Minimum Viable Process (MVPr): Implementing Agile At Scale in Highly Regulated Contexts

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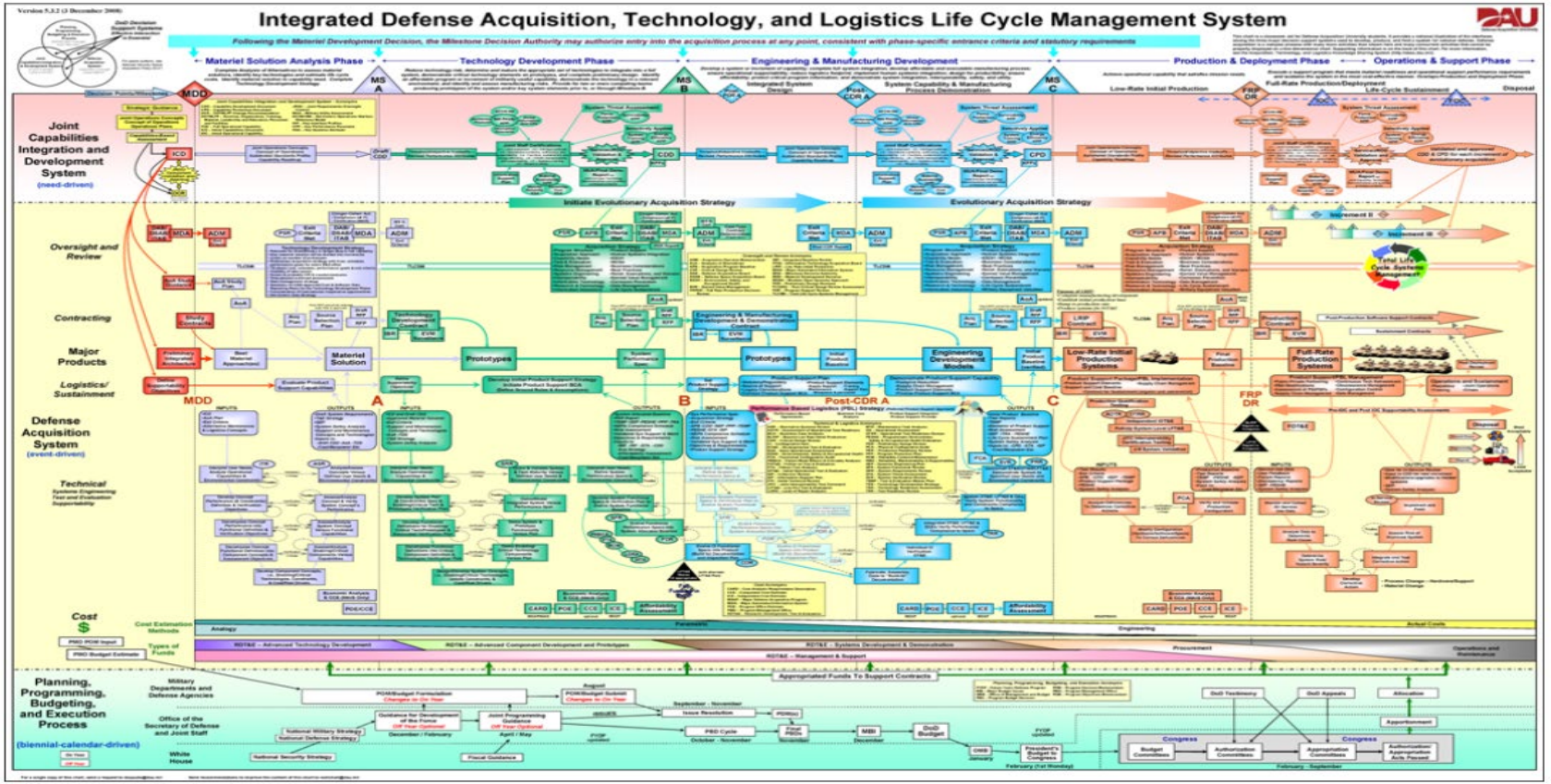
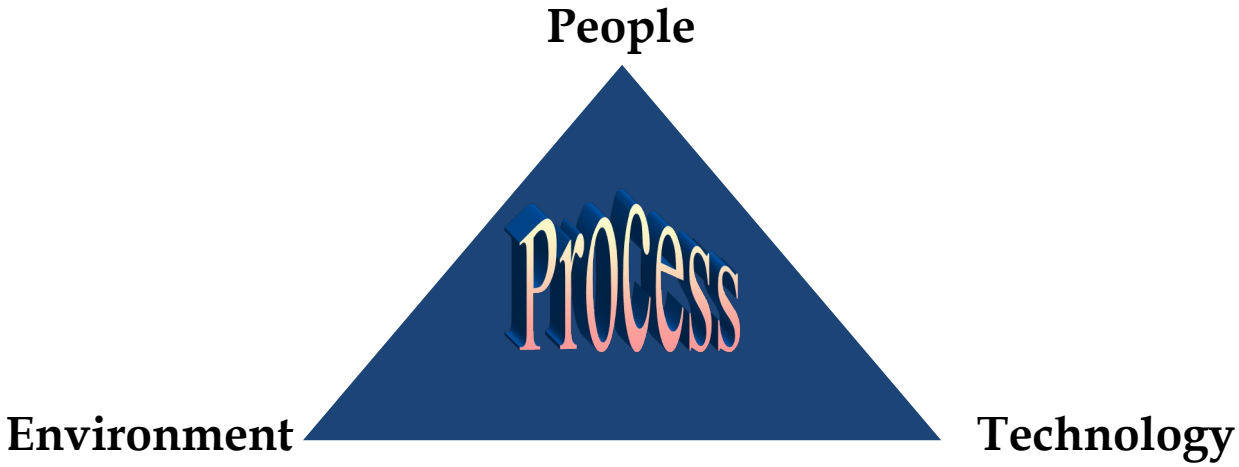
Abstract

