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Looking for Transition in All the Wrong Places

96th Communications Group
Eglin Air Force Base, Florida
16 Nov 2005

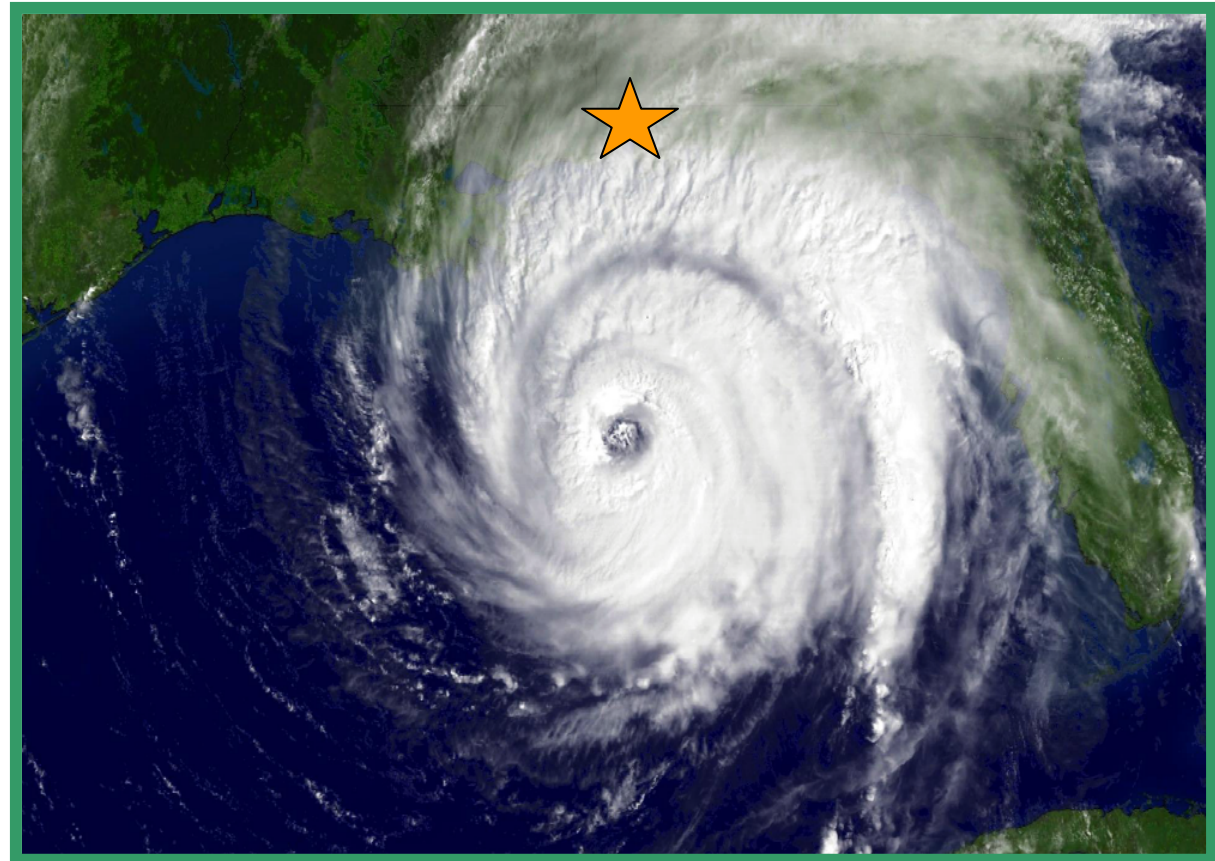




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Sunshine State



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Outline

- **Purpose**
- **Goal**
- **Scope**
- **Transition Process**
- **Results**
- **Lessons Learned**
- **Conclusion**

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Purpose

- **Communicate an effective method for transitioning new groups into an established Organization Software Process (OSP)**
- **Share process improvement experiences and lessons learned with other organizations**



