Note: *This document is simply my personal dummy guide and a basic overview on principles, concepts and practices to build business agility within an organization. It is my interpretation on all the important concepts behind Scaled Agile Framework. It does not represent all of the teachings and concepts by SAFe community. Please refer to the actual SAFe website for further references. Thank You.*

**** COMPTENCY, VALUES, & PRINCIPLES ****

What are **7-Core COMPENTENCY** of SAFe Lean Enterprise?

1. **Lean-Agile Leadership**
    a. Leading by Example
    b. Align Mindset & Lean-Agile Principles
    c. Leading the Change to new ways of Working
2. **Team and Technical Agility** *(Helps Drive Agile Quality Practices, Helps drive Built-In Quality Practices)*
    a. Agile Teams
    b. Teams of Agile Teams (ART)
    c. Built-In Quality
3. **Agile Product Delivery**
    a. Customer Centricity and Design Thinking
    b. Develop on cadence and release on demand
    c. DevOps and the Continuous Delivery Pipeline
4. **Enterprise Solution Delivery**
    a. Lean System and Solution Engineering
    b. Coordinate ARTs and Suppliers
    c. Continually Evolve Live Systems
5. **Lean Portfolio Management** *(Helps Align Strategy and Execution)*
    a. Strategy & Investment Funding
    b. Agile Portfolio Operations
    c. Lean Governance
6. **Organizational Agility**
    a. Lean-thinking People and Agile Teams
    b. Lean Business Operations
    c. Strategy Agility
7. **Continuous Learning Culture**
    a. Learning Organization

b. Innovation Culture
c. Relentless Improvement - Inspect & Adapt (I&A) - Plan Do Check Adjust

What are 2-Reasons for adopting Agile in Organization?

1. **ENHANCE** ability to manage **CHANGING PRIORITIES**
2. **ACCELERATE PRODUCT DELIVERY**, Reduce Project Cost

What are **4-SAFe Core VALUES**?

1. **Alignment** - Whole Organization aligned to a common vision and moving in the same direction
2. **Built-In Quality** – Every increment reflects quality standards
3. **Transparency** - Transparency through Trust and Openness in everything we do for a healthy organization (*Turn Mistakes into Learning Moments, Trust Based Environment*)
4. **Program Execution** – Focus on working systems & business outcomes

What are **4-PILLARS of SAFe HOUSE OF LEAN?**

1. **Respect for People & Culture** - Value Diversity, Grow people through coaching, embrace customer, build long-term partnerships
2. **Flow**
3. **Innovation**
4. **Relentless Improvement** - Create a Sense of Urgency, Build Problem Solving culture, adapt frequently, provide time and space for innovation

What are **10-LEAN AGILE** Principles?

1. Take an Economic view (*Deliver Early and Often*)
2. Apply System Thinking
3. Assume Variability; preserve options
4. Build Incrementally with fast, integrated learning cycles
5. Base Milestones on Objectives evaluation on working Systems
6. Make Value flow without Interruptions (means …??)
7. Apply Cadence, synchronization with cross domain planning
8. Unlock the Intrinsic Motivation of Knowledge Workers
9. Decentralize decision making
10. Organize Around Value Flow (*Markets & Customers Demand Change*)

What are **5-LEAN THINKING Principles**?

1. **VALUE** - Precisely specify Value by Product
2. **VALUE STREAM -** Identify the Value Stream for each Product
   - *Recognizing an opportunity through Release and Validation*
3. **FLOW -** Make Value Flow without Interruptions (*Identifying Delays*)
4. **PULL -** Let the Customer Pull Value from the Producer
5. **PERFECTION -** Pursue Perfection

What are **5-BASIC LEAN AGILE QUALITY PRACTICES**?

1. Shift Learning Left
2. Pairing and Peer Review
3. Collective Ownership and T-Shaped Skills
4. Artifact Standards and Definition of Done
5. Workflow Automation (*Establishing Flow*)

What are the **4-AGILE MANIFESTO VALUES?**

1. Individuals and interactions **over** processes and tools
2. Working software **over** comprehensive documentation
3. Customer collaboration **over** contract negotiation
4. Responding to Change **over** following a plan

What are the **12-AGILE MANIFESTO PRINCIPLES?**

1. Our highest priority is to satisfy the customer through early and continuous delivery of valuable software.
2. Welcome changing requirements, even late in development. Agile processes harness change for the customer's competitive advantage.
3. Deliver working software frequently, from a couple of weeks to a couple of months, with a preference to the shorter timescale.
4. Business people and developers must work together daily throughout the project.
5. Build projects around motivated individuals. Give them the environment and support they need, and trust them to get the job done.
6. The most efficient and effective method of conveying information to and within a development team is face-to-face conversation.
7. Working software is the primary measure of progress.
8. Agile processes promote sustainable development. The sponsors, developers, and users should be able to maintain a constant pace indefinitely.

