A SCAMPI Data Review
Improvement Technique

Getting The Big Picture
Without Pixelation

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Agenda

• Introduction

• Data Prep and Data Review Issues

• An Answer
  – Process Description
  – Results
Introduction

This presentation focuses on issues associated with reviewing documents during a SCAMPI and a practical solution to resolving these issues.

- Issue #1: The context of the applicable information is often not clear since the appraisal team member (ATM) does not have time to read the entire document or section of document in order to establish the context.

- Issue #2: Jumping from one document to another or from one section within a document to another section, in an attempt to determine that a practice is being satisfied is not very efficient.

We will explore an approach that you may find improves your appraisal performance significantly.
Issues

• Data does not always address practice or was difficult to understand
  – Data collector understood data, not the model
  – Data reviewer understood model, not the data

• Data is fragmented - too many pieces needed to demonstrate compliance
Issues - 2

- A single artifact often addressed multiple practices, all from different PAs (and mini-teams)

- Data collectors and appraisers have different views of the data
What We Had

Mini-Team

Practice Text

Direct Artifact #1
Direct Artifact #2
Direct Artifact #3
Direct Artifact #4
Indirect Artifact #1
Indirect Artifact #2
Indirect Artifact #3
Indirect Artifact #4

Data Collectors

Weak Association

Strong Association

Weak Association

Strong Association

Disparate Artifacts

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Issues

- Not possible to bring appraisers up to speed on all programs
- Not practical to make data collectors model experts

SO WHAT CAN WE DO?
An Answer

• We considered our options with two concepts at hand
  – What we COULD NOT do, and
  – What we COULD do
An Answer

- What we could not do:
  - We could not make all of the data collectors experts in understanding and interpreting the CMMI
    - Too expensive
    - Not value added for the organization
  - We could not make program experts out of the appraisal team members
    - Not available for in depth orientation on all programs included in the appraisal
    - No value to the programs
An Answer

• What we could do:
  – Establish a method (process description and tools) that
    • Enables programs to adequately and accurately address a practice
    • Provide appraisal team members with a clear view of the data in the context of the program(s)
    • Allow the appraisal team to more efficiently and effectively review the data
Process Description Assumptions

• Only major artifacts would be addressed by this process
  – Program plan
  – SEMP
  – Quality Plan
  – Configuration Management Plan
  – etc.
• In general, artifacts that have Specific Practices that need to be addressed AND Generic Practices that need to be addressed
  – Ex: PPQA SPs and GP2.9
  – Ex: CM SPs and GP2.6
• Each artifact is mapped to all of the applicable PAs/Practices
Process Description

- Focus is on reviewing the data by artifact rather than by PA
  - Enabler (e.g., checklist) must be established such that it can be sorted by artifact element OR by PA/Pr
- Enabler is sorted by artifact and appropriate sections of the enabler (checklist) are provided to the selected reviewers
- Appraisers review the artifact using the checklist
Enabler Relationship to Artifact

CM SP x.x
CM SP x.y
PP GP 2.6
TS GP 2.6

Configuration Management Plan
The Enabler (aka “The Checklist”)  

- Checklist Content
  - Artifact or plan name
  - Artifact Component
    - The plan content is derived from the organizations standard plan/artifact template
  - Maturity Level and Process Area (e.g., 2-PP)
  - Practice identifier (e.g., SP2.1)
  - Place Plan/Section Identifier
  - Place to capture the need to ask a question
  - Place for reviewer comments
## Checklist For Data Review

<table>
<thead>
<tr>
<th>Artifact or Plan Name</th>
<th>Artifact Component</th>
<th>Level - PA</th>
<th>Practice</th>
<th>Plan/Section</th>
<th>Ask ??</th>
<th>Reviewer Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project Data/ Config Mgmt Plan</td>
<td>Configuration of Product Requirements Baseline Identified</td>
<td>2-REQM</td>
<td>GP2.6</td>
<td>Pgm xyz Program CM Plan, section 3.4.1</td>
<td>How does xyz …..?</td>
<td>This section identifies the right thing.</td>
</tr>
<tr>
<td>Project Data/ Config Mgmt Plan</td>
<td>Configuration of Product Requirements Traceability Identified</td>
<td>2-REQM</td>
<td>GP2.6</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Project Data/ Config Mgmt Plan</td>
<td>Configuration of Other Project Planning Artifacts is Identified</td>
<td>2-PP</td>
<td>GP2.6</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Project Data/ Config Mgmt Plan</td>
<td>Identification of data items to be included in the project’s data management plan.</td>
<td>2-PP</td>
<td>SP2.3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Project Data/ Config Mgmt Plan</td>
<td>Data management strategy</td>
<td>2-PP</td>
<td>SP2.3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Project Data/ Config Mgmt Plan</td>
<td>Data formatting standards</td>
<td>2-PP</td>
<td>SP2.3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Project Data/ Config Mgmt Plan</td>
<td>Data collection objectives</td>
<td>2-PP</td>
<td>SP2.3</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Using “The Checklist” - 1

- Review the artifact against the checklist indicating compliance as appropriate (write the location of observed evidence in the Plan/Section col.)
- Make appropriate comments if necessary
  - Handy during the discussions with the team
  - Also provides responsible team members with additional information
- Indicate if there are any questions that you would like to ask during the interview sessions
- Enter the data into the master Checklist
- Sort the checklist by PA/practice
- Provide the information to the appropriate mini-team
Where We Ended Up

Practice Text For Multiple PAs and Practices

Data Collectors

Mini-Team\textsubscript{a}
Mini-Team\textsubscript{b}
Mini-Team\textsubscript{c}

Direct Artifact #1 Ref#1
Direct Artifact #1 Ref#2
Direct Artifact #1 Ref#3
Direct Artifact #1 Ref#4

Indirect Artifact #1 Ref#1
Indirect Artifact #1 Ref#2
Indirect Artifact #1 Ref#3
Indirect Artifact #1 Ref#4

Strong Association
Weak Association

Weak Association
Strong Association

Homogeneous Artifact – Multiple Practices Addressed
Conclusion

- Mini-teams have vetted data from all of the major plans/artifacts
- The appraisal TEAM has a better “picture” of each plan
- Mini-team members have insight into evidence beyond their own assigned areas
- Broader knowledge of “in context” information for making judgments concerning strengths, weaknesses, etc.
- References to artifacts can be checked against the checklist for acceptability, rather than having to review the same artifact multiple times
Questions?