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Goal

- **Expand Process Improvement using an Effective Method by Leveraging from Established Processes**
- **Identify Required Process and Tool Modifications to Support New Groups**



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Goal (continued)

- **Apply Lessons Learned from Existing Software Groups**
- **Institutionalize Optimizing Processes into a New Group within 18 Months**

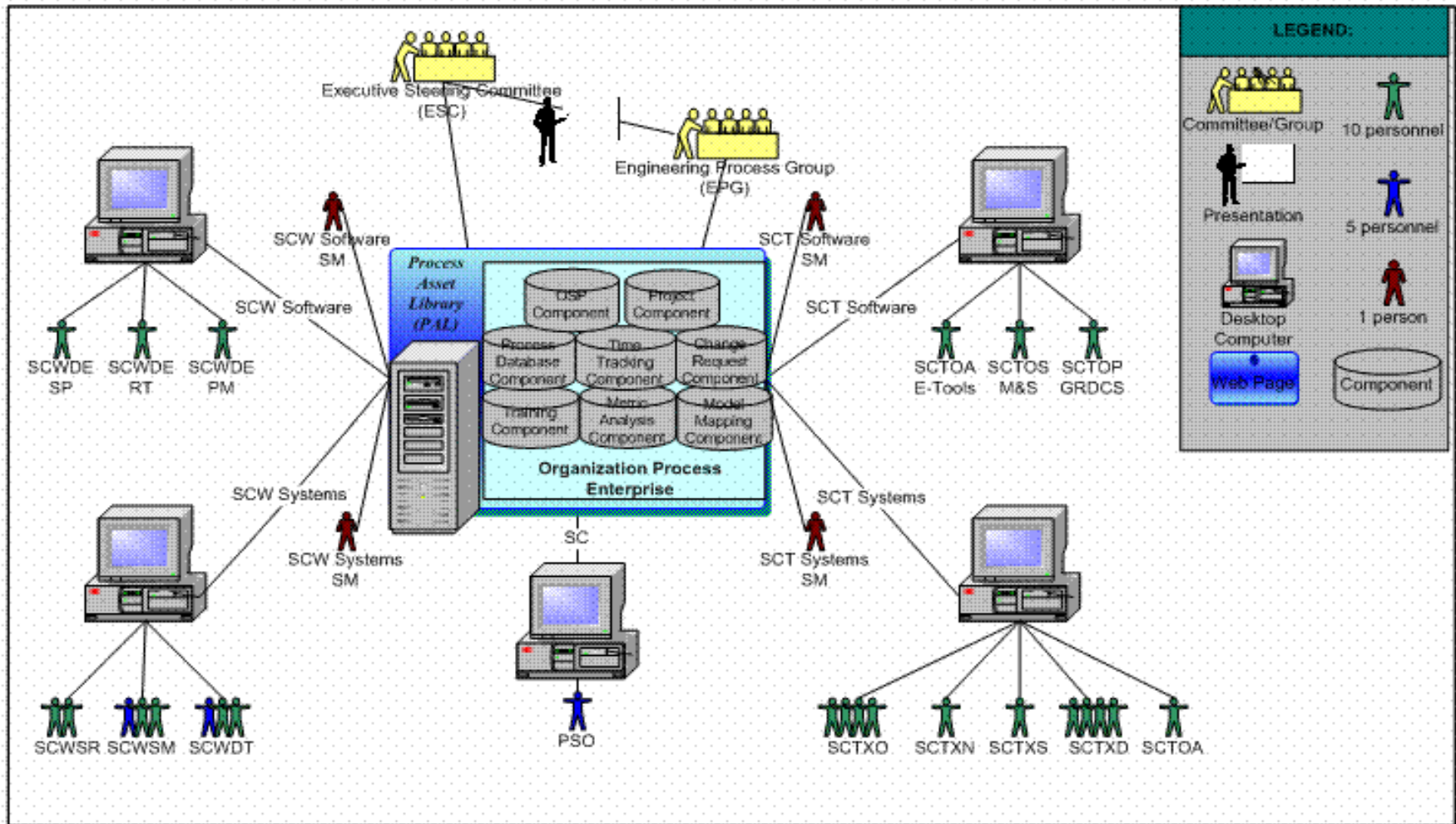


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Organizational Scope

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Scope

- **Organization Achieved CMM[®] Level 5 with 6 Target Software Groups Defined**
 - **Primarily Software Development and/or Maintenance**

- **Transition New Software Group**
 - **50% Software Development and/or Maintenance**
 - **50% Systems Administration Support**



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Scope (continued)

- Transition 7 Systems Groups



- Migrate Software and Systems Groups to Software and Systems Capability Maturity Model Integration[®] (CMMI[®])

- Transition Services Group based on Services CMMI[®]



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Transition Process

- **Execute Orientation**
- **Establish Training Plan**
- **Identify Transition Activities**
- **Implement Transition**
- **Collect Measurements**

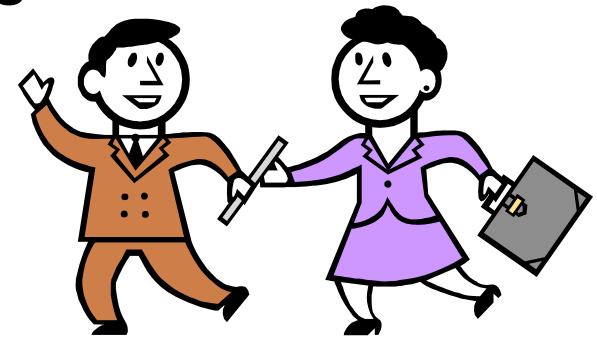


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Transition Process – Execute Orientation

- **Identify Support Infrastructure**
- **Identify Transition Team Members**
