EXPEDITING CMMI MATURITY LEVEL 3
10 ESSENTIAL TIPS AND THEIR DEMONS

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Introduction

We work with a large number of companies every year that are improving their performance. Many of them have achieved CMMI Maturity Level 3 (ML3) within one or two years and gained the benefits of meeting deadlines, fewer surprises, coordination among teams, fewer defects and daily visibility on status, risks and issues.

In this article we summarize 10 essential tips we think are critical to getting CMMI adopted quickly and pragmatically. For each tip we list a common demon, an example practice we hope you are not doing (or will stop doing when you finish the article!)

Our challenge to you: In the next two weeks, select one or two of them, try them out and report back with successes, challenges and questions.

1. **Tie improvements to actual work occurring today**

   See the problems you have in the work today as calls for improvement - either to improve something this time only, or realize it is a recurring problem that needs to be improved everywhere.

   For example, if most teams are having difficulty eliciting, writing and analyzing requirements, use those specific issues as the driving force to implement some of the requirements-related practices of the model. When the practices work, add them to the normal flow that teams follow (see Figure 1).

   Having specific problems in mind when using a practice makes implementation immediately useful. When the problem has been addressed, the process solution is done.

   Demon 1: Keep processes independent of daily work

Write processes that map nicely to each Process Area of the model, with only a vague idea of how, by whom, or when they will be used. Process stuff is created independent of daily work.

Read more at: processgroup.com
DEV: processgroup.com/pgpostfeb11.pdf
SVC: processgroup.com/monthlytidbits.html#tidbit13

2. **Have senior managers participate and lead the way**

   Managers are responsible for the performance of their organizations. Performance is impacted by schedule, technical, resource, quality and skill problems. Since process improvement is problem-solving, and problem-solving changes the way an organization runs, then management should be involved.

   Initially they lead the way: "We need to fix these issues." Then provide resources: "We will all spend 2 hours per week fixing these issues."

   Ongoing, they monitor status, provide suggestions, mentor and initiate corrective actions when the results are academic. Long term, they raise expectations that the new practices define how the organization operates: "Project teams will be performing risk management every 2 weeks."

   Demon 2: Managers deal with external events only

   Have managers focused solely on competitors, suppliers and other departments with little visibility

as to what is happening in their own organization or whether the organization's practices are being used. If someone says, "We feel like we are Level 4," then that's adequate data.

3. **Have working teams of engineers and managers create best practices and templates**

   Have the people that will use the best practices, processes and templates work in teams to develop them. Guidance is provided to help the teams know how to write and pilot a best practice. The team members contribute their knowledge directly of the problems being addressed and their expertise in the area under discussion.

   Demon 3: Give sole responsibility of achieving ML3 to a committee

   Use a committee or quality team of non-managers, who at best can only write documents and make suggestions, while in parallel the projects are doing whatever they want (some excellent, some not). Even though the documents are great, ownership has been lost and they become shelfware shortly after completion.

4. **Create small (1- to 5-page) checklists and templates as the primary (or only) way to capture best practices and process definitions**

   Small checklists take less time to write, review, approve, train and use. They can be used daily to perform work, audited with no modification and in many cases used as training materials.

   Group related processes together, such as Project Planning, Project Management and Integrated Project Management. Plan to spend 1-2 days writing the first draft, and use it by day 3.

