

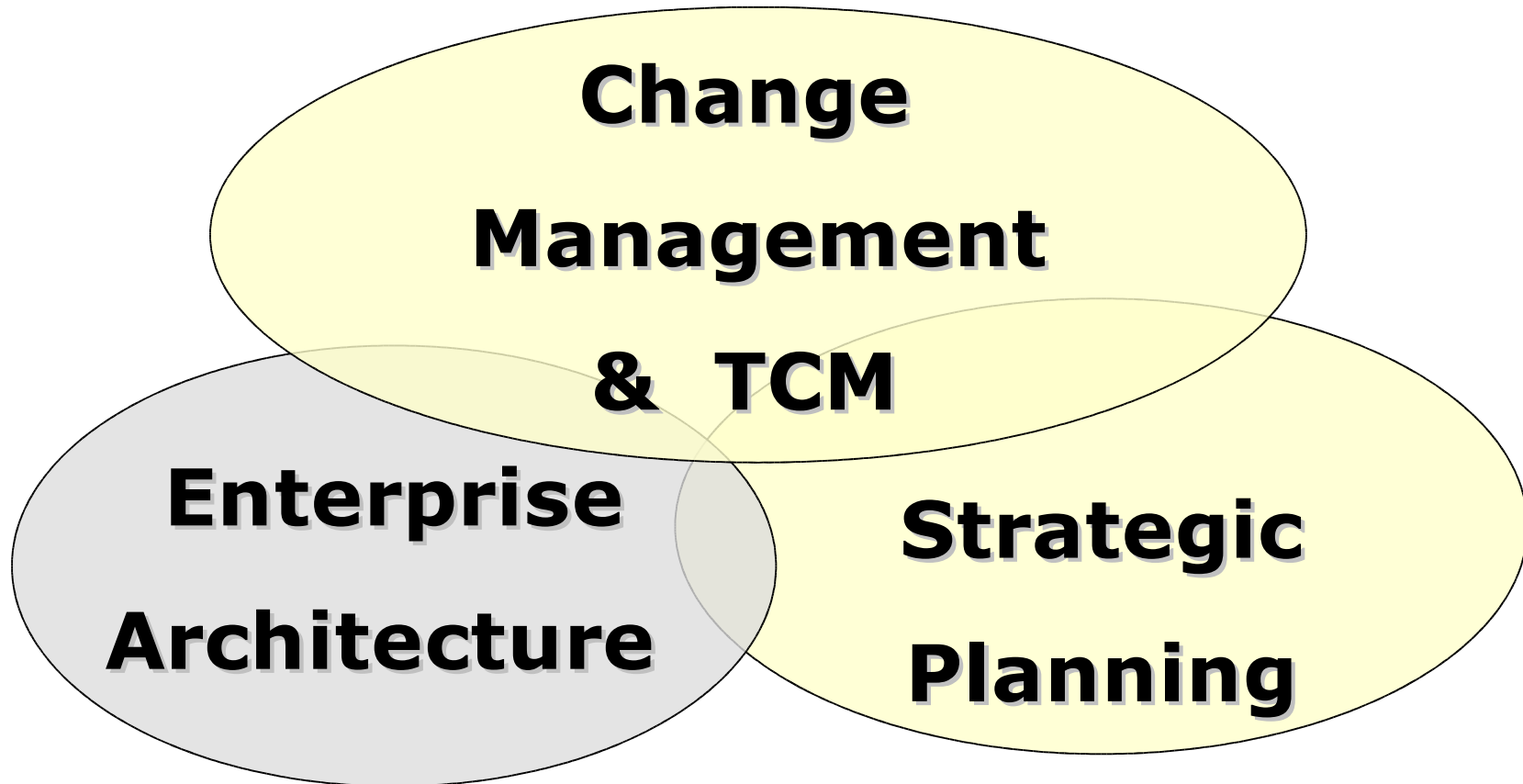
# Architecture & Change Management

- Introduction
- Strategic Planning, Architecture and Change Management
- Organizing technical changes – architectural and component
- IT Change Management Framework
- Areas of Technology and IS Architecture
- TCM and EA
- TCMM
- TCM and ITIL Framework
- Organizational Factors
- Conclusion

# Introduction

- Enterprise Architecture or EA is a system of description of an enterprise created to support management and change of the enterprise
- IT Architecture is the organizing logic for application, data and infrastructure technologies, as captured in a set of policies, standards and technical choices intended to enable the business strategy.
- Application and data technologies are covered by IS Architecture and infrastructure technologies are covered by the technology architecture (TOGAF 8)
- EA work is strategic, evolving, continuous and need to be aligned to IT and Business strategy and provides a roadmap to enterprise technology vision
- Technical Change Management is needed to move enterprise from current EA and Infrastructure to target EA and Infrastructure.

