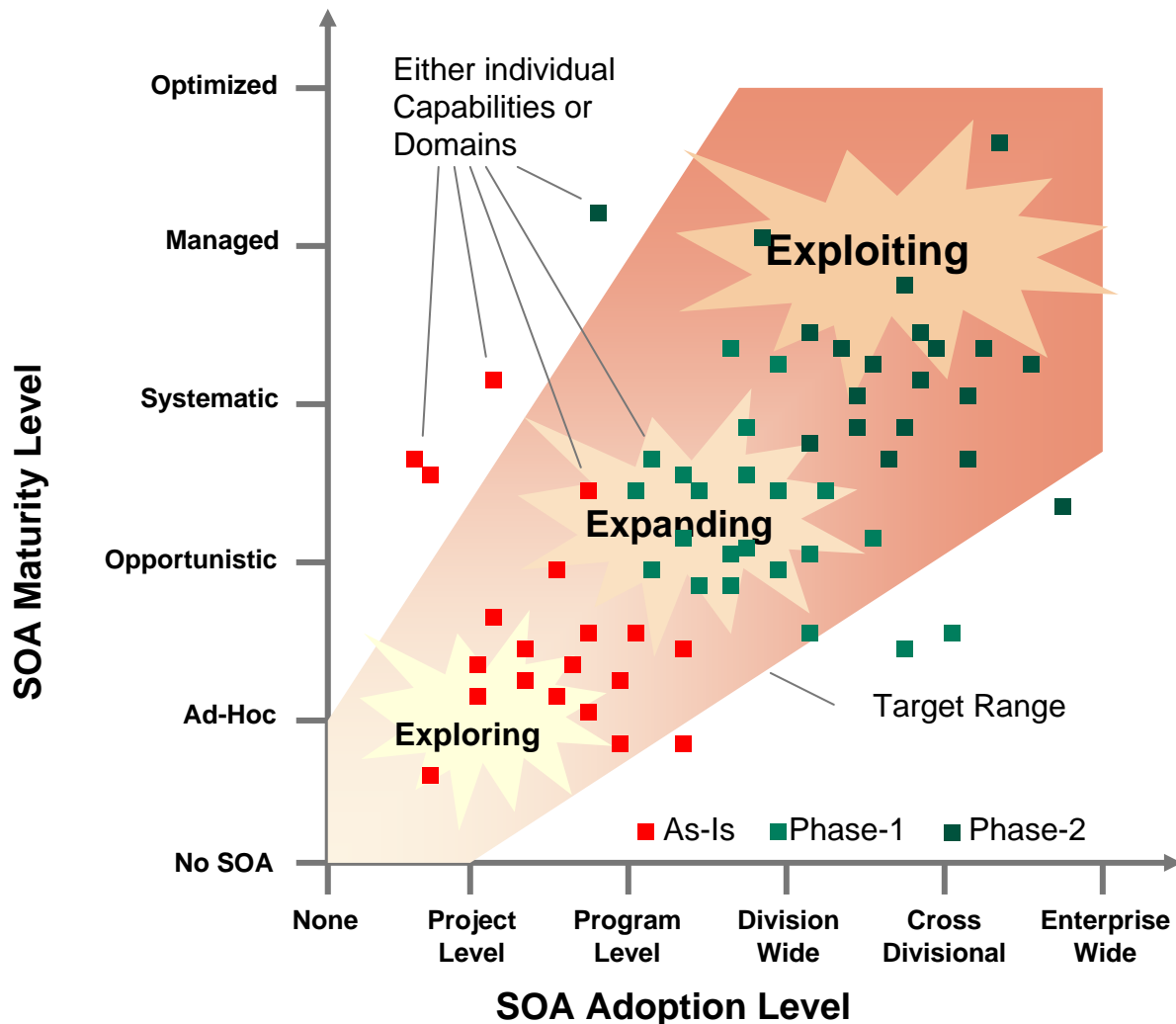
Capabilities concerning the governance structures and processes that support and guide the SOA efforts.

Capabilities concerning post deployment aspects of solutions based on SOA.

Capabilities concerning the planning and building of services and the service usage guidelines of service consumers

# SOA Maturity Model

## Measures Maturity and Adoption



- Defines the practicality of SOA being successfully taken over, ranging from applied SOA in the enterprise
- For large enterprises, it is coordinated to have multiple divisions and different levels of adoption to be successful.
- For smaller enterprises, it is necessary to have the strategy for adoption possible to avoid simply repeating it

