# CS 250 Module Eight Resources Alt-Text

This document contains alt-text for images in the readings in the Module Eight resources section. Each page is listed with a Level 2 header. Each figure needing alt-text is titled with a Level 3 header for easier navigation.

**[SAFe for Lean Enterprises](https://www.scaledagileframework.com/safe-for-lean-enterprises/" \o "https://www.scaledagileframework.com/safe-for-lean-enterprises/)**

All figures in this article are described with a Level 3 header. Some images have complex components which are indicated with a Level 4 header.

## Figure 1. SAFe business benefits derived directly from case studies written by SAFe customers

A diagram displaying a circle with “Business Results” at the center. There are four different pieces connected to the circle labeled “Engagement”, “Time-to-Market”, “Quality”, and “Productivity”. For “Engagement”, the description notes that SAFe results in 10-50% happier, more motivated employees. For “Time-to-Market”, the description notes that SAFe results in a 30-75% faster time-to-market. For “Quality”, the description notes that SAFe results in a 25-75% defect reduction. For “Productivity”, the description notes that SAFe results in a 20-50% increase in productivity.

## Figure 2. The SAFe ‘Big Picture’

Note: This picture contains a lot of information. The different components of the image are broken down in more detail throughout the article. It may help to read more of the article first and then come back to this diagram description.

### Diagram Overview and Layout

The “Big Picture” diagram contains a lot of information to help map out afull implementation of SAFe. On the left side of the diagram are the following competencies, which become the “rows” of the diagram: Organizational Agility, Lean Portfolio Management, Enterprise Solution Delivery, Agile Product Delivery, Team and Technical Agility, and Continuous Learning Culture. Along the right side of the diagram is the spanning palette identifying the elements: Vision, Roadmap, Milestones, Shared Services, Communities of Practice (CoP), System Team, Lean UX, and Metrics. Across the bottom are the foundation elements: Core Values, Lean-Agile Mindset, SAFe Principles, Implementation Roadmap, and SAFe Program Consultant. Most of the descriptive alt-text refers to the competencies and their implementation throughout the “rows” of the chart. The spanning palette and foundation elements are described in more detail in the alt-text for Figures 8 and 9.

There are multiple different levels of SAFe: Essential SAFe, Large Solution SAFe, Portfolio SAFe, and Full SAFe. This diagram displays Full SAFe, which incorporates all of the other levels. At the top of the chart is the label “Business Agility” along with an indication to “Measure and Grow”.

### Portfolio SAFe

The Portfolio level of SAFe involves the rows for “Organizational Agility” and “Lean Portfolio Management”. On the Organizational Agility row, the “Enterprise” and “Government” compile “Strategic Themes”. On the Lean Portfolio Management row, the “Epic Owners” and “Enterprise Architect” take these Strategic Themes and turn them into the “Portfolio Vision”. The Portfolio Vision feeds into a “Portfolio Backlog” (with a Kanban board), “Lean Budgets”, and “Guardrails.” These pieces are the inputs for a set of “Value Streams”. The output of the streams are “KPIs”. The Value Streams include two “Epic” tags and an “Enabler” tag. The word “Coordination” is flowing across the visualization of the Value Streams.

### Large Solution SAFe

The Large Solution level of SAFe involves the “Enterprise Solution Delivery” row. In this row, a team consisting of the Solution Architect/Engineer, Solution Management, and STE looks at the “Solution” Intent”, which has both variable and fixed portions. The tags on the Solution Intent read “Compliance”, “MBSE”, and “Set-Based”. From this, a “Solution Backlog” is developed, with an associated Kanban board. The Solution Backlog feeds into the “Solution Train”. The Solution Train has a “Supplier” indicated across the bottom. There are two “Solution Demos” along the way, where pre- and post-demo feedback are feeding into the Solution Train. Between the two solution demos are labels on the train for “Capability” and “Enabler”.

### Essential SAFe

The Essential level of SAFe involves the rows for “Agile Product Delivery”, “Team and Technical Agility”, and “Continuous Learning Culture”. In the “Agile Product Delivery” row, the Business Owners and a team comprised of the System Architect/Engineer, Product Management, and RTE begin with “Customer Centricity” and “Design Thinking”. These ideas feed into a “Continuous Delivery Pipeline” called the “Agile Release Train”. There are three loops on the Agile Release Train labeled “Continuous Exploration”, “Continuous Integration”, and “Continuous Deployment”. At the end of the Agile Release Train is a package labeled “Release on Demand”. Finally, it’s indicated that a SAFe Program Consultant can help with this by fitting a “Solution” into its “Solution Context”.

