

I've got a SCAMPI A planned for a year from now,  
I'm preparing for a SCAMPI B,  
and here comes V1.3.

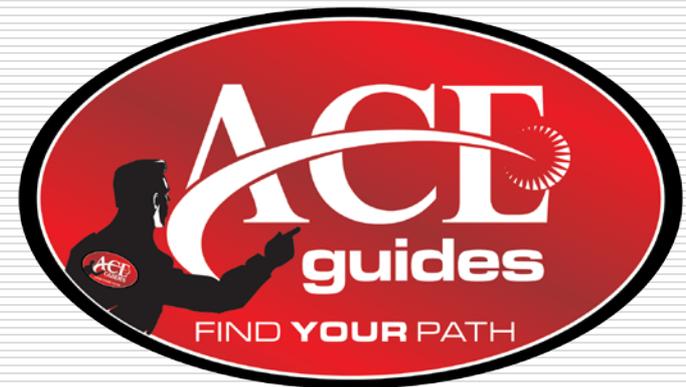
What should my evidence mapping (PIID) look like?

... PIID Strategies in a Changing Environment

Sam Fogle

SCAMPI High-Maturity Lead Appraiser

**ACE** Guides, LLC



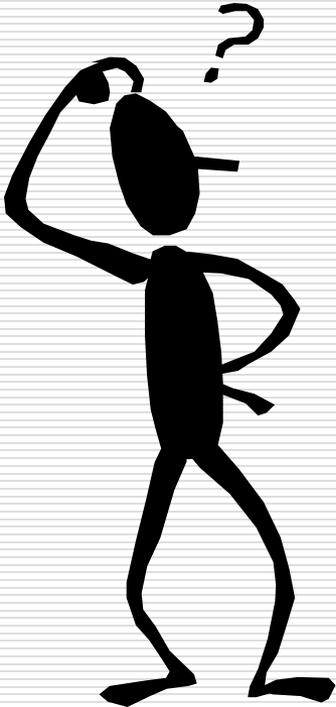
# Agenda

---

- SCAMPI V1.3 – When and What?
- Data Collection? What's Involved?
- So, what do I build?
- Problems we have met & Lessons we have learned
- Got Any Tips?

# SCAMPI V1.3 - When and What?

---



# V1.3

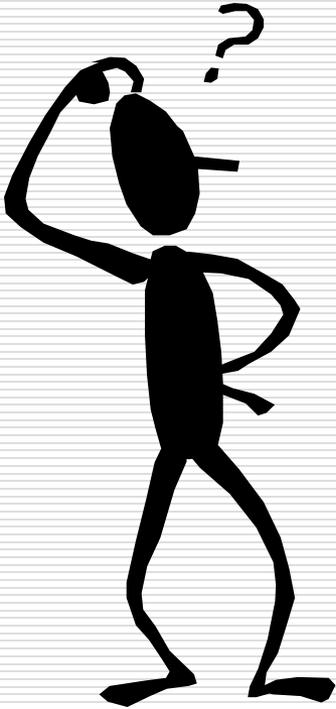
---

- SCAMPI V1.3 available Jan 2011
- SCAMPI V1.2 accepted until Nov 1, 2011
- Trying to cure “PIIDs Disease”
  - Establishing evidence types that don’t lead to wasted work (e.g. distinction of direct/indirect)
  - Unambiguous rules/guidance for “enough?”
  - Efficient methods for collecting needed data
  - “Managed Discovery” – mix of Ver. & Disc.
  - “Phased Data Collection” - evolutionary

# Data Collection?

## What's Involved?

---



# Appraisal Terms and Concepts

---

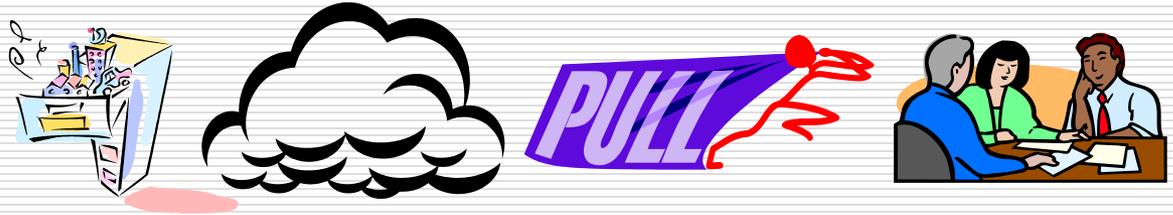
- “To make reasonable judgments regarding an organization’s implemented processes relative to the appraisal reference model, appraisal teams **base their judgments on the collection of objective evidence** for each specific and generic practice applicable to process area goals within the appraisal scope.” \*
- Objective evidence or “footprints”, left behind after a practice has been implemented, are Practice Implementation Indicators (PIIs).
- A mapping between model practices and the PIIs is called the Objective Evidence Database.