- **Update Documentation**
 - **Charters**
 - **Policies**
- **Communicate Transition Partner Activities**





Transition Process – Execute Orientation (cont)

- **Create a Transition Package**
- **Conduct Orientation Briefing**
- **Establish Meetings**
 - **Monthly Transition Status Meetings**
 - **Weekly Transition Working Meetings**





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Transition Process – Establish Training Plan

- **Coordinate Transition Partner Support Activities**
 - Quarterly User Group Meetings
 - Monthly Senior Management Review Meetings
 - Weekly Technical Working Group Meetings
 - Weekly Software Engineering Process Group (SEPG) Meetings

- **Execute Training Process to Create an Individual Training Matrix Form (ITMF) for Each Team Member**



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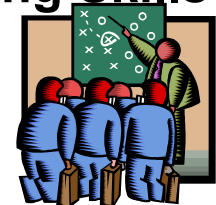


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Transition Process – Establish Training Plan (cont)

- **Create a Training Plan Based Upon Team Member Expertise**
- **Execute Training Plan Based on Defined Approach**
 - **Block Learning Approach - Requires the Student be Proactive in Learning and Applying the Training Skills**
 - **Spiral Learning Approach - Requires the Instructor be Proactive in Teaching Concepts that Build Upon Each Process and Applying Real-World Examples to Develop the Training Skills for Each Student**

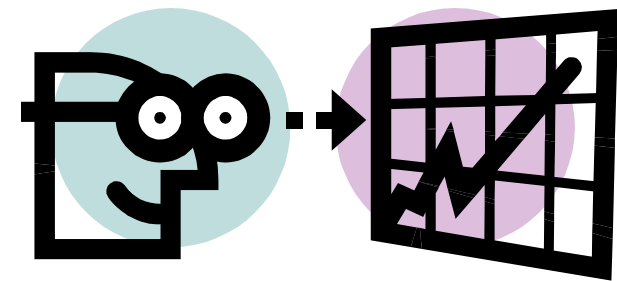


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Transition Process – Establish Training Plan (cont)

