THE VALUE OF PERFORMANCE
NORTHROP GRUMMAN

Refocusing Appraisals on Achieving and Sustaining Improvement

12th Annual CMMI Technology Conference 5-8 November 2012

> Rick Hefner, PhD Northrop Grumman Corporation rick.hefner@ngc.com

Background



- A CMMI appraisal is an expensive and time-consuming affair
- Too often, those involved lose sight of the real objective of CMMI – to improve project/organizational performance!
- This presentation will examine approaches for structuring an appraisal that results in true project performance improvements

SM SCAMPI, and SCAMPI Lead Appraiser are service marks of Carnegie Mellon University.

[®] CMMI is registered in the U.S. Patent and Trademark Office by Carnegie Mellon University.

Appraisal Objectives



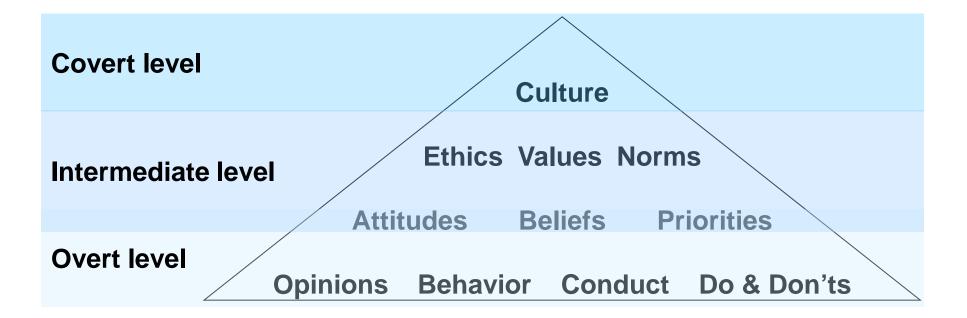
- The goal of the appraisal process area to:
 - Develop an accurate assessment against the model
 - Build organizational understanding and buy-in
 - Promote further process improvement
- Appraisal activities and style should be focused on ensuring these goals (and any others the sponsor may have) are met

Factors to Consider in Selecting an Appraisal Style



Reference: Rick Hefner, "Selecting an Effective Appraisal Style", 2008 CMMI Technology Conference and User Group

- An organization's culture
 - Guides decision making
 - Provides identity for members
 - Amplifies commitment
 - Guides employee behavior
 - Provides justification for actions



Types of Cultures





The Clan Culture

A very friendly place to work where people share a lot of themselves. It is like an extended family.



The Hierarchy Culture

A very formalized structured place to work. Procedures govern what people do.



The Adhocracy Culture

A dynamic entrepreneurial, and creative place to work. People stick their necks out and take risks.



The Market Culture

A results oriented organization whose major concern is with getting the job done. People are competitive and goal-oriented.

How do these organizations react to... Being measured? Success? Failure?

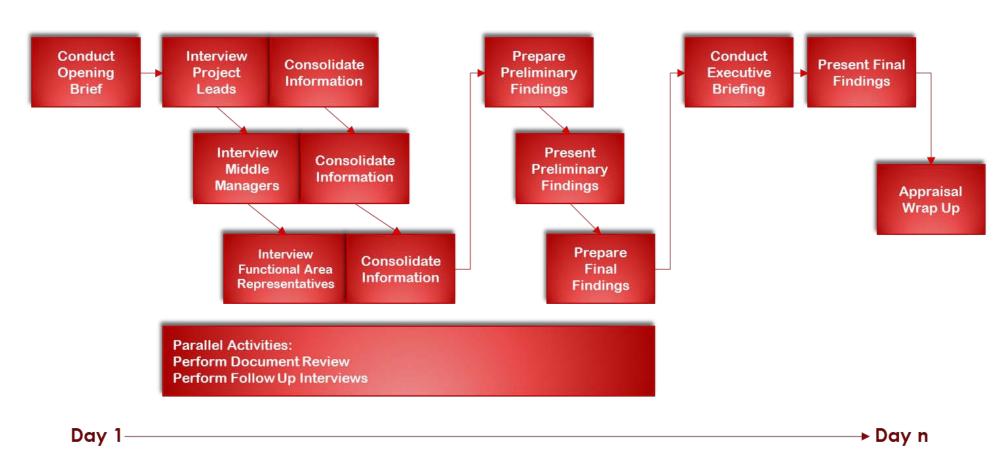
Key Decision Factors



- Formal or informal?
 - How formal is information sharing in the organizational?
 - How does formality effect perceived accuracy? Fairness?
- Interview-focused or evidence-focused?
 - Is the culture documentation intensive?
 - How distributed is knowledge and decision making?
- Educational or audit?
 - How knowledgeable is the organization about model implementation?
 - How will misconceptions be perceived?
- Cooperative or adversarial?
 - How are external views perceived?
 - What value can an external view provide?