\*From the draft SCAMPI<sup>SM</sup> A, V 1.3: Method Definition Document

# Appraisal Models

---

## 1. Full Discovery



Full discovery requires that the team do a search for evidence for each practice

SCAMPI<sup>SM</sup> pilots took more than a month  
Appraisal conduct needed to be streamlined

# Appraisal Models

---

## 2. Full Verification



Complete Mapping



Full verification has the organization provide a mapping that indicates what evidence is appropriate for every practice. The appraisal team only needs to search when the data provided is not clear or convincing

An Objective Evidence Database could require >1000 hrs to develop

Appraisal preparation needed to be streamlined

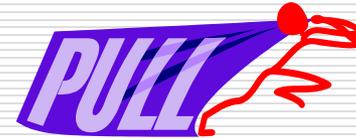
# Appraisal Models

---

## 3. Managed Discovery



Mapping  
of Key  
Artifacts



Managed discovery has the organization provide key artifacts that address the majority of the practices and the appraisal team asks for additional evidence as required.

The appraisal conduct may require additional time but preparation is simplified

# Appraisal Models

---

Comparison of the three approaches:

	Preparation	Conduct	Risk
Full Discovery	Low	High	High
Full Verification	High	Low	Low
Managed Discovery	Moderate	Moderate	Moderate

SCAMPI V1.2 and V1.3 both allow all of the above or anywhere in between

It is up to the organization and lead appraiser to plan compatible preparation and conduct phases such that the organization's needs are best met.

# Data Types

---

## V1.2

- Direct Evidence  
**needed** for every practice
- Indirect Evidence  
not necessarily for EVERY practice\*
- Affirmations  
not necessarily for EVERY practice\*

## V1.3

- Artifacts  
**needed** for every practice
- Affirmations  
**needed** for every practice

\*Talk to your Lead Appraiser

# An appropriate set of artifacts?

---

- Enough to convince the appraisal team that a practice has been fully implemented\*
  - Multiple instances for items that are produced frequently, e.g. meeting minutes
  - Cover the breadth of the practice

# So, what do I build?

---



# That's for you & your LA to decide

---

Balance your organization's resources and constraints

- What are your organization's priorities?
- What level of resources are available?  
(Including availability of CMMI and SCAMPI expertise)
- What level of risk is acceptable?

You will need to create some form of Objective Evidence Database or Mapping that relates CMMI practices to your data.

# Who should build your mapping?

---

What kind of knowledge is needed?

- Understanding of the model practices
- Understanding of the appraisal method
- Understanding of how the project's data is organized

Do you have one person with all 3?

If not, then you need a team

- Process person?
- Project representative?
- Consultant?



# Mapping Contents

---

- CMMI<sup>®</sup> practice name
- Artifact name
- Artifact location
- Basic Unit (Project) or Support Group
- Comments (may explain relevance of data)
- ...

# Mapping format

---

- Does your Lead Appraiser have a tool that they recommend?
- Will you use the data for internal purposes?
- How easy is it to insert or retrieve data?
- How easy is it to correct/update the data?
- Will you map practices to artifacts or artifacts to practices?

# Cost & Timing

---

- Objective Evidence Database development can be a major driver of total appraisal cost
- The highest quality will come from developing the Objective Evidence Database in several iterations, so start early
- If it is possible to use the same sampling in a series of appraisals (B, then A), then going through the B will identify many of the Objective Evidence Database issues and allow corrections to the data collection process prior to the A.

# Validation

---

- Involve team members in quality checks
- Don't wait for Readiness Review to check the quality of the Objective Evidence Database
- Evolve mapping over a series of appraisals
- Effort devoted to the Objective Evidence Database (including quality checks) should be proportional to the importance of achieving the ratings

Remember: having an inaccurate mapping does not just make it harder to find the correct data, it may convince the appraisal team that appropriate data does NOT exist

# Problems we have met & Lessons we have learned

---



# Problems

---

- What sort of problems have you encountered in trying to plan for or develop your mappings?
- Have others encountered this same problem? And if so, were you able to solve it?

# Lessons Learned

---

- What other lessons have you learned related to Objective Evidence Databases?

# Got Any Tips?

---



# Potential Work Saver

---

Is the standard process detailed enough so that it will be fairly consistent between implementations where a specific type of data will be found?

Provide the units/projects with a mapping that already tells them where to find the evidence.

e.g.

PP SP 2.2 Identify Project Risks

see section 3.4 of the Risk Management Plan

# Use Directories

---

- When the evidence you want to include is a frequently generated item (e.g. monthly meeting minutes or peer review reports) linking to the directory where the items are stored will provide advantages
  - The link will not go stale – new items will continue to be populated into the directory so fresh evidence is available
  - The appraisal team is free to sample from the set, thus aiding confidence in institutionalization

# Mapping Preparation

---

If done poorly

- Can consume vast resources to prepare
- Will reflect a poor understanding of what is needed
- Will cause appraisal to proceed very slowly
- Can confuse the true state of the practice

If done well

- Will require limited restarts or rework
- Accurately reflects the work done in the organization
- Provides an efficient means for an appraisal team to find appropriate evidence
- Identifies appraisal risks by uncovering holes in implementation

---

# Questions ?

# Contact Info

---

- Sam Fogle, Chief Guide, SEI-Certified SCAMPI High-Maturity Lead Appraiser
- ACE Guides, LLC
- [www.ACEguides.com](http://www.ACEguides.com)
- [sam@ACEguides.com](mailto:sam@ACEguides.com)
- 240-308-0767

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

<sup>SM</sup>SCAMPI is a service mark of Carnegie Mellon University.

