

Experiences with Indicator-Based Appraisals: TRW

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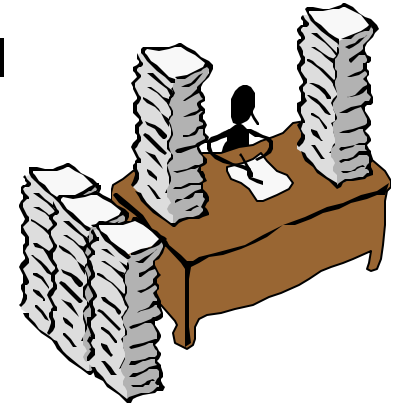
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Practice Implementation Indicators



- **PIIs are the evidence that demonstrates that a CMMI practice is performed – direct, indirect, affirmations**
- **TRW has used PIIs for many years, as the primary way of demonstrating CMMI compliance**
 - Used to prepare for and conduct CMM CBA IPI appraisals
 - A homegrown Excel-based tool is used by all projects and the organization to record how they comply with the CMMI
- **PIIS are used continuously throughout the improvement cycle**
 - Illustrate the level of detail projects must go to - “evidence for every practice in every process area”
 - Communicates the distribution of organizational and project responsibilities (e.g., policies)
 - Identify gaps between the CMMI and current practices
 - Track improvement progress
 - Determine readiness for appraisal
 - Verify CMMI achievements

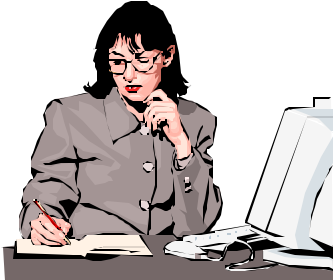


A Continuous Appraisal Cycle



Self Assessment

- Completed by Project Manager
- Identifies gaps



Appraisal (SCAMPI)

- Used as questionnaire and reference sheet



PIID links all 4 steps

Level 2 - Managed		Level 2 - Managed	
Requirement Management		Requirement Management	
1001	Requirements are managed end-to-end, with project plan and work products as needed?		
1002	Does the project manager understand self the requirements process in the context of the requirements?	No	No
1003	Does the project manager contribute to requirements from the project plan?	No	No
1004	Does the project manager change the requirements as they evolve during the project?	No	No
1005	Does the project manager participate in decisions on whether to release the requirements and the project plan and work products?	No	No
1006	Does the project manager coordinate between the project plan and work products and the requirements?	No	No
1007	Are process improvements as a management process?		
1008	Does the organization establish and maintain capacity for planning and performing the requirements management process?	No	No

Verification (ARC C)

- Reviewed by Process Group for accuracy, potential improvement strategies



Tracking Improvement

- Updated and reported as improvements made



Lessons Learned



1 Direct artifacts provide the most accurate assessment of CMMI compliance

- People often think they're complying – “It's somewhere in the project plan.” – but the evidence isn't conclusive
- Indirect evidence helps point toward direct evidence

2 Affirmations in interviews are very error-prone

- Crafting interview questions is time-consuming
- Interviewees often misunderstand the questions or the terminology
- Interviews are best used as a sanity check of the direct evidence

3 Efficient appraisals require significant up-front work

- Projects and the organization must assemble, organize, and review the evidence

4 A proper evidence trail requires up-front planning and education

- How will we document each practice? How much documentation is adequate?

5 The focus on evidence can diminish sight of the improvement itself

- More time creating documents, than thinking about the decisions reflected in the documents – “just creating paperwork for the appraisers”