9. Continuous attention to technical excellence and good design enhances agility.
10. Simplicity--the art of maximizing the amount of work not done--is essential.
11. The best architectures, requirements, and designs emerge from self-organizing teams.
12. At regular intervals, the team reflects on how to become more effective, then tunes and adjusts its behavior accordingly.

What are 8-Steps of the **KOTTER** Process?

Step 1: Create a sense of urgency. …
Step 2: Form a Powerful Coalition. ...
Step 3: Create a Vision for Change. ...
Step 4: Communicate the Vision. ...
Step 5: Remove Obstacles. ...
Step 6: Create Short-Term Wins. ...
Step 7: Build on the Change. ...
Step 8: Anchor the Changes in Corporate Culture.

What are 13-Steps of **SAFe Implementation Roadmap?**

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

What is SAFe Implementation Roadmap?

- Can be used as a **TEMPLATE** for putting SAFe into practice within an organization
- Can be used to **SCRIPT** the change to SAFe
- Pathway would a LACE use on the Agile growth lifecycle

- A series of activities that have proven to be effective in successfully implementing SAFe
- First step of the SAFe Implementation Roadmap: Reach the Tipping Point

What is the definition of SAFe?

- SAFe provides the Operating System (Network) to the organizations to achieve business agility to 7-Core competencies.
- SAFe does this *By focusing on customers, products, innovation, and growth,* Hundreds of People working together on a large project
- SAFe is a knowledge base of proven integrated principles and practices for Lean, Agile, and DevOps
- Set of Organizational and Workflow Patterns for implementing Agile practices at an Enterprise Scale
- SAFe Goal: Deliver Value

What is SAFe Economic Framework?

- Set of decision guidelines that align everyone with financial objectives of a Portfolio and inform the continuous decision-making process

What are 4-Elements of SAFe Economic Framework?

1. Operating within lean budgets and guardrails
2. **Understanding *Solution Trade-offs***
3. Leveraging suppliers
4. Sequencing jobs for the maximum benefit

What is DESIGN Thinking?

- Design Thinking is a clear and continuous understanding of the target market, Customers, their problems, and the jobs to be done.

What are 3-Tools of DESIGN Thinking?

1. **Personas** - Use Personas to Focus on Design
2. **Empathy Maps** - Promotes customer Identification
3. **Gemba Walks** - Understand the *Problem Space during Discover*

What are 4-Ways to Measure SUCCESS by DESIGN Thinking?

1. Desirable
2. Feasible
3. Viable
4. Sustainable

What is SYSTEM Thinking?

- *Optimizing a Component does not optimize a system*
- For the system to behave well as a system, a higher-level understanding of behavior and architecture is required
- A system can evolve no faster than its slowest integration point
- Focus on the delays and reduce them

What is the Intrinsic Motivation of Knowledge Workers?

1. **Autonomy** – Control over our own work
2. **Mastery** – Get better at what we do/improve
3. **Purpose** – Desire to do something that has meaning

What is Customer Centricity?

- Customer Centricity is a MINDSET focused on Customer Behaviors that produce the best Innovations
- *To understand the Customer's Needs*

What is Minimum Viable Product (MVP)?

- A minimal version of a new product used to test a hypothesis

What are CENTRLIZED Decision Making?

- Decisions that deliver large and broad economic benefits
- Decisions unlikely to change in the short term

What are Benefits of DECENTRALIZED Decision Making?

- Reduce Delays
- Delivering value in the shortest sustainable lead time
- When a Decision requires local information, then you Decentralize

What is Business Agility?

- The ability to compete and thrive in the digital age by quickly responding to market changes and emerging opportunities with innovative business Solutions.
- Ability to MOVE FAST, QUICKLY ADAPT to Changes

**** WHAT ARE **4-CONFIGURATIONS TABS** in SAFe?

1. **ESSENTIAL** - Most Basic Level of SAFe, Starting Point, Requires *SINGLE* ART
   - **Essential is Two-Layers:** Agile TEAM + ART (Agile Release Train)
   - **Essential ROLES:**
     - TEAM Layer:
       1. Scrum Master / Team Coach (SM/TC)
       2. Product Owner (PO)
       3. Agile Teams (Technical Developers and Builders)
     - ART Layer:
       1. Release Train Engineer (RTE)
       2. Product Management (PM)
       3. System Architect
       4. Business Owners (BO)

