

# Architecturally Focused Techniques for Managing System Evolution

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## Introduction



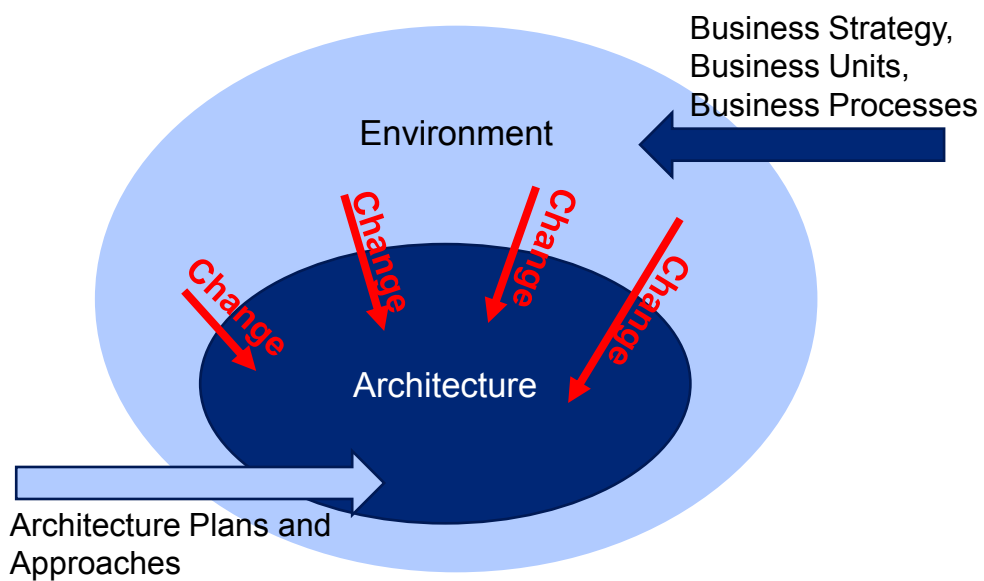
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## Agenda

- Context Setting
  - Architecture, the Environment, and Change
- (3) Techniques when Preparing & Managing Change
  - Overview
  - Steps
  - Various details
- Continuing and Future Work

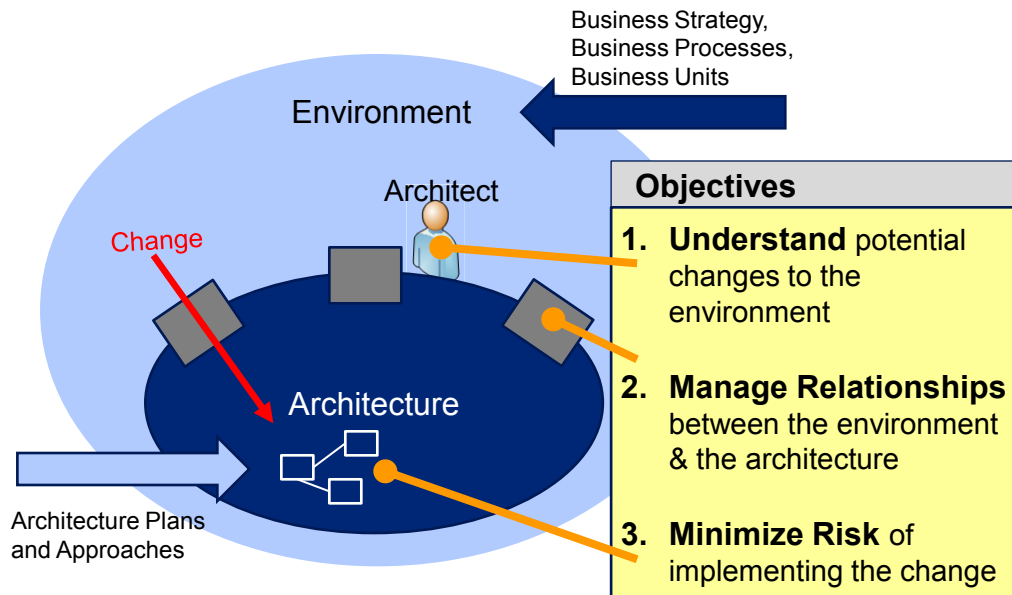
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## Context



