CMMI® Level 5……. A Bargain!

11th Annual CMMI Technology Conference and User Group

November 14 – 17, 2011

Raytheon Integrated Defense Systems (IDS)

Mary Ellen Christopher
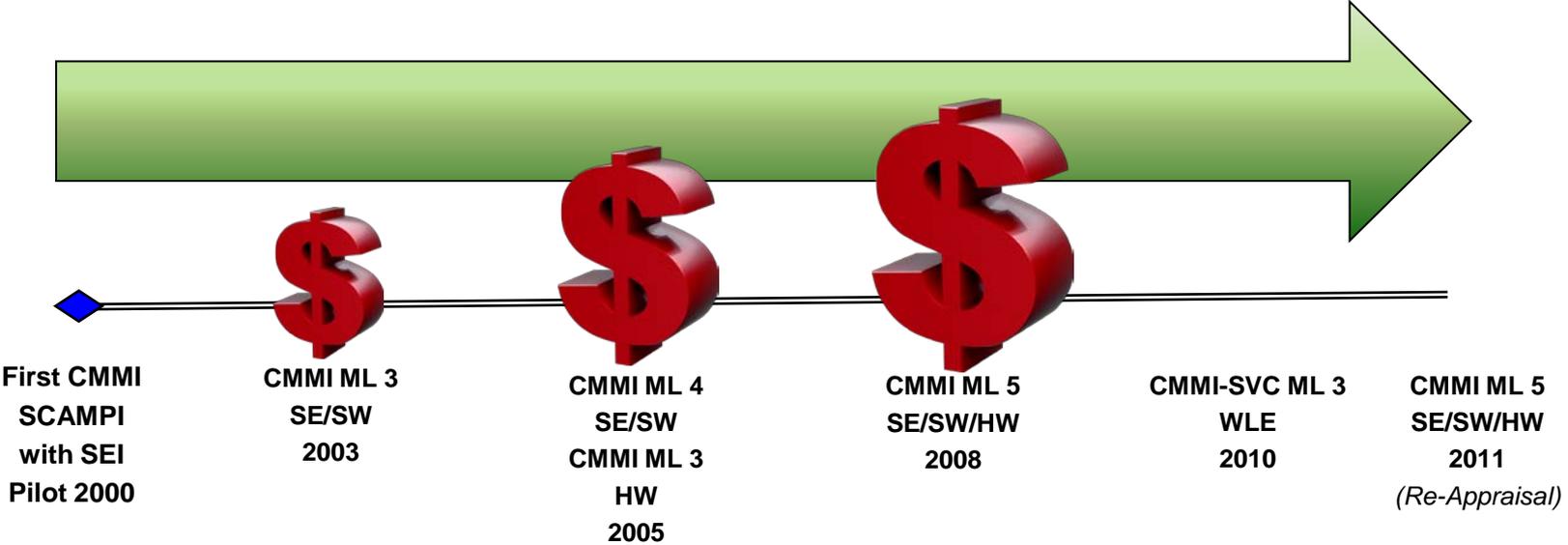
Jayne Perkins

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Agenda

- IDS History

- Cost Effective SCAMPI's – a MUST

- Bargain Hunting

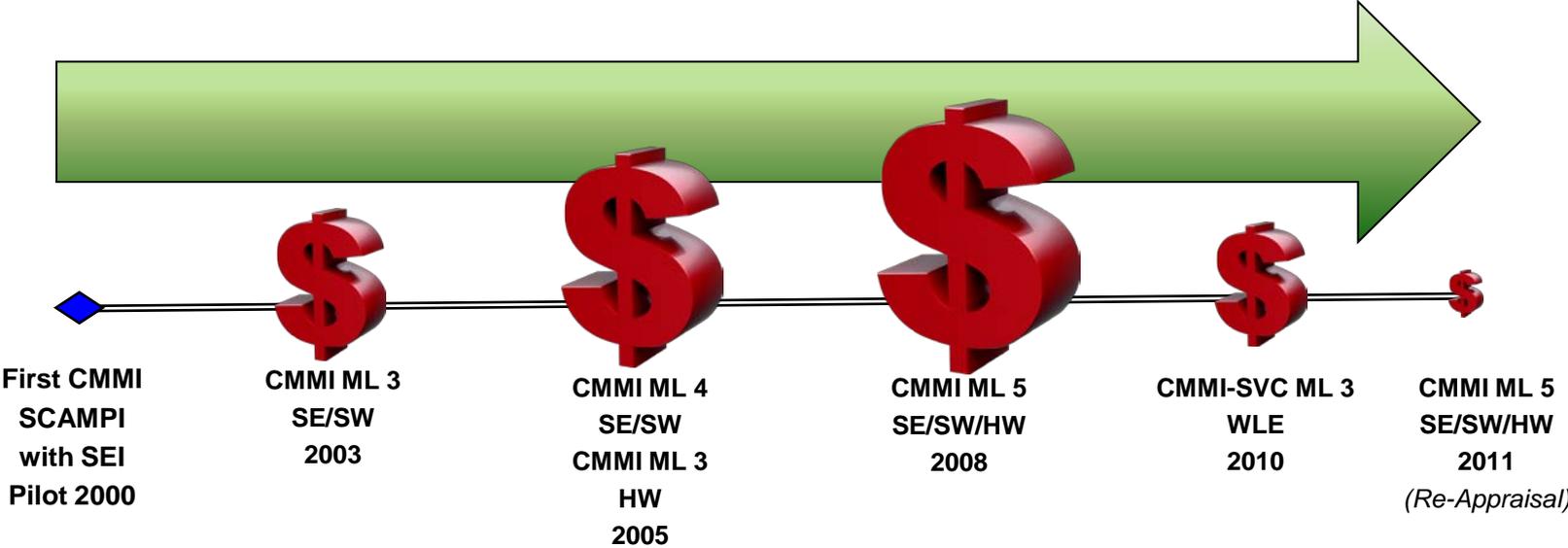- Key Shopping Tips

- Summary

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Is it possible to reduce SCAMPI costs?

- The considerable cost of preparing for and conducting a SCAMPI Class A appraisal can reduce the value of a CMMI initiative as well as diverting funds away from improvement activities.

- This presentation will share how Raytheon Integrated Defense Systems (IDS) was able to significantly reduce cost and cycle time for preparing for and conducting a 2011 CMMI-DEV V1.3 Maturity Level 5 SCAMPI A as compared to the similar scope SCAMPI A conducted in 2008.

- The strategy used balanced results with an acceptable level of risk.

- We hope you can take some of our lessons learned and apply them to your organization.

IDS CMMI Appraisal History

First CMMI SCAMPI with SEI Pilot 2000

CMMI ML 3 SE/SW 2003

CMMI ML 4 SE/SW CMMI ML 3 HW 2005

CMMI ML 5 SE/SW/HW 2008

CMMI-SVC ML 3 WLE 2010

CMMI ML 5 SE/SW/HW 2011
(Re-Appraisal)

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CMMI ML 5 SE/SW/HW 2011 *(Re-Appraisal)*

STOP THE INSANITY!

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Doesn't Everyone Want a Bargain?

A Bargain!

Bargain (noun): bɑː(r) gɪn   (Macmillan Dictionary)

1. something you buy that costs much less than normal
You should be able to pick up a few good bargains.

       a. a lower than usual price

       Twenty pounds is a real bargain!

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How do *YOU* Shop for a Bargain…

How do *YOU* Shop for a Bargain…

Special Tips for Getting the Best Bargains on Black Friday…

