



# The CMMI<sup>SM</sup> Framework and the Enterprise

## Adapting or Extending

A Presentation to the  
4<sup>th</sup> Annual CMMI Technology Conference  
and User Group  
November 17, 2004

Track 6 – CMMI Extensions

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“Approved for Public Release; Distribution Unlimited 04-1172”

# Agenda

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- Approach
- Process Structure
- Implementation
- Plans For The Future.



Everything should be made as simple as possible, but not simpler.  
*Albert Einstein*

# Objective

Establish Enterprise Processes  
That Will Assist in Achieving Acquisition Objectives

## *Enterprise Objectives*

- Reduction in Cycle Time
- Capability to the users as quickly as possible
- Keep Cost Under Control
- Needed System Interoperability

## *Process Objectives*

- ↖ Provide a Integrated Process Framework for the Management of Enterprise Systems (e.g. Use of Integrated Architectures for Requirements and Investment Planning)
- ↖ Reduce Acquisition Complexity, Span of Control, and Risks
- ↖ Life-Cycle Perspective
- ↖ Establish Nodes Responsible for Sponsor, Acquisition, Sustainment, and Test Partnership
- ↖ Synchronizes Top Down Planning, Budgeting, Direction, Acquisition, Development, Management, Testing, Delivery, Modernization, and Sustainment of System Increments

# Objective

Establish an Enterprise Processes That Will Assist in Achieving Acquisition Objectives

**Collaborative**

- Reduction in Cycle Time

**Incremental**

- Keep Cost Under Control

- Needed System Interoperability

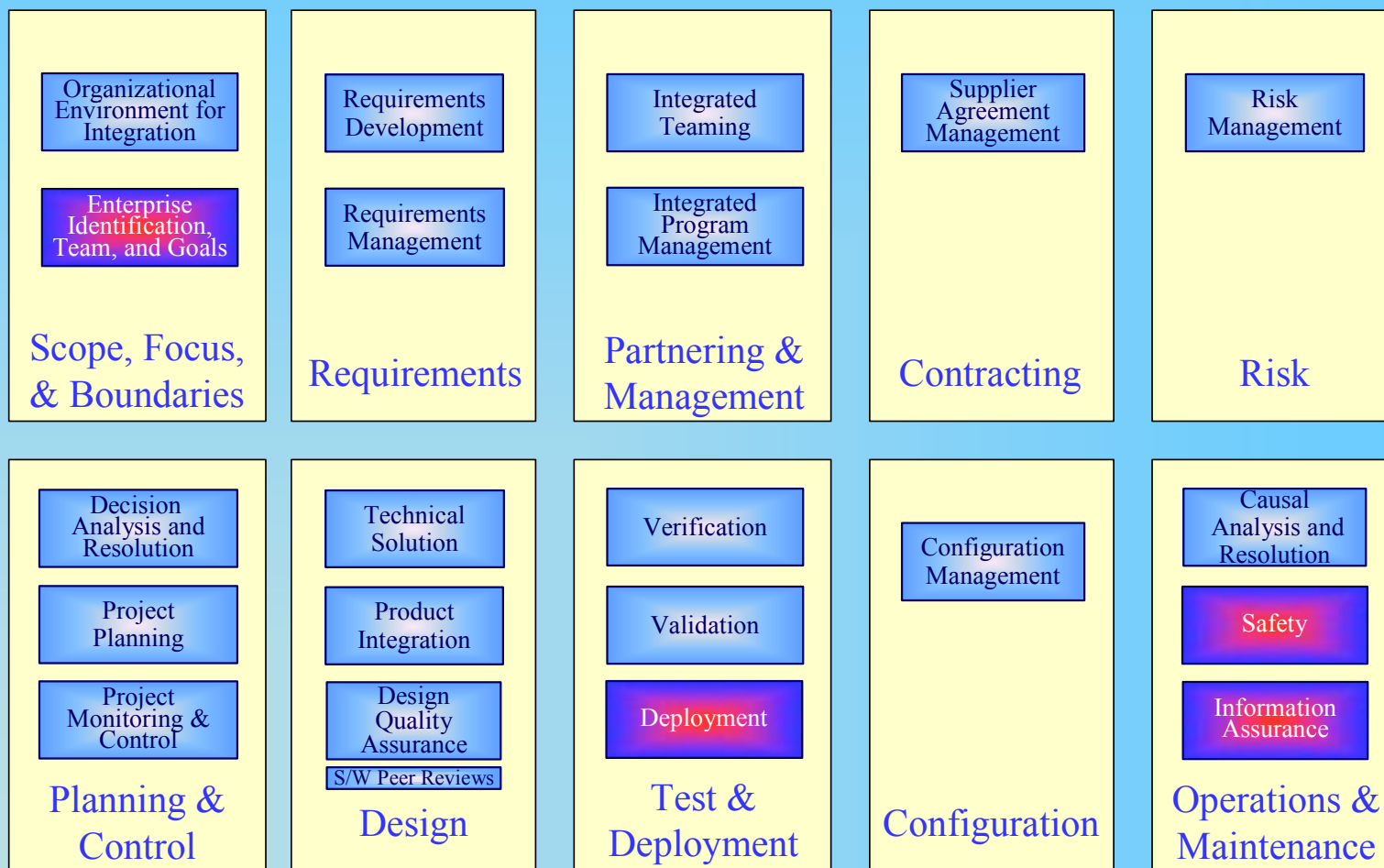
**Capability-Based**

**Processes**

- ↖ Provide a Integrated Process Framework for the Management of Enterprise Systems (e.g. Use of Integrated Architectures for Requirements and Investment Planning)
- ↖ Reduce Acquisition Cost from an Acquisition Life-Cycle Perspective
- ↖ Establish Nodes Responsible for Acquisition, Development, and Test Partnership
- ↖ Synchronizes Top Down Planning, Budgeting, Direction, Acquisition, Development, Management, Testing, Delivery, Modernization, and Sustainment of System Increments

