

2nd CMMI Technology Conference  
and User Group

**Implementing Process Improvement  
Using CMMI**

**An Acquirer's Perspective**

November 14, 2002



# Outline

- Premise for the presentation
- What is CITPO?
- CITPO's process improvement approach
- What's missing in the CMMI framework
- CITPO's Lessons learned
- Challenges

# Presentation Premise

- The CMMI framework can be implemented in a DoD acquisition organization
- The CMMI framework is not all inclusive
  - No one framework exists, other models and sources need to be used



Management Activity

**Military Health Services (MHS)  
Program Executive Office (PEO)**

**Program Management Offices**

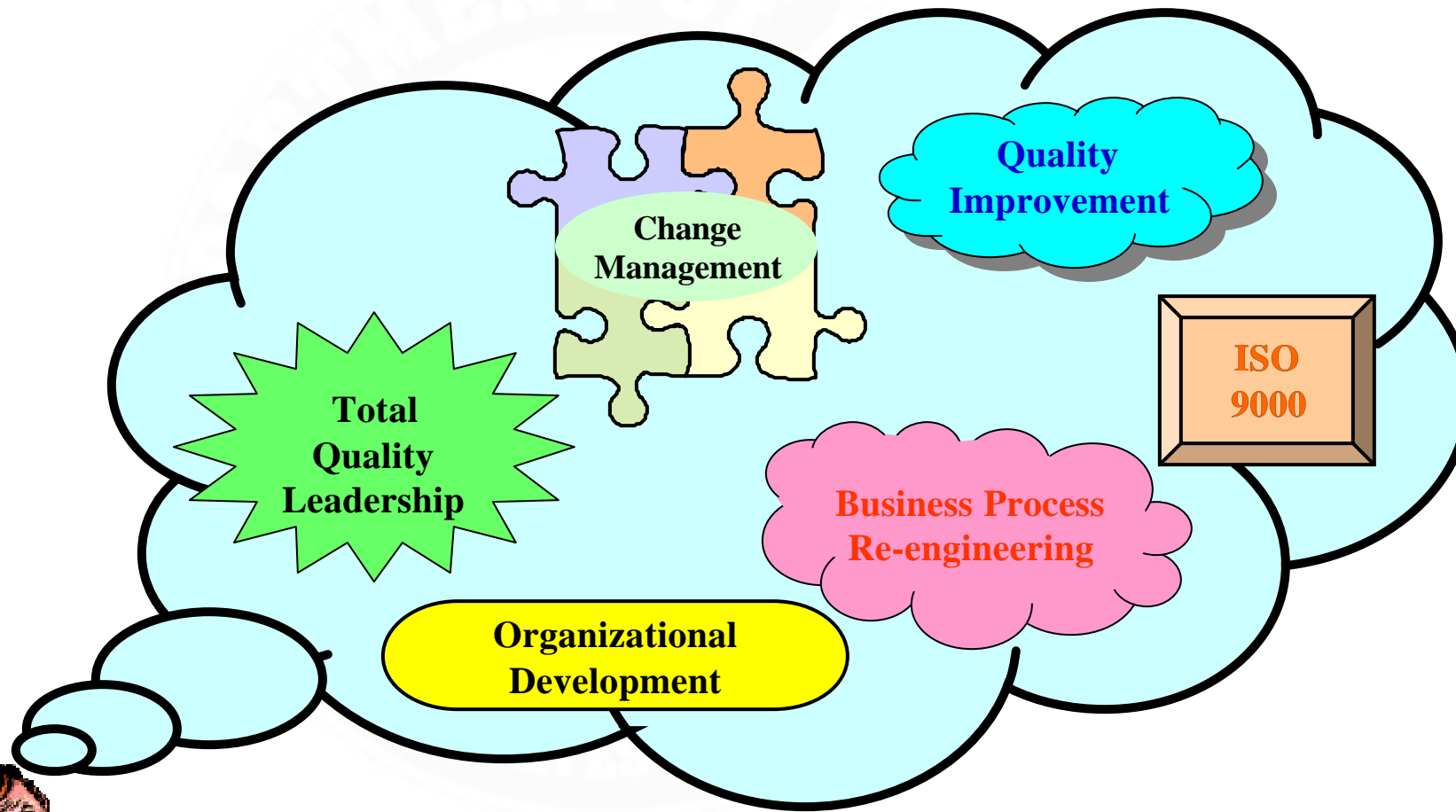


- DMLSS
- EI / DS
- RITPO
- TIMPO
- TMIP

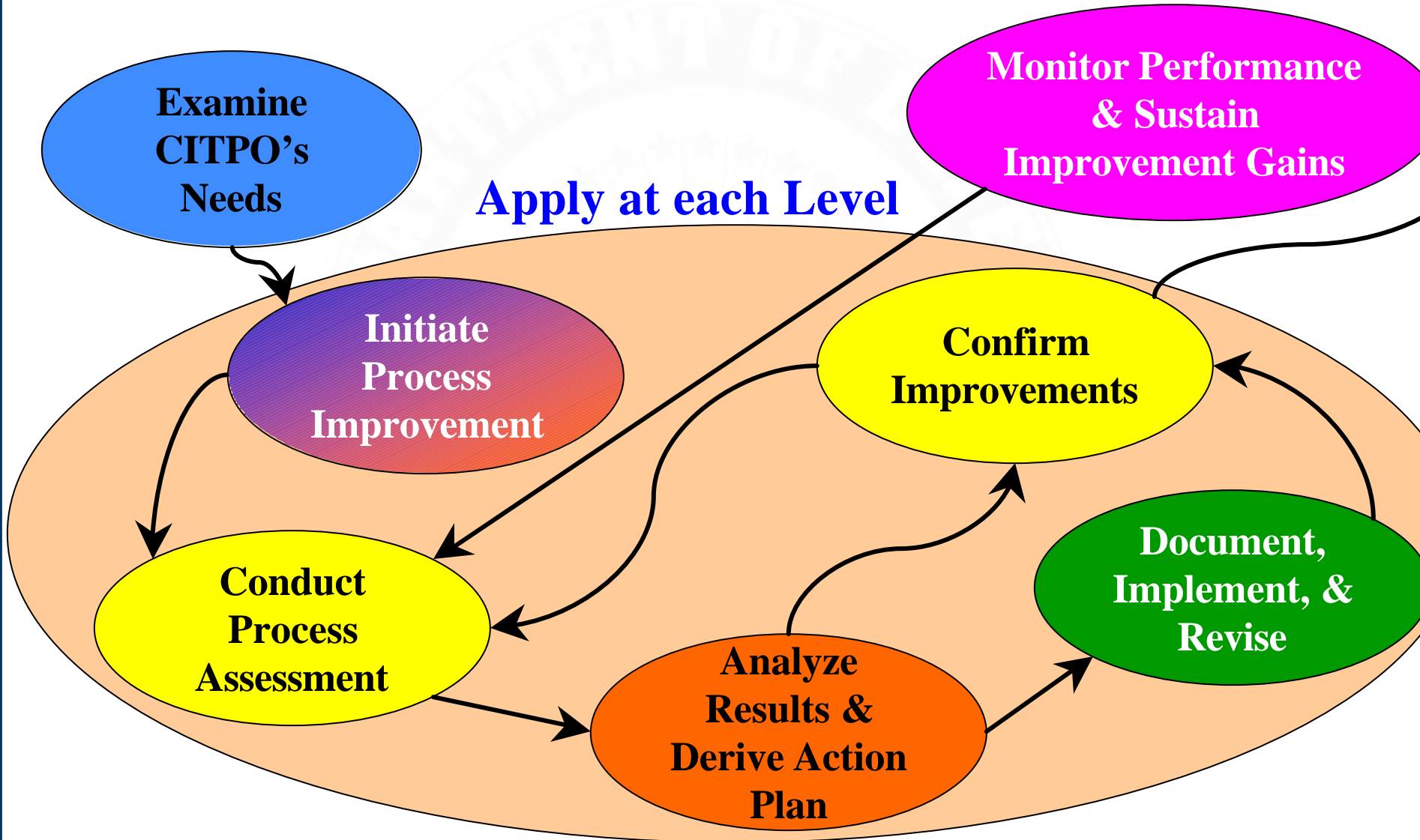
# CITPO Projects



# Not Again!



# CITPO's Process Improvement Approach



**INITIATE**

**DIAGNOSE**

**ESTABLISH**

**ACT**

**LEARN**

# CITPO Process Improvement Organization

## Process Improvement Steering Group

- Provides Guidance and Resources
- Appoints PA Owners and PAIT Leads
- Approves Procedure Definitions

