Enterprise Scaled Agile Overview

Overview of Enterprise Scaled Agile methodology, the SAFe framework and IBM’s tooling support in the Continuous Engineering solution

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Agenda

Why Scale Agile?
IBM’s Point of View
Scaling Agile – The Recipe
SAFe® Overview
IBM’s Support for SAFe
5 Simple Value Propositions
Evolving to SAFe
How IBM uses SAFe to deliver ALM tooling
Summary
Myths debunked

Why Scale Agile?
Look familiar?

1. We're going to try something called Agile programming.

2. That means no more planning and no more documentation. Just start writing code and complaining.

3. I'm glad it has a name. That was your training.
The Myths (or excuses)

We can’t do agile because…

*We have zero risk tolerance*
*We must have requirements documents*
*We work with suppliers*
*We are driven by quality over schedule*
*Our cost of failure is too high*
*Our products/systems/applications are just “too big to fail”*
*We have too much complexity*

Blah blah blah …
What’s wrong with waterfall?

- Idea
- Requirements
- Development
- Integrated test
- Release

Months or years to learn if ideas / requirements match the market need

Weeks or months to validate code matches original requirements

Nothing really except... delayed learning which leads to slower feedback response times and that negatively impacts your organization’s need to achieve faster time to value.
Agile in a bi-modal environment?

Multiple development patterns are becoming the norm

Systems of engagement: Explore, adopt, quick feedback, pivot and re-pivot

Systems of Records: Always on, always available, compliance, control, and governance
IoT adds additional layers of complexity

- Connected devices need to support multiple usage patterns and workflows
- Proliferation of variants often implies meeting multiple regulatory requirements
- Variants of devices can’t be developed using Paste & Own
- Strategic Reuse / PLE for all artifacts is a major IoT enabler
Lean and Agile @ an Enterprise level needs more than just SCRUM

- Manage development and delivery across teams
- Get visibility into development and non-development tasks in a single place
- Balance Speed and Quality
- Work together across distributed teams
- Maintain process of formal governance
- Deliver Quality
- Manage dependencies
- Outsource some work in order to deliver more quickly
- Orchestrate deliver across teams delivering at different speeds
- Collaborate effortlessly and support the principles of independent, self-governing teams

CHALLENGE - How do we orchestrate all of this consistently?
Scaled Lean-Agile Principles

Address aspects of waste and ineffectiveness in traditional processes

- Take an **economic view**
- Apply **systems thinking**
- Assume **variability**; preserve alternatives
- Manage risk and efficacy with **fast, synchronous learning cycles**
- Develop systems **incrementally**; integrate and test **frequently**
- Facilitate flow by **limiting WIP, reducing batch sizes** and manage queue lengths
- Base milestones on objective evaluation of **working systems**
Enterprise Agile

IBM’s Viewpoint
General Industry Trends

Business Models
• Products turning into Services

Core Competencies
• Cloud Transformation
• DevOps in IT, and Integration between Engineering, Manufacturing & Operations in IoT

End to End Optimizations
• Leverage the full lifecycle to further optimize, reduce cost and improve quality

Business Analysts and Systems Engineers
• Becoming key orchestrators across the full lifecycle

Cognitive
• Game changer for predictive analysis and business transformation
**Enterprise Agile – Our Viewpoint**

**Orchestration**
- Regardless of agile maturity
- Regardless of process, speed

**Design Thinking**
- Focus on user experience
- Modeling, requirements, governance as necessary

**Continuous Value Delivery**
- Economic thinking and prioritization
- Maximizing value delivery with each iteration
The relationship between Lean, Agile and DevOps

**LEAN**
- Eliminating waste
- Visual workflow management
- Root-cause problem solving
- Leaders engagement

**AGILE**
- Independent, self-governing teams
- Faster feature cycle time
- Embrace change

**DEVOPS**
- Automation
- Continuous delivery
- Continuous feedback
- Engineering components of Lean IT

**MULTI-SPEED DELIVERY**
- Different speeds needed for different value propositions
- Adaptive business mind-set
- Multi-platform, Multi-technology, Multi-process
- Varied development and deployment environments
How is the market evolving?