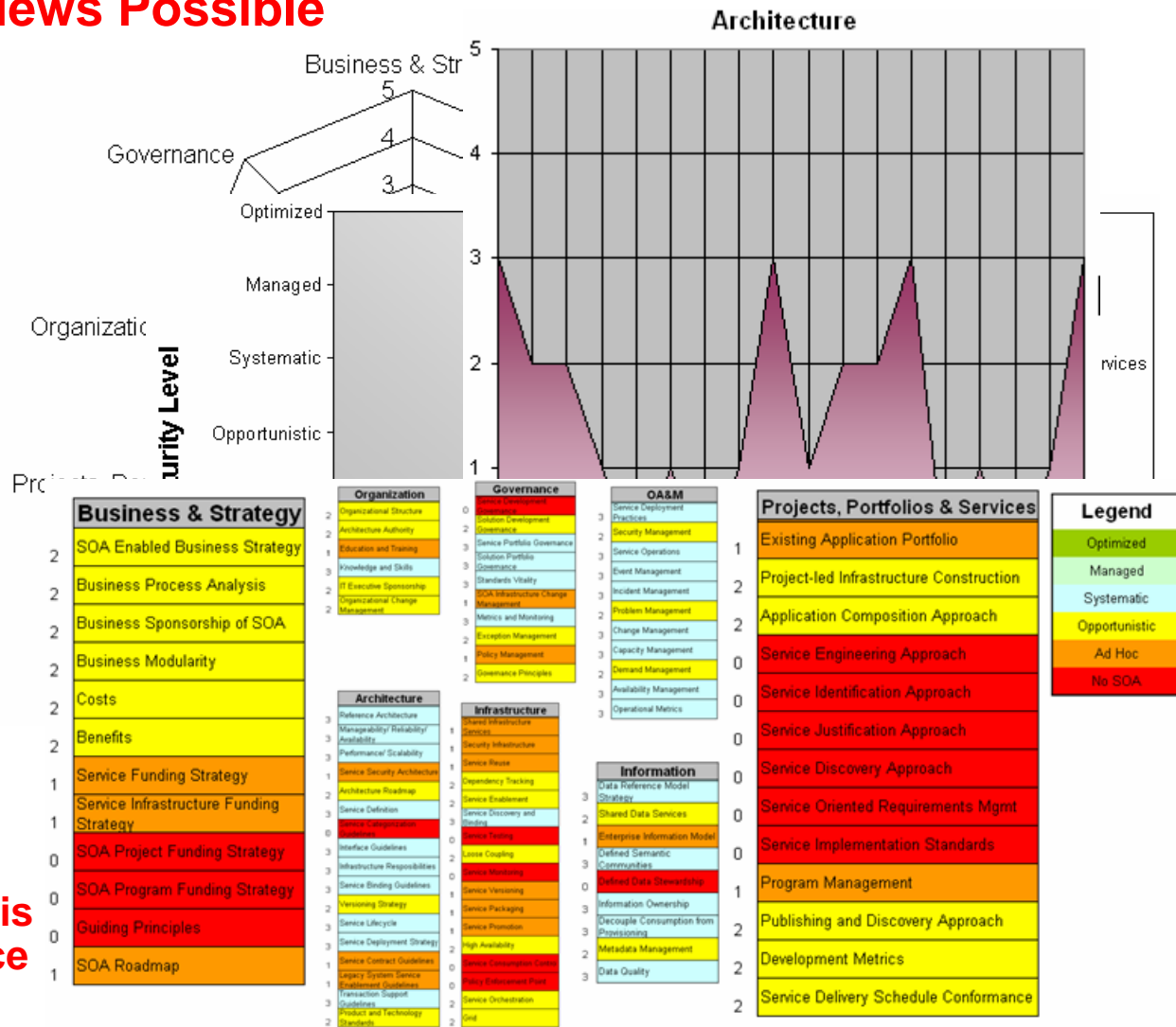


# Graphing SOA Assessment Results

## Many Different Views Possible

- Spider Graph
- Scatter Plot
- Domain Detail
- Heat Maps
- Etc...

Select the graphics that convey the information that is most relevant to the audience



# SOA Assessments

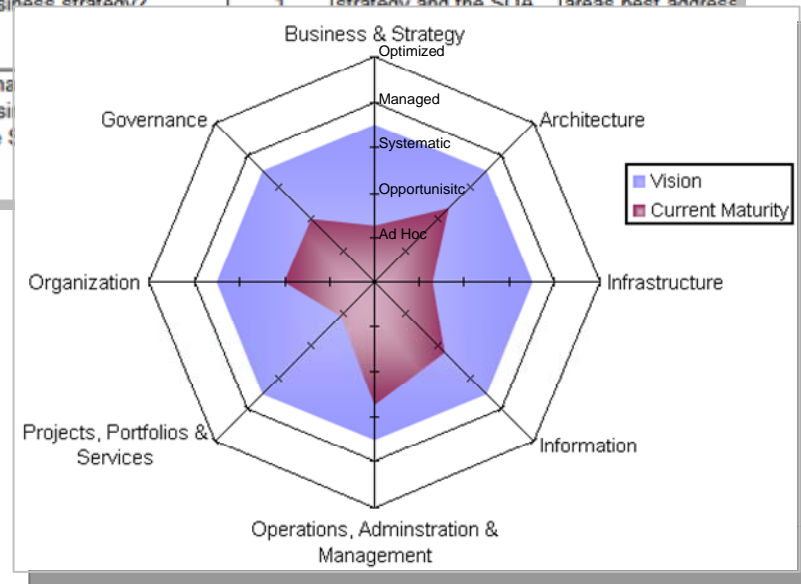
- Full SOA Assessment
  - Measures maturity and adoption
  - Uses the full 90+ capabilities
  - Roadmap building based on this assessment
- Short SOA Assessment
  - Easy to use for a self assessment
  - Only measures maturity
  - Selectively uses and combines capabilities from the full assessment
  - Online assessment uses this assessment
    - <http://www.oracle.com/technologies/soa/center.html>