## Process Area Improvement Team (PAIT)

- Develops Process Area
- Produces Procedure Definitions
- Develops Implementation Plan

- Charters PIT
- Provides Guidance and Resources
- Monitors Results

## Process Improvement Team (PIT)

- Plans Program
- Reports Status
- Provides Training
- Develops Action Plan(s)
- Advises PAIT(s)
- Produces Process Area Descriptions
- Provides Quality Assurance Function
- Measures Improvement Effectiveness

- Briefs Implementation Plan

## Implementers

- Implement Approved Procedures
- Produce Work Products
- Participate in Assessments
- Suggest Improvements

- Trains PAITs
- Facilitates Process Development

- Audits Processes / Procedures
- Evaluates Work Products



# Which Model to Choose?

**FAA-iCMM  
( version 1.0 )**

**Configuration Management**

**Contract Management**

**Outsourcing**

**Project Management**

**Quality Assurance &  
Management**

**Requirements**

**System Test & Evaluation**

**Transition**

**Level 2**

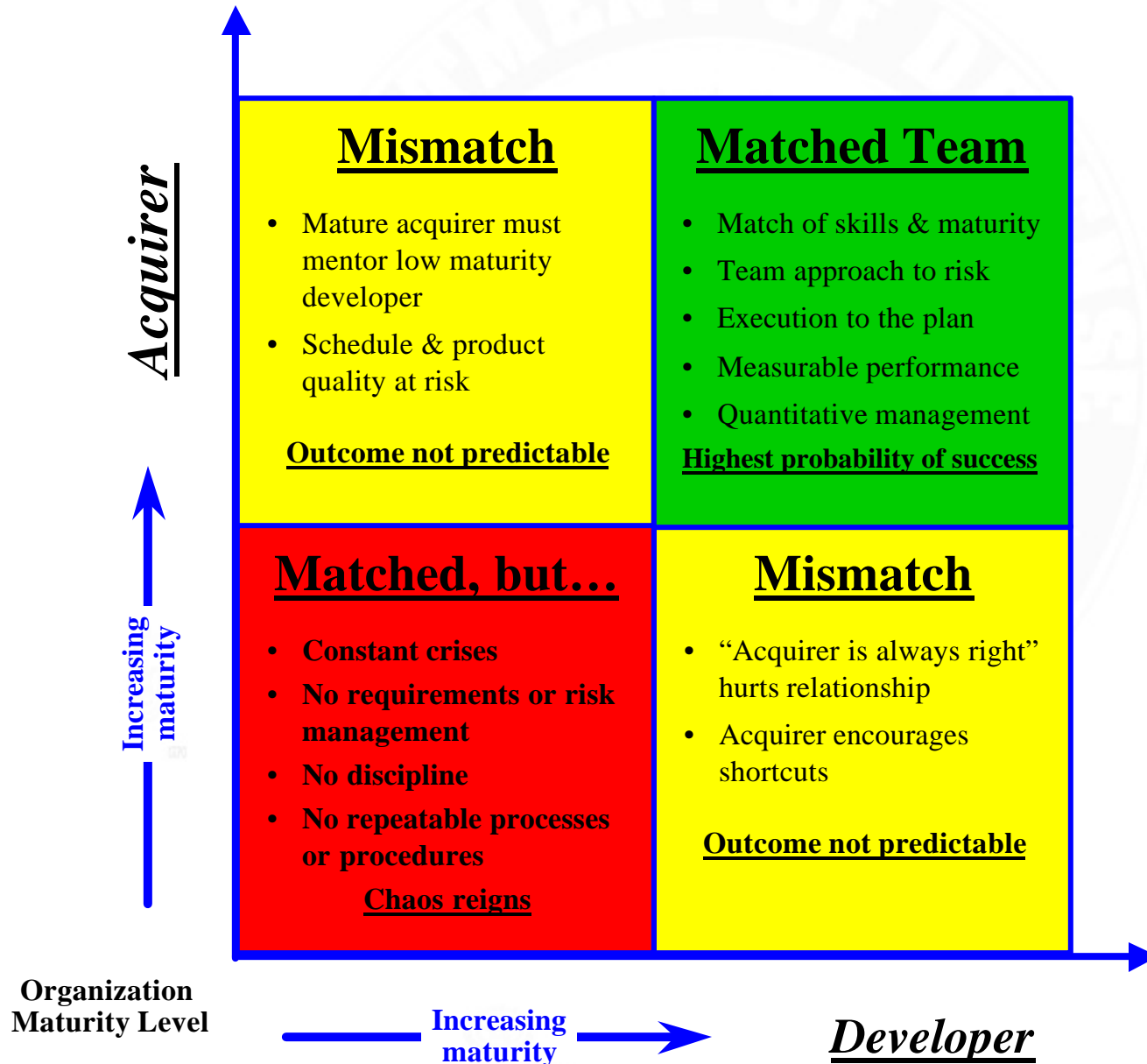
# Why CHCS II?