- **Update Individual Training Matrix Forms (ITMFs) Based Upon Completed Training Courses**
- **Distribute Updated ITMFs to the Organization Training Manager to Update the Training Database**





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Transition Process – Identify Transition Activities

- **Document the Meeting Minutes**
- **Distribute the meeting minutes to Relevant Stakeholders to Communicate the Status**



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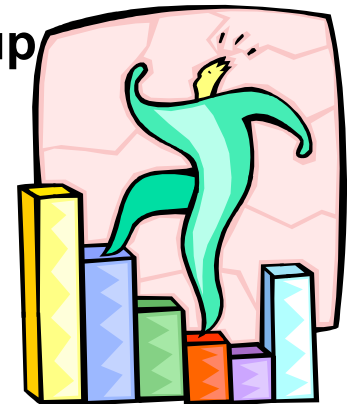


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Transition Process – Identify Transition Activities (cont)

- **Review Each Process Step in the Organizational Software Process (OSP)**
 - **Identify which Process Steps are Executed in the Transition Group**
 - **Create Initial Metrics to Document the Number of Process Steps Currently Executed in the Group**



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Transition Process – Identify Transition Activities (cont)

- **Assign Complexity to Each Step using (Role Factor x Process Factor)**
 - **Role Factor – Who Performs the Step**
 - 1 = Executive Steering Committee, Senior Management, SEPG, Organization Training Manager, Organization Software Quality Assurance (QA) Manager, or Project Support Office
 - 2 = Project Quality Assurance Manager, Configuration Management Manager, First Level Supervisor, Group Leader, Configuration Control Board (CCB), Transition Partner
 - 3 = CCB Member, Project Leader, Development Team Member



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Transition Process – Identify Transition Activities (cont)

- **Assign Complexity to Each Step
(Role Factor x Process Factor)**
 - **Process Factor – Action Verb in the Step**
 - 1 = Acquire, Attend, Submit, Provide, Update, Add, Coordinate, Distribute, Place, Schedule, Notify, Initiate, Store, Approve, Reach Consensus, Assign, Send, Proceed, Collect, Annotate
 - 2 = Record, Identify, Document, Consolidate
 - 3 = Analyze, Verify, Execute, Convene, Determine, Define, Develop, Conduct, Discuss, Process, Perform, Complete, Examine



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Transition Process – Identify Transition Activities (cont)

- **Pre-defined Process Criticality in Transition Metrics**
 - **C = Consistency Failure if Step is not Executed**
 - **D = Data Collection Failure if Step is not Executed**
 - **P = Performance Failure if Step is not Executed**

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Transition Process – Identify Transition Activities (cont)

- **Document and Prioritize Steps not Performed in the Group**
- **Document Effort, Duration, Software, Affected Personnel and Hardware Resources Based Upon Complexity Factor**



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Transition Process – Identify Transition Activities (cont)

- **Conduct Transition Overview Briefing with the Team to**
 - **Review Organization’s Process Improvement Journey**
 - **Train the Transition Process**
 - **Show the Way Ahead**



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Transition Process – Implement Transition

- **Select a Project within the Transition Partner Group to Pilot the Organizational Software Process**
- **Identify a Project Mentor from an Existing Group**
- **Acquire Feedback for Process Updates Based Upon the Pilot Project**





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Transition Process – Implement Transition (cont)

- **Submit Change Request for Feedback Requiring Organizational Software Process (OSP) Modifications to the SEPG**
- **Update the OSP to Support the Transition Partner**
- **Coordinate Training for the OSP Modifications**

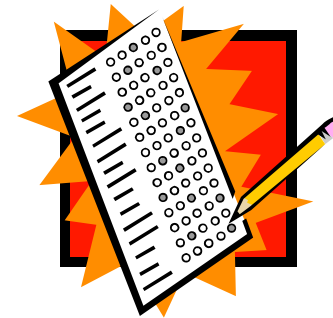


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Transition Process – Implement Transition (cont)