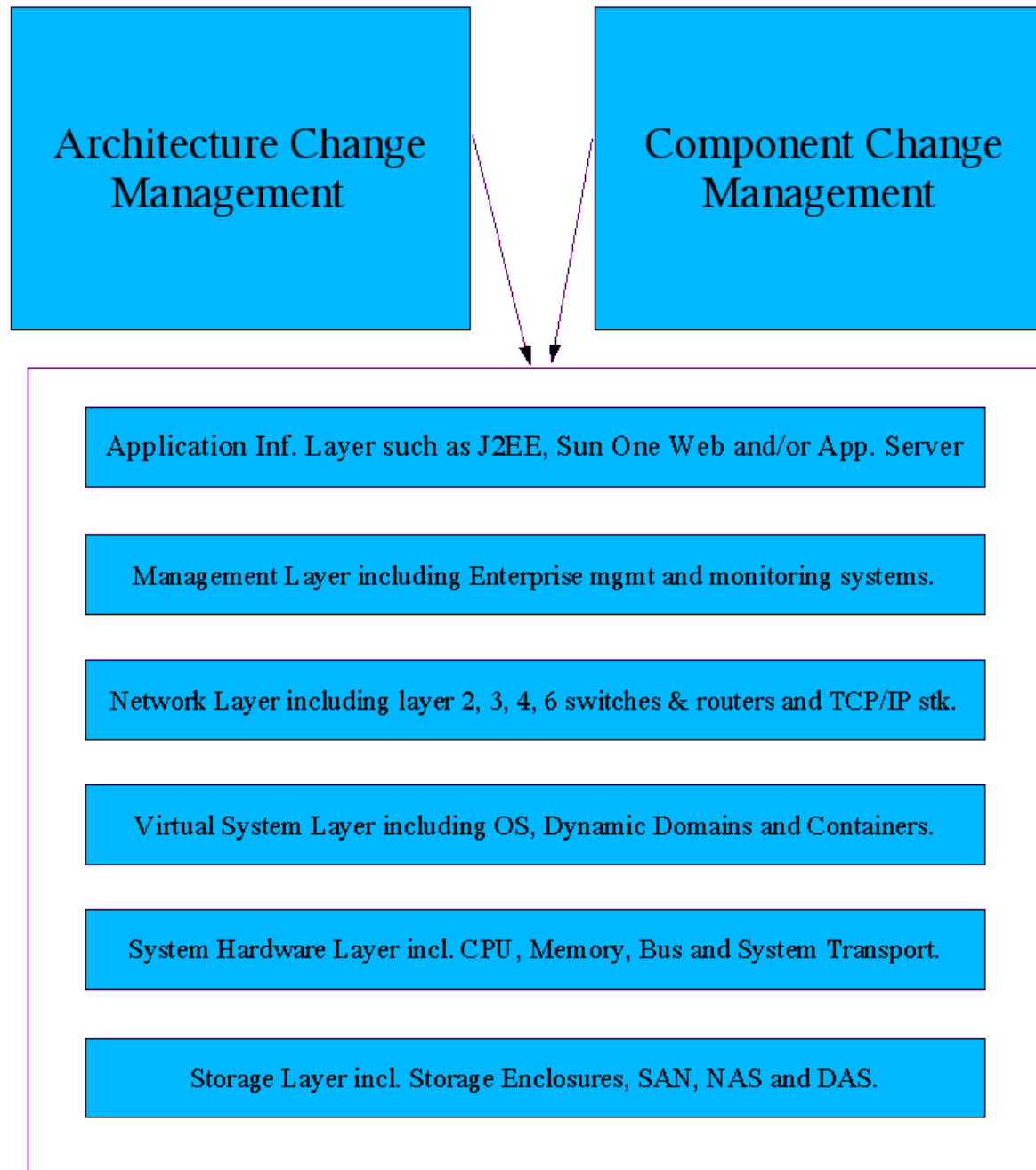
# Strategic Planning and Architecture



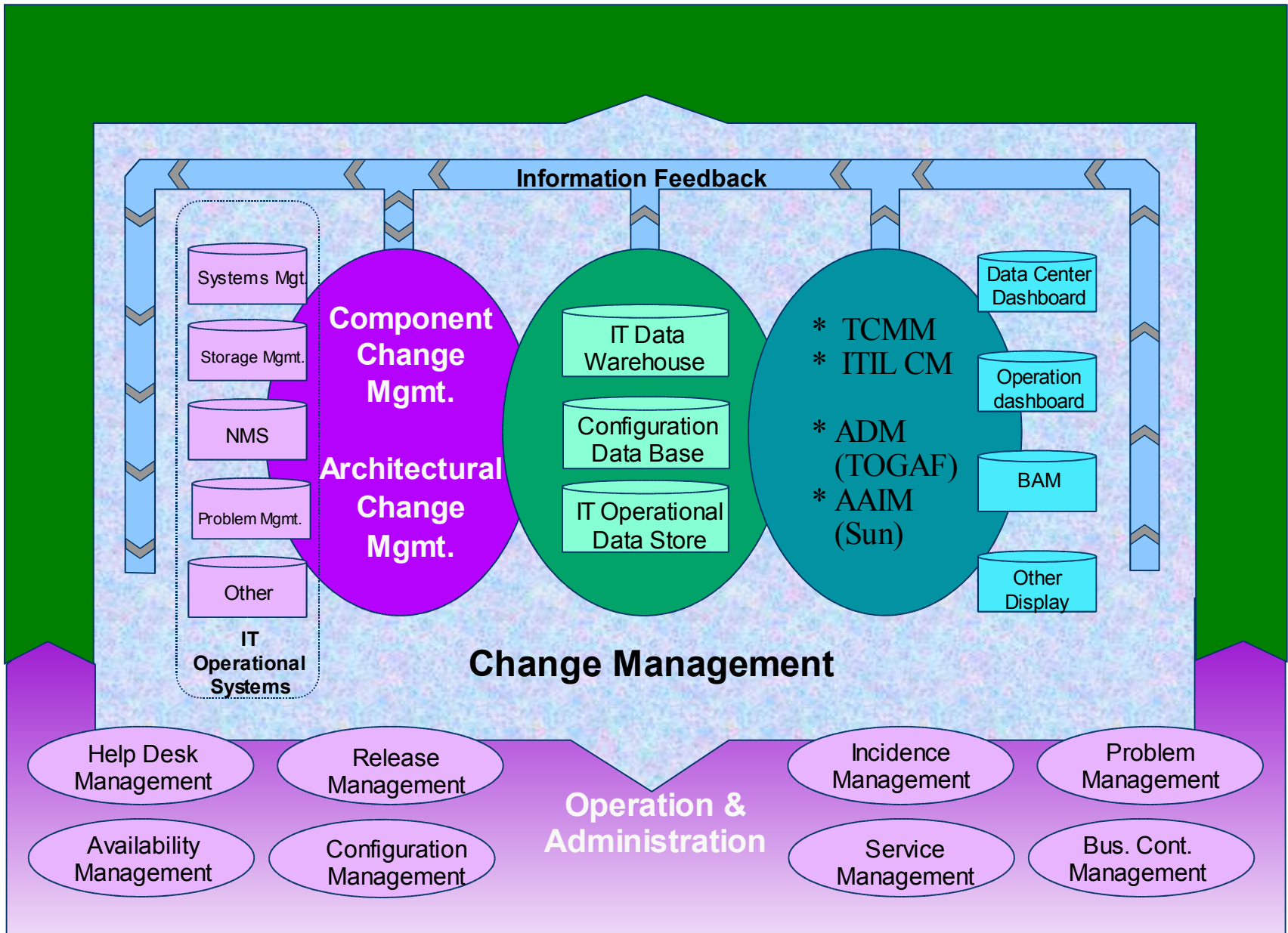
# Organizing Technical Changes

- Component Changes to IT Infrastructure: Usually in the form of changes to one or a few components of current infrastructure/architecture. This relates to Configuration Item (CI) changes as per ITIL Standards. Hardware or Software components or Stacks could be a CI.
- Tools for component change management include TCMM or Change Management Process within the ITIL framework.
- Architectural Changes to IT Infrastructure: Usually in the form of multiple components of current IT architecture or a move away from current IT architecture to target IT architecture. This relates to solution building blocks (SBB) and architectural building blocks (ABB) as per TOGAF 8.
- Tools for architectural change management include AAIM – Assess, Architect, Implement and Manage methodology from Sun and ADM or Architecture Development Methodology from TOGAF

# Organizing Technical Changes



# IT Change Management



# IT Change Management Framework

- IT Change Management Framework covers:
- ITSM Operational Systems such as Network Management Systems (NMS) applications and Storage Resource Management (SRM) applications, problem management and trouble ticketing systems are often used for management and administration of component and architectural changes
- ITSM or Data Center Activities such as Release Management, Upgrade Management, Patch Management, Problem Management and Incidence Management mostly involve component or architectural changes.
- Component and Architectural Change Management Methodologies.
- IT Change Monitoring from a proactive/reactive standpoint with today's technologies such as BAM enabling Real Time Monitoring and Action.