2. **LARGE SOLUTION** - Requires *Multiple ARTs*, Requires additional roles, artifacts, events, and coordination
   - **Large Solution is made up of:** Agile TEAM + ART + *SOLUTION*
   - **Large Solution ROLES:**
     1. Solution Train Engineer (STE)
     2. Solution Management (SM)
     3. Solution Architects
     4. Supplier
     5. Shared Services
     6. Communities of Practice (CoP)

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3. **PORTFOLIO** - *Multiple SOLUTIONs,* Large Organizations with complex Software including financial operations
   - **Portfolio is made up of:** Agile TEAM + ART + *PORTFOLIO*

- **Portfolio ROLES:**
  1. Lean Portfolio Management(LPM)
  2. Epic Owners
  3. Enterprise Architect

4. FULL - All above configurations, large companies & massive projects with lots of integrations

- **Full is made up of:** Agile TEAM + ART + SOLUTION + PORTFOLIO
- **Full ROLES:**

1. Scrum Master / Team Coach (SM/TC)
2. Product Owner (PO)
3. Agile Teams (Technical Developers and Builders)
4. Release Train Engineer (RTE)
5. Product Management (PM)
6. System Architect
7. Business Owners (BO)
8. Solution Train Engineer (STE)
9. Solution Management (SM)
10. Solution Architects
11. Supplier
12. Shared Services
13. Communities of Practice CoP
14. Lean Portfolio Management(LPM)
15. Epic Owners
16. Enterprise Architect

**** **** SAFe ROLES ****

ESSENTIAL - TEAM Roles

1. **Agile Teams** – a cross-functional group of ten or fewer individuals who can define, build, test, and deploy an increment of value in a short time box. Each ART comprises 5 – 15 Agile teams and includes the roles and infrastructure necessary to deliver fully working and tested business solutions.
2. **Product Owner (PO)** – the content authority for the team backlog is responsible for defining stories and prioritizing the backlog.
    - *PO has content authority over Team Backlog*
3. **Scrum Master/Team Coach (SM/TC)** – a servant leader and Agile team coach who helps the team remove impediments, facilitates team events, and fosters an environment for high-performing teams.

ESSENTIAL - ART Roles

1. **Product Management (PM)**– responsible for defining and supporting the building of desirable, feasible, viable, and sustainable products that meet customer needs over the product-market lifecycle.
    - *PM has content authority over Program Backlog*
2. **System Architect** – an individual or small cross-discipline team that applies Principle #2, Apply Systems Thinking. They define the overall architecture of the system, help identify Nonfunctional Requirements (NFRs), determine the significant elements and subsystems, and help design the interfaces and collaborations among them.
3. **Release Train Engineer (RTE)** – a servant leader and the chief Scrum Master/Team Coach for the train. The RTE facilitates optimizing the flow of value by ensuring the ART events and artifacts function correctly, including the ART Kanban, Inspect & Adapt (I&A) workshop, ART Sync, and PI Planning.
4. **Business Owners (BO)** – a small group of stakeholders with the business and technical responsibility for fitness for use, governance, and return on investment (ROI) for a Solution developed by an ART.

LARGE SOLUTION Roles

1. **Solution Management** – responsible for defining and supporting the building of desirable, feasible, viable, and sustainable large-scale business solutions that meet customer needs over the solution's significant lifespan.
2. **Solution Architects** –responsible for defining and communicating a shared technical and architectural vision across a Solution Train to help ensure the solution under development is fit for its intended purpose.
3. **Solution Train Engineer (STE)** – a servant leader and coach for the Solution Train, facilitating and guiding the work of all ARTs and Suppliers in the Value Stream.
4. **Supplier** – an internal or external organization that develops and delivers components, subsystems, or services, which help Solution Trains deliver solutions to customers.
5. **Shared Services** – represent the specialty roles, people, and services required for the success of an Agile Release Train (ART) or Solution Train, but that cannot be dedicated full-time.
6. **Communities of Practice (CoP)** – organized groups of people who have a common interest in a specific technical or business domain who regularly share information, improve their skills, and actively work on advancing the general knowledge of the domain.

PORTFOLIO Roles

1. **Lean Portfolio Management (LPM)** - is a function fulfilled by individuals with decision-making and financial accountability for a SAFe portfolio.
2. **Epic Owners** - collaboratively define the epic, including a Minimum Viable Product (MVP) and Lean business case, and facilitate its implementation when approved.
3. **Enterprise Architects** - provide the strategic technical direction and roadmap, enabling a portfolio to support the current and future business capabilities.