- Business models: changes fueled by digital services and the API economy
- Users: expectations are defined by the last interaction
- Technology: devices, unstructured data, open source, mix of public, private and hybrid cloud models
- Digital is a land grab for those that move fast

- Deliver apps for Multi-speed IT with DevOps
- Optimize and cloud-enable existing applications
- Ensure operational excellence across all platforms
How is the practice evolving?

Shift from “make money” to “delight customers”

Lean and agile adoption regardless of teams’ agile maturity and speed

Not just about engineering, business critical to influence notion of value

Line-of-business
“Need a feature”

Program
“Plan a feature”

Development
“Deliver a feature”

Customer
“Awesome feature”
The recipe

Scaling Agile
Addressing the Enterprise Challenge

Shift how you act and make decisions

Ensure transformation addresses all aspects of the environment

Adopt an economic view to deliver value
Shift how you act and make decisions

**Value Delivery First**
- Making money is the result, delighting the customer is the goal
- Take an economic view

**Management’s Role**
- Enable those doing the real work to be as efficient as possible by identifying and removing impediments

**Collaborate Everywhere!**
- Avoid exclusively top-down or bottom-up planning – neither leads to success
Transform the environment

**People:** Establish an organization-wide culture with the right set of skills to embrace lean and agile values – everywhere, across all teams, every day

**Process:** Apply lean and agile principles in the planning, development, deployment and delivery of value and then monitoring feedback to improve – continuously

**Tools:** Provide a framework that enables the implementation of lean and agile practices – easily – while also providing traceability and visibility of work across multi-disciplinary teams
Adopt an economic view to deliver value

- Kanban (Lean)
- ROI Ranking
- Value Estimating & Tracking

Value Delivery
What is “Value”? Depends on who you ask

As a Business Owner, I must understand what will delight my customers and deliver on that!

As a Product Manager, I must respond to customer feedback to deliver differentiating capabilities for my product.

As a Customer, I will pay for something I actually use – and LOVE to use!

Value = ROI
Maximizing Value Delivery

**Invest “Just Enough”**
- Invest only as much as necessary to get feedback quickly and then “rinse and repeat”
- Reduce or eliminate wasted resources consumed too early in the process

**“Capacity Rules”**
- Only utilize resources for estimating, analysis and solution exploration as we have capacity to work on ideas
- Move ideas through to implementation as teams have capacity

**Apply Economic Thinking**
- Ranking based on “biggest bang for the buck” (ROI)
- Lightweight, relative ranking that favors lower investment in analysis over precision until later

... and measure and track value delivery
Focus on people, process AND tools…

- **Orchestrate**
  - Unify delivery of value
  - Teams can deliver at different speeds, but the cadence of delivery is unified
  - *Use tooling to enable visibility and eliminate waste*

- **Collaborate**
  - Unite the tribes
  - Speak the same language, use the same vocabulary
  - *Let the tools do their thing and leave the teams alone!*

- **Leverage**
  - Adopt Agile and Lean practices, regardless of "process"
  - Reduce batch size uniformly, develop and deliver more quickly
  - *Govern where necessary, simplify where possible*
The Scaled Agile Framework®

SAFe® Overview
Recipe: Based on SAFe “Core Values”

**Align**
- The best agile teams do not make a successful, agile business
- Adopt lean and agile principles everywhere! Top-down, bottom-up
- Unify the cadence to reduce variability and risk

**Build quality in**
- Align requirements, construction and test
- Validate quality at every increment
- Leverage MBSE and design thinking
- Build with Enablers (exploration, infrastructure, architecture)

**Be transparent**
- Develop a “single source of truth” for solution intent and context
- Record knowledge
- Instill trust through visibility and collaboration
- Reduce waste!
- Evaluate progress of solution AND progress toward compliance

**Execute: Plan & Adjust**
- Deliver value predictably and continuously improve
- Plan for change and respond quickly
- Reduce time to feedback by working with smaller batch sizes
- Demonstrate value at each increment
Industry-Leading Scaled Agile Framework®

- Orchestrate
- Collaborate
- Unify
- Learn
- Respond
- Improve
The Levels
The People
The Backlogs
The Cadence
Quality
Relentless Improvement
Value Delivery
SAFe 4.0 Summary

**Portfolio**
- Strategy formulation and portfolio communication
- Organizing and funding Value Streams
- Managing the flow of larger initiatives
- Governance and cross-Value Stream orchestration