- ACAT I program
- Will subsume the legacy AIS functionality
- Largest CITPO development project
  - Dollars
  - Resources
- Several projects being closed out

# Measurement in CITPO

Stakeholders							
CITPO		Contractors					
		Development			Support		
Processes & Procedures	Work Products	Processes & Procedures	Work Products	Product Performance	Processes & Procedures	Work Products	Contract Performance

# Acquirer - Developer Maturity Matching



# Stakeholder Interfaces

Process Area	Developer & Acquirer Interface	Acquirer Processes		Acquirer & External Stakeholder Interfaces
		Project Level	Program Level	
Configuration Management	X	X	X	X
Integrated Supplier Management	X	X	--	--
Process & Product Quality Assurance	--	X	X	--
Project Monitoring & Control	X	X	--	--
Project Planning	X	X	X	--
Measurement & Analysis	--	X	X	--
Requirements Development	X	X	--	X
Requirements Management	X	X	X	X
Risk Management	--	X	X	--
Supplier Agreement Management	X	X	--	X

# Missing Elements in a DoD Environment

- Program-level processes
  - Financial management and budgeting
  - Project initiation
- Project-level processes
  - Project execution
  - Project closeout
- Other support processes
  - Personnel / Administration management
  - Systems security

# CITPO's Lessons Learned

- Limited resources available
  - Planning and management resources taken out of hide
  - Procedure development loses the competition to “real work”
  - Process improvement professionals are a limited commodity
  - “Free” resources are available for a reason
- Infrastructure takes time to design, develop, and implement
  - A level 3 concern but planning for now saves rework
- Need focused individual involvement
  - Not everyone needs to work a process area at the same time
  - Use small groups within a Process Action Team for specific tasking
- Initial Assessment can identify “non-Process Area” shortfalls
  - Additional resources required to take on or schedule adjustments necessary
- “Nine one-month pregnant women do not produce a baby”