- **Provide Training Matrix Updates to the Organizational Training Manager to Update the Training Database**
- **Pilot the updated Organization Software Process (OSP) within an existing (experienced) group**

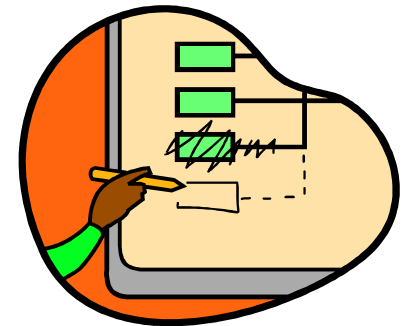


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Transition Process – Implement Transition (cont)

- **Acquire Feedback and Lessons Learned Based Upon the Pilot**
- **Submit the Organizational Software Process (OSP) Change Request to the SEPG as Applicable**





Transition Process – Collect Measurements

- **Document the Actual Effort (in hours) Expended to Complete the Transition Tasks**
- **Document the Estimated, Planned and Actual Changes to the OSP**





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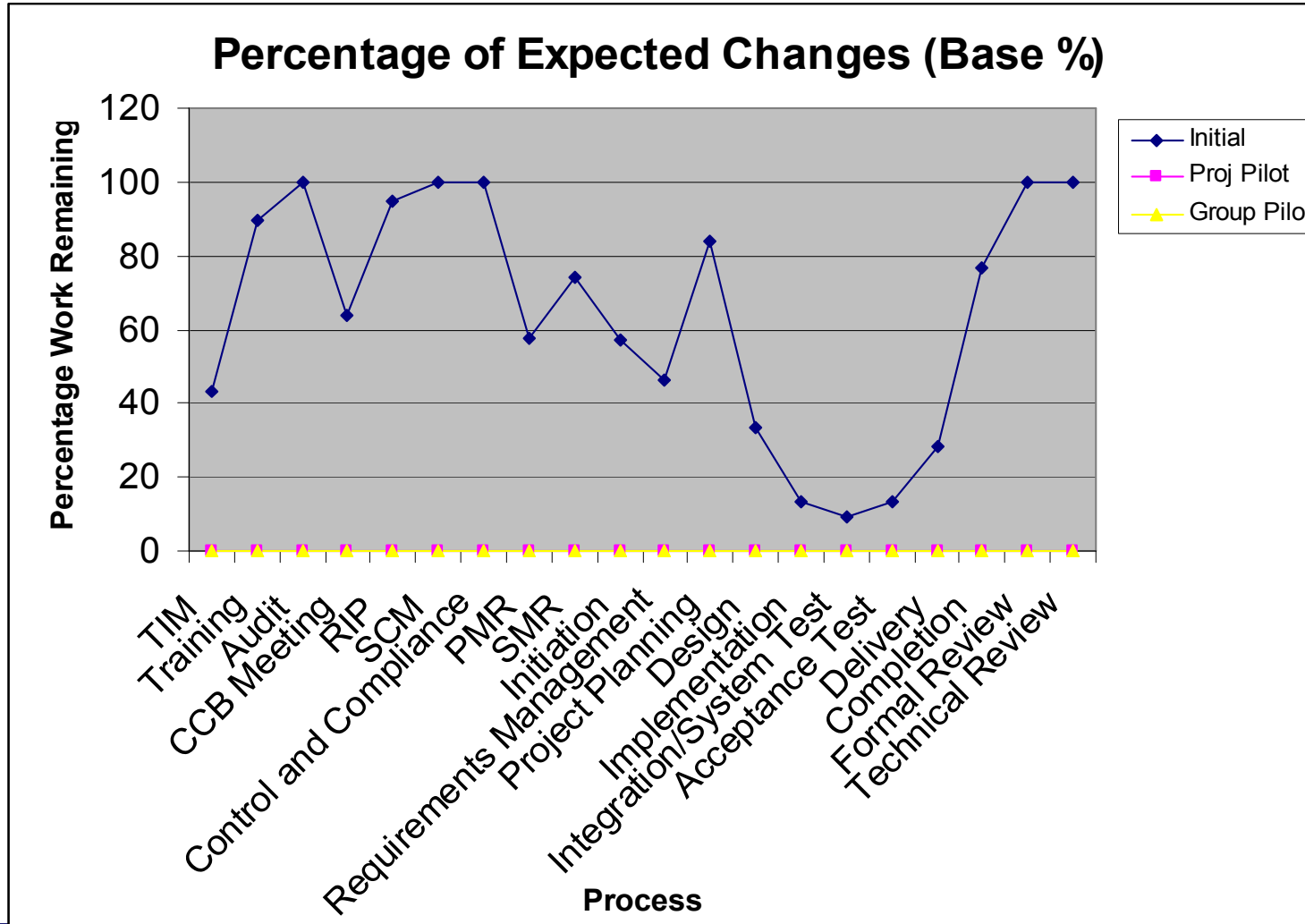
Results