Early formulations of Agile development methods emerged from contexts very dissimilar to highly regulated military-industrial contexts. Both the fixed and variable aspects of the settings of early Agile implementation were fundamentally different from those of the highly fluid, wide scope and volatile nature of government programs. The introduction of the concept of “Agile scaling” has resulted in several methods to accomplish those ends in commercial settings, but none is ideally adapted to the military and industrial environment. Through years of immersion in Agile and Agile scaling endeavors, we developed an adjunct to one popular scaling method which forms a foundation for any such adjustment towards Agile practices. This approach is called the Minimum Viable Process (MVPr), which is used as a practical tool to conscientiously winnow legacy systems engineering practices to their best expression in optimizing a scaled agile systems development approach. In this presentation, we describe the MVPr method with examples of its use in government programs as a means of bringing clarity to large bodies of information, influential stakeholder teams, and often conflicting concerns. With its development-level process focus, MVPr stands to clarify and catalyze better scaled agile integrations at scale.

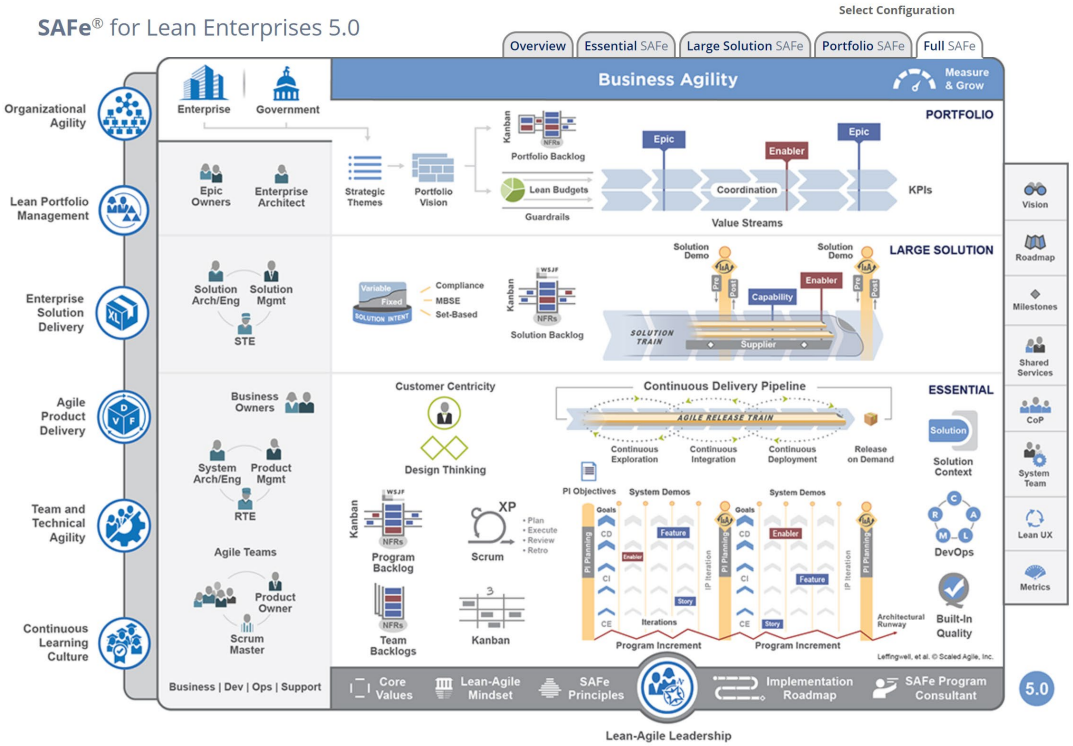
DoD Acquisition Context: The “Horse Blanket”



Back to Basics—The Role of Process in a Complex Product Development



Scaled Agile Framework (SAFe 5.0)



Version One survey lists SAFe as the most popular scaling technique

SAFe is based on:

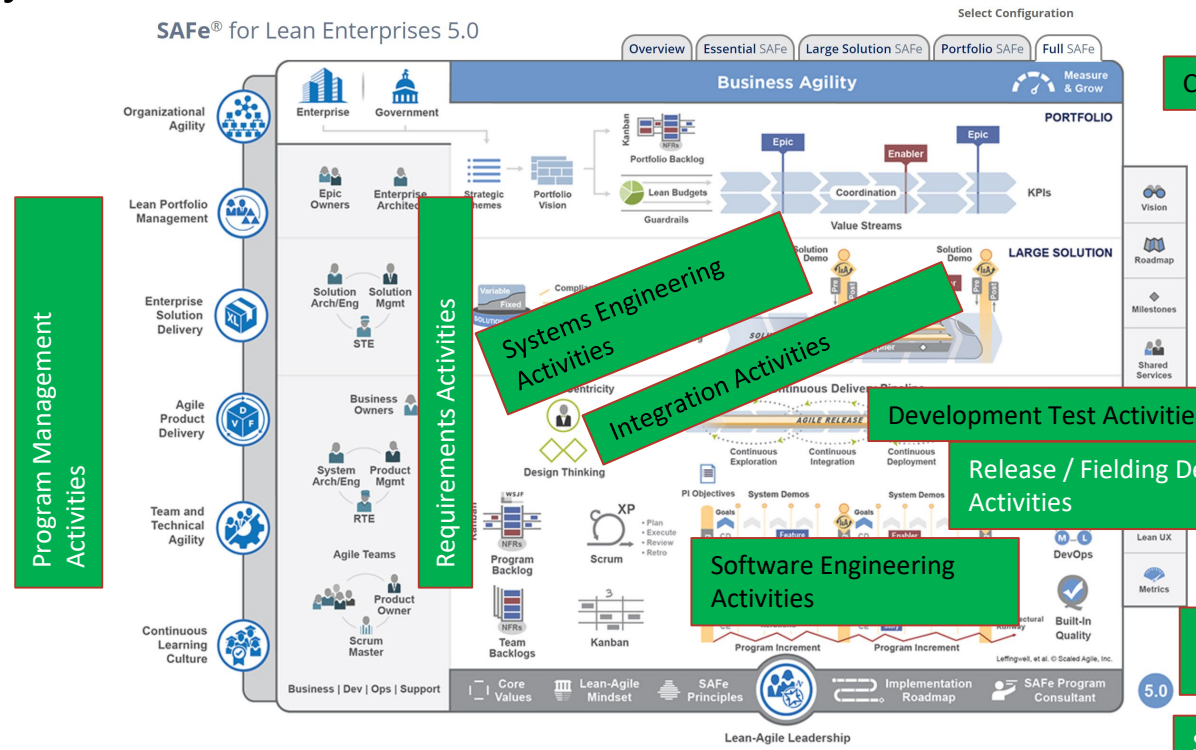
- Scrum or Kanban Team Mgmt Practices
- XP Team Technical Practices
- Lean Engineering, Lean Startup
- Design Thinking
- Kotter “Dual Operating System” Enterprise