**Value Stream**
- Solution Intent & Management
- Engineering and Architecture
- Customer and Supplier relationships
- Program (ART) coordination
- Unified Vision & Roadmap

**Program**
- Teams of Agile Teams that build solution capabilities and subsystems
- Common mission
- Architectural & User Experience governance
- Evidence of progress and delivery of value
- Organized by solution or subsystem delivery

**Team**
- Scrum, Kanban, hybrid processes
- Delivery of technology
- Organized by feature or component delivery

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**Foundation**
Core Values, Lean-Agile Principles, Center of Competency
CLM & CE tooling instrumented for scaled agile

IBM’s Support for SAFe
The IBM Continuous Engineering solution is an enterprise capability for continuous delivery of value that enables clients to seize market opportunities and reduce time-to-customer feedback. The SAFe methodology supported by the IBM CE solution enables continuous business planning to manage and drive change throughout the product and software delivery lifecycles.
IBM Watson IoT Landscape

Field Operations / Deployment
- Asset Management
- Preventative Maintenance
- Real Time Analysis
- Cognitive services
- Machine Learning

Maximo, PMQ, RTI

Operational Insights
Engineering insights
Cognitive Analytics

Cross-domain end-to-end collaboration

BackEnd/OnBoard (“SoR”)
- Requirements Management
- Change and Configuration Management
- Model Based Engineering Simulation
- Quality Management

DOORS NG, Team Concert & Git Enterprise, IoT Rhapsody, Quality Manager

Cloud Services (“SoE”)
- API Management
- Cloud logic
- DevOps Services
- IoT Platform Services

Powered by IBM Watson and SAFe 4.0

Lean Development Orchestration

IBM Watson IoT Landscape

IBM Watson IoT
IBM Collaborative Lifecycle Management

Synchronizes teams by…

- **Planning** based on a single, cross-domain source of truth
- **Automating** full traceability
- **Managing** with dashboards and reports
- **Demonstrating** compliance
- **Orchestrating** multi-speed IT
- **Supporting** multiple platform / processes / languages
- **Enabling** simple collaboration

"With IBM’s solution, we already realize that the different roles within the development lifecycle are cooperating much closer."

Christof Hammel, Product Manager, Automotive ALM at Bosch Automotive referencing IBM Rational solution for CLM

IBM is a Leader! Gartner Magic Quadrant for Application Development Life Cycle Management (Feb 9, 2015)
SAFe 4.0 support

- Tooling configuration
- Artifacts and attributes
- Key concepts: Economic ranking, lean thinking, value-based delivery
- Plans to support key activities: Roadmap, Kanban, WSJF Ranked List
- Agile Team-based Planning
- Reports
- Built-in process guidance
Using Collaborative Lifecycle Management for Enterprise Scaled Agile Transformations

Organizational alignment
- Real-time consolidated Roadmap at all SAFe levels
- Reports that provide insight into work driven from business strategy and priorities

Lean: Invest within capacity to deliver quickly
- WIP-limited
- Enforced workflow
- WSJF triage and sorting
- “Soft” dependency identification

Focus on client value
- ROI ranking using auto calculated WSJF
- Value tracking at all levels aligned to changes delivered

Measure, learn and improve
- Dashboards for visibility
- Align work based on business strategy and priorities
- Value-based portfolio metrics
- Track value delivery and trends

Get Up and Running Quickly
- Templates speed-up the creation project areas
- Starter sets to create Dashboards
- Structure
- Artifacts
- Attributes
- Activities/Workflow

Using Collaborative Lifecycle Management for Enterprise Scaled Agile Transformations
... And more...

Address cultural transformation challenges
• Process guidance embedded in the tooling through work item templates and links for common SAFe activities

Align teams with different processes and speeds
• Programs provide the framework to coordinate individual teams

Build in quality
• Manage Test Assets and Test results mapping to all levels of SAFe

Requirements governance as needed
• Solution modeling and design
• Non-Functional, System, User requirements
• Standards

Configure for “practical” SAFe adoption
• Take what is valuable, ignore the rest
• Customize for organization needs
• Flexible implementation patterns to fit ‘structure’ and ‘size’
Why CLM for enterprise scaled agile?

