Use of SCAMPI^{SM} C for Agile Methodology

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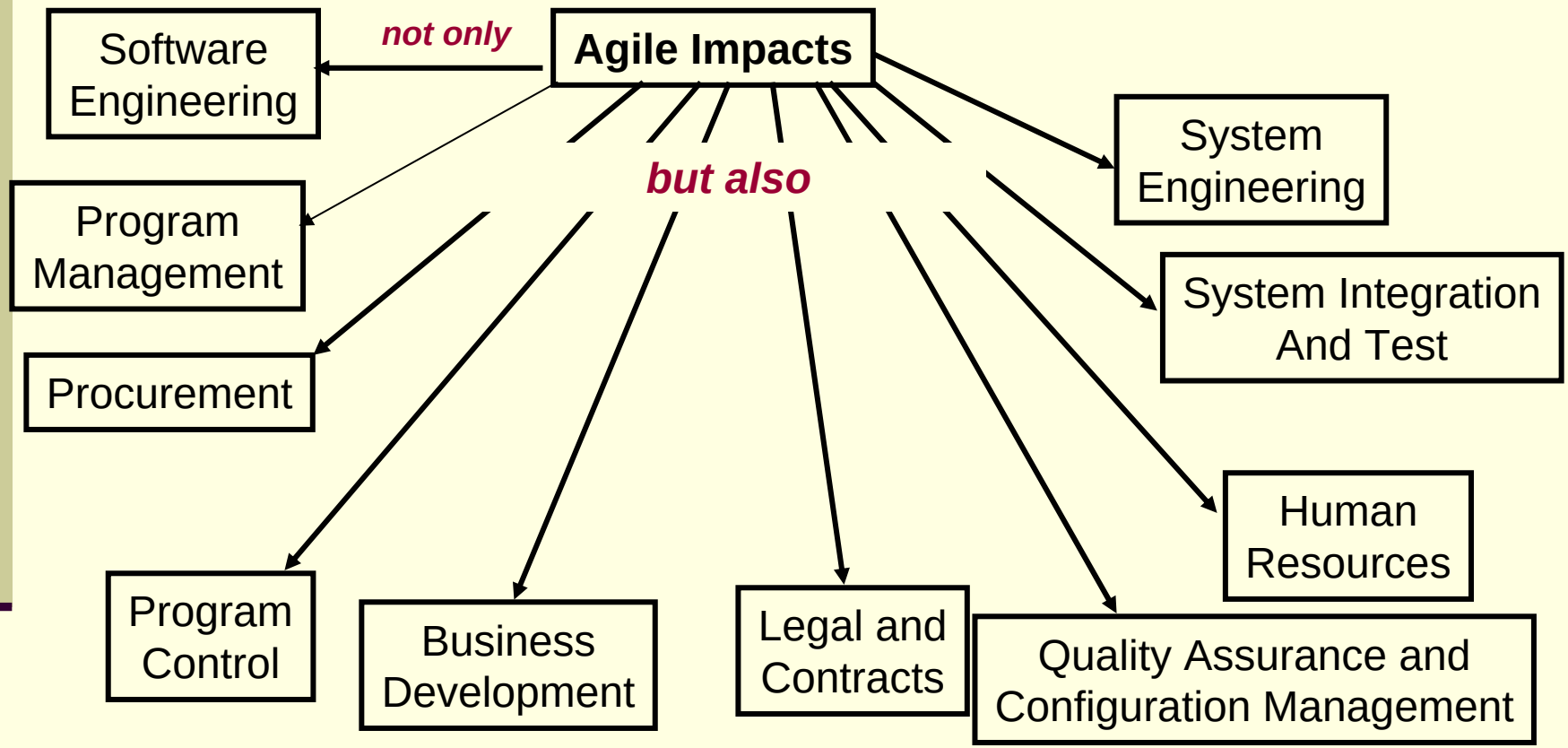
Approach to Agile at LM IS&S - Background

- LM IS&S CMMI® Maturity Level 5
  - SE/SW/SS/IPPD
- Agile perceived as a way to do things faster, cheaper, better
  - “We don’t need no stinking process.”
- LM IS&S starting to see RFPs “requiring” Agile and current Customers asking for Agile
  - But there were different perceptions of Agile both within IS&S and by customers