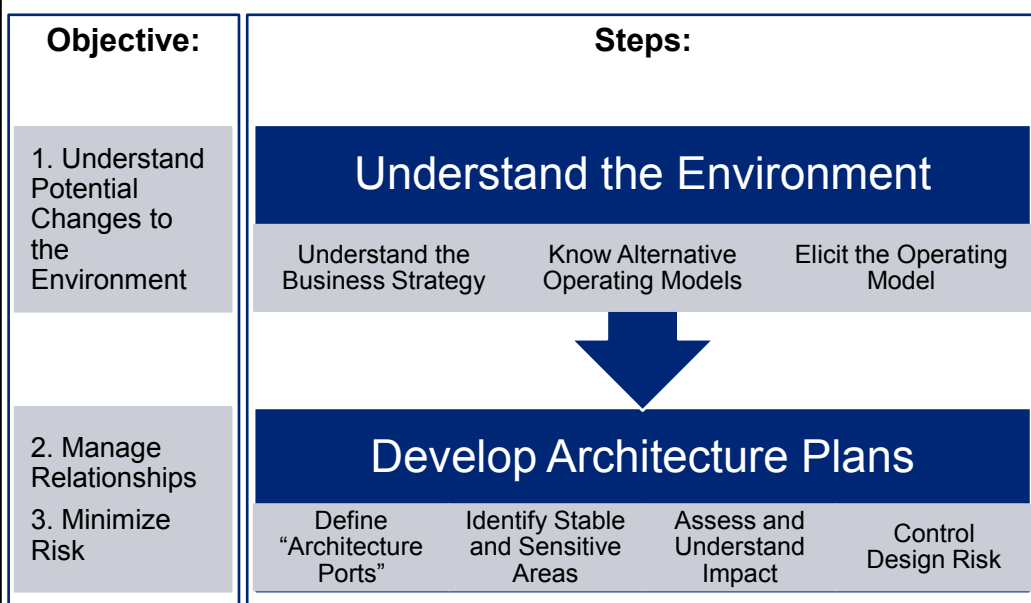
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## Techniques for Managing System Evolution – An Overview



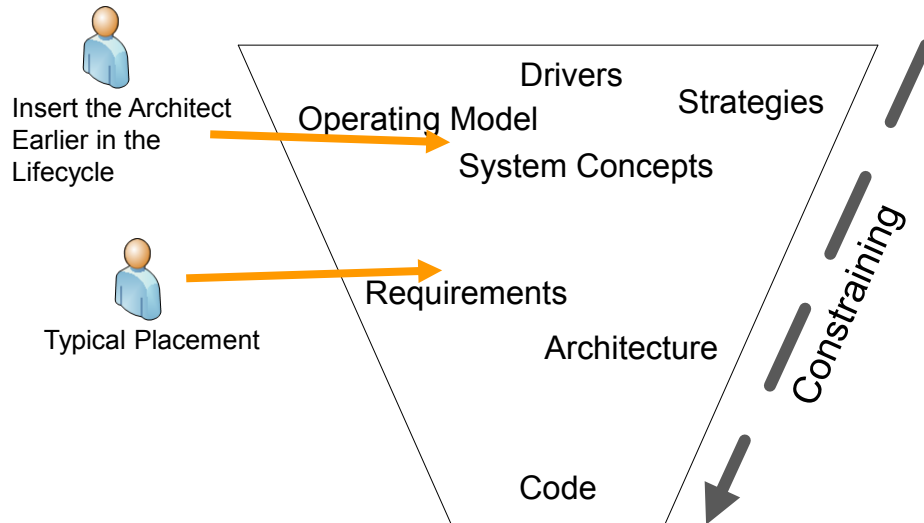
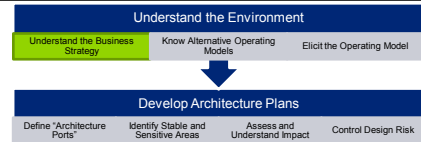
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## Techniques for Managing System Evolution – Objectives and Steps



