Interpretation and lesson learned from High Maturity Implementation of CMMI-SVC
Agenda and Topics

• Opening
• Recap High Maturity Process Areas
• Main Questions for High Maturity Process Improvement
• Pilot Lessoned Learned
Opening

Typically when one read the CMMI-SVC he may think on the classic service provider organization

- The model provides guidance for the application of CMMI best practices by the service provider organization.

- Best practices in the model focus on activities for providing quality services to the customer and end users.

- We will present through our lessons learned from large organization that dealing with parts of a system life cycle how to use CMMI-SVC as the leading guidance

- Since in this kind of complicated environment ‘everything is a service’ and therefore the CMMI-SVC is the natural leader
CMMI ML 4 & 5 PAs Recap

- Organizational Process Performance
- Quantitative Project Management
- Causal Analysis and Resolution
- Organizational Innovation and Deployment
Specific Practices of OPP

SG 1 Establish Performance Baselines and Models
   SP 1.1 Select Processes
   SP 1.2 Establish Process-Performance Measures
   SP 1.3 Establish Quality and Process-Performance Objectives
   SP 1.4 Establish Process-Performance Baselines
   SP 1.5 Establish Process-Performance Models
Organizational Process Performance Context

- Select Processes
- Establish Process-Performance Models
- Selected Subprocesses from Org. Std. Processes
- Organization’s Set of Standard Processes
- Establish Process-Performance Baselines
- Organizational Process-Performance Baselines
- Establish Process-Performance Measures
- Organization’s Quality and Process-Performance Objectives
- Establish Quality and Process-Performance Objectives
- Establish Performance Baselines and Models
- Process-Performance Models
- Organization’s Quality and Process-Performance Objectives

MA
QPM
OPP Summary

• The first three SPs establish processes (subprocesses), measures, and objectives at the organization level that focus and align the quantitative management activities of projects (QPM) with the business objectives of the organization.

• The last two SPs take the actual results obtained from projects to create baselines and models that enable the next project to predict what performance to expect from selecting certain subprocesses for its use, and thereby assess its ability to meet its objectives.
Specific Practices of QPM

SG 1 Quantitatively Manage the Project
SP 1.1 Establish the Project’s Objectives
SP 1.2 Compose the Defined Process
SP 1.3 Select the Subprocesses That Will Be Statistically Managed
SP 1.4 Manage Project Performance

SG 2 Statistically Manage Subprocess Performance
SP 2.1 Select Measures and Analytic Techniques
SP 2.2 Apply Statistical Methods to Understand Variation
SP 2.3 Monitor Performance of the Selected Subprocesses
SP 2.4 Record Statistical Management Data
Quantitative Project Management Context

**Establish Project’s Objectives**
- Project’s Quality and Process-Performance Objectives
- Remedial Actions

**Manage Project Performance**
- Compose the Defined Process
- Select the Subprocesses that Will Be Statistically Managed

**Statistically Manage Subprocess Performance**
- Record Statistical Management Data
- Monitor Performance of the Selected Subprocesses
- Apply Statistical Methods to Understand Variation
- Select Measures and Analytic Techniques

**Context**
- OPP
- Quantitative Project Management (IPM)
- Selected Subprocesses
- Organization’s Measurement Repository
- Subprocess Capability
- Predictions of Quality and Process Performance
QPM Summary

- QPM involves both quantitative and statistical management. The project
  - establishes quantitative objectives based on the organization’s business objectives and needs of the customer
  - composes a defined process based on historical capability data that will help it meet those objectives
  - monitors the project quantitatively to assess whether the project is on course to achieve its objectives.
- For each subprocess to be statistically managed,
  - objectives are established for its process performance
  - its variation is understood (subprocess is stable)
  - when the subprocess fails to achieve its objectives, corrective action is taken
Specific Practices of CAR

SG 1 Determine Causes of Defects
   SP 1.1 Select Defect Data for Analysis
   SP 1.2 Analyze Causes

SG 2 Address Causes of Defects
   SP 2.1 Implement the Action Proposals
   SP 2.2 Evaluate the Effect of Changes

   SP 3.2 Record Data
Causal Analysis and Resolution

Context

- Select Defect Data for Analysis
- Analyze Causes
- Determine Causes of Defects
- Implement the Action Proposals
- Record Data
- Selected Action Proposals & Improvement Proposals
- Address Causes of Defects
- Evaluate the Effect of Changes
- QPM

Defects and Problems

CAR Records

Performance Measures

Selected Action Proposals & Improvement Proposals

Address Causes of Defects

Implement the Action Proposals

Determine Causes of Defects

Select Defect Data for Analysis

Analyze Causes

Action Proposals

QPM
CAR Summary

• CAR has its greatest value when performed in the context of a quantitatively managed process.