SCAMPI Activities





Opening Briefing



An opportunity to set expectations...

Promoting Further Process Improvement

 Explain why following CMMI is important to success of the business



- Explain the improvement activities that led up to the appraisal
- Present the background and pedigree of the appraisal team members ("Why should I value what you say?")
 - Address any potential conflicts of interest
 - Explain team consensus
- Explain that the purpose of the appraisal is to identify further improvements
 - Ensure sponsor reinforces

Document Review



A opportunity to demonstrate depth of the review...

Promoting Further Process Improvement

 Evidence requests should make it clear what the team is looking for and why current evidence is not adequate (avoid "bring me a rock")

Interviews



An opportunity to demonstrate the objectivity of the appraisal...

Promoting Further Process Improvement

- Ensure you are interviewing the thought leaders
- Explain that interviews are looking to confirm understanding of written evidence
- Ensure interviewees are relaxed and do not feel that they are in a pressure chamber
 - "I do not know is an acceptable answer"
- Ensure everyone has a chance to provide the information they feel is key to understanding their implementation

Preliminary Findings Presentation



A opportunity to build understanding and buy-in...

Promoting Further Process Improvement

- Presentation should focus on education
 - Here's why this is a weakness... Here's what the model expects and why...
- Give every opportunity to refute the findings
 - A finding perceived as inaccurate destroys credibility and buy-in
- Draft findings should identify gaps in direct evidence <u>for each project</u>
 - Avoid "Some projects do not perform..."
 (Note: This does NOT violate confidentiality, if done correctly)
 - No need for discussion, except to ensure findings are understood
 - Anyone who supplied evidence can participate, not just interviewees

Findings Worksheet



L2RM: Requirements Management

Goal	Practice	Practice Text	Project	Direct	Affirm	Inst Char	Weaknesses	Information Needed
9G 1		Develop an understanding with the requirements providers on the meaning of the requirements.	Project A	Х	Х	FI		
			Project B	Х	Р	LI	Build 4 requirements added without normal review process.	
			Project C	Х	N	PI	TIM #2 did not follow defined process.	TIM #2 minutes
	SP 1.2	Obtain commitment to the requirements from the project participants.	Project A	Χ	Х	BP	Efficient Process for obtaining commitment	
			Project B	Ν	Ν	NI	No commitment obtained.	Commitment
			Project C	Ν	S	NY	Note: Not yet reached in life cycle	
		Manage changes to the requirements as they evolve	Project A	Х	Х	FI	Alternate Practice: Customer Provides CCB for Requirements	

- Immediately after the interview (consolidation), the mini-team completes the Findings Worksheet together
- Direct column: X if evidence of the practice was reviewed and appropriate; blank if not
- Affirm column: X if the direct practice was positively affirmed in the interview; blank if not
- Note any weaknesses and any evidence requested; send out evidence requests
- Before team consolidation, each mini-team provides a recommended ratting (e.g. LI, PI) for each instantiation (do not rate the organization)

What causes a weakness, when the projects/ organization have prepared for the appraisal (Verification mode)?



The projects/organization understood they had a weakness, but hoped the appraisal team wouldn't find it	Accuracy is key for buy-in
The projects/organization didn't review their evidence carefully enough	Finding weaknesses provides further opportunities for improvement
The projects/organization misunderstood the intent of a practice	Must be able to explain intent
The projects/organization don't value compliance with the practice _{Refe}	Must be able to explain the value of the lighty Effective Appraiser",

2012 CMMI Technology Conference and User Group,

Final Findings Presentation



A opportunity to start the next round of improvements...

Promoting Further Process Improvement

- Continued focus on education
 - Here's what else you can do to improve...
 - Here's how addressing this will improve performance...
- Ensure sponsor reinforces
 - Set expectations early in planning, remind during Executive Briefing

Summary



- The appraisal style will greatly affect the appraisal accuracy, project/organization understanding and buy-in, and especially the perceived value
- Appraisers should be adopt practices which promote continued sustainment and further improvement