

# Customer Discussion of Enterprise Architecture

Paul D. Seay, Jr.  
Director, Enterprise Architecture and Solutions  
Northrop Grumman Corporation

4 August 2010  
Session Number: 7294



**SHARE** in Boston

# Discussion Topics

- Enterprise Architecture (EA) Overview
- EA Organizational Maturity
- Guiding Principles
- Technical Reference Model
- Architecture Solution Patterns
- Strategies and Roadmaps
- Pattern-Based Strategies

# Enterprise Architecture (EA) Overview

## The Definitions

- Gartner –

*“**Enterprise architecture** is the process of translating business vision and strategy into effective enterprise change by creating, communicating and improving the key principles and models that describe the enterprise’s future state and enable its evolution.”*

- IBM –

*“The **Enterprise Architecture** discipline defines and maintains the architecture models, governance, and transition initiatives needed to effectively co-ordinate semi-autonomous groups towards common business and/or IT goals”*

- Open Group –

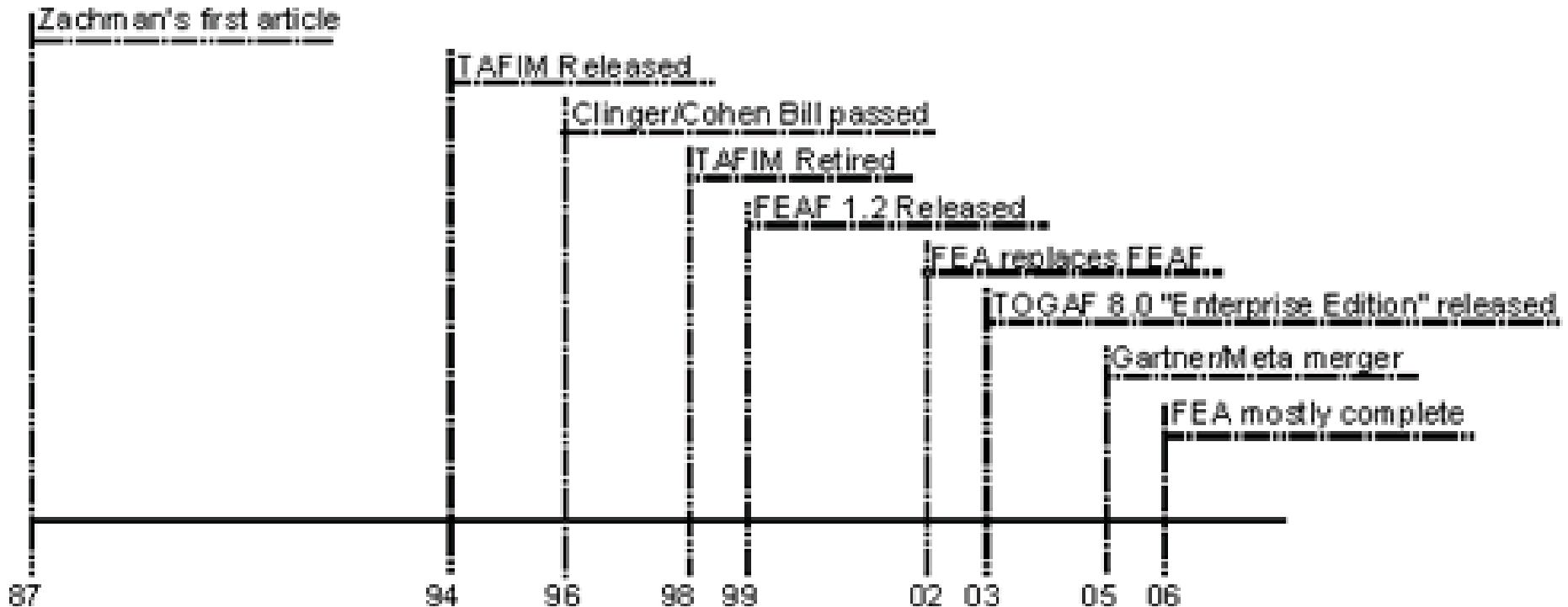
*“**Enterprise architecture** is the description of an enterprise as a system in terms of its components, their inter-relationships, and principles and guidelines governing the design and its evolution.*