**** SAFe ARTIFACTS ****

ESSENTIAL - TEAM Artifacts

1. **Stories -** Short descriptions of a small piece of desired functionality that can be developed and tested in one Single Iteration, Small Elements/Functionality of Value implemented in one Single Iteration.
2. **Enabler Stories** - Enablers Stories extend the Architectural Runaway to implement future business requirements, Ground Work, Foundational Elements you need to do, pre-requisite items of work
3. **Iteration Goals** - High level Summary of business and technical goals that Agile Team agrees to accomplish in one Single Iteration
4. **Team Backlog** - Contains Stories & Enablers that originate from Program Backlog

ESSENTIAL - ART Artifacts

1. **Features** - Set of Requirements implemented in one *Single PI* (Planning Interval), Features further split into Stories. Within one Single PI, there are multiple Iterations and within each iterations, there are multiple Stories
2. **Enabler Features** - Enablers Features extend Architectural Runaway to implement future business into one Single PI
3. **ART Epics** - Epics implemented in a Single ART (Multiple Iterations)
4. **ART PI Objective** - High Summary of business and technical goals that Agile Team or ART intends to achieve in the upcoming one Single PI
5. **ART Planning Board** - Highlighting the new feature delivery dates, feature dependencies among teams and relevant Milestones
6. **ART Backlog** - Contains Features implemented in current/upcoming PI
7. **Vision** - Describes the future state of Solutions proposed by the Customer and Stakeholders
8. **Architectural Runaway** - Consists of existing code, components and technical infrastructure necessary to implement future features
9. **Solution** - A product, service or System ARTs deliver to both internal and external customers
10. **Solution Context** - How the system will interface and be packaged and deployed in its operating environment

LARGE SOLUTION Artifacts

1. **Capabilities** - High level requirements that typically spans multiple ARTs. Sized and split into multiple Features so they are implemented in a Single PI
2. **Enabler Capabilities** - Enabler Capabilities extend Architectural Runaway to implement future business including Exploration, Architecture, Infrastructure, and Compliance
3. **Solution Train Epics** - Epics implemented by a Single Solution Train (made up of Multiple ARTs)
4. **Nonfunctional Requirements (NFRs)** - Define system attributes such as security, reliability, performance, maintainability, scalability and usability, servers as restrictions on system's design
5. **Solution Train Backlog** - Container/Holding area for upcoming Capabilities and Enablers which can span multiple ARTs and
6. **Solution** - A product, service or System ARTs deliver to both internal and external customers

PORTFOLIO Artifacts

1. **Strategic Themes** - Portfolio Business objectives that provide competitive and strategic advantage
2. **Portfolio Canvas** - Defines the Portfolio's value propositions, key resources and activities, cost structure and revenue streams
3. **Portfolio Epics** - represent the investments within a Portfolio, large initiatives typically span multiple Value Streams and PIs
4. **Portfolio Enabler Epics -** Enabler Epics typically span across multiple Value Streams and PIs
5. **Portfolio Backlog** - contains the business and Enabler Epics needed to create and evolve the Portfolio's products, services and systems, Portfolio Kanban system manages the Portfolio Backlog
6. **Guardrails** - Portfolio's policies and practices for budgeting, spending and governance
7. **Nonfunctional Requirements (NFRs)** - Define system attributes such as security, reliability, performance, maintainability, scalability and usability, servers as restrictions on system's design

**** SAFe EVENTS ****

ESSENTIAL - TEAM Events

1. **Iteration Planning** – a team event in which an Agile team determines the iteration goals and how much of the team backlog they can commit to during an upcoming iteration. Team capacity determines the number of stories and enablers that are selected.
2. **Iteration Review** – a cadence-based event at the end of each iteration in which the team reviews the previous increment's results and adjusts the team backlog based on feedback.
3. **Iteration Retrospective** – an event held at the end of the iteration for the Agile team to review its practices and identify ways to improve. The retrospective applies qualitative and quantitative information presented during the iteration review.
4. **Backlog Refinement** – an event is held once or twice during the iteration to refine, review, and estimate future stories and enablers in the team backlog.
5. **Team Sync** (aka Daily Scrum) – a short meeting (usually 15 minutes or less), typically held about daily, to inspect progress toward the iteration goal, communicate, and adjust upcoming planned work.

ESSENTIAL - ART Events

1. **PI Planning** – a cadence-based, face-to-face planning event that serves as the heartbeat of the ART, aligning all the teams on the ART to the shared mission.
2. **System Demo** – provides an integrated view of new features from the most recent iteration delivered by all the teams in the ART. Each demo includes ART stakeholders with an objective measure of progress during a PI.
3. **Inspect & Adapt** – a significant event where the current state of the solution is demoed and evaluated. Teams then reflect and identify improvement backlog items via a structured problem-solving workshop.

4. **Coach Sync** – helps coordinate the dependencies of the ARTs and provides visibility into progress and impediments.
5. **Product Owner (PO) Sync** – provides visibility into how well the ART is progressing toward meeting the ART PI objectives, discusses problems or opportunities with feature development, and assesses any scope adjustments.
6. **ART Sync** – combines the Coach Sync and PO Sync into a single event for an ART.

