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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
- “ Develop a Project Schedule
- “ 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 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



- “ 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

“ Requirements Issues

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

“ 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?**

“ 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)?**

“ 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





- “ 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)



- “ 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????