# Enterprise Architecture (EA) Overview

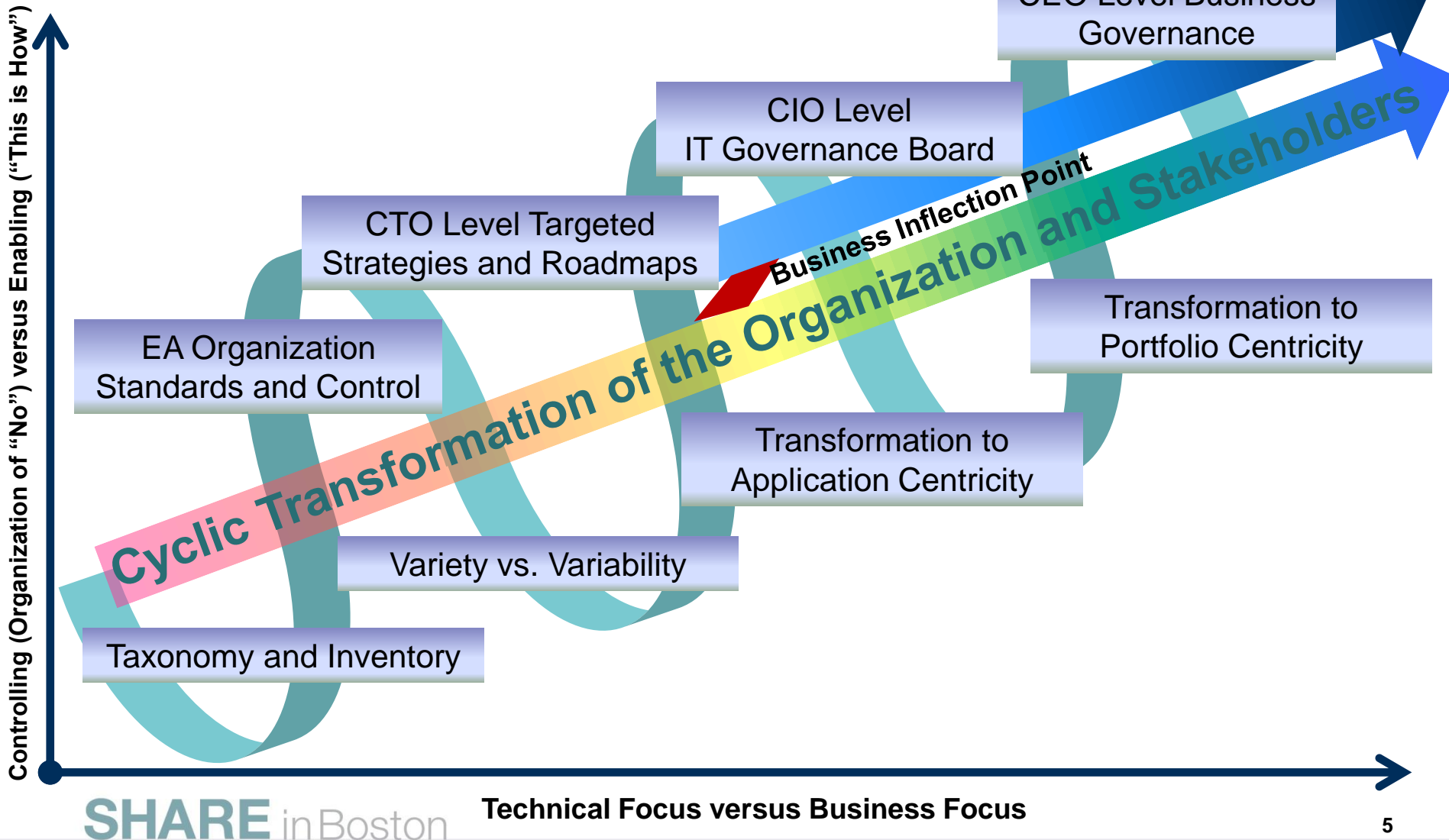
## Early History

The **cost** involved and the **success** of the **business** depending increasingly on its **information systems** require a **disciplined** approach to the **management** of those systems.