The “Team and Technical Agility” and “Continuous Learning Culture” rows are somewhat blended together. In these rows, the Agile Teams (consisting of a Product Owner, Scrum Master, and team members) work from a “Program Backlog” with a Kanban board, in a Scrum/XP cycle labeled: Plan, Execute, Review, and Retro. These team members also have “Team Backlogs” and Kanban boards. They work in a flow where there are different cycles of PI Planning. The team members work on a “Program Increment” over the course of a few “Iterations”. Throughout the Iterations, “System Demos” are happening. The Iterations have labels for “Story”, “Enabler”, and “Feature” throughout. Finally, after a few Program Increments is the “Architectural Runway”. It’s indicated that a SAFe Program Consultant can help with this by giving feedback on “DevOps” and “Built-in Quality”.

## Figure 3. The SAFe Overview

A diagram with “Customer Centricity” at the center, with the seven Core Competencies and twenty-one dimensions flowing out towards the edges. Each Core Competency has three dimensions associated with it. Level 4 headings have been used to head each competency in the descriptions.

### Foundational Core Competency: Lean-Agile Leadership

* Inspire others by modeling desired behaviors
* Align mindset, words, and actions to Lean-Agile values and principles
* Actively lead the change and guide others to the new way of working

Associated dimensions: Leading by Example, Mindset and Principles, Leading Change

### Strategy Development Core Competency: Continuous Learning Culture

* Everyone in the organization learns and grows together
* Exploration and creativity are part of the organization’s DNA
* Continuously improving solutions, services, and processes is everyone’s responsibility

Associated dimensions: Learning Organization, Innovation Culture, Relentless Improvement

### Strategy Development Core Competency: Organizational Agility

* Create an enterprise-wide, Lean-Agile mindset
* Lean out business operations
* Respond quickly to opportunities and threats

Associated dimensions: Lean-Thinking People and Agile Teams, Lean Business Operations, Strategy Agility

### Lean Portfolio Management

* Align strategy, funding, and execution
* Optimize operations across the portfolio
* Lightweight governance empowers decentralized decision-making

Associated Dimensions: In this case, the dimensions are connected to one another. “Strategy and Investment Funding” flows into “Agile Portfolio Operations”, which flows into “Lean Governance”.

### Execution Focused Core Competency: Enterprise Solution Delivery

* Apply Lean system engineering to build really big systems
* Coordinate and align the full supply chain
* Continually evolve live systems

Associated Dimensions: Lean System and Solution Engineering, Coordinating Trains and Suppliers, Continually Evolve Live Systems

### Execution Focused Core Competency: Agile Product Delivery

* The customer is the center of your product strategy
* Develop on cadence and release on demand
* Continuously explore, integrate, deploy, and innovate

Associated Dimensions: Customer Centricity and Design Thinking, Develop on Cadence Release on Demand, DevOps and the Continuous Delivery Pipeline

### Execution Focused Core Competency: Team and Technical Agility

* High-performing, cross-functional, Agile teams
* Business and technical teams build business solutions
* Quality business solutions delight customers

Associated Dimensions: Agile Teams, Teams of Agile Teams, Built-in Quality

## Figure 4. Essential SAFe configuration

This diagram is one piece of the larger “Big Picture” described in Figure 2. The spanning palette includes the following elements: Vision, Roadmap, and System Team. The foundation elements are across the bottom. See Figures 8 and 9 for more detail on these components.

The Essential level of SAFe involves the competencies “Agile Product Delivery” and “Team and Technical Agility”. In the “Agile Product Delivery” row, the Business Owners and a team comprised of the System Architect/Engineer, Product Management, and RTE begin with “Customer Centricity” and “Design Thinking”. These ideas feed into a “Continuous Delivery Pipeline” called the “Agile Release Train”. There are three loops on the Agile Release Train labeled “Continuous Exploration”, “Continuous Integration”, and “Continuous Deployment”. At the end of the Agile Release Train is a package labeled “Release on Demand”. Finally, it’s indicated that a SAFe Program Consultant can help with this by fitting a “Solution” into its “Solution Context”.

In the “Team and Technical Agility” row, the Agile Teams (consisting of a Product Owner, Scrum Master, and team members) work from a “Program Backlog” with a Kanban board, in a Scrum/XP cycle labeled: Plan, Execute, Review, and Retro. These team members also have “Team Backlogs” and Kanban boards. They work in a flow where there are different cycles of PI Planning. The team members work on a “Program Increment” over the course of a few “Iterations”. Throughout the Iterations, “System Demos” are happening. The Iterations have labels for “Story”, “Enabler”, and “Feature” throughout. Finally, after a few Program Increments is the “Architectural Runway”. It’s indicated that a SAFe Program Consultant can help with this by giving feedback on “DevOps” and “Built-in Quality”.