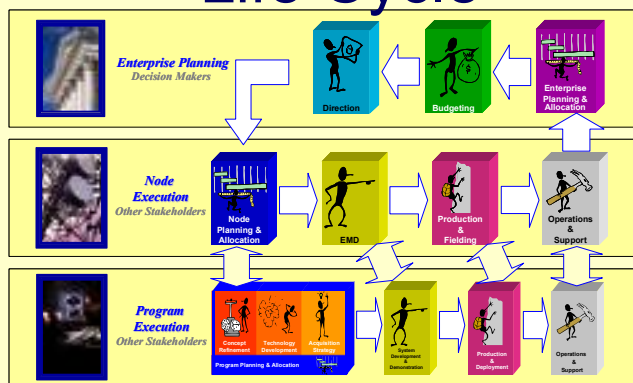


# How?

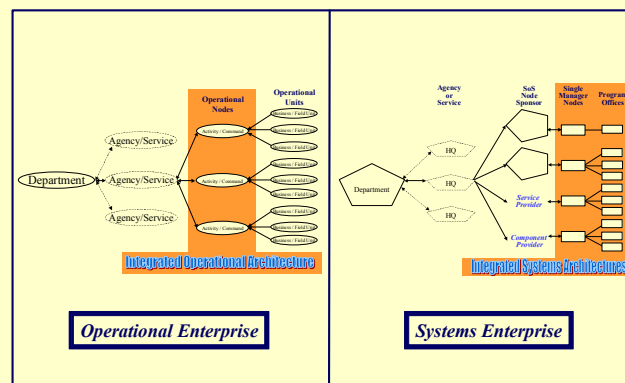


# Considerations

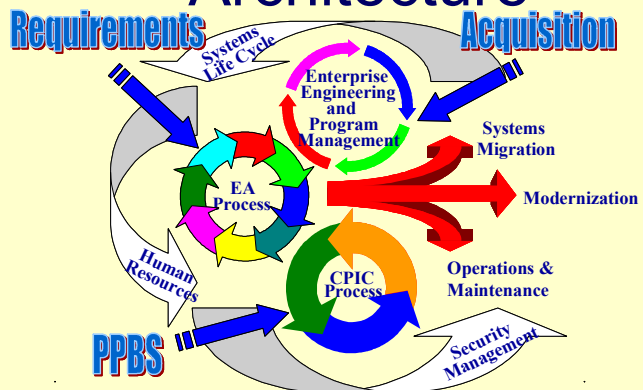
## Life Cycle



## Business Model



## Architecture



## Management

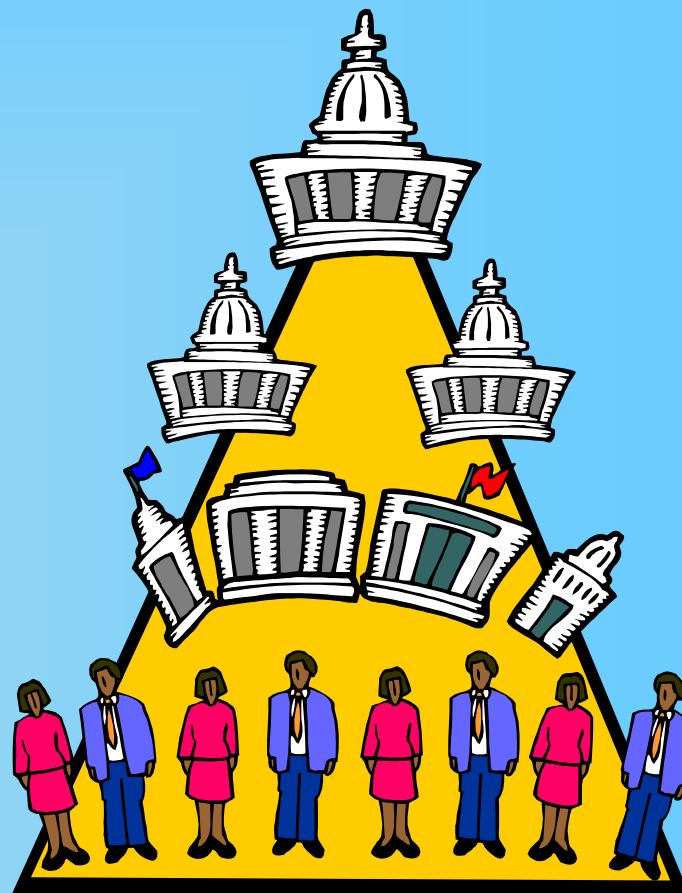
Level	Focus	Function	Processes
ENTERPRISE LEVEL	<ul style="list-style-type: none"> <li>Policy and Direction</li> <li>Develop Strategy to Mission R2D</li> <li>Establish Military Work Capability Requirements</li> </ul>	<ul style="list-style-type: none"> <li>Develop Strategic Management Process</li> <li>Establish Strategic Partnership and Information Sharing</li> </ul>	Enterprise Management Process
NODE LEVEL	<ul style="list-style-type: none"> <li>Resource Development</li> <li>Decision Making to Mission Sync</li> <li>Program Development to Manage</li> </ul>	<ul style="list-style-type: none"> <li>Develop Strategic Business As Directed by Request</li> <li>Establish Program Partnership and Information Sharing</li> </ul>	Enterprise Management Process
PROGRAM LEVEL	<ul style="list-style-type: none"> <li>Deployment</li> <li>Decision Making to Leverage Technology and Resources</li> <li>Inter System Work</li> <li>Coordination for Systemization</li> </ul>	<ul style="list-style-type: none"> <li>Deployment Core Processes As Directed by Request</li> <li>Establish Knowledge Partnership and Process Sharing</li> </ul>	Enterprise Management Process