# Areas of Technology and IS Architecture

- Technology Architecture covers
- Storage Architecture - Device Drivers, HBAs, SAN, Storage Enclosures, Storage Management Software and so on.
- Systems Architecture - Low end, mid range and highend systems, clusters, virtual systems among others
- Network Architecture - LAN, MAN and WAN technologies
- IS Architectures covers
- Data Architecture - enterprise and application data models, choice of data base technologies and so on.
- Application Architecture - 3 tier, 3 tier plus Integration Server, Web Services Architecture among others.



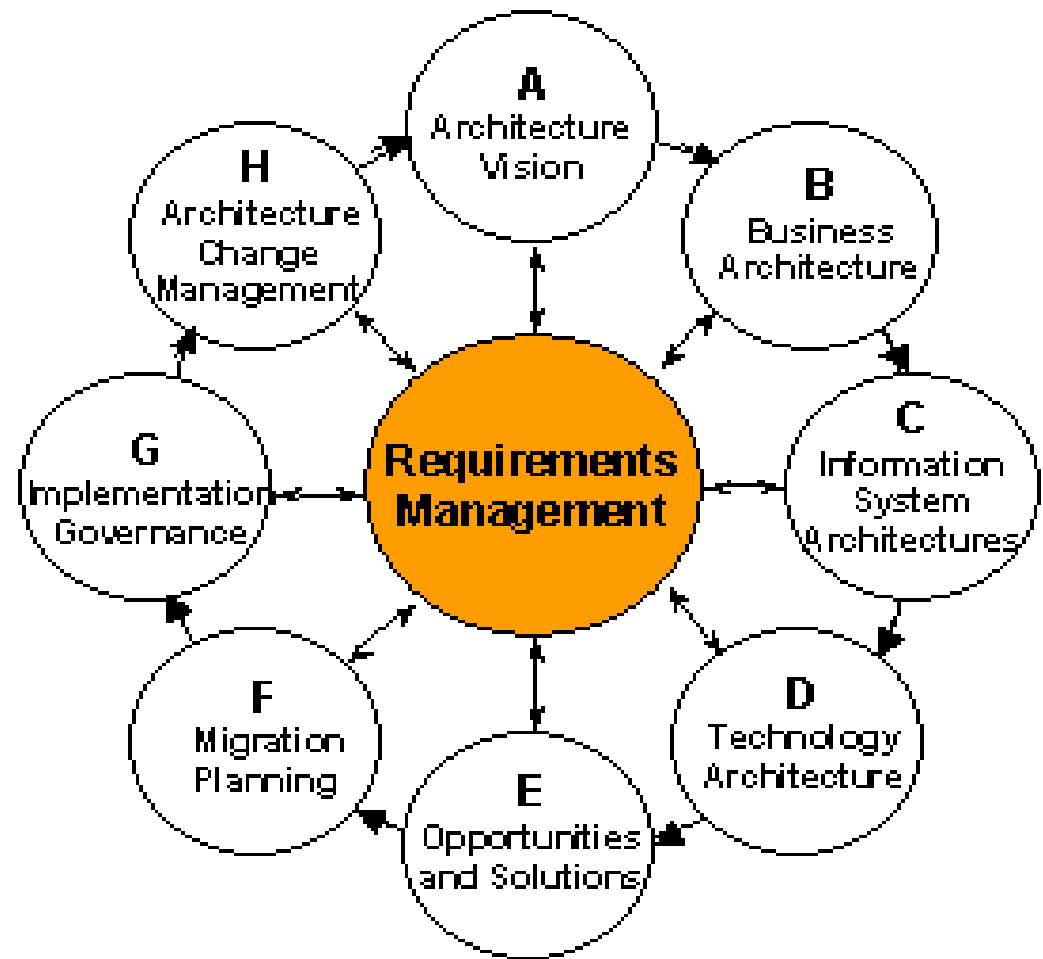
# TCM and EA

- Technical Change Management is a systematic approach to manage changes made to IT infrastructure in order to minimize risks and maximize/optimize on architectural and service level objectives.
- TCM involves in moving IT infrastructure from known state A to known state B.
- TCM also involves moving IS and Technology architecture to their respective target architecture.
- EA features conducive to TCM
- Adaptive Architecture - service driven and component based architectures are more adaptive to changing needs of the enterprise.
- Open Systems - more conducive to change for such reasons as availability/adaptability of source code, support from communities and multiple organizations and relative low costs of open technologies.
- Standards - the more standards the more consistencies in terms of processes and technologies. Positive impact with respect to both standardization of changes and implementation of changes.