LARGE SOLUTION Events

1. **Pre-Plan** – describes the alignment activities that prepare Agile Release Trains within a Solution Train for PI Planning.
2. **Coordinate and Deliver** – describes the SAFe artifacts and practices necessary for Solution Trains to maintain alignment and deliver value throughout a PI.
3. **Solution Demo** – integrates the development efforts from all ARTs and suppliers on the Solution Train every PI and makes them visible to Customers and other stakeholders for evaluation and feedback.
4. **Inspect & Adapt (I&A)** – a significant event where the current state of the integrated solution across all ARTs is demonstrated and evaluated. Solution Train stakeholders then reflect and identify improvement backlog items via a structured problem-solving workshop.
5. **Product Manager Sync** – similar to the PO Sync (see PI article), the Product Manager Sync typically runs on the same cadence as the PO Sync and is held soon after it to raise and address issues from the ARTs.
6. **Architect Sync** – a Solution Train event used to guide emerging designs, discuss tradeoffs, and increase opportunities to align implementation approaches without becoming a source of delay.
7. **RTE Sync** – similar to the 'Coaches Sync' (see PI article), this event usually runs on the same cadence as the Coaches Syncs and is held soon after it to address issues that can't be resolved directly by the ARTs.

PORTFOLIO Events

1. **Portfolio Sync** - provides visibility into how well the portfolio is progressing toward meeting its strategic objectives. It typically includes reviewing the value stream and ART execution and governance of other portfolio investments.
2. **Participatory Budgeting** - enables LPM to collaborate with Business Owners and other relevant stakeholders to right-size the investments in value streams. It helps manage the approval process of epics in the portfolio Kanban.
3. **Strategic Portfolio Review** - enables LPM to create alignment and investment guidance to inform rapid, high-quality, decentralized decisions, adapt to meet changing needs, and provide governance to respond effectively to new and changing opportunities.

What are 3-Types of CONTAINERS in SAFe?

- Containers deliver DIRECT END USER VALUE (Business Epics or Business Features) to internal/external customer
    1. **Epic** - LARGE significant item of work, large increment of value
    2. **Features** - MEDIUM size items of works
    3. **Story** - Underline SMALL elements/functionality of Value

OPTIONAL:

1. **Enablers** - Ground Technical work, foundational elements you need to do, pre-requisite items of work that will allow you to deliver DIRECT End user value
2. **Capability -** (Optional) - Sits between Epic & Feature, Links different types of features,

**** BACKLOG TYPES ****

What is TEAM Backlog?

- Team Backlog contains User Stories & Enabler Stories that originate from the Program Backlog. Contains a list of all items that you might want to get done in a single Iteration.
- Product Owner (PO) owns/manages Team Backlog

What is PROGRAM Backlog?

- Program Backlog contains Features and Enablers addressing the user needs and delivery business benefits for a SINGLE Agile Release Train (ART)
- Product Management (PM) owns/manages Team Backlog

What is SOLUTION Backlog?

- Solution Backlog contains Capabilities and Enablers addressing the user needs and delivery business benefits across MULTIPLE ART(s)
- Solution Management (SM) owns/manages Solution Backlog

What is PORTFOLIO Backlog?

- Portfolio Backlog is the highest level backlog in SAFe holding Epics as bigger initiatives for MULTIPLE Solution Train(s)
- Lean Portfolio Management (LPM) owns/manages Portfolio Backlog

What is OKRs Objective & Key Results?

- Collaborative framework for establishing clear goals and measurable outcomes
- 'Objective' defines the business outcome you strive to achieve.
- 'Key Results' are the measurable success criteria used to track progress toward the objective.

**** DEMO TYPES****

What is Team Demo?

- Held at the **Team Level** within Essential Configuration
- Team Demo also Occurs at the END of every ITERATION (similar to System Demo)
- At the end of each Iteration, Agile Team will Demo their work specifically to Product Owner (PO) to received feedback

What is System Demo?

- Held at the **ART or Program Level** within Essential Configuration
- System Demo is the *best MEASURE OF PROGRESS* for complex system development
- Presentation of new features for the most recent Iteration by all ART Teams (ART Team, PM, PO, BO, Customers, Systems Teams, System Architect, IT Operations)
- Systems Demo Occurs at the END of every ITERATION
- Each Iteration requires a System Demo
- Systems Demo is deployed in a Staging Environment (Production-Like)

What is *PI* Systems Demo?

- PI System Demo is held at the END of Each PI
- PI System Demo shows all Features developed over the last PI
- PI System Demo is Held during the Inspect & Adapt event of PI
- Timebox: Hour or less

What is Solution Demo?