# Agenda

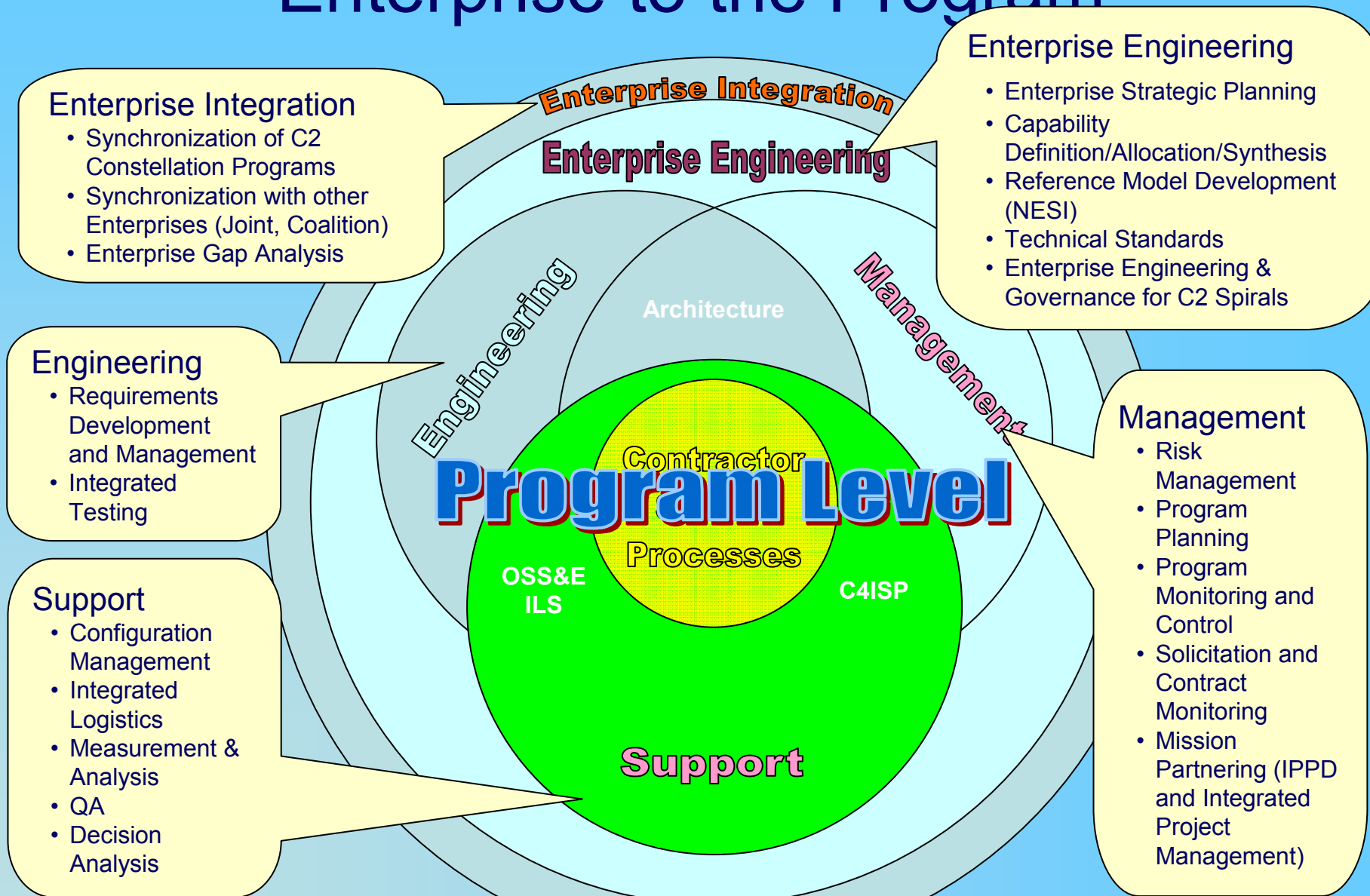
- Approach
- Process Structure
- Implementation
- Plans For The Future.

*"I am not discouraged, because every wrong attempt discarded is another step forward.*