SAFe “big-room” Program Increment Planning sessions, are a key differentiator from other scaling methods.

SAFe framework allows for, but does not require, incorporation of enterprise roles.

Tailoring the SAFe framework is expected. It is not meant to be used “out of the box”.

SAFe 5.0 is a Process FRAMEWORK that Does Not Address All the Elements of the a Complex Program's People, Process, & Technology Eco-Svstem



Why MVPr?

- When deploying scaled agile practices, most of the processes affecting *all* teams and many roles previously unknown are *undefined*
- These undefined processes will play a central and enduring role affecting all subsequent team behaviors and success
- Left undefined, teams make processes up as best they can – usually none of these made up processes has enterprise-wide consistency or equivalent effectiveness
- Early process decisions skew later results
- Scaled agile processes were not designed to accommodate highly regulated environments within a DoD-style acquisition eco-system

Therefore: Existing legacy processes tend to stay firmly in place, and hoped for benefits from a scaled agile approach are compromised or *lost entirely*

One MVPr Approach (There are Several Options Depending on Context)

"Pre-Kickoff" Activities

✓Define Process Context—*Engineering and Program Management of Reqmts Defn→Fielding*

- Start/End of Value Stream to be Mapped

✓Define Process Perspective--*Omniscient*

- Single Stakeholder/Omniscient

"Kickoff Workshop(s)" Activities

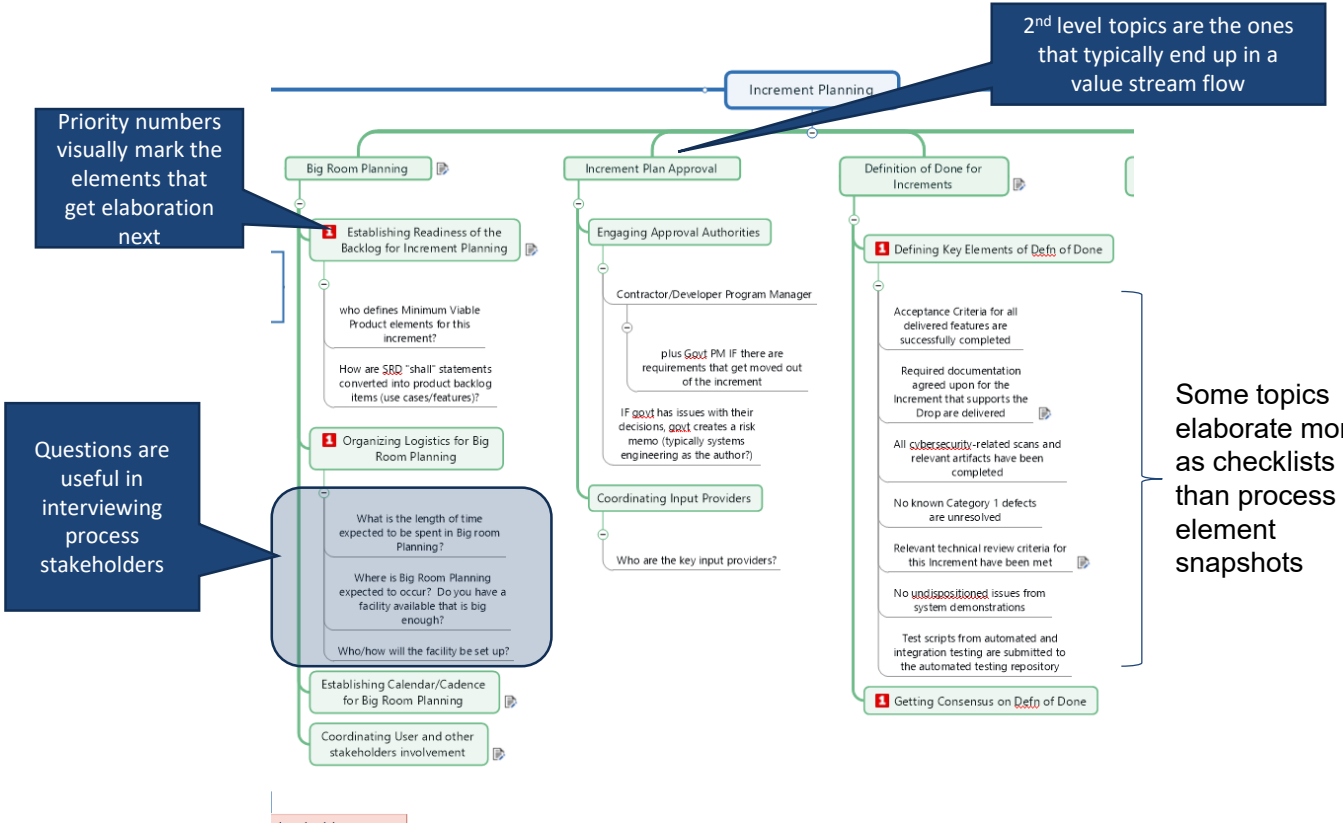
❖Select Starter Topics for MVPr—*started→subset of candidate Process Categories Identified*

- What are the Process Topics that Create Conflict or Reflect Misunderstanding among Key Stakeholders Elaborate Starter Topics (may require 2 sessions to complete)

"Post Kickoff" Activities

- Create Initial Draft of Integrated Process Model
- Create Process Element Snapshots (PES)
  - Option 1 – Create PES at post-kickoff Authoring Workshop