# TCM and TOGAF

Architecture Development Methodology or ADM from TOGAF as depicted in this diagram follows a step by step process to develop, implement and manage enterprise architecture including enterprise business architecture.

ADM rightly recognizes the continuous nature of Architectural Change Management.

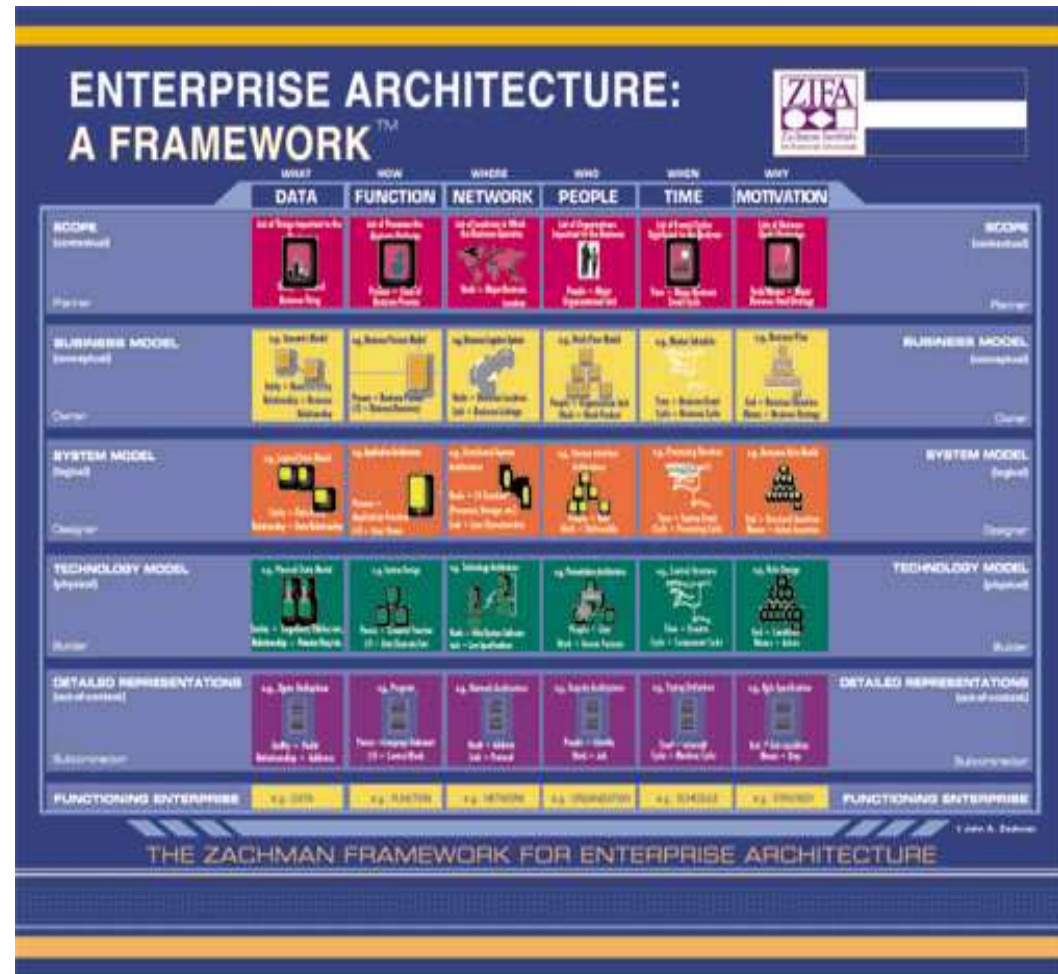


# TCM and Zachman

The Zachman Framework is relatively more static and does not provide with a methodology for architectural change management.

The Zachman Framework can lend itself to architectural change management via an iterative process that defines and redefines the content in each and every cell in the Zachman EA framework.