*Thomas Alva Edison*

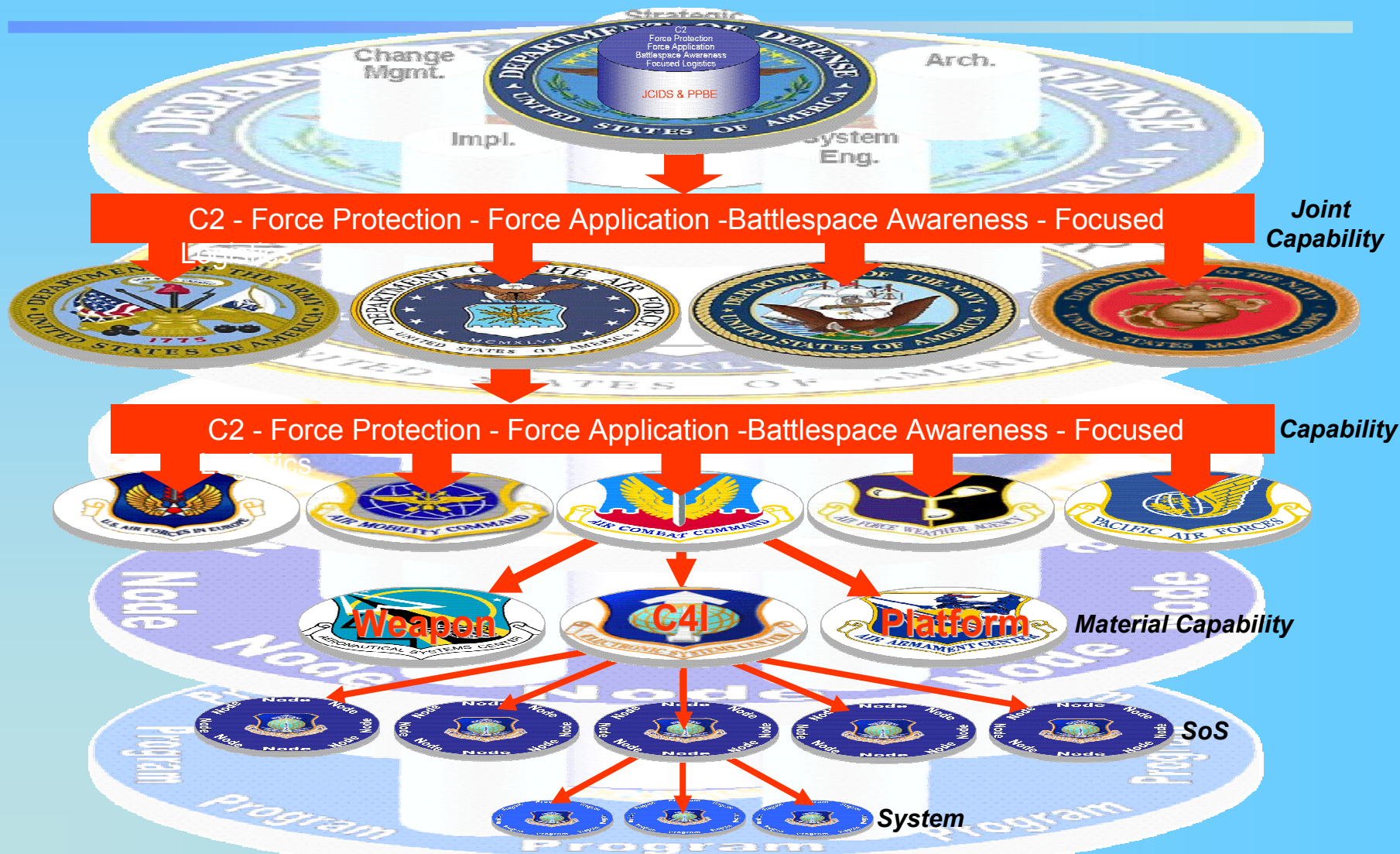


# Enterprise to the Program



# Portfolio Allocation

(DoD Example)





# Enterprise Process Levels

(Air Force Example)

- Process Framework Mapped through the Five Management Levels
- PPBE and JCIDS are Central Conduit through which the Results of Process Actions are Realized