## Figure 5. Large Solution SAFe configuration

This diagram is one piece of the larger “Big Picture” described in Figure 2. It encompasses **all** the pieces of “Essential SAFe”, as described in Figure 4, with an additional layer for the “Enterprise Solution Delivery” competency. The spanning palette includes the following elements: Vision, Roadmap, Milestones, Shared Services, CoP, System Team, Lean UX, and Metrics. The foundation elements are across the bottom. See Figures 8 and 9 for more detail on these components.

The Large Solution level of SAFe involves the “Enterprise Solution Delivery” row. In this row, a team consisting of the Solution Architect/Engineer, Solution Management, and STE looks at the “Solution” Intent”, which has both variable and fixed portions. The tags on the “Solution Intent” read, “Compliance”, “MBSE”, and “Set-Based”. From this, the “Solution Backlog” is developed, with an associated Kanban board. The Solution Backlog feeds into the “Solution Train”. The Solution Train has a “Supplier” indicated across the bottom. There are two “Solution Demos” along the way, where pre- and post-demo feedback is feeding into the Solution Train. Between the two solution demos are labels on the train for “Capability” and “Enabler”.

## Figure 6. Portfolio SAFe configuration

This diagram is one piece of the larger “Big Picture” described in Figure 2. It encompasses **all** the pieces of “Essential SAFe” as described in Figure 4. One competency has been added to the “Essential SAFe” configuration: “Continuous Learning Culture”. The Portfolio SAFe configuration also includes additional layers for the “Organization Agility” and “Lean Portfolio Management” rows. This figure does **not** include the “Large Solution SAFe” level-specific row “Enterprise Solution Delivery”. The spanning palette includes the following elements: Vision, Roadmap, Milestones, Shared Services, CoP, System Team, Lean UX, and Metrics. The foundation elements are across the bottom. See Figures 8 and 9 for more detail on these components.

The Portfolio level of SAFe involves the rows for “Organizational Agility” and “Lean Portfolio Management”. From the Organizational Agility row, the “Enterprise” and “Government” compile “Strategic Themes”. Then, on the Lean Portfolio Management row, the “Epic Owners” and “Enterprise Architect” take these Strategic Themes and turn them into the “Portfolio Vision”. The Portfolio Vision feeds into a “Portfolio Backlog” (with a Kanban board), “Lean Budgets”, and “Guardrails.” These pieces are the inputs for a set of “Value Streams”. The output of the streams are “KPIs”. In the Value Streams are two “Epic” tags and an “Enabler” tag. The word “Coordination” is flowing across the visualization of the Value Streams.

## Figure 7. Full SAFe configuration

This configuration is identical to Figure 2. It contains **all** of the levels: Essential SAFe, Large Solution SAFe, and Portfolio SAFe.

## Figure 8. Spanning Palette

There are two versions of the spanning palette, which show up on the side of the different SAFe configurations. These are lists of elements referring to roles or artifacts that apply to a certain context. Each palette element is described in the reading.

On the left is a small spanning palette. The elements are “Vision”, “Roadmap”, and “System Team”.

On the right is a larger spanning palette. The elements are “Vision”, “Roadmap”, “Milestones”, “Shared Services”, “Community of Practice (CoP)”, “System Team”, “Lean UX”, and “Metrics”.

## Figure 9. SAFe Foundation

The foundation elements show up in every SAFe configuration. From left to right, they are “Core Values”, “Lean-Agile Mindset”, “SAFe principles”, “Implementation Roadmap”, and “SAFe Program Consultant”. Each foundation element is described in the reading.

[**SAFe Lean-Agile Principles**](https://www.scaledagileframework.com/safe-lean-agile-principles/)

This article contains one image, which just lists out the different Lean-agile principles. Alt-text has not been included for this image because all of the principles are included and described in the text on the webpage.

[**SAFe Implementation Roadmap**](https://www.scaledagileframework.com/implementation-roadmap/)

This article only contains one image, the SAFe Implementation Roadmap. This roadmap is a visual representation of the following steps as described in the reading:

1. Reaching the Tipping Point
2. Train Lean-Agile Change Agents
3. Train Executives, Managers, and Leaders
4. Create a Lean-Agile Center of Excellence
5. Identify Value Streams and ARTs
6. Create the Implementation Plan
7. Prepare for ART Launch
8. Train Teams and Launch the ART
9. Coach ART Execution
10. Launch More ARTs and Value Streams
11. Extend to the Portfolio
12. Accelerate

In the article, each of the steps is a hyperlink to a specific reading associated with that step. You are not required to read through the articles for all of the steps, but it may be helpful to explore some of them if you would like to write about the SAFe framework for your discussion. To navigate easily to the list, look for the Level 1 header **SAFe Implementation Roadmap**. The linked list items will be in the text under this heading.