*IBM Systems Journal*  
“A Framework for Information Systems Architecture”  
J. A. Zachman



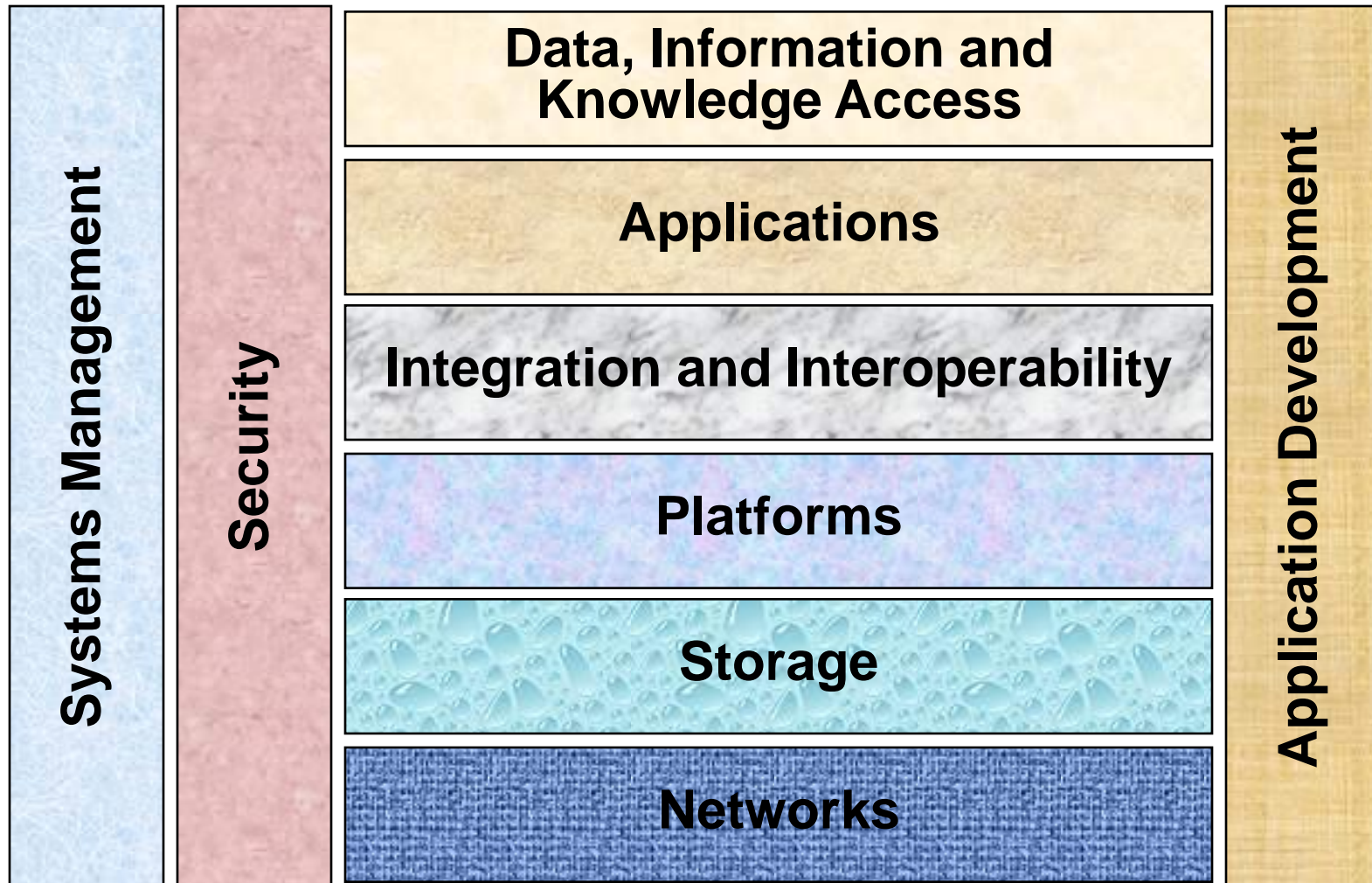
# Enterprise Architecture Maturity



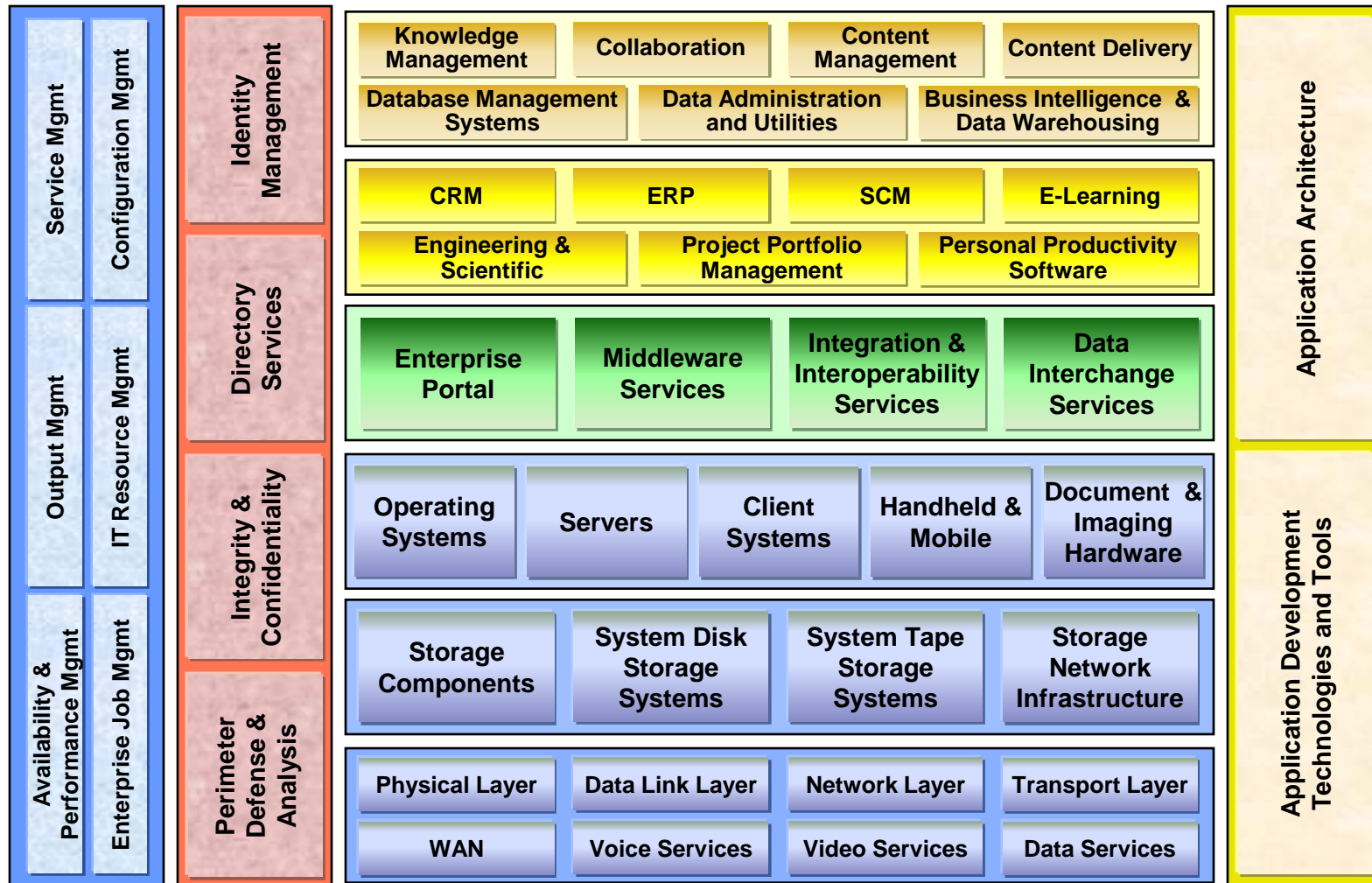
# Guiding Principles (Sample Set)

- **Business Drives IT Architecture Decisions**
- **Architecture Is a “Living” Entity:** Define and periodically refine
- **Reengineer Business and IT Together**
- **Architecture Enforcement:** Architecture decisions with a governance organization
- **Industry Proven Technology**
- **Vendor/Open Neutral Standards**
- **Solutions Preference:** (1) use existing applications; (2) COTS; (3) new custom applications; etc.
- **Secure Information Access:** Enterprise Architecture must provide appropriate protection of information and infrastructure components.
- **Reduce Integration Complexity:** Keep it simple. Controlled variability; proper variety.
- **Uniformity in Design:** Enterprise Strategy and Architecture, Systems Engineering, Systems Development, and Operational Delivery organizations act as one business enabling unit.