- Presentation/View of multiple ARTs and Suppliers
- Shows the combined development efforts of multiple Agile Release Trains & Suppliers and attended by all (SM, STE, Solution Architect, System Architect, LPM, PO, Agile Teams, Customers)

**** PI PLANNING ****

What is Planning Interval (PI)?

- Planning Interval is a timebox period (8-12 weeks) where the entire ART aligns teams & stakeholders to a shared mission and vision.
- Timebox =Typically 10-weeks (Range 8-12 Weeks)
- Each PI = 5-Iterations Total = 4-Development Iterations + 1-Innovation & Iterations Planning (IP)
    - Each Iteration = Typically 2-Weeks
    - What happens in the Last IP Iteration? 5th IP Iteration is only for buffer, I&A, PI Planning, Prepare for Demo, improvements, breather, hackathons which is innovation and research
- PI starts with a PI Planning Event (2-Day Event)

What is PI Planning Event?

- PI Planning Event is a meeting of multiple Teams in ART to plan the roadmap, decide on Features, and identify cross dependencies
- Heartbeat of ART
- Timebox = 2-Day Event
    - It's a 2-Day held event where teams PLAN for 4-Iterations worth of work
- RTE Facilitates the PI Planning Event
- PRIMARY PURPOSE: **Alignment**

- PI Planning facilitated by Release Train Engineer (RTE) for 2 days every typical 10 weeks,
- Product management provides vision and backlog,
- System architect provides architectural guidance,
- Teams of agile team plan the work and visualize on Program board.
- Outcome is Team/Program PI Objectives and Program board.
- Business Owner assign business value to PI Objectives on a scale of 1 to 10.

What is DAY-1 of PI Planning Event?

- Business context – A Business Owner or senior executive describes the current state of the business, shares the Portfolio Vision, and presents a perspective on how effectively existing solutions address current customer needs.
- Product/solution vision – Product Management presents the current vision (typically represented by the top ten or so upcoming features). They highlight changes from the previous PI planning event and any relevant milestones.
- Architecture vision and development practices – The System Architect presents the architecture vision. Also, a senior development manager may introduce Agile-supportive changes to development practices, such as test automation, DevOps, Continuous Integration, and Continuous Deployment, which the teams will adopt in the upcoming PI.
- Planning context and lunch – The RTE presents the planning process and expected outcomes.
- Team breakouts #1 – In the breakout, teams estimate their capacity for each Iteration and identify the backlog items they will likely need to realize the features. Each team creates draft plans, visible to all, iteration by iteration.
    - Identify Risks and Dependencies
    - Draft PI Objectives (Committed & Uncommitted Objectives)
    - Add Features and Dependencies to the ART Planning Board
- Draft plan review – During the tightly timeboxed draft plan review, teams present key planning outputs, which include capacity and load, draft PI objectives, potential risks, and dependencies. Business Owners, Product Management, and other teams and stakeholders review and provide input.
- Management review and problem-solving – Draft plans likely present challenges like scope, people and resource constraints, and dependencies. During the problem-solving meeting, management may negotiate scope changes and resolve other problems by agreeing to various planning adjustments. The RTE facilitates and keeps the primary stakeholders together for as long as necessary to make the decisions needed to reach achievable objectives

What is DAY-2 of PI Planning Event?

- Planning Adjustments - Next day, management presenting changes to the Plan
- Team Breakouts #2 - Teams continue Planning and making adjustments. Adjust Business Priorities, Finalize their objectives for the PI, BO assigns Business Value (BV)
- Final Plan Review & Lunch - Teams present their Plans to the Group. Teams provide the risks to use later in the ROAMing exercise. Teams ask BO if the Plan is acceptable
- ART PI Risks - Risks are discussed one by one and grouped into one of the following categories for **ROAM**: R-Resolved, O-Owned, A-Accepted, M-Mitigated
- Confidence Vote - Once ART PI Risks are addressed, Teams vote confidence on the PI Objectives. Each Team conducts a vote using Fingers (3 or above is good, 2 or less is discussed)
- Plan ReWork - Teams adjust their PI Objectives until they have high confidence.
- Planning Retrospective & Moving Forward - RTE leads a brief retrospective for the PI Planning, capture what went well, what didn't and what to do better next time

What are PI Objectives?

- Objectives are BUSINESS SUMMARIES of what each team intends to delivery in the upcoming PI
- PI Objectives are directly related to the intended Features/Stories in the upcoming PI
- Combination of Committed & a few Uncommitted Objectives to avoid overpromised work
- PI objectives are further defined as **SMART** Objectives:
  - S-Specific, M-Measurable, A-Achievable, R-Realistic, T-Timebound
- Once objectives are finalized, Business Owners (BO) assigns Business Value (BV) to each of the objectives face to face (Rate 1-10)

What are Committed Objectives?

