Accelerating CMMI Adoption with PSP/TSP

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Agenda

1. Introductions
2. Background
3. CMMI Adoption
4. TSP/PSP Adoption
5. Why Combine TSP with CMMI
6. TC-AIM
7. Short Questions (Interactive session)
Three Operational Levels

- **CMMI** - for organizational capability
- **TSP** - for quality products on cost and schedule
- **PSP** - for individual skill and discipline
# Background

## 1. CMMI

- History
- Non-operational descriptive model

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<th><strong>TSP/PSP</strong></th>
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<td>• Training- Fundamentals Advanced</td>
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<td>SP 1.1 Estimate the Scope of the Project</td>
<td>• Documentation - Books</td>
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<td>SP 1.2 Establish Estimates of Work Product and Task Attributes</td>
<td>• Methods : PROBE</td>
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<td>SP 1.3 Define Project Lifecycle</td>
<td>• Launch Process- Schedule-Scripts</td>
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<td>SP 1.4 Determine Estimates of Effort and Cost</td>
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<td>SG 2 Develop a Project Plan</td>
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<td>SP 3.1 Review Plans That Affect the Project</td>
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CMMI Adoption (IDEAL)

1. Learn about CMMI (training)
2. Goals, Objectives, Business value
3. Establish process change infrastructure
   a) EPG
   b) MSG
4. Assess current practice/process and Map to CMMI (appraisal)
5. Gaps
6. Develop operational processes to fill gaps
   a) Processes
   b) Methods
   c) Tools
   d) Training
6. Pilot
7. Institutionalize
TSP/PSP Adoption

Train
Launch
Learn
Repeat as necessary
Time to Move Up

Number of months to move to next maturity level

Recommended time between appraisals

Largest observed value that is not an outlier

75th Percentile

Median

25th Percentile

Smallest observed value that is not an outlier

Time Period of Initial Appraisal

Level: 1 to 2  2 to 3  3 to 4  4 to 5
Orgs: 15 99 22 16

1 to 2: 5
2 to 3: 19
3 to 4: 19
4 to 5: 16

50

75

100

0

18

30

100
Time to Move Up Summary

For organizations that began their CMMI-based SCAMPI effort in 2002 or later, the median time to move from:

- maturity level 1 to 2 is 4 months
- maturity level 2 to 3 is 17 months
- maturity level 3 to 4 is 15.5 months
- maturity level 4 to 5 is 12.5 months
Why combine TSP and CMMI

1. TSP/PSP is CMMI
2. CMMI is a systems development standard recognized world-wide
   1. Customers contract with the organization not a project or team (TSP focuses on the project and the team CMMI focuses on the organization)
3. CMMI can open new markets (esp. for SMEs)
   1. CMMI as a barrier to entry
      1. DoD supply chain
      2. Commercial supply channels (automotive etc)
      3. IT outsourcing
4. Best of both worlds-
   1. TSP provides: proven performance, efficiency of implementation (operational processes and supporting infrastructure)
   2. CMMI provides: organizational institutionalization, scalability (SME-BME), market recognition
TSP based CMMI Accelerated Improvement Method (TC-AIM)

TC-AIM is sponsored by the Mexican Government’s Prosoft initiative in collaboration with SEI and Mexico's leading private university, Instituto Tecnológico de Estudios Superiores de Monterrey (Tec de Monterrey).

The goal of this project is to provide organizations with a path to CMMI compatibility utilizing the strengths of the TSP

This project is designed to provide organizations with the necessary products and support to achieve the performance benefits of TSP and CMMI compatibility, utilizing a comprehensive, efficient, integrated approach. TCAIM will be designed and piloted for Small to Medium Enterprises. (SME)
TC-AIM CONOPS

Two sub teams: A) Map, Gap and PIP team and B) TC-AIM implementation Team

1. Map TSP/PSP to CMMI (SCAMPI C) AT
   - Produce artifact mapping
   - Appraisal interpretation
   - Gaps
   - Process Improvement Proposals (PIPs)

2. Develop operational implementations for the PIPs

3. Review (Reverse Gap)

4. Pilot

5. Refine and package
Summary:
Questions?