Applying the CMMI to the Process Improvement Project

“Eating Your Own Dog Food”

Pat O’Toole, PACT

www.PACTCMMI.com

March, 2009
Motivation

• “The process improvement group (SEPG) should perform one maturity level higher than the group it is trying to influence”
  – Aligns exhibited behavior with desired behavior
  – Establishes credibility

• However, many SEPGs are sending the message:
  “Do as I say, not as I do”

• This presentation shows how the CMMI can be adopted by the SEPG itself to change this message to:
  “Do as I say, just as I do”
Acknowledgments

Terms like these are often used in the following material:

CMMI® Framework
IDEAL SM Model

Capability Maturity Model Integration SM and IDEAL SM are service marks of Carnegie Mellon University

Although CMMI® is registered in the U.S. Patent & Trademark Office, in this context it means:

“Canine Morsels for Meta-Improvement”
Further Acknowledgements

• Special Thanks for the Use of the Following Terms:

  – Accelerated Leveraging of Process Opportunities

  – Processes Utilizing Reliable, Intuitive, and Natural Approaches

  – Keep Improving By Borrowing & Leveraging Everyone’s Stuff & By Improving Technology Strategically

  – Managing Outcomes Very Effectively by Aligning Learning Opportunities with Near-term Goals.
Your Menu this Evening Includes…

- Hors d’oeuvres
- Main course
- Dessert
Hors D’oeuvers

• OPF served with a selection of savory seasonings:
  – Establish an Organizational Policy
  – Plan the Process
  – Assign Responsibility
  – Train People
  – Manage Configurations
  – Identify/Involve Relevant Stakeholders
  – Monitor and Control the Process
  – Objectively Evaluate Adherence
  – Review Status with Higher Level Mgt
  – Establish a Defined Process
  – Collect Improvement Information
  – Establish Quantitative Objectives for the Process
  – Stabilize Subprocess Performance
  – Ensure Continuous Process Improvement
  – Correct Root Causes of Problems.
OPF Specific Practices

• Key Practices (Nuggets vs. Filler)
  – SP1.1 Establish Organizational Process Needs
    • What do you want to be when you grow up?
    • What are you REALLY trying to achieve?
  – SP1.3 Identify the Organization’s Process Improvements
    • What do you need to do to achieve it?
  – SP3.1 Deploy Organizational Process Assets
    • What is being provided to enable achievement?
  – SP3.4 Incorporate Process-Related Experiences into the Organizational Process Assets
    • How do we know it’s better, and how do we make it betterer?
OPF Generic Practices

- Key Generic Practices
  - GP2.2 Plan the Process
    - Process Improvement Plan
  - GP2.4 Assign Responsibility
    - MSG = Project Sponsor
    - SEPG = Project Team
    - PAT = Subject Matter Experts
  - GP2.5 Train People
    - CMMI and appraisal methods
  - GP2.8 Monitor and Control the Process
    - “Treat” it like a project
  - GP3.2 Collect Improvement Information
    - Work products
    - Measures, measurement results
    - Improvement information.
Cleansing the Pallet

- OPF is the CMMI’s foundation for process improvement
  - The generic practices spice it up a bit
  - But, like hors d’oeuvres, it merely whets the appetite for that which is yet to come…
And Now It’s Time for the …

- Hors d’oeuvres
- Main course
- Dessert
Tonight’s Main Course Consists of…

… Alphabet Soup!