- **Allocated 10% - 20% Effort to SEPG Mentor assigned for Process Facilitation**
- **Showed Process Changes Expected during Initial Analysis; however, Showed No Process Changes Required from Piloting Feedback**
- **Established a New Target Software Group in less than 1 year, which indicates Transition Process is Extremely Successful**



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Results (continued)



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Results (continued)

Transition Process Complexity Analysis Form (TPCAF)

As of:	30 December 2004								
Process Name	Step#	Yes/No	Base %	Criticality Factor	Role Factor	Process Factor	Step Complexity Factor	Process Complexity Factor	Work Remaining
Technical Interchange Meeting (TIM)	1	Yes	43.48%	C			0	49	21.30
	2	No		D	3	2	6		
	3	Yes		D			0		
	4	Yes		C			0		
	5	No		C	3	1	3		
	6	No		D	1	1	1		
	7	Yes		C			0		
	8	Yes		C			0		
	9	Yes		C			0		
	10	No		C	3	2	6		
	11	No		C	3	2	6		
	12	No		P	3	2	6		
	13	No		P	3	2	6		
	14	Yes		C			0		
	15	Yes		P			0		
	16	No		P	3	2	6		
	17	Yes		D			0		
	18	Yes		C			0		
	19	Yes		C			0		
	20	Yes		D			0		
	21	No		C	3	1	3		
	22	No		D	3	2	6		
	23	Yes		D			0		

- **Criticality Factor**
 - C – Consistency
 - D – Data Collection
 - P – Performance
- **Role Factor (who)**
 - 1 – Management
 - 2 – Support
 - 3 – Team
- **Process Factor (verbs)**
 - 1 – Simple
 - 2 – Average
 - 3 – Difficult
- **Step Complexity**
 - Role * Process Factors
- **Process Complexity**
 - Add up Step Complexities
- **Work Remaining**
 - Base % * Process Complexity Factor

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Lessons Learned

- **Tailor the Training Plan Based Upon Personnel Skills and Experience**
- **Demonstrate Tool Functionality using an Example Project During Training Sessions**



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Lessons Learned (continued)

- **Communicate Activity Status and Schedule Changes on a Periodic Basis**
- **Identify a Process Champion to Regularly Mentor to Other Team Members**





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Conclusion

- **Expected Transition to Require Updates to the Organizational Software Process and Associated Artifacts, but we were “Looking for Transition in all the Wrong Places” because**
 - **Basic Engineering Principles implemented within the Organization provided a means to Utilize Existing Processes**
 - **New Processes do not need to be created for each Discipline**
 - **Cultural Change versus Documentation/Process Change is a More Effective Means for Transitioning**