Zachmans EA frameworks key contribution to TCM is the use of the framework as a tool to better understand the relationship between the cells. A change in one or more cells surely impacts other cells. Architects can use the framework to align the technology and IS architecture to the enterprise business strategy.



# TCMM

## Five Phases of TCMM

I Change Definition phase

II Change Evaluation and Approval phase

III Change Planning phase

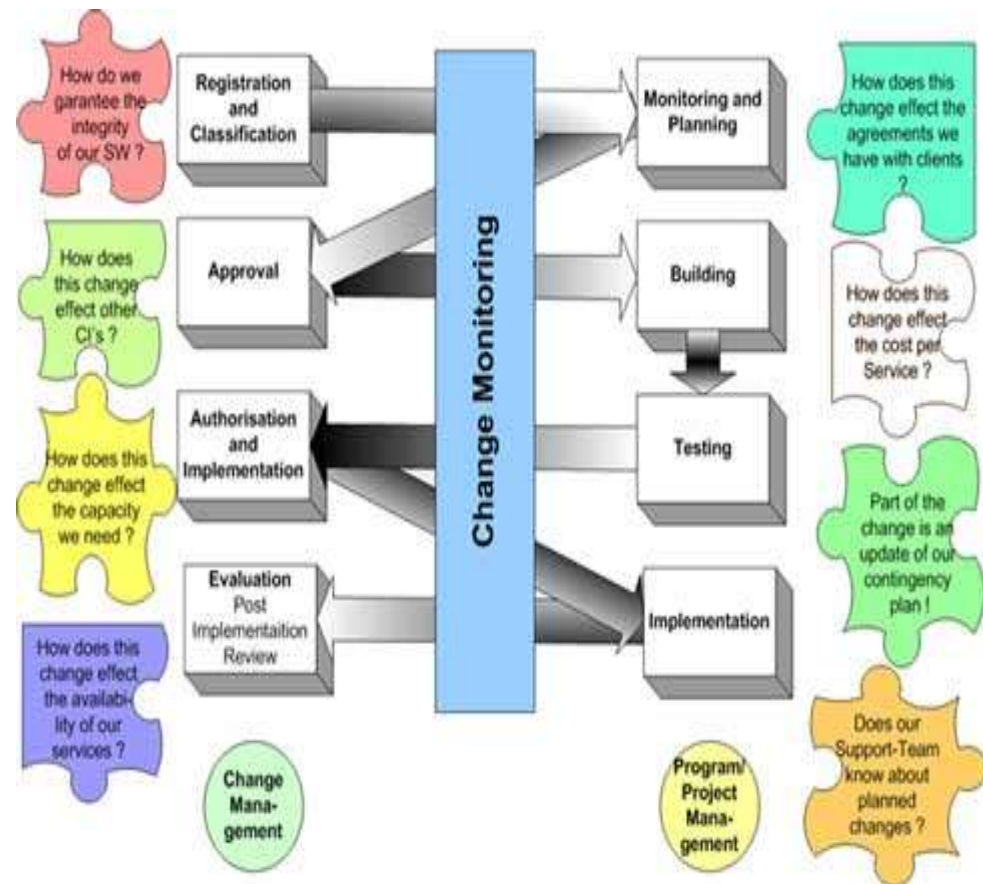
IV Change Implementation phase and

V Change Monitoring and Feedback phase.

- Relevant for both architectural and component changes
- Frequently architectural changes are implemented at the component level.
- Depending on magnitude of the change and criticality of the production environment, phase II and III may involve a detailed study on the impact of the change on current IT infrastructure/architecture and service.
- Implementation phase should ideally involve appropriate updates & notification about components and changes to components to the IT DW.
- TCMM is not relevant for large architectural changes when implemented in a parallel environment or data center.

# TCM and ITIL

- The ITIL framework provides a prescriptive set of processes for IT Service Management.
- Change Management forms the core process within the ITIL framework and relates to other processes such as release management, problem management and configuration management.



# Organizational Factors

- Architectural Changes usually has a significant impact at the organizational level and therefore requires organizational change management. Architectural change management involves people with architectural knowledge, experience and skills: Strategic Planners, Architects and Change Managers.
- Component Changes typically does not have a significant impact at the organizational level. Component change management is handled by people with component knowledge, experience and skills: Subject Matter Experts or SMEs such as cluster guru, dba or performance tuning expert.

# Conclusion

- Organization of changes
- Inter-relationship between strategic planning, architecture and change management.
- Change Management Framework
- Methodologies - TCMM and ITIL vis a vis ADM and AAIM.
- Organizational Factors.