# Exercise

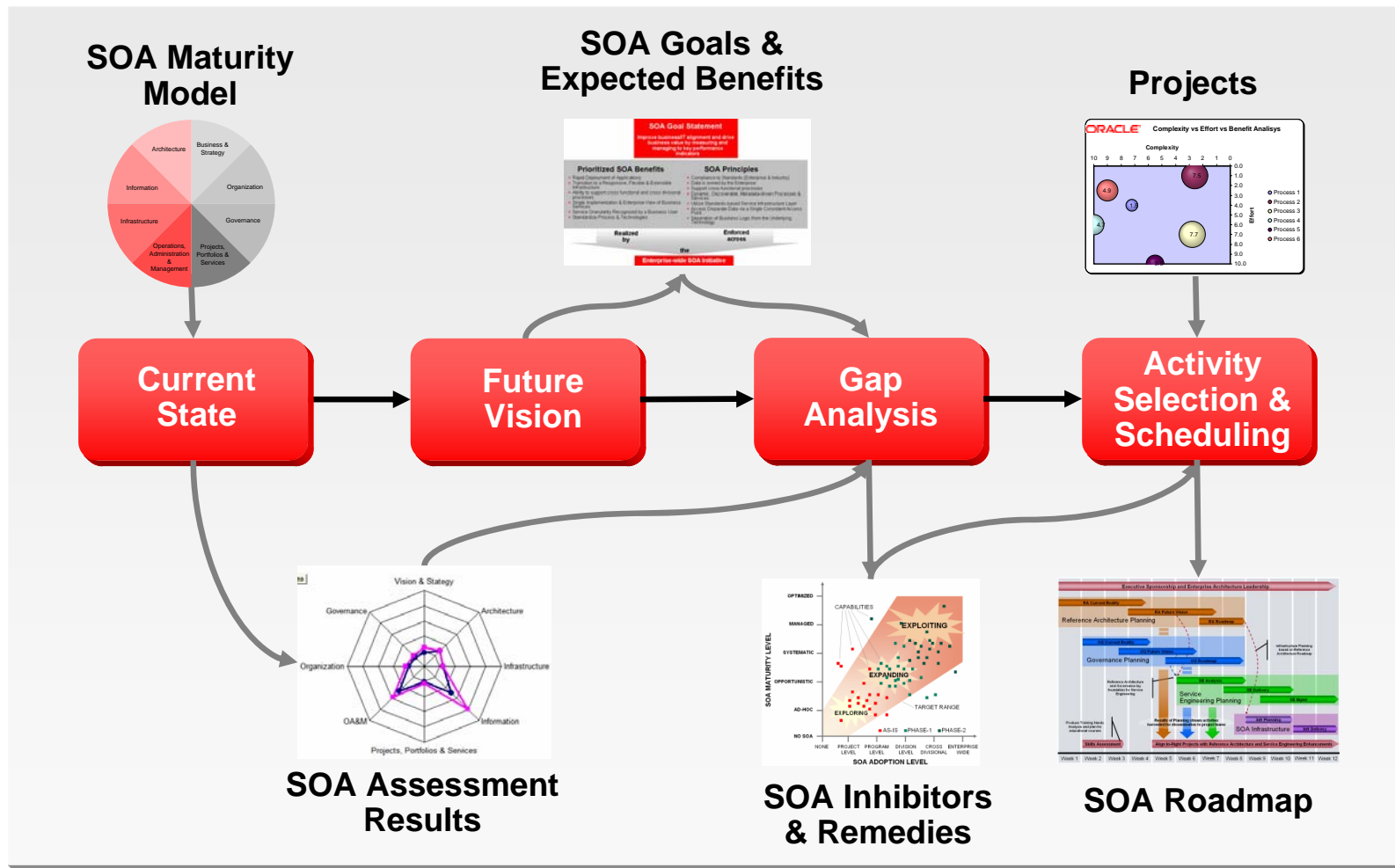
## Short Assessment

- The short assessment tool is based on answering **26 questions**.
- The first **two questions** are used to set the '**vision**' for the SOA initiative that is being undertaken by the organization.
- The remaining 24 questions evaluate the status of the initiative and **encompass all eight capability domains** within the SOA Maturity Model.