Approach to Agile at LM IS&S

- Therefore, IS&S saw the need:
  - To provide a clear definition of Agile for IS&S and communicate that definition
  - To understand the strengths and weaknesses of Agile and adopt it in the right way, for the right reasons, for our business
  - To define the blend of Agile and plan-driven methodologies that will provide best value for our programs and customers while still ensuring a disciplined approach

IS&S Agility – It's Not Just for Software



Agile methodologies drive changes across the organization, yet none of the industry Agile methods address the full scope of issues that impact IS&S

IS&S Multi-Staged Effort

- Establish an Agile Core Team (ACT)
  - Gather and share information and lessons learned about Agile across IS&S. Support proposals and customer “education”
  - Generate an "Agile Reference Model" (ARM) which describes a Systems and Software Engineering Agile life cycle
  - Use the ARM to identify and resolve Agile impacts to other organizations
  - Define agile program/project selection criteria:
    - Means to identify risks if Agile were to be used.
  - Validate the IS&S Agile life cycle through use on pilot programs.
  - Communicate to the organization.
    - Training materials, business development materials, engineering tool recommendations, etc.

Take incremental, high-value steps toward defining the IS&S Agile processes

Use of SCAMPI^{SM} Cs for Intent

- Agile Reference Model (ARM)
  - By February 2006, the Agile Core Team had established a draft Reference Model
  - Focused on Engineering portions of process (Software and Systems)
- Organization wanted to ensure that the results of ARM were compatible with CMMI®
  - Use of SCAMPI^{SM} C for *Intent* was an ideal fit
  - Plan to use a series of SCAMPI^{SM} Cs for intent as the Agile Reference Model gets refined for other process areas

Agile SCAMPI^{SM} C Process and Scope

- Used SCAMPI^{SM} Class C Method for Intent
  - Limited scope to Specific Practices of Engineering Process Areas
  - Obtained Senior Management sponsorship
  - Worked with Agile Core Team to get access to documentation and identify interviewees
    - Agile Reference Model was objective evidence for *intent*
    - *No implementation evidence available*
  - Used Practice Implementation Indicators (PIIs) to record findings
    - From documentation review and interview
    - SCAMPI^{SM} C requires at least one item of objective evidence (direct, indirect, affirmation) for each practice
  - Results reported to Agile Core Team and Sponsor

Agile SCAMPI^{SM} C Participants

- Experienced Team Members

Name	Introduction to CMMI (date attended)	Engineering Experience (# years)	Management Experience (# years)	Life Cycle Experience (# years)	Reporting Relationships
Team Lead	October, 2003	15 years	5 years	20 years	Direct Report to Sponsor
Team Member 1	February, 2005	22 years	5 years	20 years	Direct Report to Sponsor
Team Member 2	October, 2003	15 years	5 years	10 years	Direct Report to Sponsor
Team Totals		***52 years***	***15 years***	***50 years***	

- 2 Interviewees from Agile Core Team
  - About 1/3 of Agile Core Team

Summary of Results

- Very high correlation of *intent* of ARM to CMMI® Specific Engineering Process Area
  - 41 “Green” Specific Practices
    - Intent adequately addressed
  - 4 “Yellow”
    - Intent partially addressed (RD SP3.1, TS SP3.2, VER SP2.1, VER SP2.2)
  - 1 “Red”
    - Intent absent or poorly addressed (VER SP2.3)
- Recommended that documentation be enhanced to make sure intent is explicit
  - Document how the method handles interfaces, reviews, recording decisions, and constraints
- Recommended method be updated to include:
    - Measurements, Operations Concepts, End User Documentation, Peer Reviews

Actions Since SCAMPI^{SM} C

- Measurement section generated for ARM and is in the review process
- “Product Vision” defined in ARM is consistent with Concept of Operations
- Pair Programming being viewed as one form of “Peer Reviews”
  - Other reviews being defined in ARM

Next SCAMPI^{SM} C for *Intent* being planned 1Q07

Summary

- Agile Reference Model (ARM) being defined by IS&S to ensure consistent, best-value approach
  - Customers are driving the need to address
  - Organization is driving the need to maintain CMMI compliance
  - Goal is to define the blend of Agile and plan-driven methodologies that will provide best value for our programs and customers while still ensuring a disciplined approach
- SCAMPI^{SM} Cs for *Intent* are an effective tool to ensure ARM is consistent and compatible with CMMI