# Technical Reference Model (Sample High Level 1)



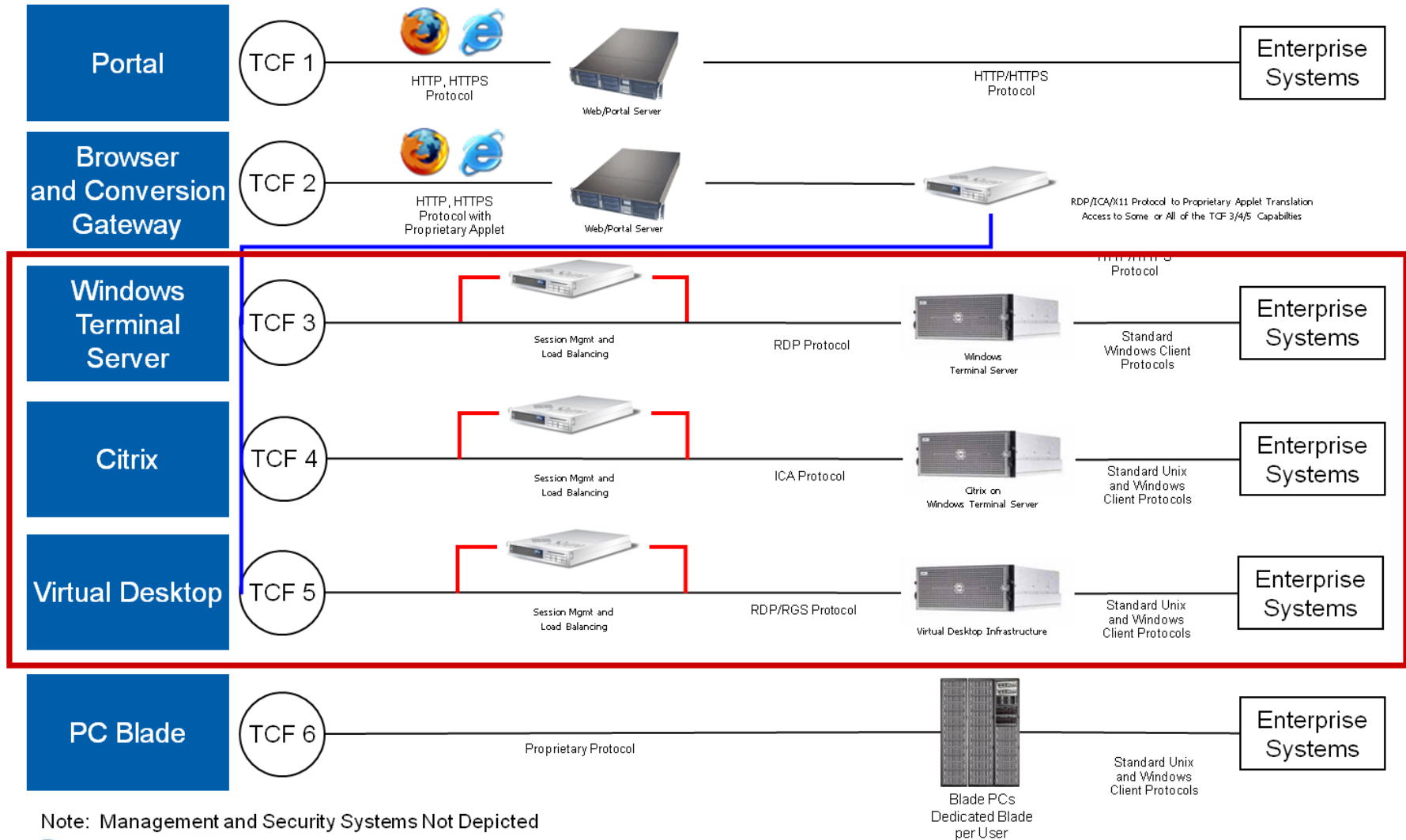
# Technical Reference Model (Sample Detail Level 2)





