CMMI on the Cheap

Thomas D. Neff
BAE Systems,
Supporting the Defense Threat Reduction Agency,
Nuclear Technologies Directorate
Setting the Stage

• A little about me:
  • USAF, retired
  • 15 years CPI experience
  • Variety of organizational experiences
  • Never say die
  • Think outside the container
Getting Started – a Basic Plan

- What’s your goal?
  - CPI
- Who’s your management champion?
  - Your boss
- How are you going to approach this effort?
  - Document your process management lifecycle
- You have no money. How do you get started?
  - Just start. PIT team 1 hr per week.
- How do I turn the CMMI-x into SOIs and SOPs?
  - CMMI Goals and Practices become Policy (SOI)
  - Your org SMEs provide inputs for SOPs
- What should be my first process to document?
  - What's your biggest headache?
  - What consumes the most time?
  - Where's the most rework?
CPI is a continuous process but...
this continuous process
Find the Right Leader

Describe your interest in CPI

A. CP who?
B. I’m doing this because I was told to.
C. I had nothing else to do today.
D. My boss is interested in it so I am, also.
E. I live for this stuff. I want to ensure everyone’s getting the best bang for the buck.
Find the Right Leader

What’s your aptitude for this?

- A. I have a PhD in Process Improvement. I KNOW how it’s done. I don’t need any more training.
- B. I can hardly spell CPI but I understand the basic concepts and want to help the office improve things. I love to learn. Learning is a life-long endeavor. I see pros and cons in nearly everything.
- C. CMMI is the only useful CPI tool. We should use it, stick to it, and never deviate. Since the CMMIs are frameworks, they are much more useful than Lean, 6-Sigma, or ISO 9000 combined.

UNCLASSIFIED
How accurate do you want your processes?

- A. What we have now is acceptable. We don’t need to improve anything.
- B. All but me are clueless. I’ll have to write the processes for everyone else.
- C. We can make it better. Why publish a flawed process? I’d rather take longer and get it perfect the first time.
- D. I guess something around 80% accurate is good. Every time we go through this process, we’ll improve it a tad. Over time it will approach perfection.
Find the Team Members

Why are you on this team?

- A. I volunteered. My regular job is boring and I wanted something different.
- B. My boss made me. He said I had the most free time of anyone.
- C. I volunteered because I hate my boss and will do anything to get away from him, even for just an hour or 2.
- D. Are you kidding? I jumped at the opportunity to do this. I live for this stuff. I hate to see wasted money and effort. Let’s get started.
- E. My boss appointed me because she said I was the person that seemed best to get things done right the first time. I figure I was just doing my job. Everyone should do it this way.
Find the Team Members

Which of these is your philosophy?

A. We get the job done now. Don’t fix what ain’t broken.

B. There’s always room for improvement.

C. Before we can start, we need to measure so we’ll know how much we’ve improved.

D. Before we begin we need a very thorough, well thought out plan, identifying everything we’re going to fix and in what order, along with a cost and schedule.
Find the Team Members

How should we begin?

- **A.** Measure first. Then fix for improvement of the measure.
- **B.** Start with the process that causes the most and biggest headaches.
- **C.** Find the easiest process to fix first so you can get a quick success.
- **D.** Start with the process that is used the most, hence will yield the most improvement.
- **E.** It really doesn’t much matter. You can pick one of the above or just start anywhere. The only bad strategy is to not start at all. Sooner or later you’ll want/need to improve it all.
Find the Team Members

What’s the best model to use?

- A. Lean 6-Sigma because you have to measure before you can improve. This also leads to the best solution.
- B. The one that works for you.
- C. CMM(s) or CMMI(s) because they give you a roadmap such that you can identify what processes you need.
- D. ISO because it will lead you to the greatest overall improvements.
What’s the single greatest reason most CPI efforts fail?

Lack of appropriate management support.
Why does management support dwindle?

However...

• They knew this was going to be a long-term investment because you told them.
• They understand that we NEED these process improvements.
• They understand that when “complete” they’ll be saving mega-bucks.
• They get a “bill” each month.
• They have no or inadequate insight into any progress.
• The few visible improvements just don’t justify the expense.
• This has become a cash cow.
How do you avoid this?

Management insight on both a:
• micro scale &
• macro scale.

How can you do this?

Come back next year to find out.
Summary

• Devise a (flexible) plan.
• Get started...don’t procrastinate.
• Find the right leader.
• Assemble the right team.
• Keep management informed of (small) progress.
• Never stop. The path will be bumpy but over time you’ll get better and better.
• As the French psychologist Émile Coué said, “Every day, in every way, I’m getting better and better.” So it is with CPI.
Additional “Cheap” Resources

- The Software Engineering Institute: www.sei.cmu.edu
- Sw Process And Measurement (pod)CAST: www.spamcast.libsyn.com/
- SSC San Diego Process Asset Library: http://sepo.spawar.navy.mil
- Tao Xie's Software Engineering Research Links: http://people.engr.ncsu.edu/txie/seresearchlinks.html
- How to ask questions the smart way: http://www.catb.org/~esr/faqs/smart-questions.html
- Virtual SPIN: http://linkedinspin.ning.com/
- Dilbert: dilbert.com
- Practical SW & Sys Management (metrics): http://www.psmsc.com
- Your favorite search engine.

Great Templates & examples

A gazillion links to useful sites.

Dilbert works in your organization.
Have a laugh.

Google Scholar... a way to search for scholarly literature. You can search across many disciplines and sources: peer-reviewed papers, theses, books, abstracts and articles, from academic publishers, professional societies, preprint repositories, universities and other scholarly organizations.