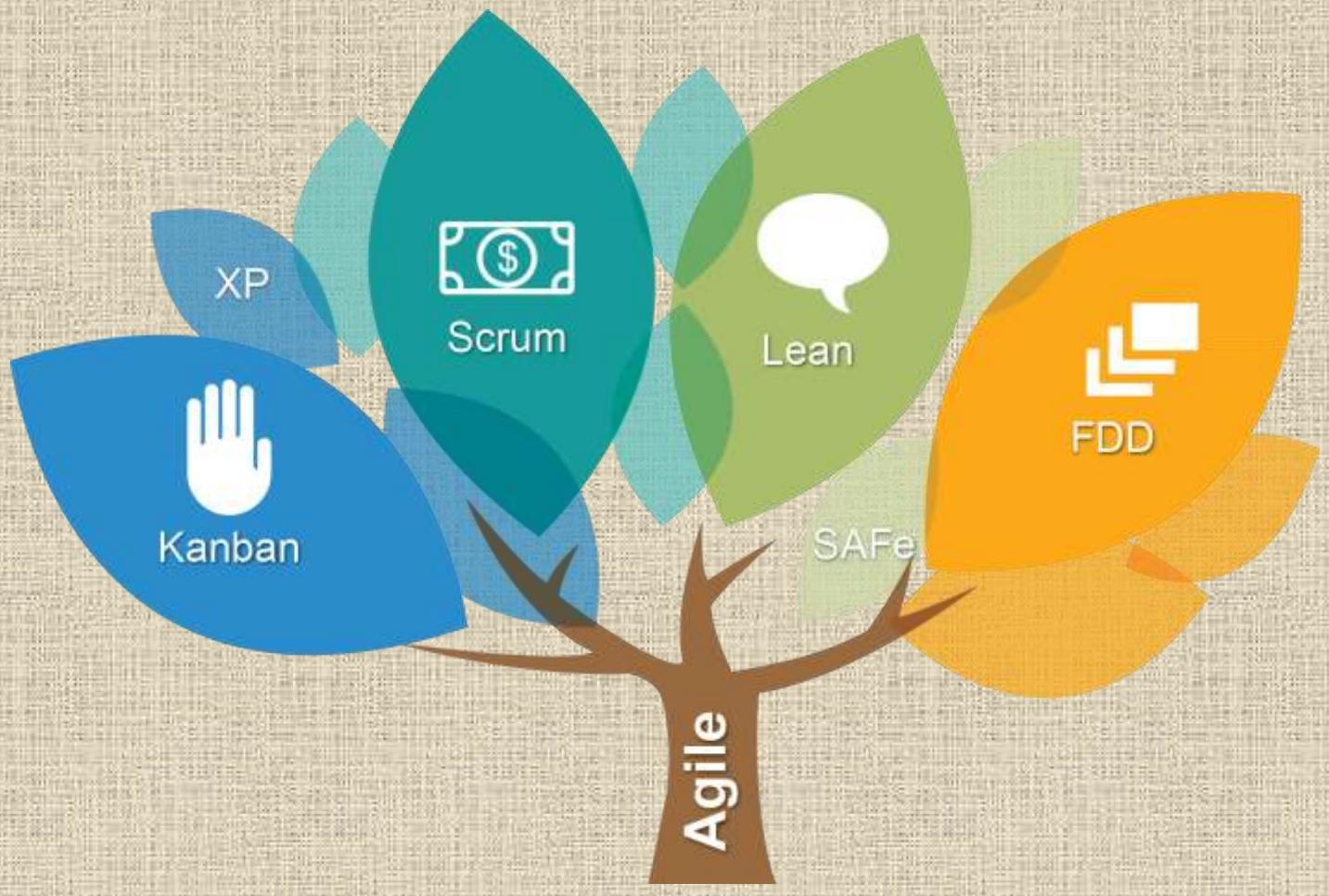


# Agile A Key of Success



## SRIRAM

Scrum Master | Agile Practitioner | Agile Coach

## Preface

I have been involved in IT Software development since 1997. I have a unique combination of process, technical and industrial skills. As a Certified Project Management Professional, I have expert level of knowledge in agile and technology practices such as Java, hadoop, AWS, Azure, DevOps, SharePoint & .Net with this combination I can help process and technology people, understand the world. Worked in India, USA, and UK which creates a global experience and awarded as a best PM professional. Dedicated “[Agile A Key of Success](#)” book to my Agile Guru’s, my family members, friends and Project Management professionals. [This book made handy and recollect everything at one shot.](#)

## Organization of this Book

[Agile A Key of Success](#) is designed to make you to success in the interview by providing valuable questions on various domain such as Agile Project management. Agile Framework, Value Driven Delivery, Stakeholder Engagement, Team Performance, Adaptive Planning, Problem Detecting & Resolution, Continuous Improvement along with the practice questions to achieve Scrum Master, PMI-ACP, Agile Coach Certification. The progressive elaboration of Project Management knowledge towards an Agile is awesome. Enjoy Reading! [This Hand-book will be more useful for Scrum Masters, Agile Practitioner & Agile Coaches to enrich the knowledge.](#)

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# Lesson 1 AGILE PROJECT MANAGEMENT OVERVIEW

## Topics to Discuss

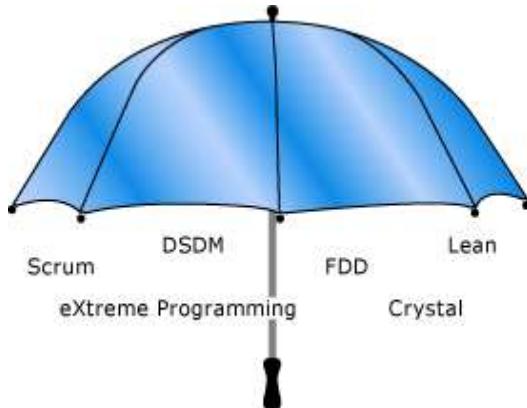
- Agile Project Management Overview
- PMI-ACP Exam Topics
- PMI-ACP Examination Domains, Tools & Techniques, Knowledge & Skills

## Agile Project Management Overview

### What is an Agile? What are its disciplines or flavours of Agile?

Agile is an umbrella term used to encompass dozens of different techniques and disciplines (e.g. Scrum, XP, KANBAN, etc.), all aimed at the iterative, incremental development of software.

The various disciplines | flavours of Agile are: -



Scrum	<ul style="list-style-type: none"><li>- Most Popular Agile Methods</li><li>- Strongly codified set of ceremonies, roles &amp; Artifacts</li></ul>
Lean Kanban	<ul style="list-style-type: none"><li>- Lean Kanban is a process, Not a methodology</li><li>- Set of principles evolved from manufacturing to eliminate waste</li></ul>
Extreme Programming (XP)	<ul style="list-style-type: none"><li>- Foremost of Agile methodologies</li><li>- Strong set of technical practices</li></ul>
Dynamic Systems Development Methods (DSDM)	<ul style="list-style-type: none"><li>- Offshoot of Rapid Application Development Methodology</li><li>- Cost   Quality   Time fixed and requirements prioritized as per MoSCoW</li></ul>
Crystal Methods	<ul style="list-style-type: none"><li>- Projects are categorised according to criticality and size of the project</li><li>- Critical Levels: Comfort (C)   Discretionary Money   Essential Money (E)   Life (L)</li></ul>

<b>Feature Driven Development (FDD)</b>	- Plan, Develop and build by Feature
<b>Test Driven Development (TDD)</b>	- Test Driven Development is a software development method that involves writing automated test code first and developing the least amount of code necessary to pass that test later
<b>Domain-Driven Design (DDD)</b>	- Domain-driven design is an Agile development approach meant for handling complex designs with implementation linked to an evolving model
<b>Adaptive Software Development (ASD)</b>	- ASD is feature-based and target-driven. ASD believes a plan cannot admit uncertainties and risks as this indicates a flawed and failed plan.
<b>Agile Unified Process (AUP)</b>	- Agile Unified Process (AUP) evolved from IBM's Rational Unified Process. AUP models its processes and techniques on the values of Simplicity, Agility, Customizability, Self-organization, Independence of tools, and focus on high-value activities.

## What is the importance of Agile? Why Agile?

The importance of the agile are: -

- Reduce turnaround time for features
- Predictability of Market Releases > Content Timing
- Ability to handle complex product enhancements

The main reason for the agile existence due to: -

- Project priorities change
- Need to respond to customer requirements and market dynamics
- Promote team work and less reliance on individual heroics
- Course corrections and continuous improvements

## What is Agility?

“Agility is the ability to deliver customer value while dealing with the inherent project unpredictability and dynamism by recognizing and adapting to change”

- Agile is the capability to balance
  - Stability with flexibility
  - Order with chaos

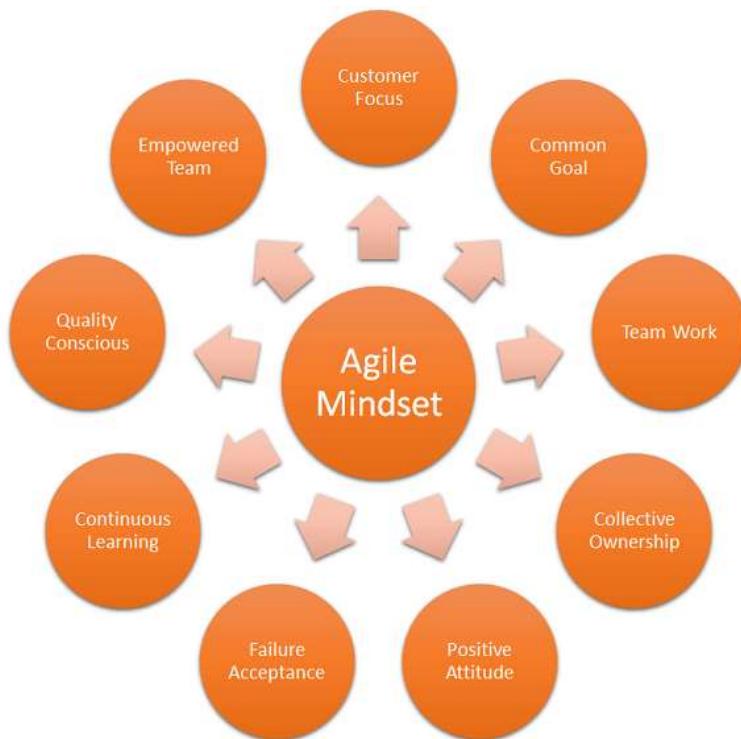
- Planning with execution
- Optimization with exploration
- Control with speed
- To deliver customer value reliably in the face of uncertainty and change....

### What are the Agile Values?

The following are the agile values are: -

- Vision
- Servant Leadership
- Trust
- Collaboration
- Honesty
- Learning
- Courage
- Openness
- Adaptability
- Lead the Change
- Transparency

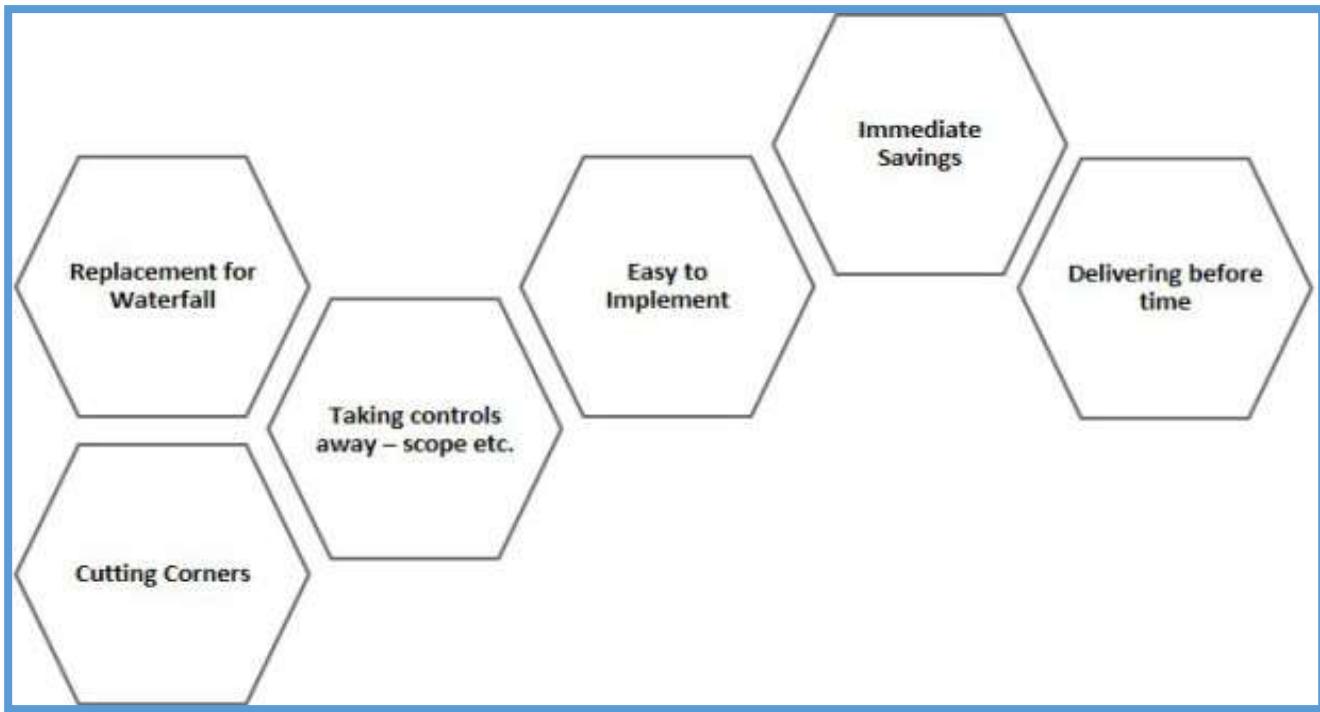
### What are the Key Agile Mindset?



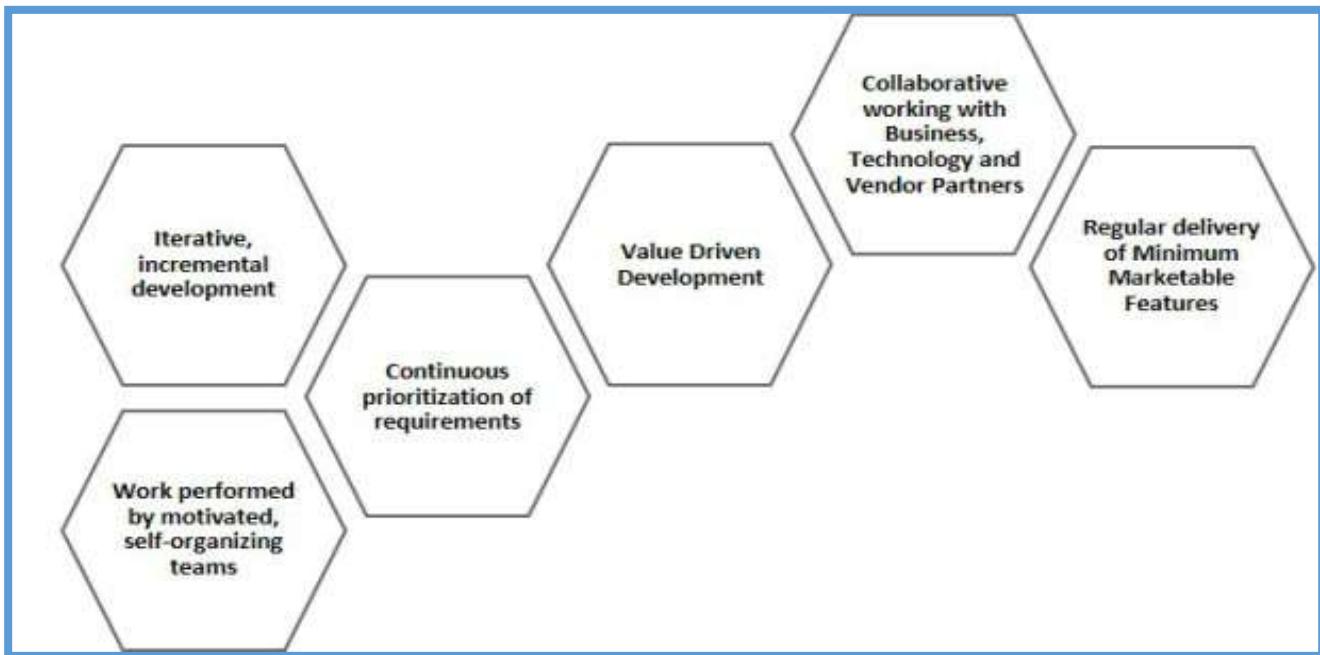


## What do you think Agile is about? What do you think Agile is Not about?

### “Agile is about”



### “Agile is Not about”



## **What is the need or demand for agility?**

The demand of agility depends on the following factors: -

- Value-driven delivery
- Faster time to market
- Better transparency
- Responsiveness to change
- Self-managing teams
- Sustainable pace of development
- Reduced process waste
- Better aligned with customer needs

## **What are the Key Agile Practices?**

The key agile practices are: -

- Evidence based development – Empiricism
- Limit work in progress
  - Defer commitment
  - Match demand with capability
  - Progressive Elaboration
  - Adaptive Planning
  - Emergent Design
- Visualize your work
- Faster Feedback Cycle
- Collaboration
- Release early and often | Release on Demand
- Continuous Improvement

## **Compare Doing Agile Vs Being Agile?**

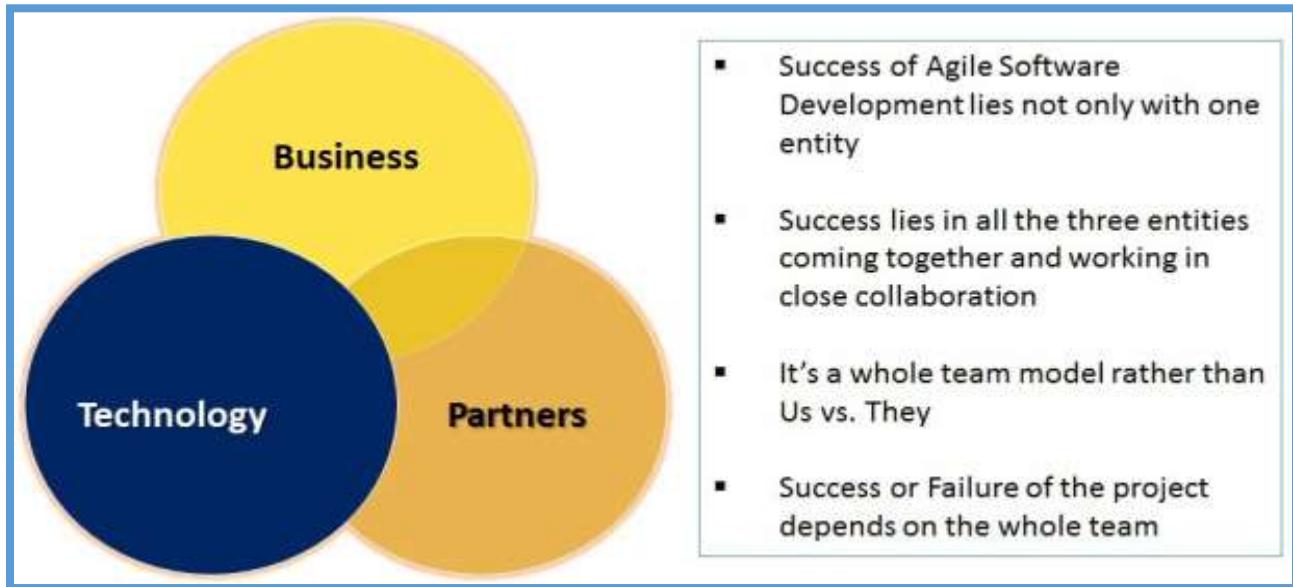
**Being Agile:** Internalizing the mindset, values and principles then applying the right practices and tailoring them to different situations as they arise

**Doing Agile:** Executing the practices as clearly as possible to “as prescribed” description, and trying to “Inspect and Adapt” to remove the impediments to achieving the prescribed execution

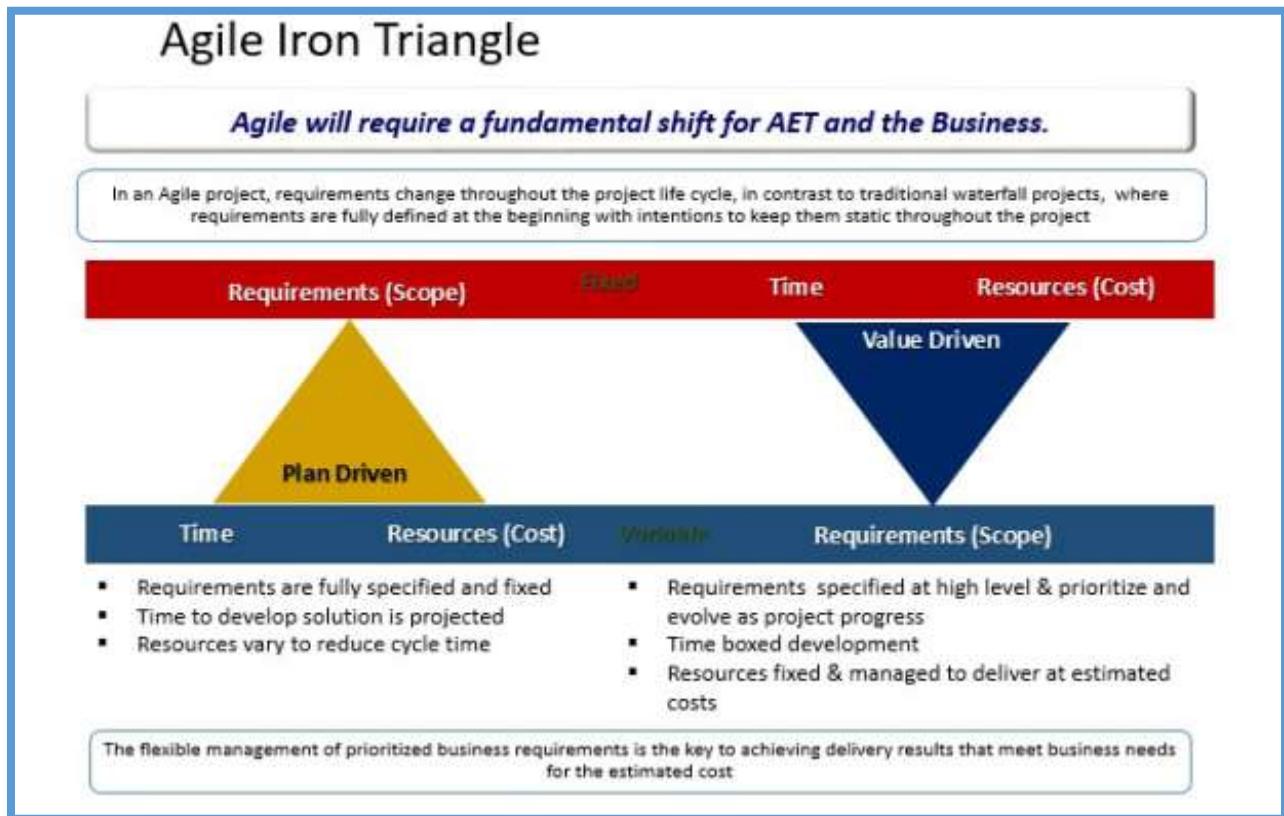
**Don’t “DO” Agile. Be an Agile! - Alan Kelly**

**Stop “Doing Agile”. Start “Being an Agile” – Jim Highsmith**

## Explain Agile Software Entity?



## Explain Agile Iron Triangle?

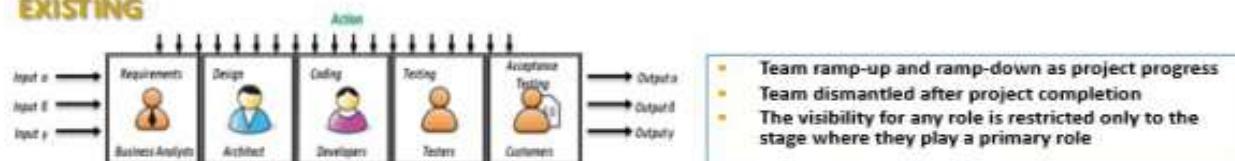


## How team differs from Existing Project Culture to Agile Team Culture?

### Standing Team – From Project Culture to Team Culture

Become a function with focus on addressing a broader array of erratic project demand challenges and support long-term growth objectives. (i.e., a complete customer-centric feature, across all components and disciplines).

#### EXISTING



#### TRANSITION TO

#### LONG LIVED STANDING TEAM

- Continuously working on backlog of work items and not on any projects
- Self Organizing, Cross functional team members
- High visibility on project progress to all team members
- Collaborative ways of working
- Frequent Delivery



What it means:- Bring projects to Agile team rather than bringing teams to the project.

## What are the Agile Development Process?

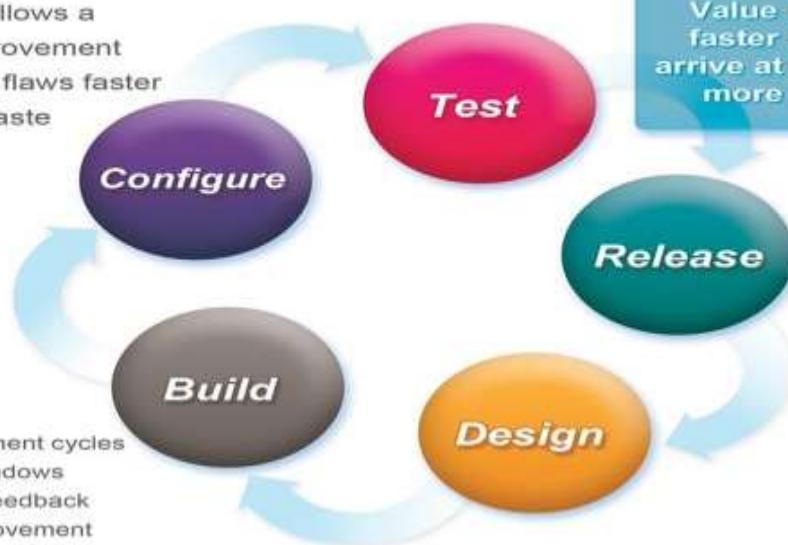
### Agile Development Process

Development follows a continuous improvement cycle, exposing flaws faster and reducing waste

#### Advantage:

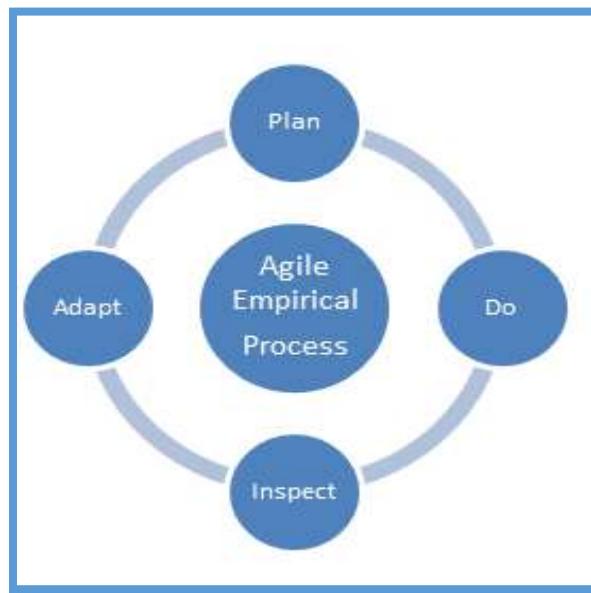
- Shorter development cycles
- Wider market windows
- Early customer feedback
- Continuous improvement

Value is achieved faster as releases arrive at the customer more frequently

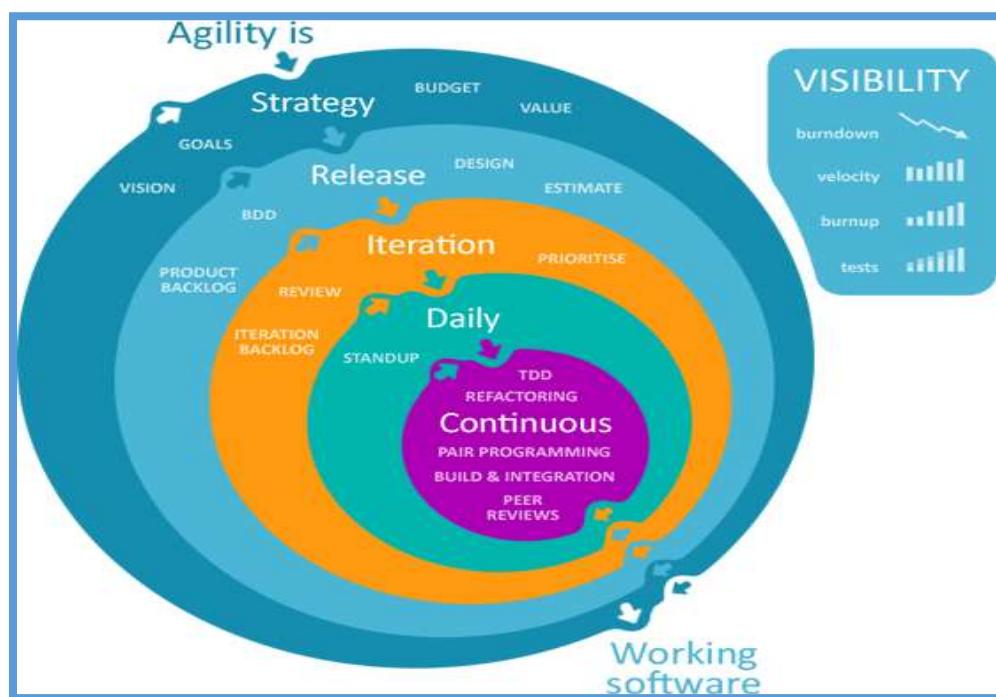


## How would you say agile methodology is empirical in nature?

- All artifacts, status is transparent to all stakeholders in a consistent way
- All roles are empowered to do the job right
- All meetings allow collaboration and opportunities for inspection and adaptation
- In Agile, the process is constantly adjusted if needed based on the short and continuous customer feedback loops
- Failure detected early and hence early adoption of corrective measures
- Course correction at frequent intervals



## How agile planning is done?



## Who are all in the key agile roles?

The Key Agile roles are Product Owner | Scrum Master | Scrum or Development Team.

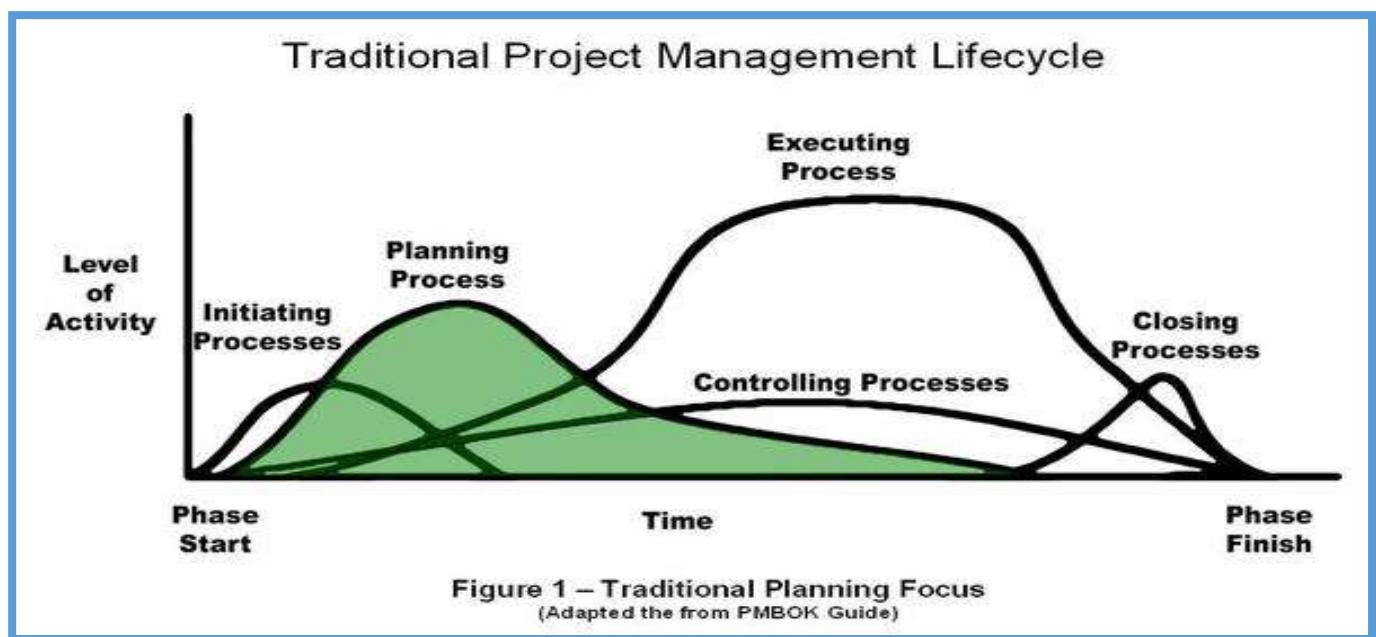
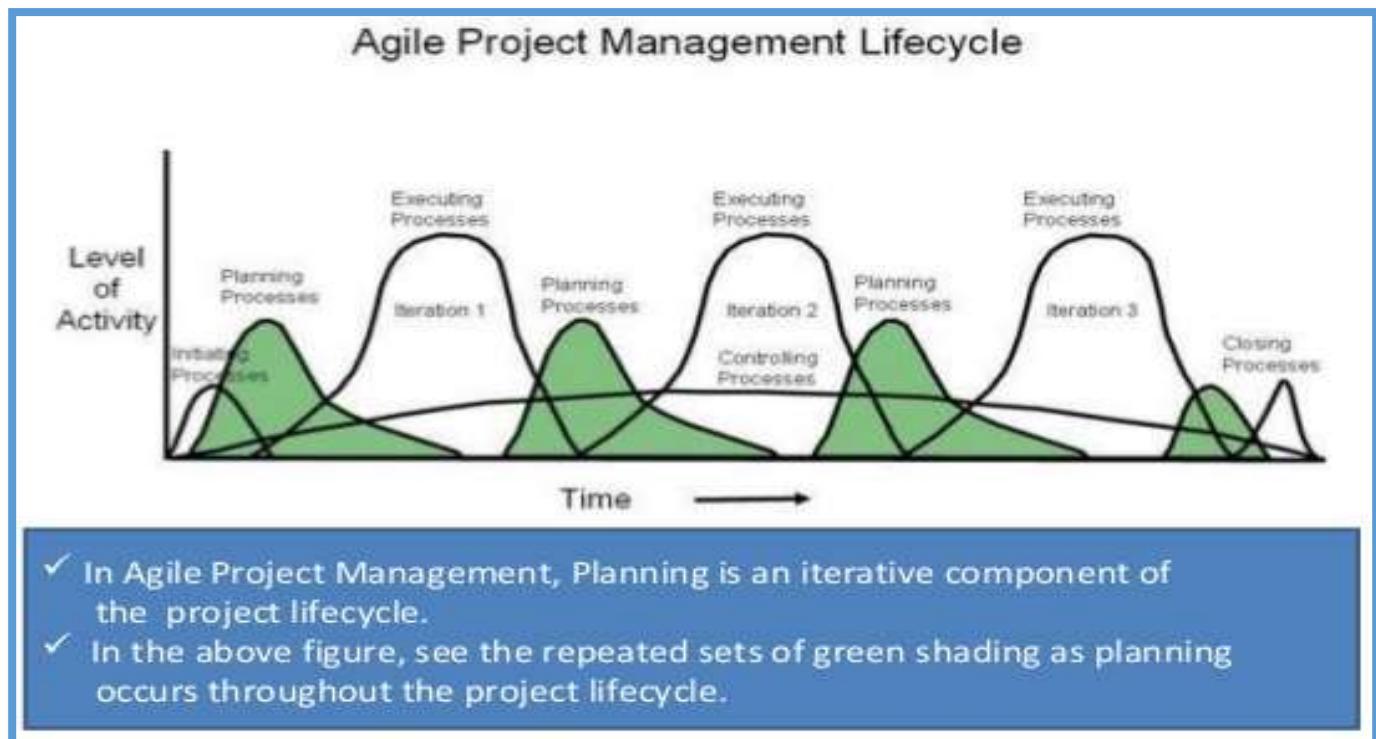
Agile roles	
<b>Product Owner</b>	<ul style="list-style-type: none"><li>■ Is (or is the representative of) the Customer</li><li>■ Develops and maintains the <i>Product Backlog</i></li><li>■ Prioritizes the Product Backlog</li><li>■ Empowered to make decisions for all customers and users</li><li>■ Presents and explains Product Backlog to team</li></ul>
<b>Scrum Team</b>	<ul style="list-style-type: none"><li>■ Performs the work directed by the Customer</li><li>■ Self-organizing</li><li>■ Seven plus or minus two performers</li><li>■ Business and technical skills to build an <u>increment</u> of functionality</li><li>■ Responsible for estimating and committing to work</li><li>■ Full autonomy and authority during a Sprint</li></ul>
<b>ScrumMaster</b>	<ul style="list-style-type: none"><li>■ Guides the Agile Execution</li><li>■ Responsible for the process</li><li>■ Responsible for maximizing team productivity</li><li>■ Sets up and conducts meetings</li><li>■ Representative to management and team</li><li>■ Characteristics of a border collie or sheepdog</li></ul>

## What is Agile Project Management?

- Created by Jim Highsmith at Cutter in 2003
- Focus on strategic plans and capability analysis
- Most holistic agile project management framework

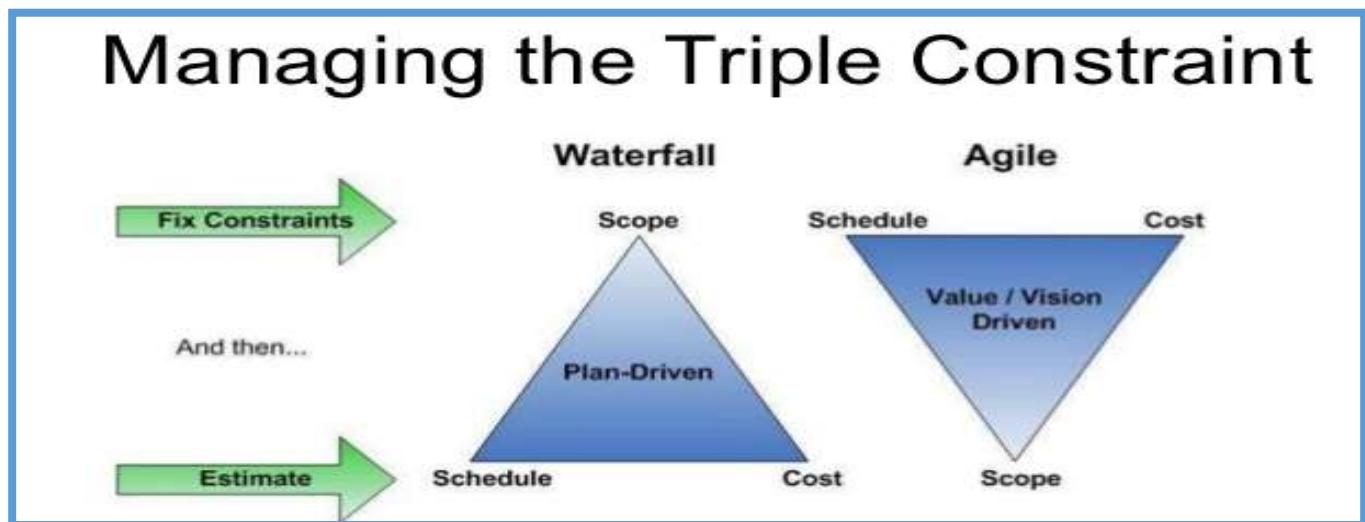


## Compare Agile Project Management Life Cycle with Traditional?

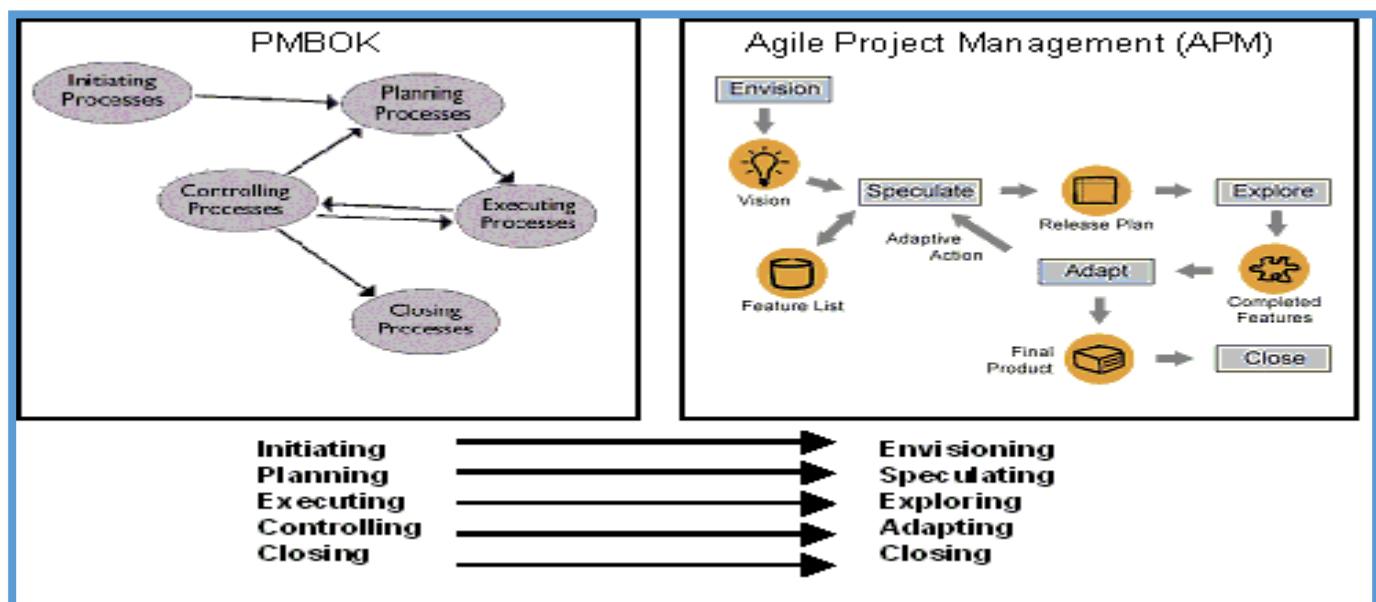


## What are Triple Constraints? How it differs from traditional to agile approach?

- In Agile, Schedule and Cost are fixed based on approved product backlog from requirements and conceptual design phase, where as In Waterfall it is quite opposite
- In Agile, Scope is delivered in small iterations, allowing most important work to be delivered first, where as in waterfall the entire scope is delivered finally
- In Agile, When the budget and or time run out, the project is either funded for additional work or the project is completed
- In Agile, Change request is issued when there is a change to Schedule and or Cost, where as in waterfall when there is a scope change, change requests are issued with additional funding



## Compare Agile Project Management Vs PMBOK?



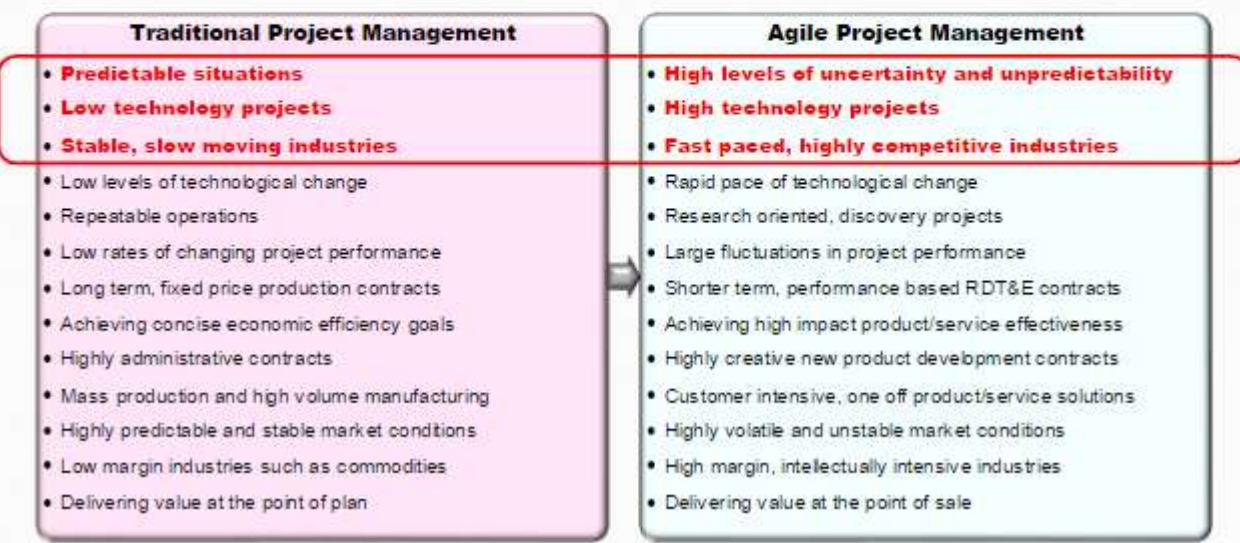
How will you map the Agile Values, Principles to Traditional Values? What are values of APM?

- People-centric way to create innovative solutions
- Market-centric model to maximize business value
- Alternative to large document-based methodologies



When will you choose Agile Project Management?

- On exploratory or research/development projects
- When fast customer responsiveness is paramount
- In organizations that are highly innovative & creative

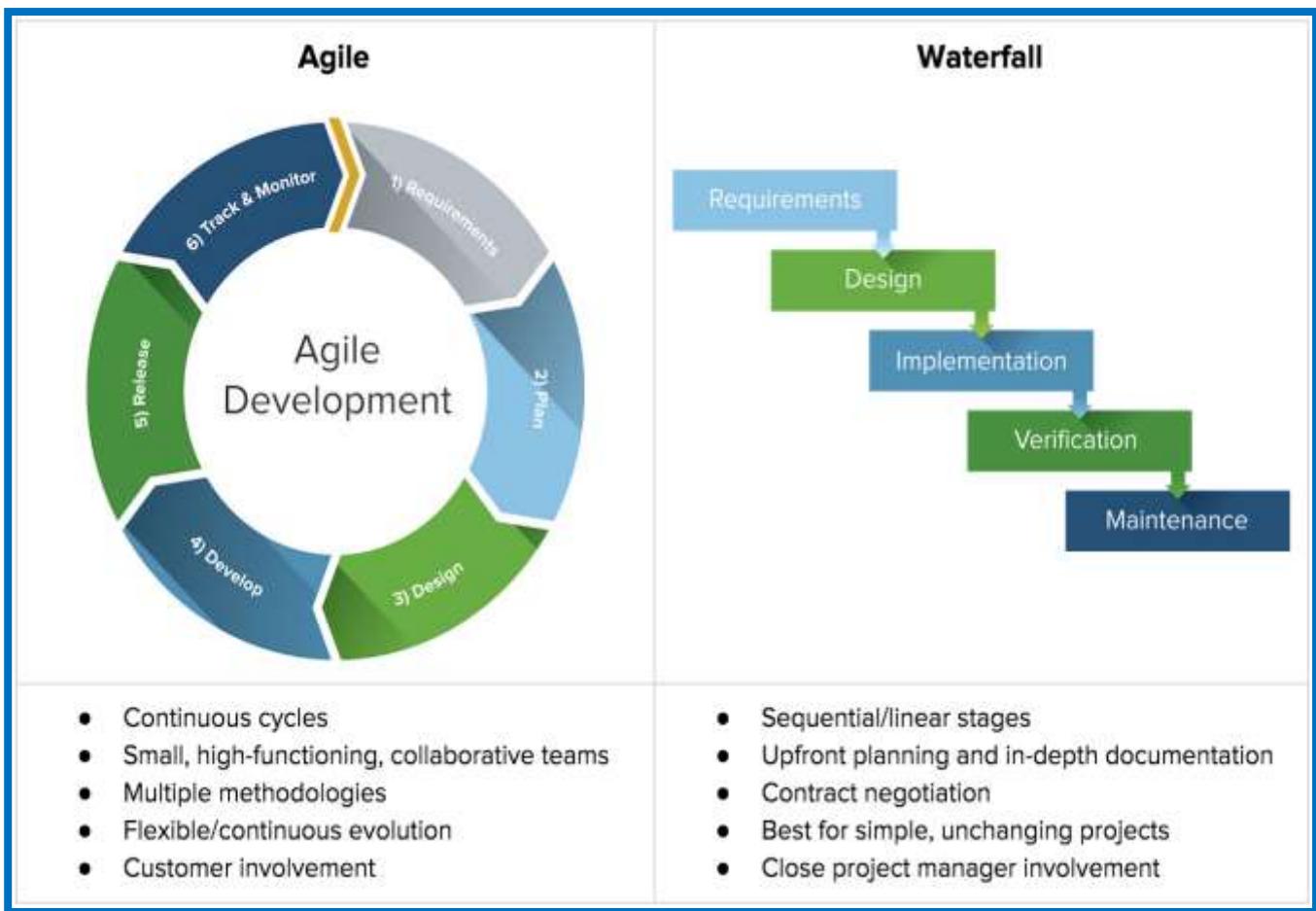




## Compare Agile Vs Waterfall?



The ultimate choice is Agile.



### In Short

- Waterfall is planning based model, start everything do little bit on it
- Agile is evidence based approach, value driven, start little bit on it



Compare Agile project management with Traditional project management?

APM vs. TPM	
Agile Project Management	Traditional Project Management
Focus on <b>customer satisfaction</b> and interaction	Focus on <b>plans and artifacts</b>
Response to change via <b>adaptive action</b>	Change controlled via <b>corrective action</b>
Progressive elaboration, <b>rolling-wave planning</b>	Monumental <b>up-front planning</b>
Customer prioritized, <b>time-boxed delivery</b>	Manager negotiated, <b>scope-based delivery</b>
Commitment management via <b>feature breakdown structure</b>	Activity management via <b>work breakdown structure</b>
Collaboration on self-disciplined and <b>self-organizing teams</b>	Top-down <b>control</b>
Minimal set of context-sensitive, <b>generative practices</b>	<b>Prescriptive, heavyweight methods</b>
Essential, <b>value-focused metrics</b>	<b>Non-value added controls</b>

How traditional project management process is mapped with agile process?

**Integration Management:** low detail, integrated change control

**Scope Management:** scope planning at beginning of each iteration, scope verification during, adjusting for changes

**Time Management:** high level estimates at release level, detailed estimates at iteration level

**Cost Management:** cost fixed, cost control at the end of each iteration

**Quality Management:** begins at beginning, critical

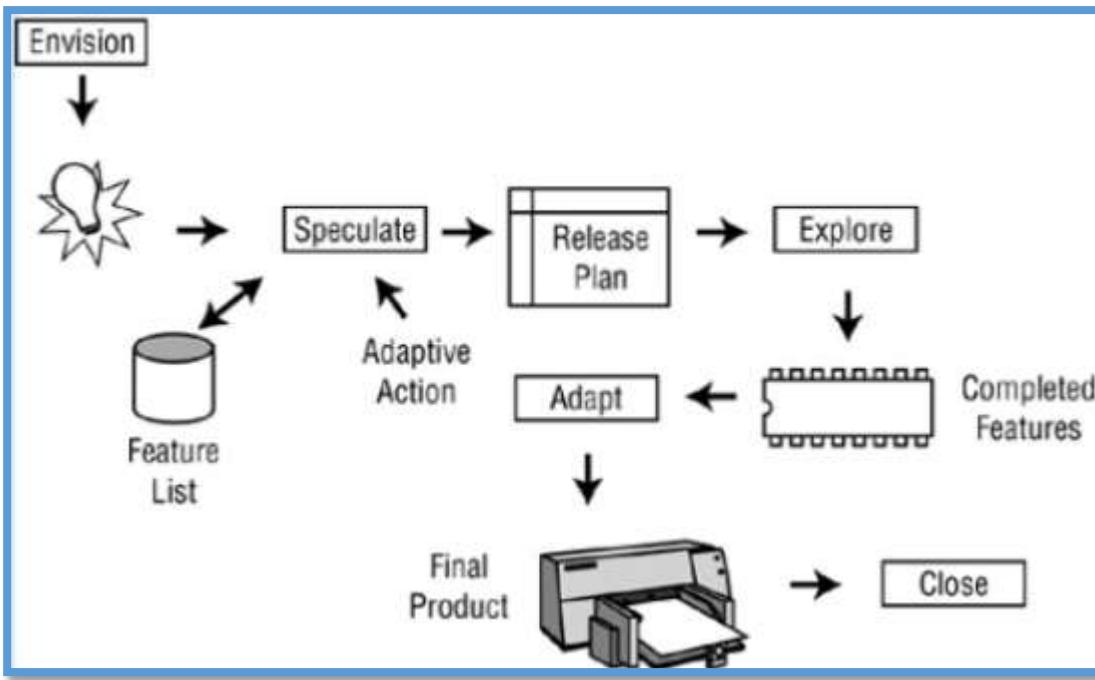
**Human Resource Management:** onus on management to run interference, breed motivation among team, co-location, reward group success

**Communications Management:** constant contact, metrics in place

**Risk Management:** focus on qualitative risk, at iteration planning and review

**Procurement Management:** purchases at beginning of project, consider contract alternatives, involve team in contracting

## Agile Project Management Framework



**Envision** – Determine the product vision and project scope, the project community, and how the team will work together

**Speculate** – Develop a feature based release, milestone, and iteration plan to deliver on the vision

**Explore** – Deliver tested features in a short time frame, constantly seeking to reduce the risk and uncertainty of the project

**Adapt** – Review the delivered results, the current situation, and the team's performance, and adapt as necessary

**Close** – Conclude the project, pass along key learning's and celebrate

### Envision Phase

#### What is Vision?

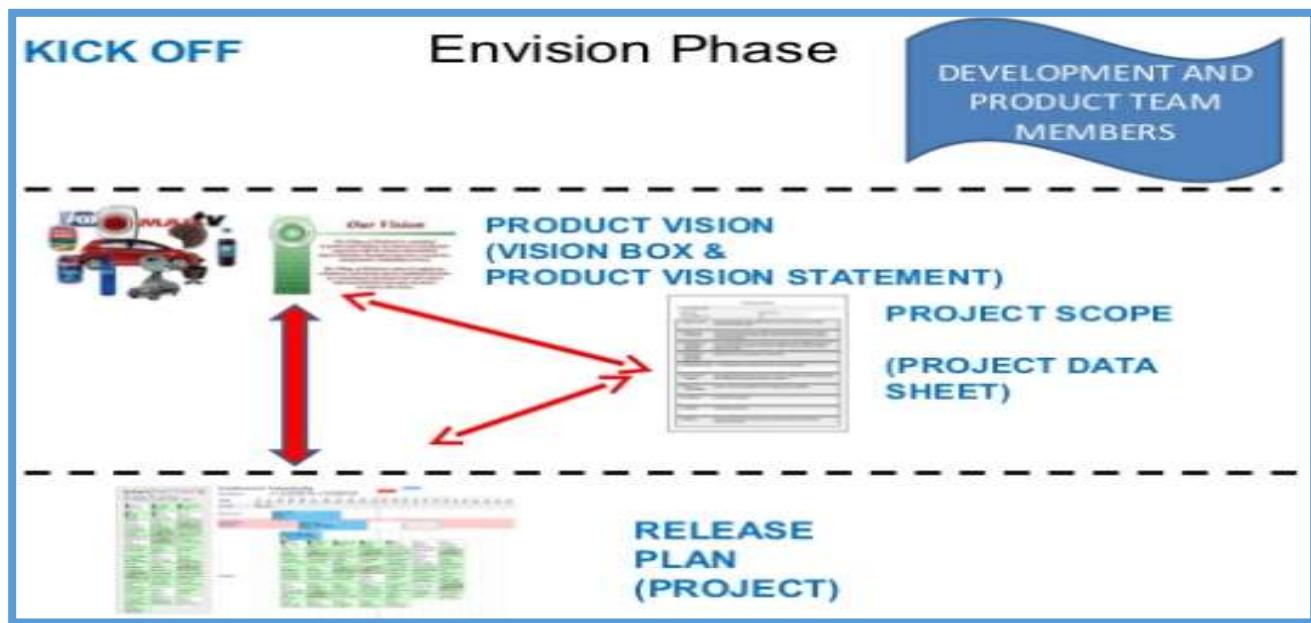
Two Aspects of Vision are: Clarity & Elevation goal – that makes a difference and conveys a sense of urgency to the project.

#### What is Envision Phase?

The Envision phase defines the beginning of a project for which the kickoff event might be the approval of a feasibility study. Envisioning should involve the development and product team members in this process, normally using a series of collaborative meetings.

Envision phase clearly identifies what is to be done and how the work is to be accomplished: -

- What is the Customer's product vision?
- What are the key capabilities required in the product?
- What are the project's business objectives?
- What are the project quality objectives?
- What are the project constraints (Scope, Schedule, and Cost)?
- Who are the right participants to include in the project community?
- How will the team deliver the product (approach)?



## Product Vision

A product vision (defined by a product vision box and elevator test statement) galvanizes members of the product team into focusing their often disparate views of the product into a concise, visual, and short textual form

### PRODUCT VISION BOX

- Product Name
- Graphic
- Product selling points (Front)
- Detailed Feature Description (Back)
- Operating Requirements (Back)

- The (product name) is a (product category)
- For
- Who
- Benefits
- Success
- Unlike (primary competitive alternative)
- Our product (statement of primary differentiation)

## What is Project Scope?

Project scope explains how a project will deliver on the product vision.

## Project Scope : Project Data Sheet

Project Data Sheet							
Project Name: CRM Development		Project Manager: Barbara Stevens					
Project Start Date: 2/1/00		Project Manager: Roger Jones					
Client:		Executive Sponsor: Barbara Powers					
Marketing:		Client Benefits:					
Customer:		Better customer service					
Sales:		Product improvements					
Marketing:		More efficient order processing					
		Better customer account management					
Project Objective Statement:							
The objective is to build a web-based CRM application that includes sales tracking, order management, tasks management, and marketing. The system needs to be operational by 6/30/00 and cost less than \$2.5 million.							
Performance Metrics:							
Call Center volume of 3,000 calls per day							
Workflows with access							
A 10-day training required							
No security, 1 device							
Resource Details:							
Scope:	Fixed	Phase-in	Accept	Target			
Schedule:	x			12 weeks FTF			
Resources:	x		x	~1.5 M			
Quality:	x			Windows NT, SQL Server, ASP			
Project Delivery Cost per Month: \$60,000							
Dependency Factor: 8							
Business Subsystem Activity:							
Sales Management							
Customer Relationship							
Marketing							
Technical Management							
Business							
Cost Generation							
Established by:							
Administrative Personnel:							
Call Center Service:							
User Management:							
2 See the System Requirements document for details, including the individual features.							
Risk Project Workload:							
System Support Call Center: 80 hours/week							
IT Support: 170 hours/week							
Data Management: 230 hours/week							
Code Management: 230 hours/week							

- ❖ Single-page summary of key business and quality objectives, product capabilities, and project management information.
- ❖ Simple document with a powerful impact whose condensed format constantly reminds of the strategic aspects of the project.

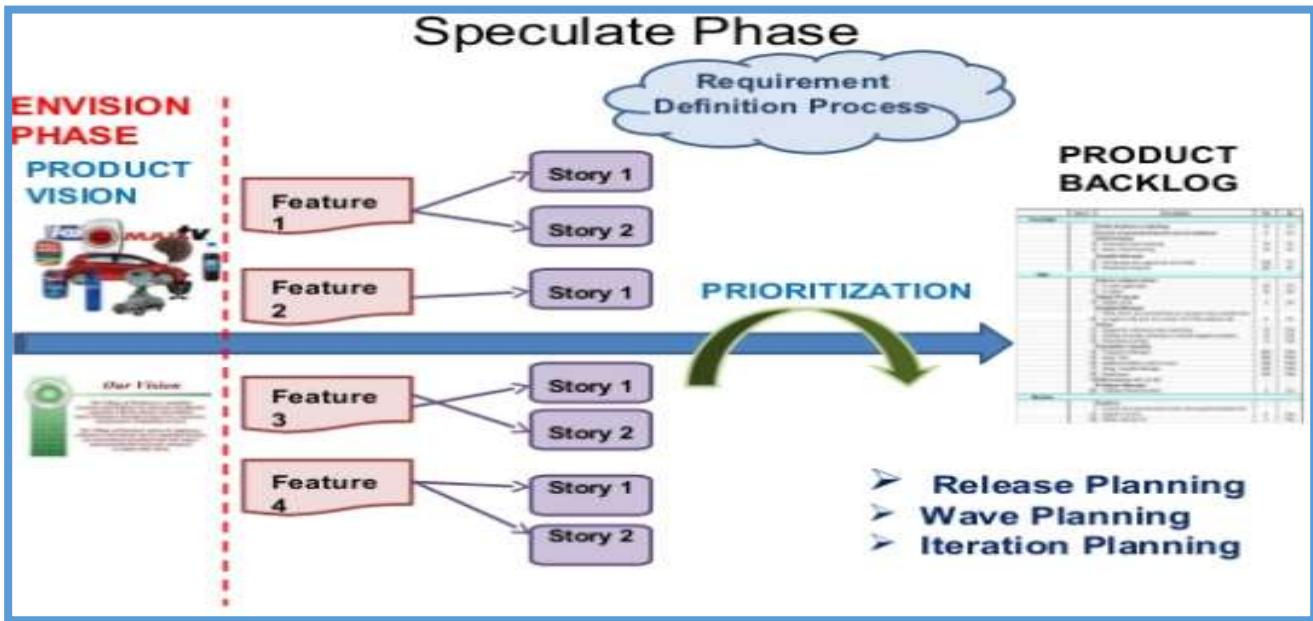
## Project Data Sheet

- List of Key Clients / customers
- Name of the Project Leader
- Name of the Product Manager (Product Owner)
- Executive Sponsor
- Project Objective Statement (POS)
- Business Objectives
- Tradeoff Matrix
- Exploration factor
- Daily Cost
- Capabilities
- Quality Objectives
- Performance / Quality attributes
- Architectural Guidelines
- Issues / Risks

## Speculate Phase

### What is Speculate Phase?

The Speculate phase spotlights product and project creating and understanding the product structure, the backlog of capabilities and stories, and the release plan.

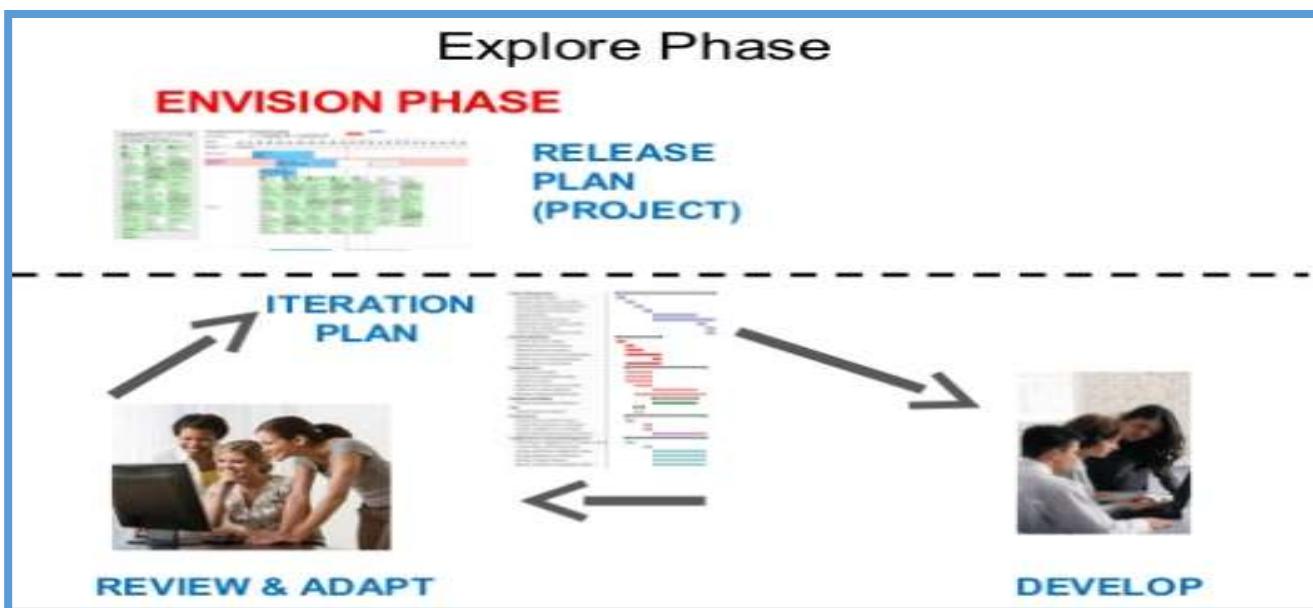


## Explore Phase

### What is Explore Phase?

The Explore phase delivers running, tested, accepted stories.

The transition from the Envision phase to the Explore phase show that the release planning done in the Envisioning cycle connects to iteration planning in the Explore cycle.



