



# Indicators of Reliable SCAMPI® Appraisal Results

Bruce A. Boyd

Associate Technical Fellow

The Boeing Company

Integrated Defense Systems – St. Louis, MO

# The “Question”

Dear Lead Appraiser,

Your recent appraisal findings briefing said that you collected data on the number of artifacts reviewed, the number of appraisal team hours, the number of projects, the number of participants, and the number of additional evidence items requested.

Is there some kind of aggregate score that could be used to determine how effective the appraisal was?

*Curious*

# The Answer?

## IT DEPENDS!

- Unfortunately, there is no “magic formula” for calculating the effectiveness or reliability of a given SCAMPI® appraisal.
- There are some minimums for artifacts reviewed and appraisal team hours, but it’s just not true that “bigger is better”.
- However, we’ve found that there are some key attributes that can serve as indicators of an effective appraisal...

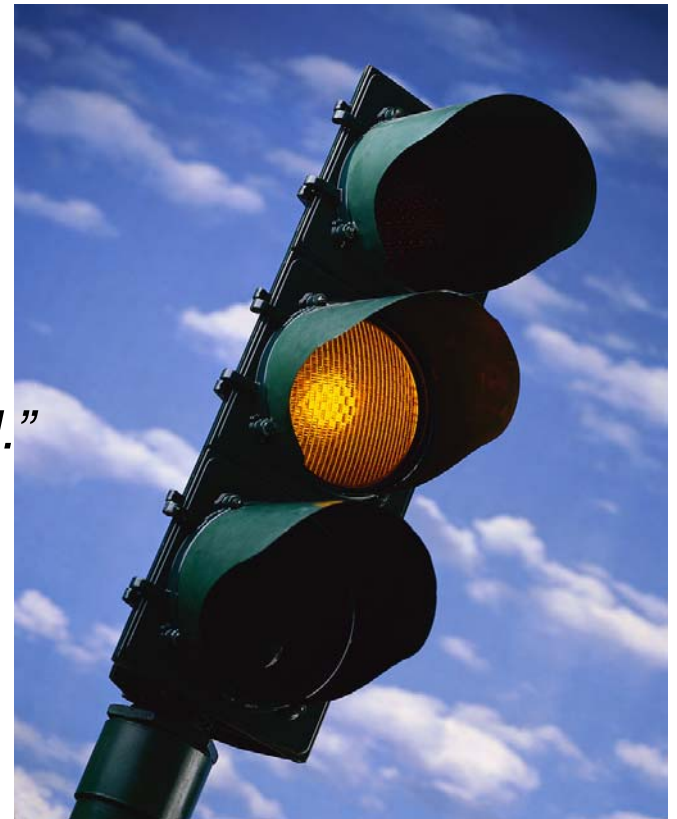
# Appraisal Effectiveness Indicators

- The following attributes of appraisals may be used as indicators of the effectiveness of appraisals...
  - Planning
  - Organizational Unit – Projects
  - Duration/Effort
  - Team Size and Composition
  - Team Activities and Training
  - Project Participation
  - Evidence Review



# Caution!

- These indicators are derived from some actual lessons learned, some “horror stories” from other organizations, some conversations with lead appraisers, and some personal opinions.
- They are not hard and fast rules, nor do they pretend to support or replace the requirements of any published appraisal method description.
- *“Any resemblance to actual persons or events, living or dead, is purely coincidental.”*
- They are just something to think about...



# Appraisal Planning

- How thorough is the appraisal plan?
  - Planning should be done well in advance of the start date
  - The plan should reflect an understanding of the organization being appraised
  - The plan should not just be a “boilerplate” with names and dates inserted
  - The appraisal sponsor and other key members of the organization should have opportunities for significant input into and review of the plan
  - The lead appraiser should interact with the sponsor during planning, not just to get approval of the plan
  - Once the appraisal has begun, it should follow the approved plan



# Organizational Unit -- Projects

- How are the projects in the appraisal selected?
  - The lead appraiser should assess how well the projects represent the organization as a whole
  - Generally, the appraisal scope should not just include the projects offered by the organization
  - The lead appraiser should not offer a “site certification” – such certifications are not part of the SCAMPI® method
  - Projects should not be allowed to “drop out” once the appraisal has begun, nor should new projects “drop in”
  - Projects that have been previously appraised should not be granted a “free pass” – they must be appraised from a “clean sheet”