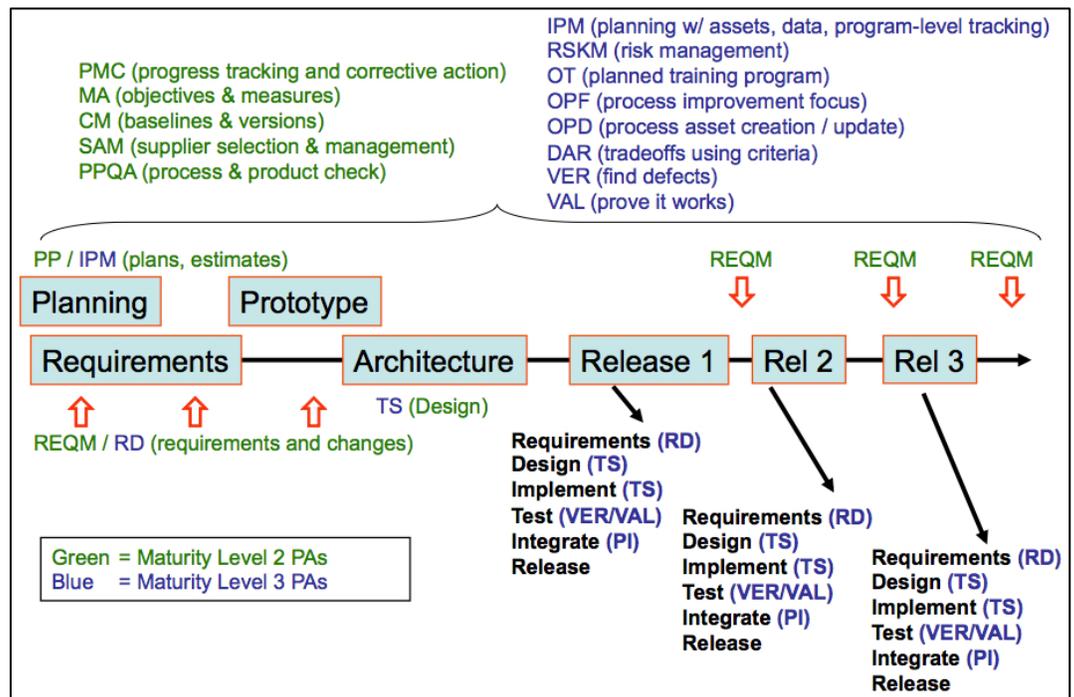   Read more at: processgroup.com/monthlytidbits.html#tidbit11

Figure 1: Using CMMI practices in the flow of a project to permanently address issues. (For Process Area definitions see [1].)

Demon 4: Make each process a voluminous beginners-guide that needs to be edited by a speechwriter

Create 18 large documents that contains everything (beginner information, mapping to every known standard and …). Spend months of time to create them and more months to approve. Notice that 80% of the document is beginner information that will only ever be used one time.

5. **Measure something useful to show progress**

   Establish a few key measures that reflect how the project or business is going. Examples are planned/expended effort, deadline accuracy, effort in rework, and customer satisfaction. These help drive which practices to adopt next and determine how well they are working.

   Read more at: processgroup.com/pgpostjul07.pdf

   Demon 5: Measure things that no one cares about (e.g., the number of times the project planning template changes) or things that don't give a useful, complete picture, such as the number of CMMI practices adopted by at least one project.

6. **Refine what has been developed**

   Continually assess and improve practices being

used. Make processes and templates easy to use, remove redundancies, provide online access, automate, and update them so that they find or avoid problems.

Remember, ML3 has many practices that state, "Fix this process for future use."

Demon 6: Develop processes and templates that are large, complex and "complete," with no effort dedicated to refine them. Then have the organization collectively spend more time getting permission to ignore them than the time needed to fix them.

7. **Prepare artifacts naturally for an appraisal**

Organize processes and templates in away that naturally fits the workflow of a team. Develop an easy way for the results to be recorded (e.g., in a template, database such as SharePoint, or checklist).

Map the practices of Levels 2 and 3 to these steps so that following the process automatically generates artifacts for the appraisal (and for future reference by the team).

Demon 7: Make appraisal preparation the sole goal by creating artifacts just to make the appraiser happy, regardless of whether they reflect naturally how teams work. Give a sigh of relief after the appraisal so normal operations can continue.

8. **Start now; see CMMI as a list of practices to permanently fix issues that you are having today**

Design your implementation of CMMI in the way you want (incremental, light-weight and useful) and see the direct correlation between the practices and the issues you face today. Don't put up with problems any longer.

Demon 8: Start later, when life is good. See CMMI as a huge tax that has to be overcome because other organizations implemented CMMI that way.

9. **Start with one common process / template for tasks, such as design and test, and add tailoring options when the process breaks**

Start with the notion that there are common and essential tasks that most teams perform within any topic such as planning, design and test. Start with this imperfect process and add tailoring guidelines to satisfy alternative work flows and options. When the number of alternatives is large, consider a separate process.