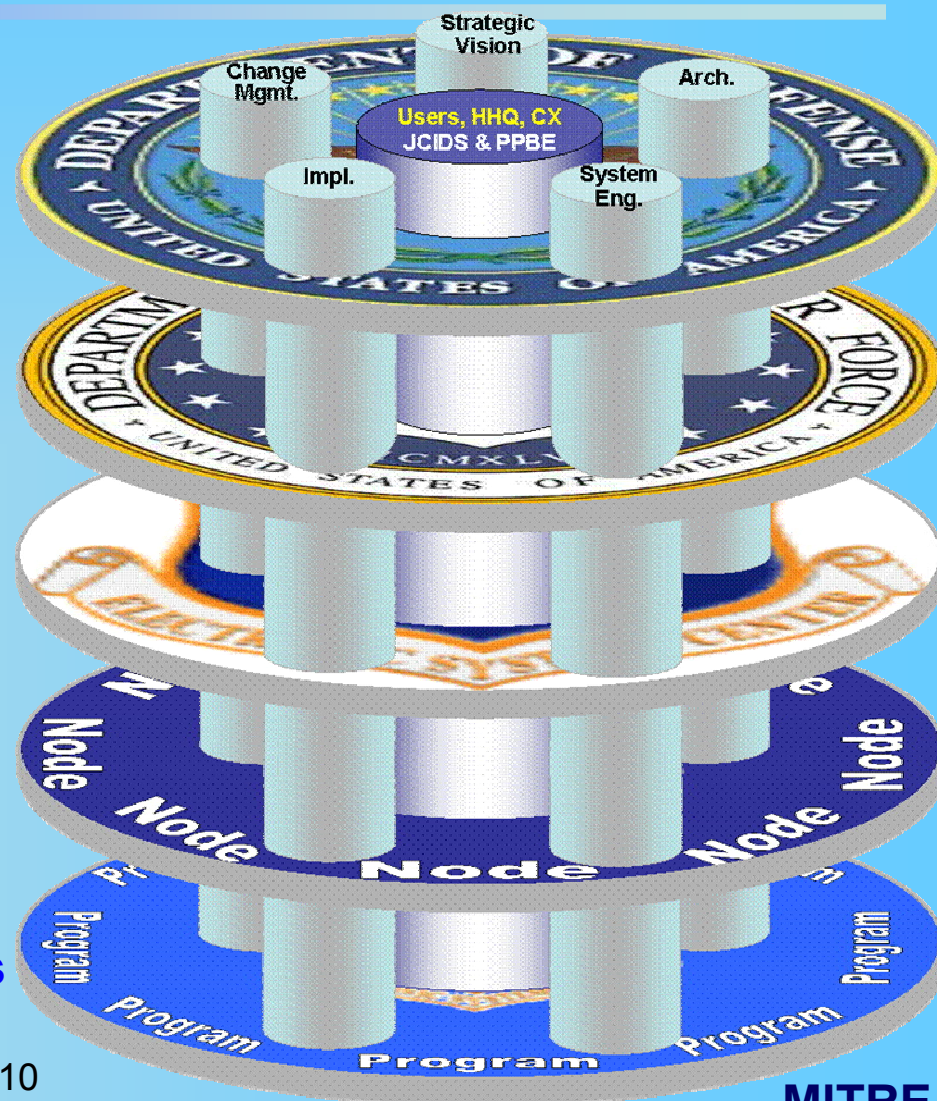
DOD

USAF

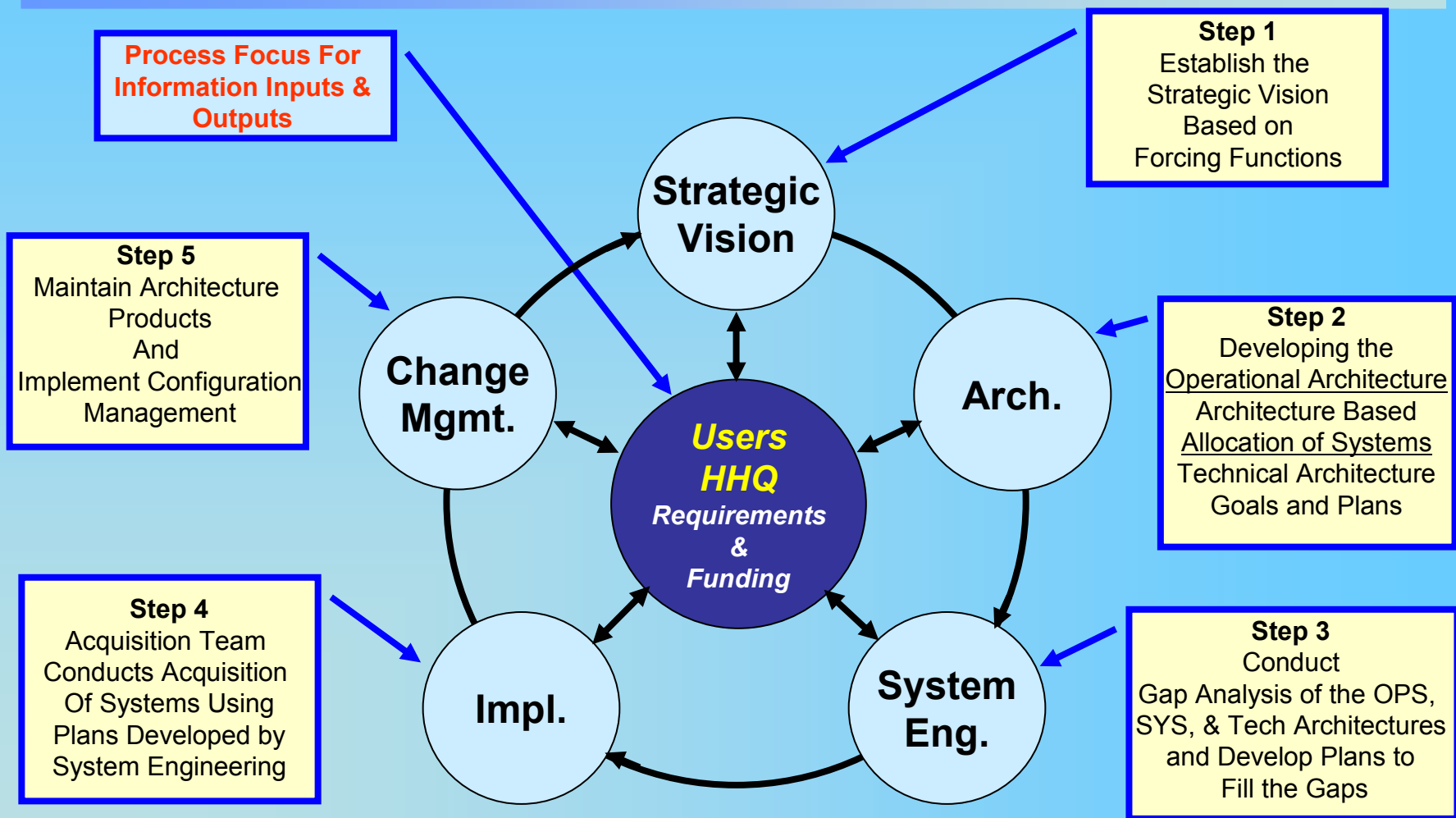
ESC

Node

Programs



# Enterprise Processes



# Agenda

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- Approach
- Process Structure
- **Implementation**
- Plans For The Future.



*"Individual commitment to a group effort, that is what makes a team work, a company work, a society work, a civilization work."*

*"Vince" Lombardi*



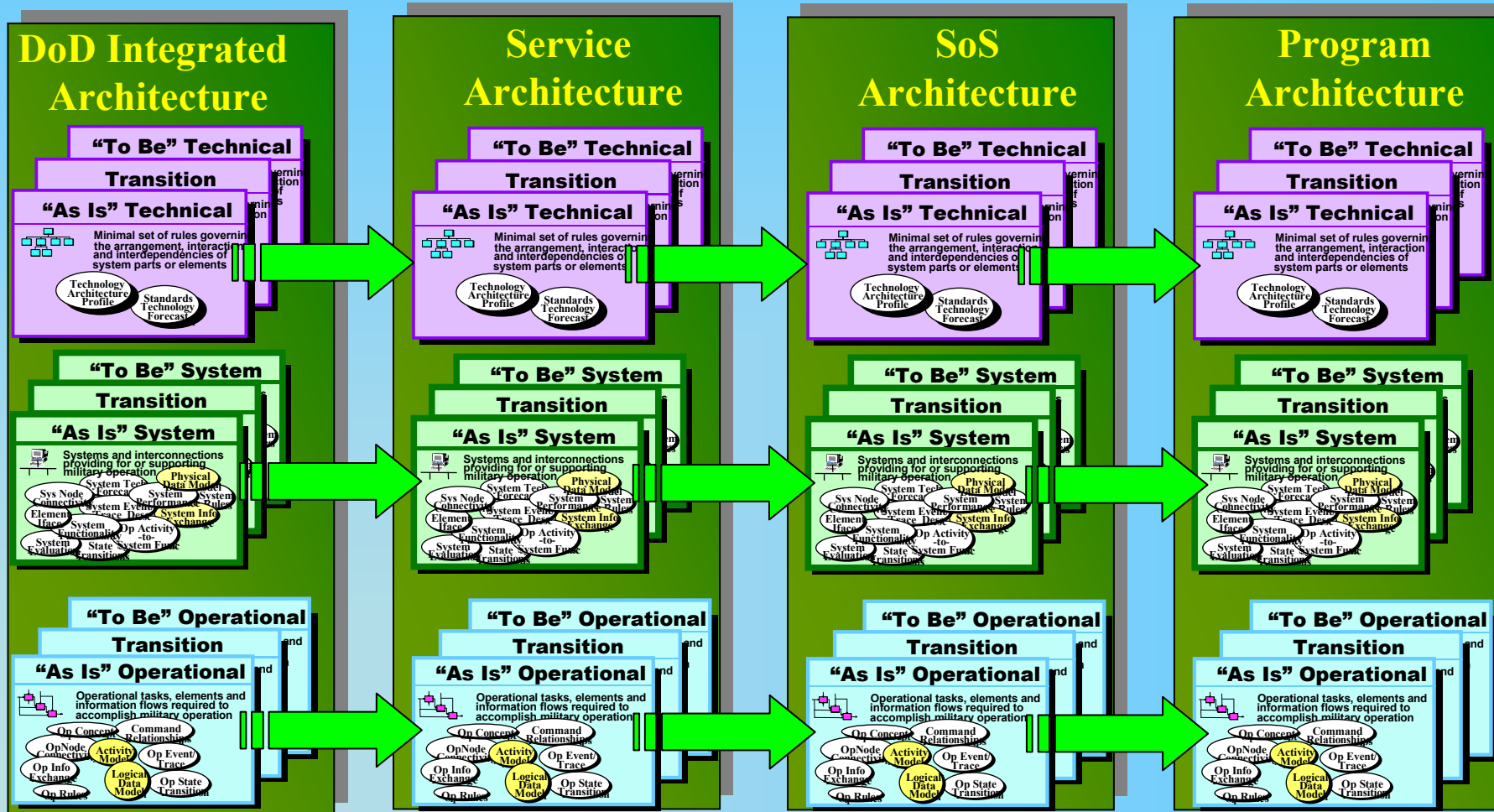
# Strategic Vision

## (Air Force Example)

Level	Strategic Vision
DoD	C2 Vision
AF	AFC2 Vision
ESC	C2C Vision
Node	Node Vision
Program	Program Vision