PP
OT
RD

M
A
DAR

R
S
K
M
C

SEPG Conference, March 2009
# Macro-Level PP and PMC

## Maturity Level 2

<table>
<thead>
<tr>
<th>Project Mgt:</th>
<th>Staged at Maturity Level</th>
<th>1/1/09 Mini Appraisal</th>
<th>1Q09 Plan</th>
<th>2Q09 Plan</th>
<th>2Q09 Act</th>
<th>3Q09 Plan</th>
<th>4Q09 Plan</th>
<th>4Q09 Act</th>
</tr>
</thead>
<tbody>
<tr>
<td>PP</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>PMC</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td></td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>SAM</td>
<td>2</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td></td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Engineering:</th>
<th>Staged at Maturity Level</th>
<th>1/1/09 Mini Appraisal</th>
<th>1Q09 Plan</th>
<th>2Q09 Plan</th>
<th>2Q09 Act</th>
<th>3Q09 Plan</th>
<th>4Q09 Plan</th>
<th>4Q09 Act</th>
</tr>
</thead>
<tbody>
<tr>
<td>REQM</td>
<td>2</td>
<td>1</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Support:</th>
<th>Staged at Maturity Level</th>
<th>1/1/09 Mini Appraisal</th>
<th>1Q09 Plan</th>
<th>2Q09 Plan</th>
<th>2Q09 Act</th>
<th>3Q09 Plan</th>
<th>4Q09 Plan</th>
<th>4Q09 Act</th>
</tr>
</thead>
<tbody>
<tr>
<td>CM</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>PPQA</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>MA</td>
<td>2</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td></td>
<td>1</td>
<td>1</td>
<td>2</td>
</tr>
</tbody>
</table>
# Macro-Level PP and PMC

## Maturity Level 3

<table>
<thead>
<tr>
<th></th>
<th>Staged at Maturity Level</th>
<th>1/1/09 Mini Appraisal</th>
<th>1Q09 Plan</th>
<th>2Q09 Plan</th>
<th>2Q09 Act</th>
<th>3Q09 Plan</th>
<th>3Q09 Act</th>
<th>4Q09 Plan</th>
<th>4Q09 Act</th>
<th>1Q10 Plan</th>
<th>1Q10 Act</th>
<th>2Q10 Plan</th>
<th>2Q10 Act</th>
<th>3Q10 Plan</th>
<th>3Q10 Act</th>
<th>4Q10 Plan</th>
<th>4Q10 Act</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Process Mgt</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>OPF</td>
<td>3</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>OPD</td>
<td>3</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>OT</td>
<td>3</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td><strong>Project Mgt</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PP</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>PMC</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>SAM</td>
<td>2</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>2</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>IPM</td>
<td>3</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>RSKM</td>
<td>3</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td><strong>Engineering</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>REQM</td>
<td>2</td>
<td>1</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>RD</td>
<td>3</td>
<td>1</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>TS</td>
<td>3</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>PI</td>
<td>3</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>VER</td>
<td>3</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>VAL</td>
<td>3</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td><strong>Support:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CM</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>PPQA</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>MA</td>
<td>2</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>DAR</td>
<td>3</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>3</td>
<td>3</td>
</tr>
</tbody>
</table>
Changing Perspective…

Macro View

Micro View
PP SP1.2: Everyone’s Favorite Practice

- Establish estimates of work products and task attributes

- In an appraisal context…
  - Model scope
    - Maturity Level X
    - Capability Level Profile Y
  - Organizational scope
    - How many / which engineering disciplines?
    - How many people / projects are in the organizational unit?
    - How many focus / non-focus projects need to be included?
    - How many geographical locations?
  - Other attributes
    - Will the appraisal be conducted in English?
    - Has the organization been appraised previously?
    - How many organizational personnel will serve as ATMs?
      - Have they been trained on the CMMI? SCAMPI? Appraisal tools?
PP SP1.2: Everyone’s Favorite Practice

- Establish estimates of work products and task attributes
- In an organizational improvement context…
  - Model implementation scope
    - ML2? ML3? CL Profile?
  - How many gaps between the current / desired states?
    - How many (and which) SMEs are available to work on them?
    - Are there pain points in any / all of these areas?
    - Does this require new or modified behavior?
  - How many engineering disciplines, life cycles, etc.?
  - Are there other change activities currently underway?
    - Re-organizations or mergers
    - ISO9000
    - ITIL
    - Empowerment Initiative for Enabling Improvement in Organizations
      - EIEIO initiative.
PP SP1.3 Define “Project” Lifecycle

**Initiating**
- Stimulus for change
- Set context
- Build sponsorship

**Learning**
- Establish improvement infrastructure
- Characterize current and desired states
- Develop recommend-actions
- Set priorities