## **Adapt Phase**

### **What is Adapt Phase?**

In Adapt phase review the delivered results, the current situation, and the team's performance, and adapt as necessary

## **Close Phase**

### **What is Close Phase?**

In Close phase, conclude the project, pass along key learning's, and celebrate

## **PMI-ACP Exam Prep Topics**

- PMI-ACP Agile Project Management Overview
- Domain – I Agile Framework
- Domain – II Value Driven Delivery
- Domain – III Stakeholder Engagement
- Domain – IV Boosting Team Performance Practices
- Domain – V Adaptive Planning
- Domain – VI Problem Detection and Resolution
- Domain – VII Continuous Improvement

# PMI-ACP Examination Domains, Tools & Techniques, Knowledge & Skills

## Content Outline

### Value Driven Delivery

Domain	Tools & Techniques	Knowledge & Skills
Value Driven Delivery	ROI, NPV, IRR Agile Earned Value Management (EVM) Product Roadmap Value Stream Mapping WIP Limits Relative Prioritization Risk adjusted backlog Cumulative flow diagrams Task  Kanban boards Chartering Customer valued prioritization Risk burndown graphs	Prototypes, Simulations, demonstrations Incremental delivery Prioritization Project and Quality standards Agile Contracting Agile Accounting System Thinking Variations in Agile Methods Value based analysis

## Stakeholder Engagement

Domain	Tools & Techniques	Knowledge & Skills
Stakeholder Management	<ul style="list-style-type: none"> <li>Wireframes</li> <li>Servant leadership</li> <li>User Stories   Backlog</li> <li>Conflict Resolution</li> <li>Agile Modeling</li> <li>Velocity</li> <li>Information radiators</li> <li>Distributed teams</li> <li>Personas</li> <li>Burn down   up charts</li> <li>Story Maps</li> <li>Negotiation</li> </ul>	<ul style="list-style-type: none"> <li>Incorporating stakeholder values</li> <li>Communication management</li> <li>Leadership tools and techniques</li> <li>Stakeholder management</li> <li>Active listening</li> <li>Facilitation methods</li> <li>Globalization, culture and team diversity</li> <li>Vendor management</li> <li>Participatory decision models</li> </ul>

## Team Performance

Domain	Tools & Techniques	Knowledge & Skills
Team Performance	<ul style="list-style-type: none"> <li>Daily Standups</li> <li>Co-located teams</li> <li>Team Space</li> <li>Agile Tooling</li> <li>Adaptive Leadership</li> <li>Emotional Intelligence</li> </ul>	<ul style="list-style-type: none"> <li>Brainstorming Techniques</li> <li>Building Empowered Teams</li> <li>Coaching &amp; Mentoring</li> <li>Building High Performance Teams</li> <li>Team Motivation</li> <li>Colocation &amp; Geographically dispersed teams</li> </ul>

## Adaptive Planning

Domain	Tools & Techniques	Knowledge & Skills
Adaptive Planning	<b>Process Tailoring</b> <b>Iteration and release planning</b> <b>Wideband Delphi and planning Poker</b> <b>Progressive elaboration</b> <b>Timeboxing</b> <b>Minimally Marketable Feature (MMF)</b> <b>Ideal Time</b> <b>Affinity Estimating</b> <b>Relative Sizing   Story Points</b>	<b>Time, budget, and cost estimation</b> <b>Value-based decomposition and prioritization</b> <b>Agile charters</b> <b>Business Case development</b> <b>Innovation Games</b>

## Problem Detecting & Resolution

Domain	Tools & Techniques	Knowledge & Skills
Problem Detection & Resolution	<b>Cycle Time</b> <b>Escaped defects</b> <b>Continuous Integration</b> <b>Risk based spike</b> <b>Frequent verification and validation</b> <b>Test-driven development   Test First Development</b> <b>Acceptance Test Driven Development</b>	<b>Problem Solving</b> <b>Control Limits</b> <b>Failure Modes &amp; Alternatives</b> <b>Variance and trend analysis</b>

## Continuous Improvement

Domain	Tools & Techniques	Knowledge & Skills
Continuous Improvement	Retrospective	<b>Knowledge Sharing</b> <b>Process Analysis</b> <b>Applying new agile practices</b> <b>PMI's code of Ethics &amp; Professional Conduct</b> <b>Continuous Improvement</b> <b>Self-Assessment</b>

## Lesson 2 AGILE FRAMEWORK

### Topics to Discuss

- Creating an Agile Mindset
- Explore Agile Methodologies
  - Scrum
  - XP
  - Lean Kanban
  - DSDM
  - Crystal
  - FDD
  - ASD
  - AUP
  - DDD
  - TDD

### Creating an Agile Mindset

### Agile Manifesto , Principles

### What are Agile Principles and Mindset Tasks?

- Advocate for agile principles and values in the organization
- Ensure common understanding of agile principles
- Educate and influence agile
- Transparency equates to trust
- Safe environment for experimenting
- Experiment with new techniques and processes
- Share knowledge new collaboration
- Emergent leadership
- Practice servant leadership

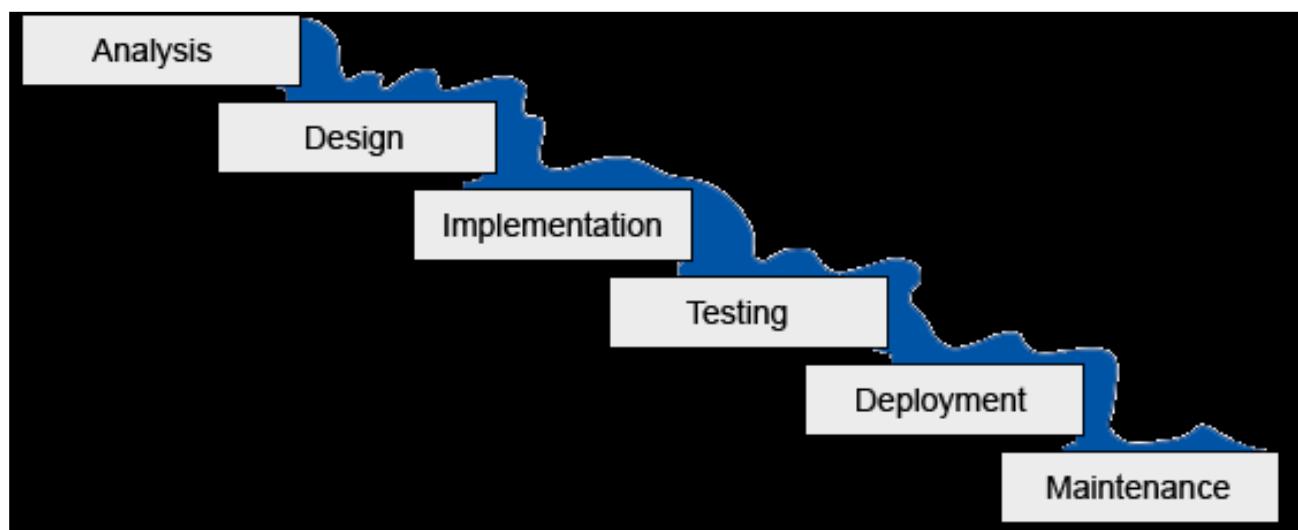
## Why Agile?

- Reduce turnaround time for features
- Predictability of Market Releases > Content Timing
- Ability to handle complex product enhancements
- Project priorities change
- Need to respond to customer requirements and market dynamics
- Promote team work and less reliance on individual heroics
- Course corrections and continuous improvements

## Why Agile Methods?

### Why do we need another approach for managing projects?

- Different types of projects use different approaches
- Value of customizing our approach to different situations often in small ways. We don't resolve every issue the exact same way, instead, we adjust our approach to be effective for the unique situation. The same concept applies to how we manage our project.
- Some projects, especially knowledge worker projects occurring in fast moving or time-constrained environments, call for an agile approach
- Predictive project plan up front - Industrial
- Knowledge work has many unknowns



## Contrast Industrial Vs Knowledge Project?

Industrial	Knowledge
<ul style="list-style-type: none"><li>○ <b>Visible</b></li><li>○ <b>Stable</b></li><li>○ <b>Running things</b></li><li>○ <b>Structure</b></li><li>○ <b>Correct answers</b></li><li>○ <b>Task driven</b></li><li>○ <b>Command and control</b></li><li>○ <b>Standards</b></li><li>○ <b>Performance measurement</b></li><li>○ <b>Cost of workers for a task</b></li></ul>	<ul style="list-style-type: none"><li>○ <b>Invisible</b></li><li>○ <b>Lots of changes</b></li><li>○ <b>Changing environment</b></li><li>○ <b>Less structure</b></li><li>○ <b>Lots of questions</b></li><li>○ <b>Value-driven</b></li><li>○ <b>Autonomy driven</b></li><li>○ <b>Innovation</b></li><li>○ <b>Learning and teaching</b></li><li>○ <b>Workers are an asset not a cost</b></li></ul>

## How would you say Knowledge work projects are different?

- Industrial work requires up-front planning
- Knowledge work expects change
- Knowledge work is invisible work
- Agile is best suited for software development projects

## Defined Vs Empirical Process?

- Industrial work relies on defined processes
- Knowledge work relies on empirical processes
- A Defined process defines all steps in advance, same output is expected every time the process is followed, best suits for “Simple” and “Complicated” problem domains
- An Empirical process are interactive, incremental, change often, adapt, and pass through the reviews, Empirical processes are change-driven

## Why Agile methodology is empirical in nature?

- Course correction at frequent intervals
- Regular customer feedback
- Failure detected early and hence early adoption of corrective measures
- Status is visible to all stakeholders in a consistent way

## What is Agile Manifesto? What are Agile 4 Values?

Meeting at Snowbird resort by 17 software pundits and light weight methodologists, February 2001.  
Created “Agile Manifesto”

We are uncovering better ways of developing software by doing it and helping others do it. Through this work we have come to value. i.e., Agile Values

- **Individuals and interactions** over processes and tools
- **Working software** over comprehensive documentation
- **Customer collaboration** over contract negotiation
- **Responding to change** over following a plan

That is, while there is value in the items on the right, we value the items on the left more.

**Author:** - Kent Beck, Mike Beedle, Arie Van Bennekum, Alistair Cockburn, Ward Cunningham, Martin Fowler, James Greening, Jim Highsmith, Andrew Hunt, Ron Jerris, Jon Kern, Brian Marick, Robert C. Martin, Steve Mellor, Ken Schwaber, Jeff Sutherland, Dave Thomas

## Agile Manifesto: Explanation

### Individuals and Integrations Over Process & Tools

- Individuals and interactions are most important
- Processes and tools will be needed on projects
- **Projects are completed by people not processes and tools**
- Agile projects are people driven

### Working Software over Comprehensive Documentation

- Agile project need to deliver value
- Value is about the purpose or business need the project aims to deliver
- Documentation is barely sufficient
- Documentation is done just in time –as the last responsible moment
- Documentation might also be just because
  - Industry requirements
  - Organizational requirements

## Customer Collaboration over Contract Negotiation

- Agile is flexible, accommodating, and willing to change
- Contracts are often rigid and uncooperative
- Agile contracts must accommodate change
- There's a difference between being right and doing the right thing

## Responding to Change over a following plan

- Agile welcomes change
- Predictive projects plan everything in advance
- Agile projects have lots and lots of many changes
- Agile projects have uncertainty up front

## What are Agile Principles? What are 12 principles behind Agile Manifesto?

No	Principle	Shortened Version
1	Our highest priority is to satisfy the customers through early and continuous delivery of valuable software	Customer Satisfaction
2	Welcome changing requirements, even late in development. Agile processes harness change for the customer's competitive advantage.	Welcome Changes
3	Deliver working software frequently, from a couple of weeks to a couple of months, with a preference to the shorter timescale.	Deliver Frequently
4	Business people and developers must work together daily throughout the project.	Work with business
5	Build projects around motivated individuals. Give them the environment and support they need, and trust them to get the job done	Motivated People
6	The most efficient and effective method of conveying information to and within a development team is face-to-face conversation.	Face to Face Communication
7	Working software is the primary measure of progress.	Measure Software Done

8	Agile processes promote sustainable development. The sponsors, developers, and users should be able to maintain a constant pace indefinitely.	Maintain Sustainable Pace
9	Continuous attention to technical excellence and good design enhances agility.	Maintain Design
10	Simplicity –the art of maximizing the amount of work not done is essential	Keep it Simple
11	The best architectures, requirements, and designs emerge from self-organizing teams.	Team creates Architecture
12	At regular intervals, the team reflects on how to become more effective, then tunes and adjusts its behavior accordingly.	Reflect and Adjust

### What is Declaration of Interdependence?

- We increase return on investment by making continuous flow of value our focus
- We deliver reliable results by engaging customers infrequent interactions and shared ownership
- We expect uncertainty and manage for it to iterations anticipations and adaptation
- We unleash creativity and innovation by recognizing that individuals are the ultimate source of value and creating an environment where they can make a difference
- We boost performance through group accountability for results and shared responsibility for team effectiveness
- We improve effectiveness and reliability through situationally specific strategies processes and practices

### What are the Agile Leadership Practices?

- Honesty
- Forward looking
- Competent
- Inspiring

# Agile Methodologies

## Agile Methodologies: Scrum, XP, Lean Kanban, DSDM, FDD, Crystal

### What are the Agile Methodologies?

Methodologies	Information
Scrum	<b>Most popular agile methods</b> <b>Strongly codified set of ceremonies, roles and artifacts</b>
XP	<b>Foremost of agile methodologies</b> <b>Strong set of technical practices</b>
Lean Kanban	<b>Lean - Set of principles evolved from manufacturing to eliminate waste</b> <b>Kanban literally means a “signboard” or “billboard” and it espouses the use of visual aids to assist and track production.</b> <b>Lean Kanban integrates the use of the visualization methods as prescribed by Kanban along with the principles of Lean creating a visual incremental evolutionary process management system.</b>
DSDM	<b>Offshoot of Rapid Application Development Methodology</b> <b>Cost   Quality/time fixed and requirements prioritized as per MOSCOW</b>
Crystal	<b>Principles are categorized according to criticality and size of the project.</b> <b>Critical Levels: Comfort ( C )  Discretionary Money   Essential Money ( E )   Life ( L )</b>
Feature Driven Development	<b>Plan   Develop and build by feature</b>

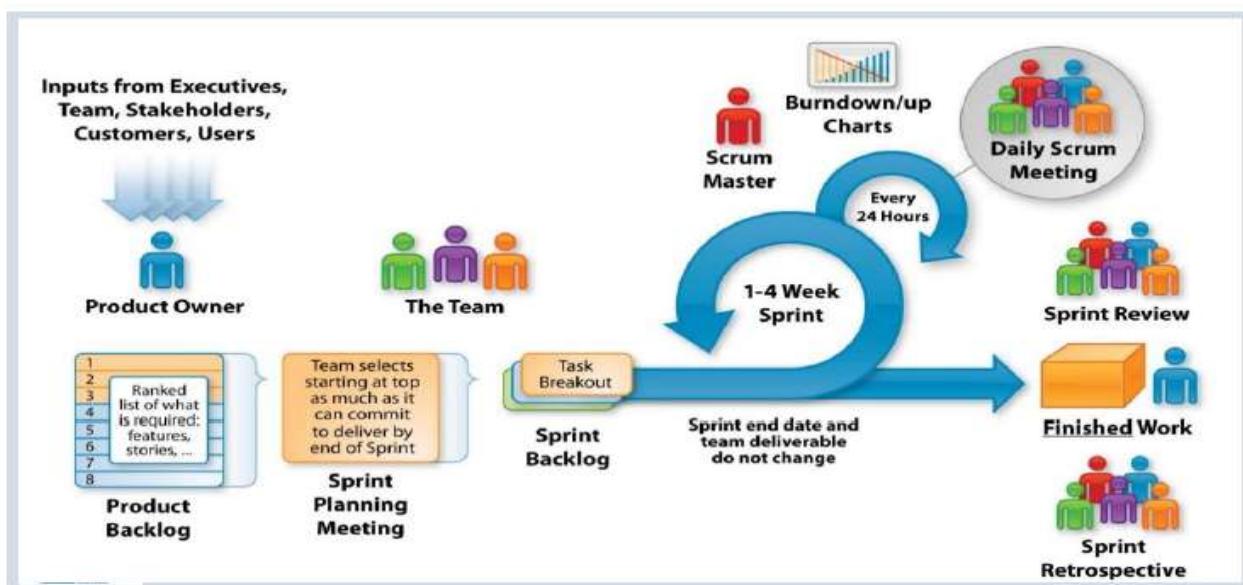
Adaptive Software Development (ASD)	ASD are constant adaptation of processes to the work at hand, provision of solutions to problems surfacing in large projects, and iterative, incremental development with continuous prototyping.
Agile Unified Process (AUP)	AUP combines industry-tried-and-tested Agile techniques such as Test-Driven Development (TDD), Agile Modelling, agile change management, and database refactoring, to deliver a working product of the best quality
Domain-Driven Design (DDD)	Domain-driven design is an Agile development approach meant for handling complex designs with implementation linked to an evolving model.
Test Driven Development	Test Driven Development is a software development method that involves writing automated test code first and developing the least amount of code necessary to pass that test later.

## Scrum

### Scrum Intro

#### What is Scrum?

- The scrum framework is a set of practices, roles and responsibilities, events, artifacts, and rules
- Scrum is easy to understand, but can be difficult to master
- Scrum is a rugby term
- Scrum uses a methodology called the scrum framework



## Tell me Scrum in 100 words?

- Scrum is an agile process that allows us to focus on delivering the highest business value in the shortest time.
- It allows us to rapidly and repeatedly inspect actual working software in every two weeks.
- The business set the priorities. Team self-organize to determine the best way to deliver the highest priority features.
- Every two weeks to a month anyone can see the real working software and decide to release it as is or continue to enhance it for another sprint.

## What is Scrum theory?

Scrum is founded on empirical process control theory, or empiricism. Empiricism asserts that knowledge comes from experience and making decisions based on what is known. Scrum employs an iterative, incremental approach to optimize predictability and control risk. Three pillars uphold every implementation of empirical process control: transparency, inspection, and adaptation.

## What are the Characteristics of Scrum?

- The most popular ‘Agile Processes’ in Agile software development
- A project management/execution process framework
- Well suited for projects that require Empirical process control
- Focuses on self-organizing teams
- Requirements are captured in a prioritized list (Product Backlog)
- Product progresses in a series of month-long “sprints”
- No specific engineering practices prescribed
- Uses generative rules to create an agile environment for delivering projects

## What is Defined & Empirical Process?

### Defined Process

A Defined process defines all steps in advance, same output is expected every time the process is followed, best suits for “Simple” and “Complicated” problem domains.

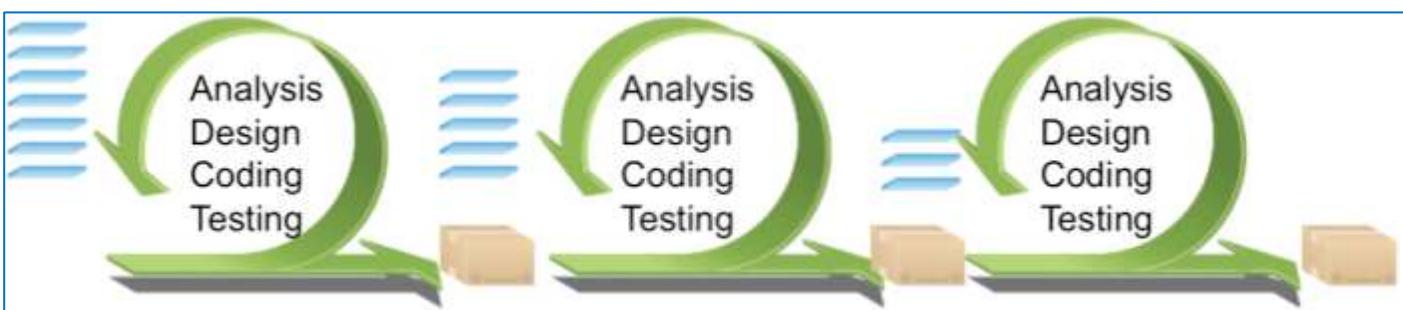
- Follows pre-defined steps to achieve an Output.
- Suitable when the output is well defined.
- Same output is expected every time the process is followed.
- Best suits for problems those fall into “Simple” and “Complicated” problem domains.



## Empirical Process

An Empirical process are interactive, incremental, change often, adapt, and pass through the reviews, Empirical processes are change-driven

As software products and requirements cannot be 100% confirmed, fixed at the beginning, the best way to build the winning product is to continuously inspect, and adapt at regular intervals, effectively and efficiently. Empirical Process is based on such inspect and adapt cycle.



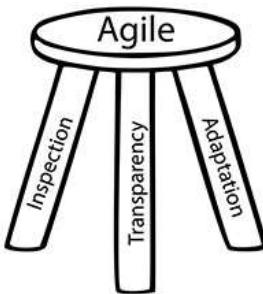
An Empirical Process is: -

- Built based on the series of experiments
- Experience based decision making
- Suitable when the output can't be well defined
- Definition of output is refined based on the result of experiments
- Steps in the process are adjusted based on the feedback from the experiments
- Deming Wheel – Plan – DO Inspect -Adapt

In order to build the winning products and deliver value SCRUM has various feedback loops so that product and process are inspected, adapted and transparent.

**Three legs | pillars of SCRUM – Inspection, Adaptation & Transparency:** -

- **Inspection** – Frequent Inspection of artefacts helps stakeholders to make any changes to achieve the goal
- **Adaptation** – Continuous improvement by adjusting the process based on the inspection
- **Transparency** – All artefacts of the process are visible to all the stakeholders. This helps stakeholders to inspect the current stake and take any required action



### How would you say Scrum is based on empiricism?

Scrum is based in **empiricism** because: -

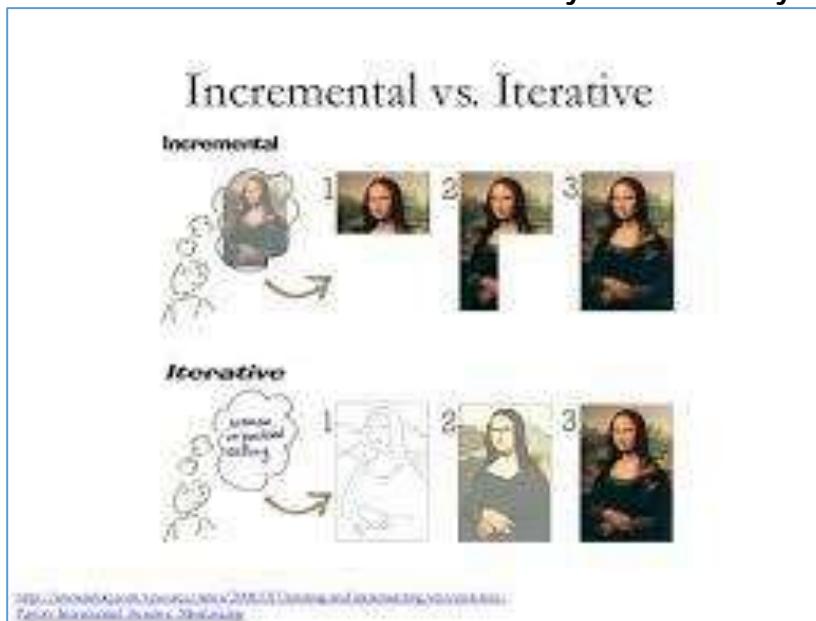
- All Artifacts should be transparent to all stakeholders
- All Scrum roles are empowered to do the job right
- All Scrum meetings allow collaboration and opportunities for inspection ad adaptation
- In Scrum, the process is constantly adjusted if needed based on the short and continuous feedback loops at iteration levels.

### Why Agile methodology is empirical in nature?

- Course correction at frequent intervals
- Regular customer feedback
- Failure detected early and hence early adoption of corrective measures
- Status is visible to all stakeholders in a consistent way

### How would you say Scrum is incremental and iterative?

**Scrum team delivers value incrementally and Iteratively**



## **Incremental Development**

Incremental development is to build small increment of a full fledges product. Each increment adds more software value – like Adding package to a Software Product. After lot of increments, you have got a big Software Product.

### **Benefits**

- Reduce risk during development
- Early discovery and mitigation of risks
- Accommodates changes early
- Manageable Complexity
- Higher confidence and satisfaction from early repeated successful delivery
- Early and continuously visibility of product increment
- Better predictability and progress
- Higher quality and lower defects
- Final product close to customer's desire
- Early and regular process improvement
- Continuous collaboration ad engagement with customers
- Effective and efficient
- Usable product at any time
- Sustainable pace of development

## **Iterative Development**

Iterative development is to build something, to get some feedback, then refine it to make better, keep doing that until the product is good enough.

### **Benefits**

- Focus on high value and good Return on Investment (ROI)
- Reduce rarely used features, maximize frequently used features
- Usable product at any time
- Quality Focus
- Effective and efficient
- Usable product at any time
- Sustainable pace of development

## Coin a Scrum Word from the Scrum values?

OPENNESS	COURAGE
RESPECT	
FOCUS	
COMMITMENT	

## What are the Scrum values?

All work performed in SCRUM needs a set of values as the foundation for the team's processes and interactions. And by embracing these five values, the team makes them more instrumental to its health and success.



### Focus

Because we focus on only a few things at a time, we work well together and produce excellent work. We deliver valuable items sooner.

### Courage

Because we work as a team, we feel supported and have more resources at our disposal. This gives us the courage to undertake greater challenges.

### Openness

As we work together, we express how we're doing, what's in our way, and our concerns so they can be addressed.

### Commitment

Because we have great control over our own destiny, we are more committed to success.

## Respect

As we work together, sharing successes and failures, we come to respect each other and to help each other become worthy of respect.

As an organization applies Scrum it discovers its benefits. At the same time, it sees how these values inherently contribute to the success of Scrum and understands why they are both needed, and bolstered, by Scrum.

## Tell me Scrum Framework in short?

Already we have seen the Agile has 4 Values & 12 Principles

SCRUM is a simple process framework. SCRUM has

- 3 Legs : Inspect, Adapt, Transparent
- 3 Roles : Product Owner | Scrum Master | Development Team
- 3 Artifacts : Product Backlog | Sprint Backlog | Product Increment
- 4 Meetings : Sprint Planning | Daily SCRUM | Sprint Review | Sprint Retrospective
- 1 Activity : Product Backlog Refinement
- 5 Values : Focus | Courage | Openness | Commitment | Respect



**Product Backlog** - Ordered list of items to be worked on for the product

**Sprint Backlog** - Product backlog items selected to work in the Sprint and the work plan to complete those items

**Product Increment** - Completed product backlog items in a sprint, which are ready to be delivered to the customer

**Product Backlog Refinement** - A meeting to get the product backlog items ready for the next few sprints

**Sprint Planning** - A meeting to create the sprint goal and plan the work for the sprint

**Daily Scrum** - A daily 15-minute time boxed event for the Development Team to synchronize activities and create a plan for the next 24 hours

**Sprint Review** - A meeting to inspect the product increment and adapt the product backlog if needed

**Sprint Retrospective** - A meeting for the scrum team to inspect and adapt the process, people and tools

## What are the Principles of Scrum?

Scrum principles are the core guidelines for applying the Scrum framework and should mandatory be used in all Scrum projects. The six Scrum principles are: -

- **Empirical Process Control**
- **Self-organization**
- **Collaboration**
- **Value-based Prioritization**
- **Time-boxing**
- **Iterative Development**

## The Scrum Team

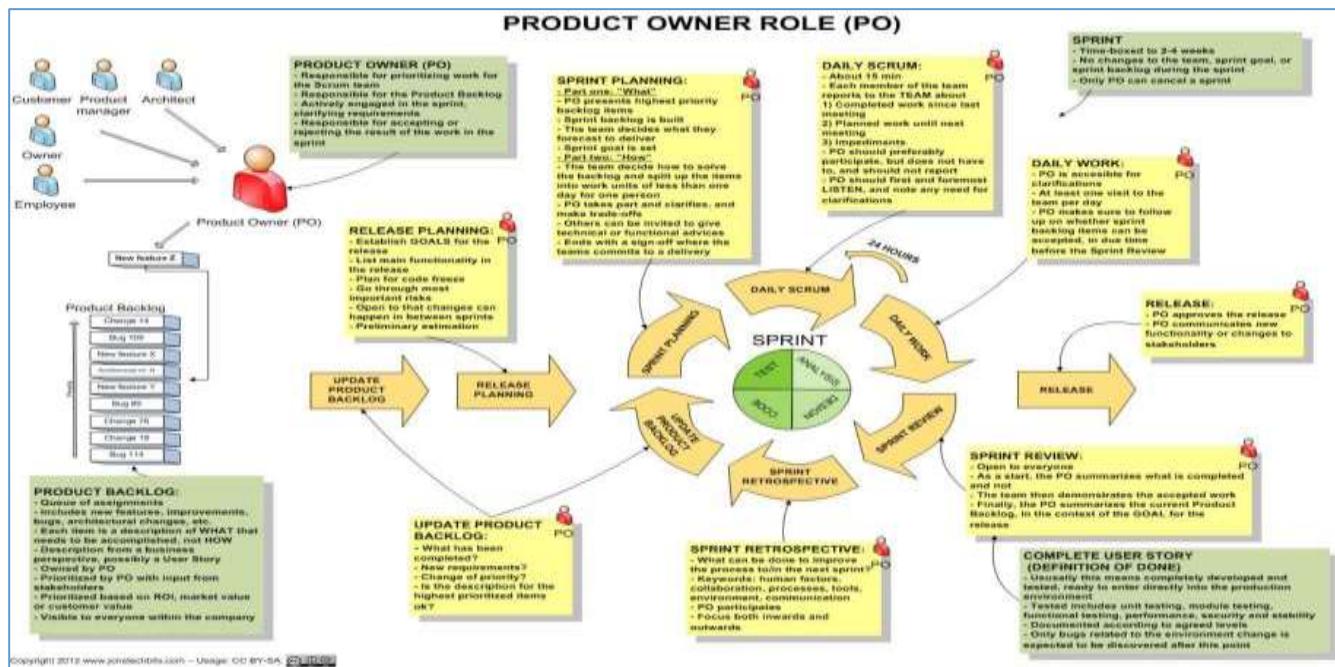
### Who are the Scrum Team members? What are their responsibilities?

- **Scrum Master** –Responsible for communicating the scrum methodology and ensuring the methodology is used effectively
- **Product owner** –Prioritizes the product backlog to ensure value from each sprint
- **Development team** –The software developers who create the product through the sprint

Item	Development Team	Product Owner	Scrum Master
Estimates	✓ DT		
Backlog Priorities		✓ PO	
Agile Coaching			✓ SM
Velocity Predictions	✓ DT		
Definition of Done   Sprint Planning	✓ DT	✓ PO	✓ SM
Process Adherence			✓ SM
Technical Decision	✓ DT		

## What are the responsibilities of Product Owner?

- Defines the feature of the product
- Decide on **release date and content**
- Be responsible for the profitability of the product (ROI)
- **Prioritize features according to the market value**
- Adjust features and priority every iteration, as needed
- Accept or reject work results
- Maintains and grooms the Product Backlog
- An effective product owner is Committed, Responsible, Authorized, Collaborative, and Knowledgeable (CRACK)



## What are the responsibilities of Scrum Master?

- Represents management to the project
- Responsible for enacting Scrum rules, values and practices and censure team members and stakeholders not adhering to these rules ad norms
- **Removes impediments**
- Ensure that the team is fully functional and productive
- Enable close co-operation across all roles and functions
- Shield the team from external interferences
- Practices “**Servant Leadership**” – Facilitator and enabler rather than a Manager



### What are the responsibilities of Development Team?

- Typically, 4 – 9 people. Ideally 7+- 2 (Note: Scrum Master & Product Owner Excluded)
- Cross functional** – Programmers, testers, user experience designers, etc.,
- Members should be full-time – May be exceptions for DBA's
- Teams are **self-organizing** (No titles)
- Membership should change only between sprints

## The Development Team

Responsible for delivering a potentially shippable increment of working software.

- Self-organized
- Cross functional
- Developer as title
- Defines practices
- 4 to 9 persons

## Scrum Events

### What are the Scrum Events or Ceremonies?

Prescribed events are used in Scrum to create regularity and to minimize the need for meetings not defined in Scrum. All events are time-boxed events, such that every event has a maximum duration. Once a Sprint begins, its duration is fixed and cannot be shortened or lengthened. The remaining events may end whenever the purpose of the event is achieved, ensuring an appropriate amount of time is spent without allowing waste in the process.

Other than the Sprint itself, which is a container for all other events, each event in Scrum is a formal opportunity to inspect and adapt something. These events are specifically designed to enable critical transparency and inspection. Failure to include any of these events results in reduced transparency and is a lost opportunity to inspect and adapt. Scrum activities are also known as events or ceremonies

There are four scrum events or ceremonies:

- Sprint planning
- Daily scrum
- Sprint reviews
- Sprint retrospective

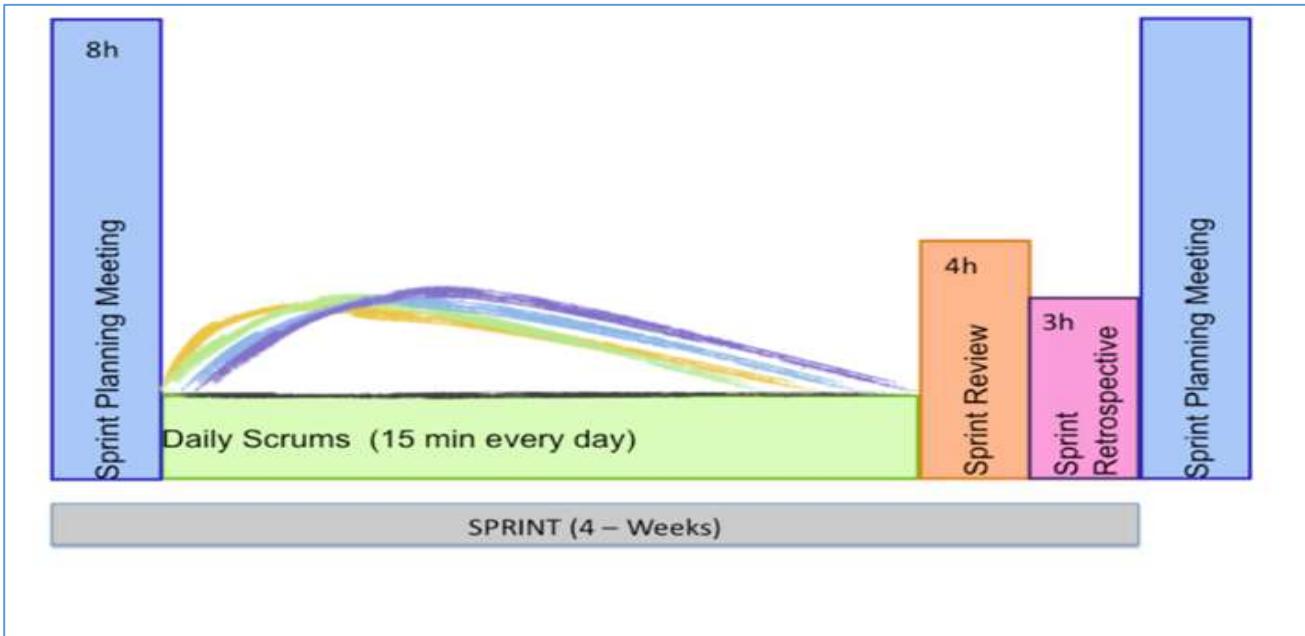
### What is Sprint?

- Scrum projects make progress in a series of “Sprints”
- Timebox iteration for project work. A timebox is a predetermined duration
- Scrum sprints are between two to four weeks in duration. A constant duration leads to better rhythm
- During a sprint no changes are made that would affect the goal of the sprint
- A sprint can be cancelled if they change in the project goals make the sprint goals obsolete. Only the product owner may cancel a sprint
- If a sprint is cancelled, uncompleted backlog items are returned to the product backlog
- The development team members are kept the same throughout the sprint , team members has to update the sprint backlog and attend the daily scrum meeting
- Within a sprint there are several activities:
  - Sprint planning meeting
  - Development
  - Daily scrums
  - Sprint review meeting
  - Sprint retrospective meeting

## Is it Scrum Events are Timeboxed?

Yes. All the Scrum events are time-boxed.

- Time box is the maximum time allowed for an event
- Time box makes teams focus on most important things first
- All Scrum events are time boxed. Sprints are time boxed at 1-6 weeks
- Timeboxing for scrum ceremonies:
  - Sprint (Ideally 2 Weeks, Max: 4 Weeks)
  - Sprint planning meetings (Max: 8 Hours)
  - Daily scrum (Max: 15 Mins)
  - Sprint reviews (Max: 4 Hours)
  - Sprint retrospective (Max: 3 Hours)



## How Sprint Planning will be executed?

- Product Owner and Project team needs to discuss the goals of the upcoming sprint
- Product Owner and team negotiates stories to select in current sprint from prioritized product backlog for the upcoming sprint
  - Selected stories are estimated with agreed acceptance criteria
  - Team identifies and estimates Task, discusses how the work will be accomplished
- Scrum Master, Product Owner and team can attend the meeting
- Product Backlog has to be groomed by PO prior to sprint planning meeting, Product owner reviews with the team items in the updated backlog

- Self-organized Development team defines how the work will be done in the goals of the sprint will be achieved
- Normally split into 2 sets of 4 hours each Timebox: Max 8 hours per sprint
  - First half for choosing the product backlog items with PO
  - Second half for splitting into tasks and assignment (Product Owner is optional for the second half)
- Artifacts – Sprint Goal, Sprint Backlog (Output of Sprint Planning)



**Input:** Refined Product Backlog | Latest Product Increment | Team Capacity

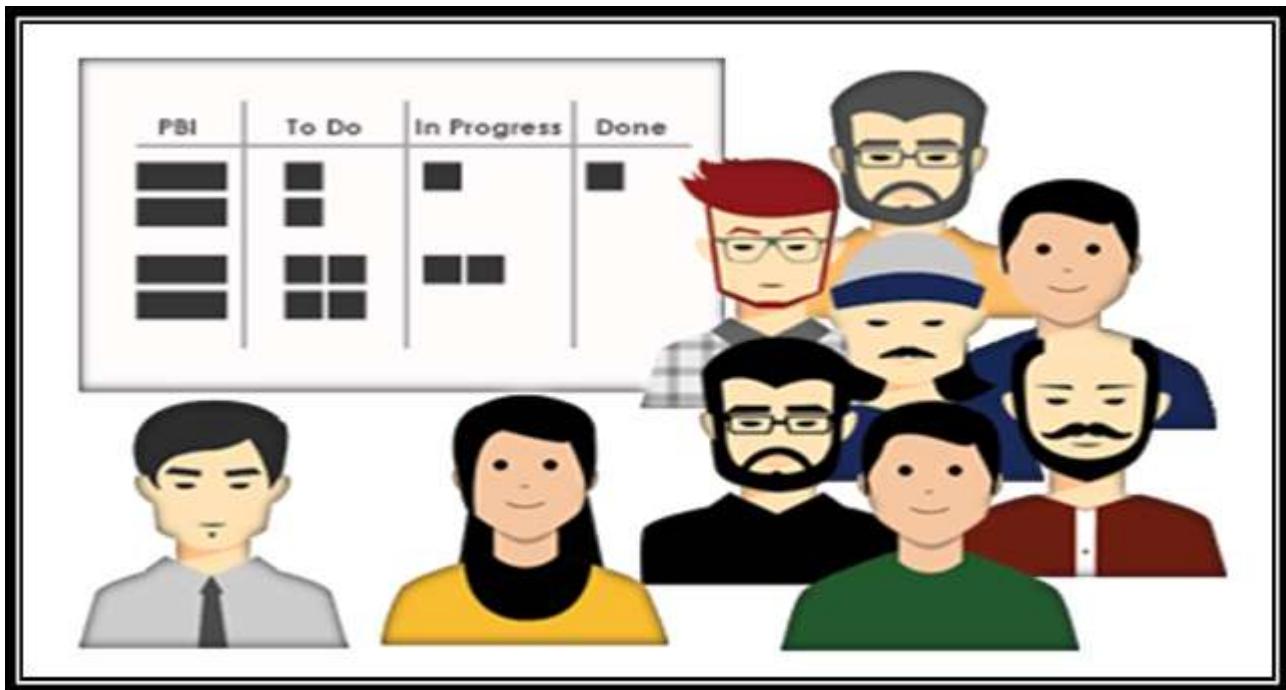
**Outcome:** Sprint Goal | Sprint Backlog

### How Daily Scrum will be executed?

- The daily scrum is also known as a **stand-up meeting**, typically first activity of the day
- This is a **15-minute timeboxed** meeting
- The daily scrum is held every day at the same time and location
- The whole world is invited
- The daily scrum is for the development team only, facilitated by Scrum Master, Product Owner optional
- This is **not problem-solving meeting**. Pigs can talk, Chickens observe
- Scrum Master to intervene to bring in discipline after due attempts at self-correction

### Daily Scrum Meeting Questions for the team members

- What have I done since the last daily scrum?
- What do I plan to do today?
- Are there any impediments to my progress?



**Input: Sprint Backlog | Outcome: Updated Sprint Backlog**

### How the Sprint Review will be executed?

- Team presents what it accomplished during the sprint, typically takes the form of a demo of new features or underlying architecture. Done from QA server (Close to Prod)
- Hosted at the end of every sprint Timebox: Max 4 hours per sprint
- Attendees will be the development team, the product owner, scrum master, and sometimes other project stakeholders
- The development team will demo the work created in the increment
- The group will decide if “Done” has been achieved
- Stakeholders can provide comments which go in to the product backlog
- The development team and the product owner will discuss the sprint and the remaining items in the product backlog further proceed with

# Sprint Review



**Input: Product Increment | Outcome: Product Backlog (Revised)**

**How the Sprint Retrospective will be executed?**

- The development team meeting posted after the sprint review, but before the next sprint planning meeting
- Periodically take a look at what is and is not working
- This is a meeting to inspect and adapt Timebox: Max 4 hours per sprint
- Lessons learned and opportunities for improvement
- Review of the product owner's feedback about the last iteration
- An opportunity to improve on their approach based on the retrospective and the last sprint



**Input: Feedback | Experience of team members | Outcome: List of improvements**

## Scrum Artifacts

### What is Scrum Artifacts?

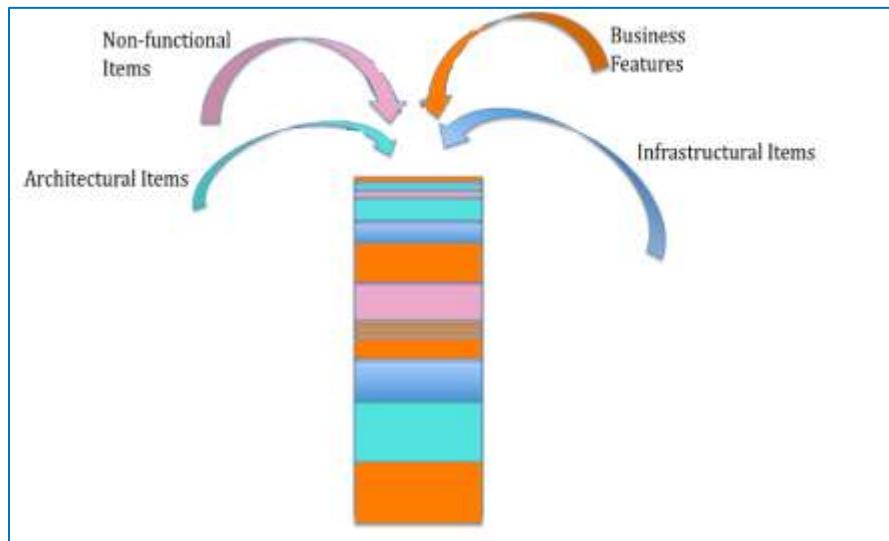
Scrum's artifacts represent work or value to provide transparency and opportunities for inspection and adaptation. Artifacts defined by Scrum are specifically designed to maximize transparency of key information so that everybody has the same understanding of the artifact.

### List out Scrum Artifacts

- Product Backlog
- Sprint Backlog

### What is Product Backlog?

- List of things that needs to be done to make the product come into existence
- The product backlog is the source for all product requirements
- The product owner sorts and prioritizes the backlog items
- The development team always works on the most important items based on the prioritized items in the product backlog
- The backlog is always prioritized before the current sprint
- Backlog refinement is done by both the product owner and the development team working in harmony
- The team estimates their capacity to attack the items in the product backlog



Each product backlog item would have:

- **Description** – Details of the item
- **Value** – What business value this item would provide
- **Estimate** – Effort estimate to build this item
- **Order** – The order in which the items should be worked in

Product Backlog contains all items required to accomplish the product vision.

### How would we say the Product Backlog is DEEP?

A Product Backlog is best described as **DEEP**

**Detailed Appropriately:** Higher order items are more detailed and well understood compared to lower order items

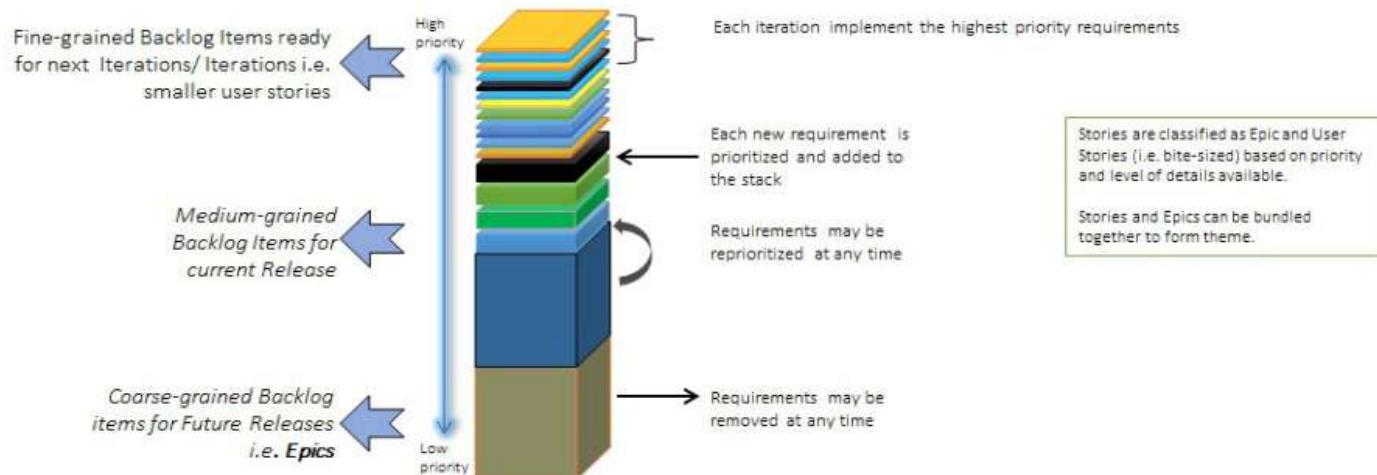
**Estimated:** Product backlog items are estimated in relative size by the development team. Product owner orders the items based on the value and the cost

**Emergent:** Product Backlog is a living artifact. It is always updated for details, estimates and order. The life of the product backlog is same as life of the product itself

**Prioritized:** Product backlog items are ordered based on the priority. The order is force ranking (1,2,3) so that there are no competing priorities

A Product backlog is simply a prioritized list of all work items, classified as

<b>Stories</b>	Prioritized list of project requirements with estimates (in Story Points) to turn them into completed product functionality
<b>Technical debts</b>	Other items like engineering improvement goals, exploratory or research work and possible known defects with appropriate estimate.
<b>Risks</b>	Risks that are of anti-value, or factors that have a potential to erode, remove, or reduce value if they occur.



## How do we determine the priority?

Customer value prioritization is concerned with working on the items that yield the highest value to the customer as soon as possible.

MoSCoW is a technique used to prioritize stories into four distinct categories:

- **M – MUST** have this  
Requirements that are fundamental to the system; without which system will not work and have no value and have to be included in the current delivery time box
- **S – SHOULD** have this  
Requirements that is important for project success; Important as **MUST** have but not as time-critical or have a work around's. In other words, not necessary for delivery in the current delivery time box
- **C – COULD** have this  
Requirements not necessary; can include if it increases customer satisfaction for little development cost
- **W – WON'T** have this time, but **WOULD** like in the future  
Alternatively **WANT** – No to this release

## What is Product Increment?

- Every sprint produces a product increment, **the sum of product backlog items delivered in each sprint is called as Potentially Shippable Product Increment**. A product increment is the “goal line” for each sprint and, at the end of the sprint, it must:
  - Be of **high enough quality** to be given to users
  - Meet the scrum team’s current **definition of done**
  - Be **acceptable to the product owner** with properly tested, completed in full shape and ready to use
- The product increment is the outcome of an iteration
- The product increment is a chunk of the project work
- The development team and the product owner must be an agreement of what done means for an increment
- At the end of each sprint, the team must produce **a potentially shippable product increment** with the following features
  - High Quality
  - Tested
  - Completed
  - Ready to Use
  - As per Definition of Done



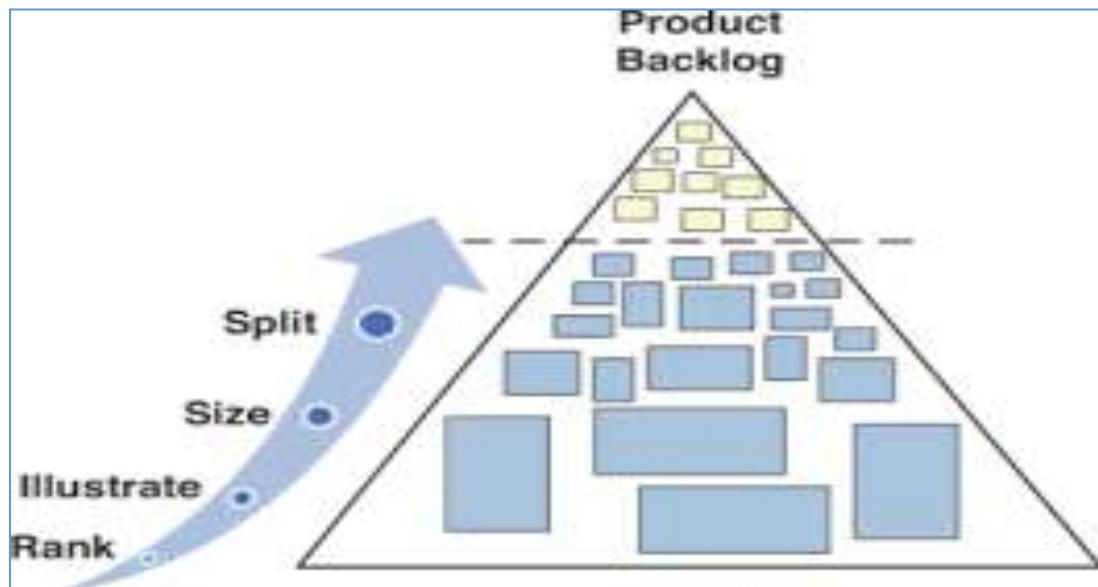
**Input: Product Backlog Item | Output: Updated Product Backlog**

### Should the team always release the Product Increment?

- It depends. If the product increment that is produced is usable and adds value to the business, the product owner may choose to release it right away.
- Though the product increment is working, it may not be feature complete and the product owner may not want to release it.
- Some businesses don't want to surprise their customers too often by frequent releases.
- Whether the product increment is shipped or not, building working software every sprint eliminates technical uncertainty.

### What is Product Backlog Refinement?

Product backlog refinement is the process through which product backlog items are reviewed by the Scrum team and revised, providing more detail and ensuring that there is greater clarity in the requirements for that item.



When product backlog is initially created it would have items of various sizes, clarity and value. But a scrum team needs clarity on few most important to get started. Backlog could be depicted as the following picture. Items at the top are important right now and should be smaller in size and more details so that team could start implementing them in upcoming sprints. As you go lower the product backlog, the items are less important and less detailed. Product owner elaborates them as they become important.

Scrum has an activity called “[Product Backlog Refinement](#)” to [progressively elaborate the product backlog](#)

- Primary goal of product backlog refinement is to get ready with few items for upcoming one or two sprints
- Product Backlog items that are [refined](#) are deemed “[Ready](#)” for selection in a Sprint Planning
- Product Backlog Refinement is the act of adding detail, estimates and order to items in the Product Backlog
- Product Backlog Refinement is an [ongoing activity](#) throughout a Scrum project
- Team and PO decide the frequency and duration of backlog refinement meeting. However, it is time boxed at 10% of total available time.

### What are two outputs of Sprint Planning?

The outputs of Sprint Planning are: -

- Sprint goal
- Sprint Backlog

### What is Sprint Goal?

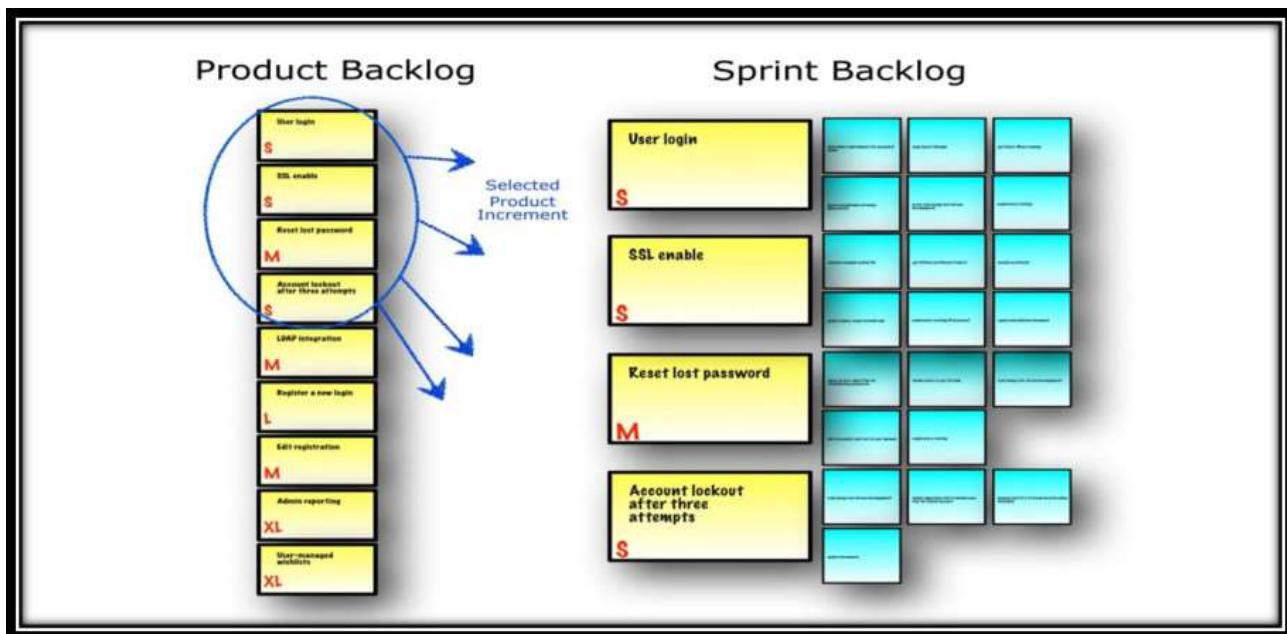
- A short statement of what the work will be focused on during the sprint
- It provides guidance to the Development Team on why it is building the Increment. It is created during the Sprint Planning meeting. The Sprint Goal gives the Development Team some flexibility regarding the functionality implemented within the Sprint. The selected Product Backlog items deliver one coherent function, which can be the Sprint Goal. The Sprint Goal can be any other coherence that causes the Development Team to work together rather than on separate initiatives.
- As the Development Team works, it keeps the Sprint Goal in mind. In order to satisfy the Sprint Goal, it implements the functionality and technology. If the work turns out to be different than the Development Team expected, they collaborate with the Product Owner to negotiate the scope of Sprint Backlog within the Sprint.

## What is Sprint Backlog?

The Sprint Backlog is the set of Product Backlog items selected for the Sprint, plus a plan for delivering the product Increment and realizing the Sprint Goal.

The Sprint Backlog is a forecast by the Development Team about what functionality will be in the next Increment and the work needed to deliver that functionality into a “Done” Increment. The Sprint Backlog makes visible all of the work that the Development Team identifies as necessary to meet the Sprint Goal.

- Highest priority items take into the sprint for implementation and the plan to deliver those items is sprint backlog
- Sprint backlog is created during sprint planning
- Helps team see the total work involved in achieving the sprint goal
- Development team creates and manages the sprint backlog, this includes updating the time left of each task, create any forgotten tasks, update the status of each task etc.
- Team should keep the status of the items up to date so that the sprint progress is transparent
- All items should be updated at least once a day
- Team uses Daily Scrum meeting to inspect and adapt the Sprint backlog



Input: Committed Product Backlog Items | Output: Updated Sprint | Product Backlog Items

## How do we Visually manage the Sprint Backlog?



## What is Definition of Done?

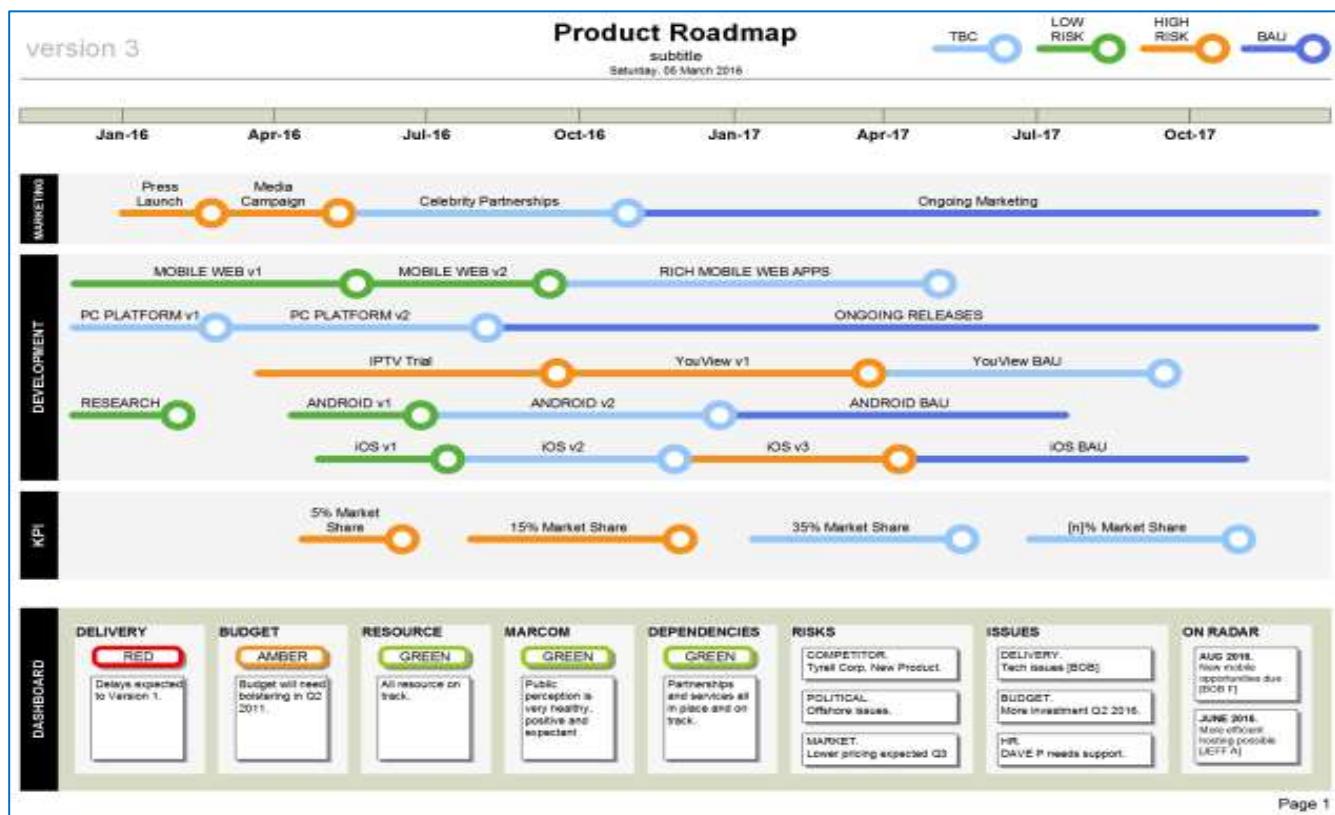
- Definition of Done is a list of attractive activities agreed by the Product Owner and the Development Team to call a backlog item is done
- A **stronger DOD** leads to higher quality product: -
  - Code Complete
  - Unit tests Written
  - Code Review
  - Manual Functional Testing
  - Automation
  - Updated Documents
  - User Acceptance Testing
  - Successful Deployment

## What is Product Vision?

- A product vision is created
- The product must be in alignment with the company's strategy
- This is done by the product owner

## What is Product Roadmap?

- The visualization of product features
- The product roadmap equates to the product division as a whole
- This is done and owned by the product owner



## What is Release Planning?

- The release timing for specific product functionality
- Priorities are assigned to the product features from most important to least important
- These features become the product backlog
- Owned by the product owner

## What is Iteration Planning?

- Goals are established for the current Sprint or iteration
- Goals are based on the product backlog
- Product owner in the development team work together to prioritize features
- This is done at the start of each Sprint

## Released Product

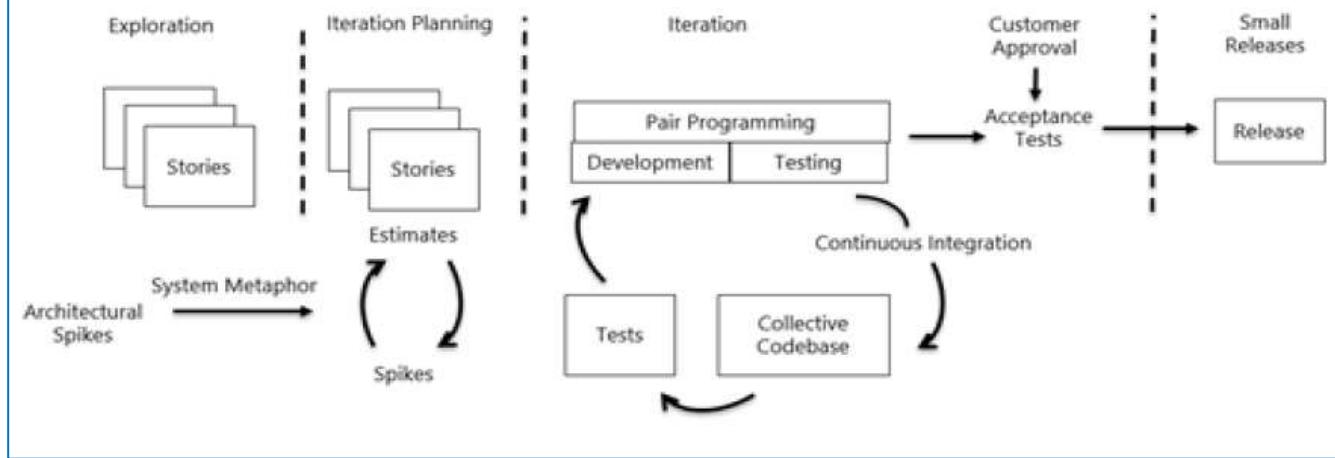
- The product is released according to the project's release plan

XP

## What is XP?

- Extreme programming is also known as XP
- XP is all about software development best practices, while scrum at the project management level focuses on prioritizing work and getting feedback

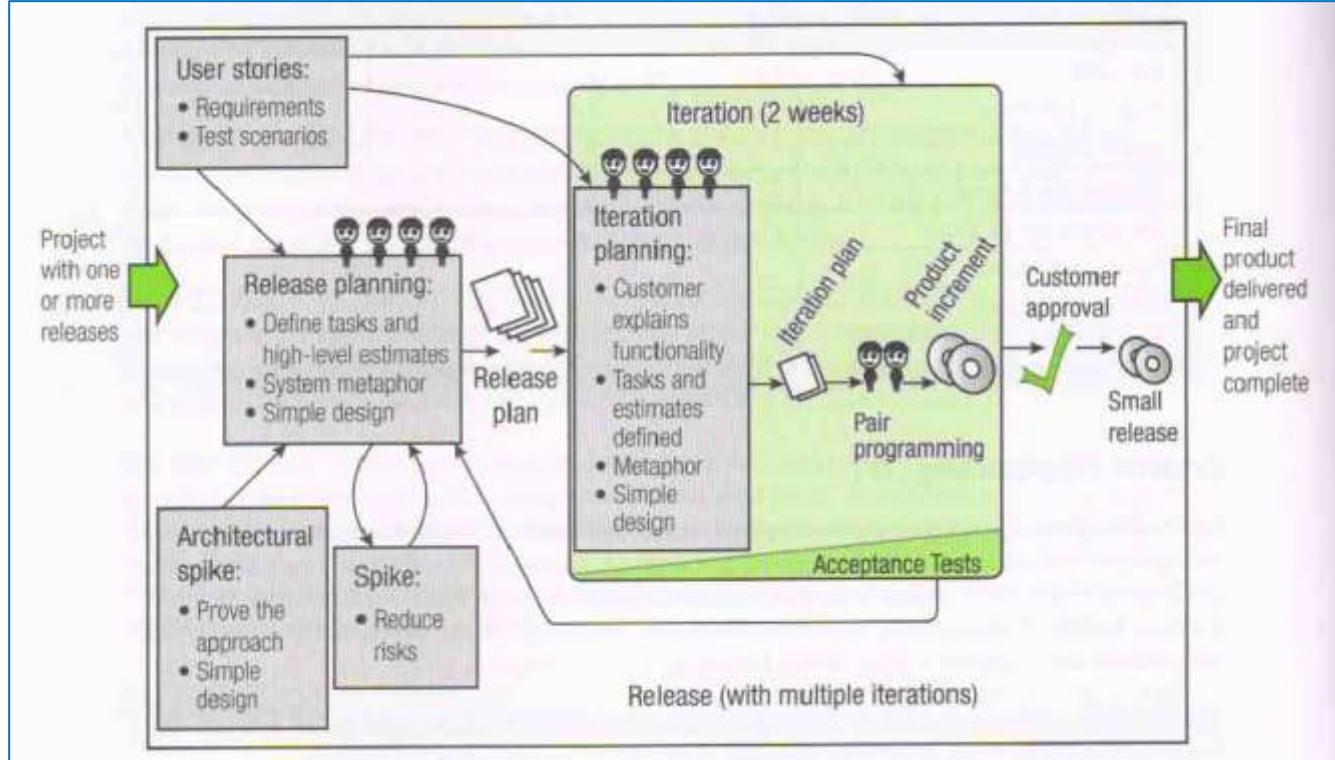
## Extreme Programming (XP) at a Glance



## XP recognizes that:

- All requirements will not be known at the beginning
- Requirements will change
- Use tools to accommodate, change as a natural process
  - Do the simplest thing that possibly work and refactor
- Emphasis values and principles rather than process

## Explain XP Life Cycle?



## What are XP Values?

The XP Values are Simplicity, Communication, Feedback, Courage & Respect

### Simplicity

Reducing complexity, extra features, and waste. Find the simplest thing that could possibly work

### Communication

- Ensuring that the project team knows what is expected of them
- Ensuring the project team knows what other people are working on
- The daily standup meeting is an excellent communication tool

### Feedback

- The development team needs feedback early in the project
- Failing fast is a way to get feedback early
- Feedback gives the team an opportunity to improve the project

### Courage

- Developers' work is entirely visible to others on the project team
- Team members share code and correct each other's code
- XP uses pair programming

## Respect

- Team members must respect one another
- Everyone is responsible for the success and or failure of the project
- Everyone works differently but must work together

## What are the XP Team Roles?

- **Coach** –Mentor/guide/facilitator/communicator similar to the Scrum Master
- **Customer** –the individual who provides requirements priorities and direction for the project similar to the product owner
- **Programmer** –the developers who write the code
- **Testers** –Define and write the acceptability test

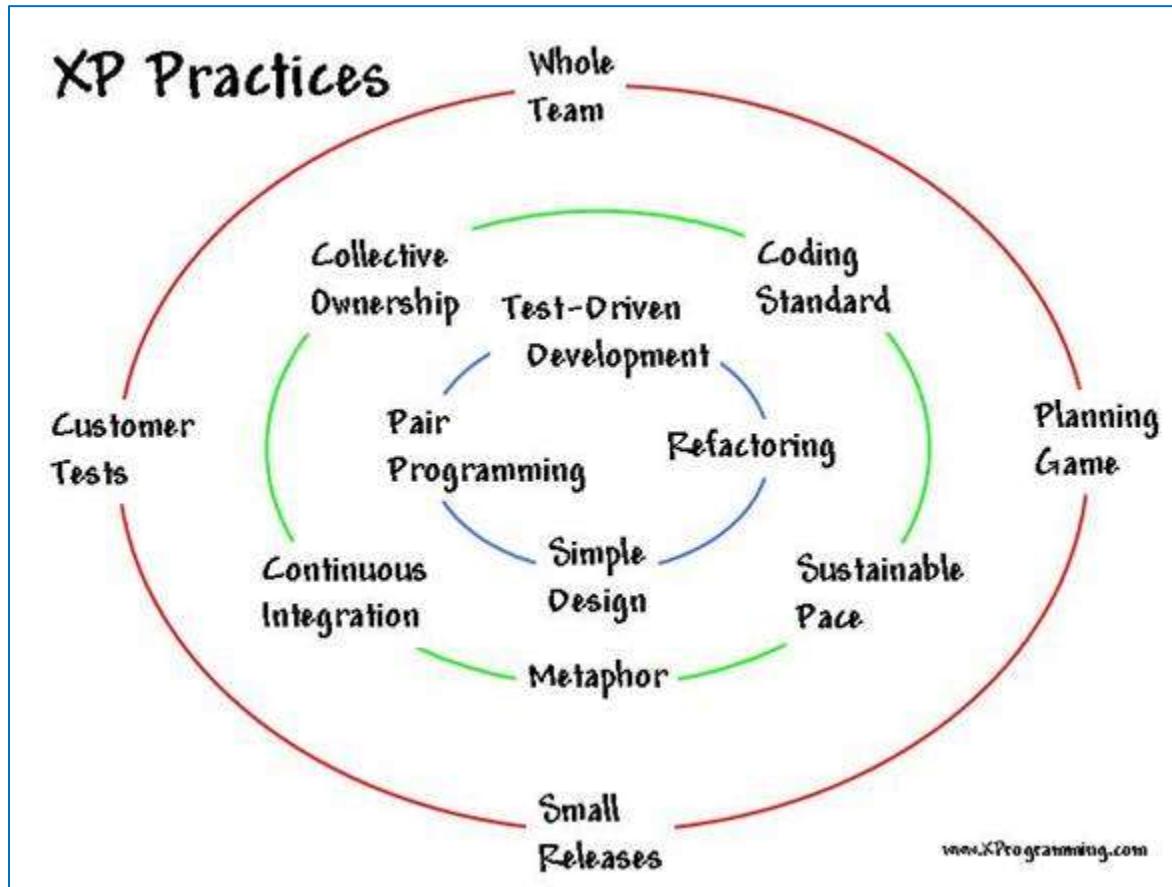
## What are the XP Concepts?