[**The Scrum@Scale Guide**](https://www.scrumatscale.com/scrum-at-scale-guide-read-online/)

There are no figure numbers for the different images in this article. The cue text for the first figure is a level 2 header in the reading itself. All other figures in the reading have a note underneath the figure. The start of the note has been used as its respective figure’s name in this document.

### The Components of Scrum@Scale

Two intersecting circles. The left circle is labeled “Scrum Master Cycle: The ‘How’”. It contains the “Executive Action Team”. The cycle progresses from “Continuous Improvement and Impediment Removal” to “Cross-Team Coordination”, “Delivery”, “Product and Release Feedback”, “Team Process”, and back to “Continuous Improvement and Impediment Removal”.

The right circle is labeled “Product Owner Cycle: The ‘What’”. It contains the Executive Metascrum. The cycle progresses from “Strategic Vision” to “Backlog Prioritization”, “Backlog Decomposition and Refinement”, “Release Planning”, “Product and Release Feedback”, “Team Process”, and back to “Strategic Vision”.

The circles overlap on “Team Process” and “Product and Release Feedback”. In the overlap area is also “Metrics and Transparency”, indicating their importance in these feedback loops. The “Product and Release Feedback” happens for every Product Increment.

### NOTE: In the above and following diagrams…

Two images side by side. On the left is a pentagon labeled “A Scrum Team”. Inside are two smaller pentagons, one labeled “SM” for Scrum Master and the other labeled “PO” for Product Owner. The right image is a set of five “Scrum Team” pentagons, each with an SM and PO inside. This image is labeled “A Scrum of Scrums Team”.

### NOTE: For simplicity, the numbers…

Two images side by side. On the left is the image from the previous figure, showing five “Scrum Team” pentagons. There is a new pentagon in the middle labeled “SoS” for “Scrum of Scrums”. This image is labeled “SoS of 5 Teams”. The right image involves *five* “SoS of 5 teams” diagrams. There is an “SoSoS” pentagon in the middle, which stands for “Scrum of Scrum of Scrums”. This image is labeled “SoSoS of 25 Teams”.

### Sample Diagram showing an EAT coordinating 5 groupings of 25 teams

This figure includes *five* of the “SoSoS of 25 Teams” images, centered around a pentagon labeled EAT for “Executive Action Team”. This means that in this figure, the EAT is responsible for a total of 125 different Scrum teams.

### In this organizational diagram…

This figure is actually made up of three separate images. For abbreviation reference: MS stands for Metascrum, SoS stands for Scrum of Scrums, EMS stands for Executive Metascrum, and EAT stands for Executive Action Team. Each Scrum Team in the diagram includes a PO and SM.

The first image is labeled “5 SoSs with 2, 3, 4, and 2x5 Teams”. In the center are the EMS and EAT. Surrounding these are five distinct groupings (the order of the groupings is not important). The first grouping involves five Scrum Teams. In the middle are an MS and SoS. The second grouping is four Scrum Teams with an MS and an SOS. The third grouping is three Scrum Teams with an MS and an SOS. The fourth grouping is five Scrum Teams with an MS and an SOS. The fifth grouping is two Scrum Teams with an MS and an SOS.

The second image is labeled “3 SOSs with 10, 13, and 15 Teams”. The configuration of 10 Teams involves a grouping of two Scrum Teams around a CPO MS (Chief Product Owner Metascrum) and SOS, a grouping of five Scrum Teams around a CPO MS and SoS, and a grouping of three Scrum Teams around a CPO MS and SOS. In the middle of these groupings is a CCPO MS (Chief Chief Product Owner Metascrum) and SoSoS (Scrum of Scrum of Scrums). The configuration of 13 teams follows a similar pattern, with groupings of four, four, three, and two Scrum Teams around their own CPO MS and SoS. These groupings are around a CCPO MS and SoSoS. The 15-team configuration is similar, with groupings of six, six, and three Scrum Teams around their own CPO MS and SOS. These groupings are around a CCPO MS and SoSoS. The 10-team, 13-team, and 15-team configurations are around an EMS and an EAT.

