Chutes and Ladders

ISO/CMMI Considerations

November 16, 2011

Since our company was ISO 9001 certified, we assumed we were all set for CMMI. However, much like the game of Chutes and Ladders, we learned when we performed our gap analysis that some of our ISO practices put us ahead for CMMI, while others meant we were behind where we needed to be!

Topics of Discussion

- Challenges faced
  - Become ISO 9001:2008 certified
  - Simultaneously implement CMMI Maturity Level 3
- The gap analysis "reveal"
  - "ladders" (areas where ISO procedures and practices gave us the inside edge)
  - "chutes" (areas which required improvement)
- The cultural shift required
  - How a group of creative, talented and opinionated employees worked together to adopt processes, procedures, and best practices
- The road less traveled
  - How ISO and CMMI learned to successfully co-habitat (or at least not kill each other)
  - Let's save some time (or helpful hints)

- The Customer
  - Defense Commissary Agency
- The SSESS Team
  - 34 employees
- The System
 - DeCA Interactive Business System (DIBS)

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- The Contract
  - ISO 9001 OR CMMI DEV
- The Challenges
  - Documentation
  - Procedures

- THE SOLUTION
  - ISO 9001

- In 2007, we started work on the SSESS contract.

- With scarcely documented procedures, we rolled up our sleeves and got to work!

- We had 34 people who were:
  - Overworked
  - Overwhelmed
  - Working like crazy

- How did we implement ISO 9001 during all this chaos?
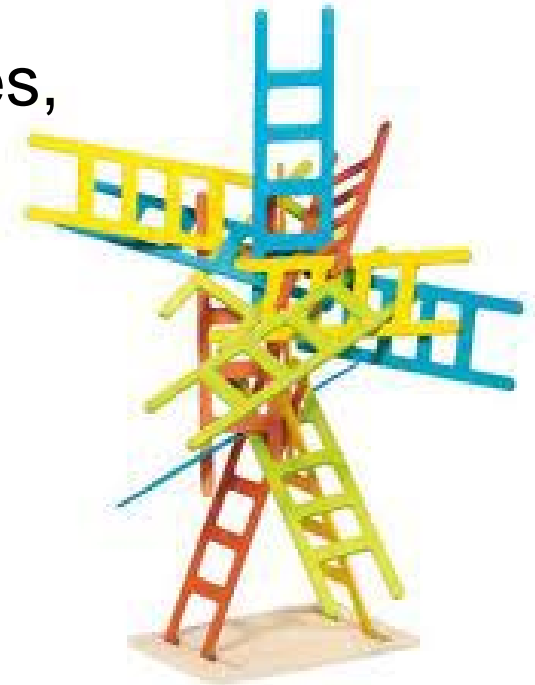
First Things First

- Top down or bottom up?
    - Without management's support, no one would listen
    - Without employee buy-in, no one would act

- Lesson learned:
    - Stakeholder engagement!!!

Stakeholder Engagement

- It's all about the message
  - Say it loud
  - Say it often
 - Say it again
  - *Repeat steps as needed*

- Our guidance
  - Prior to the first external audit, our appraiser recommended a shift from ISO 9001:2000 to 9001:2008.
- Lesson learned:
  - Whenever possible, become certified or appraised in the upcoming version of the standard. You will benefit by getting ahead of the curve.

Enter the CMMI…

- We're prepared…or are we?
  - As we entered the gap analysis: "We already have processes and procedures in place! This should be a piece of cake!"
  - During the SCAMPI C, our eyes were opened: "This is no piece of cake!

A Not So Simple Union
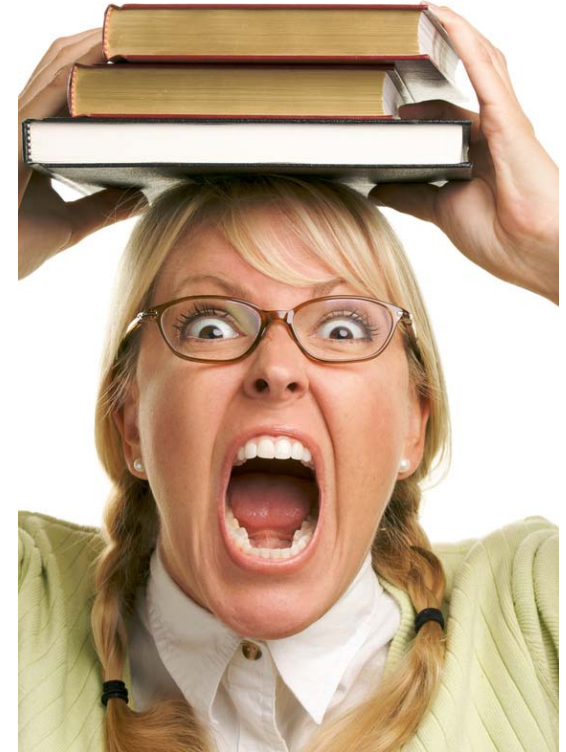
"**England and America are two countries separated by a common language.**" **George Bernard Shaw**

- Matching the ISO standard with CMMI process areas is conceptually impossible
- Limited mapping between ISO 9001 and CMMI ML 3 with some similar terminology:
  - Configuration Management = Configuration Management (well, sort of)
  - Quality Assurance = Verification
  - Requirements = Requirements (RD/REQM)

It's A Model, Not a Process

- If I comply with ISO 9001:2008 7.3.1, do I conform with the TS SG 2?