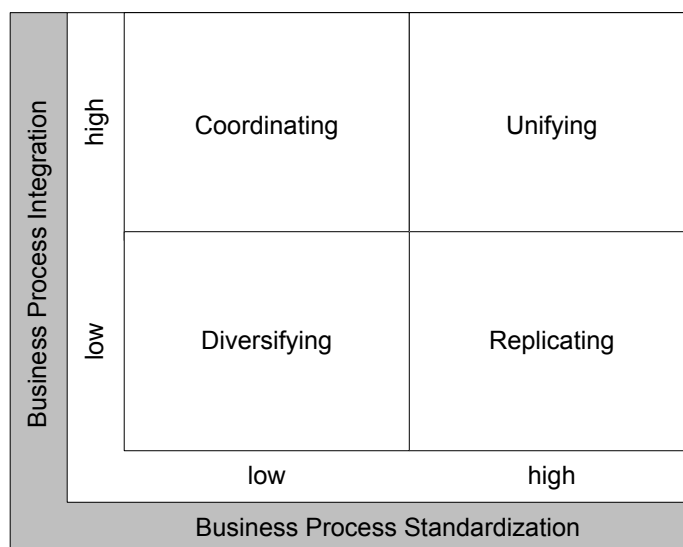
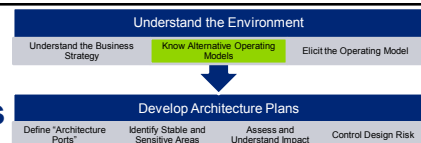
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## Understand the Environment - Understand the Business Strategy



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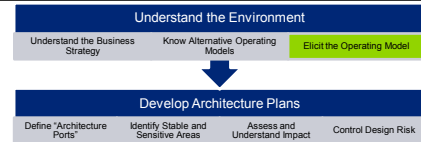
## Understand the Environment - Know Alternative Operating Models



*P. Weill, J. W. Ross, "IT Savvy", Harvard Business Press, Boston, MA, 2009.*

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## Understand the Environment – Elicit the Operating Model using a Modified QAW

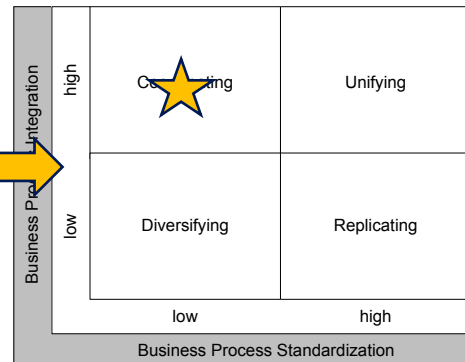


### Objectives:

- 1) Understand the business units involved
- 2) Determine the desired level of independence among business unit(s)

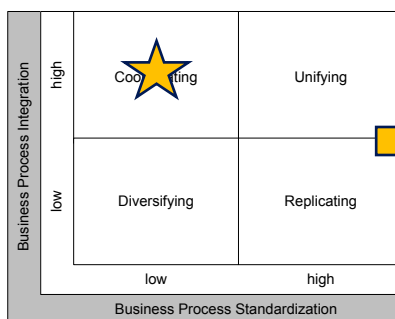
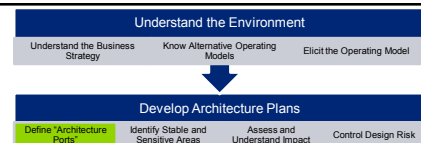
### Modified Quality Attribute Workshop for Business Processes