• CAR involves
  • a selection of defects or problems whose resolution would benefit the organization
  • a root cause analysis
  • development and implementation of an action plan to remove the root causes of the defects or problems
Specific Practices of OID

SG 1 Select Improvements
  SP 1.1 Collect and Analyze Improvement Proposals
  SP 1.2 Identify and Analyze Innovations
  SP 1.3 Pilot Improvements
  SP 1.4 Select Improvements for Deployment

SG 2 Deploy Improvements
  SP 2.1 Plan the Deployment
  SP 2.2 Manage the Deployment
  SP 2.3 Measure Improvement Effects
Organizational Innovation and Deployment Context

1. Collect and Analyze Improvement Proposals
2. Identify and Analyze Innovations
3. Pilot Improvements
4. Select Improvements for Deployment
5. Deploy Improvements
6. Measure Improvement Effects
7. Manage the Deployment
8. Plan the Deployment

- Process and Technology Improvement Proposals
- Candidate Innovative Improvements
- Pilot Evaluation Reports Lessons Learned
- Measurement Results
- Updated Training Materials
- Updated Processes
- Deployment Plan
OID Summary

• OID uses the quantitative information developed at ML4 to identify, analyze, and select incremental and innovative improvements to the organization’s processes and technologies.

• OID involves both incremental improvement (everyone in the organization is involved) and revolutionary improvements (outward looking and opportunistic) to targeted processes.

• Improvements are introduced systematically in the organization by conducting pilots, analyzing costs and benefits, and planning and managing deployment.

• OID embodies continuous improvement that results from implementing all the PAs in the model.
Main Steps for High Maturity Process Improvement
Main Steps for High Maturity Process Improvement

- During our analysis and planning, we were able to identify improvement targets in main lifecycle areas such as
  - operations,
  - information,
  - governance,
  - people
  - organizational structure,
  - portfolios,
  - project execution,
  - finance.
- And as in core process that are critical to the system success such as stakeholder management, technical interfaces and integration.
Main Steps for High Maturity Process Improvement

As the result of this observation we have built an action plan,

Our first step was to suggest to the senior management to address the lifecycle and process (as a whole) as a complex of crossing services

- To add additional content to the lifecycle map (as a layer)
- To add content in the guideline that will define the different interactions as services.
Main Steps for High Maturity Process Improvement

As the result of this observation we have built an action plan,

- Then in the **second step** we have built a **services roadmap** using the CMMI-SVC, that allow companies to begin the improvement journey, and manage the transformation to maturity by building on each successive step, and ultimately delivering the **benefits expected**:
  - service reuse,
  - improved perception
  - response time,
  - interoperability,
  - business agility.

- **Service performance** and its impact on the organization governance is a significant part of that journey
Case Study

Service level management for Incident and Problem Management

- The service provider provides a large number of services to its customers, which are mainly departments from a sibling organization.
- To manage the communication with customers regarding those services, the department has implemented helpdesk management and problem management processes.
- The implementation of these processes has been based on the CMMI-SVC with elements of other CMMIs (for the organization maturity) and ITIL (for the individuals’ education).
Case Study

Service level management for Incident and Problem Management

• Help Desk Management is used to guarantee the continuity of services, while Problem Management is used to improve the level of service in the future. So, Help Desk Management deals with incidents, whereas Problem Management is concerned with solving the problems that cause these incidents.

• The goal of this case study was to assess the quality and performance of the Problem Management process.
Case Study

Service level management for Incident and Problem Management

It soon became apparent that the organization was **not able to execute** the Problem Management process properly,

Because the Help Desk Management process did not result in the necessary data needed to adequately analyze and solve problems.

- For example, **many incidents** were **not classified** in the right incident code, or not classified at all.
- This **resulted** in a **low validity** of the incident database: it was estimated that **more than 30%** of the incidents were coded incorrectly.
- Therefore, it was **not possible** to understand the range of results from these subprocesses.
- It was found **necessary to first implement** a clear and **consistent registration of the incidents** that occur during service delivery, before attempting to improve the problem management process.
Pilot Lessoned
Learned
Pilot Lessoned Learned

- **Foundations** to implement ongoing business process evaluation and re-engineering
- **Basics** on collecting and analyzing business process-oriented real-time performance metrics
- **How to identify** what to improve and **returns** from continuous **improvement**
- **Foundations** to implement **self-correcting** business processes
Questions ?
Contact

Kobi Vider
K.V.P Consulting

Kobi.Vider@hotmail.com
KobiVP@aol.com

Phone: +972522946676