- Technical debt -> Design and Coding, Imperfection that need correction
- Refactoring -> Improve code quality without changing the behavior
- Iterations -> Design | Code | Test | Release within a specific duration
- Last Responsible moment -> Delay till when it's absolutely needed
- Stories -> Self-contained elements taken up for implementation
- Time-boxing -> Allocates time and wrap by that time

## What are XP Practices?

Thinking	Collaborating	Releasing	Developing
Pair Programming	Trust	“Done Done”	Incremental requirements
Energized workspace	Sitting together	No Bugs	Customer test
Root Cause Analysis	Real customer Involvement	Version Control	Test driven development
Informative Workspace	Metaphor	10 minutes build	Refactoring
Retrospectives	Standup Meetings	Continuous Integration	Simple design
	Coding Standards	Collective code ownership	Incremental design and architecture
	Iteration demo	Documentation	Spike Solutions
			Performance optimization
			Exploratory testing

## What are XP Core Values?



### Whole Team

- XP team members are collocated
- Generalizing specialist not role specialist
- Efficient and sharing of information

### Planning games

- Planning games are just planning activities
- Release planning is the release of new functionality
  - No more than one or two releases per year
  - The customer outlines the functionality required in the release
  - Developers estimate the difficulty to build the functionality
- Iteration planning is similar to sprint planning
  - Iteration planning happens at the start of every iteration
  - The customer defines what functionality they want to see by the end of the iteration
  - The development team estimates the difficulty to build the functionality

## **Small Releases**

- Small releases to a test environment are part of the XP practices
- Increases visibility to the customer
- Helps to deploy working software to the end users

## **Customer Tests**

- Definition of the required functionality
- Description of one or more test criteria for the software to be working

## **Collective Ownership**

- Any pair of developers can improve or amend the code
- Multiple people will work on all the code
- Improve defect resolution in discovery
- Knowledge is shared not isolated

## **Coding Standard**

- A coding standard is defined
- The team adheres to the standard
- Provides for consistency in writing the code

## **Sustainable Pace**

- Productivity is optimized through a sustainable pace
- Consistent overtime and long hours are not sustainable

## **Metaphor**

- Metaphors and similes are used to explain designs
- Metaphors help communicate the software to the customer

## **Continuous Integration**

- Compiling the code frequently throughout the day
- Programmers check-in code to the code repository
- Integration test run automatically for immediate feedback

## **Test Driven Development**

- Acceptance test are written prior to developing new code
- Initial tests will fail because the code has not been fully developed yet
- When the code has been written correctly it will pass the test

## Refactoring

- Cleaning up the code
- Removing duplicated code
- Lowering coupling
- Increasing cohesion

## Simple Design

- What is the simplest thing that could work?
- Simple does not mean easy
- Simple design is a risk mitigation approach

## Pair Programming

- One person writes the code while the second person reviews the code
- The two people change roles frequently
- The pair will catch mistakes and speed up productivity

## Difference between Scrum and XP?

Scrum	XP	Definition
Sprint	Iteration	Fixed length period of time
Release	Small release	Release to production
Sprint   Release Planning	Planning game	Agile Planning meetings
Product Owner	Customer	Business representative to projects
Retrospective	Reflection	Lesson Learned Style meeting
Scrum Master	Coach	Agile Project Manager
Development Team	Team	Empowered cross functional team
Daily Scrum	Daily Standup	Brief daily status meeting

## What is technical debt?

Technical Debt is the cost of shortcuts (like hard coding, not following coding standards) that accumulate over time, leading to:

- Increased risk
- Slower time to market
- Greater maintenance and enhancement costs
- Unmanaged Technical Deb leads to systems too unwieldy to use, and too expensive to fix

## What is Continuous Integration and Continuous Development?

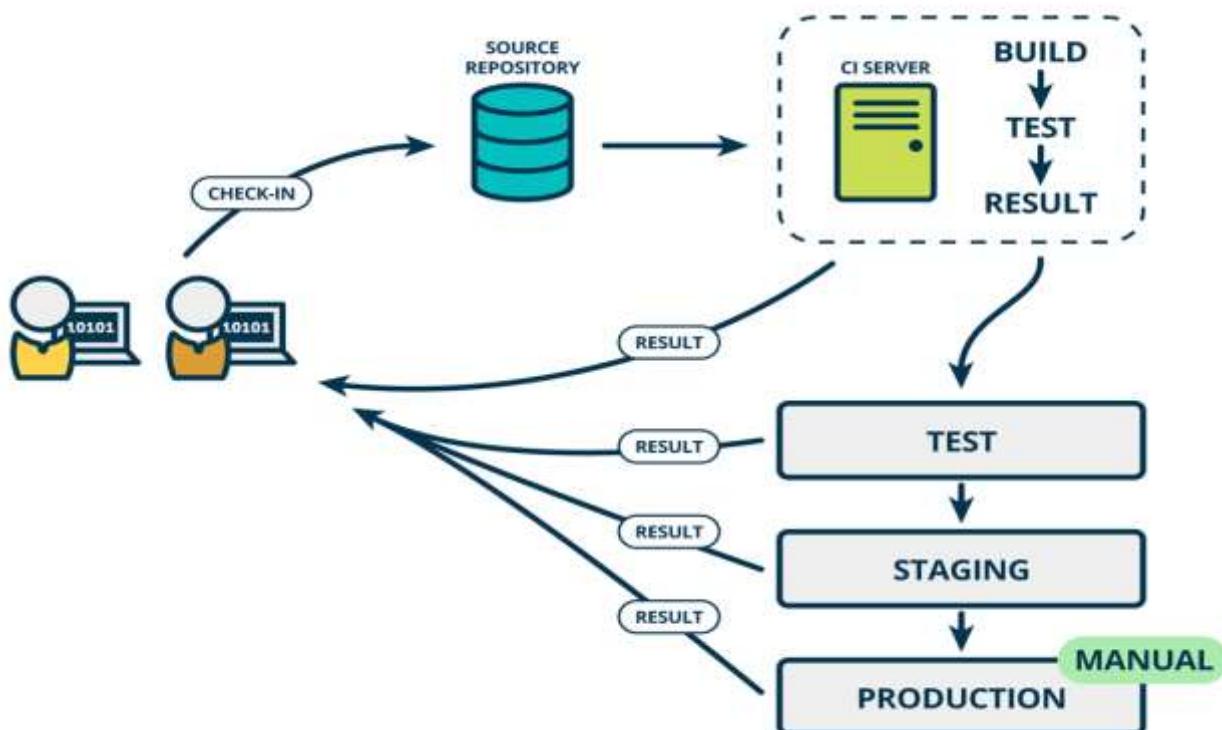
### Continuous integration

CI is a process whereby developers and testers validate the newly written code frequently. The developers check in their code to the mainline branch at least once a day, or multiple times a day. Every check-in triggers a build, and all the unit tests are run. If the build fails, notification is sent to all the developers and the new code is rolled back automatically.

Here, the tests help as a safety net to capture any bugs that were inadvertently introduced. All tests should run to confirm that the application behaves as the developers expect it to behave. A huge advantage to this process is that bugs are caught as soon as they are introduced, and the compatibility of everyone's code is tested. You always have the latest working version of the code.

### Continuous delivery

CD takes CI one step further. After a build and automated unit tests run successfully, you automatically or manually deploy the application to a test, stage, or production environment. Doing this automatically pushes the envelope one step further and is called continuous deployment. CI and CD are the basic recipes for implementing successful DevOps (yes, you have heard and read that term too many times in the recent past) practices in an organization. Often CICD is the toughest portion to implement in DevOps.



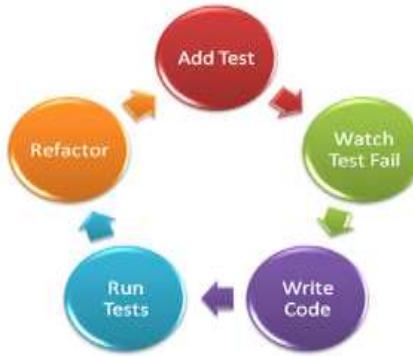
## What is TDD & BDD?

### Test Driven Development (TDD)

TDD is a software development technique that involves writing automated test cases prior to writing functional pieces of the code. This is popular in agile methodologies as it drives delivering a shippable product at the end of a sprint. This process can be divided into multiple steps:

- A developer, based on requirement documents, writes an automated test case.
- The development team runs these automated test scripts against what is currently developed and the tests fail, as they should since none of the features have been implemented yet.
- development team functional code to ensure the automated test script gives them a green light.
- The development team can then refactor and organize the code to produce a tested deliverable at the end of the sprint.

Test cases are mostly written in programming languages such as Java, Ruby, etc. and can be written using test automation tools such as Selenium, Watir, Windmill, etc. Since test scripts are written in programming languages, it is hard for a business analyst or test owner to verify the test scripts.



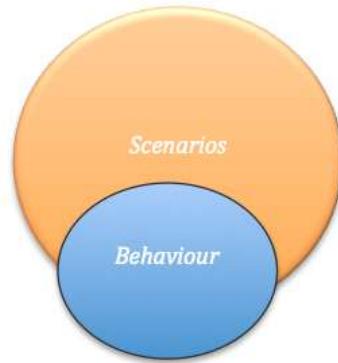
### Behavior Driven Development (BDD)

BDD is a software development technique that defines the user behavior prior to writing test automation scripts or the functional pieces of code. Used in an agile sprint, this method ensures that a shippable product is generated at the end of a sprint. This involves:

- Behavior of the user is defined by a product owner/business analyst/QA in simple English.
- These are then converted to automated scripts to run against functional code.
- The development team then starts writing the functional code to ensure the automated test script gives them a green light.
- The development team can then refactor and organize the code to produce a tested deliverable at the end of the sprint.

BDD can be driven by multiple tools such as Cucumber, FitNesse, PowerTools, Docker, etc. The test scripts are written in plain English in Gherkin, Wiki frameworks, etc. Since the behavior is defined in English, it gives a common ground for ALL stakeholders involved in the project. This reduces the risk of developing code that wouldn't stand up to the accepted behavior of the user.

*Behaviour Driven Development*



### TDD vs. BDD

BDD is in a more readable format by every stake holder since it is in English, unlike TDD test cases written in programming languages such as Ruby, Java etc.

BDD explains the behavior of an application for the end user while TDD focuses on how functionality is implemented. Changes on functionality can be accommodated with less impact in BDD as opposed to TDD.

BDD enables all the stakeholders to be on the same page with requirements which makes acceptance easy, as opposed to TDD.

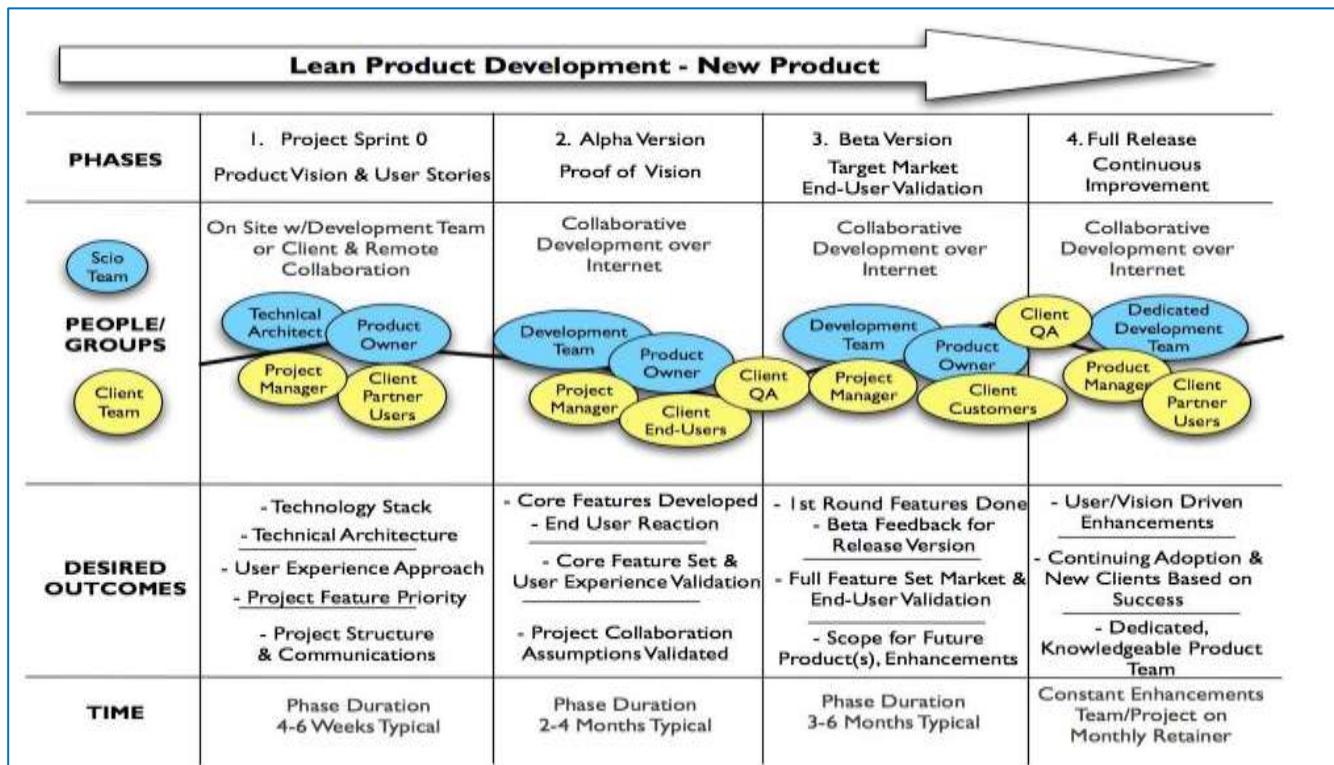
For systems that are driven by actions of the end user such as an ecommerce website or a HR system, BDD acts as a good medium to capture all the user actions. For systems that have third party API calls, cron jobs, data exports/imports, etc., TDD might be a better solution.

# Lean Kanban

## Lean

### What is Lean Product Development?

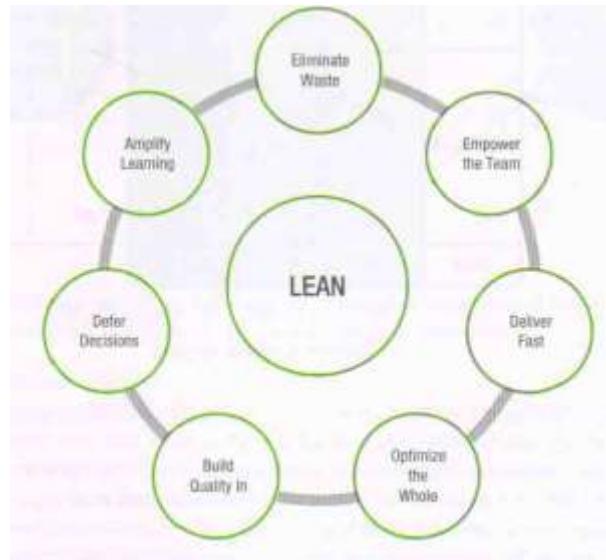
- Lean is a set of principles that have been taken from lean manufacturing approaches and applied to software development from Toyota production system by *Taiichi Ohno*
- Lean is the most popular with start-ups that want to penetrate the market, or test their idea and see if it would make a viable business
- Lean Development is focussed on eliminating waste from a system and improving value to the customer. Lean is to minimize WIP
- Lean creates process speed up by eliminating waste. Lean improves efficiency & quality by eliminating waste. Lean is for continuous improvement



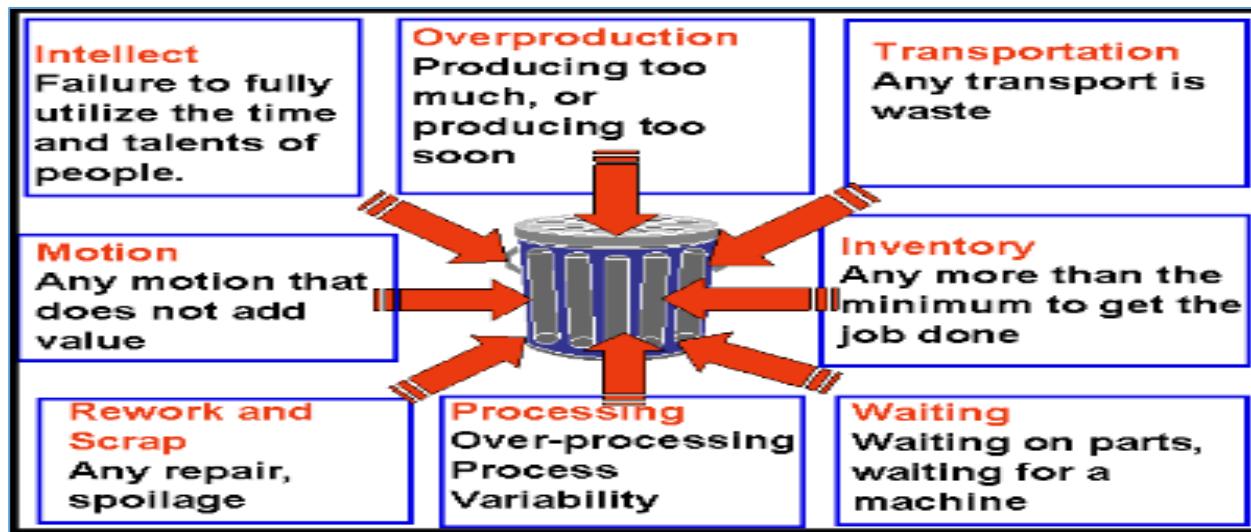
- Lean principles can be applied to any business context and applicable to a wider scope
- Lean is not an agile methodology but agile values are closely aligned.
- Lean has Visual management tools
- Lean helps Customer to find a better value
- Learning and continuous Improvement
- Adapted by Mary and Tom Poppendieck – Lean Software Development Kit: An Agile Toolkit
- Visit Website: <http://www.poppendieck.com>

## What are the Seven Lean Core Concepts?

- Eliminate waste
- Empower the team
- Deliver fast
- Optimize the whole
- Build quality in
- Defer decisions
- Amplify learning



## How will you eliminate waste in Lean?



## What are the Seven Wastes of Lean?

- Defects
- Overproduction
- Waiting
- Transportation
- Inventory
- Motion
- Extra Processing

## Match the Agile Practices to Lean Development?

Agile Practice	Eliminate waste	Empower the team	Deliver fast	Optimize the whole	Build quality in	Defer decisions	Amplify learning
Teams make their own decisions		✓					
Just-in-time iteration planning						✓	
Team retrospectives							✓
Two-week iterations			✓				
Unit test as we go					✓		
Shadow the business to learn what they do				✓			
The evolving prototype is the specification	✓						

## What is Value Stream mapping?

- Anything that does not create value to the customer is waste Muda in Japanese, stands for waste. Value Stream mapping is a method for identifying and eliminating waste
- Type I Muda: A waste that cannot be removed from the current production environment immediately.
- Type II Muda: A waste that should be eliminated immediately

Some more Japanese words, from Lean dictionary: -

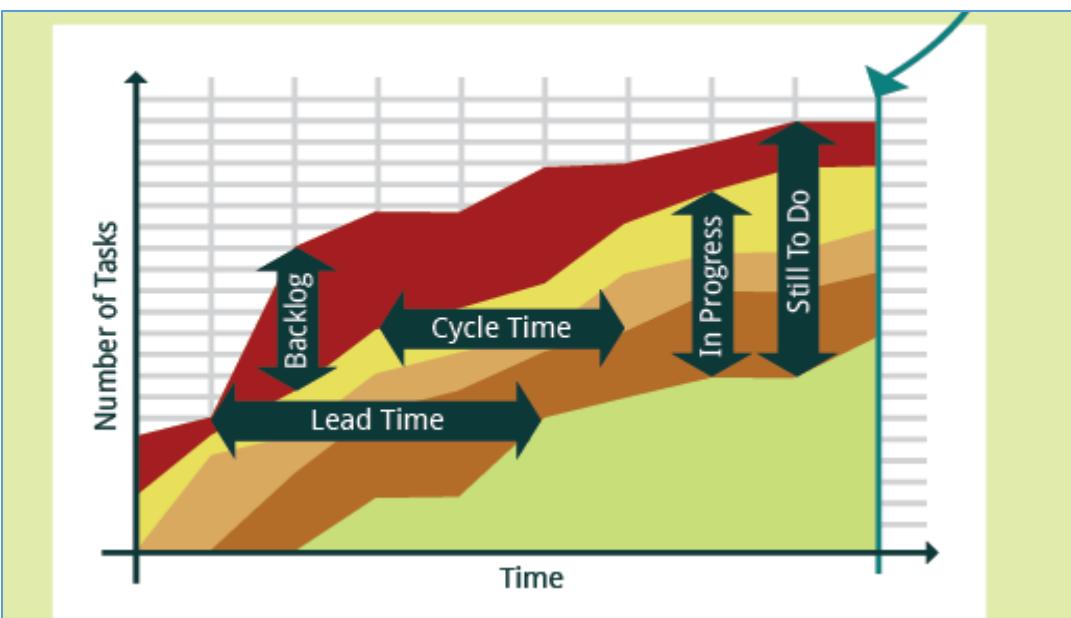
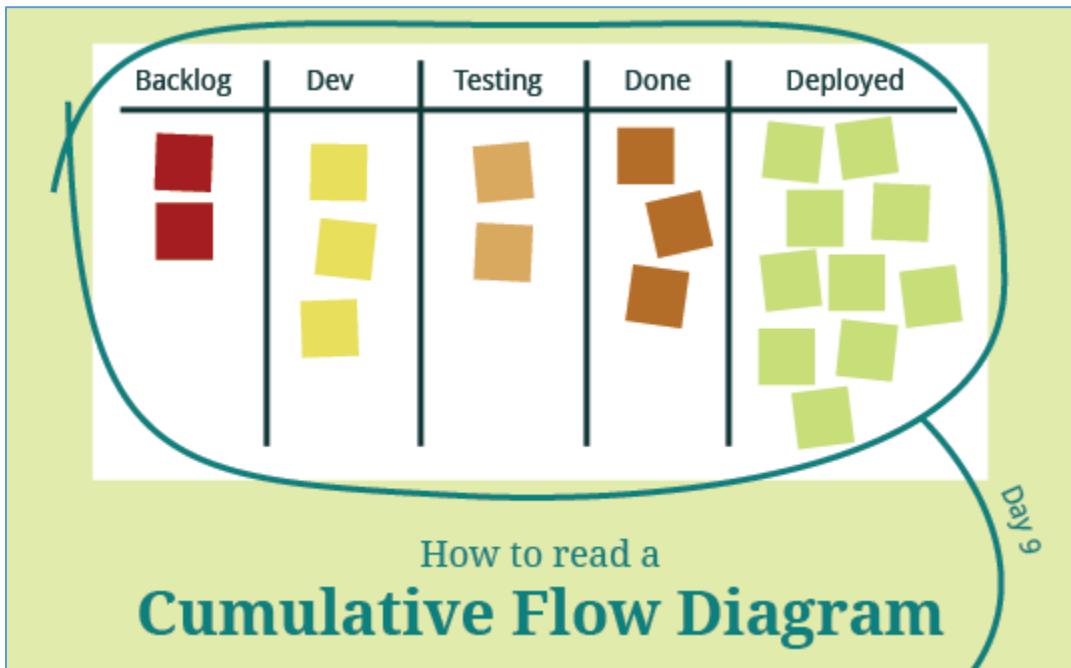
- Andon: Light for Status Signalling (Green | Yellow | Red)
- Jidoka: Automation
- Kaizen: Continuous | Relentless Improvement
- Kanban: Signboard
- Muda: Waste
- Mura: Unevenness | Irregularly
- Muri: Unreasonableness | Impossible
- Cycle Time: Cycle time is the total elapsed time from the beginning to the end of a process.

Cycle time includes process time, during which a unit is acted upon to bring it closer to an

output, and any delay time, during which a unit of work is spent waiting to take the next action.

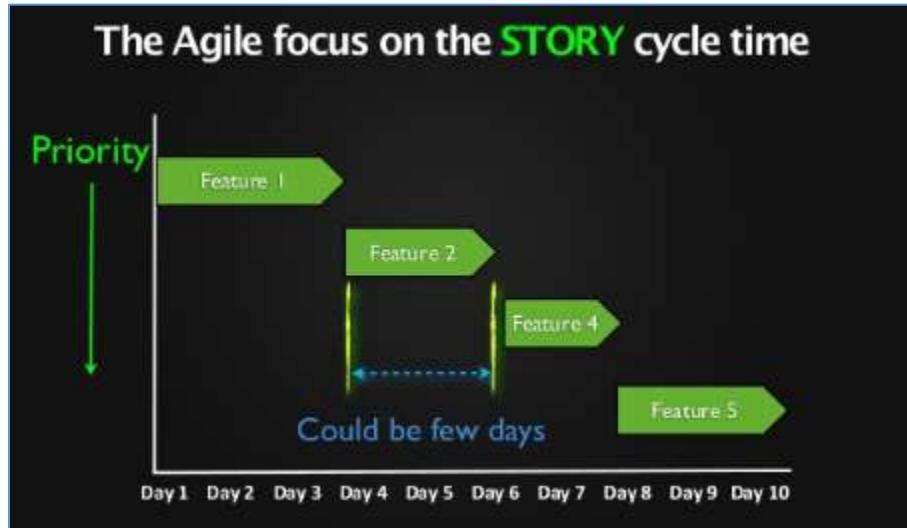
#### Cycle Time is for the Process

- **Lead Time:** Lead time is the latency time between the placement of an order and delivery to the customer. Lead time is for customer | end user
- **WIP (Work In Progress):** Number of work units in progress
- **Throughput:** The amount of material, data, work units that enters into a system and passes to generate output. Velocity, in Agile terms, can be the similar to this
- **Little's Law:**  $\text{Cycle Time} = \text{WIP} / \text{ACR}$ \* Where \*ACR = Average Completion Rate
- **Total Cycle Time** = Value Added Time + Non-Value-Added Time
- **Cycle Time Efficiency:**  $(\text{Value Added Time} / \text{Total Cycle Time}) * 100$
- **Value Stream Mapping** is a lean management method for analysing the current state and designing a future state for the series of events that take a product or service from its beginning through to the customer
  - At Toyota, it is known as the Language of Lean to depict and improve the flow of inventory and information
- A cumulative flow diagram is a tool used in queuing theory. It is an area graph that depicts the quantity of work in a given state, showing arrivals, time in queue, quantity in queue, and departure



## Difference between Cycle Time Vs Lead Time?

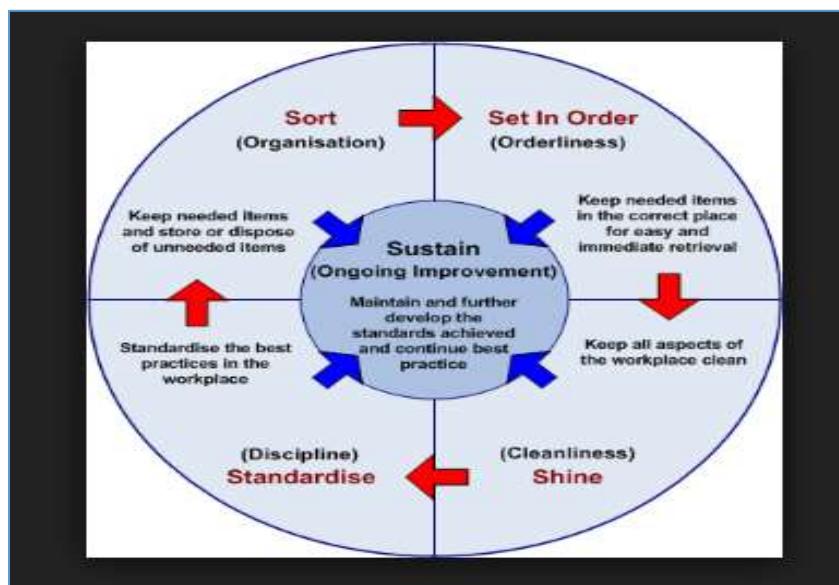
- Lead time is the time taken from when an issue is logged until work is completed on that issue
- Lead time is what customer sees
- Cycle Time is a measure of the time a work item takes to complete
  - The time a user story takes to get from the backlog to the done



## What is 5 S?

5 S is a methodology that had come out of the techniques within Total Productive Maintenance (TPM) and from the Toyota Production Systems (TPS)

5 S method uses a list of five Japanese Words: Seiri (Sort), Seiton (Straighten), Seiso (Shine), Seikketsu (Standardize), and Shitsuke (Sustain)



## What is 5 Whys?

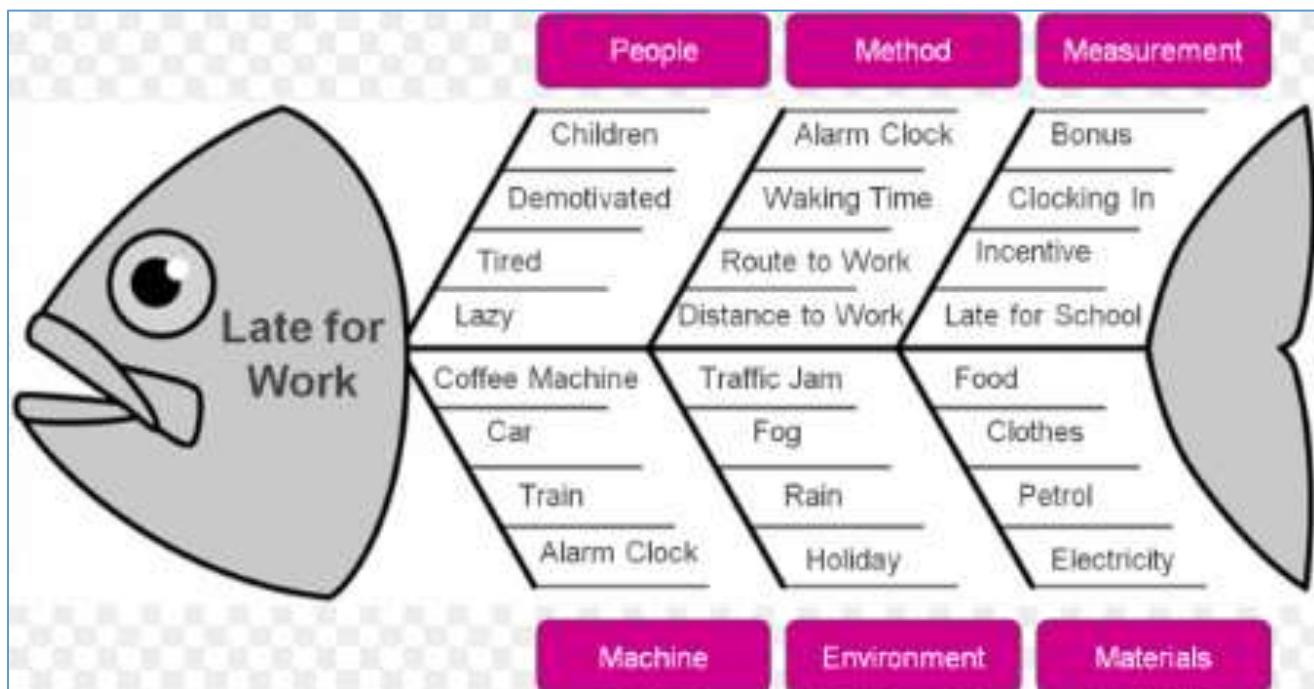
The 5 Whys is an interactive question-asking technique used to explore the cause-and effect relationships underlying a problem

By asking why 5 times and answering it each time we can get the real cause of the problem

It is a brainstorming technique

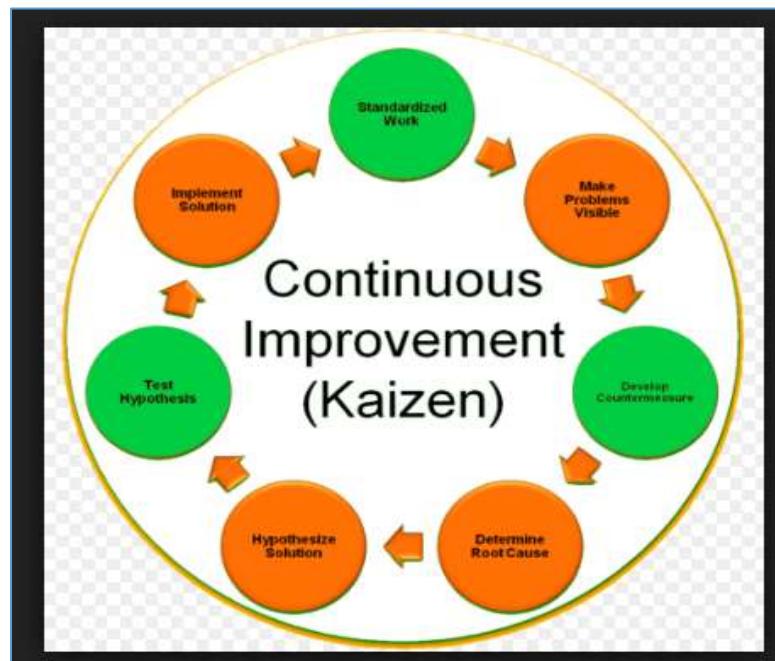


## What is Fishbone / Ishikawa Diagram?



## What is Kaizen?

- Japanese term for continuous improvement
- Philosophy involving everyone in the organization to make never ending efforts for improvement



## Kanban

### What is Kanban?

- Japanese word that means sign board, the signboard has categories of work for each stage of the production process
- Kanban is to limit WIP & Kanban is a PULL system



## What are the 5 Principles of Kanban?

- Visualize the workflow
- Limit work in progress
- Manage flow
- Make process policies explicit
- Improve collaboratively

**Visualize the workflow:** Knowledge worker projects, by definition, manipulate knowledge, which is intangible and invisible. Therefore, having some way to visualize the workflow is very important for organizing, optimizing, and tracking it.

**Limit WIP:** Keeping the amount of work in progress low increases the visibility of issues and bottlenecks and in turn facilitates continuous improvement. It creates a pull system of work through the development effort, reduces costs associated with changes, and minimizes sunk costs.

**Manage flow:** By tracking the flow of work through a system, issues can be identified and changes can be measured for effectiveness.

**Make process policies explicit:** It is important to clearly explain how things work so the team can have open discussions about improvements in an objective, rather than an emotional or subjective, way.

**Improve collaboratively:** Through scientific measurement and experimentation, the team should collectively own and improve the processes it uses.

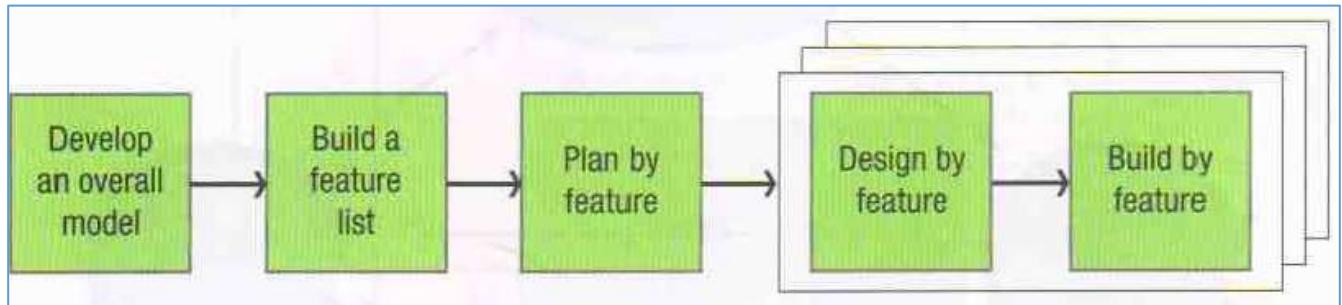
## What is Kanban Pull system?

- A pull system moves work through development
- The development team completes an item; the next item in queue is pulled into the next stage of the process
- Kanban does not use timeboxed iterations
- Only so many items can be in each stage of the project
- Work moves from left to right

# Feature Driven Development (FDD)

## What is FDD?

- The development team creates a model for the product
- They will build a feature list and a plan for the work
- The team moves through the design and build the directions for the product features
- The team designs by features and builds by features



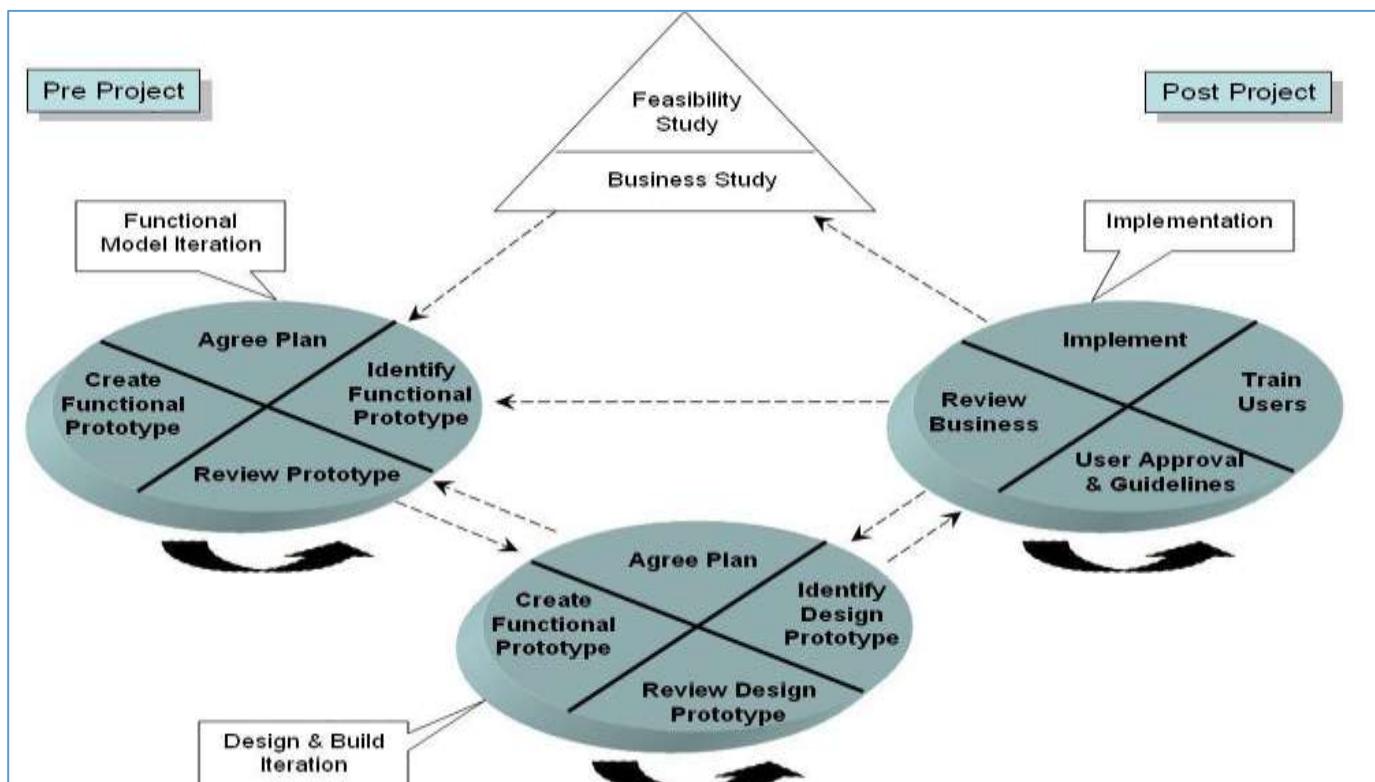
## What are its Features?

- Domain object modeling
- Developing by feature
- Individual class code ownership
- Feature teams
- Inspections
- Configuration management
- Regular builds
- Visibility of progress and results

# Dynamic System Development Method (DSDM)

## What is DSDM?

- Focus on the business need
- Deliver on time
- Collaborate
- Never compromise quality
- Build incrementally from foundations
- Develop iteratively
- Communicate continuously and clearly
- Demonstrate control

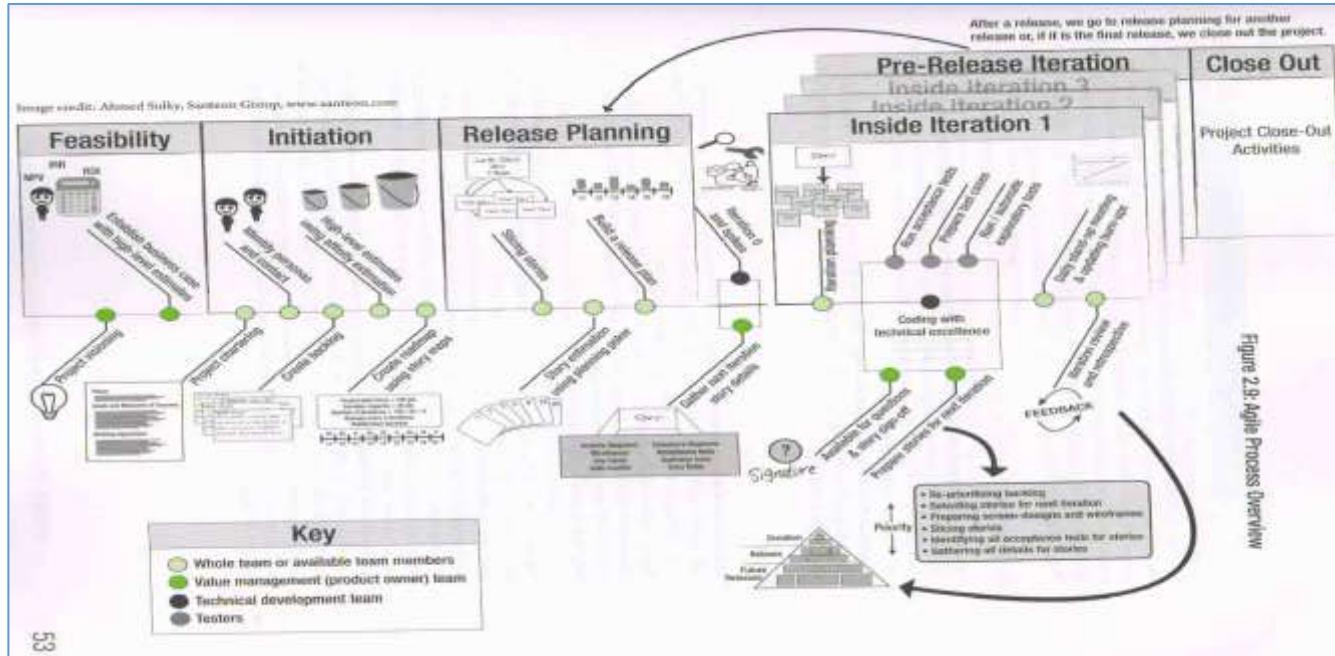


# Crystal

## What is Crystal?

- Customized methodologies coded by color names
- Methodologies are appropriate for different criticalities and team sizes
- Criticality is about the impact of a product defect design

## Explain Agile Process Overview Chart?



## What are the Professional Responsibility and Ethics?

### Responsibility

- Make decisions based on the interests of the company
- Protect proprietary information

### Respect

- Maintain the attitude of mutual co-operation
- Respect cultural differences
- Negotiate in good faith
- Deal with conflict directly
- Don't use your position to influence others

### Fairness

- Look for and disclose conflict of interest
- Don't discriminate

### Honesty

- Understand the truth
- Be truthful of all communications

## Agile Framework Practice Questions

1. What attribute of agile equates to trust with the project team and other stakeholders?

- A. Inspection.
- B. Adaption.
- C. Transparency.
- D. Honesty.

**Ans:** C. Transparency equates to trust is an agile principle core to the agile mindset. Choices A, B, and D are incorrect choices for this question.

2. What type of processes are best described as incremental, interactive, and adaptive?

- A. Empirical.
- B. Defined.
- C. Project management.
- D. Agile.

**Ans:** A. Empirical processes are interactive, incremental, change often, adapt, and pass through the reviews; they are change-driven. Choices B, C, and D are incorrect choices for this question.

3. Beth has just started a new job with the ABX Company. She has years of experience working on agile projects as Scrum Master. The ABX company currently doesn't use agile approaches, but they may like to eventually. In this scenario, Beth is likely to feel which one of the following?

- A. Excited.
- B. Sad.
- C. Scared.
- D. Frustrated.

**Ans:** D. An individual with an agile mindset will feel frustrated if the remainder of the organization doesn't embrace agile. A, B, and C are incorrect choices for this question.

4. Which one of the following statements best describes being agile?

- A. Forcing agile practice.
- B. Choosing correct practices.
- C. Command and control.
- D. Understanding agile.

**Ans:** B. Choosing correct practices is an example of being agile. A, C, and D are incorrect choices for this question. Note that you can understand agile without being agile

**5. As a PMI-ACP candidate you must be familiar with the Agile Manifesto. What does the Agile Manifesto value over processes and tools?**

- A. Individuals and interactions.
- B. Working software.
- C. Customer collaboration.
- D. Responding to change.

**Ans: A.** The Agile Manifesto values individuals and interactions over processes and tools. For your PMI-ACP exam be quite familiar with the Agile Manifesto. Choices B, C, and D, are incorrect choices for this question.

**6. What's the best way to satisfy customers in an Agile project?**

- A. Communication on a regular basis throughout the project.
- B. Involving the customers as part of the project team.
- C. Early and continuous delivery of valuable software.
- D. Deliver on time and on budget.

**Ans: C.** This is based on the first principle behind the Agile Manifesto: Our highest priority is to satisfy the customers through early and continuous delivery of valuable software. A, B, and D are incorrect choices for this question.

**7. There are five scrum ceremonies. Which one of the following is not a scrum ceremony?**

- A. Project backlog refinement.
- B. Sprint planning meetings.
- C. Daily scrum.
- D. Sprint reviews.

**Ans: A.** There is no project backlog refinement; rather there is product backlog refinement. The five scrum ceremonies are: Product backlog refinement, Sprint planning meetings, Daily scrum, Sprint reviews, Sprint retrospective.

**8. Which core value of XP is demonstrated through pair programming?**

- A. Feedback.
- B. Courage.
- C. Simplicity.
- D. Respect.

**Ans: B.** Of all the choices, courage is the best answer. Team members can see one another's code as it is being written and that takes courage. Choices A, C, and D are incorrect choices for this question.

**9. Who creates the product vision in an agile project?**

- A. Scrum Master.
- B. Product owner.
- C. Development team.
- D. Customer.

**Ans: B.** The best answer is that the product owner creates the product vision. A, C, and D are incorrect choices for this question.

**10. Servant leadership is a big part of Agile practices. In order to be an effective servant leader you must do all of the following except for which one?**

- A. Carry food and water.
- B. Remove impediments.
- C. Provide what team members need.
- D. Clean up the project war room.

**Ans: D.** Of all the choices, cleaning up after the project team isn't the best option for a servant leader's time and contribution. Choices A, B, and C are incorrect choices for this question.

# Scrum Practice Questions

## Agile Intro – Exercise (Say True or False)

1. Agile Manifesto suggests build everything that customer wants – **True**
2. Principle behind Agile Manifesto suggest emerging architecture – **True**
3. As per Agile Manifesto Architecture is not important but the functionality is – **False**
4. Agile Manifesto suggests defining and implementing architecture in first few iterations to enable teams to deliver working software in subsequent iterations – **False**
5. Scrum teams place value i planning but value responding to change even more – **True**
6. Scrum framework is good for projects, which are simple and predefined – **False**
7. According to Agile Manifesto, control and management is important – **False**
8. When Agile Manifesto suggests “Responding to change”, it means releasing products soon and often to test assumptions – **True**
9. Regular and frequent feedback is essential to address customer collaboration suggested by Agile Manifesto –**True**
10. Agile Manifesto suggests not to document anything but write code – **False**
11. Time boxing is one of the ways to maintain sustainable pace suggested by Agile principles – **True**
12. Any Process which exhibits transparency and helps the team to inspect and adapt based on evidence is called Empirical Process – **True**

## Scrum Roles Exercise – (Say True or False)

### Product Owner

1. Product Owner manages the release – **True**
2. Product Owner clarifies the requirement – **True**
3. Product Owner manages the tasks – **False** (Development Team takes care)
4. Product Owner tracks the progress in the sprint – **False**
5. Product Owner visits customers – **True**
6. Product Owner is responsible for maximizing the value of work done by the Scrum Team – **True**
7. Product Owner participates in daily scrum – **False**
8. Product Owner understands the competitors – **True**
9. Product Owner is available to team during the sprint – **True**
10. Product Owner decides how much work to do in the sprint – **True**
11. Product Owner defines the architecture – **False**
12. Product Owner understands how our product is used by the customers – **True**
13. Product Owner evangelizes the product within and outside of organization – **True**
14. Product Owner orders the product backlog – **True**
15. Product Owner maintains the product backlog – **True**
16. Product Owner envision is the product – **True**
17. Product Owner is responsible for the profitability of the product – **True**

### Scrum Master

1. Scrum Master commits work to product owner – **False**
2. Scrum Master manages the progress in the sprint – **True**
3. Scrum Master's product is a well-known working team – **True**
4. Scrum Master is NOT responsible for the schedule – **False**
5. Scrum Master needs to coach Product Owner – **False**
6. Scrum Master is a change agent for Scrum – **True**
7. Scrum Master needs to be the master of Scrum – **False**
8. Scrum Master works in full time – **False**

9. Scrum Master is the manager of the team – **False**
10. Scrum Master is responsible for solving the team's problem – **True**
11. Scrum Master manages the dependency with other teams – **True**
12. Scrum Master helps team adopt engineering practices – **True**
13. Scrum Master manages the project – **False**
14. Scrum Master facilitates the Scrum meetings- **True**
15. Scrum Master is the interface towards outside the team – **False**

#### **Development Team**

1. Team owns and improves its process – **True**
2. Team decides the priority of the work – **False**
3. Team manages the dependency with other teams – **False**
4. Team sets its own direction – **True**
5. Team commits sprint goal –**True**
6. Team maintains product backlog – **False**
7. Team maintains sprint backlog – **True**
8. Team manages the tasks – **True**
9. Team updates the sprint Burn down chart – **True**
10. Team updates the release Burn down chart – **False**
11. Team decides the architecture and design – **True**
12. Team follows Scrum Master's command – **False**
13. Team follows Product Owner's command – **False**
14. Team is not allowed to have conversation with customers – **False**
15. Team does testing – **True**
16. Team is responsible for getting done – **True**

## **Role Mapping - I**

**A servant-leader for the Scrum Team!!!**

**Accountable for building the high value products!!**

**Acts as a change agent that increases the productivity of the Scrum Team!!!**

**Coaches the Development Team for self-organization and cross-functionality!!!**

**Removes impediments to the Development Team's progress!!!**

**Details out the product backlog items appropriately!!**

**Empowered to make decisions on how to build the product increment!**

**Empowered to make decisions regarding the product backlog management to achieve the vision!!**

**Ensures the Product Owner knows how to order the Product Backlog items to maximize value!!!**

**Facilitates Scrum events as requested or needed!!!**

**Finds and teaches techniques for effective Product Backlog management to Product Owner!!!**

**Helps employees and stakeholders of the organization understand and enact Scrum and empirical product development!!!**

**Helps engineering team in estimating the backlog items by clarifying backlog items!!**

**Helps optimize the external interactions with the scrum team to maximize the value created!!!**

**Helps product owner in backlog management by explaining technical constraints.**

**Helps product owner prioritize the work. Teaches PO and stakeholders value based prioritization!!!**

**Helps Product Owner understanding product planning in an empirical environment!!!**

**Helps the Scrum Team understand the need for clear and concise Product Backlog items!!!**

**Leads and coaches the organization in its Scrum adoption!!!**

**Optimizes the value of the work the development team performs!!**

**Participates in all Scrum events!**

**Responsible for building the product fast by eliminating the waste!!!**

**Responsible for creating and establishing the product vision!!**

**Responsible for creating and managing the release plans!!**

**Responsible for creating and managing the sprint backlog!**

**Responsible for creating the product increment!**

**Responsible for deciding whether to release the product increment or not!!**

**Responsible for ensuring Scrum is understood and enacted!!!**

**Responsible for identifying and eliminating “Technical Debt”!**

**Responsible for implementing good engineering practices!**

**Responsible for keeping the Product Backlog transparent, clear and visible to everyone!!**

**Responsible for learning all the functions required to deliver a product increment!**

**Responsible for managing the Product Backlog!!**

**Responsible for ordering the backlog items to maximize the value delivery!!**

**Responsible for the quality of the product increment!**

**Responsible for tracking the progress of the sprint!**

**Responsible for tracking the release progress!!**

**Responsible for understanding and answering any question related to product domain!!**

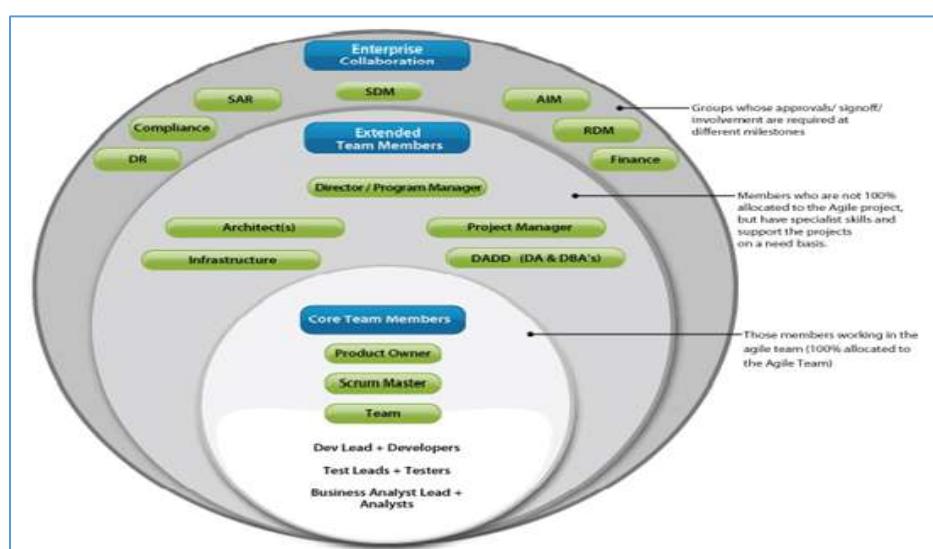
**Reviews the product increment and gives feedback to the development team!!**

## **Answers**

**Ends with! – Development Team | Ends with!! – Product Owner | Ends with!!! – SCRUM Master**

## **Role Mapping - II**

**Map the roles listed below to Scrum Roles based on the similarity in responsibilities and skills required**



- Product Manager – Product Owner
- Product Marketing Manager – Product Owner
- Test Engineer – Development Team
- Programmer – Development Team
- Technical Architect – Development Team
- Build and Release Engineer – Development Team
- Pre-sales – Product Owner
- Technical Writer – Development Team
- Project Manager – Other roles
- Business Analyst – Development Team
- User Experience Expert – Development Team
- User Interface Specialist – Development Team

### **Responsibility Mapping**

Map the roles listed below to Scrum Roles based on your understanding of Scrum so far

- Facilitate Delivery – Scrum Master
- Motivate Team – Scrum Master
- Manage product release schedule – Product Owner
- Manage Product Budget – Product Owner
- Manager Product Scope – Product Owner
- Manage release decisions – Product Owner
- Identify and address systematic problems and address them – Scrum Master
- Build learning team – Scrum Master
- Estimate Work – Development Team
- Provide technical solutions – Development Team
- Remove Impediments – Scrum Master
- Manage Product Risks – Product Owner
- Manage Product dependencies – Product Owner

- Conduct User Research – Development Team
- Product Promotion – Product Owner
- Product Positioning – Product Owner
- Maximize team potential – Scrum Master

## **Skill Mapping**

Map the roles listed below to Scrum Roles based on the responsibilities they need to perform

- System Thinking – Scrum Master
- Decision Making – Product Owner
- Product Marketing – Product Owner
- Customer Empathy -Product Owner
- Business Acumen -Product Owner
- Technical Skills – Development Team
- Domain knowledge – Product Owner
- Process Expertise – Scrum Master
- Leadership – Scrum Master
- User Experience Skills – Product Owner
- Product Discovery Skills – Product Owner
- Stakeholder Management – Product Owner
- Facilitation – Scrum Master
- People Skills – Scrum Master
- Coaching – Scrum Master
- Process Expertise / Champion – Scrum Master
- Collaboration – Scrum Master
- Emotional Intelligence – Scrum Master
- Team Building – Scrum Master

## Scrum Artifacts – Exercise (Say True or False)

### General

1. Product Owner is responsible for establishing the product vision – **True**
2. Higher ordered Product Backlog Items are usually clearer and more detailed than lower ordered ones – **True**
3. Anyone can create Product Backlog Items, but the Product Owner has overall responsibility to manage it – **True**
4. Life of the Product backlog is same as life of the product itself – **False**
5. The Development team is responsible for estimating of backlog items – **True**
6. Product Backlog Refinement is the act of adding detail estimates, and order to items in the Product Backlog – **True**
7. Team and PO decide the frequency and duration of the backlog refinement meeting. However, it is time boxed at 10% of total available time – **True**
8. Product Backlog Refinement is an Ongoing activity throughout a scrum project – **True**
9. Having a Product Backlog Refinement meeting helps sprint planning to go smoother – **True**
10. A single team works from multiple product backlogs – **False**
11. Product Owner keeps the product backlog somewhere secretly so that no one can touch it – **False**
12. The product backlog is sorted from small items (At Top) to large (At Bottom) – **False**
13. The product backlog should be updated only in backlog refinement meeting – **False**
14. In backlog refinement, the team goes through the entire backlog and refines it – **True**
15. Development team may work on critical engineering items without placing them in product backlog – **False**
16. Once the product backlog is created it is usually does not change – **False**
17. Scrum Master tells product owner what should be the priority in backlog refinement meeting – **False**
18. Once an item is placed in the product backlog, it is never re-ordered – **False**

## Product Backlog

1. It is an ordered list of everything that might be needed in the product – **True**
2. It's a single source of requirements for any changes to made the product – **True**
3. The Product Owner is responsible for the product backlog, including its content, availability, and ordering – **True**
4. A Product Backlog is never complete – **True**
5. As long as a product exists, its product backlog also exists – **True**
6. The defect should not be added to product backlog – **False**
7. Changes in business requirements, market conditions, or technology may cause changes in the product backlog – **True**
8. Multiple scrum teams can work together on the same product – **True**
9. Product Backlog items can be updated at any time by the product owner or at the product owner's discretion – **True**
10. All the items in product backlog are comprehensively detailed – **False**
11. The Product Backlog Item should always be written in the form of a User Story – **False**

## Sprint Backlog

1. The Sprint Backlog is a forecast by the Development Team about what functionality will be in the next increment – **True**
2. The Development Team modifies the Sprint Backlog throughout the Sprint, and the Sprint Backlog emerges during the Sprint – **True**
3. Sprint Backlog is just a list of tasks to be completed during the sprint – **True**
4. Development team should pull stories in the order of priorities set by PO – **True**
5. Only the Development team can change its Sprint Backlog during a sprint – **True**
6. By tracking the remaining work throughout the Sprint, the Development Team can manage its progress- **True**
7. Sprint Backlog is used by the team to manage their hours – **True**
8. The main purpose of sprint Backlog is for the team to manage themselves – **True**

9. Sprint Backlog is for Product Owner to understand what the team has committed for the sprint – **True**
10. Sprint Backlog does not contain plan for delivering the product Increment and realizing the Sprint Goal – **True**

### **Product Increment**

1. The increment is the sum of all the Product Backlog items completed during a Sprint and the value of the increments of all previous Sprints – **True**
2. At the end of a Sprint, the new increment must be “Done”, which means it must be in useable conditions and meet the Scrum Team’s Definition of Done” – **True**
3. Development team is responsible for producing product increment – **True**
4. Product Increment is “Done”. Only when stakeholders accept the stories in Sprint Review – **True**
5. Product Increment is always ready to be deployed at customer site – **True**
6. Engineering practices like TDD, continuous integration, pair programming improve the quality of Product increment – **True**
7. Velocity is the measure of how much valuable work that a team can do in a Sprint. – **True**
8. One of the ways to determine it is to sum up the story points associated with Product Backlog Items that are part of the Product Increment at the end of the Sprint – **True**
9. Product Owner guides team how to produce the Product Increment – **True**

### **Product Backlog Refinement**

1. It’s best practice to hold Backlog Refinement at least once per Sprint – **True**
2. The duration of the Backlog Refinement meeting is 2 hours per Sprint – **False**
3. It’s the act of adding details, estimates and order PBI’s – **True**
4. It’s an ongoing collaboration between the Product Owner and the development team – **True**
5. It’s a part time activity during the Sprint. How and when is decided by the Scrum Team – **True**
6. PBI is always estimated in hours in Backlog refinement meeting – **False**
7. Backlog Refinement is requirement to keep the Product Backlog DEEP for at least 2 Sprints – **False**

8. The focus of the Backlog Refinement is future release – **False**
9. Backlog Refinement is also known as Story Time, Backlog grooming ad user Story Workshop – **True**
10. Development Team is responsible for all estimates – **True**
11. The Product Owner may influence the Development Team by helping it understand and select trade-offs, but the people who will perform the work make the final estimate – **True**
12. The PBI's once estimated are never reviewed and revised during Backlog Refinement – **False**

### Scrum Meetings (Say True or False)

What did you do yesterday? What will you do today? And which team members do you need to talk to? are the three questions of a daily scrum (**FALSE**)

Scrum Master should use the Daily Scrum to solve any impediments the team raises (**FALSE**)

Product Owner is not allowed to talk during the Daily Scrum (**TRUE**)

Main purpose of the Daily Scrum is to inspect the previous day's work and plan for the next day (**TRUE**)

Daily Scrum is a good way for the Scrum Master to secretly micro-manage the team (**FALSE**)

If the team is talking about a critical issue in daily scrum, the meeting could be extended until the discussion is completed (**FALSE**)

Daily Scrum is time boxed to 15 minutes (**TRUE**)

The purpose of the Sprint Review is to get feedback on what the team has accomplished during the sprint (**TRUE**)

Though Product owner calls few key stakeholders to Sprint Review, anyone who is interested can go (**TRUE**)

In the Sprint Review, team gives a power point presentation on what they worked on in the sprint (**FALSE**)

Sprint Review is the meeting where User Acceptance Testing is performed (**FALSE**)

In Sprint Review, Scrum Team discusses the current state of the product backlog and future direction for the product (**TRUE**)

At the end of the Sprint Review, release plan is updated if needed (**TRUE**)

Product Owner should wait till sprint review to give any feedback to the development team (**FALSE**)

Any feedback in Sprint Review that turns into new backlog item should be maintained in a separate backlog (**FALSE**)

Sprint Retrospectives should be held only at the end of the last sprint in a project or release (**FALSE**)

Sprint Retrospective is the place for scrum master to do the post mortem of the sprint (**FALSE**)

The Scrum Master participates as a peer team member in the sprint retrospective meeting from the accountability over the Scrum process (**TRUE**)

Scrum Master should create a safe environment for the team so that they will open up in Sprint Retrospective (**TRUE**)

Executives can also attend the Sprint Retrospective to know team's problems (**FALSE**)

Team should only inspect and adapt in retrospective and shouldn't think about it rest of the time (**FALSE**)

At the end of the Sprint Retrospective, major improvements are identified and an action plan to is created (**TRUE**)

The main theme of the Sprint Retrospective is to answer "How can we get better as a team?" (**TRUE**)