1. Presentation and Introductions
2. Business Presentation
3. Identification of Architecture Drivers
4. Business Process Brainstorming
5. Business Process Consolidation
6. Business Process Prioritization
7. Scenario Brainstorming



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## Develop Architecture Plans – Define “Architecture Ports” and Stable/Sensitive Areas



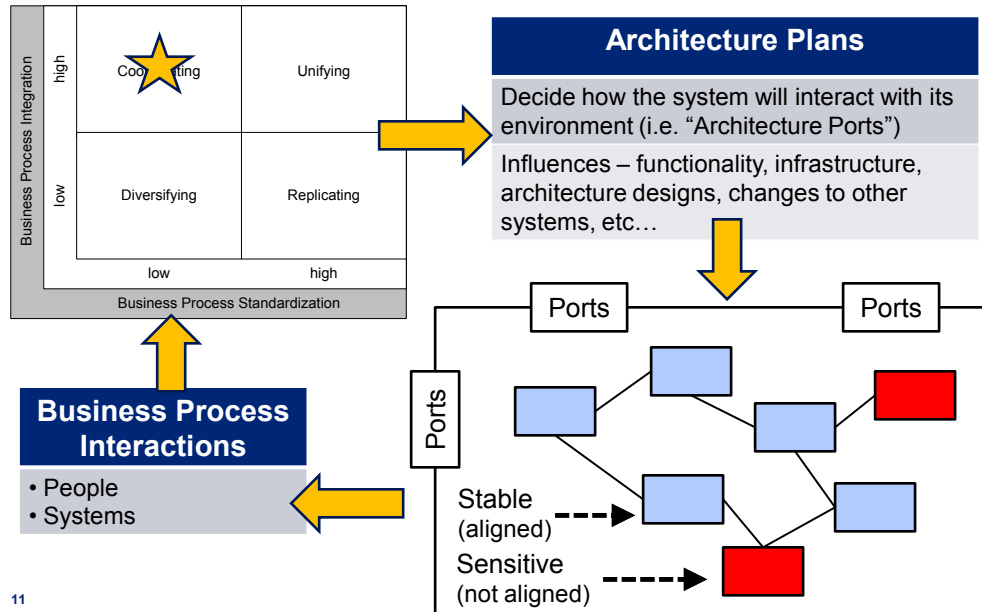
### Architecture Plans

Decide how the system will interact with its environment (i.e. “Architecture Ports”)

Influences – functionality, infrastructure, architecture designs, changes to other systems, etc...

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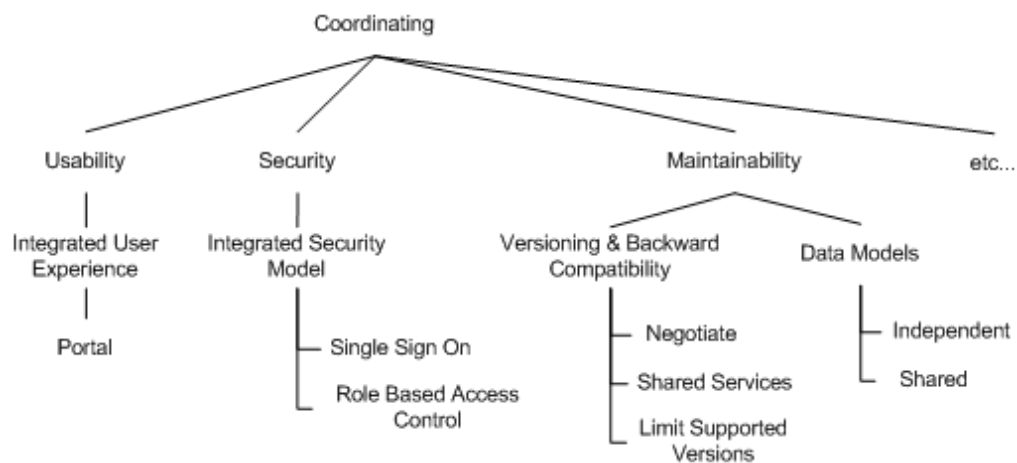
## Develop Architecture Plans – Define “Architecture Ports” and Stable/Sensitive Areas