5 Simple Value Propositions
Top 5 Quick Start Demonstrations

1. Organizational Alignment
   **Value Proposition:** Cross-domain collaboration and end-to-end visibility

2. Invest Within Capacity to Deliver Quickly
   **Value Proposition:** Adopt lean principles at all levels, rank smarter to deliver the right things right

3. Focus on Client Value
   **Value Proposition:** Elaborate solutions by applying design thinking methods to get feedback early and often

4. Measure, Learn and Improve
   **Value Proposition:** Demonstrate measured improvement and plan more effectively

5. Get Up & Running Quickly
   **Value Proposition:** Complete SAFe 4.0 alignment out of the box
1. Organizational Alignment

Complete cross-domain lifecycle support

| Change Management (RTC) | Requirements Management (RDNG) | Quality Management (RQM) |

Cross-domain reporting for planning & execution status

| End-to-end traceability reports | Planning Progress | Execution Status & Risk |
Solution Intent, Solution Context, Requirements (System, User, Non-Functional), Lifecycle Scenarios (Acts, Scenes, Roles), Graphics (wireframes, architecture), Models (link to Rhapsody/DM)

Solution Elaboration Artifacts (RDNG)

Strategic Themes, Lightweight Business Cases, Value Streams, Programs, Vision

Business Artifacts (RDNG)

Test Suites, Test Plans, Test Cases

Change Artifacts (RTC)

Epics, Capabilities, Features, Learning Milestones, PI Objectives

Quality Artifacts (RQM)
Portfolio Business Artifacts

Strategic Themes

Business Cases

Value Streams
Portofoio Budget Disbursed

JK Enterprises Portfolio (Requirement Management) Project Dashboard

How is the Portfolio budget disbursed across Value Streams?

How is the Portfolio budget disbursed across Programs?

- JKE Financial Services: 92%
- JKE Account Mgmt: 8%
- JKE Shared Services: 46%
- JKE Meters: 46%

Open in a new window.

Graph view.
Strategic Theme – Links Explorer View

Implemented By
- 211: "Push Button" Seasonal Loan Offer Campaign
- 210: Expand banking capabilities to existing customers
- 217: Charitable Contributions Program
- 395: JKE Financial Services

Strategic Theme

Value Stream
Strategic Theme – Links Explorer View

- **385: Reward and Grow Loyal Customers**
  - **210: Expand banking capabilities to existing customers**
  - **217: Charitable Contributions Program**
  - **395: JKE Financial Services**

- **Implement**
  - **211: "Push Button" Seasonal Loan Offer Campaign**
  - **371: Seasonal Loan Offer Business Case**

- **Initiatives (Portfolio Epics)**

- **Value Stream**

- **Strategic Theme**

- **Business Case**
Work Alignment with Business Strategy

Strategic Themes

Features

Target Iteration

Team-Level work items
Progress Reports (Epic, Capability, Feature)

Quick visualization of Work by state, as well as any Blocked work.

Click on any bar to view the details…
Dependencies

“Hard” dependencies between work items

“Soft” Dependencies – Blocked for a reason
“Definition of Done”

A query widget on a dashboard alerts you to the status – and violations! – of your “definition of done”.

“Houston, we have a problem...”
2. Invest Within Capacity to Deliver Quickly

**Lean**
- Define iterative delivery plan
- Invest “just enough”
- Abide by “work in progress” (WIP) limits
- Adopt economic thinking from multi-year initiatives through execution priorities

**Agile**
- Get early feedback through requirements
- Deliver the “right” stuff based on feedback
- Iterate, embrace changing requirements and execution plans

**Value**
- Identify “MVP”
- Articulate vision outside-in
- Apply design thinking
Kanban Planning

Kanban process enforced through:
- **WIP Limits**: Warning shown in red, Error prevents violation
- **Workflow**: Inability to move Epics in violation of the process
- **Calculated WSJF**: that automatically sorts

**WIP Limits** (green = ok, red = violation!)

**Business** (blue) and **Enabler** (yellow) Epics

SAFe Kanban “queues”

**SAFe Kanban** Planning View
WSJF Ranked Backlog

User/Business Value +
Time Criticality +
Risk Reduction/Opportunity
Enablement

Cost of Delay

Investment

Job Size

Set WSJF Component Values -
WSJF automatically recalculates
and list of Features is resorted