Sprint Planning is time boxed to 8 hours for 4 weeks sprint, but most teams try to get done in about half as long (**TRUE**)

Tasks in the Sprint Backlog are estimated collaboratively by the team even though one person will do the task (**TRUE**)

During the Sprint Planning meeting, the Scrum Master assigns tasks to individual team members (**FALSE**)

During the Sprint Planning, the Product Owner decides what items should be implemented in the sprint (**FALSE**)

Main purpose of the Sprint Planning is to come up with the forecast for the sprint (**TRUE**)

One of the main topics of the Sprint Planning is Product Owner explaining the details of the items (**TRUE**)

Team talks about possible solutions, high level design, automation strategy etc., during the Sprint Planning (**TRUE**)

Scrum Master comes up with the Sprint Goal at the end of the Sprint Planning (**FALSE**)

## The Sprint

1. It's a time-box of one month or less – **True**
2. Sprint length varies from Sprint to Sprint based on the PBI's selected for the Sprint – **True**
3. Sprint is done when all the committed PBI's meet definition of Done – **True**
4. Sprint Length is decided based on the size of the team – **True**
5. Sprint Length is decided based on how soon the Development team can deliver – **True**
6. Working product and how often the requirement changes – **True**
7. During first sprint, the Team works on architecture and plan for the rest of the Sprint – **True**
8. The team works on accomplishing the Sprint goal irrespective of whether its first or last Sprint – **True**
9. No changes are allowed to Sprint Goal, Length and Team during the Sprint – **True**
10. The Scope of the Sprint can't be reorganized between the team and PO – **True**
11. The Sprint can be cancelled before the Sprint Time Box is over – **True**
12. None of the Work done in a cancelled Sprint is accepted – **True**

## Sprint Planning

1. The team can proceed with Sprint Planning without Product Owner – **True**
2. The PO presents his/ her wish list and team asks questions to understand what needs to be built – **True**
3. While estimating PBI size in Sprint Planning is technically allowed, it's best to estimate prior to planning – **True**
4. The Product owner assigns development tasks to the team in Sprint Planning – **True**
5. The Product Owner gets involved in figuring out how code is written – **True**
6. The Team may split the PBI's in to tasks and estimate them in hours – **True**
7. The Team can commit to Sprint Goal based on either velocity or capacity – **True**
8. The Sprint Planning for a 2-weeks Sprint should be time-boxed to 4 hours – **True**
9. Adding a Backlog Refinement session half way through your sprint can help with making Sprint Planning shorter and more effective – **True**

10. During Sprint Planning, PO decides how many stories will be delivered by the end of the Sprint –

**True**

11. The Scrum Team is responsible for crafting the Sprint Goal – **True**

### Daily Scrum

1. It's fine for the Daily Scrum to last up to 45 minutes – **True**
2. People from outside the team may attend, provided it's okay with the team and they don't interfere – **True**
3. The main purpose of Daily Scrum is to inspect where the team stands with respect to Sprint Goal and adapt its plan to get there – **True**
4. The Daily Scrum is a status update meeting for the Product Owner – **True**
5. The Participation of Product Owner in Daily Scrum is decided by the Team – **True**
6. Discussions of how to resolve issues should be done during a sidebar after the Daily Scrum –  
**True**
7. While PO is optional for DSM, PO can attend to see the progress being made and determine if team needs help – **True**
8. It's helpful for the Daily Scrum to be in the same location, at the same time every day – **True**
9. Managers should attend the Daily Scrum to help ensure everyone is doing enough work – **True**
10. The Daily Scrum should not start until all participant arrive – **False**
11. If a team member is consistently late for the Daily Scrum, the Scrum Master should talk to the team member to figure out next course of action – **True**
12. The Sprint Burndown Chart should be updated in the Daily Scrum – **True**
13. The Team members should use only Daily Scrum to communicate impediments – **True**

## Sprint Review

1. It's expected that a team will demo a feature even if they did not finish it in the Sprint – **True**
2. The main purpose of the Sprint Review is for the Product Owner to accept the work done by the team – **True**
3. The main purpose of Sprint Review is for the Stakeholders to review the work done by the team and provide feedback – **True**
4. A PBI accepted by PO during the Sprint remains accepted even if the stakeholders disagree – **True**
5. Comments from stakeholders on accepted PBI's might result in a new PBI that will be added to Product Backlog – **True**
6. Team should spend at least 4 hours preparing for the review, and the review should include power point slides – **True**
7. If the team cannot demo a feature because it was not completed, it's okay for a manager to question the team's approach in this meeting – **True**
8. The Sprint Review is mainly for show and has little impact on the product – **True**
9. The Sprint Review is one of the ways in which the SCRUM address customer collaboration – **True**
10. The Sprint Review helps team in responding to change better as the assumptions will be tested here – **True**
11. A manager should pick who does the demos during the Sprint Review – **True**
12. Feedback from stakeholders during the Sprint Review should be collected and put on the backlog for consideration by the Product Owner instead of spawning long conversations during the review – **True**
13. The Product Owner discuss how the Product Backlog stands at the moment and projected dates of completion during the Sprint Review – **True**

## Certified Scrum Master Practice Test (CSM)

Visit the following site and practice the test (Answers are marked in BOLD letters and highlighted)

<http://www.proprofs.com/quiz-school/story.php?title=vndirect-scrum-master-test>

### 1. What does the Product Owner do during a Sprint? Discuss

- A. Protects the Team and the process
- **B. Clarifies requirements and answers questions**
- C. Guides the Team in its work
- D. Intervenes when required to make sure the pace of work is sustainable

### 2. Which role is responsible for turning the Product Backlog into incremental pieces of functionality? Discuss

- A. Product Owner
- B. Scrum Master
- **C. Team**
- D. Everyone within the Project

### 3. If a Team member is consistently late for the Daily Scrum, what is usually the first thing a Team should do?

- A. Report the Team member to his or her manager
- B. Have the Team member do the testing
- **C. Meet with the Team member to determine a solution**
- D. Ask the Scrum Master to move the Team member off the Team

### 4. During a Daily Scrum meeting, Olivia mentions she has found some open source code she thinks will solve one of the problems she has been working on. She wants to implement it immediately. What is the best next step? Discuss

- A. The Scrum Master tells Olivia to prepare an example and presentation for the Team so they can consider using the code
- **B. After the Daily Scrum meeting is held, a separate meeting is conducted to discuss the open source solution**
- C. All members of the Team are told to evaluate Olivia's solution and report back to the team at the next Daily Scrum meeting.
- D. The Product Owner notes the impediment and solves the problem after the meeting

### 5. Who is responsible for facilitating the Sprint Retrospective Meeting? Discuss

- A. Team
- B. Product Owner
- **C. Scrum Master**
- D. No one

### 6. Which role is MOST LIKELY to communicate an impediment during a Daily Scrum? Discuss

- A. Product Owner
- **B. Team**
- C. Stakeholders

- D. Scrum Master

**7. Who is primarily responsible for maintaining the Product Backlog? Discuss**

- A. Scrum Development Team
- B. Scrum Master
- C. Product Owner
- D. Stakeholders

**8. What is the Scrum Master's role in the Sprint Retrospective?**

- A. To determine the re-composition of the Team
- B. To facilitate the Team's search for improvements
- C. To lead the Team in the evaluation of each individual Team member
- D. To provide answers to the challenges that the Team identifies

**9. Which of the following is true concerning impediments?**

- A. The Team should not use daily Scrum meetings to report impediments
- B. It is the Scrum Master's top priority to remove impediments
- C. It is the Product Owner's job to remove impediments.
- D. A slow running server is not considered an impediment

**10. Why should the Product Owner attend the Daily Scrum? Discuss**

- A. To comment on the Team's progress
- B. To make sure the Team is still on target for its Sprint goals
- C. To tell the Team which tasks to work on next and update the Product Backlog
- D. To see the progress being made and determine whether the Team needs help

**11. In a 30-day Sprint, how long is the Sprint Review Meeting?**

- A. Four hours maximum
- B. Four to eight hours
- C. At least eight hours
- D. As long as required

**12. Which of the following is a responsibility of the Product Owner? Discuss**

- A. Determine the appropriate release dates
- B. Determine the appropriate technical solution for the project.
- C. Determine the Team composition necessary for success
- D. Determine the length of the Sprints

**13. What are the desirable qualities of a Product Vision? Discuss**

- A. Features a detailed overview that enlightens and inspires
- B. Provides a complete breakdown structure of the ROI formula
- C. Describes why the project is pursued and the product desired end state
- D. Outlines traceability back to overall corporate governance in IT investment

**14. Which of the following statements is TRUE about Scrum teams and planning? Discuss**

- A. Scrum Teams place value in following a plan, but they value responding to change even more
- B. Planning is not important in Scrum.
- C. Scrum is intended to be an efficient way to carry out plans that have already been made
- D. Traditional planning is replaced by the Sprint Burn down chart

**15. The Scrum Master... Discuss**

- A. Controls the priority order of items in the team's backlog
- B. Is the Team's Scrum expert.
- C. Creates, refines and communicates customer requirements to the Team
- D. Is the keeper of the product vision

**16. According to Scrum guidelines, who is responsible for hiring or assigning a new person into a Team? Discuss**

- A. Scrum Master
- B. Product Owner
- C. This is outside of the scope of Scrum
- D. The self-managing Team

**17. If a Team determines that it has over-committed itself for a Sprint, who should be present when reviewing and adjusting the Sprint goal and work? Discuss**

- A. Product Owner and Stakeholders
- B. Product Owner, Scrum Master, and Team
- C. Scrum Master, Project Manager, Team
- D. Team

**18. What does Scrum's definition of done help a Team produce? Discuss**

- A. Functionality that has been deployed to the users and delivers real business value
- B. Functionality that has been designed and analysed
- C. Product functionality ready to be tested
- D. An increment of potentially shippable product

**19. How do the principles behind the Agile Manifesto suggest approaching architecture? Discuss**

- A. Architecture emerges
- B. Architecture is not important, but functionality is important
- C. Architecture is defined and planned up front
- D. Architecture is defined and implemented in the first iterations

**20. How are the Product Owner's responsibilities BEST described?**

- A. Directing the Team's daily activities
- B. Keeping stakeholders from distracting the Team
- C. Managing the project and ensuring that the work meets the commitments to the stakeholders
- D. Optimizing the business value of the work

**21. After a Team has committed to a Sprint goal, what authority does it have?**

- A. The Team has authority to swap Sprint backlog items with Product Backlog items if it cannot finish them.
- B. The Team works under the authority of the Product Architect, who has set the definition of done
- C. The Team works according to the priorities set by the Scrum Master, as the Scrum Master is committed to the Scrum framework
- D. The Team does whatever is necessary to achieve the goal

**22. Which of the following is a MAIN purpose of a Sprint Backlog? Discuss**

- A. For the Scrum Master to manage the progress during the Sprint
- B. For the Team to manage themselves during the Sprint
- C. For the Team to manage the number of hours spent on tasks in the Sprint
- D. For the Product Owner to understand what the Team has committed to for a Sprint

**23. What is the main purpose of a Sprint Review?**

- A. For the Team to review their work and to determine what is needed to complete the next set of backlog items
- B. For Stakeholders to review what the Team has built and to give input on what to do next
- C. For Stakeholders to “hold the Team’s feet to the fire” – to make sure something is produced during the Sprint
- D. For the Product Manager to be able to show progress to the Stakeholders

**24. What does the Team do during the first Sprint?**

- A. Delivers design documents
- B. Develops a plan for the rest of the Sprints
- C. Accomplishes the Sprint goal
- D. Predetermines the complete architecture and infrastructure

**25. When using Scrum, who is primarily responsible for making scope versus schedule trade-off decisions?**

- A. The Project Manager
- B. The Team
- C. The Product Owner
- D. The Scrum Master

**26. Can the Product Owner and the Scrum Master be the same person?**

- A. No. The person would have too much power and it would create confusion
- B. Yes, if the person has the authority and empowerment to do both things
- C. No. It would take too much of one person’s time
- D. Yes, as long as the person can balance both responsibilities with care

**27. How does the Agile Manifesto address planning?**

- A. Planning is not required in an agile project, as the project is focused on current status
- B. Responding to change is more important than following a plan
- C. Sign-off on the detail of Product Backlog items is mandatory before any item can be planned into iteration.
- D. Upfront planning and design is an integral stage before development can begin.

**28. When should the Burndown Chart be updated?**

- A. After every Sprint
- B. After every day
- C. After every release
- D. After every week

**29. Once a Team starts a Sprint, who determines how the Team does it work?**

- A. Project Manager
- B. Team lead
- C. Scrum Master
- D. Team

**30. Which statement is accurate about the role of the Product Owner during the Daily Scrum?**

- A. The Product Owner's participation is defined by the Team
- B. The Product Owner outlines the additional changes that must be absorbed by the Team in the Sprint
- C. The Product Owner ensures the Burn down rate is maintained at the estimated rate
- D. The Product Owner provides instruction to the Team on how to implement a workable solution

**31. The CEO asks the Team to add a story to the current Sprint. What should the Team do?**

- A. Respect the CEO's authority and add the story to the current Sprint without any adjustments
- B. Add the story to the next Sprint.
- C. Inform the Product Owner so he/she can work with the CEO
- D. Add the story to the current Sprint and drop a story of equal size

**32. What is MOST likely to result if the Product Owner is not available during a Sprint? Discuss**

- A. The Team extends the length of the Sprint until the Product Owner returns
- B. The Scrum Master assumes the responsibilities of the Product Owner.
- C. The Sprint is abnormally terminated
- D. The product increment may not meet expectations

**33. Agile Manifesto says to value responding to change over following a plan. Which of the following statements illustrates this?**

- A. Changes are accepted only if other features are removed from the backlog such that a fixed end-date is maintained
- B. Changes are accepted up until the point that the first Sprint begins. Then, changes are deferred to a future release
- C. Changes are accepted at any time during the development effort depending on the business value of the change, the Product Owner's acceptance, and the ability of the team to respond in a timeframe acceptable to the Product Owner
- D. Changes are accepted up until about halfway through the project, then all changes are deferred to a future release

**34. What is the approach that Scrum encourages when a Team determines it will be difficult to deliver any value by the end of a Sprint? Discuss**

- A. Together with the Product Owner, focus on what can be done and identify a way to deliver something valuable at the end of each Sprint
- B. Extend the Sprint by a few days to accommodate the extra work
- C. Suggest the Product Owner abnormally terminate the Sprint
- D. Immediately escalates to Senior Management.

**35. What are the three components of an empirical process? Discuss**

- A. Transparency, inspection, and adaptation
- B. Planning, committing, and measuring
- C. Feedback, courage, and simplicity
- D. Planning, taking action, and checking for quality

## Lesson 3 VALUE DRIVEN DELIVERY

### Topics to Discuss

- Value Driven Delivery
- Assessing values in Agile Projects
- Prioritizing Values in Agile Projects
- Incremental Delivery
- Contracting in Agile Projects
- Value, Verification & Validation

## Value Driven Delivery

Maximizing business value through prior authorization  
incremental delivery testing and validation

### What are the Value Driven Delivery Tasks?

- Plan work incrementally
- Gain consensus on just in time acceptance criteria
- Tune process to organization team and project
- Release minimal viable product
- Work in small batches
- Review often
- Prioritize work
- Refactor code often
- Optimize environmental operational it infrastructure factors
- Review and checkpoint often
- Balance value and risk

- Reprioritize to maximize value
- Prioritize nonfunctional requirements
- Review and improve the overall process and product

### **What is Value Driven Delivery?**

- Projects exist to create business value
- The project manager's goal is to increase value and reduce risk as early as possible
- Value-driven delivery has the most weight of the business existence

### **How will you deliver early in the project?**

- Based on prior translation value is delivered first
- The longer a project lasts the more opportunity for risk
- By delivering high-value items early, the team demonstrates an understanding of the customers needs
- Early value help stakeholders maintain synergy an interest in the project

### **Is it minimizing waste is a constant goal?**

- Waste reduces value
- Poppendieck's Seven Areas of Waste:
  - Partially done work
  - Extra processes
  - Extra features
  - Task switching
  - Waiting
  - Motion
  - Defects

# Assessing Values in Agile Projects

**Value is Expressed in Financial Terms**



## What is ROI?

- Return on investment is the profitability in a project
- Return on investment is the value of the project minus the investment in the project
- A higher return on investment means you are getting a better return than a lower return –bigger is better
- Return on investment is not the best approach to discovering business value in a project

## What is Present Value?

The calculation of a future amount in today's terms given and assumed interest rate and inflation rate

## What is Net Present Value?

- The present value of a revenue stream over a series of time periods
- Higher net present values are good

## What is IRR?

- Calculates the NPV of the cost of the project and when the NPV of the project meets or exceeds the NPV of the benefits of the project
- The higher the IRR the more valuable the project is

## What is EVM for Agile Projects?

- It's unlikely you'll see earned value management on the exam
- EVM is a suite of formulas to show performance
- Earned value compared to actual performance to planned performance

## EVM Calculation?

Consider a scenario

BAC = \$100,000 for the entire project

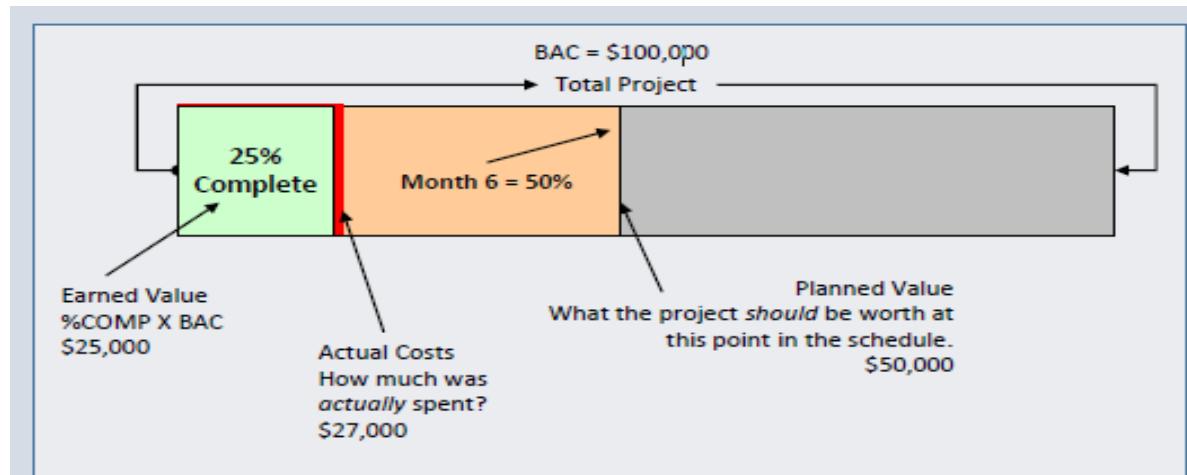
As of now      EV = \$25,000      AC=\$27,000      PV=\$50,000

### Finding the variance

- Cost Variance = EV-AC =  $25,000 - 27,000 = \underline{-2,000}$
- Planned Variance= EV-PV =  $25,000 - 50,000 = \underline{-25,000}$

### Measuring the performance

- Cost Per Index =  $25,000 / 27,000 = \underline{.93}$
- Schedule Per Index =  $25,000 / 50,000 = \underline{.50}$

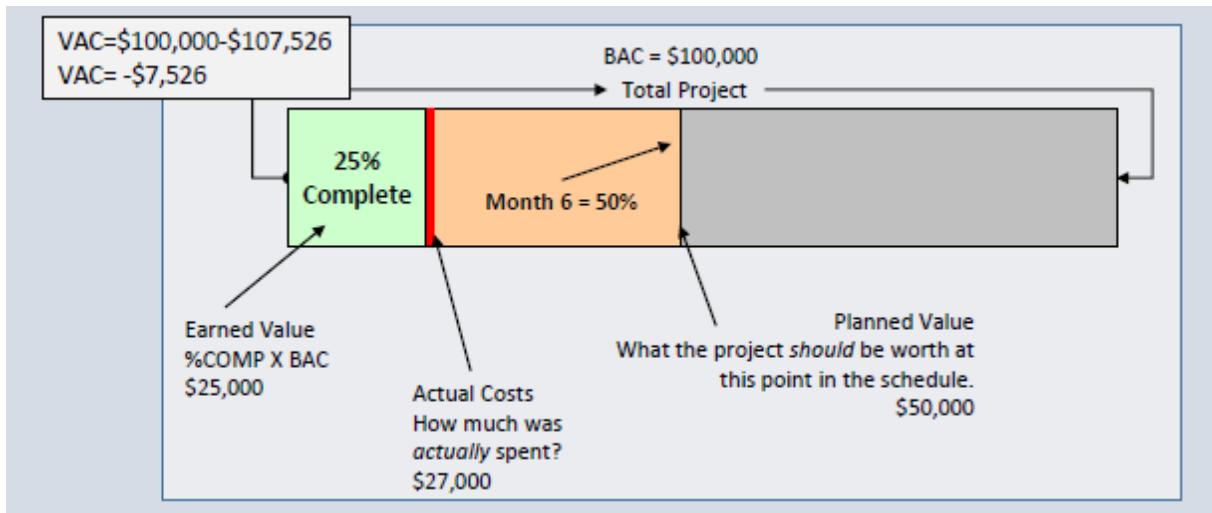


Estimate at completion EAC = BAC / CPI

$$EAC = \$100,000 / .93 = \$107,526$$

Estimate to Complete ETC= EAC – AC

$$ETC = \$107,526 - \$27,000 = \$80,526$$



## EAC in Action

### EAC Formulas

CPI will remain the same <b>BAC/CPI</b>	BAC	CPI	Result			
Trends will continue <b>AC+BAC-EV</b>	AC	BAC	EV	Result		
Future work estimate is no longer valid <b>AC+ETC</b>	AC	ETC	Result			
Weight values for SPI or CPI <b>AC+[(BAC-EV)/(CPIxSPI)]</b>	AC	BAC	EV	CPI	SPI	Result

## To Complete Performance Index (TCPI)

Efficiency needed to meet BAC:  $TCPI = (BAC - EV) / (BAC - AC)$

$$TCPI = (\$100,000 - \$25,000) / (\$100,000 - \$27,000) = 75,000 / 73,000 = 1.0273$$

Efficiency needed to meet EAC:  $TCPI = (BAC - EV) / (EAC - AC)$

$$TCPI = (\$100,000 - \$25,000) / (\$107,526 - \$27,000) = 75,000 / 80,526 = .93$$

**Note:** -

*Great than 1, hard to accomplish | Exactly 1, same level of efficiency | Less than 1, easier to accomplish*

## **Story Points & EVM**

- Can use Story Points instead of dollars
- Planned to complete 20 story points
- Completed 18 instead
- SPI=EV/PV = $18/20 = .90$

## **What is 5 EVM rules?**

- EV is first
- Variance means subtract
- Index means division
- Less than one is bad in an index
- Negative is bad in a variance

## **What is Agile Project Accounting?**

- Agile accounting defines the economic models of agile projects
- Project work and smaller chunks of a larger project
- Smaller chunks of work are less risky
- Agile project accounting is accountability of what was invested in relation to the value of the return on investment

## **What is Key Performance Indicators?**

- Key performance indicators are metrics to show how well the project is performing
  - Rate of progress
  - Remaining work
  - Likely completion date
  - Likely cost remaining

## **How will you manage the risk in an Agile Projects?**

- Risk in an agile project is anything that threatens the project's goals
- Risk is considered an anti-value
- Risk must be managed in a project
- Risk identification is an iterative activity

- Risk a recorded in a risk along

**How would you address the feature with high risk?**

- Features that have high levels of risk can be addressed early in project iteration
- High areas of risk need to be addressed sooner rather than later
- A risk-adjusted backlog brings risk features into an early portion of the project
- A risk burndown chart tracks risk as they move down in priority and elimination

**What are the regulatory compliance for agile projects?**

- Regulations are requirements
- Regulatory compliance is one instance for documentation where just because is utilized

## Prioritizing Values in Agile Projects

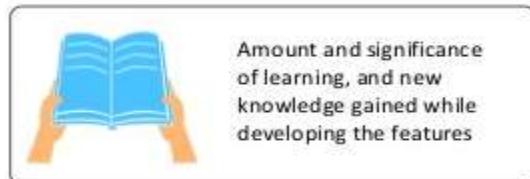
**Welcoming Changing requirements is the key to Agile Projects**

**How will you prioritize the customer value?**

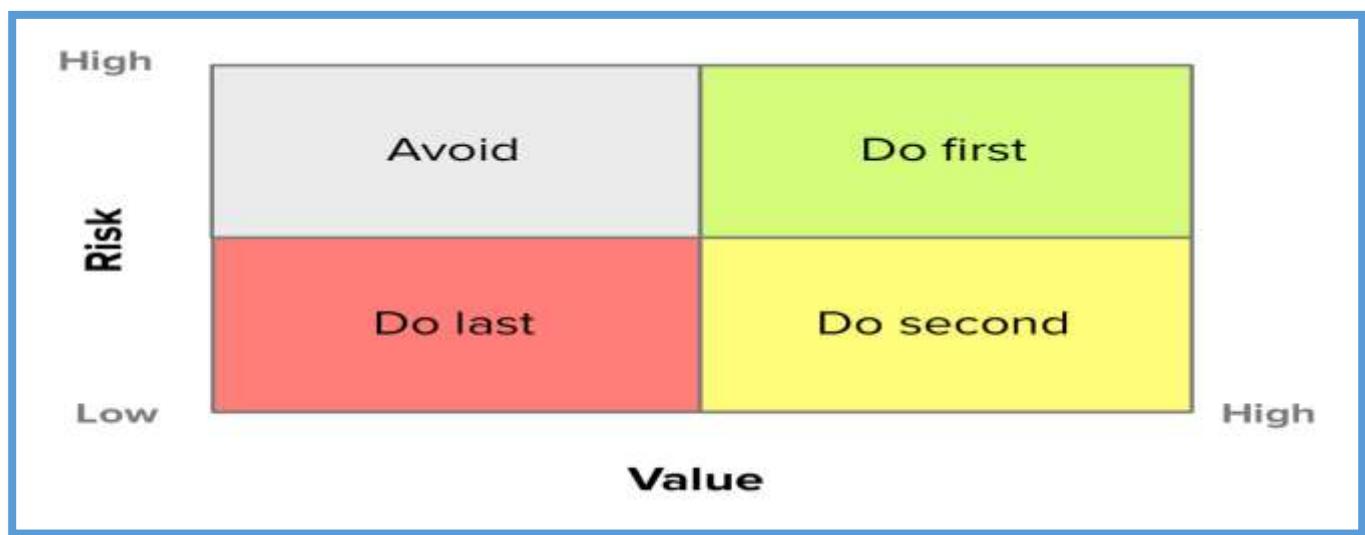
- Agile teams work on the items that yield the highest value to the customer first
- The product owner is responsible for keeping items in the backlog prioritized by business value
- When changes added to backlog, they must be prioritized for value
- The customer is the person who will declare what success looks like
- The team will discuss with the customer at the end of each iteration the priority of the remaining work items

## What are factors In Prioritization in Agile Planning?

The factors to be considered while prioritizing a project are as follows:



## What is Risk, Value relationship in Agile Planning?



## What is financial prioritization – Source of revenue?

Source of Revenue	Impact
New Revenue	Revenue originating from implementing new features or through new business models
Incremental Revenue	Additional revenue eliminated from the existing customers through the enhancement of features
Retained Revenue	Revenue the organization would have lost otherwise, if the features were not implemented
Operational Revenue	Better set-up, configuration, implementation, training, cycle time reductions and cost savings coming up from these

## What are the measures to calculate financial value?

Factors	Impact
NPV	<ul style="list-style-type: none"><li>○ The future inflows and outflows, calculated at present point in time</li><li>○ Expressed as an absolute value</li><li>○ Using just NPV to compare the financials of two themes can be misleading</li></ul>
IRR	<ul style="list-style-type: none"><li>○ How quickly will the money invested increase in value</li><li>○ Expressed in % terms</li><li>○ Can be compared across projects</li><li>○ Higher the rate better it is</li></ul>
Pay-back period	<ul style="list-style-type: none"><li>○ How soon will the project recover the initial investment</li><li>○ Does not take care of the time value of money</li><li>○ Does not indicate the profitability of the theme</li><li>○ Lesser the period better it is</li></ul>
Discounted pay-back	<ul style="list-style-type: none"><li>○ Incorporates the time value of money into the calculations by discounting the future inflows and outflows based on a % rate</li><li>○ Lesser the payback period, better it is</li></ul>

## What are prioritization methods?

The prioritization methods are: -

- MoSCoW Prioritization
- 100-point method
- Kano analysis
- Relative weighting Model

## How will you prioritize the schemes?

- How the work is prioritized
- The team agrees on the prioritization scheme
- The prioritization scheme is communicated and agreed upon by the entire agile team

## What is the simple technique for prioritization?

- Items in the product backlog are ranked:
  - Priority one (high)
  - Priority two (medium)
  - Priority three (low)
- This approach has a risk that everything is ranked as priority one

## What is MoSCoW Prioritization Scheme?

- Made popular by DSDM
  - Must have
  - Should have
  - Could have
  - Would like to have, but not at this time

## What is Monopoly money?

- Stakeholders receive monopoly money equal to the amount of the project budget
- The monopoly money is distributed among the system features
- This approach is most effective when it's limited to prioritizing business features

## What is 100 Point method?

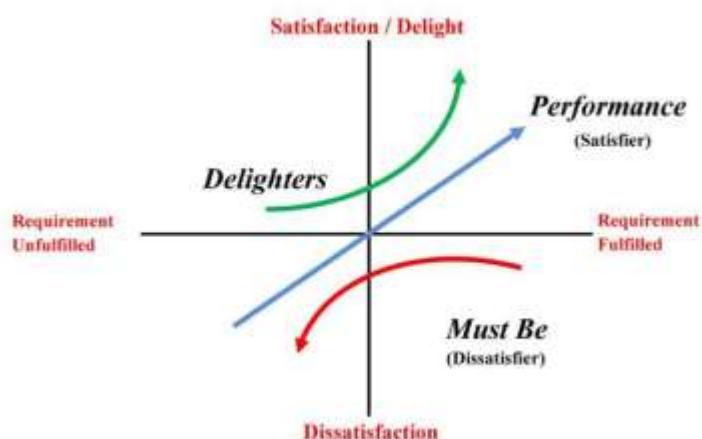
- Each stakeholder is allotted 100 points
- The points are assigned to the most important requirements

## What is Dot Voting or Multi Voting?

- Stakeholders gets a predetermined amount of dots
- Dots are assigned to the business features
- Dots could be check marks or stickers

## What is Kano Analysis?

- Delighters excitors
- Satisfiers
- Dissatisfiers
- Indifferent



## What are requirements at prioritization level?

- Uses a scale of 1 to 9
- Benefit penalty cost and risk of every feature is rated



## What are the relative prioritizing ranking?

- Priority of features
- Simplest the features from most important to least important
- Determination made to meet budget and schedule
- Changes may change the prioritize list
- Changes may bump some priorities from the list

# Incremental Delivery

Optimizing the value of delivery

## What is Incremental delivery?

- The team regularly deploys working increments
- Usually to a test environment for evaluation
- This is an opportunity for an early return on investment

## What is Minimum Viable Product?

- Complete enough to be useful
- Small enough that it does not represent the entire project
- Also known as the minimal marketable feature
- Barebones essentials of a product

## What is Agile Tooling?

- Agile teams prefer low-tech high-touch tools over-sophisticated computerized models
- Technical tools can exclude team members from interacting
- Consider high-tech tools for scheduling:
  - Data accuracy perception increases
  - A bad estimate is a bad estimate
  - Barriers for stakeholder interaction are created

## Examples of Low-Tech & Hi-Touch tools?

- Cards
- Charts
- Information radiator
- Tools that promote communication and collaboration
- Tools that promote learning and knowledge transfer

## Compare Scheduling Software Vs Kanban board?

- Also known as a task board
- Help teams monitor the work in progress

## What is Work In Progress?

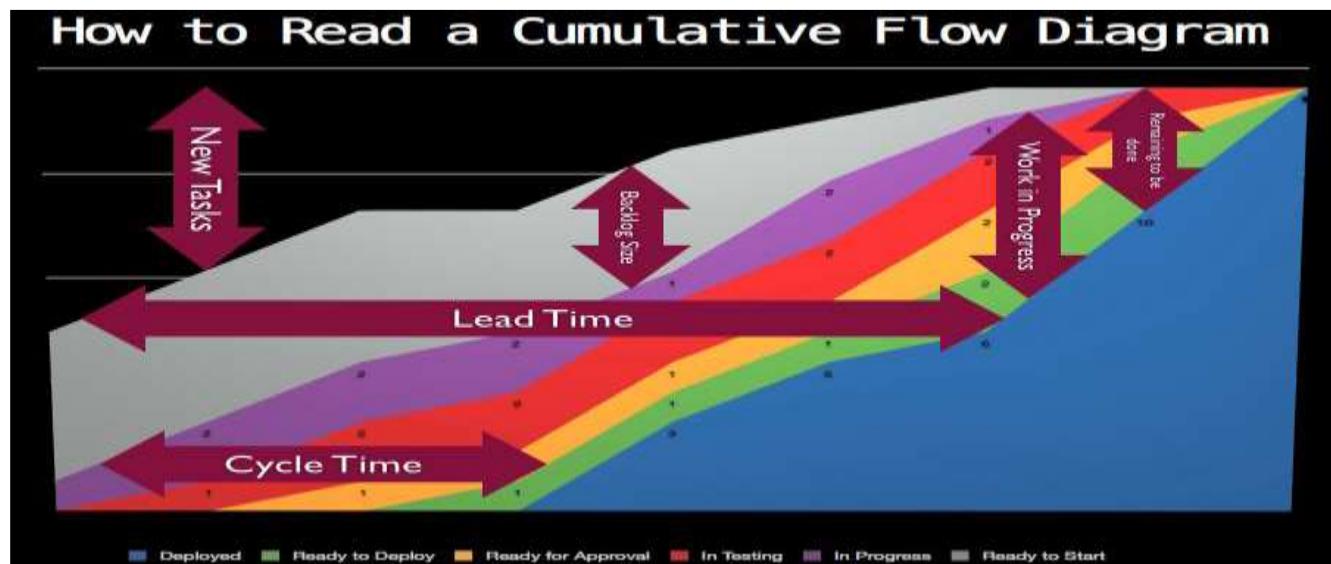
- Also known as a work in process and work in play
- WIP is risk
- WIP hides bottlenecks
- WIP requires investment but delivers no return until the work is complete
- WIP needs to be limited

## Why do we limit Work In Progress?

- Agile attempts to limit WIP
- Kanban boards can have WIP limits
- WIP limits keeps the team from taking on too many pieces of work
- WIP limits reveal bottlenecks

## What is CFD?

- Cumulative flow diagrams help tracking and forecasting the delivery of value
- Reveals the total in progress and completed work



## What are the bottlenecks & theory of constraints?

- A constraint is anything that limits your options
- Time, cost, and scope are typical constraints
- Constraints can be throughput of capacity
- A thin line in a cumulative flow diagram can reveal a bottleneck

## What is Goldratt's Theory Of Constraints?

- Five Focusing Steps Of Goldratt's Theory Of Constraints
- Identify the constraint
- Exploit the constraint
- Subordinate all other processes to exploit the constraint

- If after steps two and three is done more capacity is needed to meet demand elevate the constraint
- If the constraint has not moved go back to step 1

# Contracting Agile Projects

## Exploring Agile Project Contracts

### What is Request for Proposal?

- A request for proposal is from the buyer to the seller
- If the seller is to use an agile practice it must be defined in the request for proposal
- The buyer may need to educate the vendor about agile practices
- Agile project welcome change so this may be hard to do with contracts

### What is Agile Constraints?

- Agile is flexible
- Contracts are not flexible
- Contracts are a form of a constraint
- Contracts are constrained by an offer and a consideration
- Collaboration over contracts
- Agile projects constrain time and cost
- Agile project allows the scope to change
- Contracts typically constrain and balance time cost and scope

### **What are the considerations for contracts?**

- Scope changes
- Priorities
- Time and cost

### **What is Fixed Price Contract?**

- Both parties share some of the risk and reward
- If a vendor delivers on-time they get paid for their work at the hourly rate
- If the vendor delivers early they get paid for their work but at a higher hourly rate
- If the vendor delivers late they get paid for their work but at a lower

### **What is Fixed Price work packages?**

- The price of the work remains constant
- Individual work packages are estimated for cost
- Changes to the scope reflect a new estimate for those work packages

### **How will you customize the contracts?**

- The buyer and the seller can make any agreement they want
- Procurement is always tricky with agile projects

## **Value, Verification & Validation**

**Ensuring Value with Agile Projects**

## **What is Gulf of evaluation?**

- The difference between what is said and what is understood
- Intangible projects often experience this gulf
- What does done looks like?

## **What is frequent Verification & Validation?**

- Testing checkpoints and reviews
- Frequent verification and validation happened throughout the project
- Build consensus between the project team and the project stakeholders

## **Examples of Verification & Validation in XP?**

- Pair programming
- Unit testing
- Customer collaboration
- Stand up meetings
- Acceptance testing
- Iteration demonstrations
- Product release

## **What is Exploratory Testing?**

- The tester aims to discover issues and unexpected behavior
- The tester explores the software
- This is in addition to scripted testing

## **What is Usability Testing?**

- How will a user respond to the system under realistic conditions?
- How easy is it to use the system?
- What improvements need to be made for usability?

## **What is Continuous Integration in Agile Project?**

- Incorporate new and changed code into the code repository
- Small code commits
- Frequent integration
- Relies on automated tools to integrate code when new code is checked in

## **What is Continuous Integration System?**

- Source code control system –version control
- Build tools –build tools compile the code
- Test tools –unit test to ensure functionality operates as expected
- Scheduler or trigger –builds are launched on a schedule or based on conditions
- Notifications –an email or instant message reporting on the results of a build

## **Why Continuous Integration?**

- Early warning a broken conflicting or incompatible code
- Problems are fixed as they occur
- Immediate feedback
- Frequent unit testing defines issues quickly
- Easy to reverse the code back to the last known good

## **What the disadvantages of Continuous Integration?**

- Set up time is lengthy
  - Often called Iteration 0
- Cost of a dedicated server
- Time required to build a suite of automatic tests

## **How will you explore the test-driven development?**

- Also called test first development
- Test are written before the code is written
  - Nunit
  - Junit
- Code is developed and edited until the code passes all tests
- Refactoring is the final step to clean up the code

## **What is Test Driven Development?**

- Red –green –re-factor
- Red –green –clean
- Focus on the test first
- Early testing helps catch defects early in development
- Beware of developers writing their own test

## **What is Acceptance Test Driven Development? What its Life Cycle?**

- Testing focus is on business requirements
- Test represent the functionality the software is to have
- It's all about the desired behavior
- FIT –framework for integrated testing
  - Also called FitNesse
  - <http://www.fitnesse.org/>
- Discuss the requirements –developers as the product owner questions that are designed to gather acceptance criteria
- Distill test in a framework friendly format –gets the test ready to be entered into the acceptance test tool
- Developed the code and run the test –test initially fail because the code hasn't been written completely
- Demo –with automated acceptance testing scripts and demonstrations of the software

## Value Driven Delivery Practice Questions

**1. You are a Scrum Master for your organization and you are attending an industry tradeshow. As a representative of Agile, you were asked to explain in brief what value-driven delivery is, which of these will you say?**

- A. Maximization of values delivered to stakeholders while at the same time ensuring non-value-added work.
- B. The reaching of consensus on the acceptance criteria of the deliverables.
- C. Soliciting feedback from stakeholders and reviewing frequently to enhance value.
- D. Having knowledge about delivering valuable results by producing high-value increments for reviews based on stakeholders' priorities.

**Ans: D.** Of all the choices presented, D is the best answer. Having knowledge about delivering valuable results" is in concordance with Agile terms and language. Choices A, B & C are incorrect.

**2. Which of the divisions listed below is contained in the four basic subdivisions of Value driven delivery?**

- I Incremental Development
  - II Risk control
  - III Prioritization
  - IV Define Positive Value
- A. I & II
  - B. I, II, III & IV
  - C. II, III & IV
  - D. III & IV

**Ans: B.** All of the choices listed above are the basic subdivisions of value-driven delivery. Value-driven delivery includes incremental development, risk control, prioritization, and defining positive value.

**3. In a scenario whereby Company X, Y and Z are dealers on same products. Where Z represents Agile, as Agile active team member, how can you utilize competitive advantage over others and realize value earlier?**

- A. Giving 20% discount to consumers.
- B. Delivering work incrementally.
- C. Organizing freebies often to stimulate customers' patronage.
- D. Making use of the concept of minimally marketable features.

**Ans: B.** Delivering work incrementally to gain competitive advantage and early realization of value. Choices A, C & D are incorrect for this question.

**4. As a well-informed, competent and diligent Agile team member, how many tasks are included in value-driven delivery for the PMI-ACP examination?**

- A. 10 B. 12 C. 14 D. 16

**Ans: C.** There are 14 tasks for value-driven delivery. These are:

- Plan work incrementally
- Gain consensus on just in time acceptance criteria
- Tune process to organization team and project
- Release minimal viable product
- Work in small batches
- Review often
- Prioritize work
- Refactor code often
- Optimize environmental operational in infrastructure factors
- Review and checkpoint often
- Balance value and risk
- Reprioritize to maximize value
- Prioritize non-functional requirements
- Review and improve the overall process and product

**5. For a project to be successful and yielding, what are the necessary factors to consider or things to do, being an experienced Agile team member?**

- A. Putting some practices in place on how to handle a project.  
B. Increasing the number of members in the intended team, to effect a quick accomplishment.  
C. Refining project processes on the basis of the team's experiences and organization preferences.  
D. Considering the retrospective team's achievements.

**Ans: C.** Refining project processes on the basis of the team's experiences. Choices A, B & D are incorrect for this question.

**6. In terms of Agile project management, which of these appropriately defines prioritization?**

- A. The over-arching principle of the Agile project.  
B. Delivering the highest value to the customers as early as possible.  
C. The conformity of a product to a rule, as in specification, policy, standard or law.  
D. The process where customers organize product backlog for implementation based on the perceived values.

**Ans: D.** Organizing a product backlog for implementation. Choices A, B & C are incorrect for this question. Earned Value Management is the correct answer. Choices B, C & D are incorrect for this question.

**8. In an attempt to construct a perfect graph of Earned Value Management, what are the features that must be present in your graph?**

- A. Number of planned iterations in a release.
- B. Planned story points in the release.
- C. Planned budget for the release.
- D. All of the above.

**Ans: D.** All of the aforementioned must be present in the graph. Choice A, B or C only is incorrect for this question.

**9. The conformity of a product to a rule such as in specification, policy, standard or law is known as \_\_\_\_\_**

- A. Compliance.
- B. Validation.
- C. Verification.
- D. Regulation.

**Ans: A.** Compliance is the correct choice. Choices B, C & D are incorrect for this question.

**10. The term "Carver", according to the terminologies of Agile is best defined as a\_\_\_\_\_**

- A. The criticality, accessibility and vulnerability of the objective aspect and mission of a project.
- B. Total story points completed in the actual measurement of EMV.
- C. Document that formally begins the project created during initiation and include the project's justification.
- D. None of the above.

**Ans: A.** The criticality, accessibility and vulnerability of the objective aspect and mission of a project are the right choice. Choices B, C & D are incorrect for this question.

## Lesson 4 STAKEHOLDER MANAGEMENT

### Topics to Discuss

- Working with the project stakeholders
- Establishing | Creating a shared vision
- Creating collaboration
- Communicating with project stakeholders
- Using interpersonal skills

## Working with Project Stakeholder

### Stakeholder Engagement

#### What are the Stakeholders Engagement Tasks?

- Engage and empower business stakeholders
- Share information frequently with all stakeholders
- Form working agreements for participation
- Assess organizational changes to maintain a stakeholder engagement
- Used collaborative decision-making and conflict resolution
- Establish a shared vision for project stakeholders
- Maintain a shared understanding of project success
- Provide transparency for better decisions
- Balance certainty and adaptability for better planning

## **Who are the project stakeholders?**

- Are impacted by the project
- Can impact the project
  - Customers
  - Project sponsor
  - Project leaders
  - Development team
  - Vendors
  - End users

## **How will you identify the stakeholders?**

- Stakeholder analysis
- Expert judgment
- Meetings
- Create the stakeholder register

## **How will you plan the stakeholder Management?**

- Expert judgment
- Meetings
- Analytical techniques
- Create the stakeholder management plan
- Update project documents

## **How will you manage the stakeholder Management?**

- Communication methods
- Interpersonal skills
- Management skills
- Issue log
- Change request
- Project management plan updates
- Project document updates
- Organizational process assets updates

## **How will you control the stakeholder Management?**

- Information management systems
- Expert judgment
- Meetings
- Work performance information
- Change request
- Project management plan updates
- Project document updates
- Organizational process assets updates

## **How will you keep the stakeholder engaged?**

- Agile project worked with stakeholders
- Not command and control
- Consider servant leadership
- Identify project stakeholders as early as possible

## **How will you educate the stakeholder for agile projects?**

- People new to agile projects need some basic education
- Address concerns directly with project stakeholders
- Explain the approach that will be used

## **How Stakeholder engagement get managed?**

- Short iterations keep stakeholders involved
- Reviews and demos show the results of the work
- Agile places value of work that is done
- Agile is naturally visible for project stakeholders

## **How will you incorporate the stakeholder values?**

- Work is based on what the stakeholders value
- Engage the product owner to prioritize the backlog
- Work is executed by priorities
- The development team creates the highest priority items
- The development team delivers early value to the business
- Stakeholders are invited to planning meetings and retrospective

## **How will you incorporate the community values?**

- Agile teams must share the values of their broader community
- Respect
  - Agile works for consensus
  - Don't judge suggestions
  - Respect differing opinions
- Courage
  - Agile teams display courage through demonstrations
  - Pair programming
  - Product owner prioritizing requirements
  - Retrospective

## **What are the principles of Stakeholder engagement?**

- Get the right stakeholders
- Insure a stakeholder participation
- Manage stakeholder interest
- Frequently discussed what done looks like
- Show progress to project stakeholders
- Openly discuss project estimates and projections

# Creating a Shared Vision

Understanding what is requested and delivering what was requested

## Why Agile will fail fast?

- Failing fast means failing early and cheaply
- Good way to discover misunderstandings
- Ensures the project team understands what stakeholders want

## What is Agile Charter?

- A document issued by the project sponsor that formally authorizes the existence of a project
- Agile charters authorize the project and the project manager
- Agile charters are from the project sponsor
- Could be lightweight or very detailed
- Acknowledge change is likely in the actual project
- Agile Charter will contain
  - Vision
  - Goals
  - Measures of Success
  - Trade-off Matrix
  - Challenges |Roadblocks | Risks
  - Definition of Done (Feature | Release | Project)
  - Teams Names | Availability
  - Milestones

## **What is the difference between Agile project charter and Traditional project charter?**

- Traditional charters are very specific
- Agile charters are broad and high level
- Agile charters define:
  - Who will be engaged
  - What is the project about?
  - Where will the project take place?
  - When will the project start and end
  - Why this project being chartered
  - How the goals of the project be achieved

## **How will you create a Project “Tweet”?**

- Project customers in the project team can work together to create a project tweet
- Describe the goal of the project in 140-280 characters or less
- This exercise defines a high-level description of the project
- Elevator statement

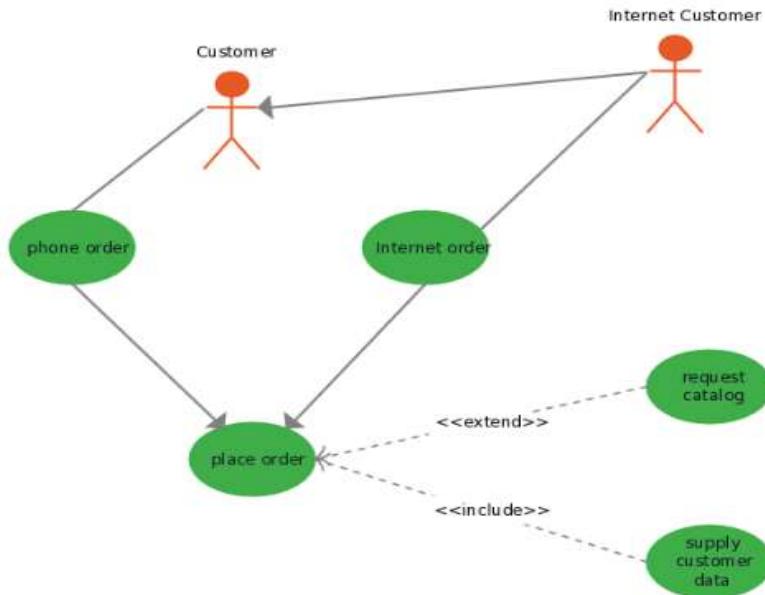
## **What does “Done” mean?**

- Defining done is important for everyone
- An example of a shared vision
- User stories –done will mean developed documented and tested
- Releases –done means there are no large defects or remaining change requests
- Final project deliverables –priority features are implemented three months of trouble-free operation and satisfactory scores

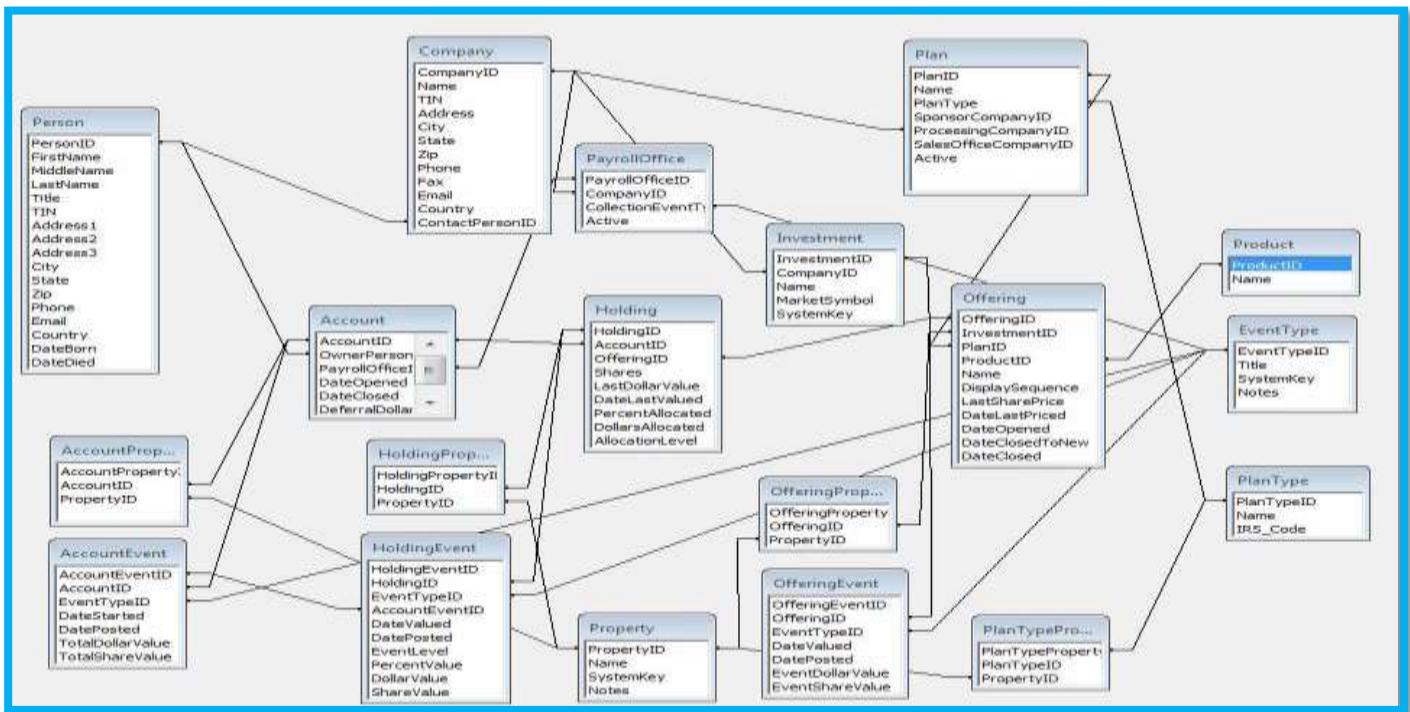
## **How will you work with Agile Modelling?**

- Modeling techniques for agile projects
- The value is in discussion and creation of the model
- Often treated on whiteboards and photographs for a record
- Lightweight and barely sufficient

## **How the user will use the solution? Draw a Use Case diagram?**



## Sample Data Model



## Screen Designs

**Microbial Samples**

**Microbials (Cultured)**  
(BioAerosols, Bulk, Swab, Water, etc.)

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## What is Wireframes?

- A quick mock-up of a product
- Could be screens and data flows between screens
- Ensures that everyone has the same understanding of the product
- A form of low fidelity prototyping
- Quick way to get feedback

## What is User Personas?

- Biographical sketches of key stakeholders
- Description of product users
- Somewhat grounded in reality
- Goal oriented
- Show tangible and actionable outcomes
- Focus on the users and who the users will be

# Communication

## Managing Communications in Agile Project

**How will you plan the communication management?**

- Communication requirements analysis
- Communication technology
- Communication model
- Communication methods
- Meeting
- Create the communications management plan
- Update project documents

**How will you manage the communications?**

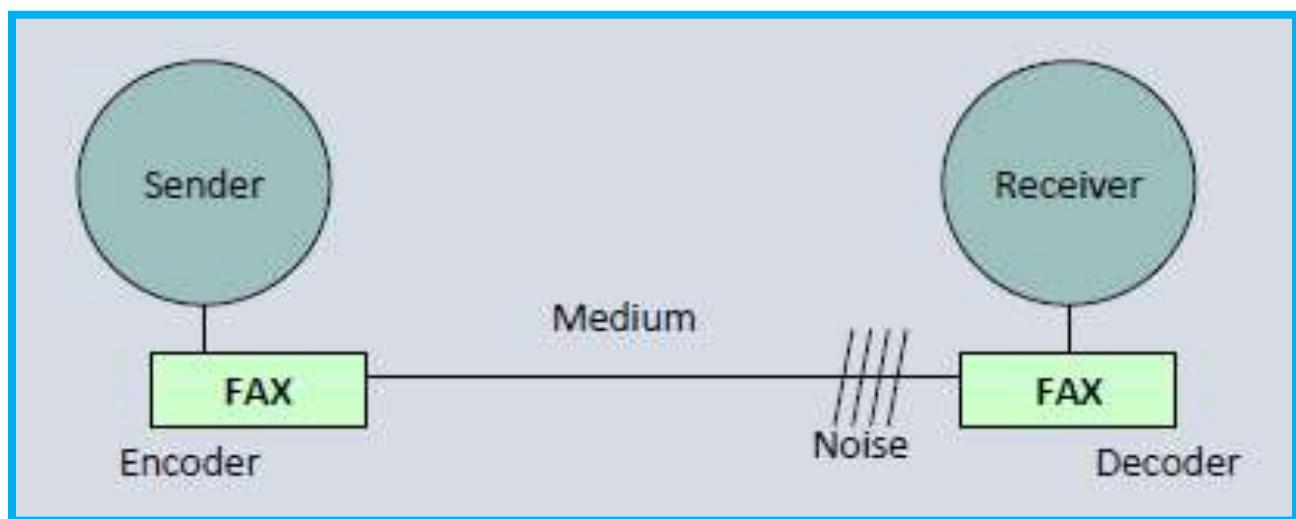
- Communication technology
- Communication models
- Communication methods
- Information management systems
- Performance reporting
- Communicate with stakeholders
- Update the project management plan project document organizational process assets

## How will you control the communications?

- Information management systems
- Expert judgment
- Meetings
- Work performance information
- Change request
- Update the project management plan project documents and organizational process a set

## What is Communication Model?

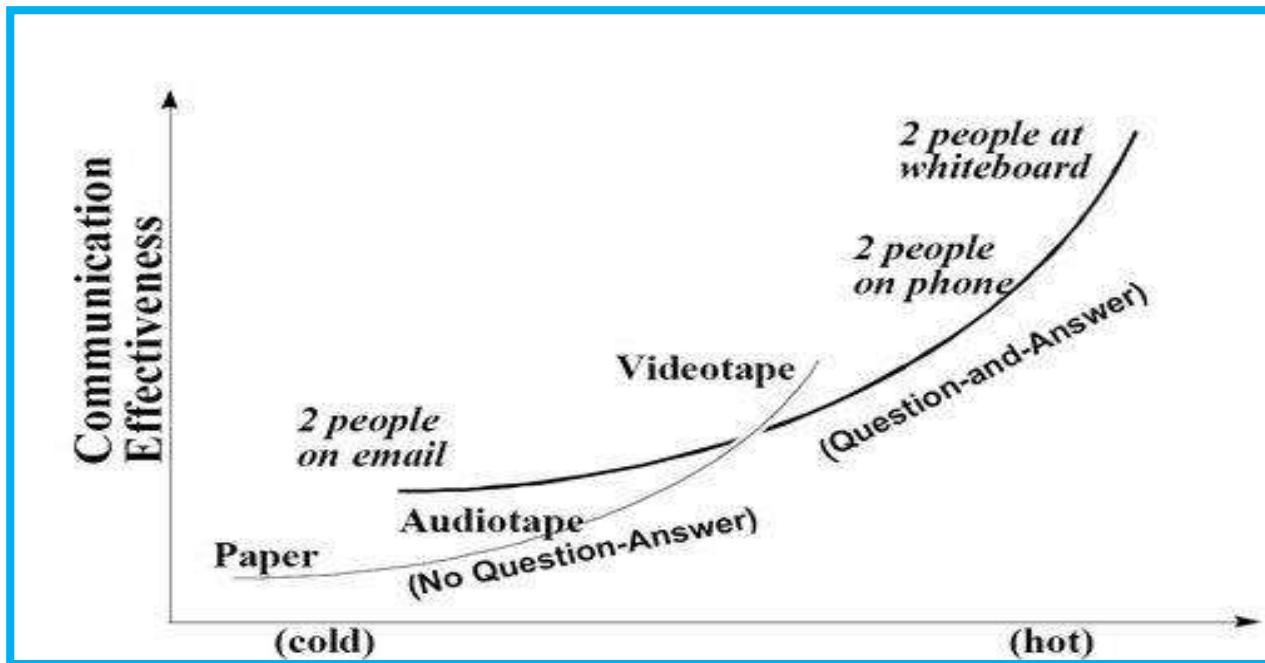
- Sender
- Encoder
- Medium
- Decoder
- Receiver
- Barrier
- Noise



## What is Face to Face Communication?

- Face-to-face communication is preferred
- Highest bandwidth of all communication types

## What are the effectiveness of different communication channels?



## What are ways of sharing knowledge in agile projects?

- Knowledge sharing is critical for agile projects
- Share information with everyone
- Collective code ownership means any developer can edit any code at any time
- Agile practices promote knowledge sharing:
  - Kanban boards
  - Information radiators
  - Personas
  - Wireframes

## What is two-way communication?

- Dispatching model –top down communication
- Collaborative model –interactive communication between sender and receiver

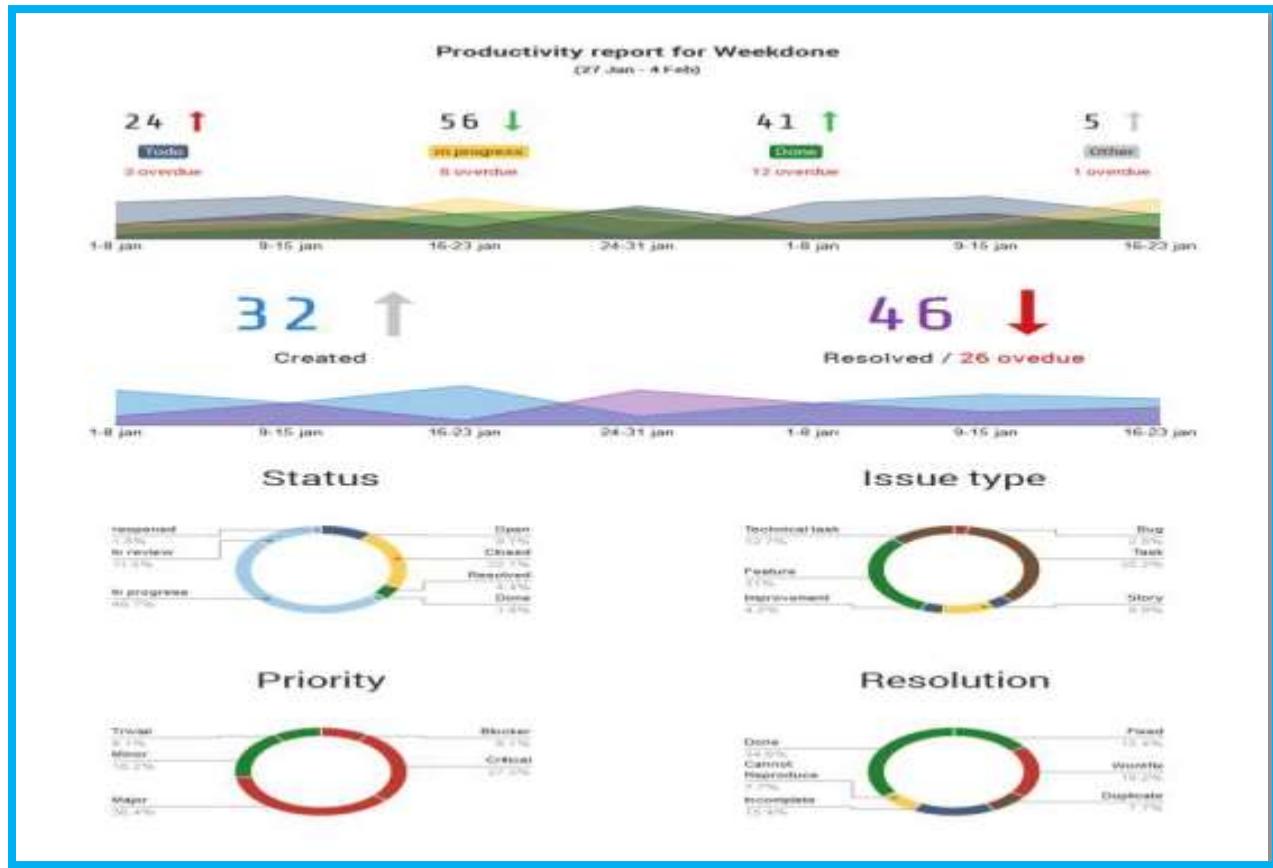
## What are the ways of communicating in agile projects?

- Low-tech high-touch tools
- Stand up meetings

- Osmotic communications
- Tacit knowledge

## What is an Information Radiator?

- Highly visible displays of information
- Large graphs or charts that summarize project data
- Out in the open and easily accessible
- Also known as visual controls



- Features delivered versus features remaining
- Who is working on what
- Current iteration features to be created
- Velocity and defect measurements
- Retrospective outcomes
- Threats and issues for the project
- Burn up and burndown chart
- Story maps

## **What are the Social Media linked with Agile Projects?**

- Remote workers staying in touch
- Facebook
- Twitter
- Web collaboration tools
- Non- co-located teams
- Consider the sensitivity of the project information

# **Collaboration**

**Collaborative Approach is the key in Agile Project**

## **How would you say collaboration is the key in agile projects?**

- Customer collaboration over contract negotiation
- Business people and developers must work together daily throughout the project

## **What are the benefits of collaboration?**

- Generates wiser decisions
- Promotes problem solving
- Promotes action
- Build social capital
- Ownership of collective problems

## How will you engage the people in agile projects?

- Engagement creates better ideas and put some conversations
- Active problem solving instead of command and control
- Taking action rather than being passive
- Collective ownership of ideas
- Motivates and engages the project team
- Shifts the power downward

## Compare Green Zone Vs Red Zone?

Green Zone	Red Zone
<ul style="list-style-type: none"><li>○ Takes responsibility</li><li>○ Responds non-defensively</li><li>○ Not easily threatened</li><li>○ Build mutual success</li><li>○ Seeks solutions</li><li>○ Uses persuasion</li><li>○ Firm, but not rigid</li><li>○ Thinks both short-term and long-term</li><li>○ Considers other points of views</li><li>○ Welcomes feedback</li><li>○ Considers conflict to be natural</li><li>○ Speak calmly and directly about difficult issues</li><li>○ Accept responsibility</li><li>○ Seeks excellence</li></ul>	<ul style="list-style-type: none"><li>○ Blames others</li><li>○ Responds defensively</li><li>○ Feels threatened or wrong</li><li>○ Triggers defensiveness</li><li>○ Holds grudges</li><li>○ Shame, blame, and accusations</li><li>○ Binary thinking</li><li>○ Short-term advantage</li><li>○ Feel victimized</li><li>○ Doesn't seek feedback</li><li>○ Must win at any cost</li><li>○ Is rigid and reactive</li><li>○ Creates a climate of antagonism</li><li>○ Disapproval and content</li><li>○ Sees others as the enemy</li><li>○ Does not listen effectively</li></ul>

## **How will you host the workshops?**

- Meetings for participants to get work done
- Clear goals and a schedule
- Retrospectives
- Planning meetings
- Estimating sessions

## **What are tips to conduct a success workshop?**

- Have a diverse group of people
- Facilitated for involvement
- Get people involved early

## **What are User Story Workshops?**

- Preferred approach for candidate user stories
- Also known as story writing workshops
- Optimize the workflow by understanding user needs
- Engage stakeholders in the design process

## **What is brainstorming?**

- Collaborative technique too rapidly generates lots of ideas
- Maximize number of suggestions
- No stupid ideas
- Will sort through the ideas later?

## **What are the brainstorming methods?**

- Quiet writing
- Round robin
- Free for all

## What is Collaboration games?

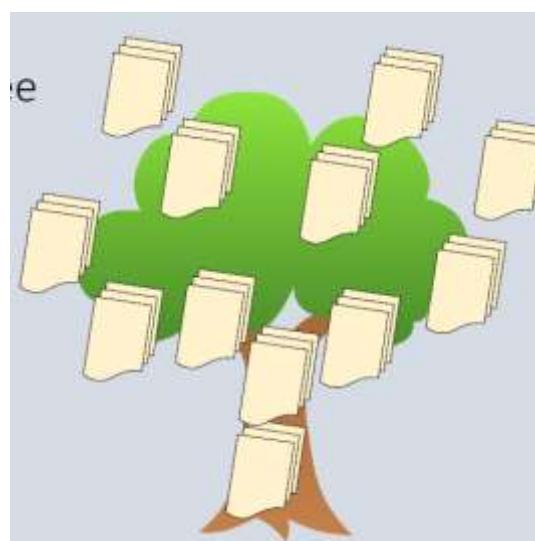
- Also known as innovation games
- Remember the future
- Prune the product tree
- Speed boat
- Buy a feature
- Bang for the buck

## How will you remember the future?

- Collaboration game
- Stakeholders look back at the project
- 20 minutes to write a future report about how the project went
- Includes what was created; written on sticky notes
- Notes are moved into associated clusters and duplicates removed
- This game define success

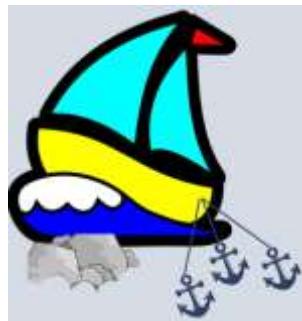
## Sketch | Prune the Product Tree build with features?