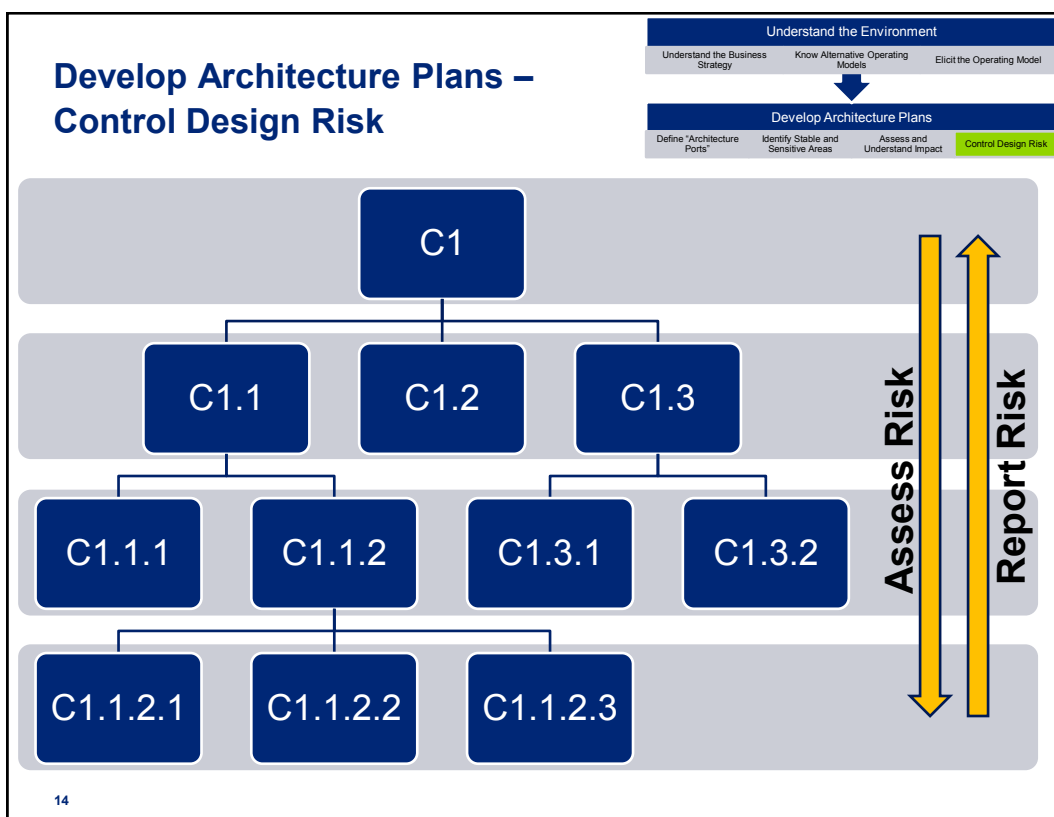
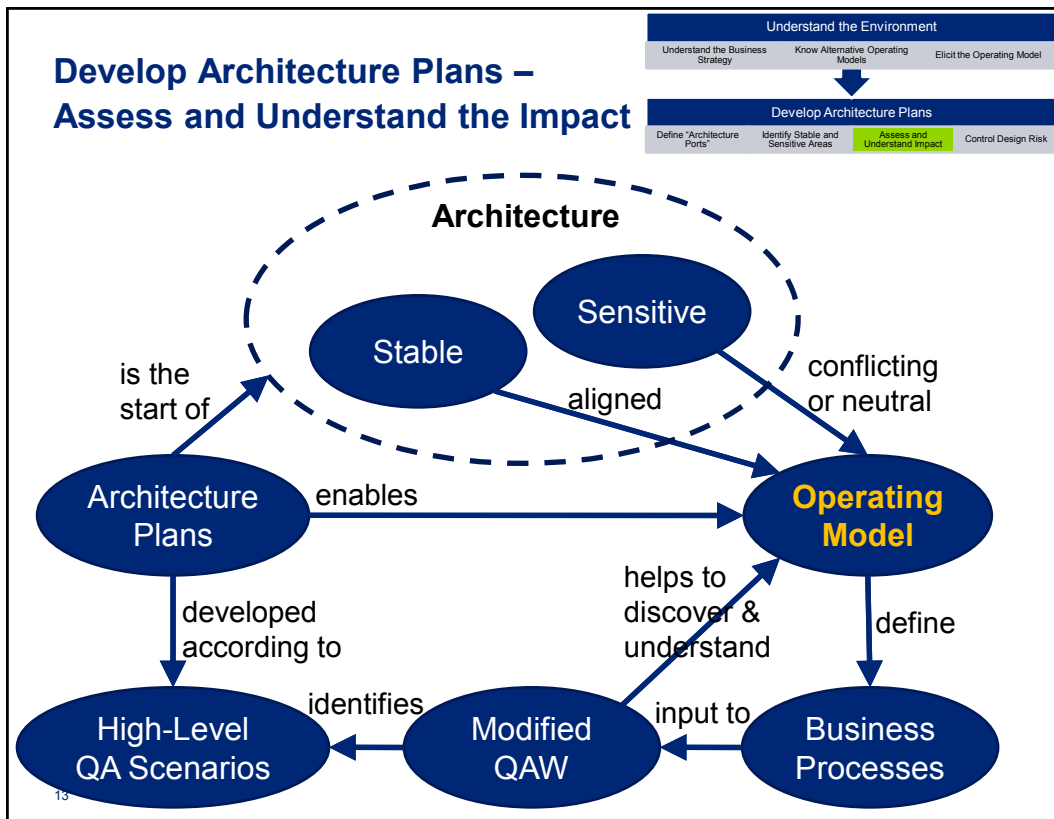
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## Develop Architecture Plans – Sidebar: Work in Progress