The third image is not labeled. There are five configurations of teams in the image. Each configuration involves five groupings of five Scrum Teams. In the center of the five Scrum Teams are the CPO MS and the SoS. In the center of the five groupings is a CCPO MS and SoSoS. In the whole image, there is a total of 125 Scrum Teams, 25 CPO MS and SoS, and 5 CCPO MS and SoSoS. Coordinating all of these different teams are the EAT and EMS in the middle. They have the additional support of a Legal/Compliance team, a Customer Relations team, and a People Operations (Agile HR) team. There are also five Knowledge Teams (on Teams) and five Infrastructure Teams (on Teams). As noted in the image description, these Knowledge and Infrastructure Teams are specialists that are closely connected to the teams.

[**Online Nexus Guide**](https://www.scrum.org/resources/online-nexus-guide?gclid=CjwKCAjw2uf2BRBpEiwA31VZjxCb-35B-daeF1BZVBWOafc3BVzm1M-yQFyq3MllzTqp9997K91jzxoC22kQAvD_BwE)

### Nexus™ Framework for Scaling Scrum

There is a more detailed description of this diagram in the reading that describes the roles, artifacts, events, and steps of the process flow in more detail. The basic product flow is:

1. Product Backlog (which constantly needs to be refined)
2. Nexus Sprint Planning, which involves Nexus and multiple Scrum Teams
3. Nexus Sprint Backlog
4. Development Work Cycle. 3-9 Scrum Teams perform integrated work. They hold Daily Scrums and a Nexus Daily Scrum. This is coached by the Nexus Integration Team.
5. At the end of the development cycle is a Nexus Sprint Review. The output is an Integrated Increment and a Nexus Sprint Retrospective. The Nexus Sprint Retrospective involves Nexus and the Scrum Teams. The Sprint Retrospective feeds into the Nexus Sprint Planning for the next sprint. The Nexus Sprint Review also informs the Product Backlog.

[**Introduction to LeSS**](https://less.works/less/framework/introduction#IntroductiontoLeSS)

The figure titles in this document correspond to the alt-text for the figures in the reading. The alt-text in this document is more descriptive to help you understand what each figure is communicating. Several images in the article include “Story Sketch” in the alt-text description. These images are purely decorative and have not been included in this document.

### The LeSS Complete Picture

Simple bulls-eye style diagram with concentric circles. In the innermost circle is “Principles”, outside that is “Frameworks”, outside that is “Guides”, and finally in the outermost circle is “Experiments”.

### LeSS Principles

In the center is a head with arrows pointing from parts of the brain to all 10 LeSS principles. Each principle is described in the reading.

1. Large-Scale Scrum is Scrum
2. Transparency
3. More with Less
4. Whole Product Focus
5. Customer Centric
6. Continuous Improvement towards Perfection
7. Lean Thinking
8. Systems Thinking
9. Empirical Process Control
10. Queueing Theory

### LeSS Framework

A visualization of the LeSS Framework which shows a flow of three different teams. From left to right, the steps in the workflow are:

1. Previous Sprint, with a tag indicating the Product Owner and the Product Backlog between this and the next step.
2. Sprint Planning 1 and Sprint Planning 2
3. During the Sprint, the Scrum Teams (including their Scrum Masters) look at the Sprint Backlog, coordinate with each other, and hold Daily Scrums and Product Backlog Refinements.
4. At the end of the Sprint, teams perform a Sprint Review, Retrospective, and Overall Retrospective. This results in a “Potentially shippable product increment”.
5. Teams move to the next sprint, and the cycle in the framework repeats.

### Sprint Planning

This diagram illustrates Sprint Planning 1 and Sprint Planning 2. Sprint Planning 1 involves the teams or representative(s) from all teams, the Product Owner, and the Product Backlog. This box is labeled “Selection and Final Clarification of Items”. Some of the selected items are fed to Sprint Planning 2, which produces a Sprint Backlog. Other selected items are given to a multi-team group; each team produces their own Sprint Backlog as well. Sprint Planning 2 is labeled “Initial Design and Plan”. As noted in the reading, multi-team planning is recommended for closely related items.

### Sprint Review and Retrospective

There are three distinct rows in the figure. The first is labeled “Sprint Review” and involves all teams, the Product Owner, and Users and Stakeholders. The second is labeled “Team Retrospective”. Each Scrum Team holds their own Sprint Retrospective with team members. The third is the “Overall Retrospective”. This involves the manager, Scrum Masters, Product Owner, and team representatives.

### LeSS Huge Framework

This diagram is a scaled-up version of the LeSS Framework diagram. The difference is that there are many more teams. In this diagram, there are nine teams displayed. Each set of three teams has an “APO” or Area Product Owner. The APOs are overseen by a Product Owner.

Each set of three Scrum Teams is represented by the same diagram as described in “LeSS Framework”.