- Drawing of a big tree
- The trunk is what we already know or have built
- The branches are new functionality and what needs to be designed
- Participants add features on sticky notes to the tree
- Closer to the trunk represents higher priority



**Explain Speed boat games? Draw a Sail boat?**

- Imagine it's a boat
- What winds are pushing the sailboat
- What anchors are holding the sailboat back
- What direction is the sailboat going
- What rocks are in the way



## Interpersonal Skills for Agile Success

**The Soft stuff is the hard stuff and the hard stuff is the easy stuff**

**What are the interpersonal skills for an agile project?**

- Emotional intelligence
- Active listening
- Facilitation techniques
- Negotiation
- Conflict resolution
- Participatory decision making

## **What is an emotional intelligence? What are its quadrants?**

The ability to identify and influence our emotions and the emotions of others

### **Self-management**

- Self-control
- Conscientiousness
- Adaptability
- Drive and motivation

### **Self-awareness**

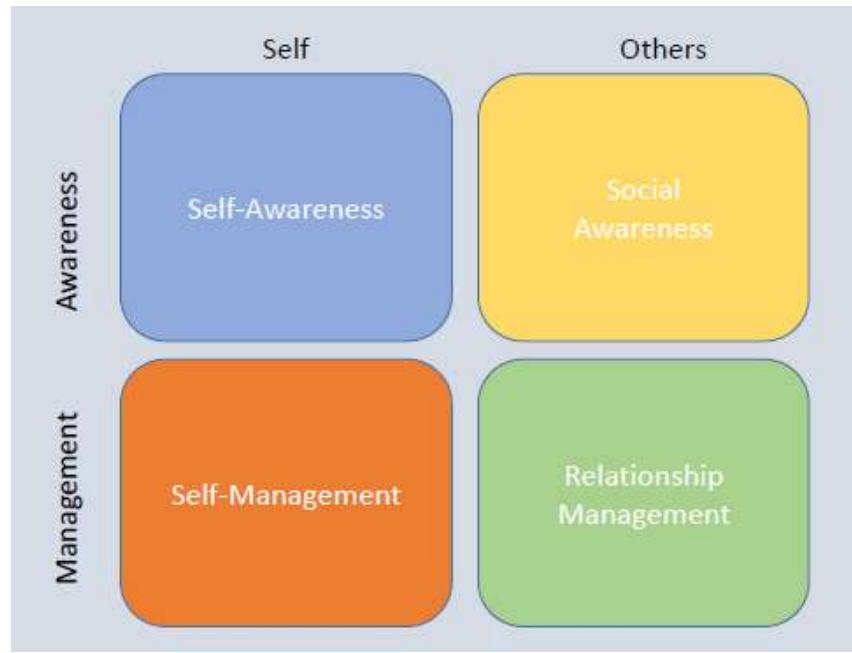
- Self confidence
- Emotional self-awareness
- Accurate self-assessment

### **Social skills**

- Influence
- Inspirational leadership
- Developing others
- Teamwork and collaboration

### **Social awareness**

- Empathy
- Organizational awareness
- Understanding the environment



### **What is Active Listening?**

- Hearing what someone is really trying to say
- Level 1 –Internal listening
- Level 2 –Focus listening
- Level 3 –Global listening

#### **Level 1 – Internal Listening**

- Words are heard, but we're not very attentive
- We interpret the meaning –how is this going to affect me

#### **Level 2 –Focus listening**

- The speaker's perspective
- We empathize with the speaker
- We look for emotional indicators such as voice and tone
- Facial expressions and words

#### **Level 3 –Global listening**

- We build on level 2
- A higher level of awareness
- Subtle clues about meeting such as the speaker's posture and energy
- Helps us to develop a fuller context of the message

## What is Facilitation?

- Running effective meetings and workshops
- Goals –ensuring that meetings are not a waste of time by promoting participation
- Rules –establishing ground rules and holding people accountable to these rules
- Timing –the duration of the meeting is established ahead of time
- Assisting –making the meeting effective and assuring that everyone may contribute

## What is Negotiation?

- Negotiations happen throughout the project
- Consider the priorities of user stories
- Avoid a zero-sum game where only one person wins
- Healthy negotiations allow for give and take

## What is Conflict Resolution?

- Differences of opinions and competing interest
- Some conflict is healthy

Level	Name	Characteristic	Language
One	Problem to solve	Information sharing and collaboration	Open in fact based
Two	Disagreement	Personal protection Trump's resolving the conflict	Garden and open to interpretation
Three	Contest	Winning Trump's resolving the conflict	Includes personal attacks
Four	Crusade	Protecting one's own group becomes the focus	Ideological
Five	World War	Destroy the other	Little or non-existent

## What is Participatory Decision Making?

- Engaging stakeholders for decision making
- Communication and decision-making are critical to keep everyone informed then engaged
- Involves stakeholders when making decisions
- Stakeholder involvement increases as they commit to the project

## What is Convergent & Shared Collaboration?

- Convergent –participating decision making models in for conversions for collective agreements
- Shared collaboration they share the decision-making process fairly

## What is simple voting?

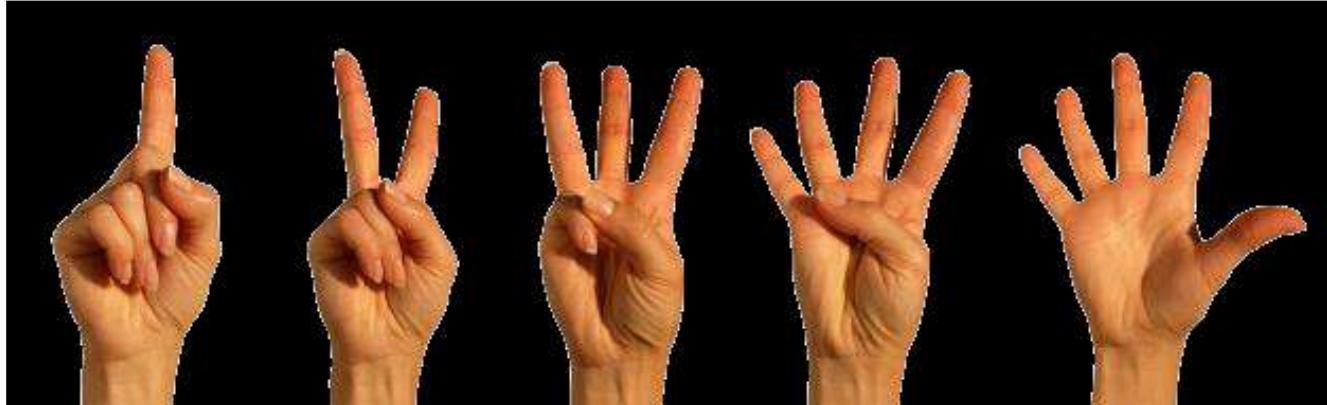
- Participatory decision approach
- The team votes for or against an idea by a show of hands

## What is thumbs up | down | sideways?

- Thumbs up and individual is for the decision
- Thumbs down and individual is against the decision
- Thumb sideways the individual is neutral or undecided

## What is Fist of Five Voting?

- The number of fingers shown indicates degree of support



## What is Highsmith Decision Spectrum?

- Participants place a checkmark on a spectrum
- In favor
- Okay but with reservations
- Mixed feelings
- Not in favor but will commit
- Veto

## Stakeholder Management Practice Questions

1. Stakeholders are one of the important elements of a business organization, which one of these corroborate this notion?

- A. They impact company's projects by rendering assistance to show a detailed project progress with presentations to the customers.
- B. They are the main consultants that render backups for company's development.
- C. They proffer positive impacts as they partake in company's development by investing in the company.
- D. All of the above.

**Ans:** C. Stakeholders render supports to company's project through investment. Choices A, B, and D are incorrect for this question.

2. To consolidate an organization's development through the engagement of stakeholders, which of these is the necessary skill needed?

- A. Build relationships with key stakeholders with a working agreement to allow effective collaboration.
- B. Ensure all stakeholders are engaged appropriately by updating the stakeholder registry upon changes to the project.
- C. Foster group decision making and conflict resolution in order to maintain a good relationship among stakeholders.
- D. All of the above.

**Ans:** D. All the aforementioned skills are necessary to enhance effective engagement of stakeholders. Choice A, B, and C only is not correct for this question.

3. To stimulate stakeholders' interest in a project, which of these proves clearly to be the most necessary?

- A. The definition of done must be agreed upon collectively with key stakeholders before carrying out the project works.
- B. Presenting them the projects' charter to aid their understanding of the projects objectives.
- C. Understanding their basic needs by engaging stakeholders through early and continuous knowledge sharing and active listening throughout the project lifespan.
- D. All of the above.

**Ans:** C. Understanding their basic needs by engaging them through continuous knowledge sharing. Choices A, B, and D are incorrect for this question.

**4. Which one of these statements is considered false as far as an agile project is concerned?**

- A. Feature means a value delivering set of stories to consumers.
- B. Ground Rules are unwritten rules that apply to all team members.
- C. Fishbone Diagram is otherwise known as root cause diagram.
- D. A project team is considered a set of stakeholders.

**Ans:** D. A project team is considered a set of stakeholders. Choices A, B, and C are incorrect for this question.

**5. The charter is one of the agile project's most important business documents, as a member of Agile who is acquainted with documentation, which one of these qualities is present on a detailed charter?**

- A. Background, objectives, vision and mission, stakeholders of a project.
- B. Communication plan.
- C. Success criteria.
- D. All of the above.

**Ans:** D. All of the aforementioned are essential qualities of a detailed project charter. Choice A, B or C only is incorrect for this question.

**6. Agile values listening; it is important in every area of business to enhance a perfect understanding of a speaker's expression, therefore, which of these levels of listening implies getting the exact message, the speaker is trying to convey?**

- A. Internal Listening.
- B. Focused Listening.
- C. Global Listening.
- D. Active listening.

**Ans:** B. Focused Listening. Choices A, C, and D are incorrect for this question.

**7. The fundamentals pertaining to stakeholder engagement involves all of the following except \_\_\_\_\_**

- A. Stakeholder's management.
- B. Knowledge sharing.
- C. Participatory decision models.
- D. Contest among shareholders and company's authority.

**Ans:** D. contest entails taking sides in an organization and this shouldn't be encouraged. Choices A, B, and C are incorrect for this question.

8. The simple techniques required to encourage and facilitate stakeholder involvement in decision-making process include all of these except \_\_\_\_\_

- A. Simple voting.
- B. Thumbs up.
- C. Jim Highsmith's Decision.
- D. Two to two voting system.

**Ans:** D. Two to two voting system. Choices A, B, and C are incorrect for this question.

9. The term which implies a total compliance of a project in terms of analysis, design, coding, user acceptance, testing and delivery, and documentation according to the pre-agreed conditions is referred to as \_\_\_\_\_

- A. Validation.
- B. Done.
- C. Verification.
- D. Regulation.

**Ans:** B. Done is the correct choice. Choices A, C, and D are incorrect for this question.

10. In order to resolve any conflict so as to maintain a perfect understanding and mutual relationship between an organization, its stakeholders and customers, the efficient dispute resolution techniques required involves which of the following?

- A. Confronting.
- B. Collaboration.
- C. Sorting out differences.
- D. All of the above.

**Ans:** D. All of the aforementioned techniques are advisable and reliable in conflict resolution.

Choice A, B or C only is incorrect for this question.

## Lesson 5 TEAM PERFORMANCE

### Topics to Discuss

- Team Performance Overview
- Building an Agile Team
- Collaborative Team Spaces
- Tracking Team Performance

## Team Performance Overview

### Overview

#### What are the team performance tasks?

- Develop team rules and processes to foster buy in
- Help grow team interpersonal and technical skills
- Use generalizing specialist
- Empower and encourage emergent leadership
- Learn team motivators and demotivators
- Encourage communication via collocation in collaboration tools
- Shield team from distractions
- Align team by sharing project vision
- Anchor team to measure velocity for capacity and forecast

## **How will you support self-organizing team?**

- Self-organizing
- Self-empowered
- The project team are stakeholders
- Team leaders
- Scrum masters

## **What are importance of people in Agile?**

- People are more important than processes
- Focus on the people
- Servant leadership

## **Who are involved in the Development team?**

- Coders
- Writers
- Analyst
- Testers
- People can perform multiple jobs in switch from role-to-role

## **What are the responsibilities of Development Team?**

- Build the product increments
- Update information radiators
- Self-organize and self-direct
- Share progress through daily standup meetings
- Right acceptance test
- Test and revise the product increments
- Demonstrate completed increments
- Hold iteration retrospective
- Estimate the stories and tasks

## **Who are the business representatives?**

- Product owner
- Customer
- Proxy customer
- Value management team

## **What are the responsibilities of business representatives?**

- Prioritize product features
- Manages the product backlog
- Ensures a shared understanding
- Provides the acceptance criteria
- Makes change request
- May change the product features and priorities
- Facilitate engagement of external project stakeholders
- Provides due date for the project
- Attends planning meetings reviews and retrospectives

## **What are the responsibilities of Scrum Master?**

- Coach or team leader
- Servant leader
- Helps the delivery team self-govern and self-organize
- Facilitator and communicator
- Coach and mentor to the delivery team
- Guides agile processes
- Helps the product owner manage the product backlog
- Helps the product owner communicate
- Facilitates meetings
- Follows up on issues

## What are the responsibilities of Project Sponsor?

- The main advocate for the project
- Provides direction to the product owner
- Determines value on time and on budget
- May attend iteration review meetings
- Authorizes the project

# Building an Agile Team

## How to build an agile team

### What are the team characteristics?

- 12 or fewer members
- Team members have complementary skills
- Team members are generalizing specialist
- Team members are committed to a common purpose
- Team members hold themselves mutually accountable
- Team members have shared ownership for the project outcome

### How will you define generalizing specialist?

- Team members can serve in multiple roles
- Team members can easily switch between roles
- Helps to resolve bottlenecks

## **What are the characteristics of high performance teams?**

- Create a shared vision for the project team
- Set realistic goals
- Limit team size to 12 or fewer people
- Build a sense of team identity
- Provide strong leadership

## **What are the 8 characteristics of high performance teams?**

- Self-organizing
- Empowered
- Believe that as a team they can solve any problem
- Committed to team success
- Owns its decisions and commitments
- Motivated by trust
- Consensus driven
- Participate in constructive disagreement

## **What is Self-Organize teams?**

- Not command and control
- Can use their own knowledge to organize work
- Structure that work based on iteration goals
- Responsibility delegated to the team

## **What is Self-Directing teams?**

- Empowered to work collectively
- Make local decisions
- Estimate and decide the project work
- Make mistakes and learn from mistakes

## **How will you define the emergent leadership?**

- Different people lead different initiatives
- High-performing teams allow multiple leaders
- No power struggle when leaders change roles
- Leaders are self-selected not assigned

## **How the team nature of Experimenting & Failing Safely?**

- The team should experiment and try new approaches
- It's okay to fail
- Learn from failure and move forward
- An engagement culture rewards people for problem solving collaboration and sharing ideas

## **How will you encourage the constructive disagreement?**

- Debate and conflict is natural and healthy
- Constructive conflict leads to better decisions and buy-in
- Divergence means the team will argue and debate
- Convergence means the team will agree on the best solution

## **What are the five dysfunctions of a team?**

- Absence of trust
- Fear of conflict
- Lack of commitment
- Avoidance of accountability
- Inattention to results

## **Explain Shu-Ha-Ri skill mastery?**

- Shu: obeying the rules to keep protect or maintain
- Ha: consciously moving away from the rules; Ha means to detach or break free
- Ri: unconsciously finding an individual path; Ri means to go beyond or transcend

## Explanation

- Shu –start by following the rules
- Ha –once the team has mastered the guidelines they can move away from them and work intuitively
- Ri–the team reaches full mastery and can transcend the rules

## Dreyfus Model of Adult Skill Acquisition?

### Novice

Follow the rules they've been given and make analytical decisions

### Advanced beginner

Still following the rules but based on experience better understand the context of the rules

### Competent

Determining which rules are best for each situation

### Proficient

Actively choosing the best strategy rather than simply relying on the rules

### Expert

Decision-making becomes intuitive

## Tuckman Model of Team Formation & Development?

### Tuckman Model of Team Formation & Development

**Forming**—the team comes together and learns about each other

Also known as a working group

**Storming**—conflict and struggle for the approach and leadership

Also known as a pseudo team

**Norming**—the team works with each other and conflict has settled

Also known as a potential team

**Performing**—the team hits their stride

Also known as a real team and becoming a high-performing team

## What is Adaptive Leadership?

**Directing** –happens during team forming

Team members may have low competence but high commitment

Leaders hi directive and low supportive behavior

**Coaching** –happens during storming

Team members have some competence and low commitment

Leaders high directive and high supportive behavior

**Supporting** –happens during norming

Team members have moderate to high competent and variable commitment

Leaders offer low directive and high supportive behavior

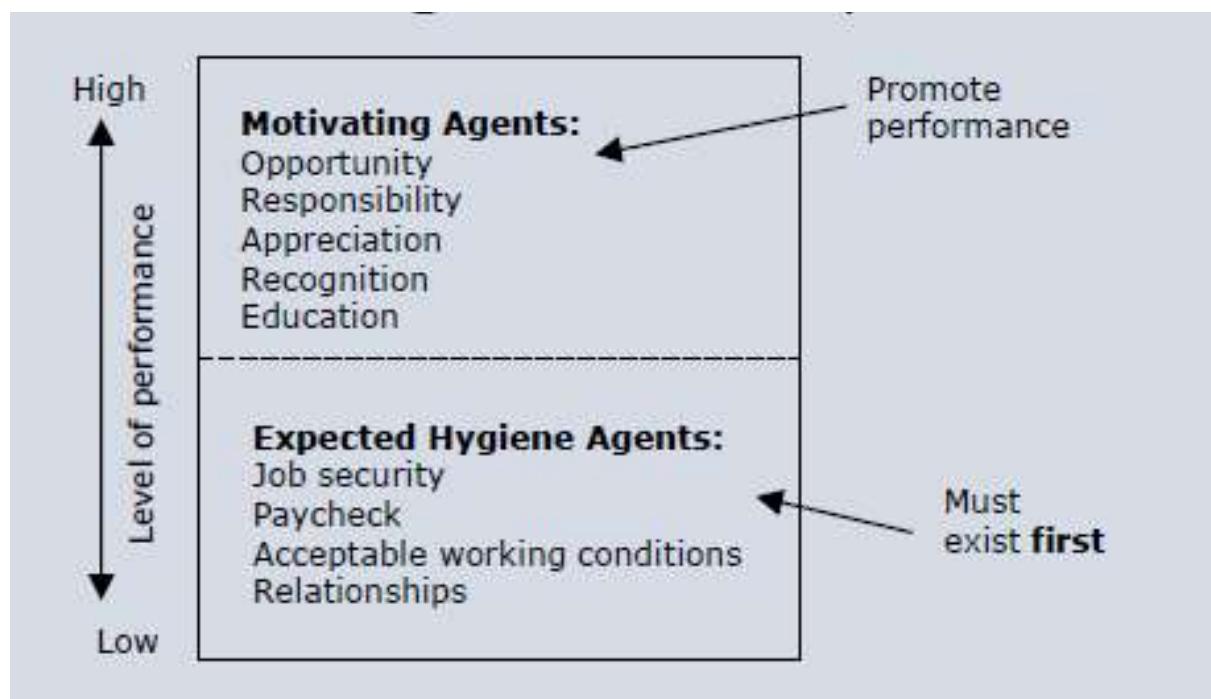
**Delegating** –happens during team performing

Team members have high competence and high commitment

Leaders offer low directive and low supportive behavior

## Herzberg's theory of Motivation?

Continuum of net contribution



## What is training, coaching & mentoring?

- Training is teaching a skill or knowledge through practice and instruction.
- Coaching is a facilitated process to help individuals develop and improve performance
- Mentoring is a professional relationship more free flowing. The mentor offers advice

## Guidelines for one-on-one coaching?

- Meet them a half a step ahead
- Guarantee safety
- Partner with managers
- Create positive regard

# Collaborative Team Spaces

## Creating a collaborative team space

### Why Collocated Teams are preferred?

- All the team works in one location
- Ideally within 33 feet or ten meters of each other
- No physical barriers like walls are doorways
- Distributive teams use collaborative software

### How will you create a team space?

- Location for team members in the same space
- Also known as the war room
- Visible information radiators for project metrics
- Lots of white boards and task boards

### **What is Caves & Commons?**

- Caves are private spaces for phone calls or one-on-one conversations
- Commons is the primary work area

### **What is Tacit Knowledge?**

- The unwritten information collectively known by the group
- How to restart a server
- How to turn on the lights
- Larger groups have more difficulty with tacit knowledge

### **What is Osmotic Communication?**

- Learning by overhearing each other's conversation
- Benefit of a collocated team

### **How will you manager Virtual Teams?**

- Consider different time zones
- Consider different cultures
- Different communication styles
- Different native languages

### **How will you manage Distributed Teams?**

- Distributed teams are virtual teams
- Short iterations help collaboration in coordination
- Distributed teams is not the same as outsourcing
- Distributed teams faced more of a challenge it was storming and norming
- The project manager may need to introduce controversial or difficulties of the work early in the project
- A face-to-face kickoff is often needed

## What are the Digital tools for Distributed Teams?

- Video conferencing it like that
- Interactive whiteboard
- Instant messaging
- Presence based application
- Electronic task for the storyboards
- Web-based meeting facilitators
- Virtual card wall
- Wiki site

## Tracking Team Performance

### Monitoring Progress and Performance

## How will you utilize the burn-down chart?

- Track the work that remains to be done on a project
- Measures the team progress in completing the project work
- Track the work that has been completed
- As work is done the line moves upward
- Provides additional insight into the project status

## What do we understand from the team velocity?

- Velocity is the measure of a team's capacity for work per iteration
- Measured in the same unit that the team estimates the work
- Velocity very early and then stabilizes
- Velocity tends to plateau

## How would you calculate the completion time?

- The team's velocity has been 20 story points per iteration
- There are 200 story points left
- Each iteration is two weeks
- 200 divided by 20 is 10
- 10 times 2 is 20
- There are 20 weeks left in the project

## Team Performance Practice Questions

1. A reputable company comprises a number of interpersonal and technical experts with common objectives and goals who work diligently to deliver the intended outcomes and values of the company's project. This group is referred to as the\_\_\_\_\_

- A. Technicians.
- B. Professionals.
- C. Team.
- D. Experts.

**Ans: C.** According to Agile terminologies, the team is the correct choice. Choices A, B, and D are incorrect for this question.

2. In order to build a substantially capable team to realize an effective and efficient work force, the necessary requirements include\_\_\_\_\_

- A. Team Empowerment.
- B. Team Collaboration.
- C. Commitment.
- D. All of the above.

**Ans: D.** All of the aforementioned requirements are necessary. Choices A, B, or C are incorrect for this question.

3. When a project work is ongoing, the Agile manifesto values team members and their interactions than which of the following?

- A. Working software.
- B. Customer collaboration.
- C. Responding to change.
- D. Processes and toolset.

**Ans: D.** Processes and toolset. Choices A, B, and C are incorrect for this question.

4. During team development, a series of steps according to Tuckman's stages of group development are usually involved, these include the following except\_\_\_\_\_

- A. Numbering.
- B. Forming.
- C. Storming.
- D. Norming.

**Ans: A.** Numbering. Choices B, C, and D are incorrect for this question.

5. At what level according to Tuckman's stages of group development, is the team said to be most efficient and with a high responsiveness?

- A. Storming.
- B. Adjourning.
- C. Performing.
- D. Norming.

**Ans: C.** Performing. Choices A, B, and C are incorrect for this question.

6. The exceptional and admirable conduct a team could exhibit due to the empowerment and support they receive includes which of these\_\_\_\_\_

- A. Self-directing.
- B. Self-organizing.
- C. Mutual accountability.
- D. All of the above.

**Ans: D.** All of the aforementioned are the resultant conducts. A, B, and C are incorrect for this question.

7. Mutual accountability is one of the positive conducts a team exhibit due to empowerment, it implies which of these\_\_\_\_\_

- A. The team has the best knowledge about the project and is in the best position to control project works.
- B. The team can make its own decisions, not to be directed from the management.
- C. Promotion of empowerment so that the team operate as a whole.
- D. None of the above.

**Ans: C.** Promotion of empowerment so that the team operate as a whole. Choices A, B, and D are incorrect for this question.

8. Which one of these is present in the Tabaka's model that states the qualities of a high-performing team?

- A. Committed to their work.
- B. Trust each other.
- C. Participatory decision making.
- D. All of the above.

**Ans: D.** All of the aforementioned are present. Choices A, B, or Care incorrect for this question.

**9. Being one of the members of a high performing team, there are a number of ways in which performance can be maximized for greater productivity. Which of these is the best example to maximize productivity?**

- A. Open and honest communication, even in case of disputes or conflicts.
- B. Lack of commitment.
- C. Accountability.
- D. None of the above.

**Ans: A.** Open and honest communication. Choices B, C, and D aren't the best option for this question.

**10. Productivity is one of the primal qualities of an effective and efficient team, it can be measured by which of these factors?**

- A. Velocity.
- B. Collocation.
- C. Displacement.
- D. None of the above.

**Ans: A.** Velocity is defined as the number of story points that are completed by a team in iteration; it is the ideal factor for measuring productivity. Choices B, C, and D are incorrect for this question.

## Lesson 6 ADAPTIVE PLANNING

### Topics to Discuss

- Adaptive Planning Overview
- Agile Planning Concepts
- Tools for Agile Project Sizing and Estimating
- Planning for releases and iterations

## Adaptive Planning Overview

### Overview

### What are the key tasks for adaptive planning?

- Progressive elaboration and rolling wave planning
- Transparent planning and key stakeholders
- Managing expectations by refining plans
- Adjusting planning cadence based on project factors and results
- Inspect and adapt the plans to changing events
- Size items first independently of team velocity
- Adjust capacity for maintenance and operations demands to update estimates
- Start planning with high-level scope schedule and cost range estimates
- Refine ranges as the project progresses
- Use actuals to refine the estimate to complete

## What is Adaptive Planning?

- Planning is an ongoing activity
- Agile planning is different than predictive planning
- Plan for early delivery business value, risk reduction, visibility

## What are the examples of interactive planning?

- Daily standup
- Backlog prioritization
- Sprint retrospective
- Iteration planning

# Agile Planning Concepts

## Planning an Agile Project

## Where is the beginning of Adaptive Planning?

- Agile projects are value-driven
- Minimize non-value-added work
- Plan to re-plan
- Early plans are necessary, but they're likely flawed
- Uncertainty requires re-planning

## Explain Agile Vs Non-Agile Planning?

- Trial and demonstration uncover true requirements
- Less up front and more iterative planning
- Mid-course adjustments are normal

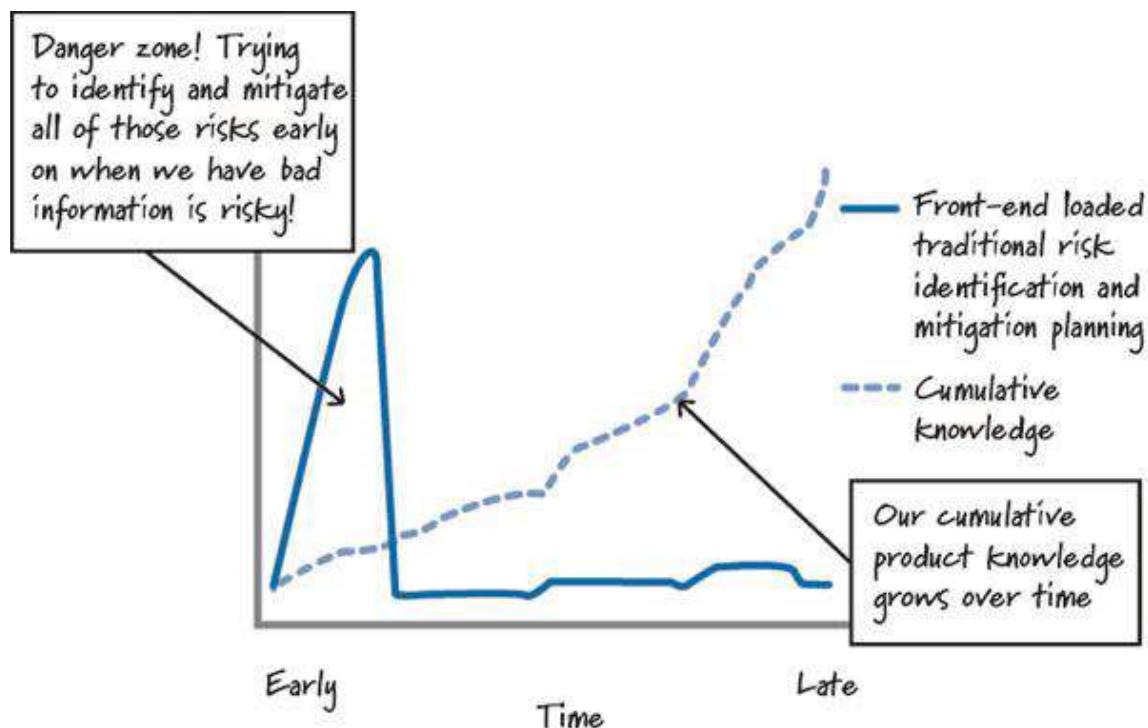
## How will you do the demo?

- Prototypes help initial planning
- Helps to avoid the gulf of evaluation
- Communicate agile planning practices

## What do you say about Iteration Planning?

- The planning effort is distributed throughout the project life cycle
- Agile projects are risky
- Consider planning efforts over the project life cycle
- Agile projects typically do more planning

## Draw a Risk Graph in Planning?



## **What are the principles of Agile Planning?**

- Plan at multiple levels
- Engage the team and customer in planning
- Demonstrate progress in velocity
- Tailor processes for the project
- Priorities will cause the plan to be updated
- Account for risk distraction and team availability
- Utilize estimate ranges
- Base projections on completion rate
- Factor in diversion from outside work

## **What is an Agile Discovery?**

- Emergent plans and designs versus predictive plans and designs
- Pre-planning activities together consensus
- Backlog refinement –grooming
- Estimating uncertain work forces certain work
- New product development vs. Repeatable project

## **What is Progressive Elaboration?**

- As more information becomes available more planning can happen
- Continuing steadily in small increments
- Progressive elaboration examples
  - Plans
  - Estimates
  - Risk assessments
  - Requirements definition
  - Software design
  - Test scenarios

## **Progressive Elaboration Vs Rolling Wave Planning**

- Rolling wave planning is planning at a multiple point
- Plan and execute iteration
- Progressive elaboration is incorporating new information into the plans
- Progressive elaboration is the implementation of rolling wave planning

## **What is Value Based Analysis?**

- Assessing and prioritizing the business value of work items
- Business benefit –cost
  - Business benefit equals \$8,000
  - Cost equals \$5,500
  - Value is \$2,500
- Will the item generate business value every week or month
- A high business value item may be dependent on a low business value item

## **What is Value Based decomposition?**

- Requirements elicitation
- Grouping of like features
- Breaking down of features
- Ranking of requirements
- Prioritize requirements into development

## **How will you create the Product Box?**

- Imagine a product box or software
- Top three features
- Major functional elements
- Prioritization of features
- This is a visualization exercise

### **What is Coarse Grained requirements?**

- Keeps the overall design balanced
- Delays decision on implementation details until the last responsible moment

### **What is time boxing in agile projects?**

- Fix duration period of time
- Define set of activities
- Daily scrum or stand up
  - Daily standup meetings -15 minutes
  - Retrospective –2 hours
  - Iterations and sprint's –1 to 4 weeks

### **Example for time boxing in sprints?**

- 12 work items
- Team completes eight
- Remaining four items returned to the backlog

### **What is Parkinson's Law?**

- Work expands to fill the time allotted to it
- Student syndrome –students wait to the last possible minute to start working

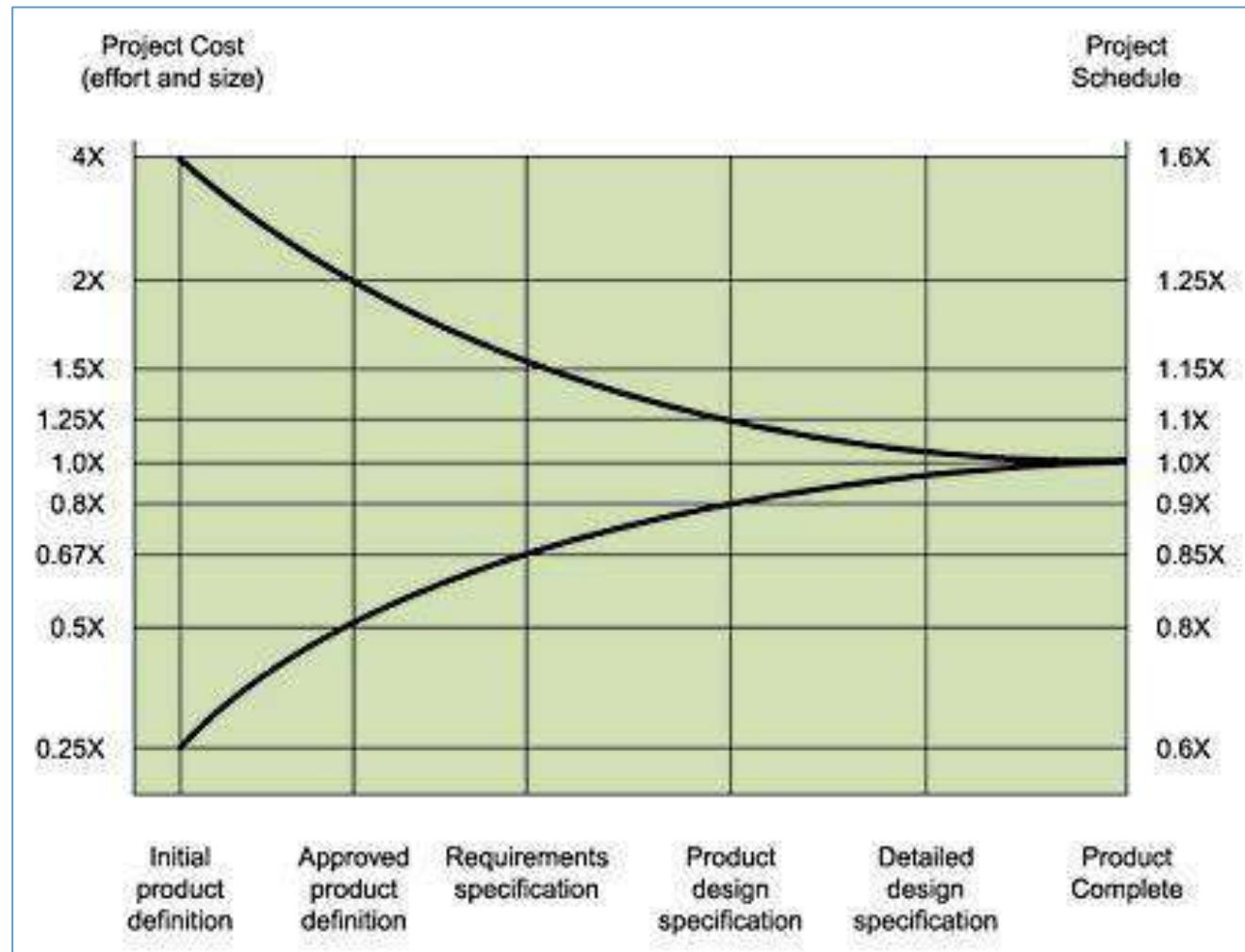
## Tools for Project Sizing & Estimating

### **Estimating an Agile Project**

## How will you provide the estimate ranges?

- Not as precise as predictive planning
- More uncertainty and agile projects
- Include a range of variance
  - Between \$500,000 and \$550,000
  - Plus, or minus 10%

## Draw estimate convergence graph?



## **How will you create an Agile estimate?**

- Why is an estimate needed –to create a schedule and budget
- When does estimating happen –the last responsible moment and throughout the project
- Who does the estimating –team members estimate their own work
- How are estimates created –stages of sizing and planning; roll out an estimate cost may also be included
- How are estimates stated –always include a degree of uncertainty

## **What are the factors for an Ideal Time?**

- Estimate as if there would be no interruptions
- Ideal time assumes all time in the estimate is for project work

## **What are the assumption for sizing & estimation?**

- Details emerged as the project moves forward
- Plans are adjusted based on feedback
- Privatization happens throughout the project

## **How will you decompose the project requirements?**

- Breakdown of the project work
- Epics –large user stories that span one or more iterations
- Feature –attributes of the product
- User story –decomposition of a feature
- Task –smallest element of the decomposition

## **What is a User Story?**

- Small chunk of business functionality within a feature that involves roughly 1-3 days' work
- Also defined as for 40 hours of work
- User stories are written on index cards or sticky notes
- User stories are the items in the product backlog

## How will you create a User Story?

- Potential stories are called candidate stories
- Perspective of the user or customer
- Often written in the following format

As a <role> I want <functionality> so that <business benefit >

**Role:** Represents who is performing the action, it should be a single person, not a department. It may be a system if that is what is initiating the activity

**Functionality:** Represents the action | function to be performed on the system

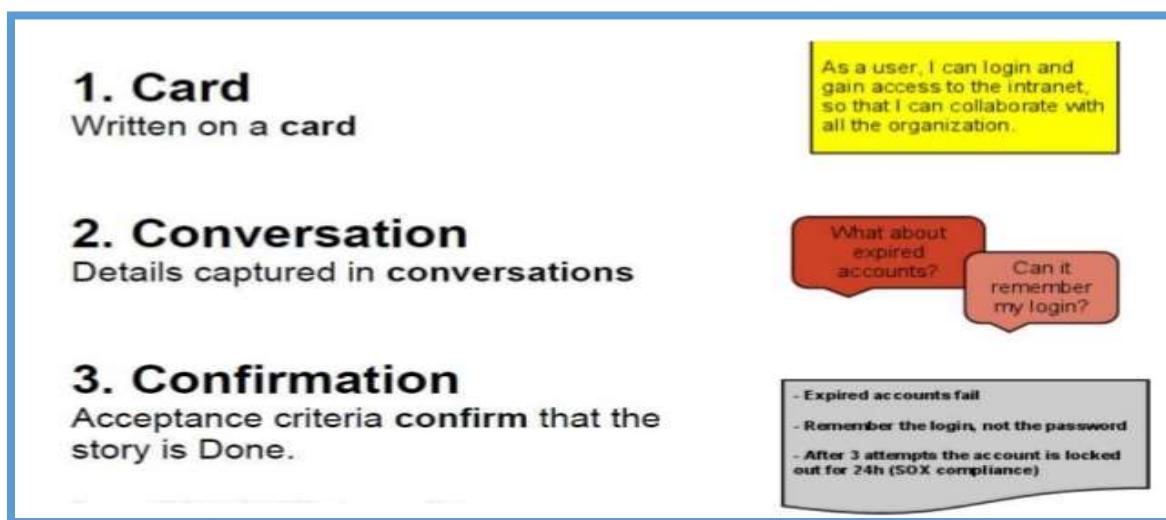
**Business Benefit:** Represents the value to the business. Why is this story important?

E.g., As a user I can login and gain access to the intranet so that I can collaborate with all the organizations

- Answers two questions:
  - Who was asking for this?
  - Why are we doing this?

## What is 3C's of User Story?

- **Card** –just enough text to identify the story
- **Conversation** –details are communicated via a conversation between the customer and the development team
- **Confirmation** - customer confirmed the story has been implemented correctly



## Tell me the User Story Format?

- Given –the scenario for the story
- When –the action that takes place
- Then –the result of the action

## What are the types of User Story?

Requirements	<ul style="list-style-type: none"><li>○ Functional requirements</li><li>○ Non-Functional requirements</li><li>○ Compliance to standards and regulatory concerns</li></ul>
Technical User Stories	<ul style="list-style-type: none"><li>○ An item of work in the Software Debt backlog that pays off a chunk of debt that is undesirable and valuable to the Product Owner”</li></ul>
Spike Stories	<ul style="list-style-type: none"><li>○ A story or task aimed at answering a question or gathering information, rather than implementing product features, user stories, or requirements.</li><li>○ Items needing investigation towards backlog grooming</li></ul>

## What is INVEST in User Stories?

Characteristics of effective user stories follow INVEST:

- Independent –stories can be prioritized in any order
- Negotiable –the team can discuss the user story with the product owner and make trade-offs based on the cost and function
- Valuable –the user story must have obvious value
- Estimate –the user story can be estimated for effort
- Small –small user stories are easier to create and test than large user stories; 4 to 40 hours work
- Testable –the story results must be testable

Letter	Meaning	Description
I	Independent	The User story should be self-contained, in a way that there is no inherent dependency on another user story
N	Negotiable	User Stories, up until they are part of an iteration, can always be changed and rewritten
V	Valuable	A User Story must deliver value to the end user
E	Estimable	You must always be able to estimate the size of a user story
S	Scalable	User Story should not be so big as to become impossible to plan or Task or prioritize with some level of certainty

T	Testable	The User Story or its related description must provide the necessary information to make test development possible
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## What is User Story Estimation?

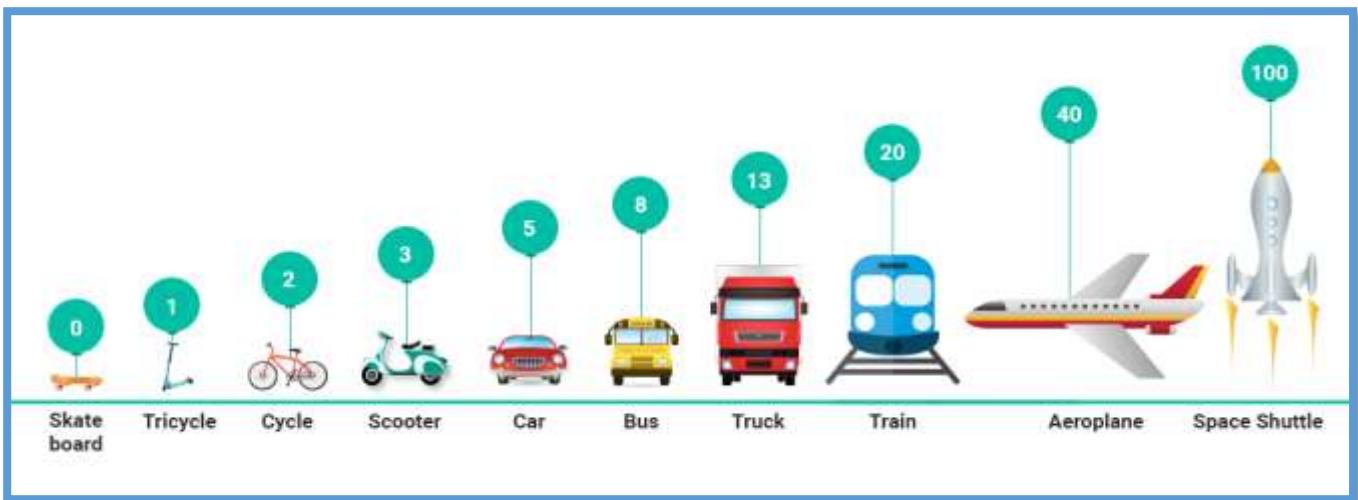
Human Mind is tuned towards relative estimation, as compared to on an absolute basis

Relatives Estimates are preferred for

Story Points	Ideal Days
<ul style="list-style-type: none"> <li>○ Story points have numbers, but only show the relative complexity. Like a 10 points story is 2 times complex as a 5 points story</li> <li>○ It is an estimate of effort</li> <li>○ Use a non-linear scale – Like, Fibonacci sequence is a good measure of scale (1, 3, 5, 8, 13, 21, 34, ...)</li> <li>○ Is a cross-functional estimate</li> <li>○ Pure estimate of size</li> <li>○ Does not decay</li> <li>○ Quicker</li> </ul>	<ul style="list-style-type: none"> <li>○ Amount of time needed to complete – When stripped of all unnecessary tasks</li> <li>○ Should be a single estimate – not broken into role based time</li> </ul> <div style="background-color: #e0f2e0; padding: 5px;"> <ul style="list-style-type: none"> <li>○ Varies with every person   team</li> <li>○ Amenable to change</li> </ul> </div>

In Relative estimation

- User Story points as units
- At higher abstraction levels relative estimates suits better than the absolutes
  - As we move higher the abstraction the clarity reduces and accuracy with absolute estimate decreases



## What are the estimation techniques?

The different estimation techniques are: -

### Analogous Estimation - Triangularization

- Compare the new story against an assortment of user stories already estimated

### Expert Opinion

- Intuition or gut feel of the expert
- Disaggregation
- Break into smaller pieces and then estimate

### Affinity Estimation

- Process of grouping requirements together and estimating
- Compare view of estimates

### Wide band Delphi

- Panel of experts provide estimates anonymously
- Eliminates bandwagon effect, halo effect

## How will you define the User Story Backlog?

- Also known as the product backlog
- User stories are listed and sorted
- User stories are prioritized in the backlog
- There is only one backlog

## How will you groom the backlog?

- The backlog needs to be kept continuously updated
- Prioritizing or refining the backlog is called grooming

## **What are the changes to the backlog?**

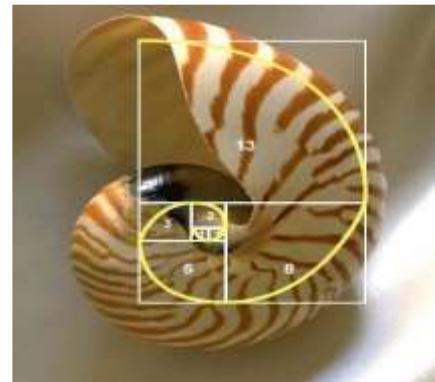
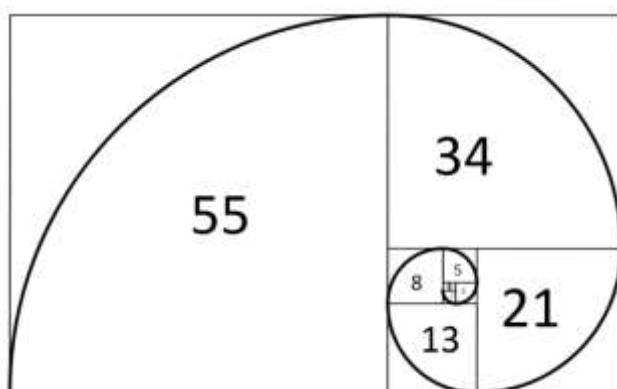
- New stories can be added
- Existing stories maybe reprioritized or removed
- Stories can be decomposed into smaller chunks
- Customer or value management team can add new story or reprioritize existing stories
- Decomposing stories –also called slicing –is typically done by the development team

## What is relative sizing in Story Points?

- It's difficult to make absolute estimate
- Story points are points assigned to stories size
- Relative sizing assigns points to stories on a relative scale
- The team then decides how many points can be done in our generation

## What is Fibonacci Sequence?

- Starting with zero the two numbers in the sequence are added together to get the next number
- 0 plus 1 equals one
- One plus one equals two
- 2 plus 1 equals 3
- 1, 2, 3, 5, 8, 13, or 21 points
- Only these numbers are assigned to user stories



## Tell me the guidelines for Story Points?

- The team owns the definition of their story points
- Story point estimate should be all inclusive
- Point sizes should be relative
- When disaggregating estimates the totals don't need to match
- Complexity work effort and risk are all included in the estimate

## What is Affinity Estimating?

- Grouping items into similar categories or collections
- Group items based on story points
- Affinity estimating is like triangulation
- Allows the team to see the collection of user stories by points assigned

## What is T-Shirt Sizing?

User stories are assigned to t-shirt sizes



## What is Wideband and Delphi?

- Rounds of anonymous estimates
- Helps to build consensus
  - Bandwagon effect –gathering around common viewpoint
  - Highest-paid person's opinion –HIPPO
  - Groupthink –making decisions to maintain group harmony

## What is Planning Poker?

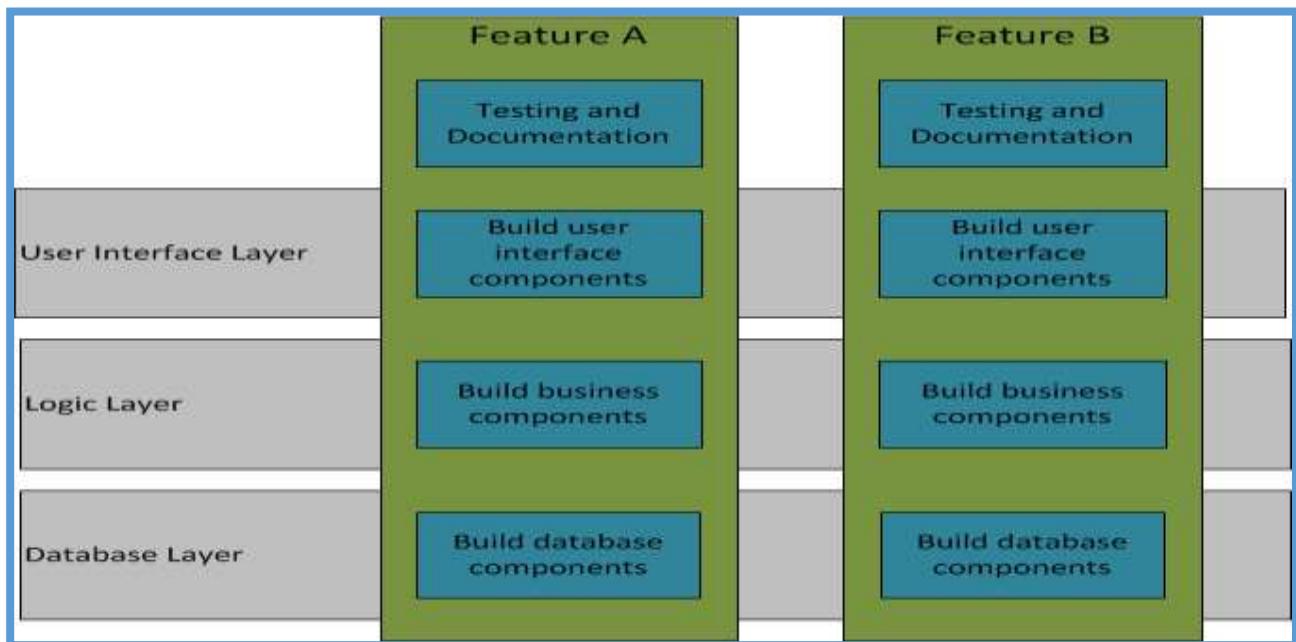
- Estimators choose a card and open at the same time, repeated after discussions for typically three rounds
- Arrive more on a quick reasonable estimate rather than an accurate one
- Cards with the Fibonacci sequence
- For User stories review
- Participants show their cards at the same time the score the user



## How will you split User Story?

### Guidelines for splitting the User Story

- Can be split on data boundaries
- Can be split alongside operations
- Horizontal components
- Functional and Non-Functional Components
- Maintain the INVEST check
- Like Shasimi – Fish Slice



## When to re-estimate the user stories?

Re-estimate only when the relative basis of the user stories gets changed.



## What is Definition of Ready?

“Never pull anything into a Sprint that is not ready, and never let anything out of the Sprint that is not done”

A User story needs to meet some criteria before it can be pulled into a Sprint

- User Story defined
- User Story Acceptance Criteria defined
- User Story dependencies identified
- User Story sized by delivery team
- Scrum team accepts UX Artefacts
- Performance criteria identified, where appropriate
- Person who will accept the user story is identified
- Delivery team has reviewed and accepted the user story
- Team has a good idea what it will mean to Demo the user story

## What is Definition of Done?

- List of activities for producing potential shippable product increment
- DoD differs for a User Story, Sprint, Release
- Differs from team to team

Team “Done” List	
<p><i>...With a Story</i></p> <ul style="list-style-type: none"><li>• All Code (Test and Mainline) Checked in</li><li>• All Unit Tests Passing</li><li>• All Acceptance Tests Identified, Written &amp; Passing</li><li>• Help File Auto Generated</li><li>• Functional Tests Passing</li></ul>	<p><i>...With a Sprint</i></p> <p>All Story Criteria, Plus...</p> <ul style="list-style-type: none"><li>• Product Backup Updated</li><li>• Performance Testing</li><li>• Package, Class &amp; Architecture Diagrams Updated</li><li>• All Bugs Closed or Postponed</li><li>• Code Coverage for all Unit Tests at 80% +</li></ul>
<p><i>...Release to INT</i></p> <p>All Sprint Criteria, Plus...</p> <ul style="list-style-type: none"><li>• Installation Packages Created</li><li>• MOM Packages Created</li><li>• Operations Guide Updated</li><li>• Troubleshooting Guides Updated</li><li>• Disaster Recovery Plan Updated</li><li>• All Test Suites Passing</li></ul>	<p><i>...Release to Prod</i></p> <p>All INT Criteria, Plus...</p> <ul style="list-style-type: none"><li>• Stress Testing</li><li>• Performance Tuning</li><li>• Network Diagram Updated</li><li>• Security Pass Validated</li><li>• Threat Modeling Pass Validated</li><li>• Disaster Recovery Plan Tested</li></ul>

## How will you create the Product Map?

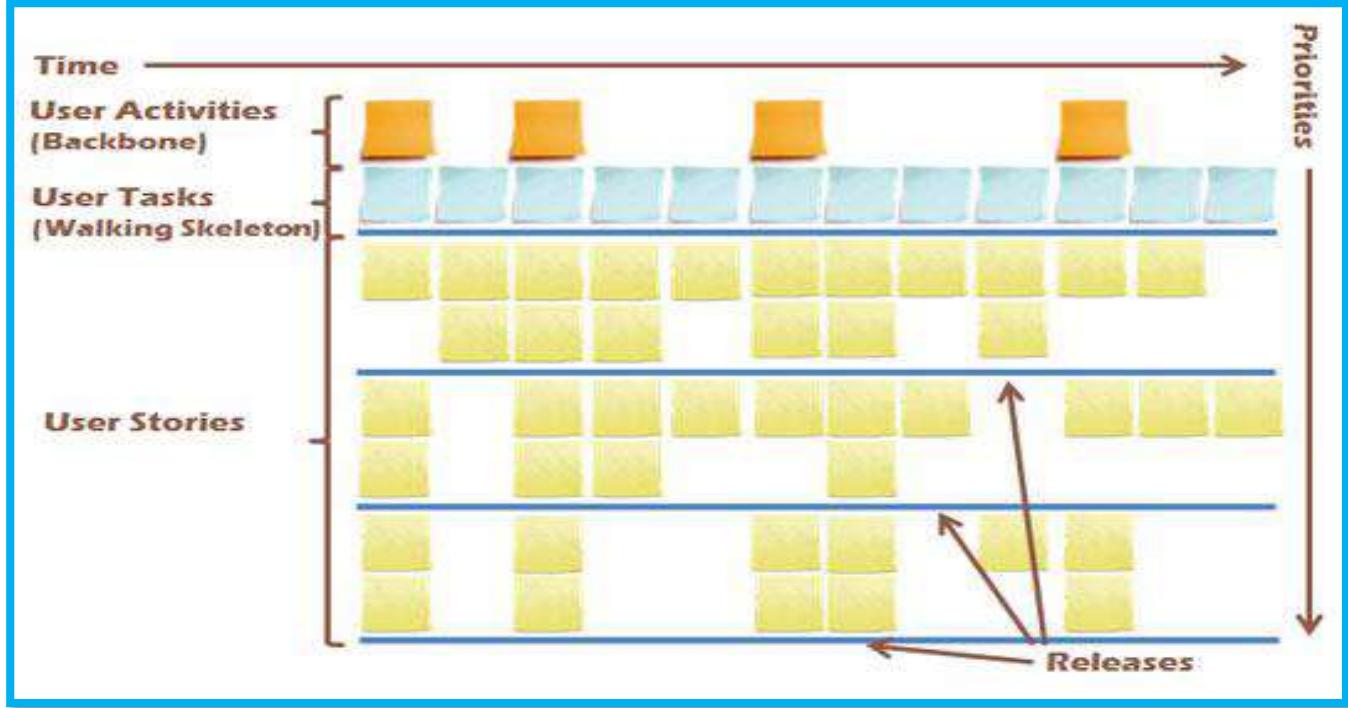
- Visual overview of a product's releases and its main components
- Communication tool which provides stakeholders quick overview of primary releases and intended functionality
- Created by the Product Owner
- Roadmap include large areas of product functionality, and when features will be available to Market
- P O considers following while building product roadmap
  - Market Trajectories
  - Engineering Constraints
  - Value Propositions

### In short

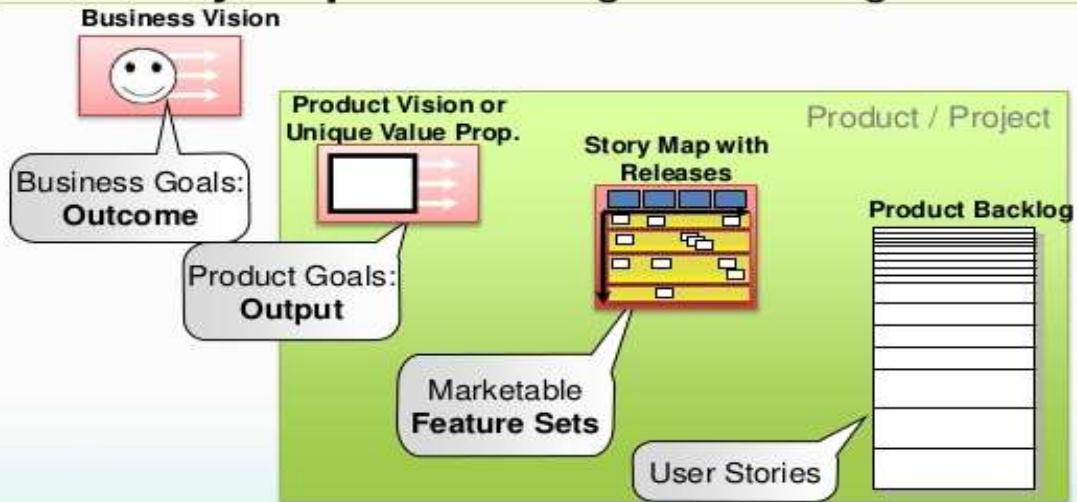
- Visual depiction of product releases
- Primary items that will be included in each release
- Helps to check risk and viability

## What are Story Maps?

- Story mapping is an effective inception tool to create a product backlog in a visually structured way
- It helps in building a shared understanding, identify gaps in the backlog
- Story maps provide end to end view of the system
- Story mapping consists of ordering of user stories into two independent dimensions
- Give a Story map so arranged the first horizontal row represents a “Walking Skeleton” , a barebones but useable version of the product. Working through successive rows fleshes out the product with additional functionality
- High-level planning tool to map out project priorities
- Prioritized matrix of the features and user stories for the product being built
- Backbone –top level of the story map; essential functions for the system to work
- Walking skeleton –second row of the story map; smallest version of the system that will beat the customers both basic needs



## How Story Maps fit into Agile Planning



Thanks to Xebia for this visualization.

9

### What is Minimum Viable Product?

- It is a strategy for avoiding development of products which customers don't want
- Rapidly build a minimum set of features enough to deploy the product and get quick customer feedback



(minimum viable product)



(product)

## Planning for Releases & Iteration

Agile Projects are divided into releases & iterations

### What is Releases & Iterations?

- Iterations are short, timeboxed periods of development
- Usually last two to four weeks
- Releases are the publishing of the software

## **How will you define the iteration types?**

- Development timeboxes
- Sprints
- Time for development

## **What is Iteration Zero?**

- Sets the stage for development
- Typically, no deliverables for the customer
- Prepares to do the work

## **What is Iteration H?**

- Sets Hardening sprint
- Wrap up sprint
- Used to stabilize the code
- Document the product
- Compile final assembly
- Final testing

## **What is Architectural Spikes?**

- Proof of concept
- Timeboxed effort to test the approach

## **What is Risk based Spikes?**

- Short effort to investigate risk
- Reduce or eliminate through mitigation
- Good for new technology and early in the project

## **What is Fast Failure?**

- Testing of different approaches for viability
- Good result before wasting time and money

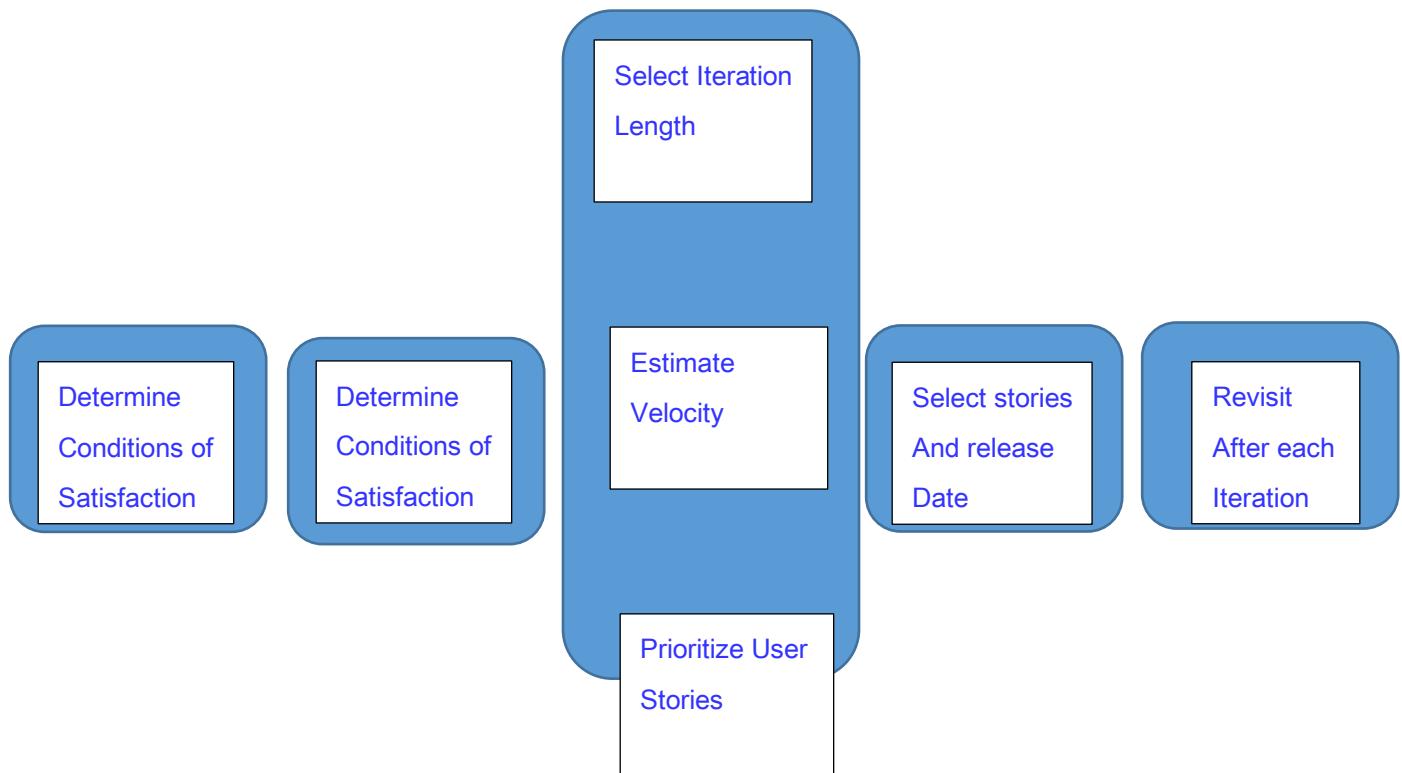
## What is Visioning or High-Level Planning?