**Acting**
- Propose future actions
- Analyze and validate
- Implement solution
- Refine solution
- Pilot/test solution
- Create solution
- Plan actions

**Establishing**
- Develop approach
- Analyze and validate
- Implement solution
- Refine solution
- Pilot/test solution
- Create solution
- Plan actions
PP SP1.3 Define “Project” Lifecycle

January
- Size est. template
- Use case template
- Test case template
- Effort est. template
- Use case training
- Test case metrics
- Cost est. template
- Use case metrics
- Test tool evaluation
- WBS template
- JAVA Standards
- Test tool evaluation
- Risk ID template
- C++ Standards
- Test tool evaluation

February
- Size est. template
- Use case template
- Test case template
- Effort est. template
- Use case training
- Test case metrics
- Cost est. template
- Use case metrics
- Test tool evaluation
- WBS template
- JAVA Standards
- Test tool evaluation
- Risk ID template
- C++ Standards
- Test tool evaluation

March
- Size est. template
- Use case template
- Test case template
- Effort est. template
- Use case training
- Test case metrics
- Cost est. template
- Use case metrics
- Test tool evaluation
- WBS template
- JAVA Standards
- Test tool evaluation
- Risk ID template
- C++ Standards
- Test tool evaluation

April
- Size est. template
- Use case template
- Test case template
- Effort est. template
- Use case training
- Test case metrics
- Cost est. template
- Use case metrics
- Test tool evaluation
- WBS template
- JAVA Standards
- Test tool evaluation

May
- Size est. template
- Use case template
- Test case template
- Effort est. template
- Use case training
- Test case metrics
- Cost est. template
- Use case metrics
- Test tool evaluation
- WBS template
- JAVA Standards
- Test tool evaluation
Requirements Development

• Key Practices
  – SP1.1 Elicit Needs
    • Management is the customer
    • The project teams are the users
  – SP2.3 Identify Interface Requirements
    • User interface
    • Interface with other relevant stakeholders
      – EIEIO Initiative
  – SP3.5 Validate requirements to ensure that the resulting product will perform as intended in the user’s environment
    • Pilot, pilot, pilot
    • Remember – it’s all about the stakeholders!
Measurement and Analysis

• **Macro Level: Determine Process Improvement’s ROI**
  – You are competing for corporate funds just like everyone else
  – Why should management continue investing in YOUR program?

• **Micro Level: Hypothesize the value of each improvement**
  – Design changes to maximize results
  – Implement changes to achieve results
  – Measure the actual results
  – Keep management informed
    • Or, better yet, actively engaged!
Organizational Training

• It’s more than the “Intro to CMMI”
  – Organizational Change Management
  – Presentation skills
  – Negotiation skills
  – Written/verbal communication skills
  – Process/procedure standards

• Convey the skills and knowledge necessary to perform the improved process or to use the new tool
  – Subject Matter Experts provide the content
  – Instructional Designers package content to maximize learning
  – SEPG provides a safe setting for practice & initial implementation
  – Provide ongoing coaching and mentoring
  – Solicit feedback – and then act on it!
## Risk Management – Project Factors