ISO 9001L2008	CMMI-Dev 1.3
7.3.1- Design and Development Planning	Technical Solution SG2- Develop the Design

- What's an interface anyway?

ISO 9001L2008	CMMI-Dev 1.3
7.3.1- Manage Interfaces (Design and Development Planning)	Product Integration SP 2.2- Manage Interfaces

- Processes were well documented and institutionalized on the project

Chute…

- Processes were institutionalized on the PROJECT!
- The Organization wants me to do what?
    - Change…again
    - Document…again
    - Train…again

    Hint: the miracle of Tailoring

- The SSESS customer required and supported quality standards for the project which means we already had their buy-in

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- CMMI does require the time and commitment of the project team
  - Project leadership had to ensure this didn't take away from deliverables and scheduled tasks
- Lesson Learned: If it doesn't get planned, it doesn't get done.

Ladder…

- Since SSESS already had process evangelists embedded on the team, it was easier to make CMMI disciples

- Lesson Learned: Form partnerships between the Organization's Quality Group and project Quality team members early. It takes a village to raise a process framework.

Chute…

- ## Cultural shift
  - "We already made it up the ISO mountain! Who needs CMMI?"
- ## Lost in translation
  - The SSESS quality team was often serving as the translators between the technical staff and the Organization's corporate quality team during the CMMI gap analysis
  - The distillation between CMMI and ISO often left our heads spinning
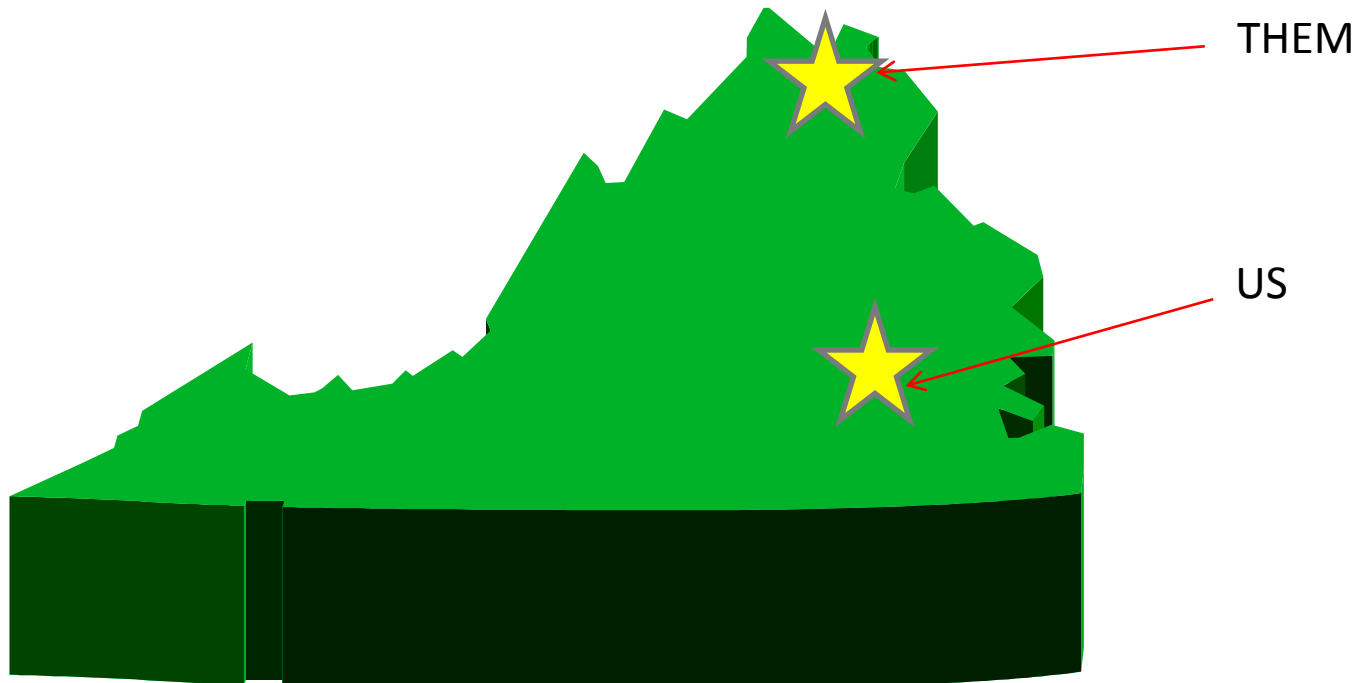- ## The challenge of objectivity

Shoot…let's just do it!

- What happens when you marry a standard and a model?
  - Continuous quality improvement, of course

Think Globally. Act Locally.

- We're in Prince George, they're in Northern Virginia…
- You want CMMI? That's nice…what's in it for me?

THEM

US

What Didn't Work…

- Trying to match up ISO and CMMI is like trying to herd cats…

"Resistance is futile."

- Resisting conformance to organizational standards…

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- Not planning for CMMI tasks, but expecting them to get done anyway…

What Didn't Work…

- Jumping into CMMI with minimal training…

What worked…

- Don't lose buy-in: from the bottom up <u>and</u> the top down
  - Required weekly CMMI status reports to many levels of ManTech management with regular feedback
  - CMMI Day
  - Team engagement with Mission Assurance (not just the PM/DPM)
  - CMMI Training

What worked…

- Continual reality checks
  - Why are we doing this?
  - Is it working?
  - What can we do better?