

Dean Leffingwell's Vision of Agile at Scale Transformation

A Brief Overview and Critique

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LA INCOSE Mini-Conference

Draft 3

<http://scaleagile.com>

<http://agiletheory.com>

<http://onticity.com>

How is Scaling Agile Defined?

- Via *Scaled Agile Framework* (SAFe) Big Picture on Web <http://scaledagileframework.com/>

- Explained by book

Agile Software Requirements (2011)

This book as Leffingwell acknowledges is not really about requirements but is an agile at scale model improving on Scaling Software Agility (2009)

- Backed up by SAFe Program Consultant Certification <http://scaledagileacademy.com>

SAFe Big Picture

Narrative Levels

Portfolio Scrum Team with Backlog Architecture Team	Theme Epic
Program Scrum Team with Backlog Release Train planning and supervision	Feature
Teams Agile Production Scrum Teams with Backlogs	Story

Narrative Entity Relation Diagram

Summary – The Full Lean and Scalable Requirements Model

In summary, the full lean and scalable requirements model for the agile enterprise appears below.

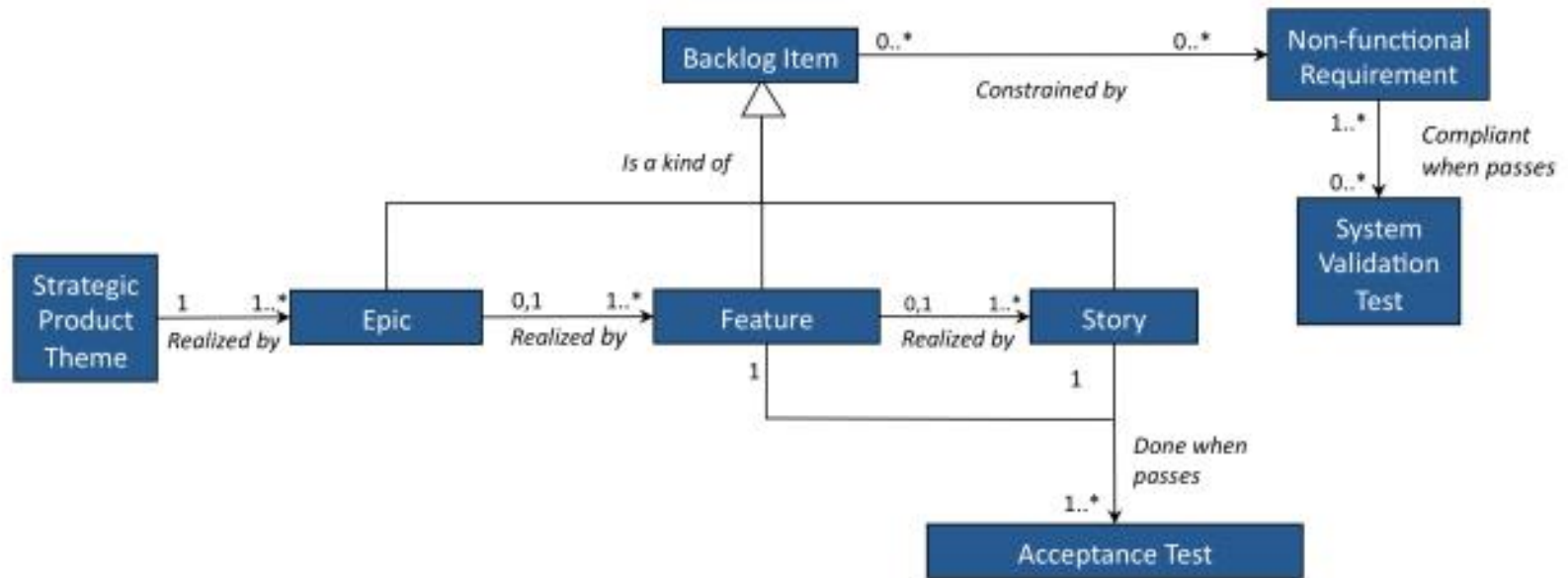
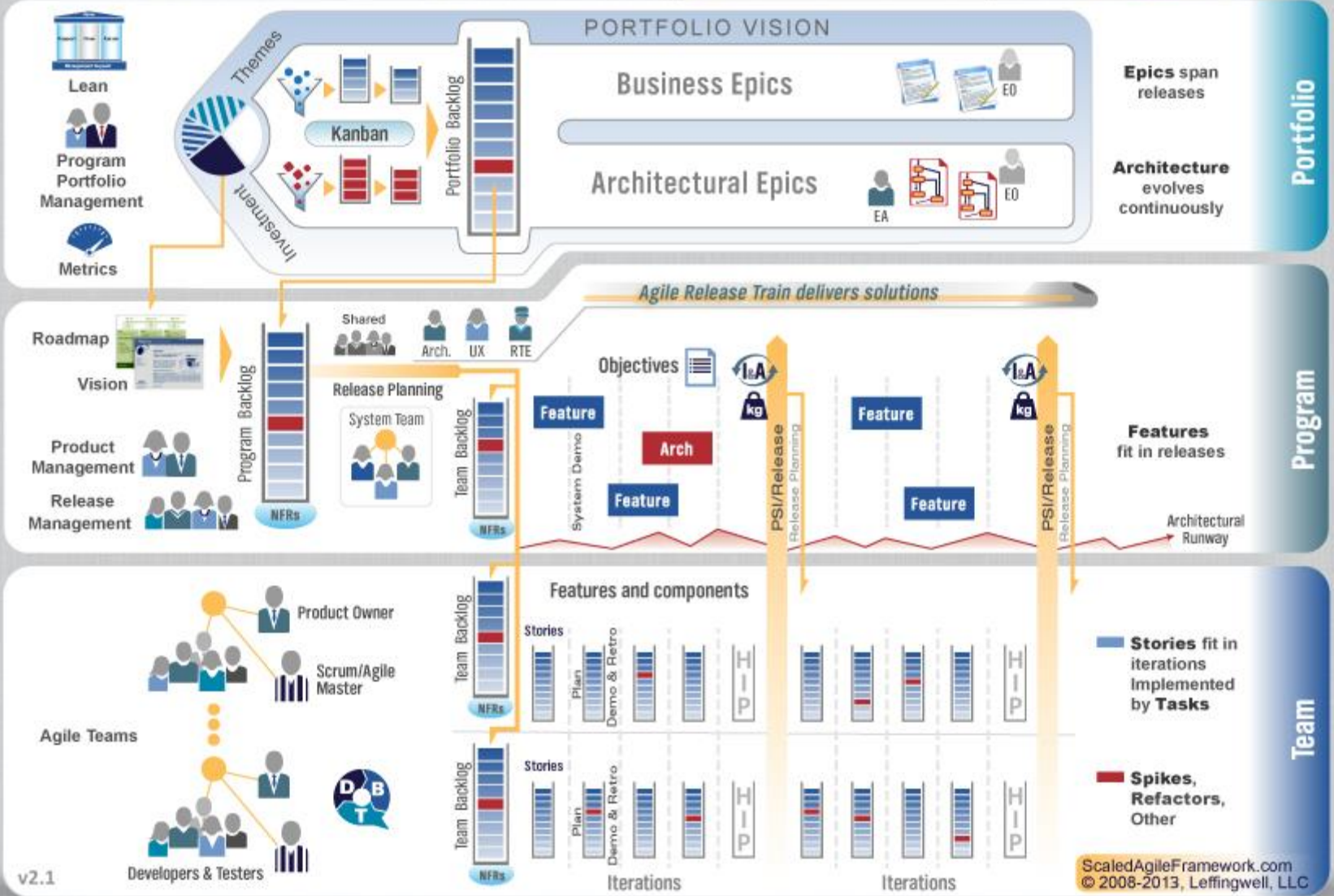