Estimate the Story
Points during planning

<table>
<thead>
<tr>
<th>Summary</th>
<th>Id</th>
<th>Status</th>
<th>WSJF (integer)</th>
<th>Job Size</th>
<th>User/Business</th>
<th>Time Critical</th>
<th>RROE</th>
<th>Proposed</th>
<th>Estimated Story Points</th>
<th>Tracks</th>
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</thead>
<tbody>
<tr>
<td>Cap 3</td>
<td>53</td>
<td>Implementing</td>
<td>38</td>
<td>1</td>
<td>5</td>
<td>20</td>
<td>13</td>
<td>P1 1</td>
<td>20</td>
<td>Links (2): 1, 2</td>
</tr>
<tr>
<td>Cap 2</td>
<td>52</td>
<td>Implementing</td>
<td>16</td>
<td>2</td>
<td>8</td>
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<td>P1 1</td>
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<td>Links (2): 1, 2</td>
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<tr>
<td>Cap 4</td>
<td>54</td>
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<td>6</td>
<td>8</td>
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<td>P1 1</td>
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<tr>
<td>Cap 5</td>
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<td>4</td>
<td>5</td>
<td>2</td>
<td>8</td>
<td>13</td>
<td>P1 1</td>
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<tr>
<td>Cap 6</td>
<td>56</td>
<td>Ready (for Approval)</td>
<td>2</td>
<td>13</td>
<td>20</td>
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<td>Cap 1</td>
<td>38</td>
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<td>1</td>
<td>13</td>
<td>13</td>
<td>13</td>
<td>3</td>
<td>P1 1</td>
<td>0</td>
<td>--</td>
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<tr>
<td>Cap 7</td>
<td>57</td>
<td>Approved</td>
<td>1</td>
<td>13</td>
<td>13</td>
<td>3</td>
<td>8</td>
<td>P1 1</td>
<td>90</td>
<td>--</td>
</tr>
<tr>
<td>Cap 8</td>
<td>58</td>
<td>Draft</td>
<td>Unassigned</td>
<td>Unassigned</td>
<td>Unassigned</td>
<td>Unassigned</td>
<td>Unassigni</td>
<td>Backlog</td>
<td>0</td>
<td>--</td>
</tr>
<tr>
<td>Cap 9</td>
<td>59</td>
<td>Draft</td>
<td>Unassigned</td>
<td>Unassigned</td>
<td>Unassigned</td>
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</tr>
<tr>
<td>Cap 10</td>
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<td>Draft</td>
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<td>Unassigned</td>
<td>Unassigni</td>
<td>Backlog</td>
<td>0</td>
<td>--</td>
</tr>
</tbody>
</table>
Tracking Value

What is the planned business value for this PI?

Planned Business Value

What is ready to be demonstrated?

<table>
<thead>
<tr>
<th>PI Objective Iteration</th>
<th>Objecting Team</th>
<th>PI Objective</th>
<th>PI Objective Type</th>
<th>Planned Value</th>
<th>Contributing Work Item</th>
<th>Contributing Work Item Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sprint 4.3</td>
<td>JKE Account Management JKE Acct Mgmt - Mobile</td>
<td>Demonstrate ability to transfer money between accounts on Windows devices</td>
<td>Team</td>
<td>6</td>
<td>As a mobile banking customer, I must be able to transfer between accounts on my Windows device</td>
<td>Story</td>
</tr>
</tbody>
</table>
3. Focus on Client Value

As a Business Owner, I must understand what will delight my customers and deliver on that!

As a Product Manager, I must respond to customer feedback to deliver differentiating capabilities for my product.

As a Customer, I will pay for something I actually use – and LOVE to use!

What is “Value”?
Depends on who you ask.

Value = ROI
Lean & Agile practices encourage you to shift your thinking…

Shift from “make money” to “delight customers”

Lean and agile adoption regardless of teams’ agile maturity and speed

Not just about engineering, business critical to influence notion of value
Navigate from a change artifact to the vision
Solution Elaboration

Elaborate solutions in a Value Stream during Portfolio and Value Stream Epic Analysis

- Links to change and quality management artifacts
- System, Non-Functional and User Requirements
- Modeling & Architecture
- Design, Usage Models, Scenarios
Solution artifacts can be used for early feedback

Solution Intent, Solution Context, Lifecycle Scenario, Scenario Act, Scenario Scene...