Demon 9: For any one topic (such as design, project planning or testing), create 10 different processes and templates (that essentially do the same thing) and later merge them together and add tailoring guidelines when they are unwieldy and use different terminologies.

10. **Consider getting help from somewhere to get started and keep going**

Many organizations have trod the same path as yours. Consider accelerating by learning from their experiences. This could be experience from within your own group, division or company or from external sources.

Demon 10: Form a committee, meet one hour per month and argue with each other four hours each month on issues that could have been resolved in 10 minutes with some good advice. Don't copy anyone that has already achieved Level 3!

You can do this!

Other articles you might like:

1. Summary of CMMI-DEV
   processgroup.com/monthlytidbits.html#tidbit15

2. Summary of CMMI-SVC
   processgroup.com/monthlytidbits.html#tidbit3

3. Implementing Scrum (Agile) and CMMI Together
   processgroup.com/pgpostapr2013.pdf

4. Books: Making Process Improvement Work
   processgroup.com/book.html

Need speeding up? Have unmet needs?
   E-mail or call with questions. We can get you started, help you plan your CMMI effort, get you back on track or speed your implementation up. (See contact info bottom right of last page.)

Want to share your story?
   Send us a 1- to 2-paragraph success story. We will edit it, get your approval and include it in our next newsletter. Get recognition for your success.

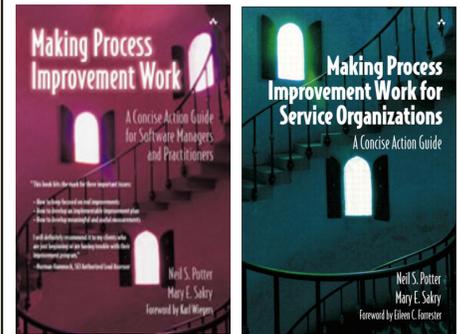# Practical Solutions for Your Current Challenges

Webinar-style sessions to save on travel, or onsite coaching to save on time
(Standard or customized sessions)

❏ **Run your software development projects faster and incrementally.**
Two-day workshop, AGILE SOFTWARE DEVELOPMENT (SCRUM).

❏ **Understand customer needs. Clarify product requirements early.**
Two-day workshop, IN SEARCH OF EXCELLENT REQUIREMENTS.

❏ **Manage projects effectively. Meet project deadlines and reduce risks.**
Three-day workshop, PROJECT PLANNING AND MANAGEMENT.

❏ **Meet project deadlines. Scope and estimate the project work.**
One-day workshop, PROJECT ESTIMATION.

❏ **Avoid schedule delays caused by needless rework. Find defects rapidly.**
Two-day workshop, INSPECTION (PEER REVIEWS).

❏ **Hands-on CMMI. Perform a CMMI gap-analysis.**
The following workshops are available:
• CMMI-DEV: Overview (1/2 day), LEVEL 2 (1 day), LEVEL 3 (2 days), Intro to CMMI-DEV (3 days).
• Intro to CMMI-SVC (3 days), Supplement class (1 day), LEVEL 2 (1 day).

❏ **Identify critical changes to improve organizational results. Benchmark against the CMMI.**
A PROCESS APPRAISAL examines your organization's current practices and generates a focused list of strengths and critical areas for improvement. Our certified Lead Appraisers conduct customized CMMI-based appraisals.

❏ **Clarify and refine business/project measures and analysis.**
One-day workshop, MEASUREMENT AND ANALYSIS.

❏ **Systematically evaluate decision alternatives.**
Half-day workshop, DECISION ANALYSIS AND RESOLUTION.

❏ **Goal/problem-based improvement for service and development organizations.**
Two-day workshop, MAKING PROCESS IMPROVEMENT WORK.

❏ **Manage your suppliers.**
One and one-half-day workshop, SUPPLIER MANAGEMENT.

❏ **Achieve more with your time. Make your staff more productive.**
One-day workshop, TIME MANAGEMENT.

❏ **Understand how to save money, produce more and work faster.**
Two-day workshop, DOING MORE FOR LESS (LEAN).

❏ **Tailored assistance. Dedicated phone/web-based assistance.**
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