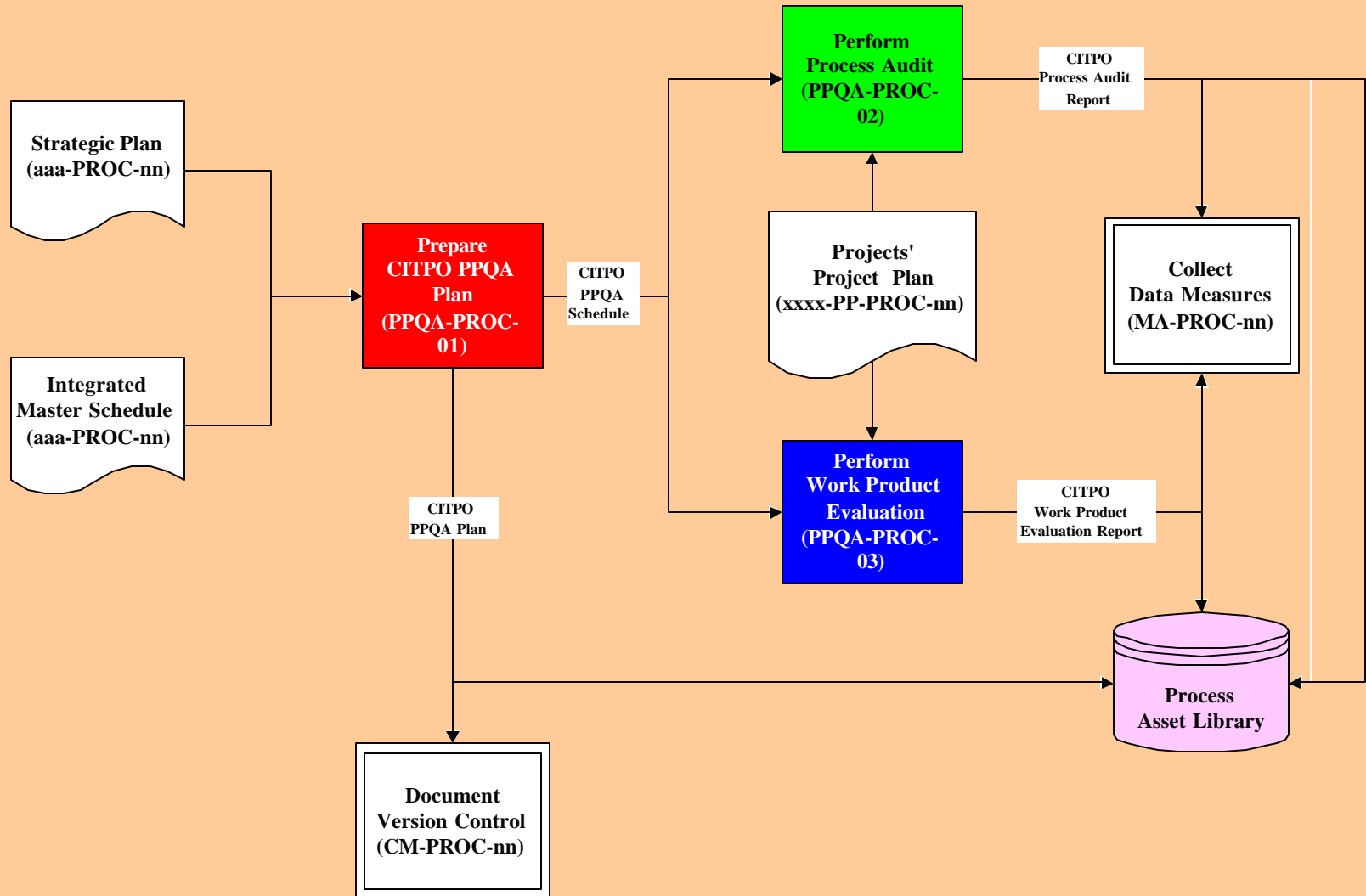
# Challenges

- Interfacing with the enterprise-level process improvement program
- Using Dynamic Object-Oriented Requirements System (DOORS) to produce our documentation
- Establishing an interactive repository
  - Process diagrams (Visio)
  - Procedure workflows (Visio)
  - Activity tables (MS Word)
  - Roles and responsibilities roll-up (SQL database)