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Conclusion (continued)

- **Plan to Utilize the Transition Process to**
 - **Expand Process Improvement to Groups with Systems Engineering (SE), Supplier Sourcing (SS) and Integrated Process and Product Development (IPPD) Disciplines**
 - **Leverage Existing Processes to Reduce the Cycle Time for Developing Processes that Support the Software Engineering, Supplier Sourcing, and Integrated Process and Product Development**

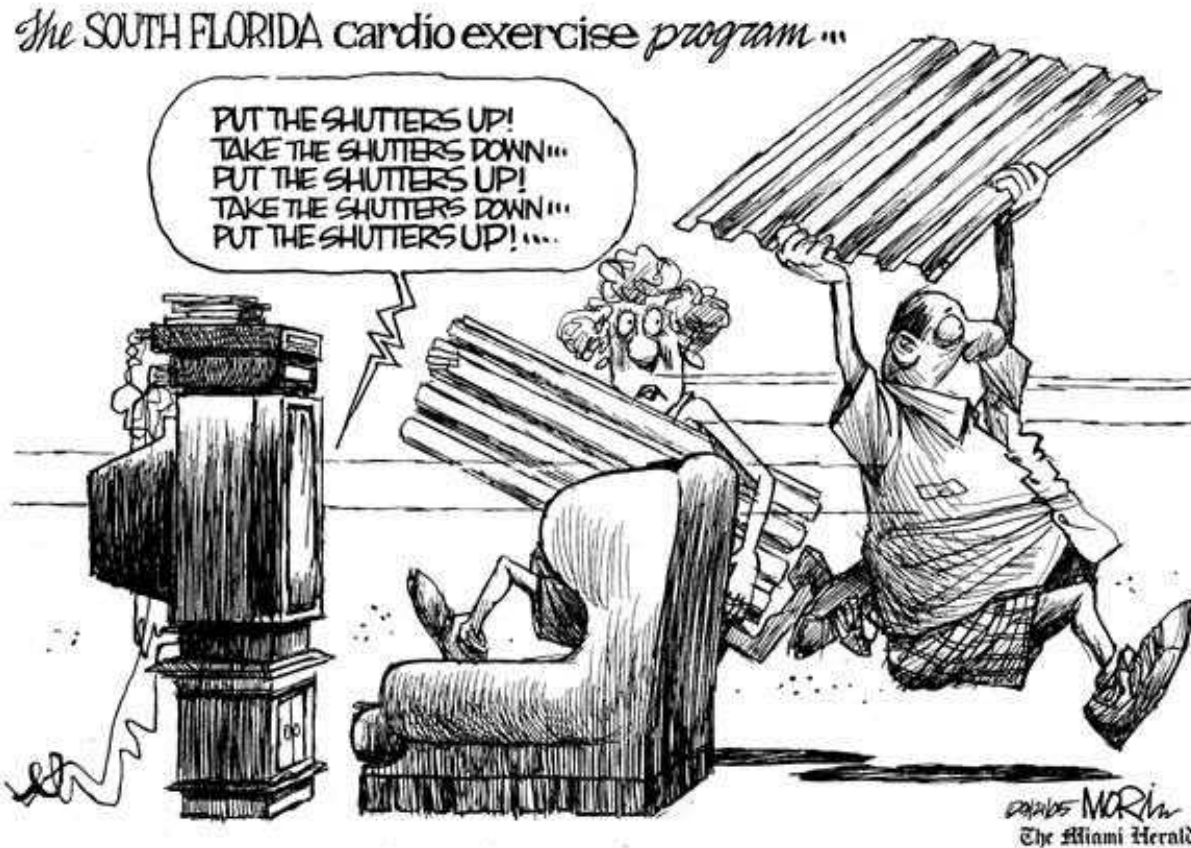
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Questions?



Floridian Transition Process

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