CMMI and Agile: Partners in Driving Radical Change in Engineering.

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Broadsword, an SEI Partner
Agile Evangelist
ScrumMaster
Certified SCAMPI Lead Appraiser
Certified CMMI Instructor
What is Process Improvement?

How many of you have been asked by your management to do one of the following?

• Continuously Improve
• Do more with less
• Build quality into “the process”

... or some other slogan?

What the #&$% does that mean?
Welcome

Jeff Dalton
Agile Evangelist
SCAMPI Lead Appraiser
CMMI Instructor

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Or click over to:
www.broadswordsolutions.com/resources.php
On a warm summer night in 1913 Igor Stravinsky presents “Rite of Spring” in Moscow . . .

Le Sacre du Printemps/The Rite of Spring
Arr. for Piano 4 Hands by I. Stravinsky

Every Note

Part I: The Adoration of the Earth

Introduction

I. Stravinsky

The audience expected a story about spring . . . But it was about change – radical change.

To the End my Dear . . . To the End!
It was not well received . . .
Why the brain doesn’t like change

When neurons in the auditory cortex hear something new, they go into overdrive and trigger an overdose of Dopamine... Leading to SCHITZOPHRENIA

The Brain needs to *incrementally* interpret new ideas
Remember this?
Humans are “pattern seeking” mammals

When exposed to something new we desperately try to make sense of it.

Specific Practices

Generic Practices

... Scrum Practices

.... but myopic adoption leads to “Mal” Practice

... and Introduces “Process Debt”
A useless audit-driven death-march that sucks the life out of us, turns us into zombies, and forces us into slave-like adherence to THE PROCESS.

Engineers interpret most new processes as:

- march to zombies,
The Agile vs. CMMI Debate is over

CMMI or Agile: Why not embrace both!
SEI Technical Report

Hillel Glazer, Jeff Dalton, David Anderson, Mike Konrad, Sandy Shrum
SEI Technical Publication CMU/SEI-2008-TN-003

http://www.sei.cmu.edu/publications/documents/08.reports/08tn003.html

www.broadswordsolutions.com/resources.php
CMMI & Agile; Friends or Foes?

People that advocate Agile tend to disdain structure...

People who support CMMI tend to want to avoid chaos and risk...

...so, it follows that...

...most advocates of Agile focus on iterations and failing fast

...most advocates of CMMI focus on planning

What we have is a failure of imagination!
“Agile” organizations are not process focused . . . . Right?

Planning Poker
PP.SP1.1, SP1.4

Refactoring
REQM.SP1.5

Value Velocity
GP2.8, MA.SP1.2

Requirements in Code
RD.SP1.2

Pair Programming
VAL.SP2.1, SP2.2, VER.SP3.1, SP3.2

Test-driven development
RD.SP3.1-3.4, VAL

SEI Partner
CMMI

Broadsword
Process Innovation at the speed of life
What we have is a failure of IMAGINATION

CMMI is something we USE

Agile is something we ARE

Do I have to be like everyone else?
The CMMI was designed to be Agile .. Really!

This is the essence of TAILORING.
We don’t “tailor-out” we SELECT what is right for us.

ONE SINGLE PROCESS (none)
Paradigm Shifts...

- The average CMMI Level 3 SCAMPI Appraisal examines over 400 document types and over 1000 artifacts.

- We can **reduce and consolidate** documents and processes if we stop thinking about “certification” and start thinking about what is useful.

- A template, form, or document is always the obvious answer, but there are other options...

  - Digital Photos
  - Databases/Tools
  - Code Comments
  - White-board Cameras/Printouts
  - Videos
  - Scanned Drawings, Napkins
Agile is a philosophy about how we do work

<table>
<thead>
<tr>
<th>Perceived for CMMI*</th>
<th>Possible Substitute</th>
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<tbody>
<tr>
<td>Meeting Minutes</td>
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<td>Notice of Decision</td>
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<td>Stakeholder Involvement Report</td>
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<td>Detailed Requirement Specification</td>
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<td>Bi-directional Traceability Matrix</td>
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<td>COCOMO, SLOC, Top Down, Function Points</td>
<td>Planning Poker, Ideal Days, Feature Value</td>
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Don’t create a work product for every practice, look to the **INFORMATIVE MATERIAL** to understand the **INTENT** of the practice, and strive to satisfy its meaning.

* Notice “perceived.” Nothing in the model requires this.
We are learning that the traditional ways of developing process need improvement and that, through iteration and collaboration with others, we have come to observe that:

- Innovation
- Useful Processes
- Collaboration
- Flexibility & Agility

Outweighs
Outweigh
Outweighs
Outweigh

- Process Mandates
- Certifications & Audits
- Coercion & Punishment
- Rigid Compliance

*with appropriate attribution to Jeffries, Sutherland, et al
A story about a Rock Star, one very groovy M&M, and “Just Enough Process.”
A Continuously Improving Process Architecture
A new way to understand process velocity

First, strive to understand where work is occurring and where the CMMI Model addresses that work.

Use the practices and informative materials to understand where your gaps are.
Use an appraisal to understand institutional weaknesses

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So what happened to Stravinsky?
He took “Rite of Spring” on the road...
... and returned to Moscow a hero
He learned and became more agile . . .

And 27 years after causing a mass riot, his music was selected for the Disney cartoon movie Fantasia.
If you only remember one slide . . .

Agile is a **philosophy**, a way of life

Agile something you **are**

CMMI is something you use.
Thank you!

Visit Jeff’s Agile CMMI Blog at:

http://asktheCMMIAppraiser.com

www.broadswordsolutions.com