- Prior to planning the first release
- Mapping out the overall effort of the project
- Product owner and sponsor
- Key team members
- Other major stakeholders

## What are the outputs of High-Level Planning?

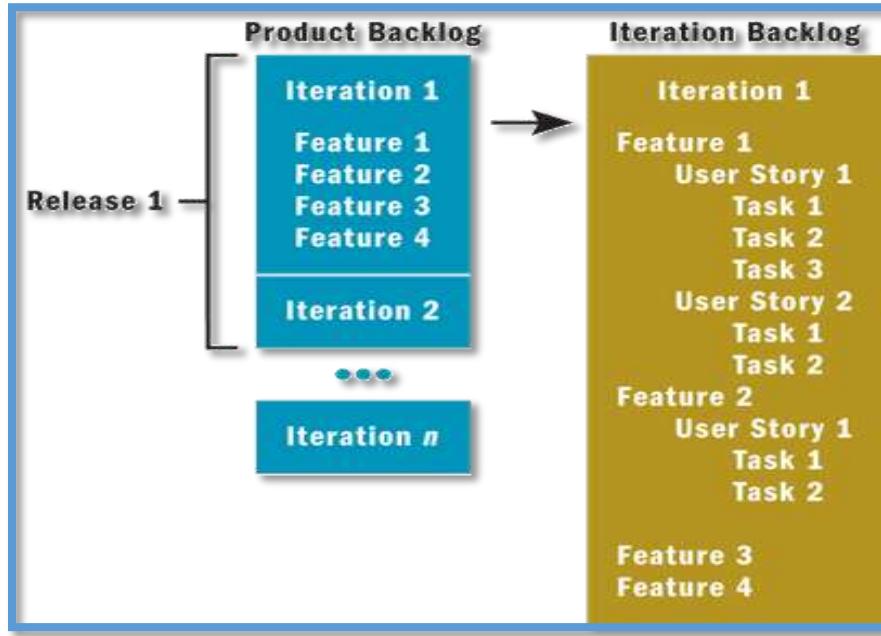
- Updated prioritize backlog
- Coarse grained relative estimates for each user story
- Goals of the release
- Release date

## What is release Planning in Agile?



What determines success or failure of the project

Is the project Date-Driven or feature driven

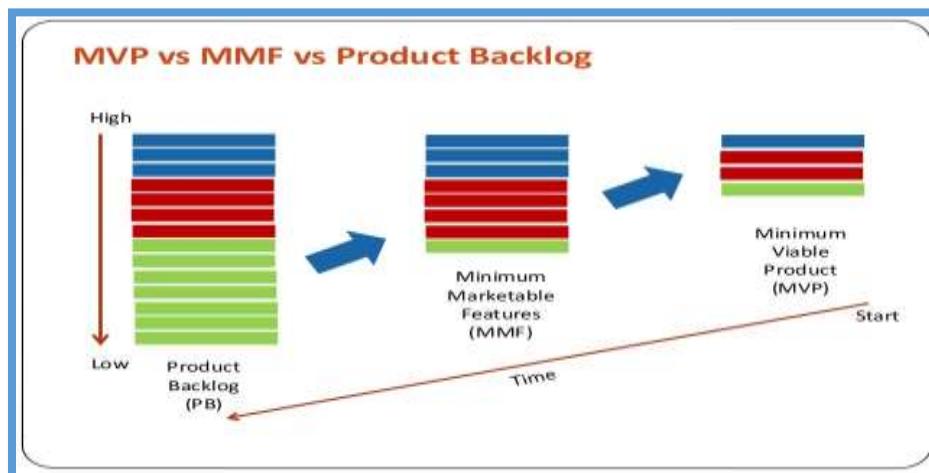
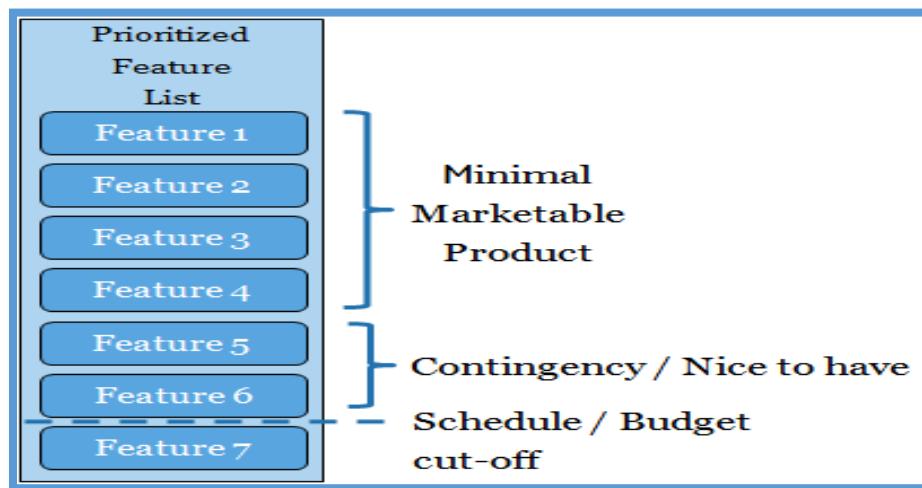


### How will you host the Release Planning Meeting?

- All stakeholders represented
- Happens before each release
- The goal is to find which stories will be done in which iterations for the release
- Also defines future iterations for future releases
- Assess the prioritize backlog
- Reviews story sizing
- Sort the stories by release
- Define the initial outline or road map for the release
- Slice the stories as needed for the plan release

## What is minimum marketable feature set?

A minimum marketable feature is the smallest possible set of functionalities that, by itself, has value in the market place



## What is iteration planning?

Velocity Driven

### Adjust Priorities

Identify Iteration Goal

Select User Stories

Split into Tasks

Estimate Tasks

Have target velocity in mind

Commitment Driven

Each story is taken, broken into tasks and estimated.

**Team commitment is arrived at before including that within the iteration**

## What is iteration tasks?

The iteration activities are

- Be Specific, add all tasks (meetings, UT, bug fixing etc.,)
- Add tasks of non-development nature-testing, documentation
- Dependencies between user stories need to be handled
- Task should not typically take more than a day
- If tasks appear wrong, re-plan accordingly

## How to select right iteration length?

Factors affecting the right iteration length are: -

- Length of Release
- Amount of Uncertainty
- Ease of getting feedback
- Iteration Overhead
- Suitability of Priorities
- Feeling of Urgency

Each item has two-way communication and all the items are interlinked

## What are the factors affecting in estimation velocity?

Factors	Impact
Use Historical Values	<ul style="list-style-type: none"><li>○ From the similar teams under similar technology, domain, tool landscape and working environment</li></ul>
Run an Iteration	<ul style="list-style-type: none"><li>○ Run a few sample iterations and arrive at a narrow range of projected velocity per sprint</li><li>○ Typically, 3-4 iterations will help to arrive at a projected value which is reasonably accurate range</li></ul>
Make a forecast	<ul style="list-style-type: none"><li>○ When there is no scope for using historical values or sample sprints, make a forecast</li><li>○ Fill an iteration capacity with tasks derived from randomly selected stories. This can serve as indicative velocity</li></ul>

## How will you slice stories?

- Compound stories –includes other independent stories within
- Stories –one large complicated story; usually can't fit in one iteration



## **What is Iteration Planning?**

- Meeting for and facilitated by the delivery team
- Confirms goal for the current iteration
- Discuss the user stories in the backlog
- Select the user stories for the iteration
- Define the acceptance criteria and write the acceptance test for the stories
- Breakdown the use for stories in tasks
- Estimate the task

## **How will you be finding an estimate?**

- Base of the team's velocity more accurate estimates can be created
- Burn up charts
- Burndown chart

## **How will you host the Daily standup?**

- Also known as the daily scrum
- Call the stand up because the team's stand through the meeting
- 15-minutes duration
- Answer three questions
  - What have you worked on since our last meeting?
  - What will you finish today?
  - Are there any problems or impediments to your progress?

## **What are rules for daily standup?**

- People with tasks must attend
- Only people who have tasks can talk
- Address the entire team not the scrum master
- No side conversations
- Add new task to sticky notes if they are started
- Discuss issues after the stand up
- Solve problems offline

## Adaptive Planning Practice Questions

1. One of the various essential levels involved in agile project planning include which of these?

- A. Strategic planning.
- B. Logical planning.
- C. Initiative planning.
- D. None of the above.

**Ans:** A. Strategic planning. Choices B, C, and D are incorrect for this question.

2. Agile sizing and estimation involves which of these necessary steps prior to reaching completion?

- A. Making use of progressive elaboration to estimate project efforts more accurately.
- B. Updating the team capacity to factor in maintenance and operations demands.
- C. Making initial rough estimate range on scope, schedule and cost at the very beginning of the project based on the high-level requirements to kick off the project.
- D. All of the above.

**Ans:** D. All of the aforementioned steps are essential. Choice A, B or C only is incorrect for this question.

3. All of these are part of agile core project management phases employed in the development of a project except \_\_\_\_\_

- A. Brainstorming.
- B. Envisioning.
- C. Speculating.
- D. Exploring.

**Ans:** A. Brainstorming. Choices B, C, and D are incorrect for this question.

4. Which of the following agile planning stages implies the creation of a document, describing the high-level product requirements and the timeframes for deliverables, providing a visual overview of all the planned releases and major components?

- A. Product vision.
- B. Product road map.
- C. Release plan.
- D. Sprint/ Iteration plan.

**Ans:** B. Product road map. A, C, and D are incorrect for this question.

**5. Which type of iteration involves the carrying out of tasks before the actual development work begins for technical and architectural setup and gathering initial requirements into the backlog?**

- A. Iteration O
- B. Iteration H
- C. Iteration P
- D. None of the above.

**Ans: A.** Iteration O. Choices B, C, and D are incorrect for this question.

**6. The Release planning aspect of agile project management implies which of the following?**

- A. Hardening iteration which is a time used to test and prepare the launch software.
- B. involves scheduling development at high level about features and iterations.
- C. A planning meeting to be attended by project team and stakeholders to discuss project related issues.
- D. None of the above.

**Ans: B.** Scheduling development at high level about features and iterations.

**7. Which of these is a meeting scheduled at the end of each sprint to be attended by team members only, in order to discuss improvements on product and process to enhance efficiency and effectiveness?**

- A. Sprint Retrospective.
- B. Sprint Review.
- C. Lessons.
- D. All of the above.

**Ans: A.** Sprint Retrospective. Choices B, C, and D are incorrect for this question.

**8. In a traditional project management, when is a lesson learned meeting carried out?**

- A. End of the meeting.
- B. Some moment before the meeting.
- C. During the meeting.
- D. All of the above.

**Ans: A.** End of the meeting. Choices B, C, and D are incorrect for this question.

**9. Which of the followings is among agile Planning Artifacts and Meetings?**

- A. Product vision.
- B. Product road map.
- C. Personas.
- D. All of the above.

**Ans: D.** All of the aforementioned are parts of agile planning artifacts. Choice A, B, and C are incorrect for this question.

10. A tool used in requirement collection and testing in which realistic depiction of likely users for the product are created, these users can be real or fictitious is \_\_\_\_\_

- A. Extreme Persona.
- B. Persona.
- C. Wireframes.
- D. Release Plan.

**Ans: B. Persona.** Choices A, C, and D are incorrect for this question.

## Lesson 7 PROBLEM DETECTING & RESOLUTION

### Topics to Discuss

- Problem Detection & Resolution Overview
- What is the Problem?
- Detecting Problem in Agile Projects
- Managing Threats & Issues

# Problem Detection & Resolution Overview

## Overview

### What are the Problem Detection & Resolution Tasks?

- Create a safe an open environment to surface problems
- Engage team in resolving threats and issues
- Resolve issues or reset expectations
- Maintain a visible list of threats and issues
- Maintain a threat list and add threat remediation efforts to the backlog

### What are the 4 themes in Resolution Tasks?

- Understanding problems
- Detecting problems
- Managing threats and issues
- Solving problems

## What is Risk Management?

- Risk are uncertain events or conditions
- An agile projects risk is always negative
- Probability and impact
- Risk identification and tracking

# What is the Problem?

## Problem & Agile Projects

### What is Issue & Risk?

- Risk are uncertain events they've not yet happened
- Issues are risk events that have occurred

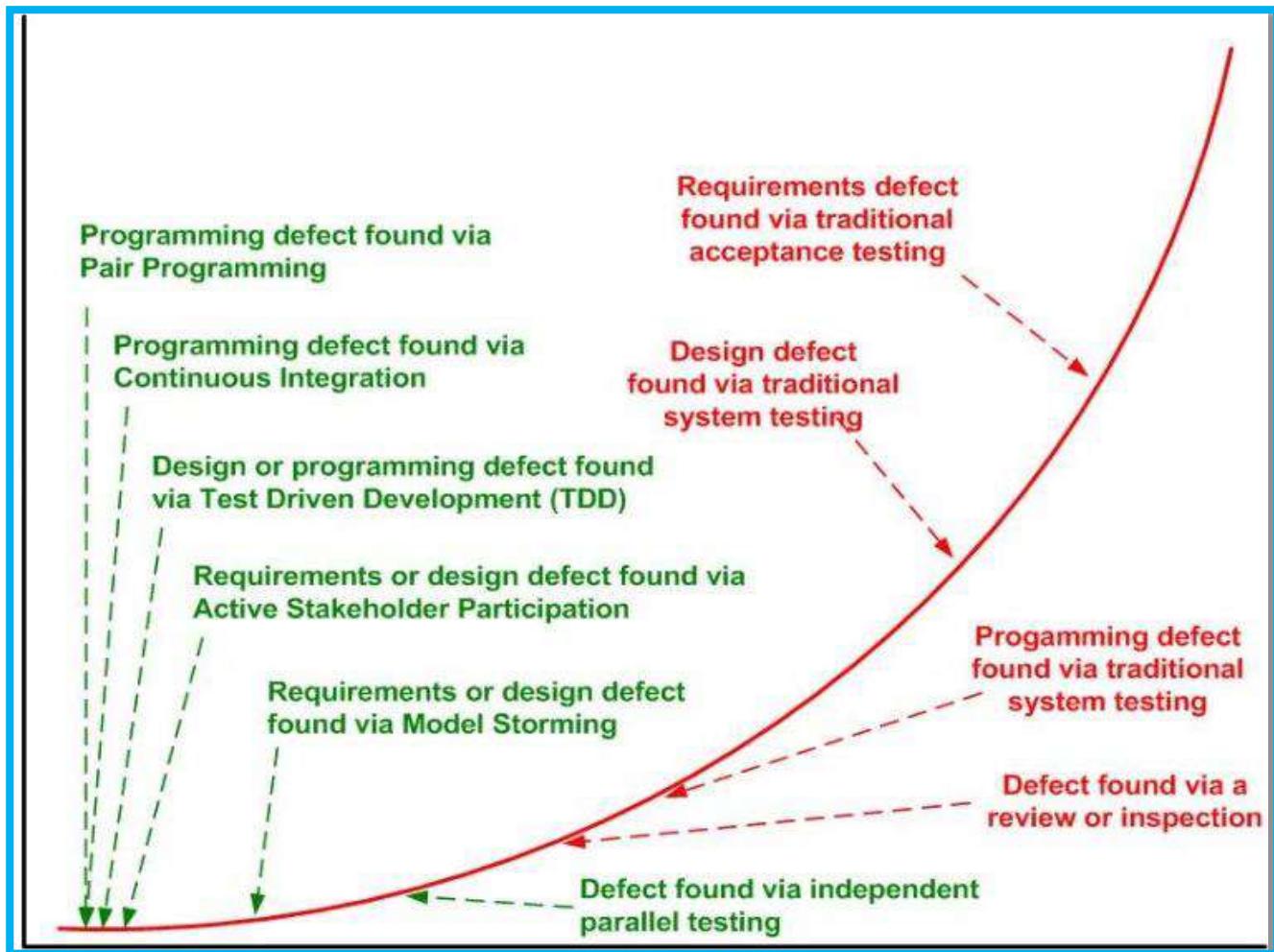
### How will you understand the problem of resolution?

- Problems can mushroom
- Problems can have ripple effects
- What happens in one area of the project affect all other areas of the project

### What is the financial impact of problems?

- The longer a defect is left unaddressed, the more expensive it will be to fix
- It is like going to the dentist
- The longer you wait the more expensive it will be

## Where the issues are discovered?



## How will you review the technical debt?

- Backlog of work caused by lack of regular clean-up maintenance and standardization
- Refactoring solves technical debt
- Red green refactors
- Refactoring cleans up and standardize is code to make it easier to support
- Refactoring should be included in estimates

## How will you create the Safe environment?

- PMI-ACP calls for safe and open environment
- People should feel comfortable experimenting for solutions
- When people get stuck they should share the problem with her teammates
- Safe environments are coaching opportunities

### **How will you understand the failure modes?**

- We make mistakes –mistakes happen
- We prefer to fail conservatively
- We prefer to invent rather than research
- We are creatures of habit
- We are inconsistent

### **How will you understand the success modes?**

- We are good at looking around
- We are able to learn
- We are malleable
- We take pride in our work

### **How will you create the success strategies?**

- Balance discipline with tolerance
- Start with something concrete and tangible
- Copy and alter
- Watch and listen
- Support both concentration and communication
- Match work assignments with a person
- Retain the best talent
- Use rewards that preserve joy
- Combine rewards
- Get feedback

# Detecting Problems in Agile Projects

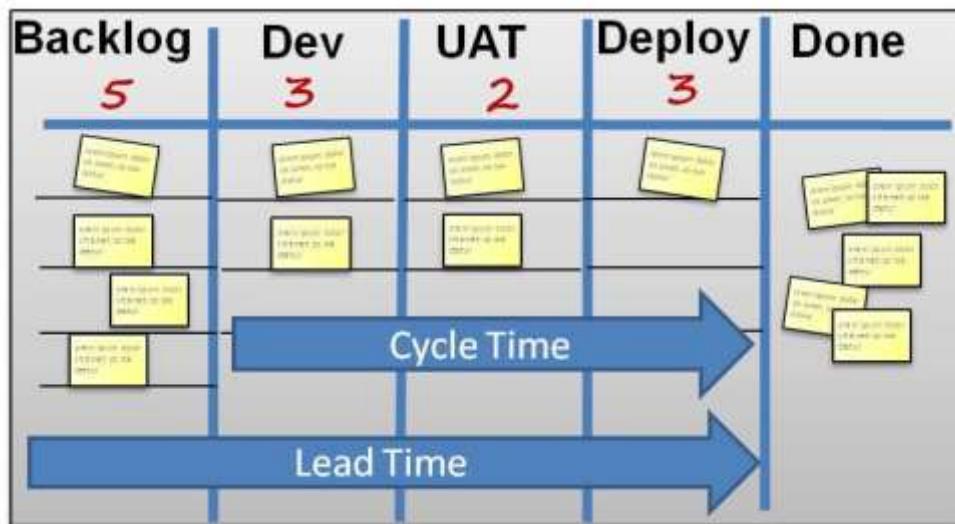
## Finding Problem & Defects

How will you start a day with daily startup?

- Are there any problems or impediments to the team members?
- This is the first step to detecting problems

How will you review the Lead & Cycle time? Display in Kanban board?

- Lead time is how long something takes to go through the entire process
- For example, from concept design to shipping
- Cycle time is a subset of lead time
- Cycle time is how long something takes to go through a part of the process
- For example, from coding to testing



## What do you know about Cycle Time, WIP, Throughput?

- Understanding the team's throughput allows for forecasting future capabilities
- Cycle time equals WIP / throughput

## What is Project Cycle Time?

- The project duration is the cycle time for the entire project
- Average amount of work the team can get done in a time.
- Productivity is the rate of efficiency at which the work is done
- Productivity could be the amount of work done per team member

## How will you look for Defect Cycle Time?

- Defect cycle time is the amount of time between when the defect was discovered and when the defect was fixed
- The longer the defect cycle time typically the more expensive the defect

## What is Defect Rates?

- Defects that slip by the testing team are called escaped defects
- Escape defects are the most expensive to fix
- The defect rate measures the frequency of defects found
- An increase in escape defects signals a problem with a process

## What is Variance Analysis?

- The difference between what was planned and what was experienced
- Cost variance
- Schedule variance
- Other tracking items

## What are the causes for Variance?

### Average day to day differences

- Good days and bad days
- Ups and downs

### Special causes of variance

- Something unusual that causes a problem
- Power went out for 2 days
- Three team members caught the flu

## How will you rely on trend analysis?

- Measurements of past experiences are called lagging metrics
- Leading metrics provide a view into the future
- Trend analysis aims to predict performance or problems

## What are the control limits?

- Upper and lower control limits
- Set boundaries and expectations for performance
- WIP and Kanban are a form of control limits

# Managing Threats & Issues

## Removing Anti Value in Agile Projects

## How will you work with Risk adjusted backlog?

- Risk is considered anti value
- Goal is to attack high-risk items early in the project
- Items with the greatest value in greatest risk move to the top of the backlog

## How will you groom the risk backlog?

- Stories are ranked based on business value and risk level
- The ranking is subjective often based on gut feeling or preference
- The return on investment for the project can be broken down per item
- The business representatives assign the ROI to each item in the backlog

## How will you find the expected monetary value? Explain Probability Impact Risk Matrix?

- Expected monetary value is the worth of a risk event
- $EMV = \text{risk impact} \times \text{risk probability}$
- $EMV = \$45,000 \times 30\%$
- $EMV = \$13,500$
- This is done for each risk in a probability impact matrix

Risk event	Probability	Impact	Ex\$V
A	.60	-10,000	-6,000
B	.20	-75,000	-15,000
C	.10	25,000	2,500
D	.40	-85,000	-34,000

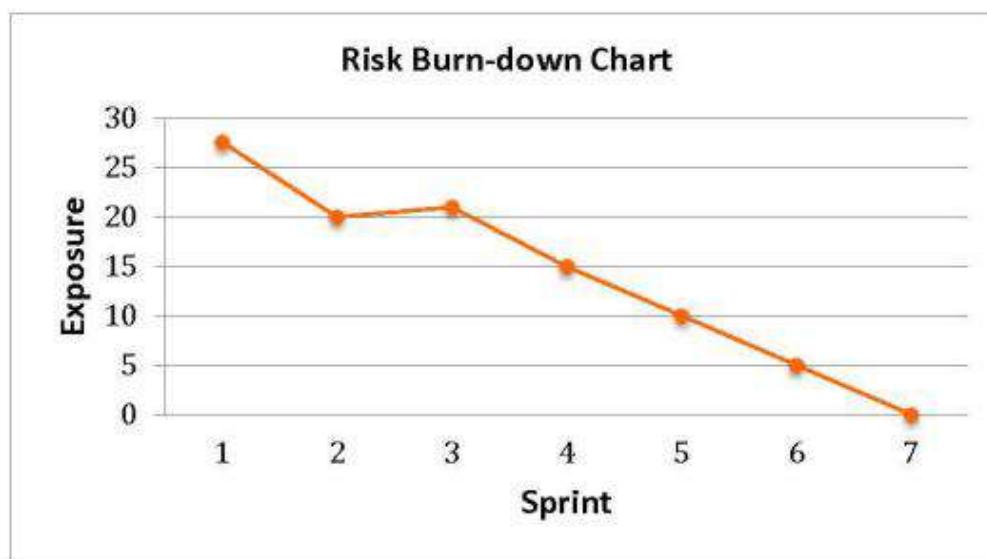
**Contingency reserve = \$52,500**

## What is Risk Severity?

- Instead of risk probability and dollar amounts
- Probability and impact uses a simple scale
- For example, low medium high
- Risk severity = risk probability x risk impact
- Risk severity = 3 x 1

## What is Risk Burndown Chart?

- Stacked area graphs of cumulative project risk severity
- Visual communication of risk events
- Severe these for each risk are plotted on top of one another to show the cumulative severity of the project
- Overtime risk should diminish so the chart diminishes as well



# Solving Problems

## Solving Problems for Agile Projects

**How would you identify problem solving is in continuous improvement?**

- Problem solving games to fix the problem before it happens
- Consider daily standup
- Iteration reviews and retrospectives
- Sprint planning sessions

**How would you enlarge the team in problem solving?**

- By asking the team for a solution we inherit consensus for the proposal
- Engaging the team excesses a broader knowledge base
- Team solutions are practical
- When consulted people work hard to generate good ideas
- Asking for help shows confidence
- Seeking others ideas models desired behavior

**What are the considerations for team engagement?**

- Involve the team where it can be most helpful
- Solve real problems only
- Team cohesion is necessary
- Check in after project changes
- Be sure to follow through

## **What are the problems cannot be solved?**

- Even with team engagement some problems won't find a solution
- Work around these problems
- Track and monitor the problems

## Problem Detecting & Resolution Practice Questions

1. The Problem Detection and Resolution aspect of agile project consists of all of these except \_\_\_\_\_
- A. Encourage experimentation and communication in order to discover problems or impediments that prevent maximal value delivery.
  - B. Identify and resolve issues and threats on time by engaging the whole team.
  - C. Issues should be resolved by appropriate team member(s). In the case the issue cannot be resolved; the team should communicate with appropriate stakeholders to adjust project expectations and priorities.
  - D. Finding the escalating factor of the problem.

**Ans:** D. Finding the escalating factor of the problem, this statement is not presented in agile problem determining steps. Choices A, B, and C are incorrect for this question.

2. It is the uncertainty that could affect the success or failure of a project; it becomes a problem after occurrence. The characteristics stated above implies to which of the following?
- A. Mistake.
  - B. Error.
  - C. Risk
  - D. None of the above.

**Ans:** C. Risk. Choices A, B, and D are incorrect for this question.

3. According to agile threat management, in order to maximize values, which of these risks should be utilized?
- A. Positive risk.
  - B. Negative risk.
  - C. Compromise risk.
  - D. None of the above.

**Ans:** A. Positive risk. Choices B, C, and D are incorrect for this question.

4. In risk or threat management, which of these shares the same meaning with negative risk?
- A. Devaluing risk.
  - B. Anti-value risk.
  - C. Null value risk.
  - D. All of the above.

**Ans:** B. Anti-value risk, in accordance to agile context.

5. The core risks mentioned in the book “The Software Project Manager’s Bridge to Agility” includes all of the following except \_\_\_\_\_

- A. Scope creep.
- B. Project variation.
- C. Specification breakdown.
- D. Extrinsic schedule.

**Ans:** D. Extrinsic schedule. Choices A, B, and C are incorrect for this question.

6. Which of these is defined as the acceptance criterion and acceptable risks accompanying a project?

- A. Validation.
- B. Compliance.
- C. Verification.
- D. Done.

**Ans:** D. Done is the right choice. Choices A, B, and C are incorrect for this question.

7. In user requirements collection, the form of testing created for continuous feedback to effect quality improvement and assurance includes?

- A. Unit testing.
- B. Automated testing.
- C. Quality testing.
- D. None of the above.

**Ans:** A. Unit testing. B, C and D are incorrect for this question.

8. \_\_\_\_\_ is the measure of how far apart things are; i.e. how much the data vary from one another.

- A. Trend analysis.
- B. Variance analysis.
- C. Project analysis.
- D. None of the above.

**Ans:** B. Variance analysis. Choices A, D, and C are incorrect for this question.

9. Another tool for carrying out cause and effect analysis to help discover the root cause of a problem or the bottle necks of processes is\_\_\_\_\_

- A. Trial diagram.
- B. Root diagram.
- C. Fishbone diagram.
- D. Scatter diagram.

**Ans:** C. Fishbone diagram. A, B, and D are incorrect for this question.

10. Which of these is the technique involved in the application of a Fishbone diagram\_\_\_\_\_

- A. Writing down the problem as the fish head.

- B. Thinking of major factors involved in the problem, at least four.
- C. Identifying possible causes and draw a line spinning off the major factors.
- D. All of the above.

**Ans:** D. All of the above. Choice A, B or C only is incorrect for this question.

## Lesson 8 CONTINUOUS IMPROVEMENT

### Topics to Discuss

- Continuous Improvement Overview
- Continuous Process Improvement
- Continuous Product Improvement
- Continuous People Improvement

# Continuous Improvement Overview

## Overview

### What are the Continuous Improvement Tasks?

- Periodically review and tailor the process
- Improve team processes through retrospectives
- Seek product feedback via frequent demonstrations
- Create an environment for continued learning
- Use values dream analysis to improve processes
- Spread improvements to other groups in the organization

### What are the lessons learned to be captured?

- Lessons learned are captured in each iteration
- Allows lessons to be applied in next iterations
- Lessons are repeated until they are learned

## How will you improve quality along with continuous improvement?

- Quality assurance is prevention driven
- Quality assurance is planning for quality
- Quality control is inspection driven
- You cannot inspect quality into a product

## What is Kaizen?

- Japanese word meaning change for the better
- Small incremental steps for improvement
- Plan Do Check Act
- Plan, develop, evaluate learn

# Continuous Process Improvement

## Improving Process in Agile Project

## How will you tailor the process for Agile Projects?

- Adapting agile for your environment
- There is some risk with tailoring
- Better to create processes for each project as needed
- Consider risk and reward

## What are the risk and reward for process tailoring?

- First embrace traditional agile processes before attempting to change
- Second examine the motivation for changing processes

## Why to use Hybrid Model?

- You can use elements from different agile models
- Combinations to best fit your environment
- There's no right or wrong hybrid

## What is System thinking?

- Understanding the system's level environment
- Classifying projects by their level of complexity and uncertainty
  - Project requirements
  - Technical approach
- Looking for a balance between simple and highly chaotic

## How will you conduct Process Analysis?

- Reviewing and diagnosing issues with agile methods
- Trying to discover what does and does not work
- Often done after process tailoring

## What will be the impact of Antipatterns of methodologies?

- One-size-fits-all projects
- Intolerant processes
- Heavy methodologies
- Embellished methodologies
- Untried methodologies
- Used only once

## What are the 3 success criteria for Antipatterns?

- The project got shipped
- The leadership remained intact
- The team would work the same way again

## **What are the Success Patterns Methodology?**

- Interactive face-to-face communication is the cheapest and fastest channel for exchanging information
- Excess methodology weight is costly
- Larger teams need heavier methodologies
- Projects with greater criticality require greater ceremony
- Feedback and communication reduce the need for intermediate deliverables
- Discipline skills and understanding counter process formality and documentation
- Efficiency is expendable in on bottleneck activities

## **What is Visual Stream Mapping?**

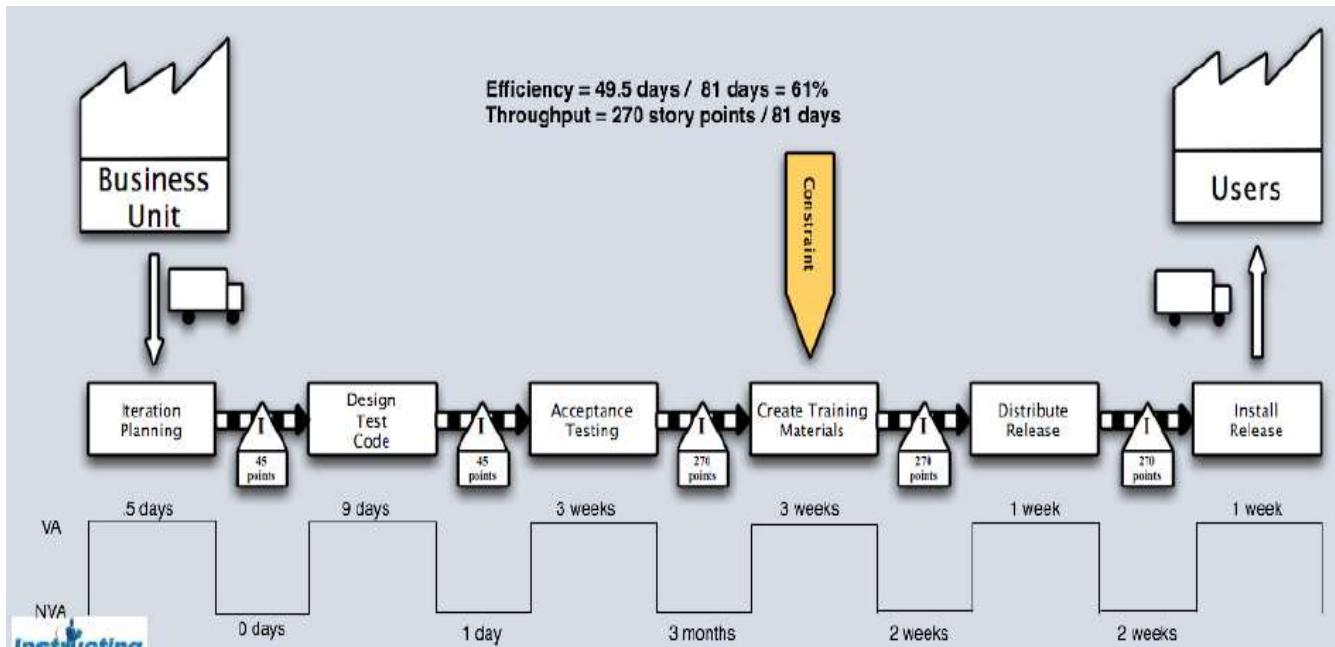
- Lean manufacturing technique adopted by agile
- A visual map of a process flow to identify delays waste and constraints

## **What is Project Postmortem?**

- Aims to find failure points before they happen
- Imagine the failure
- Generate the reason for failure
- Consolidate the list
- Revisit the plan

## **How to create Visual Stream Mapping?**

- Identify the product or service to be analyzed
- Map current processes steps, queues, delays, and information flows
- Review the map for delays waste and constraints
- Create a new value-stream map of the desired future state for the process
- Develop a road map for creating the optimized state
- Plan to revisit the process in the future to continually refine and optimize



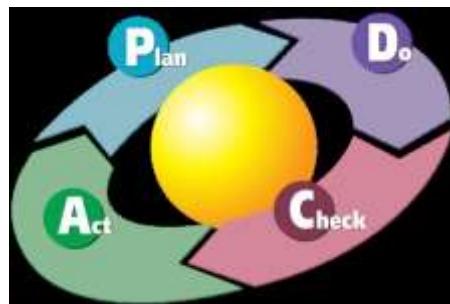
## Continuous Product Improvement

Products are iteratively and incrementally improved

What are the ways to collect Product Review?

- Product feedback
- Retrospective and demos

## What is P D C A cycle?



## What are the Agile Review Rules?

- Let the data speak for itself
- Respect individuals
- Diverge and then converge

## What are the product feedback loops & learning cycles in Agile?

- Does it meet the customer's needs and expectations?
- Does it work and all conditions?
- Did we break anything while building this?
- How can we improve efficiency?
- How can quality be improved
- How can we share lessons learned?

## What are the product feedback methods?

- Prototypes
- Simulations
- Demos

## How would we conclude the iterations get approved?

- Iterations and sprint reviews
- Held at the end of a sprint
- Demonstrates the new incremental build
- Business partner approved work
- Next sprint may begin

# Continuous People Improvement

## Helping People to improve in Agile Projects

**What is the importance of Retrospective for people improvement?**

- What is going well
- What areas could use improvement
- What should we be doing differently

**Why do you need Retrospective?**

- Improve productivity
- Improved capabilities
- Quality improvement
- Capacity improvement

**How will you set the stage for Retrospective?**

- Encourage participation
- Set the ground rules
- Define what people want from the retrospective
- Have people checking in with one or two words
- Ask the team to commit to focus
- Explorer shopper vacationer prisoner
- Working agreements for the retrospective

## **How will you gather data for Retrospective?**

- Used techniques to extract data
- Get people involved in contributing
- Facilitate the meaning for contributions

## **What are the methods for gathering data in Retrospective?**

- The team creates a timeline
- Triple nickels –five groups spending five minutes on 5 ideas 5 times
- Color-coded dots –used color-coded dots to track your energy was high and low throughout the duration
- Mad sad or glad –track emotions throughout the timeline



## **What are the methods can be followed during data collection?**

- Satisfaction histogram –a bar chart showing satisfaction about particular areas or issues
- Team radar –an assessment of performance improvement
- Locates strengths -what went well, or not well, in the iteration
- Like to like –compares reactions to different iteration events

## **How will you generate insights?**

- Evaluate the data
- Create insights based on the data
- Done with the project team

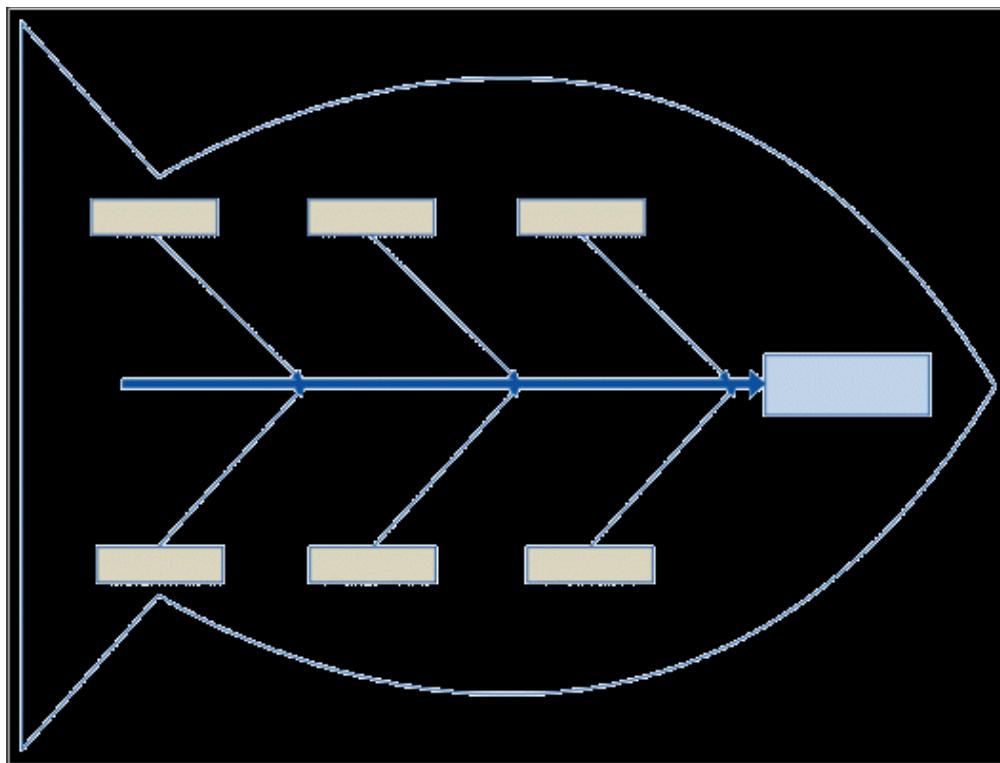
## What are the types of brainstorming sessions?

- Quiet writing
- Round robin
- Free for all

## What is Five Whys?

- Cause and effect exercise
- Small groups
- Ask why five times
- The goal is to find root cause

## What is Fish-bone analysis?



- Also known as a cause and effect diagram
- Also known as an Ishikawa diagram

## How will you decide What will we do in conducting Retrospective?

- Create an action plan
- Short subjects –keep drop add

- Smart goals –specific measurable attainable relevant timely
- Circle of questions –each person ask a question on how to improve one of the issues in the next person of the circle answers the question
- Retrospective planning game –play in the task to reach process improvement goals

### **How will you close the Retrospective?**

- Plus / delta –what to do more of and what to do less of
- Help hindered hypotheses –feedback on the retrospective
- Return on time invested –the team discuss the benefits of the retrospective and gives a great
- Appreciation –the team gives appreciation to other team members based on efforts from the last iteration

### **What are the ways in conducting team assessments?**

#### **Shores team self-assessment scoring model**

- Thinking
- Collaborating
- Releasing
- Planning
- Developing

## Continuous Improvement Practice Questions

1. Which of the following tasks is present in "continuous improvement" with regards to Agile principle?

- A. Review product processes and practices periodically to look for rooms for improvement and efficiency enhancement.
- B. Conduct frequent retrospectives and experiments to continually improve team processes and effectiveness.
- C. Gather feedback from stakeholders on product increments and demonstrations to enhance value delivery.
- D. All of the above.

**Ans: D.** All of the aforementioned are parts of the task. Choice A, B or C only is not correct for this question.

2. In the aspect of integration, testing and experiment. "Continuous integration" involves all of these objectives except \_\_\_\_\_

- A. To continuously integrate changes to the codebase by merging the new codes as soon as practicable.
- B. To avoid code conflicts and minimize risks of incompatibility.
- C. On every integration, the codebase needs to be tested with automated testing tools.
- D. Disseminate knowledge gained during carrying out of project works to the whole organization for organizational improvement.

**Ans: D.** Disseminate knowledge gained during carrying out of project works". This is a task only in "continuous improvement". Choices A, B, and C are incorrect for this question.

3. A set of typical settings for continuous integration includes which of the following?

- A. A source code repository.
- B. A check-out and check-in process.
- C. An automated build process.
- D. All of the above.

**Ans: D.** All of the afore stated are involved in the settings. Choices A, B or C only are In correct for this question.

4. Which of these types of testing involves finding out how the software actually works, and to ask questions about how it will handle difficult and easy cases by asking test subjects to try the software?

- A. Unit testing.
- B. Exploratory testing.
- C. Usability testing.
- D. None of the above.

**Ans: B.** Exploratory testing. Choices A, C, and D are incorrect for this question.

**5. All of the followings are parts of the significance of Agile learning cycle except \_\_\_\_\_**

- A. Helps to provide insights on the design of the software.
- B. Agile software development is about learning from little known about the end product in the beginning to hopefully delivering the maximal value in the end.
- C. Each retrospective is an opportunity to learn.
- D. Understanding of the requirements as well as the technology to make the product feasible and increase incrementally during the project.

**Ans: A.** Helps to provide insights on the design of the software", this only pertains to testing. Choices B, C, and D are incorrect for this question.

**6. Which of these fully defines an Agile process for self-evaluation to be performed at the end of each iteration slightly similar to the “postmortem” meeting or “lessons learned” meeting in traditional project management?**

- A. Retrospective.
- B. Review.
- C. Iteration conference.
- D. All of the above.

**Ans: A.** Retrospective. Choices B, C, and D are incorrect for this question.

**7. Which of these refers the Agile project management as an ad hoc meeting by the Agile team to review on the team practices or teamwork during the sprint, often called for when something went wrong?**

- A. Pre-mortem.
- B. postmortem.
- C. Introspective.
- D. None of the above.

**Ans: C.** Introspective. Choices A, B, and D are incorrect for this question.

**8. Which of these is the activity during which team members are asked to generate plausible reasons for a project’s assumed failure?**

- A. Postmortem.
- B. Infraction.
- C. Pre-mortem.
- D. Retrospectives.

**Ans: C.** Pre-mortem. Choices A, B, and D are incorrect for this question.

**9. Which of these is the essential act of maximizing the amount of work not done?**

- A. Value Stream Mapping.
- B. IT development projects.

C. Lean manufacturing.

D. None of the above.

**Ans: A.** Value Stream Mapping. Choice B, C, and D are incorrect for this question.

**10. All of the objectives of Value Stream Mapping involve the followings except \_\_\_\_\_**

A. Provision of optimum value flow to customers through value creation processes.

B. Elimination of wastes in every process through analysis such as value stream mapping and enhancements.

C. It serves as a graphical tool for analyzing the flow of materials in manufacturing from its beginning through to the customer.

D. To make it safe for team members to voice out their reservations about the project direction and so on.

**Ans: D.** "To make it safe for team members to voice out their reservations", this pertains only to pre-mortem. Choices A, B, and C are incorrect for this question.

## Lesson 9 PMI-ACP PRACTICE QUESTIONS

1. The extreme programming role that keeps the Agile team focused on learning and the process of delivering value is the \_\_\_\_\_

- A. Supervisor
- B. Coordinator
- C. Coach
- D. Inspector

**Ans: C.** In conformity with Agile terminologies, the above is the responsibility of the Coach. Choices A, B, D are incorrect for this question.

2. Which of these is the ability to relate to others and lead?

- A. Superiority
- B. Emotional intellect.
- C. Extreme persona.
- D. Emotional intelligence.

**Ans: D.** Being able to relate to others and lead is part of emotional intelligence. Choices A, B and C are incorrect for this question.

3. The Agile term, “grooming”, means which of these:

- A. Arranging of valuable software in order.
- B. Keeping Agile premises tidy by wiping off glasses, re-arranging objects and cleaning floors.
- C. Cleaning up the product backlog by removing items, disaggregating them, or estimating them.
- D. Sorting Agile products in order of magnitude.

**Ans: C.** Cleaning up the backlog is the right definition for the above. Choices A, B, D are incorrect for this question.

4. Through which of these boards is work flow stages easily determined?

- A. Workflow board.
- B. Project board.
- C. Glancing board.
- D. Kanban board.

**Ans: D.** The Kanban board is used to see at a glance what work is in progress and where work items are in the project. Choices A, B, C are incorrect for this question.

5. The tool for analyzing a chain of processes with the aim of eliminating waste is:

- A. Value Stream Mapping.
- B. Verification
- C. Analyzer
- D. Process Monitor.

**Ans: A.** Value stream mapping is the tool used to conduct analysis on ongoing processes. Choices B, C, D are incorrect for this question.

6. Which of these implies ensuring that a product conforms to the specifications?

- A. Inspection
- B. Verification
- C. Perusal
- D. Validation

**Ans: B.** Verification entails checking the conformity of a product in terms of specification. Choices A, C, D are incorrect for this question.

7. In an agile project what is velocity?

- A. Number of services rendered by agile team per day.
- B. Number of agile products manufactured per day.
- C. Amount of resources consumed per product in the manufacturing process.
- D. The number of features or user stories that a team delivers in a fixed iteration.

**Ans: D.** Velocity, according to agile, means the number of user stories delivered by a team in a fixed iteration. Choices A, B, C are incorrect for this question.

8. A project costs \$450,000, but once it's implemented it will be worth \$567,000. This is known as what?

- A. Return On Investment.
- B. Rate Of Investment.
- C. Retrieval Of Information.
- D. Rate Of Improvement.

**Ans: A.** ROI is a term in Agile glossary, it means Return On Investment. Choices B, C, D are incorrect for this question.

9. Which of these is the function of a story card?

- A. It contains the list of all Agile products.
- B. It holds the user story information.
- C. It contains the details of all agile recent and current staffs.
- D. It serves as the license to working with Agile project team.

**Ans: B.** The story card contains the user story. Choices A, C, D are incorrect for this question.

10. Sustainability refers to the:

- A. Ability to realize great productivity from meager resources.
- B. Pace of work or velocity that can be maintained by a team indefinitely.
- C. Indefinite and efficient functioning of a manufacturing machine.
- D. None of the above.

**Ans: B.** Pace of work or velocity that can be maintained. Choices A, C, D are incorrect for this question.

11. This item has no value:

- A. Work In Persistence.
- B. Waiting In Progress.
- C. Work In Progress.
- D. Work In Permanence.

**Ans: C.** WIP is the work in progress and has no value until the work is completed.

12. The decisions that the team chooses not to implement at a particular time, but will become obstacles if not done are called?

- A. Logical debt.
- B. Technical debt.
- C. Reasonable debt.
- D. Probable debt.

**Ans: C.** Technical debt, being a decision that can create an unforeseen obstacle for a team if postponed. Choices A, B, D are incorrect for this question.

13. The collaboration technique where the entire team is focused on a single story is called?

- A. Merging
- B. Coalescing
- C. Swarming
- D. Perming

**Ans: C.** Swarming is the techniques involved in the described process. Choices A, B, D are incorrect for this question.

14. Empowered group of individuals, collectively responsible for delivering value on a project is?

- A. Colleagues
- B. Staff
- C. Coworkers
- D. Team

**Ans: D.** The empowered group of individuals indicates a team. Choices A, B, C are incorrect for this question.

15 In which of these ways does an agile project manager and project team enhance transparency and trust with its customers?

- A. Through mutual understanding of terms and conditions.
- B. Through the use of common communication media.
- C. Maintaining the use of highly visible information radiators to show the progress of the projects in process.
- D. Through some special advertisements of their products.

**Ans: C.** Maintaining the use of highly visible information radiators. Choices A, B, D are incorrect for this question.

16. What does Agile value the most about empirical learning?

- A. It's believed that experience can be gathered from practical activities due to possibility of making mistakes.
- B. It is able to enrich an individual with enough knowledge to invent.
- C. It stimulates one's theoretical approach to a project.
- D. It facilitates one's problem solving techniques.

**Ans: A.** It's believed that experience can be gathered from practical activities. Choices B, C, D are incorrect for this question.

17. Which of these means of communications will Agile encourage in sharing knowledge during a project work?

- A. Communication through sophisticated technological gadgets.
- B. Communication through body language.
- C. Face to face communication.
- D. Communication through internal memorandum.

**Ans:** C. face to face communication is recommended. Choices A, B, D are incorrect for this question.

18. Among all of these tools, which one is not used in knowledge sharing?

- A. Kanban board.
- B. Bulletin boards.
- C. White boards.
- D. None of the above.

**Ans:** D. None of the above as all of the above are used in knowledge sharing.

19. Which of these is the advantage of using Agile terminologies?

- A. Ability to create a common understanding of the values and principles of Agile.
- B. To minimize the use of excessive words in communication processes.
- C. To encourage being brief and easily understood.
- D. To prevent loss of concentration while trying to communicate.

**Ans:** A. Ability to create a common understanding of the values and principles of Agile. Choices B, C, D are incorrect for this question.

20. Why is carrying out experiments important as a member of Agile project team?

- A. Because it widens one's practical knowledge.
- B. Because it's real, unlike in theory.
- C. Due to the fact that it's involving.
- D. It enhances creativity and the ability to discover efficient solutions.

**Ans:** D. It enhances creativity and the ability to discover efficient solutions. Choices A, B, C are incorrect for this question.

**21. Which of these is not the advantage of collaboration while working on a project?**

- A. It enhances knowledge sharing through efficient communication.
- B. Removal of knowledge silos and bottlenecks.
- C. It saves time and energy.
- D. Costs are automatically reduced.

**Ans:** D. While collaboration is a good practice, it doesn't ensure that costs will be automatically reduced. Choices A, B, and C are incorrect answers.

**22. Which of these is not part of the Agile mindset?**

- A. Collaborate with one another to enhance knowledge sharing as well as removing knowledge silos and bottlenecks.
- B. Establish a rewards and recognition system for the employee of the month throughout the project duration.
- C. Establish a safe and respectful working environment to encourage emergent leadership through self-organization and empowerment.
- D. Support and encourage team members to perform their best by being a servant leader.

**Ans:** B. An employee of the month program is an example of a zero-sum reward, something to avoid in agile projects. Choices A, C, and D are part of the Agile mindset.

**23. Which of these does Agile valued over Processes and tools?**

- A. Individuals and interactions.
- B. Working software.
- C. Customers collaboration.
- D. Responding to change.

**Ans:** A. individuals and interactions is the right choice. Choices B, C, D are incorrect for this question.

**24. Beth is a new Agile project manager and she's reviewing the Agile approach with her development team. Which one of the following isn't part of Agile?**

- A. Users Involvement.
- B. Predictive planning.
- C. Fixed Time Box.
- D. Team Empowerment.

**Ans:** B. Predictive planning isn't part of the agile approach so this choice is incorrect. Choices A, C, and D are part of the agile approach.

25. Agile methodologies involve:

- (i) Scrum
  - (ii) XP (eXtreme Programming)
  - (iii) Kanban
  - (iv) LSD (Lean Software Development)
- A. i, ii  
B. i, ii, and iii.  
C. iv only  
D. I, ii, iii, iv

**Ans: D.** all of the above options are involved in the Agile methodologies. Option A, B or C only is incorrect for this question.

26. Which one of these is not an attribute of Define Positive Value?

- A. Deliver work incrementally to gain competitive advantage and early realization of value.
- B. Maximize values delivered to stakeholders while at the same time minimize non-value added work.
- C. Use a command-and-control approach when it comes to value assurance.
- D. Reach consensus on the acceptance criteria of the deliverables.

**Ans: C.** Command-and-control isn't part of Agile and value delivery. Choices A, B, and D are components of defining positive value.

27. Soliciting feedback from stakeholders and review frequently to enhance value are part of

- A. Prioritization of resources.
- B. Avoiding potential downsides.
- C. Incremental development.
- D. Organizational Improvement.

**Ans: B.** Avoiding potential downsides in the project. Choices A, C, D are incorrect for this question.

28. What is value-driven delivery?

- A. An over-arching principle for Agile projects.
- B. A prioritizing principle established by Agile.
- C. An advertising principle intended to improve sales.
- D. Revitalization of products to improve its value.

**Ans: A.** Value-driven delivery is an overarching principle for Agile project. Choices A, B, C are incorrect for this question.

29. Agile's main purposes for carrying out projects does NOT include

- A. Economic benefits.
- B. Risk taking.
- C. Reducing risks.
- D. Competitive advantages.

**Ans:** D. Risk taking is the correct option. Choices A, B, C are incorrect for this question.

30. \_\_\_\_\_ is the process where customers select product backlog for implementation based on the perceived values?

- A. prioritization
- B. selection
- C. patronization
- D. Condescension

**Ans:** A. prioritization is the right choice. Choices B, C are incorrect for this question.

31. When a project will have value over multiple time periods, such as quarters or years, what value assessment approach is recommending?

- A. Net Profit Value.
- B. Net Present Value.
- C. Net Product Verified.
- D. Net Product Validated.

**Ans:** B. Net Present Value. Choices A, C, D are incorrect for this question.

32. A positive NPV implies that\_\_\_\_\_

- A. The project is not profitable.
- B. The project is not so profitable.
- C. The project is substantially profitable.
- D. None of the above.

**Ans:** C. the project is substantially profitable. Choices A, B and D are incorrect for this question.

33. Which of these appropriately defines the InternalRate Return?

- A. The profit an organization earns from investments.
- B. The interest rate of an investment.
- C. The net remittance earned from a project.

D. A present value in future valuation.

**Ans: B.** The interest rate of an investment implies the Internal Rate Return. Choices A, C, D are incorrect for this question.

34. The relationship between the Internal Rate Return and the profit realized from a project are?

- A. Directly proportional.
- B. Inversely proportional.
- C. Negligible
- D. Insignificant

**Ans: A.** The higher the positive Internal Rate Return, the more profitable the project, i.e., Direct proportionality. B, C, D are incorrect for this question.

35. Which of these is not a type of prioritization?

- A. Value based prioritization.
- B. Customer based prioritization.
- C. Requirements Prioritization.
- D. Differential Prioritization.

**Ans: D.** Differential Prioritization is not a type of prioritization. A, B, C are incorrect for this question.

36. Relative prioritization is otherwise known as

- A. Ranking
- B. Respective prioritization.
- C. Differential prioritization.
- D. Requirements Prioritization.

**Ans: A.** Ranking is the other term for Relative prioritization. Choices B, C, D are incorrect for this question.

37. What is MMF in agile?

- A. Minimally Marketable Features.
- B. Moderately Marketable Features.
- C. Minimally Manufactured Features.
- D. Multi Marketable Features.

**Ans: A.** Minimally Marketable Features. Choices B, C, D are incorrect for this question.

38. Which of these clearly defines Minimally Viable Products?

- A. The minimal product (with just essential features and no more) that can be shipped to early adopters to see and learn from the feedback instantly.
- B. Products that contain both the essential and additional features needed by a consumer.
- C. products that only last for a short period of time.
- D. Meagerly Manufactured products.

**Ans:** A. The minimal product with key features. Choices B, C, D are incorrect for this question.

39. Characteristics of self-organization and empowerment team does NOT include

- A. Team formation.
- B. Work allocation (members are encouraged to take up works beyond their expertise).
- C. Self-management.
- D. Self-appraisal.

**Ans:** D. Self- appraisal, this is not among Self-organization and Empowerment practice. Choices A, B, C are incorrect for this question.

40. Which one of the following is not an example of information radiator?

- A. Kanban board.
- B. Burn down chart.
- C. White board.
- D. Story Card.

**Ans:** D. A Story Card holds the user's information, not an information radiator. ©Instructing.com, LLC  
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41. According to the Agile principles and mindsets, which of these is valued over comprehensive documentation?

- A. Working software.
- B. Customers collaboration.
- C. Responding to change.
- D. Individuals and Interaction.

**Ans:** A. Working software. Choices B, C, D are incorrect for this question.

42. In an agile project, visibility is defined as which one of the following?

- A. The concept that each team member's work and progress should be transparent to all stakeholders.
- B. The concept which enforces prioritization.
- C. The concept which focuses on the significance of information radiators.
- D. The concept that every agile team member should remain interactive when handling a project.

**Ans:** A. The concept that each team member's work and progress should be transparent to all stakeholders. Choices B, C, D are incorrect for this question.

43. Which of the enlisted guidelines clearly defines validation?

- A. Making sure that the product manufactured is acceptable to the customers.
- B. Ensuring that the product meets the required specifications.
- C. Ensuring that the product is well packaged.
- D. All the above.

**Ans:** A. Acceptability. Choices B, C, D are incorrect for this question.

44. In conformity with Agile terminologies, the personnel who measures the team's progress (against the iteration plan, the release plan, test, etc.) and radiates the info to the team is the \_\_\_\_\_

- A. Monitor
- B. Supervisor
- C. Tracker
- D. Coach

**Ans:** C. Tracker is the right term. Choices A, B, D are incorrect for this question.

45. Someone in an Agile project who is involved but not committed is referred to as a \_\_\_\_\_:

- A. Duck
- B. Duckling
- C. Fowl
- D. Chicken

**Ans:** D. Chicken is the correct term. Choices A, B, C are incorrect for this question. ©Instructing.com, LLC www.instructing.com 18

46. The document that contains all the details about an ongoing project is known as the \_\_\_\_\_

- A. Log book
- B. Catalogue
- C. Charter
- D. project document.

**Ans:** C. Charter is the correct word. Choices A, C, D are incorrect for this question.

47. In Agile, the rate at which resources are consumed in a production process is\_\_\_\_\_

- A. Consumption rate
- B. Burn rate
- C. Utilization rate
- D. Usability

**Ans:** B. Burn rate implies the rate of consumption. Choices A, C, D are incorrect for this question.

48. The process of keeping stakeholders informed and meeting their needs is referred to as \_\_\_\_\_.

- A. Stakeholder assistance.
- B. Stakeholder management.
- C. Stakeholdering.
- D. None of the above.

**Ans:** B. Stakeholder management is the right term. Choices A, C, D are incorrect for this question.

49. Reorganizing working code to improve functionality and maintenance refers to\_\_\_\_\_:

- A. Revitalization
- B. Revision
- C. prioritization
- D. Refactoring

**Ans:** D. Refactoring is the appropriate term for this process. Choices A, B, C are incorrect for this Q.

50. Which one of the following is the best example of anti-value?

- A. User story writing workshops.
- B. Predictive project management.
- C. Risk
- D. Time

**Ans:** C. Risk is considered an anti-value in agile project management. Choices A, B, and D are incorrect.

# Lesson 10 AGILE METRICS

## What is Agile Reporting?

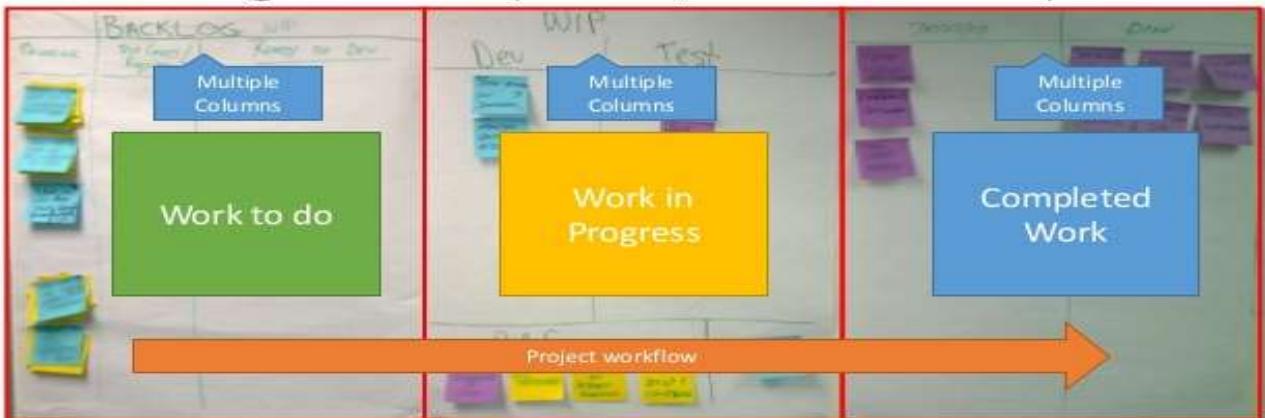
- Management driven metrics
- Metrics are to measure outcome, not output
- “Embracing Change” requires insight on those changes
- Stakeholders informed in a meaningful manner on progress
- Updated by the team, metrics generated by Scrum Master
- Metrics automation is encouraged. Rally supports Automation

Business Metrics	Process Metrics   Reporting
Earned Value Management	Sprint   Iteration Burn down chart
	Release Burn down chart   Risk Burn down chart
	Parking lot chart

## What is Information Radiator?

- Group of artifacts to communicate status
- Large & easily visible to the casual observer
- Understood at a glance
- Changes periodically and kept up-to-date
- Big Visible Charts
- Transparency | Visibility
- Kanban Board | Planning board | burn down charts
- Information Refrigerator (Information that cannot be communicated | released to everyone in public)

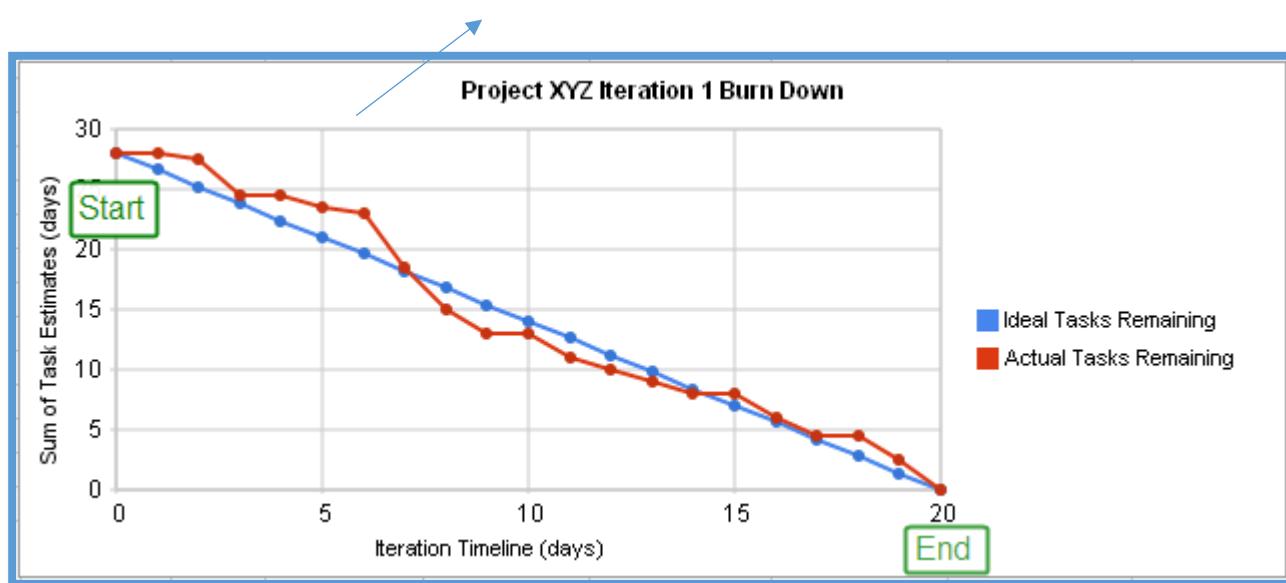
Agile Board (Scrum, Kanban ... etc.)



## What is Iteration burndown chart?

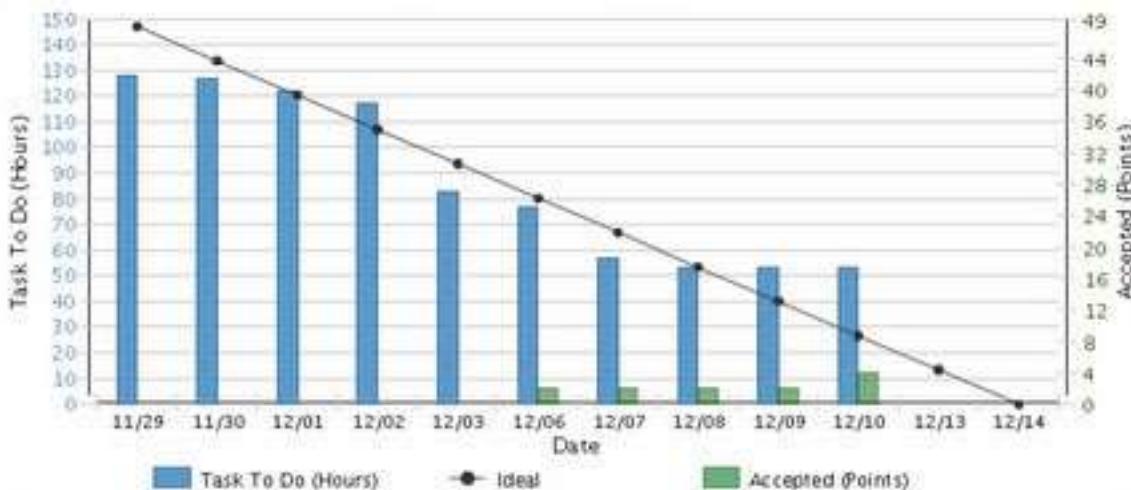
- Information Radiator
- X Axis Sprint Days, Y Axis Efforts can be hours or story points
- Graphical representation work left to do Vs Time
- Warns you early if things are not going according to plan
- Useful for predicting when all the work can be completed
- Ideally should burn down to zero to the end of the sprint
- Sprint or Release

Ahead of Schedule



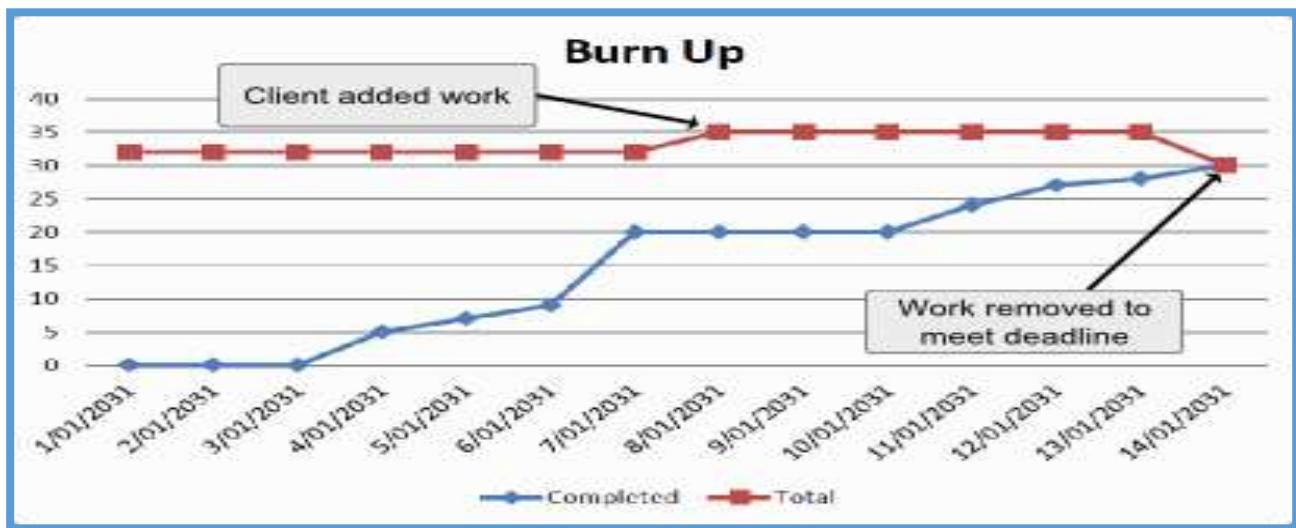
Iteration Burndown

Sprint 3



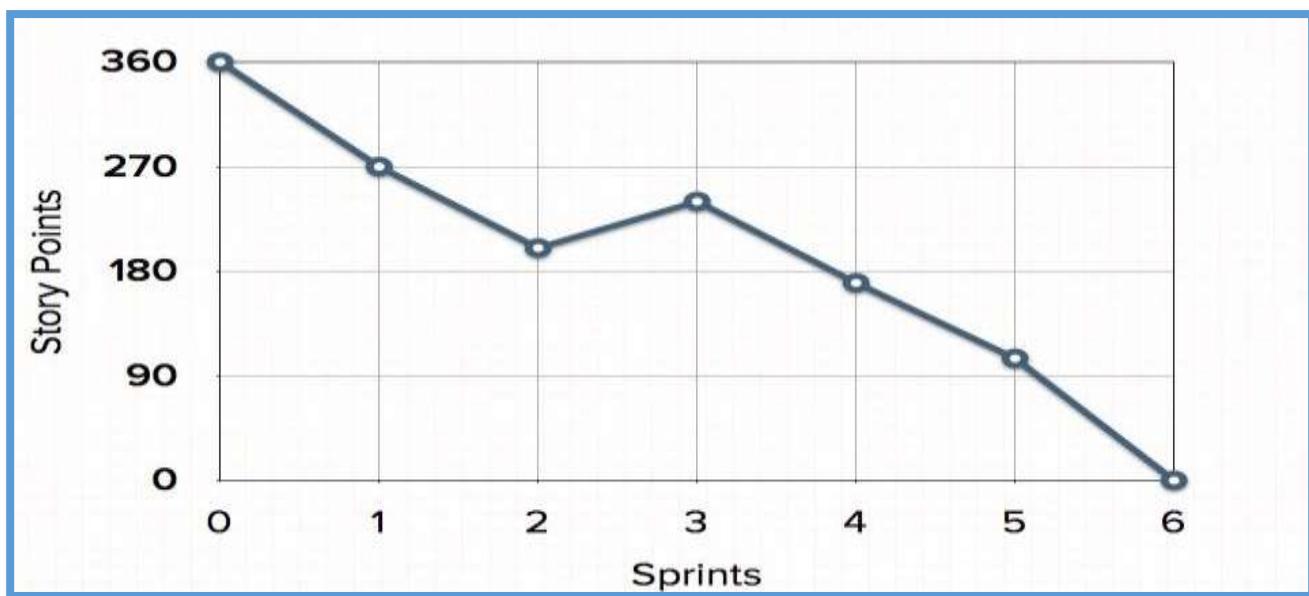
## What is Iteration burnup chart?