Tips for Bargain Hunting…

Comparison Shop

Shopping List

Exclusive Deal

COUPONS!

BUY 1 GET 1 FREE

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#1 Shopping List

What do we have to get … It's all in Planning!

Problem: Evidence had been collected from multiple disciplines for every Process Area and was Evidence Collector Driven

Goal: To develop an Efficient Data Collection Strategy

- Established a Plan as to who would supply what evidence
  - Appraise at the program level vs. by individual disciplines
  - One Evidence Collector per Program
- Developed Precision PIID's - *"Operational Definitions"*
  - Example Evidence very detailed
  - Common Artifacts Identified
  - Identified Multi Purpose Evidence "Threads" for ease of collection and appraising
- Established Common File structure for Evidence Repository

If you can't explain it simply, you don't understand it well enough.

Albert Einstein

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#2 Exclusive Deals

What's unique … It's all in Understanding the Business Needs and Tailoring to suit!

Problem: Appraisals were considered a Major Event requiring many Meetings and Communications

Goal: To make Appraisals Less Invasive to Programs

- Eliminated Participant Briefing & Opening Briefing (3 Briefings merged to 1)
  - Used existing Project Briefing Sessions, combining duplicate information
- Eliminated two "Formal" Preliminary Findings Briefings
  - Performed alternative validation of Preliminary Findings - via E-mail with acknowledgement of Findings
- Eliminated the appraisal "*hype*"
  - Reduced Communications Costs - We did not want to "alert" the organization
  - An appraisal event should not be a stimulus to perform differently!
    - "This is the way we do business"
  - Stoplight status stayed within "Closed doors" *(vs. Fix that RED!)*
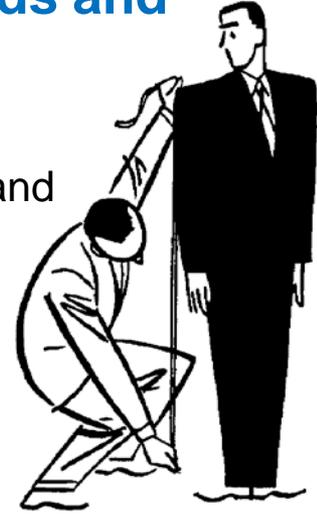
Breaking with Traditional Thinking

#3 Coupons

How much can we get for our money … It's all in spending $ wisely!