# Top Down Architecture Influences

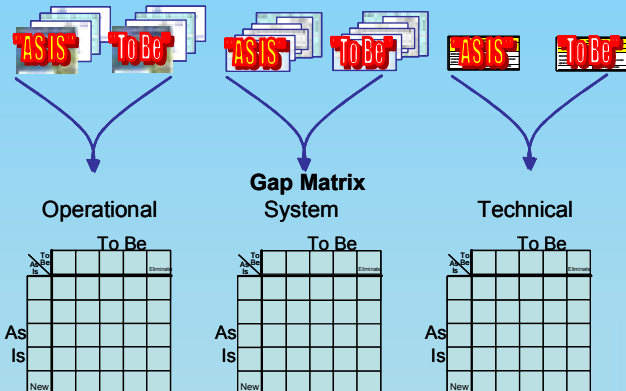


# System/Node/Enterprise Engineering

(Arch Gap Analysis & Planning)

## ENTERPRISE VALUE SYSTEM

Program Architectures



Program Interaction and "Deal Making"

**Program Investment Strategy**

**R&D Gaps**

**O&M Gaps**

**Technology Gaps**



System of System Sponsor  
Decision Maker

With Identified

## Program Management Office

<b>Ops Requirements</b>	<b>Planning</b>	<b>Budget</b>	<b>System Requirements</b>
<ul style="list-style-type: none"> <li>•Operation Gap</li> <li>•Infrastructure Gap</li> <li>•Capability Gaps</li> <li>•Legal/Regulatory Issues</li> <li>•New Services</li> <li>•Requirements</li> <li>•Interoperability</li> </ul>	<ul style="list-style-type: none"> <li>•Mission &amp; Service Life</li> <li>•New Mission Phase In</li> <li>•"Outsource" Deliveries</li> <li>•Technology Sequence</li> <li>•Development Sequence</li> <li>•Block Schedule</li> <li>•Infrastructure Ready</li> </ul>	<ul style="list-style-type: none"> <li>•O&amp;M Budget</li> <li>•Investment Budget</li> <li>•RDT&amp;E Budget</li> <li>•Production Budget</li> <li>•Construction Budget</li> </ul>	<ul style="list-style-type: none"> <li>•Block Capabilities</li> <li>•Existing Direction</li> <li>•Capstone Direction</li> <li>•Modifications</li> <li>•Tech Insertion</li> <li>•S/W Maintenance</li> <li>•Requirement Docs</li> <li>•CONOPS</li> </ul>

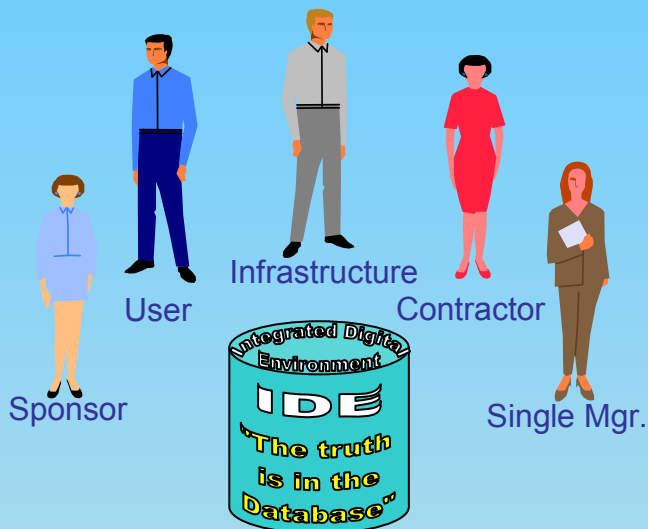
## Risks & Tradeoffs

-O&M, Acquisition, and Planning Tradeoffs -O&M vs Investment -Allocation of Work - Risk Analysis