- A burn up chart indicates the how much work team completed against the project scope
- Tracks completed work and total work in two separate lines
- It communicates to the project stakeholders and clients how the additional feature requests affect the possibility of meeting the deadlines

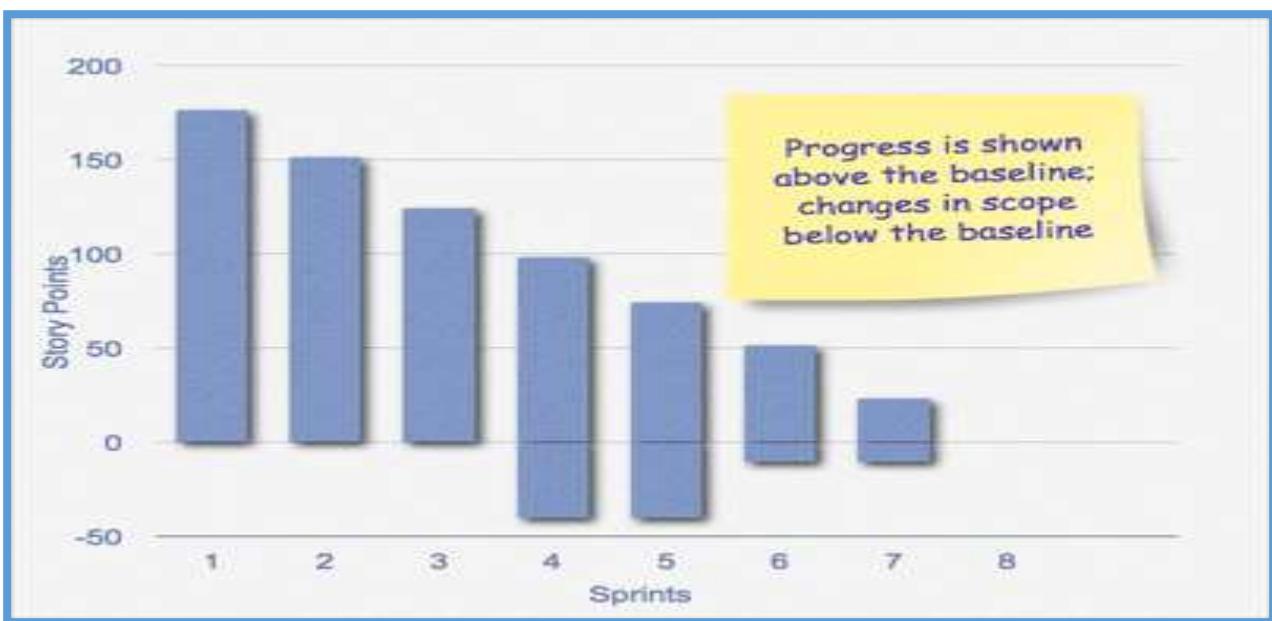


## What is release burndown chart?

- Sprints | iteration on the X axis against story points on the Y axis
- Updated during the end of the sprint to show the team's net progress in that sprint



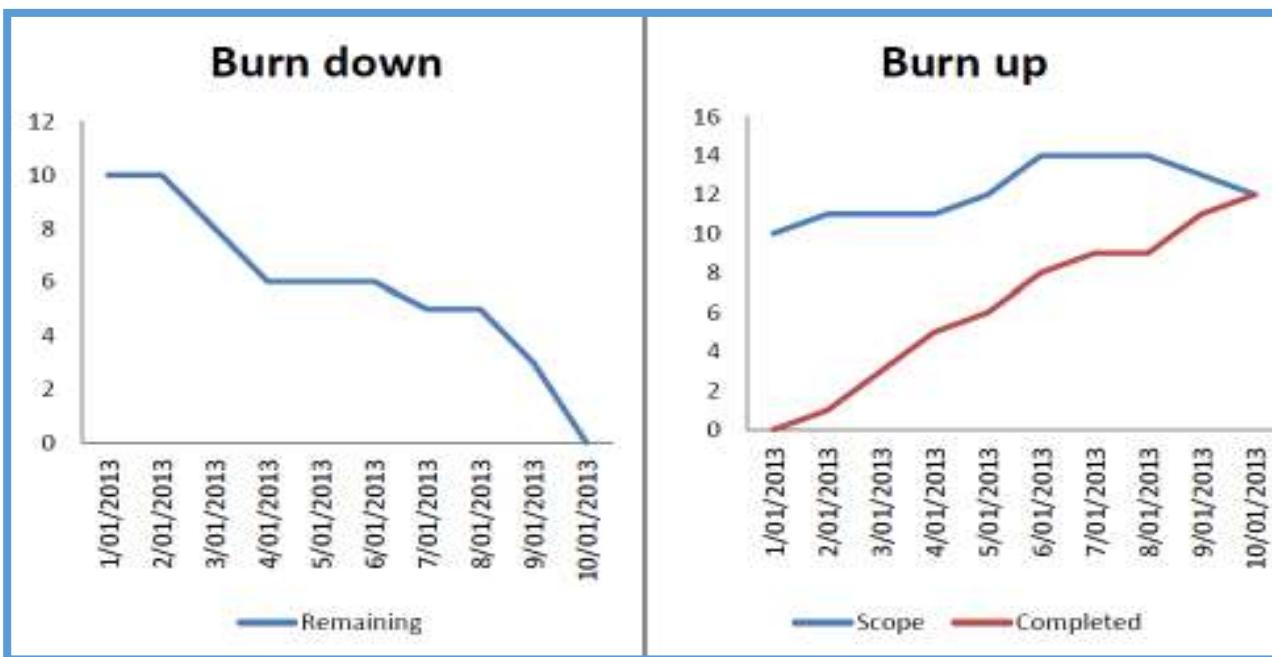
In this diagram, 6 Sprints comprise a release



- Story points completed per iteration
- Defects open at the end of every iteration
- Cumulative story points completed vis-à-vis targeted story points for the release

#### Difference between burndown and burnup chart?

- Burndown chart shows how much work or effort remaining
- Burn up chart shows how much work completed



## How will you handle risks in Agile?

### Risk Census

Risk	Probability	Size of Loss	Exposure
Failure of network connectivity with partner systems	65 %	10 days	6.5
Dependent systems are incompatible during the integration	80%	12 days	9.6
Prototyping has inconclusive evidence for the final design	50%	10 days	5
Lack of comprehensive data from live sites	70%	5 days	3.5
User interfaces stability across all browsers	30%	10 days	3
			27.6



Sprint	1	2	3	4	5	6	7
Exposure	27.6	20	21	15	10	5	0

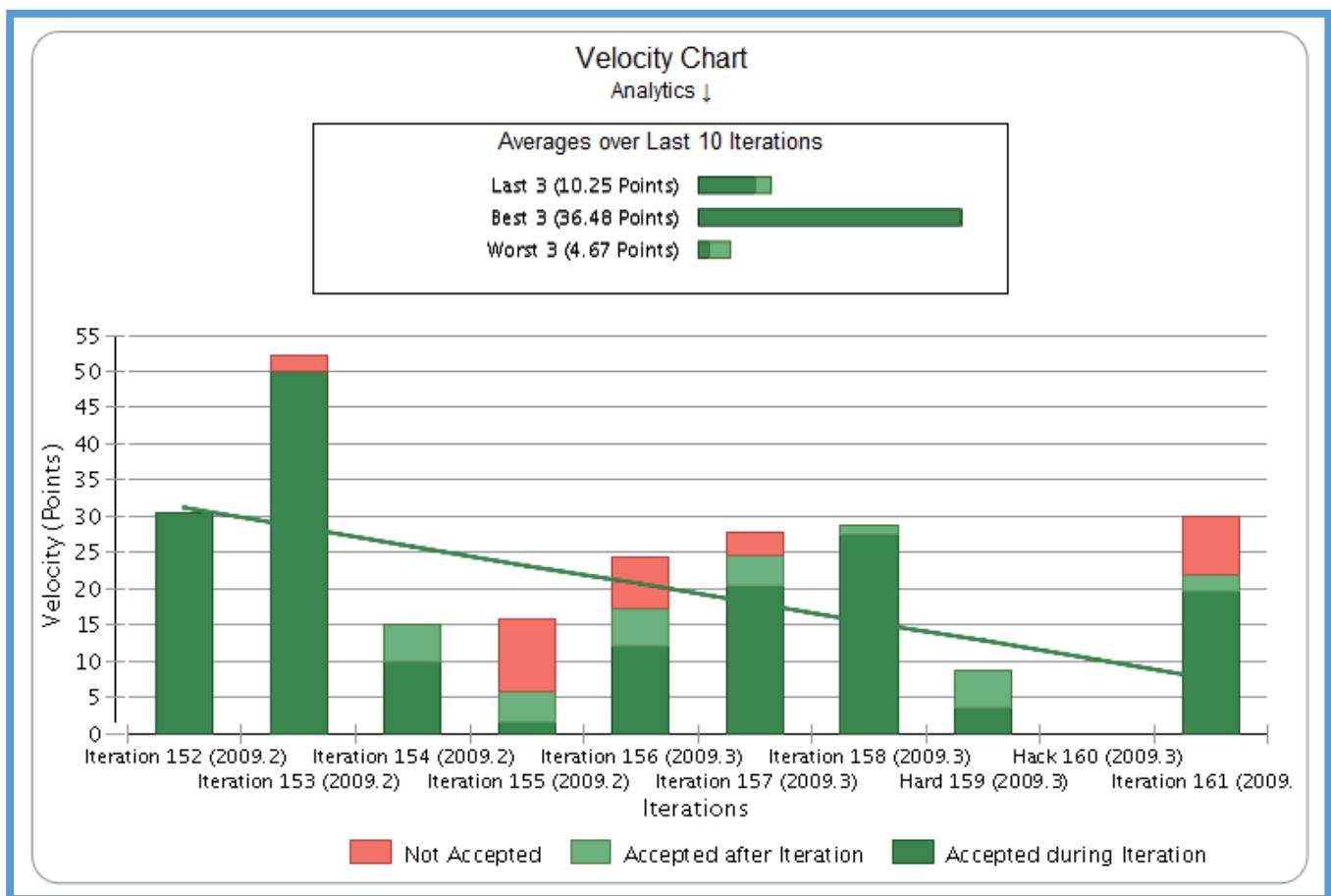
### Risks are adjusted in Product Backlog

- The product backlog items are assessed for applicability of identified risks
- Based on the applicable risks, the backlog items are re-prioritized
- Outcome is what is called as “Risk Adjusted Product Backlog”
- Look out for transition indicators which signal that a risk is about to occur

## What is velocity?

- Velocity = User story points delivered in a sprint
- Measure of work Team completes in a Sprint
- Planning Tool
- Only stories accepted by PO qualify for velocity calculation
- Varies across teams why?
- Projected Vs Actual Velocity

Sprints	Story Points Committed	Story Points Accepted	Velocity
1	20	16	16
2	24	24	24



## What do you think Velocity as Metrics?

Nothing but the team capacity based on two factors mainly requirement ability & team capability

## What is escaped defects?

- Defects reported by the customer after sprint demo
- Prioritized in next sprint
- Escaped Defect Rate = Number of Escaped defects for a sprint
  - Total story points in that sprint
- Escaped defect rate should reduce as the team becomes more mature

## What is Earned Value Management?

- Method of measuring project performance
- PV, NPV, IRR, SPI, CPI
- Applied at the iteration level
- Select projects with higher NPV and IRR
- NPV > 0 accept the project or reject
- NPV includes cost into calculation, PV does not

## What is Net Present Value?

- Takes time value of money into account
- Takes cost of capital into account values projects the same way that stock is valued
- Positive NPV adds value to the firm
- Leads to better investment decisions than other criteria such as IRR, ROI\*

## How to improve NPV

- Reduce and delay cash expenditures
- Accelerate cash workflows
- Lower risk (R)

$$\text{Net Present Value} = \text{NPV} = \sum C_t / (1+r)^t$$

Where:

C = Net Cash in period

R = cost of capital

NPV > 0; Accept the project

NPV < 0; Decline the project

## In Traditional

Formulae for calculating EVM are given in the following table:

Metric	Formula	Metric Analysis
Planned Value	BAC * Planned Percent Complete	The planned value indicates how much value was planned to have been generated by a particular milestone or point in time.
Earned Value	BAC * Actual Percent Complete	The earned value indicates how much value has actually been generated at a particular milestone or point in time.
Cost Performance Index (CPI)	EV/AC	This metric indicates how many cents have been earned out of every dollar spent. It measures cost efficiencies.
Schedule Performance Index (SPI)	EV/PV	This metric measures schedule efficiency. It indicates how fast you are progressing against the rate of progress planned.
ETC	(BAC - EV)/CPI	This metric is the forecast amount to complete the remaining work.
EAC	BAC/CPI or AC+ETC	Forecasted cost for the total planned work.

## In Agile

EVM Metric	Definition	Calculation
PPC	Planned % Complete	Iteration # / Total Iterations
APC	Actual % Complete	Points Delivered / Total Points
PV	Planned Value	PPC * BAC (Budget at Completion)
EV	Earned Value	APC * BAC
CPI	Cost Per Index	EV / Actual Cost
SPI	Schedule Per Index	EV / PV

Name (Abbreviation)	Formula	Interpretation
Internal Rate of Return (IRR) %		The formal definition of IRR is " <i>the discount rate at which the net present value of all cash flows from a particular project equal to zero</i> " Just need to know IRR is used while selecting which project to proceed, when comparing different project, the higher the IRR, the better.
Net Present Value (NPV)  NPV = $\sum C / (1+r)^t$		The formal definition of NPV is " <i>the present value of the future returns from the project minus investment</i> ". Since money will depreciate over time owing to inflation, the present value will give a better judgement on the actual values realized on capital investment. Just need to know NPV is used while selecting which project to proceed, when comparing different project, the higher the NPV, the more profitable the project is.
Return on Investment (ROI) %		The formal definition of ROI is " <i>the return resulting from the investment in the project</i> ". Just need to know ROI is used while selecting which project to proceed, when comparing different project, the higher the ROI, the better.
Schedule Performance Index (SPI)	$SPI = EV/PV$ EV = Earned Value PV = Planned Value	< 1 behind schedule (bad) = 1 on schedule (Ok) > 1 ahead of schedule (good)
Cost Performance Index (CPI)	$CPI = EV/AC$ EV = Earned Value AC = Actual Cost	< 1 Over budget (bad) = 1 On budget (Ok) > 1 Under budget (good)  <i>sometimes the term 'cumulative CPI' would be shown, which actually is the CPI up to that moment</i>
Schedule Variance (SV)	$SV = EV - PV$ EV = Earned Value PV = Planned Value	< 0 Behind schedule (bad) = 0 On schedule (Ok) > 0 Ahead of schedule (good)
Cost Variance (CV)	$CV = EV - AC$ EV = Earned Value AC = Actual Cost	< 0 Over budget (bad) = 0 On budget (Ok) > 0 Within budget (good)

# Lesson 11 AGILE SOFT SKILLS

## What is Negotiation?

- Happens throughout the agile project
- Should not be a “Zero-Sum” Game (With Winner and Looser)
- Opportunity for each view point to be presented
- Business case to be fully described
- Pros & Cons of different options to be considered
- Most effective when interactions between participants are positive and there is some room for give and take on each side

## What is Active Listening?

- Is hearing what someone is really trying to convey, rather than just the meanings of the words they are speaking
- In Agile projects we need to listen for the message, not just the string of words being spoken
- Various levels of active listening are: -  
Level 1 -> Internal Listening | Level 2-> Focused Listening | Level 3-> Global Listening
- Coaching Agile team requires
  - We listen intently to people
  - We cannot listen when we are talking ourselves
  - Talk Less and Listen More
  - Wait for others to speak
  - Give other people enough time to be comfortable and speak up
- General: - We are not learning while our mouths are flapping

## What is Facilitation?

When Facilitating a meeting or session the following should be kept in mind:-

### - Goals

- Establishing a clear goal for each meeting or session can help people get engaged right from the start
- Everyone to be focused on that goal

### - Rules

- Use of Cell phones
- Starting and ending the sessions on time
- Respecting the views of all participants



#### - Timing

- Duration of the session to be informed well in advance
- Someone could be designated as time keeper
- Determine in advance when the session breaks will take place

#### - Assisting

- Facilitator to ensure meeting is “Productive” and is focussed on session goal and all members participate
- Make sure junior or quieter members voice their opinions (Everyone)

### What is globalization, culture and diversity?

It is more important to adapt the globalization, culture, unity in diversity. Team can be added or removed on each iteration depending upon the requirements.

Ex:

- Well need biweekly status report
- Nodding head for Yes & No
- We will get back to you

- One great way to improve members of Global team learn about each other's communication preferences is to hold a “Face to Face” meetings

Can be done for:

- Release planning meetings
- Sprint Meetings
- XP Practice of “Paired Programming”

Bringing geographically disbursed teams together EARLY improves COMMUNICATION LATER

### What are the 5 stages of team development?

The 5 stages of team development are Forming, Storming, Norming, and Performing & Adjourning



## What is Conflict Management?

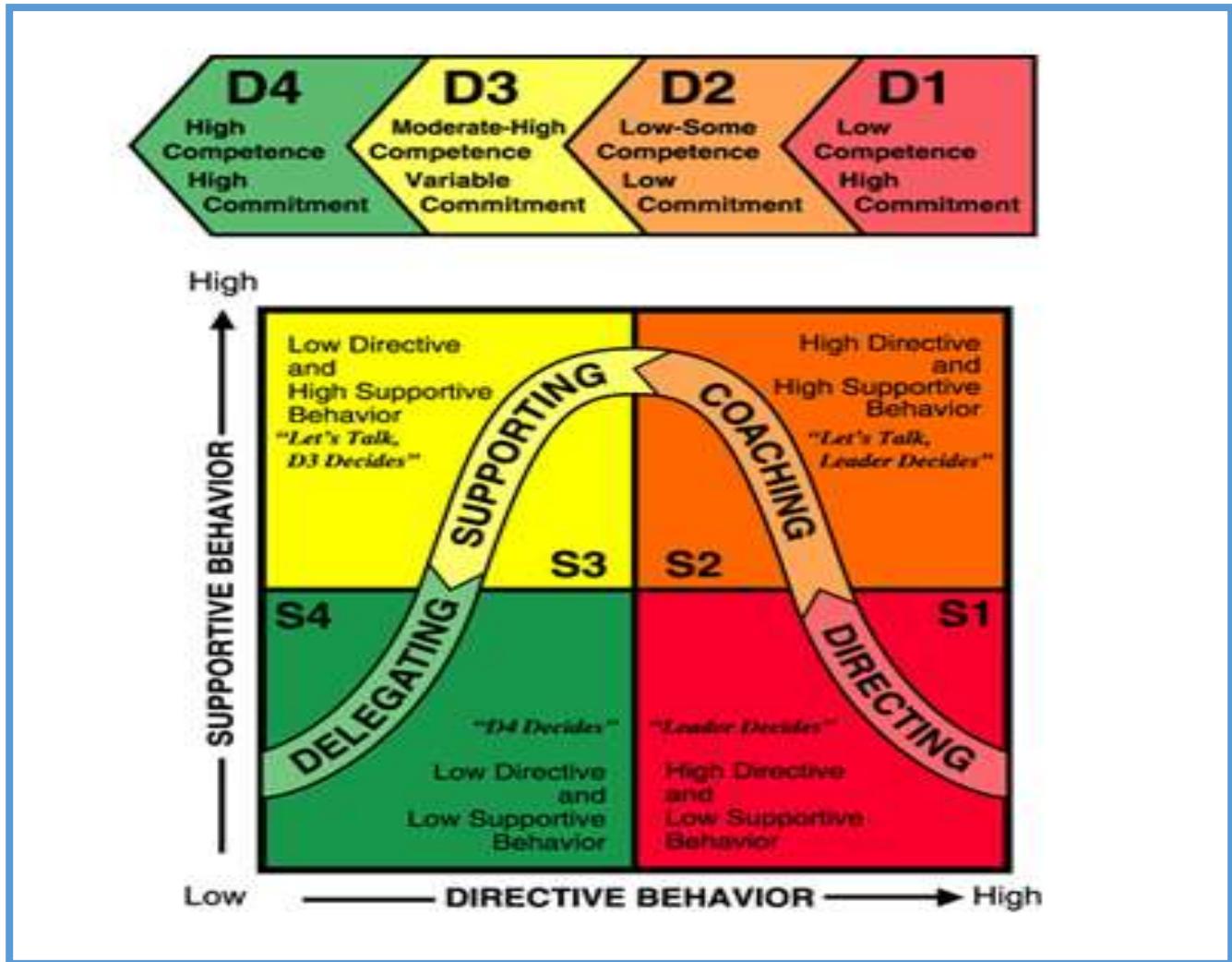


## What are Conflict Resolution Techniques?

Conflict Resolution Techniques	How to handle
Collaborating   Problem Solving	Incorporating multiple view points and insight from different perspectives. Requires open dialogue that typically leads to consensus and commitment
Force   Direct   Competing	Push one's view point at the expense of others; Offering win-lose solutions
Compromising   Reconcile	Searching for solutions that bring some degree of satisfaction to all the parties in order to temporarily or partially resolve the conflict
Smoothing   Accommodating	Emphasize areas of agreement than areas of difference Conceding one's position to the needs of others to maintain harmony and relationship
Withdrawal   Avoiding	Retreat; Cool off; Postponing issues



## What is Situational Leadership?



## How will you communicate for Distributed team?

Communication Technologies used: - Video Conferencing, Live Chat, Skype, any other tools to simulate a shared team environment. The challenges in distributed team are: F2F Communication, Information Radiators

## What is participatory decision models?

Participatory decision models present different ways to engage the team in the decision-making progress: -

- Mechanism in place for making decisions while still keeping everyone engaged in the project
- It is not realistic to expect the team to achieve total agreement on all issues and decisions
- These mechanisms are called Participatory Decision Models

### Simple Voting

- A simple “For” or “Against” Voting
- Omits refinement
- For most straightforward decisions this would be a poor use of team’s time

### Thumps Up | Down | Sideways

- Show of Thumps up, down or sideways around the room is a more efficient way of achieving a simple vote still allowing some time to discuss other options
- Members holding the thumb sideways may be neutral on the idea, might have a conflict, concern or question that needs further investigation

### Jim Highsmith’s Decision Spectrum

- Team members indicate how they feel about a decision by placing a checkmark on the spectrum ranging from “Fully in Favor” to “Mixed Feelings” to “Absolutely No” or Veto
- It could be created on a whiteboard with permanent markers

### Fist of Five

- People vote by showing the number of fingers that indicates their degree of support
- One Method: A first (No Fingers) means to support, while raising five fingers indicates full support
- Other Method: (Most Popular)
  - **One Finger:** I totally support this option
  - **Two Fingers:** I support this option with some minor reservations that we probably don’t need to discuss
  - **Three Fingers:** I have concerns that we need to discuss
  - **Four Fingers:** I object and wants to discuss the issue
  - **Five Fingers:** Stop, I am against this decision

## **What is Servant Leadership?**

Agile promotes Servant Leadership Model that recognizes it is the team members, not the leader, coach, scrum master, who get the technical work done and achieve a business value

It focusses the leader on providing what the team member needs, removing the impediments to progress, and performing, supporting tasks to maximize the teams productivity

### **Four Primary duties are: -**

#### **- Shield the Team from Interruptions**

- Isolate and protect team members from diversions, interruptions
- Shield from request for work that are not the part of the project
- Physically co-locating team members is an effective way to prevent external interference's

#### **- Remove Impediments to Progress**

- Ex: Daily Stand up Meeting

#### **- (Re) Communicate Project Vision**

- Reiterate common vision
- A developer's desire for simplicity or a new technology can cause his or her work to diverge from user's requirements
- Communicating and recommunicating the project vision helps stakeholders recognize these divergences and bring them back in line with the project objectives

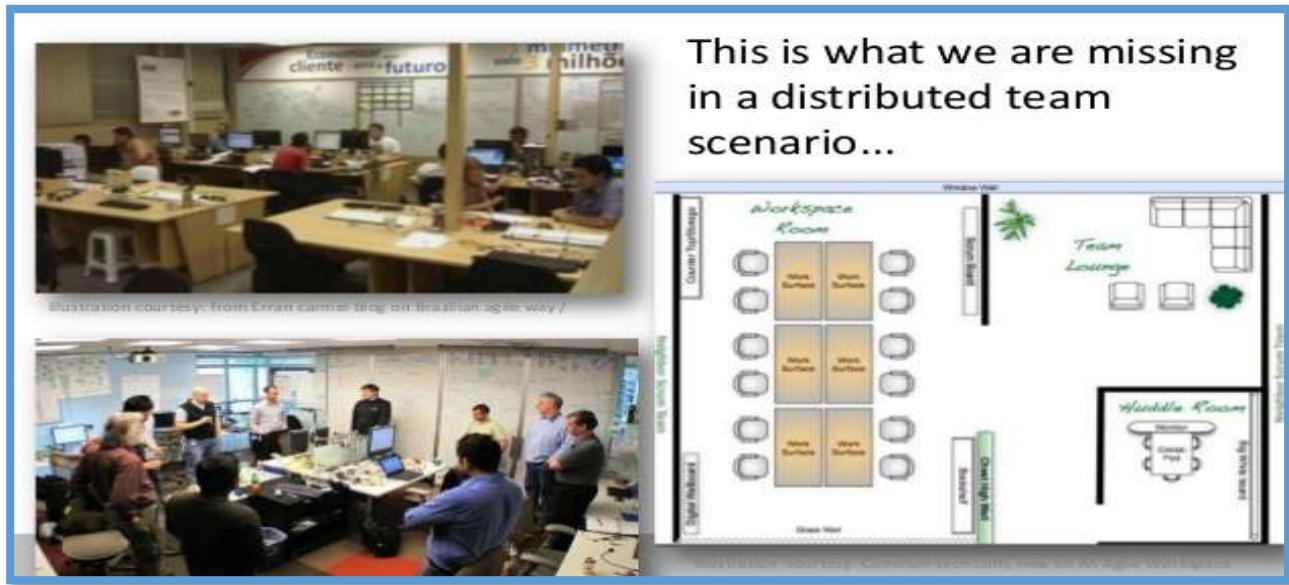
#### **- Carry Food and Water**

- Provide essential resources which the team needs
- Ex: Tools, Encouragement, Compensation
- Sincere "Thank You" to someone for their hard work
- Celebrate victories as the project progresses (Not wait until end)
- Training and other professional development activities

## What is Collocation & Open Workspace?

Colocation promotes face-to-face communication and fosters early query resolution and promotes osmotic communication

Osmotic communication means that information flows into the background hearing of members of the team, so that they pickup relevant information as though by osmosis. This is normally accomplished by seating them in the same room.

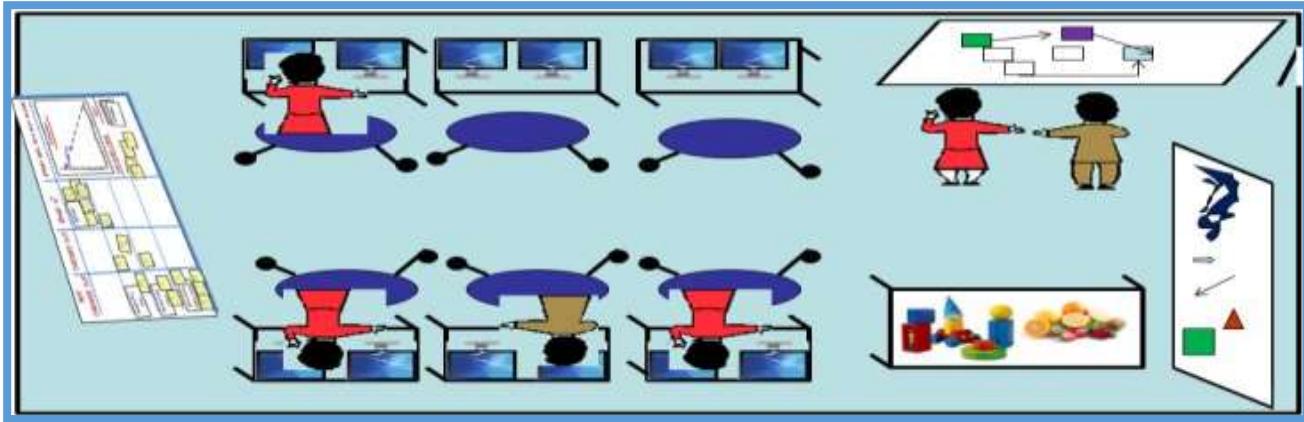


## What is called Caves and Common?

Common area for collaboration – Open flow for information

Caves for Privacy

- Intense Problem Solving
- Create Solitude
- Private Phone Calls
- Research
- Rocking Silently and Weeping



### What is agile tooling?

- It is a collection of technology tools to bring the distributed team together
- It is useful for the team to share ideas, code, knowledge, practices
- Goal of Agile tooling is to increase bondage between teams when they are distributed by using technology
- Agile tools – Webcams, WebEx, Chat & Shared electronic documents

### What are the Agile Community Values?

The following are the agile community values are: -

- Vision
- Servant Leadership
- Trust
- Collaboration
- Honesty
- Learning
- Courage
- Openness
- Adaptability
- Lead the Change
- Transparency

### What are the Feedback techniques?

The feedback techniques in agile are: -

- Prototyping
- Simulation
- Demonstration

- **Pair Programming**
- **Unit testing**
- **Continuous Integration**
- **Daily Stand-up meeting**
- **Sprint Planning | Sprint Review | Sprint Retrospective**

# Lesson 12 AGILE TRANSFORMATIONS & TRAININGS

## Agile Transformation

### How will you transform from Waterfall to Agile?

In Agile transformation, usually I have done the assessment and laid out a road map for the team to execute the transformation. During transformation, I will conduct 5 Phases such as orientation, preparation, and execution, repeat & adapt phase to transform from source to destination framework. Collaborate within the organization (client & vendors) to create a customized agile transformation program as mentioned in the agile transformation summary. (Refer – Attached Excel Sheet)



### Agile Transformation - Highlights

1. Do an **as is analysis** with the current situation
2. Define the **to be state** and get stakeholder approval
3. Do the **gap analysis** of what it takes from as is to the to be state
4. Identify **action points and metrics**
5. **Roll out the action points incrementally** (Minimum Viable Action Items)
6. **Report to stakeholders with Metrics** set earlier
7. **Take feedback**, have improvement items defined and start the next increment
8. On a parallel note **launch training's and workshops**
9. **Launch Pilot Projects** using the transition model
10. **Inspect and Adapt**
11. **Do assessment** and define the next steps
12. **Continue the process till its stabilized**
13. **Then start scaling**

## Agile Transformation - In detail

Typical **agile transformation services** include:

- Assessments of the current state of an organization
- Roadmap and vision creation
- Creation and launch of the agile transformation program
- Identification of valuable metrics
- Assisting in establishing internal agile advocates
- Change management
- Engagement with an agile consultant who will provide on-going support and mentorship

**Divide the transformation work** with client, coach and the team to execute the transformation successfully.

### Client Role

Before Agile transformation client usually conduct the benefit analysis.

- Business outcome for agile
- What we have today and what we are going to become tomorrow?
- Gap against Engagement Status with Industry Practices.
- Conduct the maturity level of the organization and project teams over people maturity, technology practices & agile tools, Quality Conscious

Next client follows the **best Practices in Agile Transformation**

- Executive Sponsorship over all phases
- Limit WIP
- Get Agile Coaches in place
- Rolling out Agile Pattern
- Adapt Key Agile Practices
- Inspection and Adaptation of Agility
- Create Quality Metrics
- Met Acceptance criteria to roll out for the organization

### Agile Coach Role

Agile Coach has to run the show effectively: -

In transformation, I have done the assessment and laid out a road map and executed the transformation.

**Roadmap Flow:**

Define the Strategy -> Governance, Structure, Metrics & Tools

Lead the transformation -> Form Teams, Train Teams, Coach Teams

Prepare to go alone -> Assessment, Targeted Coaching, Sustaining Artefacts

### **Transformation Stage:**

During transformation I have conducted orientation, preparation, and execution, repeat & adapt phase to transform from source to destination framework

#### Orientation Phase

Activity	Outcome
Step 1 - Agile Maturity Assessment	Client Agile Maturity Profile (Level 1 - Level 5)
Step 2 - Agile Inception Workshop	1. Governance 2. Release, Requirements Management 3. Setting up Expectations
Step 3 - Agile Suitability Readiness	Benefits vs Risk, Benefits vs Lost opportunity
Step 4 - Agile Inception Training	Education - Agile SDLC; Exposure - Processes & Tools
Step 5 - Lifecycle, Governance & Contract Definition	Agile Charter
Step 6 - Program Mobilization	Platform Readiness

#### Preparation Phase (Product Discovery, Base Sprint)

Activity	Outcome
Step 1 - Product Discovery	"1. Vision / Roadmap - Roadmap, Feature Matrix / Prioritization, UI Standards 2. Solution Design - Prototypes / Mock-ups, Features / User Stories, Interface Requirements, NFR's"
Step 2 - Agile Inception Workshop	Key Risks, Groomed Backlog & Success Criteria for initial few sprints
Step 3 - Define Agile-DevOps Strategy	Operational Governance, DevOps Tools, DevOps backlog
Step 4 - Define QA Strategy	Approach & Implementation Strategy for TDD, Regression Testing
Step 5 - Release Planning	Iteration plan for first two iterations, Release Plan

### Execution Phase

Activity	Outcome
Step 1 - Iteration Execution	Delivery of potential shippable incremental product
Step 2 - Agility Assessment	Program Agility Index
Step 3 - Retrospective	Lessons learnt, action items for implementation

### Repeat Phase

Activity	Outcome
Lessons learnt, action items for implementation	Lessons learnt, action items for implementation

### Adopt Phase

Activity	Outcome
Step 1 - Increase Productivity, Reduce time to Market	Business value realization

**What are the challenges encountered by you when you started Agile transformation? (or)**

**Tell us about the most challenging obstacle you found while leading an Agile transformation (team or organization) and how did you handle it? (or) We are looking for a talented and motivated agile coach to help us succeed with our agility transformation Why should we pick you?**

**Top three challenges, blockers, and barriers:**

1. Lack of executive commitment
2. People and culture (Adopting across the continent)
3. Neglecting the need for technical excellence

**The major challenges faced in the agile transformation are: -**

- Executive Sponsorship over all phases
- Limit WIP
- Get Agile Coaches in place across the continents
- Rolling out Agile Pattern
- Adapt Key Agile Practices to new team members
- Inspection and Adaptation of Agility
- Create Quality Metrics
- Met Acceptance criteria to roll out for the organization

**The challenging obstacle during transformation is the people resistance to change initially.** To overcome this developed Agile Mind-set and Culture and Team Maturity to make them self-managed and collaboratively work together.

I am expertise and handled 20+ agile transformation successfully for the past 6 years of my agile career.

### How would you convince your organization to transform to agile?

Reference: -

<https://www.mountaingoatsoftware.com/articles/introducing-an-agile-process-to-an-organization>

<https://www.scrumalliance.org/community/articles/2014/march/managing-organizational-change-in-agile-transforma>

### In which scenario should we still follow waterfall and not agile?

Reference: - <http://www.thedigitalprojectmanager.com/agile-vs-waterfall/>

## Agile Trainings

### What are the trainings you will provide to create Agile awareness across the organization in 2 days?

To create the agile awareness in 2 days across the organization by 3 levels 1 | 2 | 3 the following topics to be handled: -

#### Level 1

- Agile Intro
- Active listening
- **Agile Manifesto values and principles**
- Assessing and incorporating community and stakeholder values
- Agile Brainstorming techniques
- Building empowered teams
- Coaching and mentoring within teams
- Agile Communications management
- Feedback techniques for product (e.g., prototyping, simulation, demonstrations, evaluations)
- Incremental delivery
- Agile Knowledge sharing
- Agile Leadership tools and techniques
- Prioritization
- Agile Problem-solving strategies, tools, and techniques
- Project and quality standards for Agile projects
- Stakeholder management
- Agile Team motivation
- Time, budget, and cost estimation
- Value-based decomposition and prioritization

#### Level 2

- Agile frameworks and terminology
- Building high-performance teams
- Agile Business case development
- Collocation (geographic proximity)/distributed teams
- Agile Continuous improvement processes
- Elements of a project charter for an Agile project
- Agile Facilitation methods
- Agile Participatory decision models (e.g., input-based, shared collaboration, command)
- Value-based analysis

#### Level 3

- Agile contracting methods
- Agile project accounting principles
- Applying new Agile practices
- Compliance (organization)
- Control limits for Agile projects
- Agile Failure modes and alternatives
- Globalization, culture, and team diversity
- Agile Innovation games
- Principles of systems thinking (e.g., complex adaptive, chaos) · Regulatory

- compliance · Variance and trend analysis
- Variations in Agile methods and approaches
- Agile Vendor management

**What are the trainings you will provide to create a Scrum Master across the organization in 2 days?**

To create the scrum master in 2 days the following topics to be handled:

- 
- Day 1: Scrum Basics, Scrum Framework, Scrum Roles, Scrum Artefacts
- Day 2: Scrum Ceremonies, Scrum planning & estimations, Agile best practices

**Certification Achievements**



**What are the trainings you will provide to create an Agile Practitioner across the organization in 2 days?**

To create the agile project manager in 3 days the following topics to be handled: -

**Certification Achievements**



**1. Introduction to AGILE methodologies**

- What is AGILE
- History & Genesis
- Manifesto & principles
- Introduction to methodologies
- CRYSTAL
- SCRUM
- XP
- FDD
- DSDM

**5. Planning, Monitoring and Adopting**

- Agile Retrospectives
- Agile task and Kanban boards,
- Agile Time boxing
- Agile Iteration and release planning
- Agile WIP limits
- Agile Burn down/up charts (Sprint|Iteration | Risk)
- Agile cumulative flow diagrams (CFD)
- Agile process tailoring

**2. AGILE implementation in an organization**

- AGILE features
- Team composition
- Team dynamics

**6. Agile estimation**

- Agile relative sizing/story points
- Agile wide band Delphi /Agile planning poker / Agile affinity estimating / Team Estimation Game Method
- Agile ideal time
- Agile process tailoring

**3. Agile project Life cycle**

- Planning – portfolio level
- Planning – project level (Releases and Iterations)
- Executing
- Monitoring & Control
- Closing
- Professional Ethics & Code of Conduct

**7. Agile analysis and design**

- Agile product roadmap
- Agile user stories and backlog
- Agile story maps
- Agile progressive elaboration
- Agile wireframes
- Agile chartering
- Agile personas
- Agile modelling

**4. Agile project communications**

- Agile Information radiator
- Agile Team space
- Agile tooling

**8. Product quality**

- Osmotic communications for collocated teams
- Osmotic communications for distributed teams
- Agile Daily stand-ups
- Agile frequent verification and validation
- Agenda for the session
- Agile test first development
- Agile acceptance test-driven development
- Agile definition of done
- Agile continuous integration

## 9. Soft skills negotiation

- Agile emotional intelligence
- Agile collaboration
- Agile adaptive leadership
- Agile negotiation
- Agile conflict resolution
- Agile servant leadership

## 10. Value-based prioritization

- Agile return on investment (ROI)
- Agile net present value (NPV) / Agile internal rate of return (IRR)
- Agile compliance
- Agile customer-valued prioritization
- Agile minimally marketable feature (MMF)
- Agile relative prioritization or ranking

## 11. Risk management

- Agile Risk-adjusted backlog
- Agile Risk Burn down graphs
- Agile risk-based spike

## 12. Agile Metrics

- Agile velocity
- Agile cycle time
- Agile earned value management (EVM) for agile projects
- Agile escaped defects

## 13. Agile Value stream analysis

- Agile value stream mapping
- Agile Flow charts
- Agile lean methodology

**What are the trainings you will provide to create an Agile Coach across the organization in 3 days?**

To create an agile coach in 3 days the following topics to be handled: -

### Coaching Fundamentals

- Teaching vs. Mentoring vs. Coaching
- The Agile Coaching Mind-set
- Setting Boundaries for Coaching
- Coaching Agreement

### Certification Achievements



### Coaching skillset

- Professional Coaching Skills
- The Coaching Stance
- Responsibilities and Skills of the Coach

### The Coaching Process

- Coaching for Potential
- Coaching for Action
- Effective Coaching Conversation

### Mentoring and Coaching Agile roles

- Teaching the Agile Basics
- Understanding Agile roles and the Mind-set Shift
- Mentoring Agile Roles & Transitions

### Coaching the Journey toward High Performance

- Understanding Team Development
- Setting up the Team Environment
- Handling Conflict and Dysfunction within the Team
- Handling Organizational Impediments

## Review and Assessment of Agile Frameworks

What are the trainings you will provide to create a SAFe Coaching across the organization?

To create an SAFe coaching with the following topics to be handled: -

### Leading SAFe (2 days)

1. Introducing Scaled Agile Framework
2. Embracing a Lean Agile Mindset
3. Understanding SAFe Principles
4. Implementing an Agile Release Train (ART)
5. Experiencing PI Planning
6. Executing and Releasing Value
7. Building an Agile Portfolio
8. Building Really Big Systems
9. Leading the Lean Agile Enterprise

### SAFe Product Manager | Product Owner (2 days)

1. Introduction
2. Embracing a Lean and Agile Mindset
3. Exploring PM PO Roles
4. Contributing to Portfolio Content
5. Defining and Managing Solution Value
6. Being an Effective Product Manager
7. Being an Effective Product Owner
8. Engaging Stakeholders
9. Building Communities of Practice

### Implementing SAFe (2 days)

1. Reaching the SAFe Tipping Point
2. Designing the Implementation
3. Launching an ART
4. Facilitating an ART Execution
5. Extending to the Portfolio

### SAFe for Teams (2 days)

1. Introducing the Scaled Agile Framework
2. Building an Agile Team
3. Planning the Iteration
4. Executing the Iteration
5. Executing the PI

### SAFe Scrum Master (2 days)

1. Introducing Scrum in SAFe
2. Understanding the Role of Scrum Master
3. Experience PI planning
4. Facilitating Iteration Execution
5. Finishing the PI
6. Coaching Agile Team

### Certification Achievements



### SAFe Advanced Scrum Master (2 days)

1. Exploring the Scrum Master role in SAFe Enterprise
2. Applying SAFe Principles – A Scrum Master Perspective
3. Exploring Agile and Scrum Anti-Patterns
4. Facilitating Program Execution
5. Improving Flow with Kanban
6. Building High Performance Teams
7. Improving Program Performance with Inspect and Adapt

## Lesson 13 EXPERT AGILE COACHING

### Topics to Discuss

- Getting Started with Agile Coaching
- Coaching Agreement
- Professional Coaching Skills
- Coaching Conversations – Coaching's for Actions
- Understanding Team Development
- Setting up the Team environment
- Review and Assessment of Agile Frameworks
- Mentoring Agile Roles and Transitions

## Module 1 - Getting Started with Agile Coaching

### Learning Objectives

- Define Coaching
- Understand human motivation for change
- Coaching vs Other Disciplines
- Key mindset shifts
- Coaching Competencies(ICF)
- Agile Coach Roles & Responsibilities
- Agile Teams

### Define Coaching

#### Activity 1.1: Roles and Responsibility of Agile Coach

- Discuss on your table the role of an agile coach
- Identify the various responsibilities expected from an agile coach?
- What are the key skills / competencies of an agile coach?

#### Role of an agile coach

- Facilitator: Facilitate the team with the knowledge so that team can start the project.
- Trainer: Provide training to the team on the agile process; training will continue all the time during the project execution on agile and continuous improvement on velocity, quality, processes etc.
- Help in preparing the overall planning of the project that means he will work as a consultant. He will provide various ideas, suggestions, strategies.
- Make sure that team is following agile processes in each sprint at user story level as per the Definition of Done (DoD); However, this is the responsibility of the Process Check Master but if project does not have a role of process check master, this activity should be handled by the agile coach.
- Help team to answer all the questions on the agile process during the project execution; that means agile coach need to be on the ground so that he can answer the questions immediately.
- Identify project risks and raise them immediately
- Make the winning strategy according to the ground conditions
- Mentor: Focusing on people and Continuous Improvement all the time; provide team a platform for improvement not only during the retro but all the time. Create a safe environment for healthy conflict and meaningful collaboration.
- Identify process issues and improve them

- Help product owner to write user stories
- Help team on the estimating of the user stories and prepare them for the same
- Help scrum master to plan meetings like
  - preplanning, planning, daily scrum, Review & Retrospective
- Provide capacity calculator template for the team
- Provide the common tasking codes for the team for better tracking on technical front

### **Responsibilities of an agile coach**

- Assist Agile teams in acquiring the necessary skills to rapidly become self-sufficient and benefit from Agile approaches. Define and manage project scope, goals and deliverables.
- Support the start-up of projects, give advice to improve the application of Agile delivery methods (Kanban, Scrum, XP, etc.) throughout projects, and institute best practices.
- Promote and facilitate the adoption of Agility within teams through team coaching, one-on-one mentoring, delivery of Agile training classes, workshops, and briefings.
- Manages the coordination of activities among subordinates, customers, and third-party vendors and subcontractors



## **Key Skills | Competencies of an agile coach**

- Must be a “Servant Leader” and able to garner respect from your teams and be willing to get your hands dirty to get the job done
- Must be able to lead and demonstrate value-add principles to a team
- Must be able to ensure Agile concepts and principles are adhered to, must be able to be a voice of reason and authority, make the tough calls. Must be able to provide objective guidance, without personal or political considerations.
- Must be familiar with multiple Agile delivery methods including Kanban, Scrum, Extreme Programming, and Lean.
- Must have situational awareness and be the first to notice differences and issues as they arise and elevate them as needed
- Must have a ‘continual improvement’ mindset and be continually growing the craft, learning new tools and techniques
- Must be an expert at conflict resolution and be able to facilitate discussions of alternatives/different approaches
- Must be able to build trust relationships among and between teams by fostering disclosure and transparency to the development process.
- Must possess excellent interpersonal skills and demonstrate the ability to work with diverse personality types.
- Deep understanding of agile techniques, principles, processes and tools.
- Possess facilitation skills in leading planning meetings, reviews, and retrospectives.
- Possess strong analytical and problem-solving skills with a high attention to detail.
- Possess exceptional verbal and written communications skills, including the ability to represent technical subjects through concise, easy to understand graphics and text

## **Why coaching?**

- Why do we need a coach at all?
- What will a coach do that a manager does not?

## **What is coaching?**

- Facilitate positive change
- Explore and enhance individual/team potential
- Enable self-learning and self-growth

## **Define coaching?**

- Coaching is partnering with clients in a thought-provoking and creative process that inspires them to maximize their personal and Professional Potential.
- Coaching is a form of development in which a person called a coach supports a learner or client in achieving a specific personal or professional goal.

## How does coaching enhance Potential?

The Coaching enhance the potential by Self-learning and Self-growth Coachee is the primary DOER!!!!!!!!!!!!!!

### Understand human motivation for change

#### Why worry about change?

The main reason for the change is to: -

- Market dynamics
- Client expectations
- Technology
- Competition



“Smooth Sailing “is only temporary

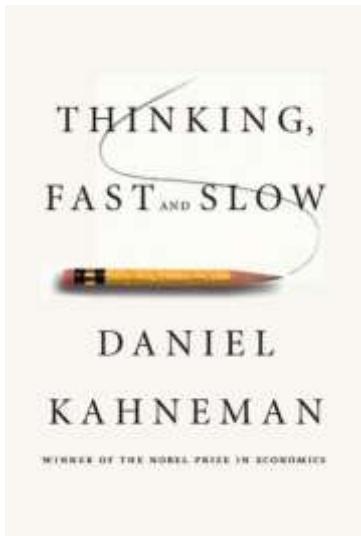
#### Activity 1.2: What motivates people for change?



#### Do the people want to change?



## How people will think fast & slow?



### Our Subconscious mind: -

- Fast processing
- Pattern-based, hardwires responses
- Automatic perception
- Energy efficient

### Our Conscious mind: -

- Slow processing
- Can make new patterns
- Energy exhaustive

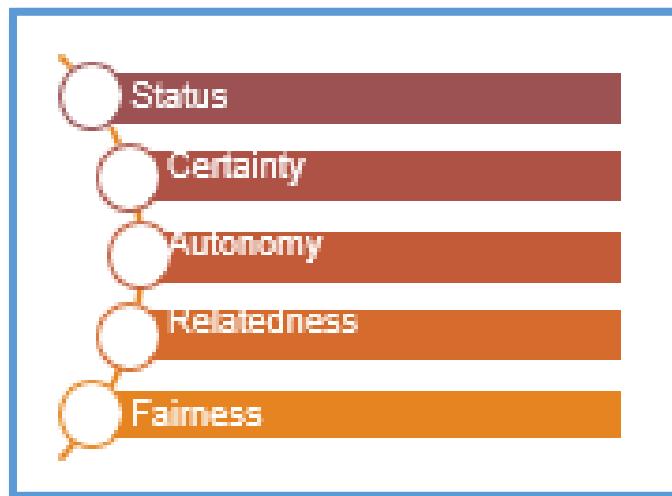
## How will you change the bottom line?

- Everyone derives some comfort in status quo
- Everyone likes a little bit of change
- People like change when it comes from within



## What is SCARF® Model?

Common factors that activate a reward or threat response in social situations:



Status is about relative importance to others.

Certainty concerns being able to predict the future.

Autonomy provides a sense of control over events.

Relatedness is a sense of safety with others - of friend rather than foe.

Fairness is a perception of fair exchanges between people

There are also different behavioral and psychological consequences associated with threat and reward:

### Threat leads to:

- Reduced working memory, - Narrower field of view
- Generalizing of threat, - Greater pessimism

### Reward leads to:

- Greater cognitive resources. - More insights
- Increased ideas for action. - Fewer perceptual errors
- Wider field of view

See more at: <http://www.brilliantminds.co.uk/news/the-scarf-model#sthash.sv6maKat.dpuf>

## How to enable Self-Learning and Self-Growth?

- Make them think
- Engage their conscious mind

Asking powerful questions is the primary tool of a Coach!

## What are Powerful Questions?

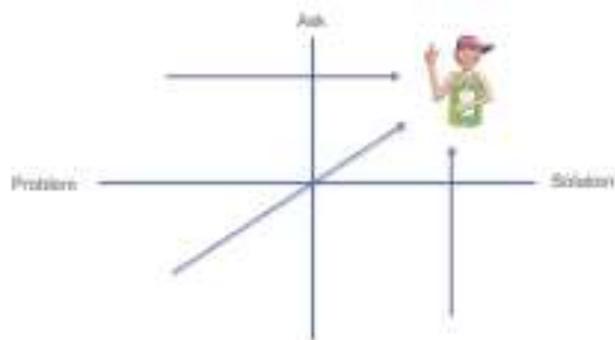
Powerful Questions that:

- Generate insight in Coachees mind
- Motivate Coachee for action
- Invoke commitment

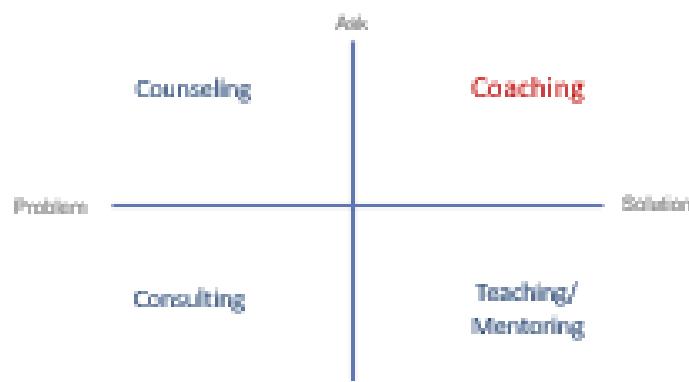
## Coaching vs Other Disciplines

### What you say about Coaching?

Asking questions that lead the Coachee to the Solution!



### Coaching Vs other disciplines



### Is Coaching is not Consulting?

Yes. Coaching is not Consulting

- Consultant is a domain expert
- Consultant does a job for you
- Consultant provide facts, figures and reports
- Consultant gives you expert advice

## **Is Coaching is not Training?**

**Yes. Coaching is not Training**

- The trainer provides specialized knowledge
- Trainer follows a standard agenda and curriculum
- The standard agenda is driven by the trainer
- Training provides similar experience for each trainee

## **Is Coaching is not Mentoring?**

**Yes. Coaching is not Mentoring**

- Mentoring is showing how something is done
- Mentor needs to be subject matter expert
  - Mentor has relevant experience
- Mentoring requires a close working relationship
  - Hand-holding and close observation during learning
- Coaching has more structure than mentoring

## **Activity 1.3: Mapping Needs with a Discipline**

**Map the following solution needs with a discipline:**

1. Imparting knowledge based on a standard agenda - **Training**
2. Helping a person figure the root cause of a serious behavioral issue - **Counselling**
3. Seeking external help to understand a complex technical problem the team has been facing for past several weeks - **Counselling**
4. Helping someone learn how to develop a complex technical skill – **Mentoring**
5. Helping someone think through a nagging problem and figure a possible solution – **Coaching**
6. Helping a group navigate through a problem and find a solution through consensus – **Facilitating**

## **Difference between Counselling | Consulting | Mentoring?**

The difference between Counselling, Consulting & Mentoring are: -

- |               |  |
|---------------|--|
| Counselling – | Idea to understand the problem (Traditional Counselling) |
| Consulting –  | Look at what going Wrong                                 |
| Mentoring –   | Providing Solutions                                      |

## Key mindset shifts

**How would you say coach as a Role Model?**

- Be a living example of the depth and usefulness of agile values
- Being agile more than doing agile
- Exhibit the ‘Ri’ stage of Agile

*Would you hire a fitness trainer who needs to shed at least 10 kilos himself?*

*How would you feel if you find your child’s teacher verbally abusing someone on the road?*

## What is Servant Leadership?

The term coined by Robert K. Greenleaf:

- Lead by serving others
- Provide leadership in helping others achieve their goals:
  - Focus on building capacity in others
  - Facilitate decision making process
  - Distance from the center of action and attention
  - Listen and give space

## How will you cultivate growth mindset?

- Facilitate Learning goals
  - Mastery and Competence
- Metrics reflect current state (NOW)
  - Measuring potential or productivity is a lower priority
- Focus on positive emotion – Performance and Enjoyment
  - Decrease negative emotion

## Activity 1.4: Key Mind-set Shifts

Review the list of responsibilities as a group and segregate them into two groups:

1.” Away From” – the responsibilities a Coach should move away from

2.” Towards” – the responsibilities a Coach should move towards

## **1." Away From" – the responsibilities a Coach should move away from (Ends with!!)**

Create detailed work plan for the team!!  
Work with the customer and create a product vision!!  
Work with the Dev team in solving their technical programs!!  
Define performance expectations from team members!!  
Identity metrics to track team performance!!  
Focus on team productivity targets set by the management!!  
Track individual performance and report it to the management!!  
Resole organizational level impediments!!  
Help team members find the root cause of their problems!!  
Identify and resolve team conflicts!!  
Guide team members with specific instructions!!  
Evaluate Agile Frameworks and finalize the best fit for the team!!  
Focus on Scope, Schedule and budget targets!!  
Own Service delivery – ensure team delivers on time!!

## **2." Towards" – the responsibilities a Coach should move towards (Ends with!)**

Motivate team members towards higher performance!  
Identity and handle resistance from individuals!  
Teach Prioritization techniques to product owner!  
Facilitate teams in creating their ground rules!  
Continuously challenge the team to improve!  
Facilitate team in managing their own conflict!  
Identify team Dysfunction patterns and work on them!  
Educate Stakeholders on Agile Mind-set!  
Focus on overall team improvement!  
Facilitate team in creating their culture & vision!  
Focus on maximizing business value delivery!  
Engage with management to strategize agile transformation!  
Educate team about mind-set and core practices!  
Facilitate decision making process!  
Facilitate team in finding their own solutions!  
Develop Self-organizing teams!  
Perform powerful conversations with Team and Leadership!

## **Activity 1.5 Professional Coaching Competencies**

**List key Skills and Competencies needed to perform the Coaching role in an effective manner**

1. Meeting Ethical Guidelines and Professional Standards
2. Establishing Trust the Coaching Agreement & Establish Trust and Intimacy with the Client
3. Active Listening
4. Powerful Questioning
5. Creating Awareness
6. Managing Progress and Accountability

### **What are the ICF Coaching Competencies?**

Coaching is about behavioral competencies:

#### **A. Setting the Foundation**

1. Meeting Ethical Guidelines and Professional Standards
2. Establishing the Coaching Agreement

#### **B. Co-creating the Relationship**

3. Establishing Trust and Intimacy with the Client
4. Coaching Presence

#### **C. Communicating Effectively**

5. Active Listening
6. Powerful Questioning
7. Direct Communication

#### **D. Facilitating Learning and Results**

8. Creating Awareness
9. Designing Actions
10. Planning and Goal Setting
11. Managing Progress and Accountability

### **What are the ten characteristics of an effective leadership?**

- Effective Listening
- Empathy
- Healing
- Awareness
- Persuasion
- Conceptualization
- Foresight
- Stewardship
- Commitment to the growth of the people
- Building community

## Coaching Competencies(ICF)

Based on your learning so far, prioritize Coaching skills and competencies (top 5).

For each of the prioritized competency, perform a self-assessment of your current competency level.

1. Meeting Ethical Guidelines and Professional Standards
2. Establishing Trust the Coaching Agreement
3. Active Listening & Creating Awareness
4. Powerful Questioning
5. Managing Progress and Accountability

## Agile Coach Roles & Responsibilities

What are roles & responsibilities of an agile coach?

**Teaching** – Instructing others in specific knowledge, skills and perspective

**Mentoring** – Sharing knowledge, skills & perspective that foster the personal and professional growth of someone else

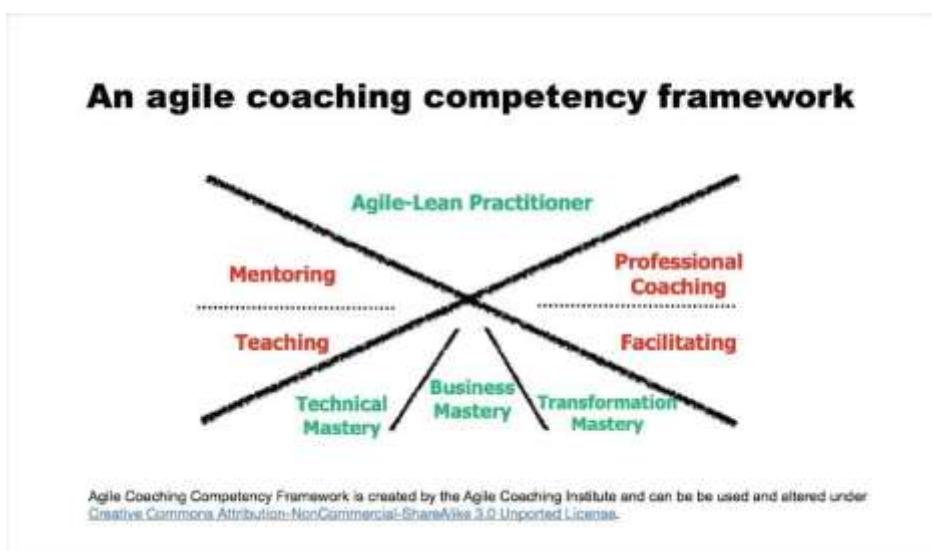
**Facilitating** – A neutral process holder who guides groups through processes that help them come to solutions and make decisions

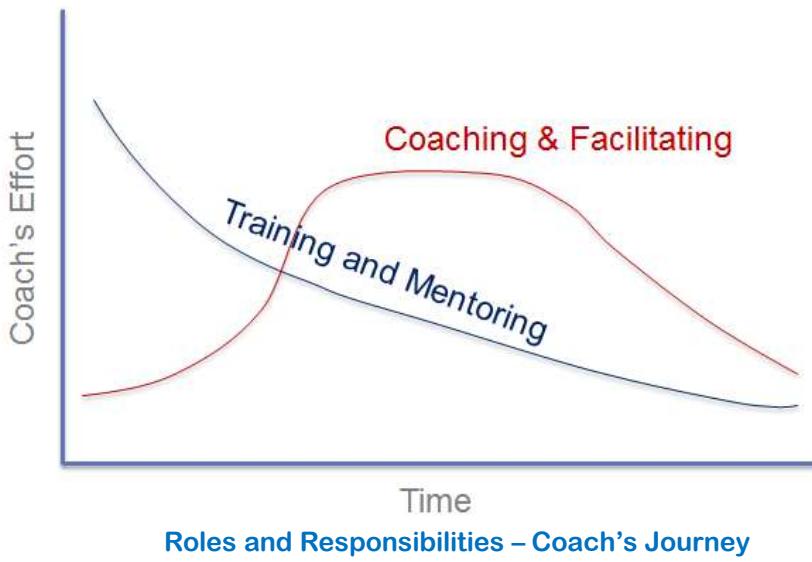
**Coaching** – Partnering with clients in a creative process that inspires their personal and professional potential

**Technical Mastery** – Technical expertise as a software craft-person

**Business Mastery** – Expert at business value driven innovation and product development

**Transformation Mastery** – Expertise as an organizational development and change catalyst





## Agile Teams

### Who are all the part of the agile team?

To improve the effectiveness of the customer and users of the product and maximize the value of the organization AS AN Agile Team WE NEED to leverage the strengths of each team member and create valuable products now and in the future

**Agile Team Member** – Strives to be better than they were yesterday every day. Everyone in an Agile Team is first and foremost an Agile Team Member

**Agile Customer** – Ensures the team works on stories that deliver the highest business value possible

**Agile Customer Proxy** – Helps the Agile Customer ensure the team works on stories that deliver the highest business value possible

**Agile Team Lead** – Does whatever it takes to ensure the team delivers now and in the future

**Agile Project Manager** – Does whatever it takes to ensure that valuable projects are delivered now and in the future

**Agile Business Analyst** – Helps the Agile Customer discover the goals and needs of the customer of the product

**Agile User Experience (Ux) Designer** – Helps the Agile Customer discover usability needs, help the team meet them and verify they have been met

**Agile Developer** – Implements stories with high business value using good techniques and practices.

**Agile Architect** – Ensures the team implements good techniques and practices

**Agile Tester** – Provides information on the state of the project.

## **Agile Coach – Creates a team that delivers value now and in the future**

**As an Agile coach, your goal is to develop productive agile teams that think for themselves rather than relying on you to lay down the path for them. You need to help them understand the agile from the value point of view rather than practice point of view.**

**You need to help them change the way of work, communicate, collaborate, understand the team based value delivery. During this process you need to help them unlearning some of their old habits, using your coaching skills, tools and techniques.**

**You need to understand, each team is different as they have different levels of skills, attitude, knowledge. That means your coaching strategy depends on what the teams need for you.**

## Module 2 - Coaching Agreement

### Learning Objectives

- Coaching Stance
- Internal vs. external coaches
- Defining the coaching “contract”
- Designing a coaching alliance

### Coaching Stance

#### What is coaching stance?

The Coaching discipline are:

- Holding the client’s agenda
- Maintaining neutrality
- Reducing client dependence
- No colluding
- Self-awareness and self-management
- Signature Presence

### Internal vs. external coaches

#### What are the challenges of internal coach?

The Challenges of internal coach are:

- Maintaining neutrality and confidentiality
- Holding people accountable
- Challenging the status quo
- Personal bias
- Difficult to stay out of office politics

#### What are the challenges of external coach?

The Challenges of external coach are:

- Need for effective system entry
- Treating the client process with respect
- Balancing challenge and pace of change
- Understanding organization culture is a slow process
- Fostering too many new relationships

## Defining the coaching “contract”

### **What are the specific points to remember during agile coaching?**

The specific points to remember in agile Coaching are: -

- Is Agile training part of the engagement?
  - How often will the agile training will be conducted?
  - How long will each session be?
- How many locations will be covered in coaching?
- How many teams are part of it?
- Will coaching involve working with Scrum Masters and/or the entire team?

### **What are the important considerations in agile coaching?**

The Coaching discipline are:

- What are the overall goals for coaching? Is there specific performance- related goals or expectations?
- What are the coachee’s attitude towards coaching?
- What are the reporting and confidentiality boundaries and are these clearly understood by the coach and the coachee?
- What is the contracted time for coaching? Will it be a continuous or intermittent engagement?
  - If intermittent, how often is coaching expected and how long will each session be?
- Has the coachee allocated time for coaching – both for sessions and follow-up actions?
- Have the coach and coachee established a good rapport?
- How and when will the coaching be reviewed?
- How will the impact of coaching be measured?

### **What is coach must not do?**

The Coaching discipline are:

- Manage teams or team members
- Give performance evaluations for team members
- Track Delivery issues
- Work with clients in contract negotiations

### **What are the coaching pre-requisite?**

The Coaching pre-requisite are:

- Purpose
  - Does the coachee /team have a clear goals that focus on delivering the business value?
- Commitment
  - Is the coachee / team committed to achieve their goal?