2	Question	Response	1	2
3	What is the 2-3 year goal for your SOA initiative?	4	Develop experience building services to provide a foundation for further investments in SOA.	Apply SOA to some projects to demonstrate the benefits of SOA build credibility with business owners.
4	What is the desired scope of your 2-3 year SOA initiative?	4	A small number of projects will be applying service-orientation.	One or more business units will use SOA address all of their projects.
5	How well is your SOA initiative aligned with the business strategy?	1	Very limited linkage between business strategy and the SOA	Using the business strategy to help identify areas best address

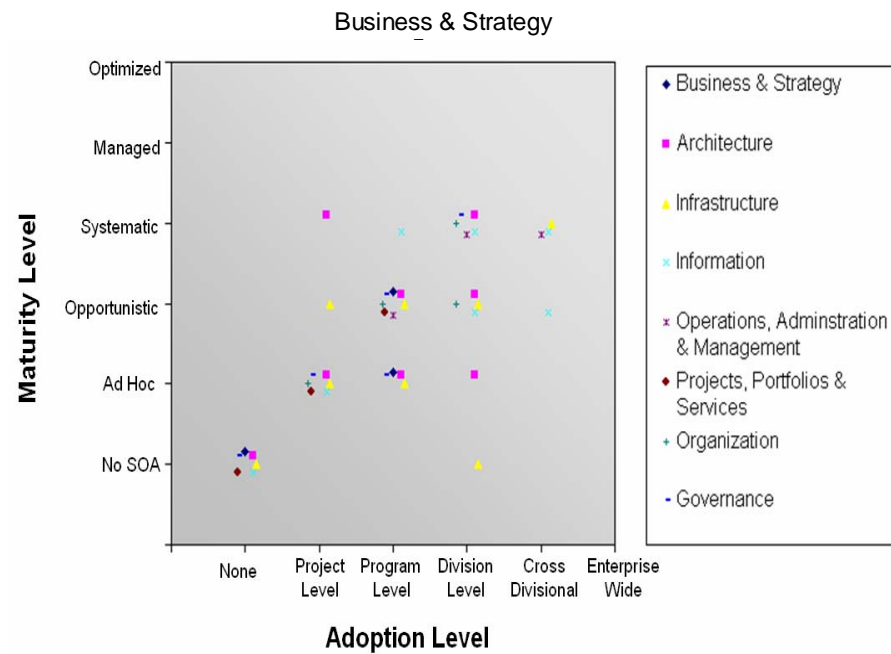


# Roadmap Creation Process Overview



# Understanding of the Current State

- Define the **scope** of the assessment
  - Ultimately the scope of the roadmap as well
- Participants are chosen to ensure that **all capabilities** within the SOA Maturity Model can be accurately scored
- Existing **IT and SOA documents** are reviewed
  - Ask more intelligent questions during interviews
  - Resolve inconsistencies via interviews
- Score each capability in the SOA Maturity Model for **maturity and adoption**



- Scores are analysed in the gap analysis phase

# Future Vision

## SOA Vision Definition



- The SOA vision definition phase focuses solely on the **high level goals** and **principles** that will be used to guide and entire SOA initiative
- Detailed future vision is not something that must be created prior to creating an SOA Roadmap
  - Initial phases of the SOA Roadmap can create detailed vision
- What is **goal** of the SOA initiative?
- What is the **organizational scope** of the SOA initiative?
- What are the **benefits** that SOA is expected to deliver to the organization?
- What are the **guiding principles** for the SOA initiative?

# Future Vision

## SOA Goal

### SOA Goal Statement

Improve business/IT alignment and drive business value by measuring and managing to key performance indicators

### Prioritized SOA Benefits

- Rapid Deployment of Applications
- Transition to a Responsive, Flexible & Extensible Infrastructure
- Ability to support cross functional and cross divisional processes
- Single Implementation & Enterprise-View of Business Services
- Service Granularity Recognized by a Business User
- Standardize Process & Technologies

### SOA Principles

- Compliance to Standards (Enterprise & Industry)
- Data is owned by the Enterprise
- Support cross-functional processes
- Dynamic, Discoverable, Metadata-driven Processes & Services
- Utilize Standards-based Service Infrastructure Layer
- Access Disparate Data via a Single Consistent Access Point
- Separation of Business Logic from the Underlying Technology