**Work in Progress:** Started a Taxonomy of Architecture Plans based on the Operating Model

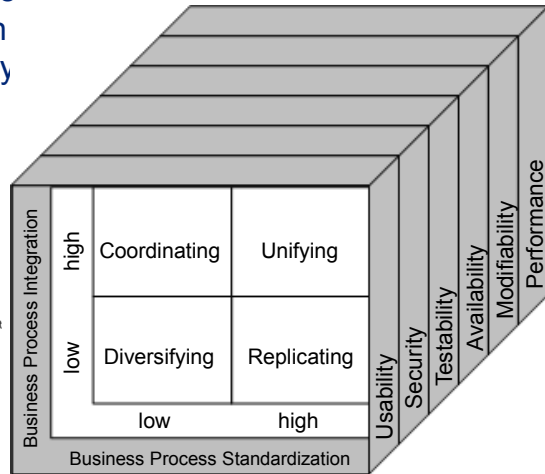
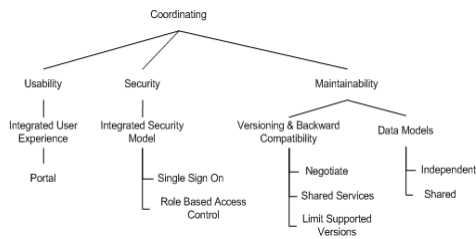


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## Continuing and Future Work

1. Continue defining taxonomies of architecture plans for each operating model organized by quality attribute scenarios



2. Expand the architecture ports concept and its interplay with enterprise architecture