## Integrated Program Solution

Gaps Are Filled Collaboratively in the IPS

# Team Solution Plan



## Resource Optimization

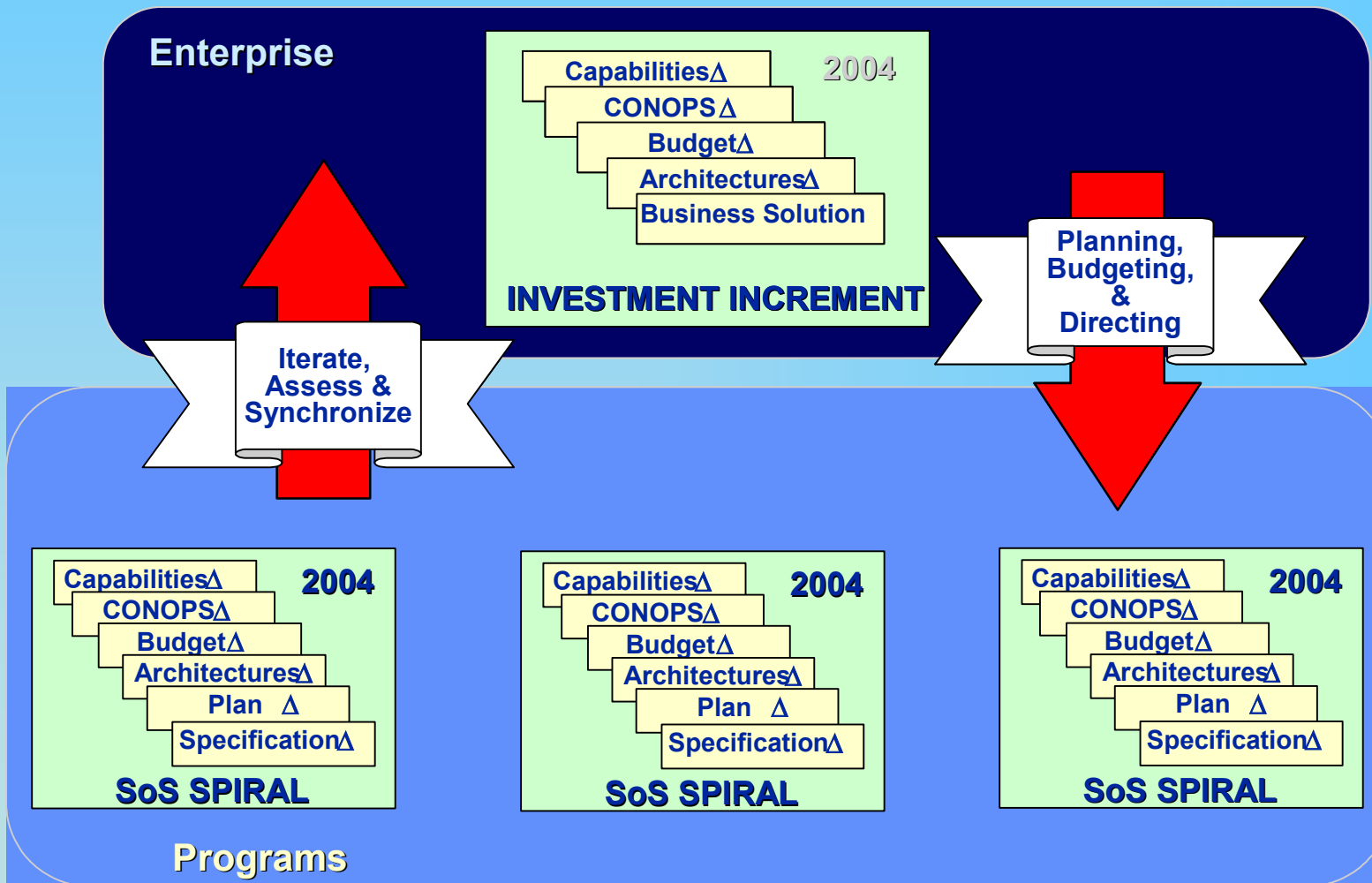
- Use Your Flexibility to Maximize Your Capability (Faster and Cheaper Results)
- Establish Equilibrium (Win-Win-Win)
- Requires Sharp Configuration Control
- Maintain Procurement Integrity

Reduced Oversight

	Capabilities	Tech. Insertion	Ent. Interoperability	Maintenance	Contingencies	User Modifications
Funding						
R&D	●	●	●		●	
Proc		●	●	●	●	
Ops	●	●	●	●	●	●
Cont.	●	●	●	●	●	●
Other	●	●	●	●	●	●