<table>
<thead>
<tr>
<th>Risk Factor #</th>
<th>Risk Factors</th>
<th>Low Risk Cues</th>
<th>Medium Risk Cues</th>
<th>High Risk Cues</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>4.0 Organization Management Factors</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.1</td>
<td>Organization Stability</td>
<td>Little or no change in management or structure expected</td>
<td>Some management change or reorganization expected</td>
<td>Management or organization structure is continually or rapidly changing</td>
</tr>
<tr>
<td>4.2</td>
<td>Organization Roles and Responsibilities</td>
<td>Individuals throughout the organization understand their own roles and responsibilities and those of others</td>
<td>Individuals understand their own roles and responsibilities, but are unsure who is responsible for work outside their immediate group</td>
<td>Many in the organization are unsure or unaware of who is responsible for many of the activities of the organization</td>
</tr>
<tr>
<td>4.3</td>
<td>Policies and Standards</td>
<td>Development policies and standards are defined and carefully followed</td>
<td>Development policies and standards are in place, but are weak or not carefully followed</td>
<td>No policies or standards, or they are ill-defined and unused</td>
</tr>
<tr>
<td>4.4</td>
<td>Management Support</td>
<td>Strongly committed to success of project</td>
<td>Some commitment, not total</td>
<td>Little or no support</td>
</tr>
<tr>
<td>4.5</td>
<td>Executive Involvement</td>
<td>Visible and strong support</td>
<td>Occasional support, provides help on issues when asked</td>
<td>No visible support; no help on unresolved issues</td>
</tr>
<tr>
<td>4.6</td>
<td>Project Objectives</td>
<td>Verifiable project objectives, reasonable requirements</td>
<td>Some project objectives, measures may be questionable</td>
<td>No established project objectives or objectives are not measurable</td>
</tr>
</tbody>
</table>

### 5.0 Customer/User Factors

<table>
<thead>
<tr>
<th>Risk Factor #</th>
<th>Risk Factors</th>
<th>Low Risk Cues</th>
<th>Medium Risk Cues</th>
<th>High Risk Cues</th>
</tr>
</thead>
<tbody>
<tr>
<td>5.1</td>
<td>User Involvement</td>
<td>Users highly involved with project team, provide significant input</td>
<td>Users play minor roles, moderate impact on system</td>
<td>Minimal or no user involvement; little user input</td>
</tr>
<tr>
<td>5.2</td>
<td>User Experience</td>
<td>Users highly experienced in similar projects; have specific ideas of how needs can be met</td>
<td>Users have experience with similar projects and have needs in mind</td>
<td>Users have no previous experience with similar projects; unsure of how needs can be met</td>
</tr>
</tbody>
</table>
## Risk Management – SEPG Factors

<table>
<thead>
<tr>
<th>Risk Factor #</th>
<th>Risk Factors</th>
<th>Low Risk Cues</th>
<th>Medium Risk Cues</th>
<th>High Risk Cues</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.1</td>
<td>Attitude Toward Change</td>
<td>A variety of changes have been introduced, with recent success</td>
<td>The organization has tried to change with varied success; people are hesitant to try new approaches</td>
<td>The organization has been severely burned by one or more changes; there is widespread fear of new approaches</td>
</tr>
<tr>
<td>4.2</td>
<td>Experience with Quality Programs</td>
<td>The organization has successfully implemented a major quality program with favorable results</td>
<td>One or more quality programs have been attempted with limited success; some members of the organization are skeptical, others think the programs a waste of time</td>
<td>One or more quality programs have been attempted; the organization believes the efforts were wastes of time; active opposition is expected to &quot;yet another&quot; quality or process improvement initiative</td>
</tr>
<tr>
<td>4.3</td>
<td>Action Orientation</td>
<td>The organization is oriented to taking action and solving problems; members of the organization have proven ability to make fundamental changes</td>
<td>Some members of the organization take action, but there are political struggles to get broad changes made</td>
<td>The organization hides behind corporate politics or insists on long reviews and discussions prior to taking action</td>
</tr>
<tr>
<td>4.4</td>
<td>Use of Facts</td>
<td>The organization has defined business goals; the organization collects and uses measures regularly</td>
<td>The organization has some limited experience with measurement; parts of the organization are quality- and fact-oriented</td>
<td>Most decisions in the organization are based on politics; there are no measurable business or improvement goals in place</td>
</tr>
<tr>
<td>4.5</td>
<td>Patience with Change</td>
<td>Management and key leaders in the organization are willing to spend time socializing the changes</td>
<td>Some managers or key technical leaders are impatient and push for quick results</td>
<td>There is little experience with SPI; one or more leaders in key positions push for quick results</td>
</tr>
</tbody>
</table>
So Much To Do, So Little Time…

• **Management wants:**
  – Six Sigma
  – Lean
  – ITIL
  – EIEIO

• **Projects want:**
  – Data Drill
  – Doors
  – MiniTab

• The Class C appraisal identified 15 weaknesses
• You’ve got a backlog of 30+ improvement requests
• Projects are screaming there is too much administrivia
• So, what should you do next???
Decision Analysis and Resolution