- Committed Objectives are selected when Team is confident in completing them during the upcoming PI
- Once you have identified Committed objectives and BV has been assigned, a Vote of Confidence is given by the teams to each of those objectives

What are UnCommitted Objectives?

- Uncommitted Objectives are used to identify work that is planned, but the outcome is simply not certain.
- Uncommitted Objectives Help ***IMPROVE PREDICTABILITY***
- Uncommitted Objectives are **NOT** included in the team's commitment
- A team ***DOES NOT COMMIT*** *to Uncommitted Objective*
- It might carry Risks, Knowledge Gaps, or concerns with that objective
- Work related to Uncommitted Objectives is planned, but the outcome is not certain
- Low Confidence in meeting the objectives

What are BENEFITS of PI Planning?

- Establishing face-to-face communication among all team members and stakeholders
- Building the social network the ART depends upon
- Aligning development to business goals with the business context, vision, and Team and ART PI objectives
- Identifying dependencies and fostering cross-team and cross-ART collaboration
- Providing the opportunity for just the right amount of architecture and Lean User Experience (UX) guidance

What are PI Planning ADJUSTMENTS?

1. Adjust Business Priorities
2. Movement of People
3. Changes to Scope

What is Inspect & Adapt Event?

- I&A event is held at the END of Each PI where current state of the Solution is demonstrated and evaluated
- Participants: Agile Teams, RTE, System & Solution Architects, PM, BO, Stakeholders

What are INPUTS of PI Planning?

1. Business Context
2. Roadmap & Vision
3. Highest Priority/Top 10 Features of the ART Backlog

What are OUTPUTS of PI Planning?

1. Committed PI Objectives
2. ART Planning Board

**** What is **Agile Release Train (ART)**? ****

What is Agile Release Train (ART)?

- Team of multiple Agile Teams
- Cross-Functional Team that shares a common mission and cadence for Business and Technology under one umbrella
- Size of ART: 50-125 Members, 5-12 teams
- Often operate one or more Solutions in a Value Stream
- Negates the SILOs (SILO is business divisions that operate independently and avoid sharing information)

What EVENTS are in Agile Release Train (ART)?

1. PI Planning
2. ART Sync = ***Scrum of Scrums*** **+** ***Product Owner Sync*** (Weekly or more frequently, 30–60 minutes)
3. System Demo (Occurs at the end of each Iteration in PI)
4. Inspect & Adapt (Occurs at the end of each PI)

What ART Sync?

- ***ART Sync = Product Owner Sync + Coach Sync (Scrum of Scrums)***

- Since PO and SM/TC are often interested in similar topics and collaborate, it's helpful to have the combination in the ART Sync
- ROAM Board + ART Planning Board is reviewed during ART Sync

What is COACH Sync (Scrum of Scrums)?

- Coach Sync focuses on executing the current PI, including risk, dependencies, progress, and impediments
- Participants: SM/TM
- Facilitated by RTE (30-60mins)

What is PRODUCT OWNER Sync?

- Product Owner Sync manages the PI's scope, reviews progress, adjusts priorities, and prepares for the following PI
- Provides visibility into progress, scope and priority adjustments
- Participants: PM/PO
- Facilitated by RTE/PM (30-60mins)

What is Architectural Runway?

- Architectural Runway is existing code, hardware components, marketing branding guidelines, etc., that enable near-term business Features. Enablers build up the runway to support Features for e.g. A single sign-on mechanism will enable sign-on in multiple applications.

What is ART Planning Board? aka Program Board

- ART Planning Board is a centralized Visual Board of the PI's Feature Delivery Dates, Feature Dependencies among teams and relevant Milestones

What does ART Planning Board show? aka Program Board

1. Features
2. Significant Dependencies
3. Milestones

What are 4-Topologies in ART Team?

- Following types of teams enhance and simplify the task of Organizing Around Value (#10 SAFe Principle)

1. **Stream-Aligned Team** - Working on Features, building solutions and delivering Value to Customers
2. **Complicated Subsystem Team** - Requires deep Specialist Skills & Expertise, support "Stream Aligned Teams"
3. **Platform Team** - Provide Microservices (Self Service APIs) that can be used by anyone in Organization for different Platforms (Ex: HR, CRM)
4. **Enabling Team** - provide Coaching & Guidance to Stream Aligned Teams on improvement, capabilities, *become proficient in NEW TECHNOLOGIES*

**** What is ART Flow? ****

What is ART Flow?