# Appraisal Duration and Effort

- Does the appraisal take a reasonable amount of time?
  - A Class A SCAMPI® SE/SW/IPPD/SS appraisal of 4-6 projects ought to take about 10 work-days to complete
  - Less than 5 days does not seem reasonable
  - Pre-onsite review of evidence is recommended
  - An appraisal should not stretch out over several weeks or months
  - Team work-days should not be excessively long
  - A planned Class B or C appraisal should not “morph” into a Class A appraisal
  - Projects should not “rework” evidence during the appraisal period





# Appraisal Team Size/Composition

- How many people are on the team?
  - A full SCAMPI® Class A Level 5 appraisal should probably have 8-12 people to keep the workload manageable
- What is the make-up of the team?
  - Team members from outside the appraised organization should be welcomed
  - A well-balanced team includes experienced practitioners representing the disciplines and functions being appraised
  - A mixture of experience levels and viewpoints provides for good consensus building
  - Domineering personalities should be avoided



# Appraisal Team Activities and Training

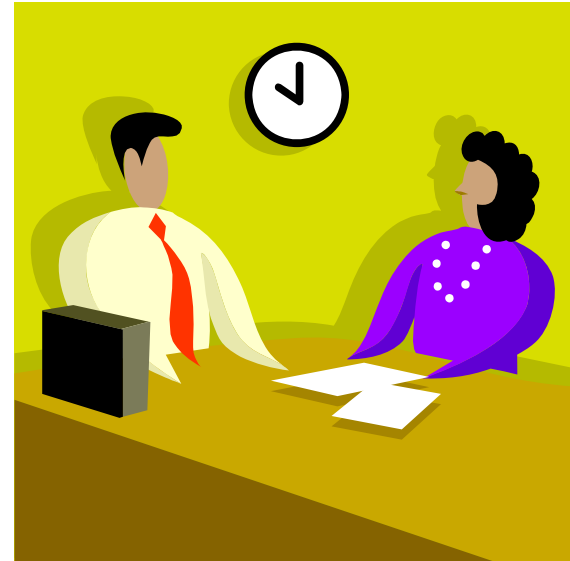
- What do the appraisal team members do?
  - All should be reviewing evidence, participating in interviews, writing requests for information, participating in characterization discussions, and developing findings
  - All should be operating somewhat autonomously, not as “gophers” for the lead appraiser
  - Team findings should be formed by consensus, not the dictate of the lead appraiser



- How was the appraisal team trained?
  - All should have received required training in the model and the appraisal method – not necessarily by the lead appraiser
  - The lead appraiser should verify training and other credentials of team members before the start of the appraisal

# Project Participation

- Who does the appraisal team talk to on the projects?
  - Project managers and practitioners should be interviewed directly
  - Process focals or other “surrogates” should not be primary sources of affirmations
  - “Hearsay” evidence should be followed-up with face-to-face interviews
  - Organizational EPG members should not need to participate in project-level interview sessions
  - Pre-appraisal briefings may address the conduct of the appraisal, but should not be “coaching” sessions used to provide the “right answers”



# Evidence Review - 1

- How is objective evidence used in the appraisal?
  - Documented evidence (Direct and Indirect) should be the primary driver of practice characterization
  - Most effective (and efficient) appraisals are done in verification mode, not discovery mode
  - Practice Implementation Indicators (PIIs) of some form should be used to organize and present evidence to the appraisal team



# Evidence Review - 2



- Intuition or “gut feel” should not be allowed to overrule the objective evidence
- Counter-affirmations should not be ignored – they may be a source of latent truth
- Artifacts should be used appropriately – for example, process documents are not direct evidence of performance
- Artifacts should not be created just for the appraisal – “wet ink” documents should be treated as suspect

# Summary

- When evaluating whether an appraisal (planned or past) is effective, the organization sponsor and EPG should consider the following questions...
  - *How thorough is the appraisal plan?*
  - *How are the projects in the appraisal selected?*
  - *Does the appraisal take a reasonable amount of time?*
  - *How many people are on the team?*
  - *What is the make-up of the team?*
  - *What do the appraisal team members do?*
  - *How was the appraisal team trained?*
  - *Who does the appraisal team talk to on the projects?*
  - *How is objective evidence used in the appraisal?*

# Conclusion

- What you do with these indicators is up to you.
- Our experience has been that you ignore these indicators at your own risk.
- When these indicators are considered, you can have confidence that the appraisal results represent an accurate assessment of your organization's CMMI maturity level and/or capability profile.
- Will the appraisal will indicate how good you are at passing appraisals?
- Or... how good you are at managing projects, developing products, and improving performance?