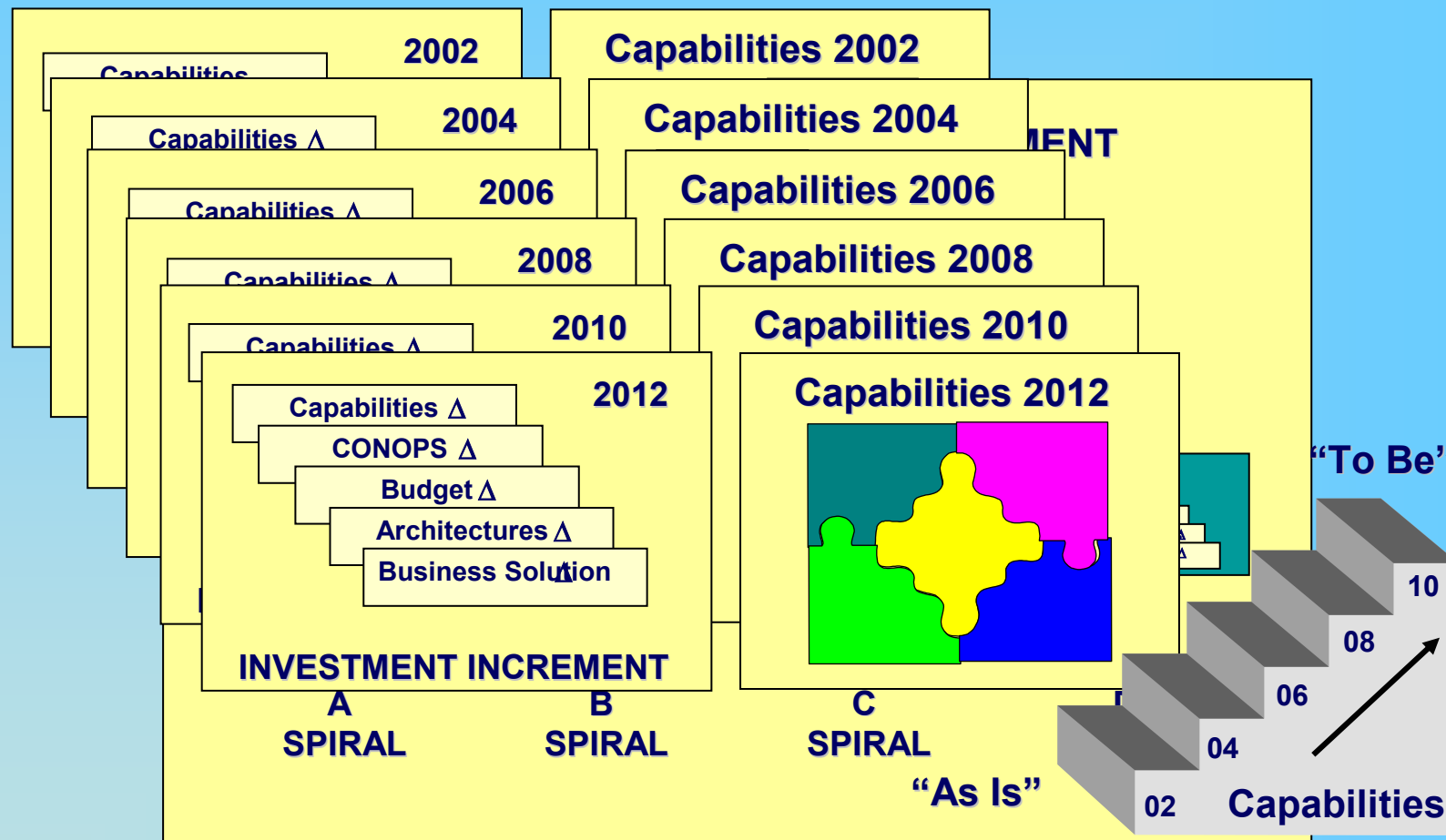
# Implementation

## Synchronized Direction and Budget



# Implementation

## Enterprise Investment Plan

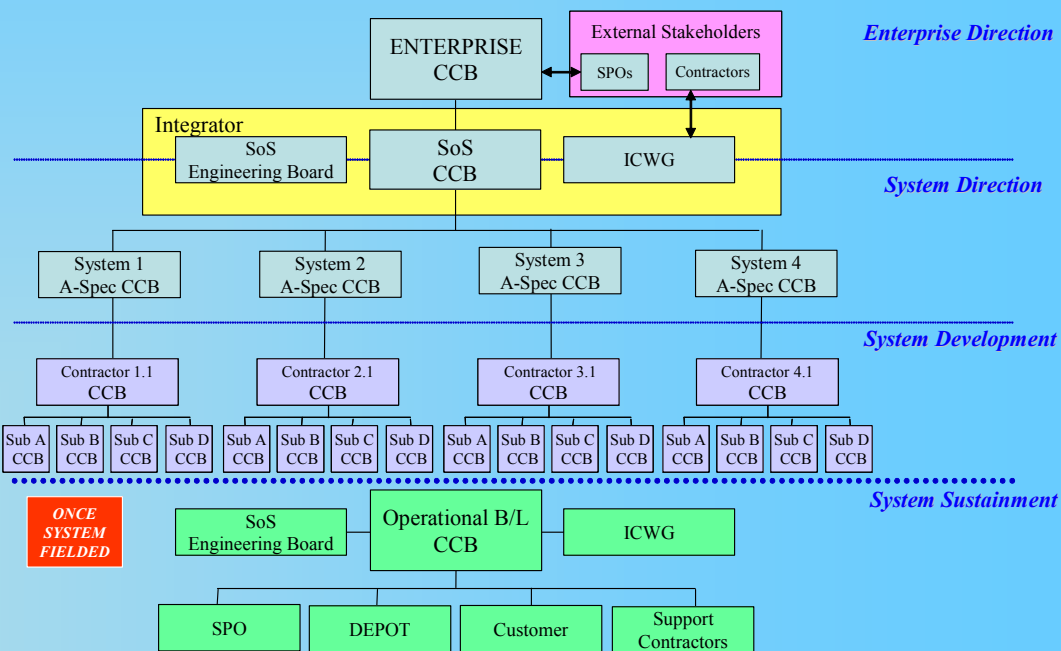
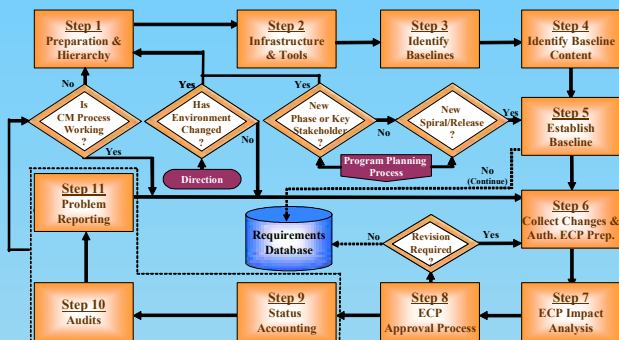




# Implementation Processes

Level	Focus	Function	Processes
<b>ENTERPRISE LEVEL</b>	<ul style="list-style-type: none"> <li>• Policy and Direction</li> <li>• Decision Making to Maximize ROI</li> <li>• Maximize Military Worth</li> <li>• Capability Synchronization</li> </ul>	<ul style="list-style-type: none"> <li>• Implement Enterprise Management Process</li> <li>• Establish Enterprise Partnerships and Information Sharing</li> </ul>	<p>Enterprise Management Process</p>
<b>NODE LEVEL</b>	<ul style="list-style-type: none"> <li>• Execution Direction</li> <li>• Decision Making to Maximize Sync Programs</li> <li>• Deliver Capability to Warfighter</li> </ul>	<ul style="list-style-type: none"> <li>• Implement Enterprise Processes As Directed By Enterprise</li> <li>• Establish Program Partnerships and Information Sharing</li> </ul>	<p>Enterprise Management Process</p>
<b>PROGRAM LEVEL</b>	<ul style="list-style-type: none"> <li>• Implement</li> <li>• Decision Making to Leverage Technology and Resources</li> <li>• Max System Worth</li> <li>• Team/Stakeholder Synchronization</li> </ul>	<ul style="list-style-type: none"> <li>• Implement Core Processes As Directed By Enterprise</li> <li>• Establish Stakeholder Partnerships and Process Sharing</li> </ul>	<p>Program Management Processes</p>

# Change Management



**Subject Architecture and Program Direction to Configuration Control**

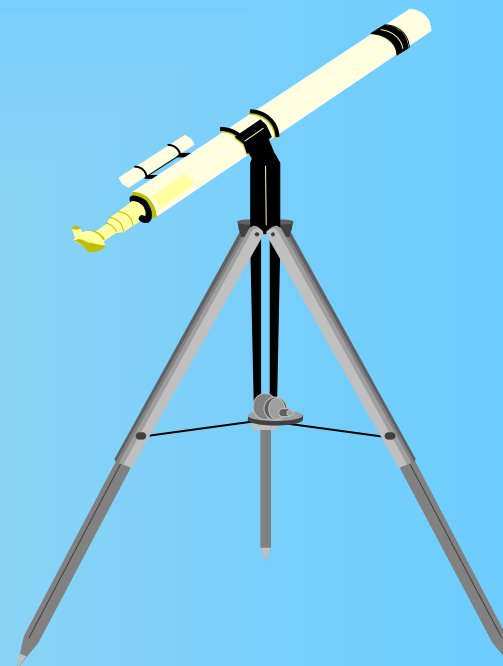


# Enterprise Process Toolkits

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- Plans For The Future.



*Plans are only good intentions unless they  
immediately degenerate into hard work.  
Peter Drucker*

# The CMMI<sup>SM</sup> Framework and the Enterprise



“Things are only Impossible until they're not.”

Jean-Luc Picard, 'Star Trek: The Next Generation'