All of these are a reflection of the outside-in design from a user's perspective and can be used for early feedback!
4. Measure, Learn and Improve

Are we getting better?

**Value Delivery Over Time**
- What is our PI Performance in terms of “achieved value”?

**Effort Estimation**
- Progress Measures & Alignment with Estimates
- Estimation Improvements Over Time

**Velocity**
- Are we improving our velocity?
- How many Features have we delivered?
Feature Progress and Estimation
Velocity
Value Delivery

Table view allows you to drill down into details for each achieved value.

What value was delivered?
5. Get Up & Running Quickly

- Out-of-the-box CLM templates allow you to create a SAFe-based Program or Portfolio infrastructure in 10 minutes
- Start simple and evolve

**RTC**
- Complete support for SAFe Programs and Teams
- Lightweight requirements management (via RTC work items)

**RTC**
- Partial SAFe Portfolio/Value Stream
- Lightweight requirements management (no formal requirements or solutioning artifacts)

**CLM (RTC + RDNG + RQM)**
- Complete support for SAFe, all levels
- Cross-domain support for requirements, change and quality management
### SAFe Project Templates

#### Structure for all levels of SAFe

**Roles in Project Area Configuration**

<table>
<thead>
<tr>
<th>Team Area Hierarchy</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>SAFe Program</strong></td>
</tr>
<tr>
<td>Team 1 (rename)</td>
</tr>
<tr>
<td>Team 2 (rename)</td>
</tr>
</tbody>
</table>

**Overview**

- **Details**
  - Name: SAFe 3.0 Process (Program)
  - Description: A process template for Scaled Agile Framework (SAFe). SAFe is an established framework for applying lean and agile development practices on an enterprise scale. Updated: 2015-05-11

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**Roles**

<table>
<thead>
<tr>
<th>Identifier</th>
<th>Name</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>System Owner</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Business Analyst</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Technical Architect</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Release Train Owner</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Product Owner</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Team Lead</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Team Member</td>
<td></td>
</tr>
</tbody>
</table>

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**Preconditions & Follow-up**

- Actions
- Iteration Types
- Access Control
- Social Network
- Work Items
Structure, artifacts, attributes…
Implementation considerations

Evolving to SAFe
# Many teams, different needs

<table>
<thead>
<tr>
<th>Small Teams</th>
<th>Large teams</th>
</tr>
</thead>
<tbody>
<tr>
<td>Simple Applications</td>
<td>Complex, Regulated Development</td>
</tr>
<tr>
<td>Simple process</td>
<td>Multiple processes, rigorous governance and compliance</td>
</tr>
<tr>
<td>Cloud-based development and deployment</td>
<td>Multi-platform, multi-technology development and deployment</td>
</tr>
<tr>
<td>High risk tolerance</td>
<td>Low risk tolerance</td>
</tr>
<tr>
<td>Minimal or no orchestration or planning requirements</td>
<td>Complex orchestration and planning with dependency management across many teams</td>
</tr>
</tbody>
</table>
Support for 3- or 4-level SAFe topology

Process templates enable you to set up a SAFe tooling infrastructure that supports best practices out of the box!
Support for multiple processes, speeds, ...

Flexible configuration options allow you to choose what works for you!
Typical Adoption Paths: Two Patterns

SAFe Portfolio (with or without Value Streams)
• How does IT investment support business strategy?
• What is on our delivery roadmap?
• Where do we have delivery risk?

SAFe Program (with or without Teams)
• How do we orchestrate delivery of features across teams?
• How can we support agile and waterfall teams that need to collaborate?
• What are the dependencies across teams?

Meet in the Middle
➢ Establish an “orchestration” layer at the Program or Portfolio Level
➢ Scale from the bottom up or manage delivery from the top down
Evolving to Agile Requirements Management with SAFe

The Basics
- Strategic Theme
- Value Stream
- Program

The Obvious
- System Requirements
- User Requirements
- Non-Functional Requirements

The New Stuff
- Vision
- Solution Intent
- Solution Context
- Lifecycle Scenario (Act, Scene)
- Lightweight Business Case
Eating our own dog food…

How IBM uses SAFe to deliver ALM tooling
Our motivation to change…

Increase *efficiency* and *effectiveness* of our continuous delivery process

**Pressures**
- Wasted time on low-value activities
- Feature delivery cycle time too slow
- No insight into ability to deliver value

**Improvements**
- Adoption of lean and agile principles organization-wide
- Portfolio-level planning on business release boundary
- Data persistence through tooling for visibility, traceability, reporting

*But first, we had to address the hardest part → Change the way we work!*
Why SAFe?