Problem: Too much Time and Money was spent on Polishing the Evidence and conducting Multiple Appraisal Events

Goal: Ensure Appraisals do not consume majority of Funding…Budget spread to Sustainment, Institutionalization and Improvements

- Focused on Sustainment Activities
  - Updated Quality Audits to find sustainment issues
  - Used a Maturity Index Tool to ensure no process regression
- Reduced Evidence review time Pre-Onsite and Onsite Activities
  - Common Artifacts and Threads told the same story
- Eliminated Class C and B appraisals - Were not looking for an appraisal with "No findings"
  - Address weaknesses after the SCAMPI^{SM} rather than between events
- External "seasoned" team members reviewed high risk evidence
- Level Set the Appraisal Team by phone a few weeks prior to the appraisal

More Bang for the Buck!

#4 Buy 1 Get 1 Free

What can we get for free …. It's all in the Re-Use!

Problem: Multiple copies of the same evidence collected by various evidence collectors – too much evidence, too time consuming to review/interpret

Goal: To collect the Minimum amount evidence – for the Maximum amount of coverage

- Developed a list of "common" artifacts
  - 30/40 key documents provided 70% coverage …
  - Reduced Evidence Collection Rework
- Established a Common File Structure for Evidence
  - Ensured ease of evidence identification by collector *and* reviewer
- Created one PIID per Program being appraised (vs PIIDs by PA)
  - Facilitated the copy of common links rather than having to relink
- Identified One Evidence Collector per Program
  - Evidence collector knew what was already collected and could re-use across Process Areas

Read Once…. Write Many

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#5 Comparison Shop

Who has the best …It's all about Lessons Learned!

Problem: Preparing for and Conducting Appraisals the same as we always had because "that's how we do it"

Goal: Utilize Lessons Learned to get a Lean appraisal process while ensuring Appraisal Integrity and Accurate Appraisal findings.

- Write Once… Read Many for Evidence Collection
- Logistics
  - "Dry Run" in New Conference Area
  - Ensured two site coordinators were available and at least one was always present to assist the appraisal team
- Business Units typically staff 50% of their team members from outside
  - Enables sharing of best practices across the entire Raytheon - leverage across and take the best of the best
- Utilized local experienced appraisal team members for evidence review

Work Smarter, Not Harder

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Impulse Purchase

## Seeing something you can't live without… It's all about Best Practices!

- Raytheon shares among 6 Business Units (BU)
  - Engineering process Group (EPG) Workshop
  - Constantly look for improvements (Feeding ML 5)
- Hi – MAT
  - Worked with Programs in their own language – "not in CMMI terms" to determine actual process execution
    - Models that make sense – *"Model Hunting"*
    - Programs were performing "High Maturity"
- Maturity Index Tool
  - Adopted from another BU
    - Altered to fit our process structure
    - Modified to incorporate Services Model
- Appraisal Team Members
  - Participate on other BU Appraisals
  - Bring members from other BU's to participate on ours
- Lead Appraiser
  - Periodic Site Visits keeps Lead involved – no surprises

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Our ML5 Re-appraisal ….. a Bargain!

March 2011

CMMI® ML5
SCAMPI^{SM}
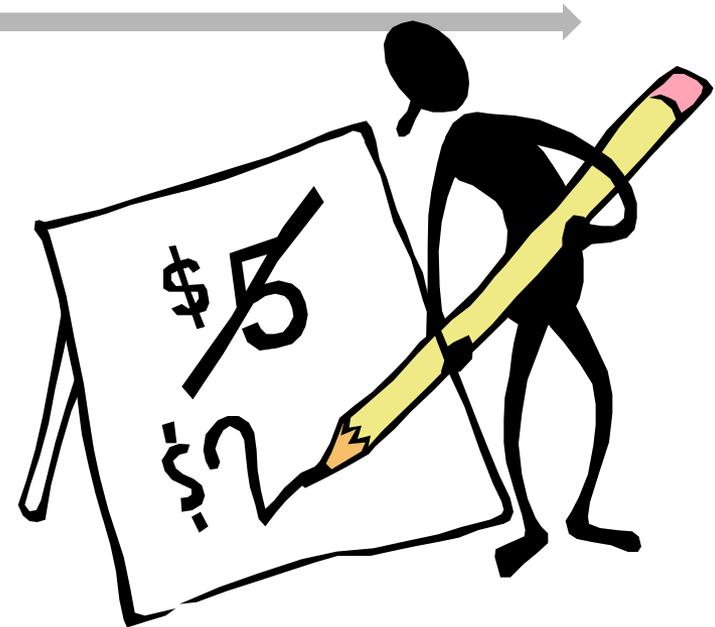
-50% less overall cost (Prep & Conduct)
- 2.5 weeks on-site vs. 4 weeks
- 8 months ahead of schedule
- Minimal impact to programs – Already sustaining

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Questions?

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Contact Information

Mary Ellen Christopher

Mary_Ellen_S_Christopher@raytheon.com
978.858.9013
Raytheon Integrated Defense Systems
Tewksbury, MA 01876

Jayne Perkins

Jayne_A_Perkins@raytheon.com
978.858.4506
Raytheon Integrated Defense Systems
Tewksbury, MA 01876

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