  - Option 2 – Create PES individually; hold workshop to review, refine & integrate
- Refine Integrated Process Model

What a Process Model Map Looks Like



What a Process Element Snapshot Looks Like-1

Context	**<notes about the immediate triggers for the process and/or known constraints that should be understood. Shouldn't be more than about 5 lines>**
Purpose	• <primary reason this process exists and needs to be performed>
Primary roles involved:	• <primary performing/approving roles should be listed first—after the role is named, their primary function in the process is stated briefly> • <other named stakeholders> -- they provide input that reflects their particular perspective
Relevant/Key Events	• <list of known events that may either trigger the process or act as its completion>
Related Process Elements	• <Names of other processes that depend on or are dependent on this process >

What a Process Element Snapshot Looks Like-2

Process Steps/Roles	Team 1	Team 2/ Other Stakeholders	Tooling?	Notes
1.2.1 < Verb Object Statement of the Process Purpose> INPUT: <primary input(s) to the process> OUTPUT:<primary output(s) of the process>	<primary activities of team 1 roles involved in the process>	<primary activities of team 2 or other key stakeholder roles involved in the process>	<notes about current or proposed tooling support for the steps>	Directives that may apply><any notes that would be helpful in understanding how this process should occur, including any standards or other guidance
1.2.1.1 <steps 1…n>				
1.2.1.2				

Summary

MVPr is one approach to reconcile legacy “large batch” processes common in DoD acquisition with lean/agile “small batch” processes that lead to incremental evolution of a complex system

Focusing on problematic processes and ones that inherently cause conflict among stakeholders helps not only with clarity, but also with collaboration

Just like building products using iterative, incremental approaches reflects Agile principles, so does applying Agile principles to process development