- ART Flow describes a state where an ART delivers a continuous flow of valuable Features to the Customer
- *Improve Flow by Reduce the Batch Sizes of Work*
- There are **8-Flow Accelerators** that teams can use to address, optimize, and debug issues with achieving continuous flow
- Flow is smooth transition of work with a minimum of handoffs, delays and rework
- Flow is where Teams, Trains, and Portfolio can quickly, continuously and efficiently deliver quality Product from trigger to value

What are 8-Flow Accelerators or Primary Keys to Implementing Flow?

1. ***Visualize and Limit WIP (Primary)***
2. ***Work in Smaller Batches (Primary)***
3. ***Reduce Queue Length (Primary)***
2. Address Bottlenecks
3. Minimize Handoffs and Dependencies
4. Get Faster Feedback
7. Optimize Time 'in the zone'
8. Remediate Legacy Policies and Practices

What are Value Streams?

- Series of Steps that an organization uses to build Solutions that provide a continuous flow of Value to a Customer

- Set of Activities in a Sequential Order necessary to deliver a Product, Service or Experience to a Customer both internal and external
- Accelerates "Time to Value" delivery

What is Continuous Delivery Pipeline?

- CDP represents the workflows, activities, and automation needed to guide new functionality from ideation to an on-demand release of value
- Series of automated processes for delivering new software
- Allows Organizations to rapidly deliver Business Value at a Faster Rate
- Automate Deployment Process
- Each ART builds and maintains a Shared Pipeline

What are 4-Components of Continuous Delivery Pipeline?

1. Continuous Exploration (CE)
2. Continuous Integration (CI)
3. Continuous Deployment (CD)
4. Release on Demand (RoD)

What is Portfolio Canvas?

- Used to capture the **CURRENT STATE** of the Portfolio and a PRIMER to the **FUTURE STATE**
- Portfolio Canvas is a TEMPLATE for identifying a specific SAFe portfolio.
- Inputs to the Portfolio Canvas: **Strategic Themes**

What is Portfolio Kanban?

- Describes the state of Portfolio Epics (larger enterprise initiatives) as they proceed toward their decision point
- Manages Flow of Portfolio Epics
- Brings Structure to Analysis and Decision making around Epics

What are ROLES of Portfolio Kanban?

1. **Epic Owner** - drive their epics through the whole Kanban system
2. **Enterprise Architect** - promote adaptive design and engineering practices while driving architectural initiatives for the portfolio

3. **LPM (Lean Portfolio Management)** - has the highest level of decision-making and financial accountability for the products and solutions in a SAFe portfolio
    - **LPM is responsible for managing Portfolio Kanban**

What are Strategic Themes?

- *Strategic Themes are Portfolio level **BUSINESS OBJECTIVES** that connect the SAFe portfolio to the Enterprise business strategy*
- *INFLUENCE **Portfolio Strategy** & **Lean Budget Guardrails***
- Align the business objectives of an Enterprise to SAFe Portfolio.
- Provide Business Context for portfolio decision-making.
- Strategic themes are direct inputs to the portfolio vision.
- Strategic themes can be defined by a phrase or by using the Objectives and Key Results (OKRs) template.

What are Lean Budgets?

- Lean Budgets are Financial Governance approach that ***Funds Value Streams*** instead of Projects
- Funding Value Streams, Not Projects
- Apply Participatory Budgetsg vh

What are Lean Budget Guardrails?

- Lean Budget Guardrails describe the policies and practices for budgeting, spending, and governance for a specific portfolio.

What are 4-Types of Lean Budget Guardrails?

1. Guiding investments by horizon
2. Applying capacity allocation to optimize value and solution integrity
3. Approving significant initiatives
4. ***Continuous Business Owner Engagement***

****** 3-LEVEL HIGHLIGHTS ******

What are **14-ESSENTIAL** Level Highlights?

1. Agile Release Train (ART)
2. Continuous Delivery Pipeline
3. Customer Centricity
4. Design Thinking
5. Lean UX
6. PI (Planning Interval)
7. Iterations
8. Innovation and Planning (IP)
9. SAFe Scrum
10. SAFe Team Kanban
11. Built-In Quality
12. DevSecOps
13. ART Flow
14. Team Flow

What are **4-LARGE SOLUTION** Level Highlights?

1. Solution Train
2. Solution Intent
3. Solution Train Flow
4. Spanning Palette

What are **12-PORTFOLIO** Level Highlights?

- Portfolio Flow
- Strategic Themes
- Portfolio Vision
- Portfolio Backlog
- Big Data
- Lean Budgets
- Participatory Budgeting
- Value Stream Management
- Coordination
- Development Value Streams
- Solutions
- KPIs

SAFE AGILIST 6.0 QUICK NOTES