Figure 20-Full enterprise requirements model

Scaled Agile Framework™ Big Picture

CLICK ANY ICON for detailed information

Scaled Agile Framework



v2.1

ScaledAgileFramework.com
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Who and what on client side is targeted to be changed?

- Team Level normal scrum teams assumed to be in place
- Reorganize Product Management into Product Owners
 - Product Management has own backlog of Features
- Reorganized Portfolio Managers into a scrum team with own backlog of Themes and Epics
 - Organize Architectural Team to produce Technology improvement and infrastructure Epics

Key Issues in Change

- Need to deliver Epics and Features in a timely manner so teams working on stories can maintain cadence
- Need to provide an agile friendly organizational environment to support teams
- Need to make all levels of R&D transparent and Lean

What in a nutshell does the Agile Organization look like after the transformation is complete?

- Scrum teams with their own backlog at all three levels of abstraction
- Release Planning is functioning with synchronization between teams on large projects
- Whole organization has sustained cadence
- Whole organization applies Reinertsen's Flow Principles
- Common vocabulary and Vision of the organizations functioning

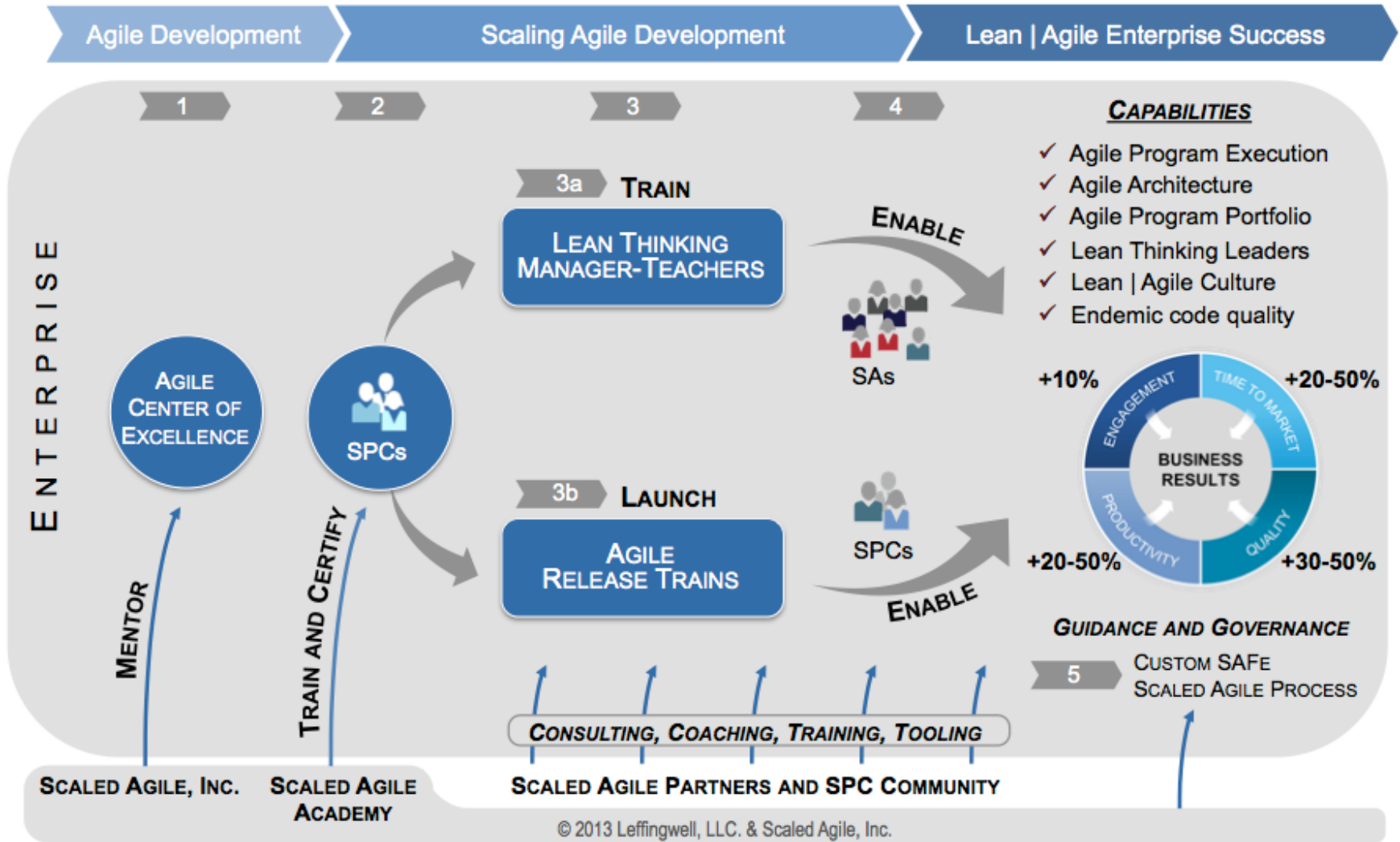
What are the key steps of the transformation process?

- To my knowledge Leffingwell does not provide guidance on how to achieve the utopian vision of the Big Picture of the Scaled Agile Framework
- Recently an Implementation Strategy has been added See <http://scaledagileframework.com/implementing/>
- But understanding the picture we can hypothesize some steps

Figure 1 describes this strategy in summary form. Each of the numbered items in this strategy is described in the paragraphs below, along with links to those who can help.

Scaled Agile Framework Implementation Strategy

SCALED AGILE FRAMEWORK®



What are the hypothetical key steps of the transformation process?

- Alignment on Agile at Scale Big Picture
- Stabilize functioning of the agile development production teams
- Re-organize Product Management into scrum team & organize product managers into Product Management sub-teams
- Establish Product Mgmt. backlog of Features
- Provide Features at rate necessary to sustain cadence of Production Teams
- Establish Release Planning discipline on larger programs
- Coordinate work of product owners on large teams
- Create Scrum of Scrums as necessary on large projects to coordinate between Scrum Masters
- Establish program wide cadence with synchronization

What are the hypothetical key steps of the transformation process?

- Re-organize Portfolio Management into scrum team
- Establish a yearly planning cadence with themes
- Establish Portfolio Management backlog of Epics based on Themes
- Establish Architectural oversight team that produces Technical Epics
- Provide Epics at rate necessary to sustain cadence
- Coordinate among programs within the organization
- Maintain and Improve Lean Agile at Scale organization functioning based on 2nd Generation Lean principles

Most Important Elements?