Realized  
by

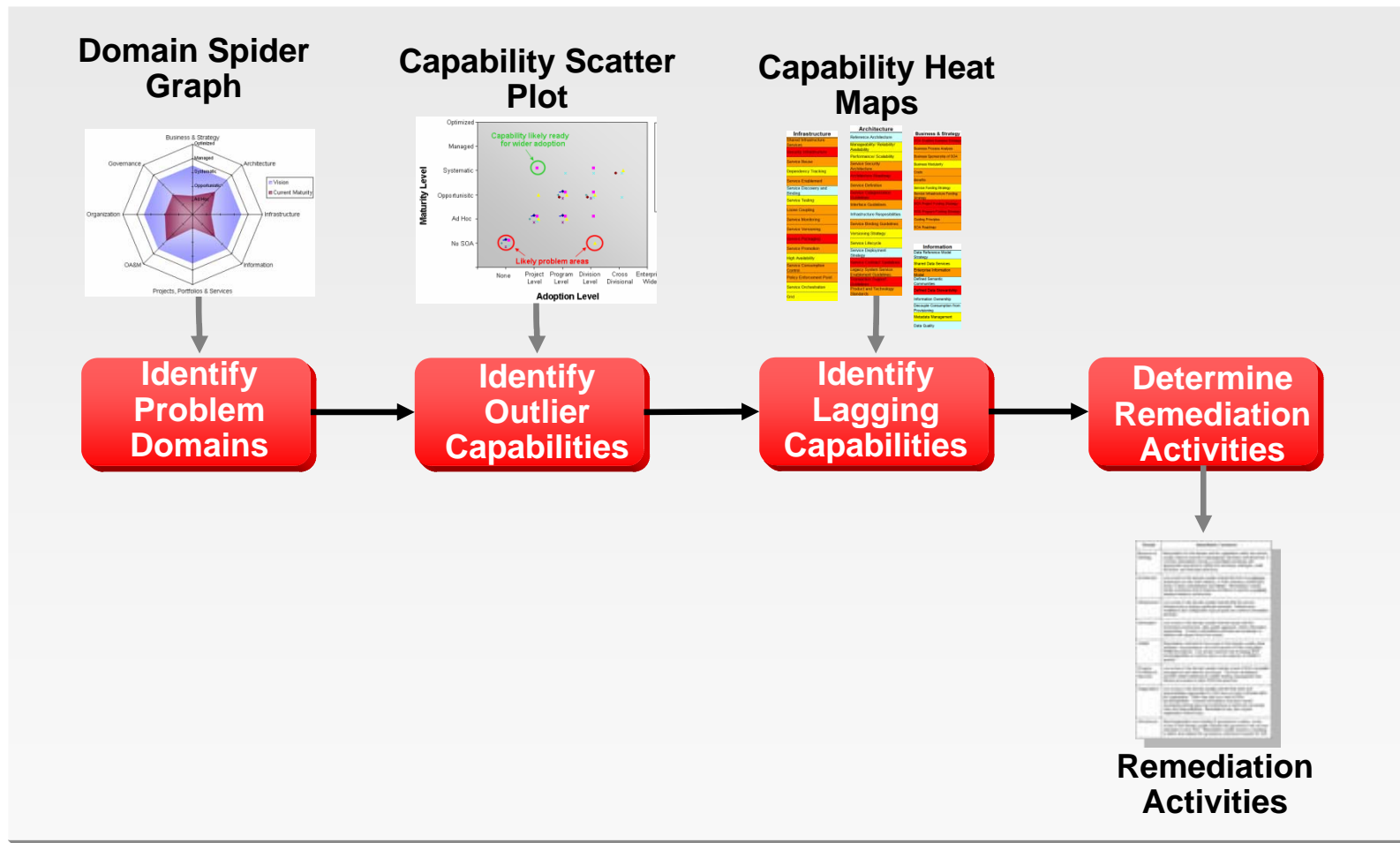
Enforced  
across

the

Enterprise-wide SOA Initiative

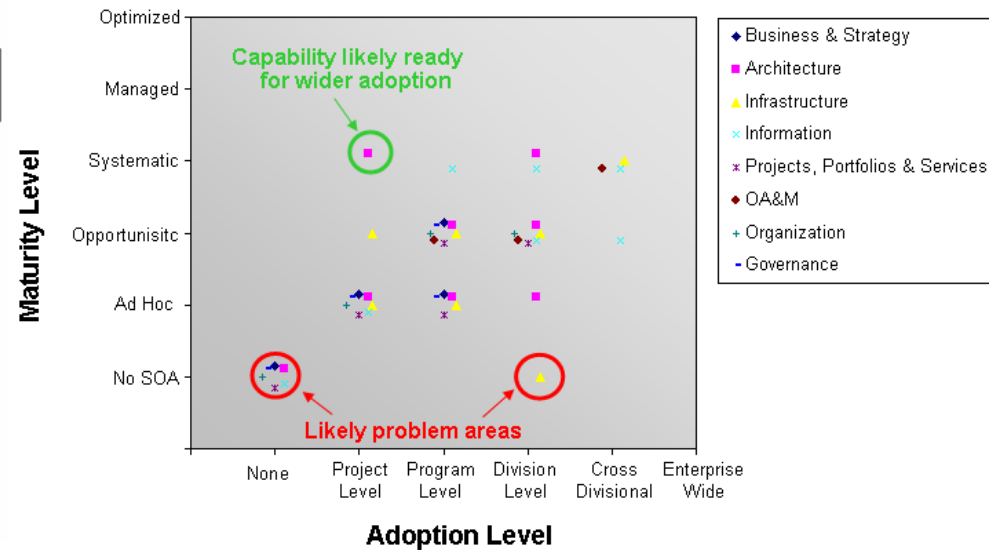
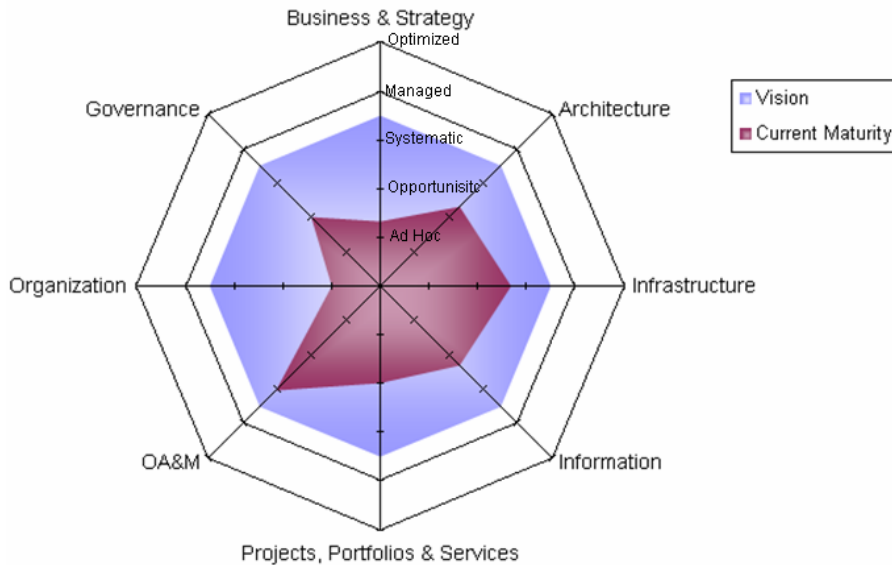
# Gap Analysis

## Analyze Gap and Determine Remediation





# Problem Domains and Outlier Capabilities



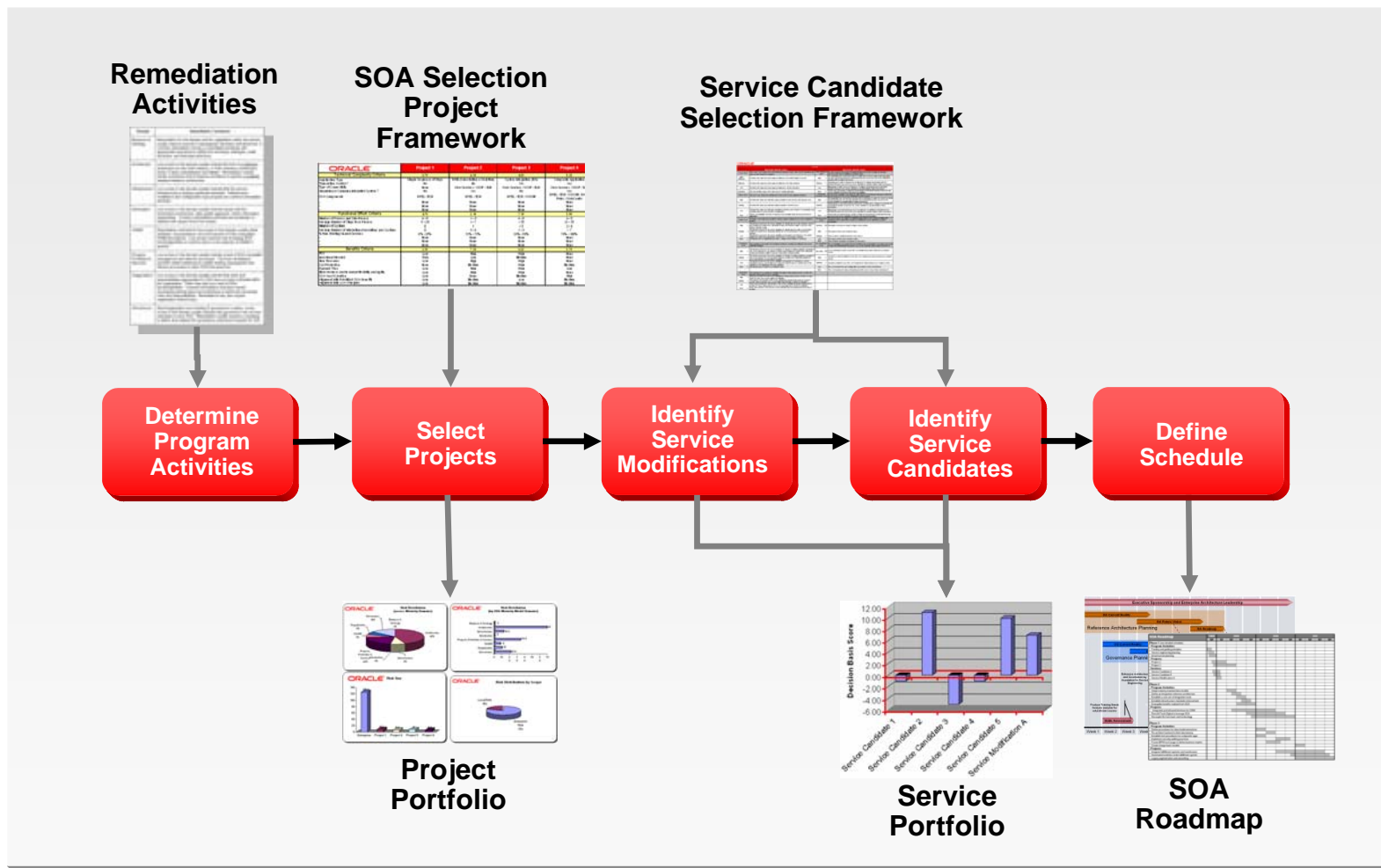
- Identify the domains that exhibit the **largest gap** between current maturity and the maturity needed to achieve the SOA goal
- Outlier capabilities are capabilities where the maturity and the adoption are significantly **out of sync**
- Usually indicates a capability that should receive **attention early** in the roadmap

