How to Kick Start a Process Improvement Project to Achieve a CMMI Rating

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Background:
- A decision has been made by the Powers that Be that a particular program should "get a CMMI level 3 rating".
- A search is made for a Process Engineer to lead this effort and make this happen.
- You get the assignment.
- Now what?
- The purpose of this presentation is to guide you on how to kick start this effort.
- Process Engineer: START YOUR ENGINE.
Your first task is to determine what it means, exactly, to "get a CMMI level 3 rating".

As the Process Engineer, not only must you decipher the goal and rephrase it into laymen's terms that are actionable and achievable, but you must also determine what needs to be done to satisfy this goal in terms of:

- Resources, including Consulting Support from Corporate Management
- Teams, Boards, Steering Committee
- Plans, schedules, procedures
- Baselines, databases, tools, working aids
- Training

That's just to name a few basics for getting started
But, the first question that must be answered with a resounding "YES" is:

*Do you have Executive Sponsorship?*

Senior Management must sponsor and champion this cause or there is no way it can be successful.

So, if the answer is NOT Yes, then you really do not have authorization to proceed, nor should you.

But, if the answer IS Yes, you have a lot of work to do.

Let's examine the activities, tasks and support that must be initiated to *kick start this effort* and institute an infrastructure for implementing a process improvement project to achieve a CMMI rating.
Establish a Process Team to Facilitate the Process Improvement Project

- Assign the Process Engineer as Chairperson
- Assign Process Team Members
  - Subject Matter Experts
  - Support Organizations
  - Relevant Stakeholders

Establish a Measurement Program

Establish the Process Improvement Infrastructure

- Process Baseline
- Change Request Systems
- Measurement Repository
- Meeting Minutes and Action Items
- Corrective and Preventive Actions
- Practice Implementation Indicator Descriptions (PIIDs)
Establish a Process Improvement Project

- Establish Governance
  - Program Directives
  - Process Improvement Plan and Schedule
  - Steering Committee
  - Configuration Control Board (CCB)

- Align Process Improvement Activities with Parent Organization and Corporate Organization

- Formally Introduce the Process Improvement Project and Team to the entire program
Perform Preliminary Planning

- Ensure Process Team members are trained in:
  - the CMMI: formal, instructor-led, 3-day class
  - Process Architecture and Modeling
  - Process Concepts
    - Institutionalization
    - Process Maturity
    - Process Capability
    - Process Performance

- Ensure Program Leadership receives a CMMI overview
- Ensure Program Staff Members receive a CMMI in-depth briefing

- Address Process issues:
  - How do we begin the process improvement effort with our current process assets?
  - What measures are needed in addition to the ones we are currently collecting, analyzing and reporting?
  - What information exists throughout the company that we can leverage?
Resolve Interpretation Issues
  - Determine the organizational elements, processes and practices that will be in scope
  - Determine "alternate practices"

Apply the CMMI
  - Conduct a gap analysis (or a series of gap analyses) of the CMMI against existing processes and practices
  - Develop action plans for closing gaps

Implement the PIP and the action plans
Populate the PIIDs with evidence
Prepare for appraisals

Communicate, Communicate, Communicate
Interpretation Issues - Scope

What element(s) of the organization can be considered a “project”?

- Develop a Program Profile document that contains information about all projects.
- Determine from the profile which elements of the organization can be considered a project.
- Based on the work being performed, security issues, etc. select the candidate projects and any other participating elements (e.g., the PMO).

Based on the work performed on the program:

- What processes are being followed? Customer processes? Your Company processes? Subcontractor Company processes?

This will determine what processes are in scope and what processes are out of scope.
Interpretation Issues - **Scope**

Â Requirements Issues
  - **What are requirements?**
  - **What constitutes a Requirements Traceability Matrix?**
  - **What evidence exists to show bidirectional traceability of requirements?**

Â Planning Issues
  - **How do we estimate size, effort, cost and schedule?**
  - **Are the methods in which risks are being identified, analyzed and tracked sufficient?**
  - **Do we develop a WBS for each organizational element?**
  - **If not, what constitutes a WBS?**

Â Supplier Agreement/Procurement Issues
  - **Does the SAM PA apply?**
  - **If so, based on the work performed on the program, is the procurement of labor in scope (purchasing labor services)?**

Â What practices may be considered "alternate practices"?
• Conduct a gap analysis of the CMMI against existing processes and practices

• Develop action (get well) plans for closing gaps
  - Build the actions into the Project Schedule
  - Monitor and track the completion of all actions

• Manage the implementation of the PIP
  - Process Team-manage the activities with the guidance of the Steering Committee
  - CCB-review and disposition changes to the process baseline

• Populate the PIIDs with evidence

• Prepare for appraisals
Critical Success Factors

- Executive Sponsorship
- Dedicated, CMMI trained Process Improvement Project Staff
- Process Baseline
- Regular, frequent communication about progress and needs
  - Process Team Meetings
  - Steering Committee Meetings
  - CCB Meetings
  - All Hands Meetings
  - Status Reports
  - Newsletters, Posters, Flyers, Broadcast email messages, mementos, etc.
- Recognition and Reward Program
- Feedback on progress (internal reviews, SCAMPI C, SCAMPI B)
Recommendations

• Engage the SCAMPI Lead Appraiser in the early planning stages and continue communication until the rating is achieved
• Ensure that your organization has a representative on the SCAMPI Team
• Begin preparation for evaluations at least two months in advance and manage the logistics
• Ensure that Senior Management is aware of any barriers or obstacles

Sound the Alarm
As a Process Engineer responsible for preparing a program to achieve a CMMI rating, it is important that you realize that this effort may take 18-24 months of project activities.
The guidelines in this presentation should help you get started.

Questions??