It’s important to our customers:
- Not vendor-specific, independently developed
- Based on sound lean and agile principles applied across all layers of an enterprise organization
- Well-defined
- Addresses issues current enterprises face today

It’s important to us:
- Consistent terminology that is well-defined (so we don’t have to do that!)
- Standard framework known across the industry (so we don’t have to prove the value!)
- Experts that can help

Lead by example:
- By leading a SAFe-based transformation internally, we have personal understanding of the challenges and benefits specifically when applying our own tools to address the issues
Addressing the culture shift – Find our WOW! factor

“What if…?”

Team Lead

I could clearly map my team’s work to high priority business themes?

I could get visibility into which work items are proposed for the next few iterations?

Business Executive

We had a great example of business planning and IT execution aligned with SAFe to share with clients?

I could see how we are investing and where I can re-balance?

Product/Release Manager

I didn’t have to spend my days creating spreadsheets and PPTs?

We could streamline the arduous internal processes?

I could see which items are at risk across all of the teams?

I could get status without having to ask for it?

What if we could do this with our own tools??
Our SAFe Portfolio

Our SAFe Portfolio environment uses CLM* with SAFe 4.0 to orchestrate the planning and delivery of the CLM and CE tooling:

- RTC
- RDNG
- RQM
- Rhapsody
- Rhapsody/DM
- RELM
- Jazz Foundation
- Jazz Reporting Service

* We self-host on the latest CLM environment – always!
Our evolutionary approach to SAFe adoption
Mapping SAFe’s key concepts to ALM Portfolio processes

Kanban
- Do not use the Kanban view and do not enforce WIP limits
- Use Kanban workflow and Roadmap views to apply workflow and WSJF

Economic Ranking
- Use WSJF to come up with initial ranked list of Epics and Capabilities
- Apply priority to further refine the Capability ranked list to include those “must do” items

Value & Quality
- Some articulation of Acceptance/Success Criteria, not widespread
- Some solution test related to Solutioning artifacts
- Not yet capturing the notion of Value

Solutioning
- Some articulation of solution intent and context, lifecycle scenarios
- Not widespread
- Do not articulate any other formal requirements
Our Portfolio Kanban process

**Input:**
- Portfolio Epics (business initiatives)

**Output:**
- Value Stream Epics
- Capabilities → Value Stream Backlog
- (Some “solution level” work)

---

**Funnel**
- Ideas from any stakeholders (marketing, sales, support, customers)
- New business opportunities
- Infrastructure and architectural issues
- Cost reduction initiatives

**Review**
- Value Statement defined
- Initial WSJF triage

**Analysis**
- Solution trade-offs and analysis
- Customer feedback (Design Partner Program)
- Refined WSJF
- Go/No-Go decision

**Backlog**
- Approved Portfolio Epics
- Continuous re-prioritization (WSJF)
Our “next PI” Planning Process

*Review Value Stream Epics on roadmap and in backlog*

Moving Epics through the Kanban

**Funnel**
- Epic Owner (Portfolio) creates initial Value Stream Epics with Value Statement
- Reviewing ->

**Review**
- Solution (Offering Mgmt) Team performs initial triage, sets WSJF
- Analyzing ->

**Analysis**
- Solution (Offering) Manager/Architect refines into Capabilities to identify iterative development plan
- Ready ->

**Ready (for Approval)**
- Epic and Capabilities are *Proposed* on Value Stream Roadmap
- Approved ->

**Approved**
- Capabilities are Ready for Approval with allocated capacity resulting in a “green” PI plan

Capabilities created in the Funnel
Our “next PI” Planning Process
Review Capabilities on roadmap and in backlog

Moving Capabilities through the Kanban

**Funnel**
- Capability created by Solution (Offering) Manager/Architect

**Analysis**
- Solution (Offering) team begins conversation with engineering on top-ranked Capabilities, starts tracking Program-level plan items