# Lagging Capabilities and Remediation

- Capability heat maps can be used to **visually identify** low maturity capabilities
  - Not all capabilities are of equal importance for a particular organization
  - Capabilities may be deemed unimportant or not applicable
- Remediation activities have been identified to **address** the **lagging** domains and capabilities
- Remediation activities provide a **primary input** into the roadmap creation process

	Infrastructure	Architecture
<b>Legend</b>		
Optimized		
Managed		
Systematic		
Opportunistic		
AdHoc		
No SOA		
<b>Domain</b>	<b>Remediation Comments</b>	
Business & Strategy	Remediation for this domain and the capabilities within this domain usually requires executive management decisions and directives. A common remediation activity is a facilitated workshop with appropriate executives to define the necessary strategies, make decisions, and formulate directives.	
Architecture	Low scores in this domain usually indicate the lack of a reference architecture for the SOA initiative, or if the reference architecture exists, it lacks completeness and details. Remediation usually entails workshops with Enterprise Architects to specify a complete, detailed reference architecture.	
Infrastructure	Low scores in this domain usually indicate that the service infrastructure is lacking significant elements. Infrastructure installation and configuration type projects are common remediation activities.	
Information	Low scores in this domain usually indicate issues with the information architecture, data quality approach, and/or information stewardship. Common remediation activities are workshops to address the causes for the low scores.	
OA&M	Remediation activities for low scores in this domain usually entail definition, documentation, and enforcement of SOA compatible OA&M procedures. Low scores could be due to lacking SOA knowledge/skills or could be due to a low maturity of OA&M in general.	
Projects, Portfolios & Services	Low scores in this domain usually indicate a lack of SOA compatible management and delivery processes. Common remediation activities entail workshops to modify existing management and delivery processes to inject SOA best practices.	
Organization	Low scores in this domain usually indicate that roles and responsibilities appropriate for SOA have not been instituted within the organization. There may also be a lack of SOA knowledge/skills. Common remediation activities include developing training plans and workshops to define the necessary roles and responsibilities. Remediation may also require organization restructuring.	
Governance	Most organization have existing IT governance in place, so low scores in this domain usually indicate that governance has not been extended to cover SOA. Remediation usually requires a workshop to define and institute the governance extensions required for SOA.	

# Activity Selection & Scheduling



# Roadmap Creation

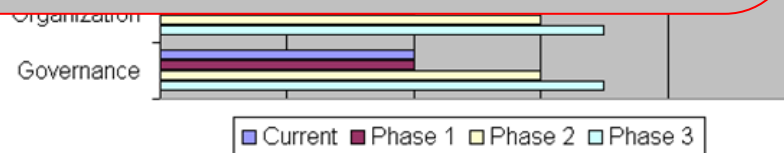
## Determine Program Activities

Cultural resistance is often the primary reason for failure in enterprise IT endeavors. If your adoption posture is **incremental**, you will lessen the impact on your organization, customers, and partners so they can **assimilate change gradually**.