- Common vision of what an agile at scale transformation means and vision of agile utopia for whole R&D organization
- Common vocabulary for agile concepts
- Bringing Architecture, Requirements, longer term Planning back into Agile Parlance
- Organization around release planning to make large programs work coordinating agile teams
- Non-conflict with Major Agile Team processes and practices

What is missing?

- The “SAFe Big Picture” is just what it implies: an overarching vision, but lacks many practical fundamentals necessary to make it work in practice
- There is no Process model behind the big picture to make sure the parts actually work together and set detailed expectations
- There is no Practice definition for teams to coordinate internally & externally on Technical Issues
- Framework does not actually address the Reinertsen Flow Principles directly, but they remain behind the scenes and are paid lip service to but are not directly visible in the framework

What is missing?

- Portfolio level is very sketchy and needs more definition than is provided
- No actual guidance on how to make the organizational transformation only the end state is defined
- Book is silent on many issues that are important in practice, so that there are many interpretations of what it means which become points of contention
- Technology to implement backlogs is not addressed but Rally tool is recommended.

What is missing?

- People focus on backlogs and do not read the whole book, but backlogs are not well defined enough so how to structure them in practice becomes a point of contention
- The book is in effect the tip of an iceberg of Agile Transformation and most of what needs to be done is actually hidden behind the Façade of the Big Picture

Summary

- The Leffingwell 'SAFe Big Picture' (with book and website) is very effective in giving a vision of what agile at scale transformation means for an organization
- But without a transformation guideline it may tend to produce chaos when different parts of the organization interpret then implement it differently

Summary

- This is why there are Certified Consultants which are meant to address in person the gaps in the SAFe Big Picture as applied to specific organizations
- What is needed to augment Leffingwell is a roadmap for transformation that provides guidance on organizational change, process, practice, and technological aspects not covered in his approach

Lessons to be Considered

- Compare Leffingwell Picture with Ivar Jacobsen's work on practices and you will see that there is a large gap between the abstractions of Leffingwell and practice level help given by Iver Jacobsen and SEMAT. However, Jacobsen's EssWork is too process-like and does not actually change the process abstractions enough, so there is a gap that is not filled on both sides.

Lessons to be Considered

- Compare Leffingwell with CMMI and you see that much of what he is talking about is the same sort of thing just in a different terminology and style, however his model is not as complete as the CMMI and is really addressed most directly at Release Coordination and Synchronization and management which is the problem that firms are facing trying to scale up agile teams on larger projects.

Lessons to be Considered

- Compare Leffingwell with other books on Agile at Scale and you see that his approach is the easiest to digest and the SAFe big picture is very effective as a communication tool among change agents and those participating in the change

Lessons to be Considered

- Leffingwell seems to have caught the imagination of many organizations and is becoming the Agile at Scale approach of choice mainly because it does not conflict with established agile practices and because it gives a simple picture of the end state that would appear to produce an agile organization as a whole out of scattered agile teams, especially for large projects where teams need to synchronize and coordinate to produce a common product

Opportunities for Improvement

- Whatever approach one takes toward Agile at Scale should remain complementary with the Leffingwell approach because it is likely to be the market leader for some time to come.
- There is plenty of room to provide missing elements not covered by Leffingwell's approach which would ease transition to Agile at Scale, i.e. provide the “meat” behind the façade of the SAFe Big Picture that is actually needed for large organizations to make the transition

Opportunities for Improvement

- There is no training in Agile appropriate for Aerospace customers who are locked into Standards constraints, and so this seems to be an unaddressed market
- Leffingwell is software specific and thus a model that is not software specific would be a good thing to try to produce to smooth the way for the spread of agile and lean to other industries

Opportunities for Improvement

- Despite having an entity relation diagram of the various narrative items (Theme, Epic, Feature, Story) the coordination of backlogs is not well defined in Leffingwell and this is a large point of confusion that needs clarification for his approach to succeed and thus this is a place where his approach could be improved significantly. See Roman Pichler's idea of the multidimensional backlog as one source of improvement

Opportunities for Improvement

- The steps of a large organization to engage in Agile at Scale Transformation which mitigates its large risks has not been developed by Leffingwell and that is another area where there could be significant contributions

New Approach toward Agile at Scale Model Building

- Provide a rigorous Agile Theory based on Special Systems Theory
 - See precursor at <http://flowproces.info>
 - Agile Theory manuscript exists
- Provide a rigorous Foundation for Agile Teaming to underpin High Performance Teams
 - The Foundations of Agile Teaming manuscript exists
- Explain Agile and Lean concepts based on Theory including Scrum essentials
- Explain Agile at Scale Transformation based on Meta-systems Theory rather than in terms of Systems
- Provide a more robust model of Agile at Scale that SAFe Big Picture in order to enhance it and to mitigate risks of adoption