**Ready (for Approval)**
- Initial capacity (estimated effort) assigned, proposed plan is “green” from capacity perspective

**Approved**
- Planned For is set on Capability
- Committed to next PI

**Implementing**
- Confirm (and monitor) tracked Program plan items to ensure alignment with commitment

Analyzing -> Ready -> Approved -> Implementing ->
<table>
<thead>
<tr>
<th>Scope</th>
<th>Technology Delivery</th>
<th>Refinement of “what” and “how”</th>
<th>Demonstrable value at each iteration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Top-Level “plan item”</td>
<td>Scope: Cross-Program, Program Increment</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Capability</td>
<td>Scope: Cross-Program, Program Increment</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Story (Use Case)</td>
<td>Scope: Cross-Program, Program Increment</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Task (Technology)</td>
<td>Scope: Program Increment</td>
<td></td>
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</tr>
</tbody>
</table>

**Our “taxonomy”**

**Portfolio Strategy and Initiatives**
- "What" will differentiate us – aligned with business strategy
- "Why" will it do that
- Definition of solution/project that realizes the value delivery and ROI proposition

**Technology Delivery**
- "How" will we deliver
- Technology decisions

**Refinement and re-prioritization is a collaborative effort between Offering Management and Engineering**
High-Level Domain Model

Artifacts in play across RM and CCM
(QM is separate at the moment)
How our SAFe artifacts “hang together”
“Working” dashboard for all Stakeholders

Executive View

Roadmaps – By Customer, By Program, By PI

Potential issues, scope changes, planning discrepancies… thinks we want to keep an eye on

Current PI status – The “Execution” views

Stuff we need to know about to plan the next two PIs and watch planning progress
SAFe support in CLM - Mapping

IBM Rational Collaborative Lifecycle Management (CLM)

**RTC**
Tracking & Planning
- Portfolio backlog
- Value Stream backlog
- Roadmap & Kanban views

**DNG**
Requirements Management
- Value Stream
- Strategic Theme
- Lightweight Business Case
- Solution Content \ Intent

**RQM**
Quality Management
- Value Stream Test Plan

Portfolio
Value Streams

Program

Team

- Program backlog
- WSJF Ranked List
- Roadmap & Kanban views

- Scrum based: Ranked Backlog, Sprint Planning
- Kanban & Taskboard views

Reports and Dashboards
Enabling key SAFe concepts in tooling

**Lean & Agile principles**
- Apply lean thinking across the portfolio – at ALL levels! – to eliminate waste and respect work-in-process (WIP) limits
- Provided through Kanban planning at each SAFe level

**Economic thinking**
- Avoid the “loudest voice, biggest stick” syndrome
- Rank and prioritize based on “biggest bang for the buck” – greatest value at lowest cost
- Provided through calculated WSJF and WSJF-ranked backlogs for planning at all SAFe levels

**Value-based delivery**
- Capture the notion of value, track it, report on it – improve it!
- Provided through PI Objective at Value Stream, Program and Team levels with reports to track value delivery and trends

**Process guidance**
- Help your team learn by doing
- Process guidance embedded in the tooling through work item templates for common SAFe activities and methodology support
Where can I learn more?

SAFe Landing Page: [http://jazz.net/safe](http://jazz.net/safe)

Videos:
- Watson IoT Video: Agile and the Scaled Agile Framework® for IoT
- Enablement Videos

Enterprise Scaled Agile Reporting: [SAFe Reports](http://jazz.net/safe)

Configuring Existing Environments: [Configuring the SAFe Methodology in CLM](http://jazz.net/safe)

Enablement: [IBM CLM® for SAFe® Level 1 Program Enablement Course](http://jazz.net/safe)

Blogs:
- [What’s new with SAFe® in CLM 6.0.3](http://jazz.net/safe)
- [Explore SAFe® quickly, easily and cheaply with IBM’s SAFe® in a Box!](http://jazz.net/safe)
- [Keep your organization on track with CLM and SAFe® 4.0](http://jazz.net/safe)
- [New and improved SAFe support is here!](http://jazz.net/safe)
- [Need SAFe 4.0 Support? Look no further…](http://jazz.net/safe)
- [Introducing SAFe in CLM V6.0.1](http://jazz.net/safe)

One customer’s story: [Pole Emploi](http://jazz.net/safe)
Thank you!

IBM