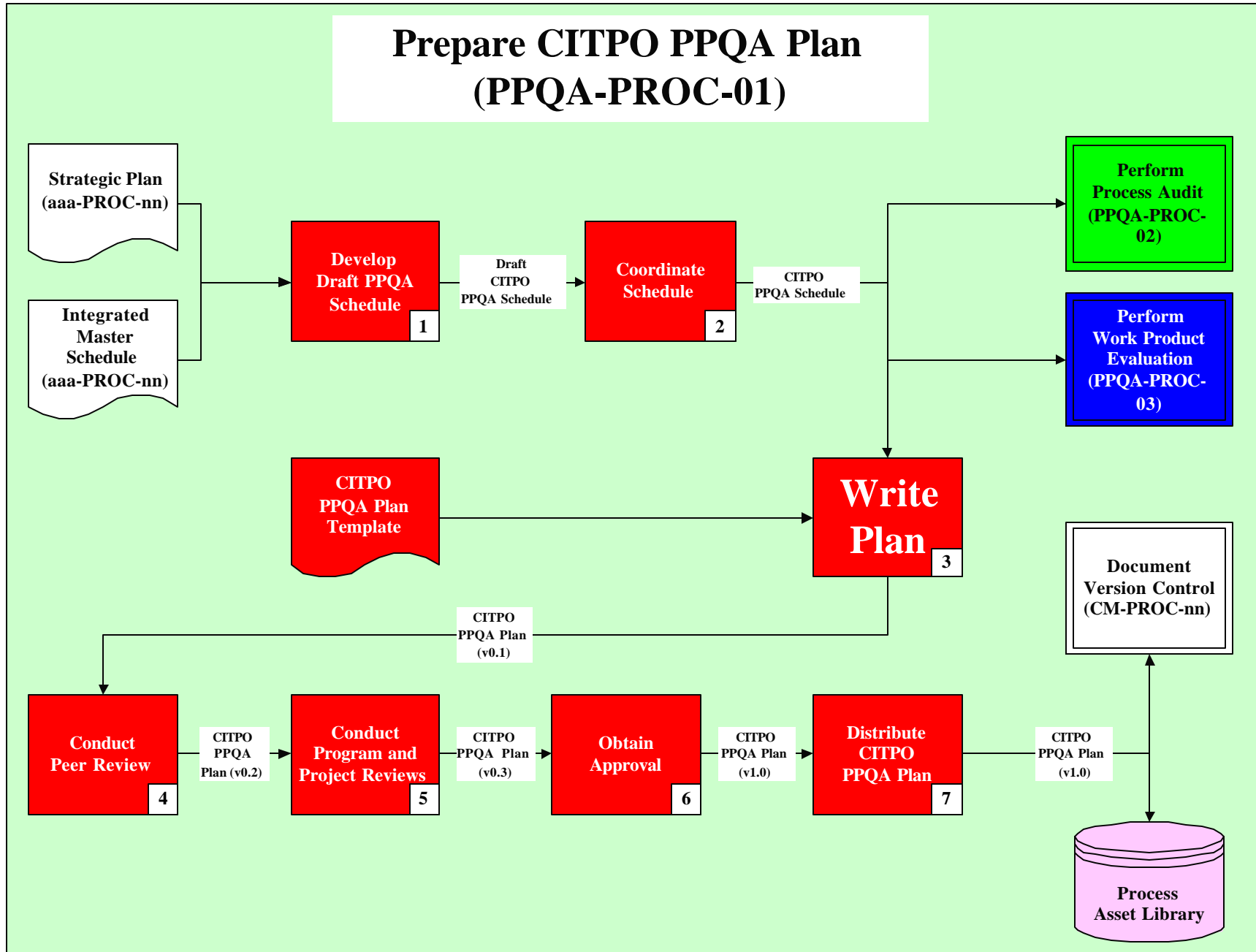
# Interactive Repository

## Process and Product Quality Assurance (PPQA)



# Interactive Repository

## Prepare CITPO PPQA Plan (PPQA-PROC-01)



# Interactive Repository

PPQA-PROC-01		Previous Procedure	aaa-PROC-xx, Integrated Master Schedule aaa-PROC-xx, Strategic Planning	Following Procedure	CM-PROC-xx, Control Document Versions OPD-PROC-xx, Maintain CITPO Process Asset Library PPQA-PROC-02, Perform Process Audit PPQA-PROC-03, Perform Work Product Evaluation
Prepare CITPO PPQA Plan					
Entry Criteria	The PPQA process is ready to be implemented. (Initial entry) The CITPO PPQA Plan needs to be updated. (Subsequent entry)			Exit Criterion	The CITPO PPQA Plan has been approved.

Sequence	Input	Activity	Output	Responsibility	Others Involved
1	Integrated Master Schedule (aaa-PROC-xx) Strategic Plan (aaa-PROC-xx)	Develop Draft PPQA Schedule	Draft CITPO PPQA Schedule	PPQA Lead	PPQA Implementers
2	Draft CITPO PPQA Schedule	Coordinate Schedule	CITPO PPQA Schedule (to PPQA-PROC-02 and PPQA-PROC-03)	PPQA Lead	PI Steering Group Project Office
3	CITPO PPQA Schedule CITPO PPQA Plan – Template (Attachment 3)	Write Plan	CITPO PPQA Plan (v0.1)	PPQA Lead	PPQA Implementers
4		Conduct Peer Review			
	CITPO PPQA Plan (v0.1)	• Review and Comment	Review Comments	PPQA Implementers	N/A
	Review Comments	• Incorporate Comments	CITPO PPQA Plan (v0.2)	PPQA Lead	PPQA Implementers

**CHANGE  
IS GOOD.**



***You go first.***

**DILBERT**

# QUESTIONS?