Candidate Improvements
1. Six Sigma
2. Lean
3. ITIL
4. Data Drill
5. Doors
6. MiniTab
7. Weakness #1
8. Weakness #N
9. Improvement #1
Decision Analysis and Resolution

Criteria
1. Hypothesized benefit
2. Cost to develop / implement
3. Number of people affected
4. Time to achieve benefits
5. CMMI level related to change
6. Acceptability to management
7. Acceptability to project teams.
# Decision Analysis and Resolution

- Rate the criteria for each candidate

<table>
<thead>
<tr>
<th>Benefit</th>
<th>Cost</th>
<th># People Affected</th>
<th>Time to Achieve</th>
<th>ML</th>
<th>Mgt</th>
<th>Project Teams</th>
<th>SCORE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Data Drill</td>
<td>10</td>
<td>8</td>
<td>5</td>
<td>8</td>
<td>6</td>
<td>8</td>
<td>53</td>
</tr>
<tr>
<td>Doors</td>
<td>6</td>
<td>5</td>
<td>8</td>
<td>8</td>
<td>6</td>
<td>6</td>
<td>43</td>
</tr>
<tr>
<td>ITIL</td>
<td>3</td>
<td>5</td>
<td>3</td>
<td>7</td>
<td>7</td>
<td>5</td>
<td>37</td>
</tr>
<tr>
<td>Lean</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>3</td>
<td>7</td>
<td>3</td>
<td>32</td>
</tr>
<tr>
<td>MiniTab</td>
<td>4</td>
<td>1</td>
<td>9</td>
<td>7</td>
<td>9</td>
<td>4</td>
<td>38</td>
</tr>
<tr>
<td>Six Sigma</td>
<td>10</td>
<td>10</td>
<td>9</td>
<td>6</td>
<td>4</td>
<td>7</td>
<td>54</td>
</tr>
<tr>
<td>Improvement #1</td>
<td>2</td>
<td>4</td>
<td>5</td>
<td>2</td>
<td>9</td>
<td>8</td>
<td>10</td>
</tr>
<tr>
<td>Improvement #2</td>
<td>1</td>
<td>6</td>
<td>5</td>
<td>7</td>
<td>3</td>
<td>2</td>
<td>6</td>
</tr>
<tr>
<td>Improvement #3</td>
<td>7</td>
<td>2</td>
<td>5</td>
<td>8</td>
<td>7</td>
<td>7</td>
<td>4</td>
</tr>
<tr>
<td>Improvement #N</td>
<td>2</td>
<td>1</td>
<td>3</td>
<td>6</td>
<td>3</td>
<td>6</td>
<td>1</td>
</tr>
<tr>
<td>Weakness #1</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>4</td>
<td>4</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Weakness #N</td>
<td>4</td>
<td>8</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>6</td>
<td>5</td>
</tr>
</tbody>
</table>

- Sort by Score and work on Top N first
Cleansing the Pallet

• The SEPG should interpret the CMMI process areas as they apply to the process improvement project
  – “Do as I say just as I do!”
And Now It’s Time For…

- Hors d’oeuvres
- Main course
- Dessert
Hopefully You’ve Saved Some Room!

• For dessert… The CMMI for Services!
  – The SEPG provides a set of services to the organization
  – The CMMI-SVC provides additional “food for thought.”
CMMI for Services

• New Process Areas
  – Capability and Availability Management
  – Incident Resolution and Prevention
  – Service Continuity
  – Service Delivery
  – Service System Development
  – Strategic Service Management
  – Strategic Service Transition.
Conclusion

• When “eating their own dog food,” too many process improvement groups fill up on tasty hors d’oeuvres
  – They mistakenly believe that OPF is their whole meal
  – They gobble up only that portion of the model
  – And then produce a big pile of OPD!
Questions?

Pat O’Toole

pact.otoole@att.net
www.PACTCMMI.com