# Architecture Solution Patterns

## Thick-Client Functionality Example



# IT Strategies

- “Pounds of Paper” Do Not Make a Better Strategy
- Base Everything on Your “Laws” (Guiding Principles)
- Focus on the Business Strategy
  - Derive the Business Processes
  - Align the Information Architecture to the Business Processes
  - Extrapolate to the Required Applications Architecture
  - Determine the Supporting Infrastructure Strategy

# Business Focused IT Roadmaps

- **Strategic Roadmaps**

Mission enabling strategic roadmaps directly reflect the business strategy to reach a visionary operational state for improved effectiveness. The investment cycle for mission capability roadmaps take into consideration the operational environment's AS-IS state and define a pathway through achievable milestones and release spirals to drive to a TO-BE state, usually 3 to 5 years in the future.

- **Supplier Driven Roadmaps**

Supplier driven roadmaps manage and plan the tactical adoption of technology provider improvements, represent the life-cycle and sunset timeline for products reaching their end-of-life or retirement, inform in order to avoid unsupported product situations, identify the interdependencies of integrated product solutions in relation to their capabilities, and aid in the process for just-in-time investment and product adoption to maximize mission benefits.

# Supplier Driven Roadmap Example

Product		Supplier Availability	Entry Date	Completion Target	2010				2010				2011				2011				Mainstream Support Retired	Extended Support Retired	Sunset Date		
					Jan-Jun				Jul-Dec				Jan-Jun				Jul-Dec								
Operating System																									
Microsoft Windows XP Professional Base		12/31/2001	8/1/2004	5/31/2008										S	S	S	S	S	S	S	S	S	8/30/2003	N/A	11/1/2010
Microsoft Windows XP Professional SP3		4/1/2008	9/1/2008	11/1/2008										S	S	S	S	S	S	S	S	S	3/15/2009		11/1/2010
Microsoft Windows XP Tablet PC Edition Base		2/11/2003			S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	12/31/2006		10/10/2006
Microsoft Windows XP Tablet PC Edition SP1		8/30/2003	8/1/2004	12/1/2004	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	9/17/2006		10/10/2006
Microsoft Windows XP Tablet PC Edition SP2		9/17/2004	6/1/2006	12/31/2006	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	3/15/2009	N/A	11/1/2008
Microsoft Windows XP Professional x64 SP2		1/1/2007	12/1/2007	6/30/2008	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	3/15/2009		1/1/2010
Microsoft Windows 7 x32 Enterprise		1/1/2010	7/1/2010	6/30/2014	P	P	P	P	P	P	E	E	E	E	E	E	E	E	E	E	E	E	1/1/2015	1/1/2020	
Microsoft Windows 7 x32 Enterprise SP1		1/1/2011	9/1/2011	6/30/2014													P	P	P	P	P	E	E	E	
Microsoft Windows 7 x64 Enterprise		1/1/2010	7/1/2010	6/30/2014	P	P	P	P	P	P	E	E	E	E	E	E	E	E	E	E	E	E	1/1/2015	1/1/2020	
Microsoft Windows 7 x64 Enterprise SP1		1/1/2011	9/1/2011	6/30/2014													P	P	P	P	P	E	E	E	

# Pattern-Based Strategies

- Enterprise Architecture Reflects the Business Strategy
- Pattern-Based Strategies: Latest Maturity Level in the Business Strategy and Enterprise Architecture Model
- Business Ecosystem Driven Strategy
- Sense the Ecosystem Around Your Business
  - Consider the Global Ecosystem
  - Think “Far Outside the Box”
  - Understand the Broader Context of Competitive Pressures
  - Reflect on the Implications
- Examples
  - Twitter – What Implications Exist for Sales?

# IT Shapes the Business Today

# Questions?