*The Seven Steps to SOA Nirvana, Tom Termini, January 2009*

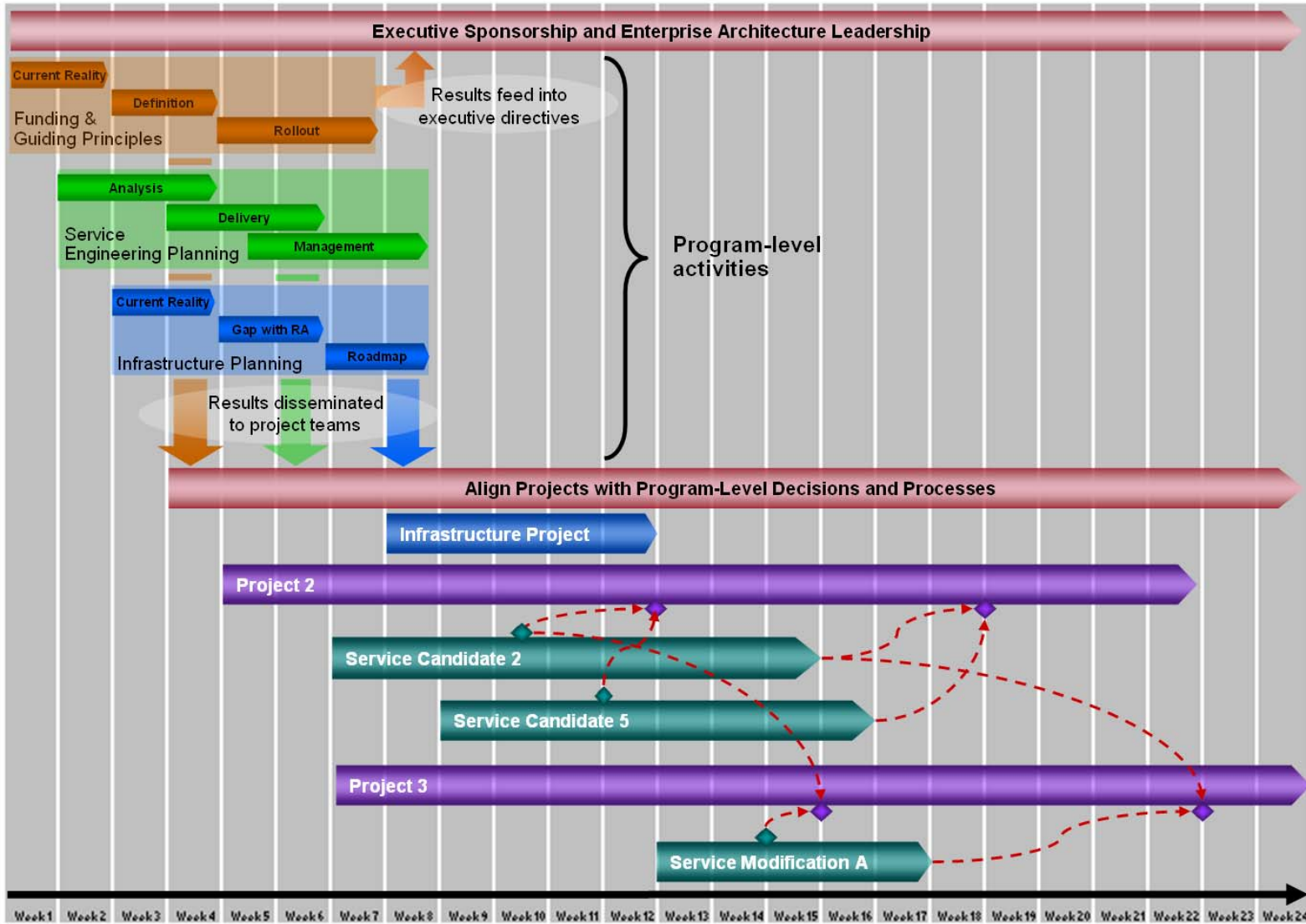
must

- Be long enough to accomplish some **meaningful progress**
- Be short enough to **minimize risk**
- Maintain a **continuous pace** of incremental progress



- Iteration must not exceed organization's **ability to absorb** that change

# Example SOA Roadmap Phase 1 Schedule



# Example SOA Roadmap Subsequent Phases

SOA Roadmap	2008	2009				2010				2011			
	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Phase 1 (see detailed schedule)													
<b>Program Activities</b>													
Funding and guiding principles													

Measure progress and communicate results. The successful implementation of any SOA must be driven from the **top down**. This means gaining **early wins** that engage senior management. Define three or four metrics and **regularly communicate results**.

*The Seven Steps to SOA Nirvana, Tom Termini, January 2009*

Establish a core set of integration tools													
Establish infrastructure standards enforcement													
Evangelize benefits realized from SOA													
<b>Projects</b>													
Portal infrastructure project													
Integrated, portal based interface for CRM													
Retrofit Fresh Digital to leverage SOA													
Decouple UIs from back-end technology													
<b>Phase 3</b>													
<b>Program Activities</b>													
Define procedures for data model extensions													
Re-architect backend to limit data latency													
Establish test procedures for composite apps													
Implement security auditing practices													
Foster BPM tool usage to define business reqmts													
Create charge-back models													
<b>Projects</b>													
BPM infrastructure project													
Integrate fulfillment systems and warehouses													
Automated workflow order fulfillment system													
Legacy augmentation and sunsetting													

# Conclusion

- SOA Roadmap encompasses
  - Program level activities
  - Project activities
  
- SOA Roadmap should be based on facts
  - Ensures that the roadmap is accomplishing the goal of the SOA initiative
  - Tackle largest inhibitors early
  - Focus on early wins to build momentum
  
- SOA is a journey of discovery and learning
  - Iterative approach required
  - Evaluate and adjust regularly



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