- **Motivation**
  - Is the coachee / team motivated to work with the Coach?
- **Expectations**
  - Does the client / coachee have realistic expectations from the Coach?
- **Investment**
  - Is the client / coachee / team ready to invest time, money and energy in the coaching process?

### **Activity 2.1: Discuss Internal and External Coaching**

**Discuss and identify challenges faced by Internal and External Coaches**

**Internal coaches**

- Too much pressure in influencing
- Senior Management members has to collaborate
- Taken for granted

**External coaches**

- Initially they don't know about organization culture
- Understanding Landscape
- Take time to get respect

### **Activity 2.2: Sample Agreement Review**

**Read the sample coaching agreement**

**Discuss the coaching agreement within your group**

Between \_\_\_\_\_ (Coachee)

and \_\_\_\_\_ (Coach)

In undertaking to coach you I am committing myself to be available at the time(s) we agree on and to provide a trusting, confidential relationship for you to explore issues and difficulties and move towards change. I will endeavor to support you in this process.

In undertaking to receive coaching from me you are committing yourself to be open and honest and to optimize the use of the coaching time. Your intent to grow in excellence and develop is a key ingredient in a successful coaching experience.

To be coachable, you must ensure that:

- Your intent to change and desire for change are serious.
- You are willing to try new ways of learning, be truthful, keep your commitments and inform your coach immediately when things are not working for you.
- You are willing to explore, challenge and change thoughts, feelings and actions if you feel it will be beneficial for you.

- You understand that your coach will be focused on you, your goals and your best interests.  
Your coach will be non-directive and non-judgmental.

#### **Confidentiality**

The coaching service is confidential between the coach and the Coachee except in the following instances:

- It has been agreed in advance that the progress of the sessions will be discussed with senior management.
- If the Coachee gives information to the coach for the purpose of discussion with others.
- If the Coachee gives information to the coach that may be linked with possible physical harm to the Coachee or others.

#### **Cancellations**

If you wish to change the time of a session the coach should be informed in writing as soon as possible and a minimum of three working days before the scheduled session. The full coaching fee will be charged for changes made less than three days in advance.

#### **Duration and Termination**

The initial coaching agreement is for: \_\_\_\_\_ (Term:6 Months | 1 Yr.)

Towards the end of these sessions there will be a discussion regarding progression and next steps.

Termination of coaching engagement must be in writing and agreed before the final coaching session to allow time for closure.

#### **Coachee Records**

Any written notes taken by the coach are securely kept and are confidential.

I have read and understood this agreement.

Name: \_\_\_\_\_ (Coach)

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Name: \_\_\_\_\_ (Coachee)

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

## Module 3 - Professional Coaching Skills

### Learning Objectives

- Coaching Presence
- Active Listening
- Direct Communication
- Powerful questioning
- Giving and receiving feedback
- Emotional intelligence

### Coaching Presence

#### What is coaching presence? What is ICF?

“Ability to be fully conscious and create spontaneous relationship with the coachee by employing a style that is open, flexible and confident.” - ICF

ICF means International Coach Federation

#### What are the key motivations of coaching presence?

The key motivations of Coaching presence: -

- Build rapport with the coachee
- Engage coachee in the coaching process
- Keep the coachee in ‘towards’ state

#### What are the key behaviors of coaching presence?

- The key behaviors of Coaching presence: -
- Be present and flexible
- Use Humor effectively to create lightness and energy
- Trust your intuition, the inner knowing
- Be open to not knowing
  - “I don’t know what I don’t know”
- Be open to change, stay flexible to new alternatives
- Confidently experiment with new possibilities
- Learn to work with strong emotions, without getting overpowered by them

## What are the key blockings of coaching presence?

The key blockings of Coaching presence: -

- A self-focused approach:
  - Thinking too much about the next step
  - Trying too hard to get it right
  - Trying to push your own agenda
- High emotional involvement:
  - Being judgmental of yourself or the coachee
  - Getting stuck in detail, problem or drama
  - Getting **stuck** in a filter

## Active Listening

### What is Active Listening? What are its approach?

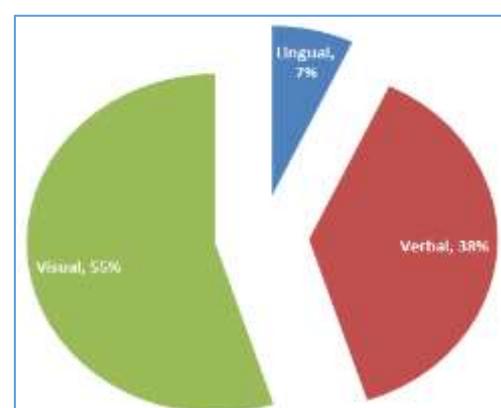
*"Ability to focus completely on what the client is saying and is not saying, to understand the meaning of what is said in the context of client's desires, and to support client's self-expression." - ICF*

- Attend to the client's agenda
- Listen to client at all levels
  - words, tone of voice and the body language
  - feelings, perceptions, concerns, values and beliefs
  - concerns, goals, ideas, suggestions
- Help the client get there
  - Focus on the essence of client's communication
  - Allow the client to vent without judgment or attachment, bypass long and descriptive stories
  - Mirror back what client has said – summarize, paraphrase, reiterate
  - Integrate and build on client's ideas and suggestions

## What are the components of communication?

The components of communications are: -

- Textual/ Lingual – Words of the language
- Verbal/ Vocal – Tone, rhythm, pitch, pace
- Visual - Body language, facial expressions, eye contact



## **Why Listening is important for agile coach?**

The Listening is very important for the agile coach because to increase the potential and clarity of problems: -

- Listen Generously
- Listen without judgment
- Listen at all Levels
  - Listen to words
  - Listen to emotion
  - Listen to body language
- Listen for clarity and value
  - Listen intently
  - Listen with empathy
  - Listen without interfering
  - Listen without assumption

## **What is clarity of distance? What are things to avoid during the agile coaching?**

Things to avoid while listening for potential:

- Lost in the Details
- Misled by our Filters
- Having a personal Agenda
- Hot Spots

## **Activity 3.1 – Active Listening Sail boat**

**Identify circumstances and behaviours that: -**

**Help in Active Listening**

**Discourage/compromise Active Listening**

### **Team 1**

#### **Positive**

Maintain Positive Body Language | Open Mindedness | Being interested, motivated | Asking Question (Probing) | Taking Notes | Keeping Emotion

#### **Challenges**

Pre-Conceived Notion | Subconscious Reactions | Loss of eye contact | Not being present in the moment | Pride or ego | Lack of respect

## Team 2

### **Positive**

Acknowledge Passphrase / Summarize Holding | Attitude (Optimism) | High Level Interest | Sense of need | Motivated Benefit so involved

### **Challenges**

Noise | Communication Gap | Language Barrier | Cultural Context Lack of focus or Inattentive | Lack of context | Appropriateness | Out of Context | Lack of Support / Team management / Client

## Team 3

### **Positive**

Knowledge | Respect Mutual | Interactive Conversation | Collocated Team | Presentation Style | Listen to understand | Subject which interest everybody | Common interest or like minded

### **Challenges**

Big Conversation without context | Distributed Team | Listen to reply

## Direct Communication

### **What is direct communication? Why it is so important?**

“Ability to communicate effectively during coaching sessions, and to use language that has the greatest positive impact on the client.” - ICF

- Clearly state coaching objectives and agenda
- Speak with intent
  - Be clear, articulate and direct in sharing and providing feedback
- Reframe and articulate
  - Help the client understand from another perspective
- Use appropriate and respectful language
  - non-sexist, non-racist, non-technical, non-jargon
- Use metaphor and analogy

## **Why speak with intent?**

It will be more clear, articulate and direct in sharing and providing feedback

- **Succinct**
  - Saves significant time and mental energy
  - Helps stay on client's agenda
  - Use active visual words where necessary
- **Specific**
  - Focus on meaningful and relevant information, beyond the obvious
  - One to three most important items
- **Generous**
  - Help them relate to what you are saying
  - Use words to include other person's perspective

## **What are the other communication skills?**

The other communication skills are: -

- Silence
- Simple acknowledgements
- Matching coachee's energy
- Matching coachee's language

## **Powerful questioning**

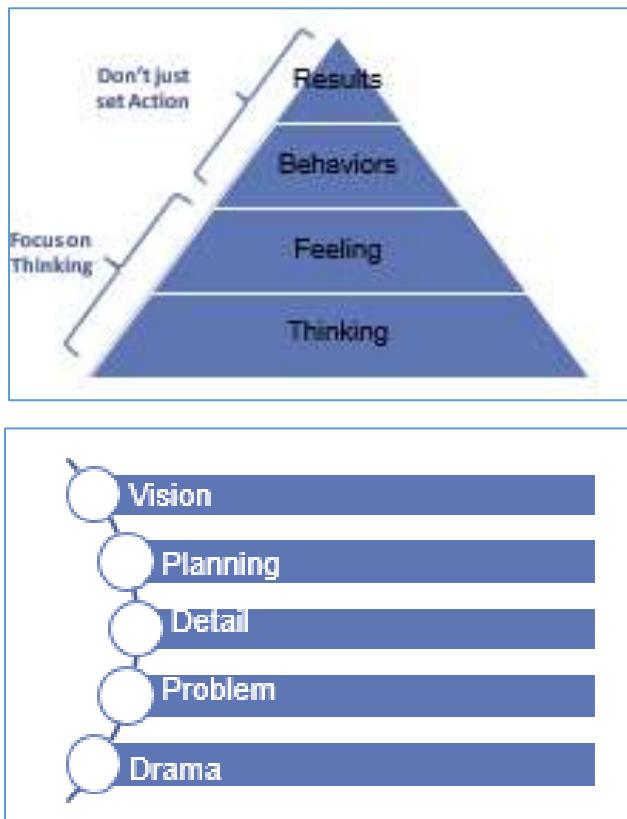
### **What is powerful questioning?**

**“Ability to ask questions that reveal the information needed for maximum benefit to the coaching relationship and the client.” - ICF**

- Asks questions that reflect active listening
  - Reflect understanding of the client's perspective
  - Challenge client's assumptions
- Asks open-ended questions that evoke greater clarity:
  - Facilitate new insight, discovery or possibility
  - Prompt commitment to action
- Asks questions that move the client forward:
  - Towards goals that they desire

- Not backwards to problems and justifications

## How to choose your Focus to make powerful questioning?



## What are the questions likely to generate Insight...?

The questions likely to generate Insight because: -

- “Why” questions that try to get more details
- Loaded questions that tell people what to think about
- Questions that force people into action
- Questions too focused on investigating the problem

Type	Example
Forcing people in to action	What is your next step... What are you doing about...
Telling people how to think	Why don't you think about...? What about being more positive...
Asking “why” questions to get more details	Why is this issue... Why did you... Why don't you...
Giving Advice	Why don't you...

	<b>What about doing this...</b>
<b>Asking questions about the problem</b>	<b>What is the issue... What is stopping you...</b> <b>Why do you think this...</b>
<b>Asking questions to get more details</b>	<b>Can you list....</b> <b>What's been happening ...</b>

### What are the questions that generate Insight...?

The questions that generate insight are

Type	Example
Thinking Questions	<b>How long have you been thinking about...? What are your insights so far?</b> <b>What ideas have crossed your mind about...</b>
Vision questions	<b>What would you like to achieve here? What is your objective, goal or desired outcome?</b>
Planning Questions	<b>What are the milestones for achieving this goal? What are your options?</b>
Action Questions	<b>What are you prepared to do for...? What will you complete by next week?</b>
Labelling questions	<b>What are three key emotions around...</b> <b>If you could label your emotion, what would it be?</b>
Reappraisal Questions	<b>How might you handle this differently? How could you think from a different perspective?</b>

## Activity 3.2 - Powerful Questioning

You are an Agile Coach for multiple agile teams. One Scrum Master approaches you for help - he is feeling frustrated that he is unable to conduct daily scrum within 15 minutes.

List some questions you would like to ask him to begin the coaching conversation.

### Part – 1 Self-Management

Questions	5 	4 	3 Average	2 	1 
I regularly think positive thoughts about myself					
I tend to be optimistic					
I am comfortable saying 'no' to people and giving an honest explanation					
I take time to 'take in' and reflect on positive feedback other people give me					
I rarely, if ever, look to blame others					
I do not avoid conflict, but embrace it with assertive, positive behaviour					
I rarely, if ever, criticize my physical appearance					
I rarely, if ever, wish I was someone else					

Total score (out of 40) \_\_\_\_\_

## Part – 2 Social Management

Total score (out of 40) \_\_\_\_\_

Questions	5 	4 	3 Average	2 	1 
I regularly think positive thoughts about others					
I rarely, if ever, criticize other people for who they are – instead I focus on criticizing their behaviour					
I reject idle gossip about people in the news, reminding myself and others that I do not know the person					
I regularly give praise to others, both for their qualities as a person and actions					
I rarely, if ever, judge other people and brand them as 'good' or 'bad' people					
When disagreeing with another person, I focus on criticizing their actions and opinions, not who they are as a person					
I rarely, if ever, criticize the physical appearance of others					
I tend to focus on the strengths of others rather than their weaknesses					

## Part – 3 Self Awareness

Questions	5 	4 	3 Average	2 	1 
I regularly pay attention to how I am feeling					
I am good at 'listening' to my body, reflecting on why I get pains, tension and other negative physical symptoms					
I believe emotions are at least as important as rational thoughts					
I am aware of how my body communicates good and bad emotions to me					
I regularly use my intuition when making decisions					
I regularly reflect on my actions and remind myself how I was feeling at the time of my action					
I know how emotions such as anger, happiness, sadness, fear and guilt are expressed by my body					
People who are close to me would describe me as emotionally aware, paying careful attention to how positive and negative emotions are expressed by my body					
Total score (out of 40)					

## Part – 4 Awareness of Others

Questions	5 	4 	3 Average	2 	1 
I regularly try to pay attention to how other people are feeling					
I am good at listening to others, and rarely interrupt them					
I am usually aware of other people's body language					
I regularly check with others how they are feeling by asking them					
I tend to ask other people lots of open questions as I believe it will help me to understand them better					
I usually notice when someone else is uncomfortable with something, even when they don't say it					
I listen carefully to the words people choose to use, noticing when they use more emotional words like 'never' or 'always'					
I am usually aware of changes in people's voice volume, tone and intonation, reflecting on how their voice expresses their feelings at the time					
Total score (out of 40) _____					

**Result: Higher Score indicates high performing team**

## Giving and Receiving feedback

### Why you give feedback to the team?

Effective feedback helps keep the conversation meaningful:

- Closes the communication loop
- Confirms the listener has understood what is being said
- Assists in highlighting gaps or assumptions in a timely manner

### Steps for giving feedback to the team?

The steps for giving feedback to the team are:

- Placement
- Share what you think is going well
- Share what you think needs to be developed
- Ask for adding thoughts

### Tips for giving feedback?

The tips for giving feedback to the team are:

- Listen carefully
- Give timely feedback
- Think before you speak
  - Observation vs. Evaluation
  - Be succinct, specific and generous
- Always ask permission to touch sensitive areas
- Balance positives and negatives

## Emotional intelligence

### Define Emotional Intelligence? What are its performance?

Emotional intelligence is the habitual practice of:

- Using emotional information from ourselves and other people And, integrating this with our thinking:
- Better decision making in defining life goals and problem solving

Put another way...

EI is using thinking about feeling (and feeling about thinking) to guide our behaviour, so it leads to better management of ourselves and better relationships with others.

## Performance

- Improves relationships
  - improved communication with others
  - better empathy skills
  - acting with integrity
  - respect from others
- Improves confidence and positivity
  - reduced stress levels
  - increased creativity
  - learning from mistakes
- Improves career prospects
  - managing change more confidently
  - fewer power games at work

## What are Multiple Intelligence?

Howard Gardner's research into multiple intelligences:

1. Linguistic
2. Logical – Mathematical
3. Spatial
4. Musical
5. Naturalist
6. Bodily – Kinaesthetic
7. Intrapersonal
8. Interpersonal

## Compare Emotional Intelligence Vs Multiple Intelligence?

The tips for giving

- Intrapersonal intelligence
  - An ability to recognize and understand one's own moods, desires, motivations, and intentions
  - Introspective and self-reflective capacities
- Interpersonal intelligence
  - An ability to recognize and understand other people's moods, desires, motivations, and intentions
  - It is not about being an extrovert

### Activity 3.3: Measure Emotional Intelligence

Evaluate your Emotional Intelligence [on a scale of 1 to 5]:

- Self-Awareness → 4
- Self-Management → 5
- Social Awareness → 3
- Relationship Management → 3

#### What is Self-awareness?

Developing your self-awareness is a habit that we can all learn. This habit involves three simple steps:

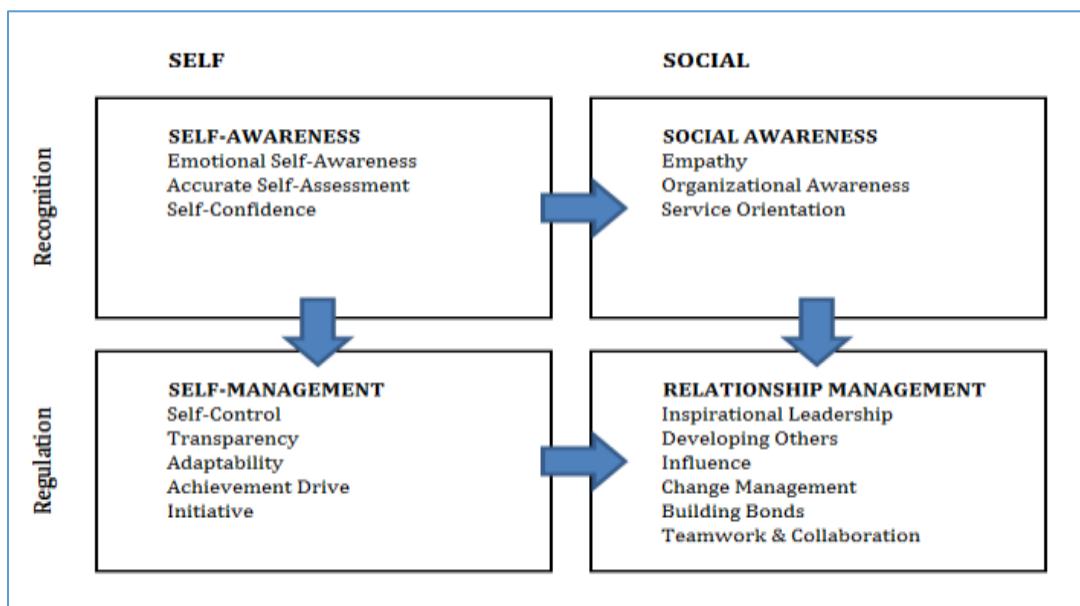
- Stop and notice the emotions you are feeling
- Give a name to these emotions
- Understand these emotions and manage them
  - Else, they will continue to manage you

#### To know the other's awareness:

Active Listening | Authentic rapport versus manipulating support | Empathy: The antidote to premature judgement

#### Dimensions of Emotional Intelligence?

The dimensions of emotional intelligence are Self | Social | Social Management | Relationship Management



## Status of Ideal Emotional Intelligence Coach?

The High awareness for self and others: -

Low self-awareness High awareness of others <b>The other-focused coach</b>	High self-awareness High awareness of others <b>The EI coach present, tuned in to self and others</b>
Low self-awareness Low awareness of others <b>The unaware coach</b>	High self-awareness Low awareness of others <b>The self-focused coach</b>

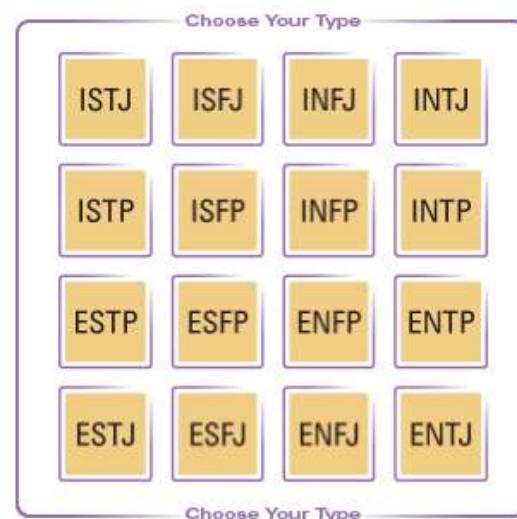
## What are the factors for emotional regularization?

- Mindfulness
  - Active, open and objective attention on the present
  - Observing your thoughts and feelings from a distance
- Labelling
  - Describe the emotion in just a word or two
  - Helps reduce the impact of emotion
- Reappraisal
  - Ability to see situation differently

## How would you know your personality?

16 distinctive personality types using four dimensions:

1. Favourite world
  - Extraversion (E) – Outer world
  - Introversion (I) – Inner world
2. Information Processing
  - Sensing (S) or Intuition (N)
3. Decision Making
  - Thinking (T) - logic and consistency
  - Feeling (F) - people and special circumstances
4. Structure
  - Judging (J) - get things decided
  - Perceiving (P) - stay open to new information and options





## **Activity 3.4: Myers-Briggs Personality Test**

- 1. Go through the 20 Questions**
- 2. Evaluate your personality type**
- 3. Share Insights if you feel like [optional]**

For questions 1 to 20 below, please circle one option – ‘a’ or ‘b’ – the one that you feel defines your behaviour more closely:

1. a. expend energy, enjoy groups or  
**b. conserve energy, enjoy one-on-one**
2. a. interpret literally or  
**b. looks for meaning and possibilities**
3. a. logical, thinking, questioning or  
**b. empathetic, feeling, accommodating**
4. a. organized, orderly or  
**b. flexible, adaptable**
5. a. more outgoing, think out loud or  
**b. more reserved, think to yourself**
6. a. practical, realistic, experiential or  
**b. imaginative, innovative, theoretical**
7. a. candid, straight forward, frank or  
**b. tactful, kind, encouraging**
8. a. plan, schedule or  
**b. unplanned, spontaneous**
9. a. seek many tasks, public activities, interaction with others  
**b. seek private, solitary activities with quiet to concentrate**
10. a. standard, usual, conventional or  
**b. different, novel, unique**
11. a. firm, tend to criticize, hold the line or  
**b. gentle, tend to appreciate, conciliate**
12. a. regulated, structured or  
**b. easy going, “live” and “let live”**
13. a. external, communicative, express yourself or  
**b. internal, reticent, keep to yourself**
14. a. focus on here-and-now or  
**b. look to the future, global perspective, “big picture”**

15. a. tough-minded, just or  
**b. tender-hearted, merciful**

16. a. preparation, plan ahead or  
**b. go with the flow, adapt as you go**

17. a. active, initiate or  
**b. reflective, deliberate**

18. a. facts, things, “what is” or  
**b. ideas, dreams, “what could be,” philosophical**

19. a. matter of fact, issue-oriented or  
**b. sensitive, people-oriented, compassionate**

20. a. control, govern or  
**b. latitude, freedom**

## Module 4 - Coaching Conversations – Coaching's for Actions

### Learning Objectives

- Coaching Models
- Issue identification
- Issue exploration
- Action commitment
- Conducting the coaching conversation

### Coaching Models – Coaching for Performance

#### Activity 4.1: Peer Coaching - Personal Dilemma

We need two volunteers for this peer coaching session: -

- A Coachee who has a personal dilemma
- A Coach who will help the Coachee think through the problem and possibly find a solution

The rest of the class will observe and provide feedback after the coaching session.

#### Solution

Team 1 - Speaker | Team 2 - Listener

Team 1 will deliver the speech | Team 2 Listen and may ask the question like

What more or what less you going to talk further?

This is empathy exercise but just understand, build practice for listening and don't react on them.

We need two volunteers 1 Coach & 1 Coachee

Who understand the situation better? - Coachee

Who focus to deliver the solution for the current situation? - Coach

#### Hint

- Narrow the solution
- Give Importance (Strong | Less) | Emotion (Strong | Less)
- Internal Emotion - Focusing on one problem continuously keep asking many questions
- What owner will expect from this?
- Maintain a good rapport with coach along with Scrum Master

## How would you improve the coaching performance?

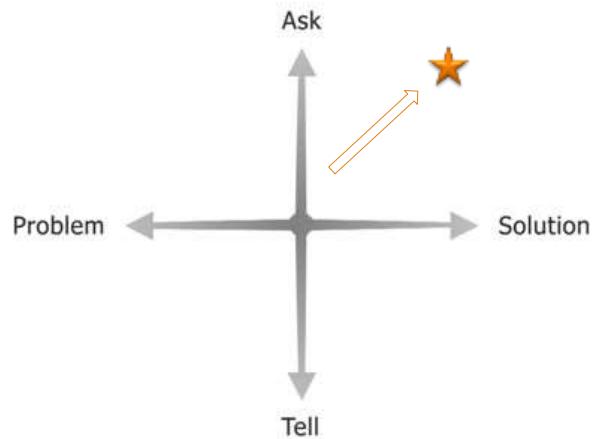
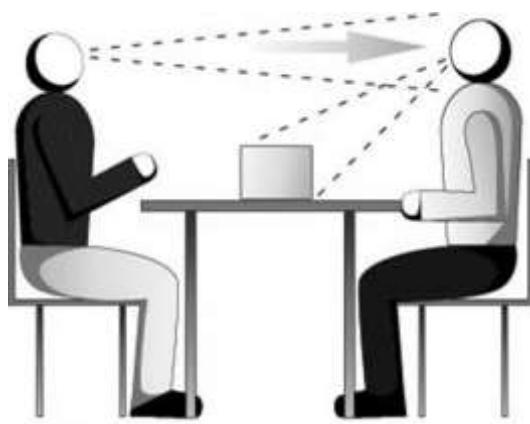
To improve the performance of coaching, the following activities to be performed: -

1. Think about thinking
2. Listen for potential
3. Speak with Intent
4. Dance towards insight
5. CREATE New thinking
6. Follow-up

### Think about Thinking

#### What is Think about Thinking?

- Let them do all the Thinking
- Focus on Solutions
- Remember to Stretch
- Accentuate the Positive
- Put Process before Content

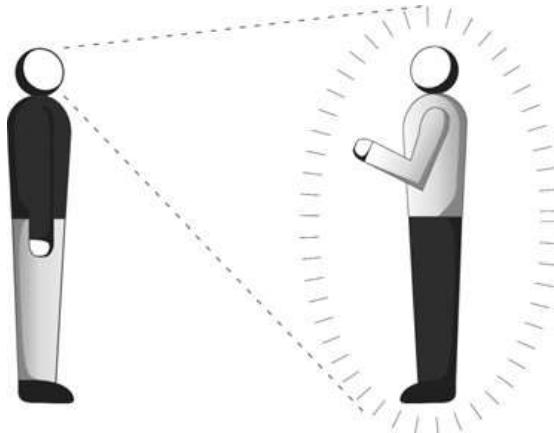


### Listen for Potential

#### What do you think Listen for Potential?

Coaching is about:

- Enabling self-learning and growth
- Unlocking potential to maximize performance





## Speak with Intent

### Why do we Speak with Intent?

Speak with focus on maximizing improvement in thinking:

- Succinct
- Specific
- Generous

## Dance towards Insight

### What are the four faces of Insight?

The four faces of Insight are: -

- Awareness of Dilemma
- Reflection
- Illumination – the ‘Aha!’ moment
- Motivation

### How coaching traps that prevent Insight?

Common coaching traps that prevent progress towards insight:

- Rushing the coachee
  - Not giving them enough personal space or thinking time
- Thinking harder about the issue than the coachee himself
  - The one having insight is the coach
- Losing focus of the goal or direction
  - Getting lost in the details

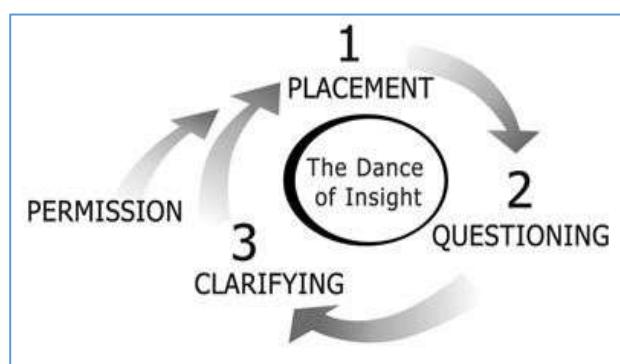
### What is Dance of Insight?

A coaching model that helps: -

- Helping people develop a deeper awareness of their dilemma
- Keeping people fully engaged towards making new connections
- Making the ‘Aha!’ moments happen

The Dance of Insight Model is

- Permission
- Placement
- Questioning
- Clarifying



### **Step 1: Permission**

- Reduces likelihood and impact of the threat response
- Gives Coachee choice on the direction of coaching conversation
- Demonstrates respect for the Coachee
- Takes care of Status part of SCARF
- Takes care of Autonomy part of SCARF
- Permission should be asked when:
  - Starting a coaching conversation
  - Getting more personal than you have been so far
  - Coaching conversation shifts direction

### **Step 2: Placement**

- Brings people to the same point in the conversation
- Brings Certainty and ensures equal Status (SCARF)
- Helps Coachee create clear mental map by sharing key info.:
  - Setting the scene
  - How long you'd like to speak for?
  - Where you're coming from?
  - What your goal for the conversation is?
  - What you would like them to do in the conversation?
  - How you would like them to listen?
  - What's going to happen in the conversation?
  - What you're looking to achieve from the dialogue?

### **Step 3: Questioning**

Powerful Questioning is core coaching competency:

- Ask questions that make the Coachee think about Solution
- Asks open-ended questions that evoke greater clarity:
  - Facilitate new insight, discovery or possibility
  - Prompt commitment to action
- Asks questions that move the client forward:
  - Towards goals that they desire
  - Not backwards to problems and justifications

#### **Step 4: Clarifying**

- Clarifying is voicing the essence of what is being said
- Simplifying complex ideas allows us to make connection to other ideas easily
- When you clarify, pay attention to:
  - What is the person trying to say?
  - What are they not saying?
  - What is the emotional context?
  - What is behind the words – the real feelings?
  - What is the essence of what they are saying?
  - Are they saying something that they can't hear themselves?

#### **Activity 4.2: Demo - Dance of Insight**

We need two volunteers to practice Dance of Insight in front of the class.

##### **Dilemma situation**

I would like to have more time for strategic planning within my role, however I am always stuck in meetings, replying to emails, and people keep interrupting me. There never seems to be any time left for higher level thinking.

Solution: Discussion with Coach and Coachee

#### **Activity 4.3: Peer Coaching - Dance of Insight**

This is a peer coaching exercise to practice the Dance of insight.

For each coaching session, one person will act as Coach, another as Coachee, and the third as observer. After the coaching session, observer will share feedback.

After each coaching session, roles will be rotated. Each session should take no more than 7 min, including observation sharing.

Solution: Coach has to follow G R O W options while discussing with Coachee: -

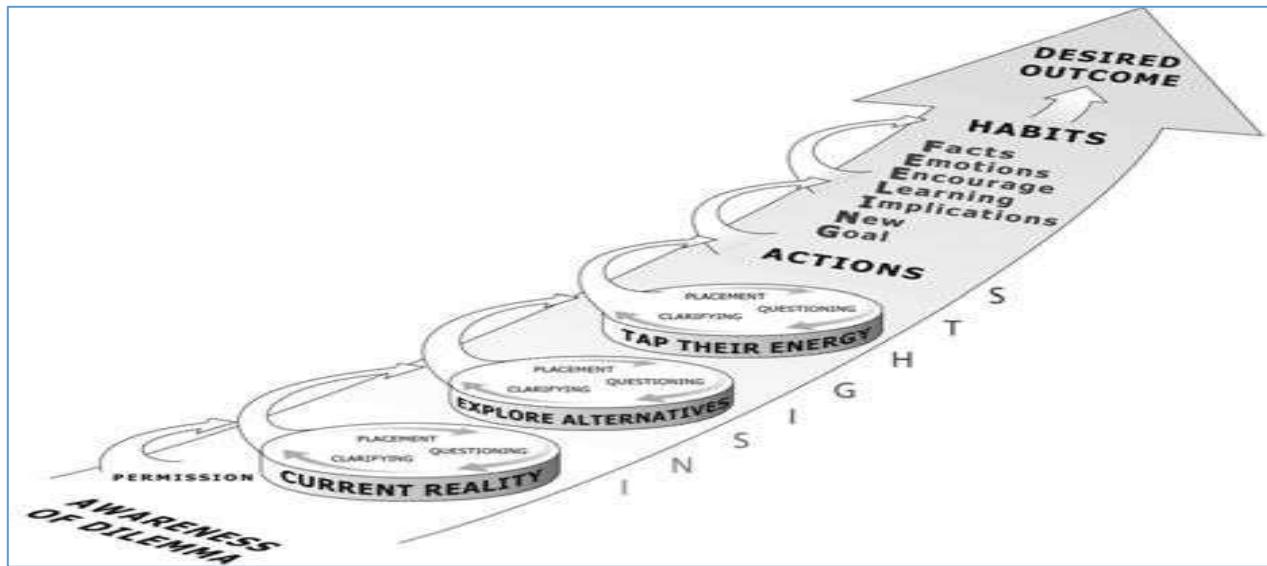
G - Goal | R – Reality (Current reality) | O - Options (Explore Alternatives) | W-Will (Tap their energy)

## Create New Thinking

### What is Create Model?

The idea of CREATE model is to ‘Coach for Action’:

- Current Reality
- Explore Alternatives
- Tap their Energy



### Identify the current reality?

- Identify the landscape of a person’s thinking rather than the landscape of their issue
- Avoid value judgments
- Use powerful questioning:
  - What are your main insights about this issue up to now?
  - And, what else?
  - How important is this issue to you?
  - What is the real challenge here for you?
  - What do you feel about the thinking time you have given this so far?

### Explore the Alternatives?

- Help coachee take the best option
  - Not the easiest or the first one
- Prompt people to think more

- With each alternative, new mental maps are created
- May give gentle suggestions or clues to other alternatives

### **Powerful questioning while exploring alternatives:**

- What are the possible paths we can take from here?
- Do you want to explore a few different ideas?
- Can you see some different angles we could look at this from?
- How can I possibly help here?
- If you are saying ‘yes’ to this, what are you saying ‘no’ to?

### **How will you tap their energy?**

Time to anchor an insight into reality:

- Get specific while their energy is still flowing
- Create Deadlines when people are more likely to commit
- Establish feedback loop – improves odds for action
- Look for a quick tangible activity linked to the insight

### **Powerful questioning: -**

- How best can I help you think through this?
- Shall we focus on X and figure more details?
- What specific action do you want to take first?
- When do you think you might do this by?
- Would it be okay to email me X when you have it ready?

### **Follow up**

### **How do you follow up?**

We can follow up with the following list of items: -

- Facts
- Emotions
- Encouragement
- Learning
- Implications
- New goal

## **Conducting the coaching conversation**

### **Activity 4.4: Coaching Conversation (CREATE)**

**This is a peer coaching exercise using CREATE Model, where coach will help coachee make a decision, or solve a problem.**

**For each coaching session, one person will act as Coach, another as Coachee, and the third as observer. After the coaching session, observer will share feedback.**

**After each coaching session, roles will be rotated. Each session should take no more than 8-10 min, including conversation sharing**

**Practice Yourself with the team**

## Module 5 - Understanding Team Development

### Learning Objectives

- Working groups vs. teams
- Team Development
- Different stages of a team
- Helping a team move up the development curve
- Defining and identifying high performance
- The coach's role in a self-organizing team
- Identifying and Managing 'GroupThink'
- Identifying and resolving conflicts

### Working groups vs. teams

#### What is a team?

- Sports Team?
- People working together?
- People that share the same work area?
- Employees in a department?
- Management group?

"A team is a small number of people with complementary skills who are committed to a common purpose, performance goals and approach for which they hold themselves mutually accountable"

#### What are the different teams? How helping a team choose to be a team?

- Working Group
- Pseudo or Potential Team
- Real Team
- High Performance Team

#### What is working group?

- Clear individual responsibilities, but no significant collective performance need or opportunity
- No desire of common purpose, incremental performance goal or joint work product
- Members may interact to help each other
  - Share information, best practices or perspectives
  - Make decisions for the entire team
  - Help others within own area of responsibility

### **What is pseudo or potential team?**

- A history of working together
- A significant, incremental performance need
- Requires more clarity about common purpose and goals
- Lacks a disciplined common working approach
- The practice of collective accountability is not established yet

### **What is a real team?**

- A group of people committed to a common purpose
- Members have complementary skills
- Well defined performance goals
- Working processes properly understood by the team
- Expected to practice collective accountability towards goals

### **Compare Working Group Vs Real team?**

Working Group	Real Team
Strong, clearly focused leader	Shared Leadership role
Individual accountability	Individual and shared accountability
The group purpose is the same as the broader organization mission	Specific Team purpose that team itself delivers
Individual work products	Collective work products
Meetings focus on status check	Meetings focus on open-ended discussions and active problem solving
Measure its effectiveness indirectly by its influence on others	Measure performance directly by assessing collective work products

### **What is a high-performance team?**

- Been a real team for some time
- Members are deeply committed to team goals
- Well established processes and strong work discipline
- High degree of collaboration
- Significantly outperforms all reasonable expectations

- Members contribute to each other's personal growth and success

## Team Development

**What are the team development objectives?**

- Improving knowledge and skills of team members
- Improving feelings of trust and agreement
- Creating a dynamic, cohesive and collaborative team culture



**When will be the team development timing?**

- Essential during the initial stages of a project
- But, truly a never-ending process



## Different stages of a team

**What are the 5 stages of Team Development? (Tuckman)**

- Forming
- Storming
- Norming
- Performing
- Adjourning

**What are the vital signs for a Team's Stage?**

- Themes and Identity
- Enthusiasm and energy level
- Event-driven history
- Personal commitment
- Level of collaboration
- Performance results

### Team Stage - Forming

**What are the characteristics of Forming Stage?**

- Uncertainty about roles and responsibilities
  - Possible lack of commitment
- High curiosity and excitement
- Limited information sharing
- Outspoken members may assume some leadership role
- Members prefer independent tasks



**What are the feelings & behaviors of Forming Stage?**

- Members are usually excited to be part of the team
- Eagerness and anxiety about the work ahead
- High positive expectations about team experience
- Often accompanied with some anxiety
  - How will I fit in with other members?
  - Will I be able to perform per expectations?

**What are the focus areas of Forming Stage?**

- Select suitable members – Attitude and Skills
- Provide clarity on role and responsibilities
- Educate members about the project, team goals and process
- Facilitate forming of ground rules





## Team Stage - Storming

### What are the characteristics of Storming Stage?

- An uncomfortable stage for the team:
- Increase in disagreements and conflicts
- Competition for Control, Influence and Authority
- Defensiveness may lead to impolite conversations
- Blaming, back-biting, and groupism on the rise



### What are the feelings & behaviors of Storming Stage?

- Reality check is discomforting
- Defensiveness about individual performance
- A strong sense of competition may lead to frustration, anger and envy

### What are the focus areas of Storming Stage?

- Re-emphasize project purpose and team goal
- Train/mentor on task-related skills
- Coach on soft skills
  - Collaboration
  - Conflict management
- Refine roles and responsibilities, if needed
- Break larger goals down into smaller, achievable steps

## Team Stage - Norming

### What are the characteristics of Norming Stage?

- Normalization of behavior and contribution
- Group norms are established
- Members learn to trust each other
- Overall improved cooperation
- Significant scope of improvement



### What are the feelings & behaviors of Norming Stage?

- An increased sense of overall comfort
- Less reluctance to interact with others
- Openness while expressing ideas
- Better rapport among team members
- Increased confidence about individual contribution
- Conscious effort to align with others

### What are the focus areas of Norming Stage?

- Support the team
- Ensure individuals don't slip back to Storming stage
- Focus on motivation and rewards
  - Tap the positive energy
- Challenge the team towards higher performance goals

## Team Stage - Performing

### What are the characteristics of performing Stage?

- Strong team-goal orientation
- Team is a well-organized unit
- High trust among members
- Collaborative team environment
- Smooth flow of information and learning opportunities
- Sustained higher levels of productivity and performance



### What are the feelings & behaviors of performing Stage?

- High intrinsic motivation – people take pride in their work
- A "can do" attitude - visible confidence in personal and team capabilities
- Unguarded participation in team discussions
- Transparent work ethic
- Self-initiated team-bonding opportunities

### What are the focus areas of performing Stage?

- Empower the team in decision-making process
- Ensure high trust from management
- Ensure efficient requirements management for sustainable goal- orientation
- Measure and celebrate team accomplishments
- Ensure team has slack time at its disposal
  - Learning, knowledge sharing, team-bonding activities, etc.

## Team Stage - Adjourning

**What are the characteristics of adjourning Stage?**

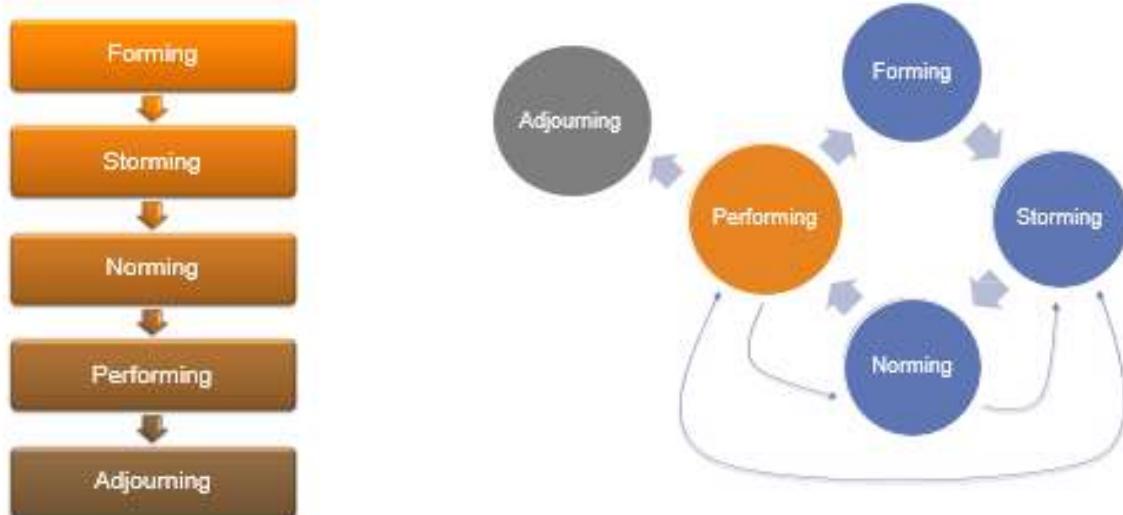
- Team completes the work and moves on
- Typical occurs in Project Closing Phase

**What are the focus areas of adjourning Stage?**

- Ensure lessons learned are recorded
- Ensure appraisals are done
- Pending claims must be cleared

## Detecting Team's Stage of Development

**What is sequencing of team Stage?**



## Activity 5.1: Team Stage Characteristics

Identify key characteristics of different team stages:

1. Observed team behavior
2. Focus areas for a Coach
3. Dominant Style (Coach / Trainer / Mentor / Facilitator)
4. Relevant Skills

	Team Behaviour	Focus Area	Relevant Coaching Skills
<b>Forming</b>	Introduction	Team Formation	Facilitation / Negotiation
	Cardinal Behaviour	Team Games for Team Building	Agile Mindset
	Guarded	Identity	Training
		Leadership Bonding	
		Roles	Taking Initiative
		Ice Breaking	Training & Mentoring
		Set up Ground Rules	
		Encourage Open Commun.	
<b>Storming</b>	Arguments	Conflict Management	Conflict Resolution Techniques
	Conflicts	Confrontation	Mentoring
	Avoidence	Help to resolve impediments	Consulting / Communication
	Challenge Status Quo		Listening / Practice
	Impediments		
<b>Norming</b>	Team Bonding	Collaboration	Collaborating Techniques
	Better Trust   Collaboration	Building Cadence	Games
	Smooth Discussion	Avoidance Antipattern	Mentoring
	More Bonding with each other	Adoption of Agile Best Practices	Counselling
	Team Formation with Structure	Formulate Team Ethics & Value	
	Delivery on Track		
	Lesser Conflict		
<b>Performing</b>	Delivering Business Value	Maintain Optimistic Support	Observation
	Helping each other	Conflict Resolution Facilitation	Coaching
	Increase Productivity	Self Empowerment	Empathy
	Giving each other	Encourage Team	Listening
	With Complementary Skills	Delegating	Defined Process
	Strong Team Bonding		Benchmarking
	Highly Performing Team		

## **Activity 5.2: Identify your team stage**

**Identify key characteristics of different team stages:**

**This is an individual exercise.**

**1. Fill the team assessment survey, keeping in mind the dynamics at your current team or a previous team.**

**2. Evaluate your team's stage**

**3. Discuss your insights or concerns with the class**

### **Team Dynamics Survey**

Use the scale below to indicate how each statement applies to your team. It is important to evaluate the statements honestly and without over-thinking your answers.

**3 = Often/Usually**

**2 = Sometimes**

**1 = Rarely or Never**

- 1. How much does humour come into day-to-day interactions within the team?
- 2. How often are contradictory views raised by team members (including junior team members)?
- 3. When contradictory views are raised by team members, how often are they fully discussed?
- 4. Based on the norms of the team, how often do team members compromise in the course of usual team interactions (when not forced by circumstances)?
- 5. To what extent can any team member provide feedback to any other team member (think about both negative and positive feedback)?
- 6. To what extent does any team member actually provide feedback to any other team member?
- 7. How likely would it be that a team member would discuss issues with your performance or behavior with another team member without giving feedback to you directly (triangulating)?
- 8. To what extent do you as an individual get support from your team on your personal career goals (such as learning a new skill from a team member)?
- 9. How likely would you be to ask team members for help if it required your admission that you were struggling with a work issue?
- 10. How likely would you be to share personal information with the team that made you feel vulnerable?
- 11. To what extent is the team likely to bring into team discussions an issue that may create conflict or disagreement within the team?

\_\_\_ 12. How likely or willing are you to bring into a team discussion an issue that is likely to have many different conflicting points of view?

\_\_\_ 13. If you bring an item into a team discussion that is likely to have many different conflicting points of view, how often does the team reach a consensus that takes into consideration all points of view and feels workable to you?

\_\_\_ 14. Can you identify an instance in the past few work days when you felt a sense of warmth or inclusion within the context of your team?

\_\_\_ 15. How much does the team make you feel accountable for your work?

Calculate Your Score: \_\_\_ / 45

**Result: Higher Score indicates high performing team**

### High Performance Agile Teams

**What are the qualities of high performance agile team?**

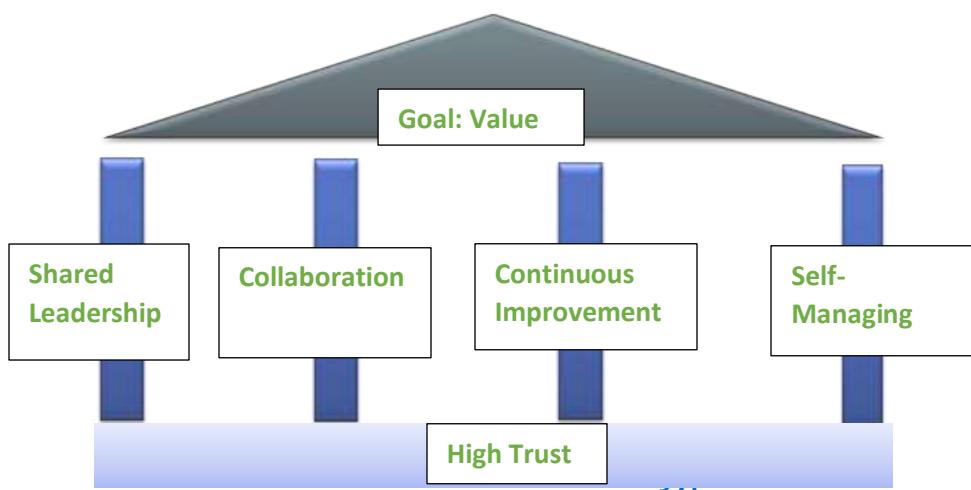
Agile teams aim to be high performance teams:

- Propelled by shared purpose
- Shared leadership
  - Free from Command and Control culture
- High Trust
- High degree of collaboration
- Continuously seeking to improve
- Self-managing

### Activity 5.3: The House of High Performance Culture

This is a group exercise.

Create a house of High Performance Team Culture using the key characteristics of high performance of agile teams



## Collaboration for Agile Team

### What are the characteristics of Collaborative Team?

The characteristics of high collaboration and, thus, high performance (adapted from Tabaka 2006):

- They are **self-organizing** rather than role- or title-based.
- They are empowered to **make decisions**.
- They truly believe that as a team they **can solve any problem**.
- They are committed to team success vs. success at any cost.
- The team owns its decisions and commitments.
- They are consensus-driven, with full divergence and then convergence.
- And they live in a world of constant constructive disagreement.

### What is collaboration principles?

- Help promote high degree of Collaboration
- With strong Result Orientation



### How based on the Collaborative demands behavior will changes?

From	To
Individual Accountability	Joint Accountability in addition to Individual accountability
Rely on managerial control	Encourage people to manage their own work
Divide work into tasks and assign to people	Expect everyone to plan work together and pull tasks
Build Functional Excellence by narrowing set of tasks done by individual	In an effort to finish work faster, encourage people to learn and volunteer for work outside their specialization
Maximize individual productivity - A fair day's pay for fair day's work	Support personal growth that expands as well as exploits individual capabilities

#### Activity 5.4: Collaboration principles vs. key agile practices

This is a group exercise. For each of the Collaboration principle, identify two to five key agile practices that are aligned to that principle.

Activity 5.4      Collaboration Principles Vs Key Agile Principles		
<b>Alignment</b>	Sprint Planning	Colocated Teams
	Pair Programming	Refactoring
Involvement with the Team	Sprint Goals	Continuous Integration
	Delivery	
<b>Empowerment</b>	Story Point Estimation	Ceremonies
	Self Organising	Task Volunteering
Decision Making	Sprint Retrospective	Limit Work In Progress
	Backlog Grooming	
<b>Engagement</b>	Sprint Retrospective	Sprint Review
Having Entire Team Involved	Sprint Execution	Sprint Backlog
<b>Transparency</b>	Daily Scrum	Sprint Retrospective
	Kanban Board	Burndown Chart
Openness	Information Radiator (IR)	
<b>Accountability</b>	Sprint Review	Sprint Retrospective
	Sprint Backlog	Daily Scrum
Responsible	Ownership	Deliverable

## **Activity 5.5: Assessment - Dysfunctions of a Team**

**This is an individual exercise.**

- 1. Please complete the assessment on behalf of your team.**
- 2. [Optional] Please share your team's dysfunctions, if any.**
- 3. Please share any new insights gathered from this activity.**

**Instructions:** Use the scale below to indicate how each statement applies to your team. It is important to evaluate the statements honestly and without over-thinking your answers.

**3 = Usually | 2 = Sometimes | 1 = Rarely**

- 1. Team members are passionate and unguarded in their discussion of issues.
- 2. Team members call out one another's deficiencies or unproductive behaviors.
- 3. Team members know what their peers are working on and how they contribute to the collective good of the Team.
- 4. Team members quickly and genuinely apologize to one another when they say or do something inappropriate or possibly damaging to the Team.
- 5. Team members willingly make sacrifices in their areas of expertise for the good of the Team.
- 6. Team members openly admit their weaknesses and mistakes.
- 7. Team meetings are compelling, and not boring.
- 8. Team members leave meetings confident that their peers are completely committed to the decisions that were agreed on, even if there was initial disagreement.
- 9. Morale is significantly affected by the failure to achieve Team goals.
- 10. During Team meetings, the most important – and difficult – issues are put on the table to be resolved.
- 11. Team members are deeply concerned about the prospect of letting down their peers.
- 12. Team members know about one another's personal lives and are comfortable discussing them.
- 13. Team members end discussions with clear and specific resolutions and calls to action.
- 14. Team members challenge one another about their plans and approaches.
- 15. Team members are slow to seek credit for their own contributions, but quick to point out those of others.

Calculate Your Score : \_\_\_\_\_ / 45

### Result: Higher Score indicates more performing team

Use the following table to score your results and determine which areas your team needs to focus on.

Absence of Trust	Fear of Conflict	Lack of Commitment	Avoidance of Accountability	Inattention to Results
Statement 4	Statement 1	Statement 3	Statement 2:	Statement 5
Statement 6	Statement 7	Statement 8	Statement 11:	Statement 9
Statement 12	Statement 10	Statement 13:	Statement 14:	Statement 15
Total .....	Total .....	Total .....	Total .....	Total .....

A score of 8 or 9 is a probable indication that the dysfunction is not a problem for your Team.

A score of 6 or 7 indicates that the dysfunction could be a problem.

A score of 3 to 5 is probably an indication that the dysfunction needs to be addressed.

How do you think can your team can use this evaluation?

### What are the 5 dysfunctions of team?



## Groupthink

### What is Groupthink?

“A phenomenon that occurs when the desire for harmony or conformity in the group results in an irrational or dysfunctional decision-making outcome.”

### What are the symptoms of Groupthink?

- Illusion of invulnerability – Excessive optimism leading to extreme risks
- Collective rationalization – Discounting warnings and assumptions
- Belief in inherent morality – Belief in the rightness of their cause
- Stereotyped views of out-groups – Avoidance/ignorance of conflict
- Direct pressure on dissenters
- Self-censorship – of deviations from perceived group consensus
- Illusion of unanimity – Majority view and judgments are assumed to be unanimous.
- Self-appointed ‘mind guards’ – Members protect the group and the leader from information that is contradictory to the group’s cohesiveness, view, and/or decisions

### What are the remedies of Groupthink?

- Assign the role of critical evaluator to each member
- Avoid stating preferences and expectations at the outset
- Invite outside experts to group meetings
  - Outside experts should be encouraged to challenge views of members
- Assign one member the role of devil's advocate
  - to question assumptions and plans
- Set aside a sizeable block of time to survey warning signals from rivals
  - Group should construct alternative scenarios

## Handling Conflicts

### What are the responsibilities of agile coach in handling conflicts?

- Skilfully determines the severity of conflict
- Mindfully decides whether to intervene and how
- Generously teaches teams how to navigate it
- Courageously refuses to settle for a team that tries to hide or avoid it

## What are the 5 levels of conflict? (Speed Leas Framework)



### Level 1: Problem to Solve

Just a “difference of opinion”:

- Conflicting goals or values may exist
- Members feel anxious about the conflict in the air
- Team remains focused on logical problem-solving
- Language is factual and logical
- Information flows freely, and collaboration is alive
- Team members seem optimistic, moving through the conflict

### Level 2: Disagreement

Personal emotions are visible in the conflict:

- Self-protection is as important as solving the problem
- Members may talk offline with others to test strategies or seek advice and support
- Nastiness gets a sugar coating but still comes across as bitter
- Language reflects emotions and generalizations
- Defensiveness may constrain smooth flow of information
- Facts begin to play second fiddle to interpretations

### Level 3: Contest

A sense of ‘groupism’ begins to surface:

- Multiple issues may cluster into larger issues or “cause”
- Misunderstandings and power politics begin to arise
- People begin to align themselves with one side or the other
- Emotions become tools used to “win” supporters for one’s position
- Language full of overgeneralizations
- People may not be ready to move beyond blaming

## Level 4: Crusade

Group boundaries are very clear now:

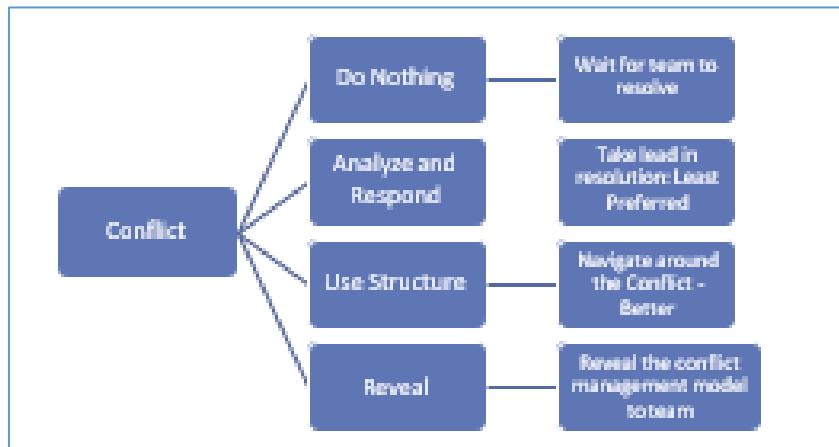
- Factions become entrenched
- The overall attitude is righteous and punitive
- “People on the ‘other side’ will not change!”
- Members believe the solution is to remove others from the team or get removed from the team themselves
- Language is ideological

## Level 5: World War

Extreme level of group rivalry:

- ‘Destroy’ the other
  - “It’s not enough that we win; others must lose!”
- Difficult to have constructive outcome
- Major team restructuring may be required

## How will respond to conflict?



## Module 6 - Setting up the Team environment

### Learning Objectives

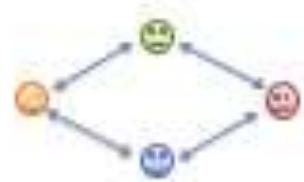
- Helping teams to know themselves
- Helping teams create their culture & vision
- Creating team agreements & ground rules
- Setting up the work environment
- Accommodating the team's geographical relationship
- Creating a team kick off | Startup agenda

### Learn About the Team

What are the things you are learning about the team?

1. Learning about each other

- Behaviour, attitude, beliefs
- Skills and expertise
- Work background
- Cultural background



2. Learning about the team context

- Management's vision for the Team
- Key goals and expectations
- Roles and reporting hierarchy



How teams know each other by helping themselves?

Help members learn about others so they can better collaborate in meeting team goals:

- Stranded on an island
- Finish the sentence
- Journey Line
- Market of Skills
- Constellation
- Values

## Activity 6.0: Finish the Sentence

Finish the sentence with the first thought that comes to mind:

1. My favorite color is White.....
2. My favorite food is Veg Briyani.....
3. My favorite movie is Kabali.....
4. My favorite pastime is Surfing net.....
5. I like people who like' s me | are frank.....
6. I feel trust is trustworthy / Important .....
7. Personally, I would define success as accomplishment of an aim or purpose .....
8. I would define happiness as being happy .....

Share your professional journey line?

Graph your professional journey:

- Start as far back as you want
- Draw the key events – ups and downs
- Present a summary to the team

## Create a Shared Vision

What are the Multi-Level Goals?

- What's in it for me?
- What is in for us as a team?
- What is in for my company?
- What is in for the world?

What's in it for Me?



## **What's in it for US, the team?**



## **What's in it for My Company?**

"We are developing new market segment for online training that will help the company meet its target of revenue growth by more than 25%."

## **What's in for the World?**

"Our online training product will help working professionals enhance their knowledge and skills in a cost- effective manner in the comfort of their home."

## **Example: Creating Shared Vision**

**Individual exercise:**

**What's in it for me? | What is in for us as team?**

**What is in for my company? |What is in for the world?**

**Compile and make shared vision**

## Creating Team agreements & ground rules

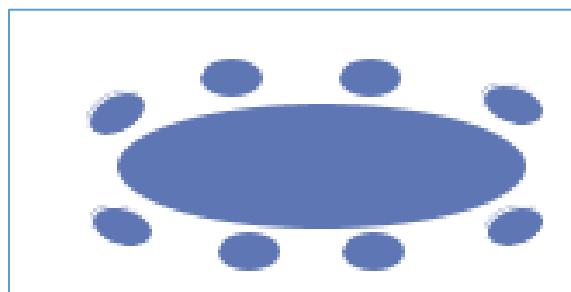
### How would you create team norms?

- Shared Values
  - Keep it simple
  - Don't struggle for more than 30 minutes – ask for help
- Rules for working together
  - No meals on the desk, snacks are fine
  - No personal chats during team meeting
- Logistics
  - Core hours
  - Meeting times
  - Leaves
- Being together in conflicts

## Setup the work environment

### How to setup the work environment? How sit together?

- Quick access to other members
- Face to face interaction enhances communication
- Decision making, problem solving, and knowledge sharing



## Different team settings

### Activity 6.1: Discuss Challenging Team Settings

1. Discuss and identify the key challenges specific to the following types of team settings:

- Virtual or Distributed teams
- Temporary teams
- Cross-Organization teams
- Culturally diverse teams

2. Discuss three to five key practices that can help mitigate the challenges/risks associated with these team settings.

<b>Cross Organizational Team</b>	
<b>Challenges</b>	<b>Key Practices</b>
Communication	Vitual Meeting
Organization Culture	Common Communication Platform
Language	Cross Site Visit
Politics	Joint Team Outings
Respect Missing	Team Photos
Colocation	Joint Planning & Demo Sessions
Grouping	Weekly Governance Meetings
Missing Synergy	Joint Release Retrospective
Quality	Joint SCRUM Ceremonies
	Break Silos
<b>Distributed Team</b>	
<b>Challenges</b>	<b>Key Practices</b>
Timezone (Non Overlap)	Overlap
Communication Constratints (Face 2)	Temporary Colocation
Colocation	Proactive Communication (Mobile)
Issue Resolution	Oncall Support / Emergency)
Lesser Efficiency	Hand Over
	Configuration Management
<b>Culturaly Diverse Team</b>	
<b>Challenges</b>	<b>Key Practices</b>
Communication	Face to Face Communication (Video Conf)
Regional Cultural Differences	Team Building Activities
Attitude & Beliefs	Cross Cultural Situation Awareness
Collaboration	Must have Collaboration, Empowerment, Engagement,

## How to set the ideal team?

- Co-located
- Ongoing/ Long-term
- Single Organization
- Same Culture

## Activity 6.2: Ground Rules for a Distributed Team

This is a group activity. You are a new distributed Scrum team with members in two different locations, with time zone difference of 4 hours. You have been brought together for the initial kick off meeting.

-Based on your previous experience, make a list of 5 to 8 key ground rules that should help the team members work effectively with each other and be able to produce working product at the end of each sprint.

- Share your team's ground rules with other groups

### Solution

-> Time Overlap for Europe & India Project

India - 2 Pm-6 Pm | Europe 10Am - 2 Pm

-> Meetings

- Whole team presence during overlap timings
- 3 Pm IST, 11 Am Europe Timings
- Dollar Jar (Fine for late) INR 50 | Euro 1

## How will you accommodate team in geographical relationship?

Why have Distributed Teams at all?

- Availability of resources
- Availability of specialized skills
- Cost-effectiveness
- Support for different time-zones or markets

## What are the challenges with distributed agile teams?

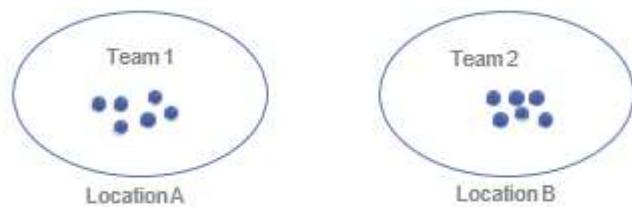
- Communication
  - Limited or no F2F communication
- Collaboration
  - Difficult to have the entire team together
- Transparency
  - Work assignment and status is not visible across locations
- Shared Learning
  - Difficult to share knowledge across locations
- One Team Feeling
  - Common to have development of silos – We vs. Them

## What is the distribution strategy?

- Collaborating collocated teams
- Multiple Deliberately Distributed Teams

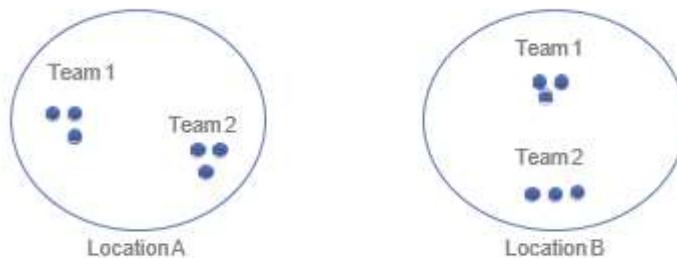
## What is collaborating collocated teams?

- Preferred option
  - Simplifies day to day work for most team members
- Need enough people to establish team at each location
- Each collocated team must be cross-functional
- May have resource/skill availability constraints



## What is deliberately distributed teams?

- May be cost effective due to localized special skills
- Creates communication and co-ordination burden
- Increases Transparency



## How will you manage the distributed teams?

- Favour live communication over email and documentation
- Create opportunities to bring the team together
  - Initial co-location
  - Seeding Visits
  - Contact Visits
  - Traveling Ambassadors
- Adding Some Process and Structure
  - Agree on one common language
  - Clarify tasks and processes, not just goals and roles
  - Use of collaboration tools like Jira, Wiki, SharePoint, etc.
  - Insist on whole team presence in team meetings

## How to understand the cultural differences?

- Power Distance Index (PDI)
- Individualism (IND)
- Achievement Orientation (ACH)
- Uncertainty Avoidance Index (UAI)
- Long Term Orientation (LTO)

## What is Fragile?

- Independent decision making
- Drive for excellence
- Challenge each other
- Learning ability
- Free flow of information | Knowledge

## How would you achieve from Source to destination? What are the Positive and Challenges?

**Solution:**  
Game Storming

**Solution:**  
Positive: You were had!

- Destination:**
- High team morale
  - Customer is super happy
  - High | Super performance team
  - Self-management team
  - Driven Adaptability
- Challenges:**
- Lack of agile mind-set
  - Not willing to empower team
  - Investment on Thinking

➤ Lack of direction

## Module 7 - Review and Assessment of Agile Frameworks

### Learning Objectives

- Agile values and key practices
- Teaching / Selling Agile
- Evaluating Agile Frameworks

### Why and How of Agile?

#### What is the need for Agility?

- Value-driven delivery
  - Better aligned with customer needs
- Faster time to market
- Better transparency
- Responsiveness to change
- Self-managing teams
- Sustainable pace of development
- Reduced process waste

#### Explain Agile Manifesto – The Agile Values?

We are uncovering better ways of developing software by doing it and helping others do it. Through this work we have come to value:

- Individuals and interactions over processes and tools
- Working software over comprehensive documentation
- Customer collaboration over contract negotiation
- Responding to change over following a plan

This implies, while there is a value in the items on the right, we value the items on the left more.

#### What are the Key Agile Practices?

- Evidence based development – Empiricism
- Limit work in progress
  - Defer commitment – Match demand with capability
  - Progressive Elaboration
  - Adaptive Planning
  - Emergent Design
  - Visualize your work
- Faster Feedback Cycle

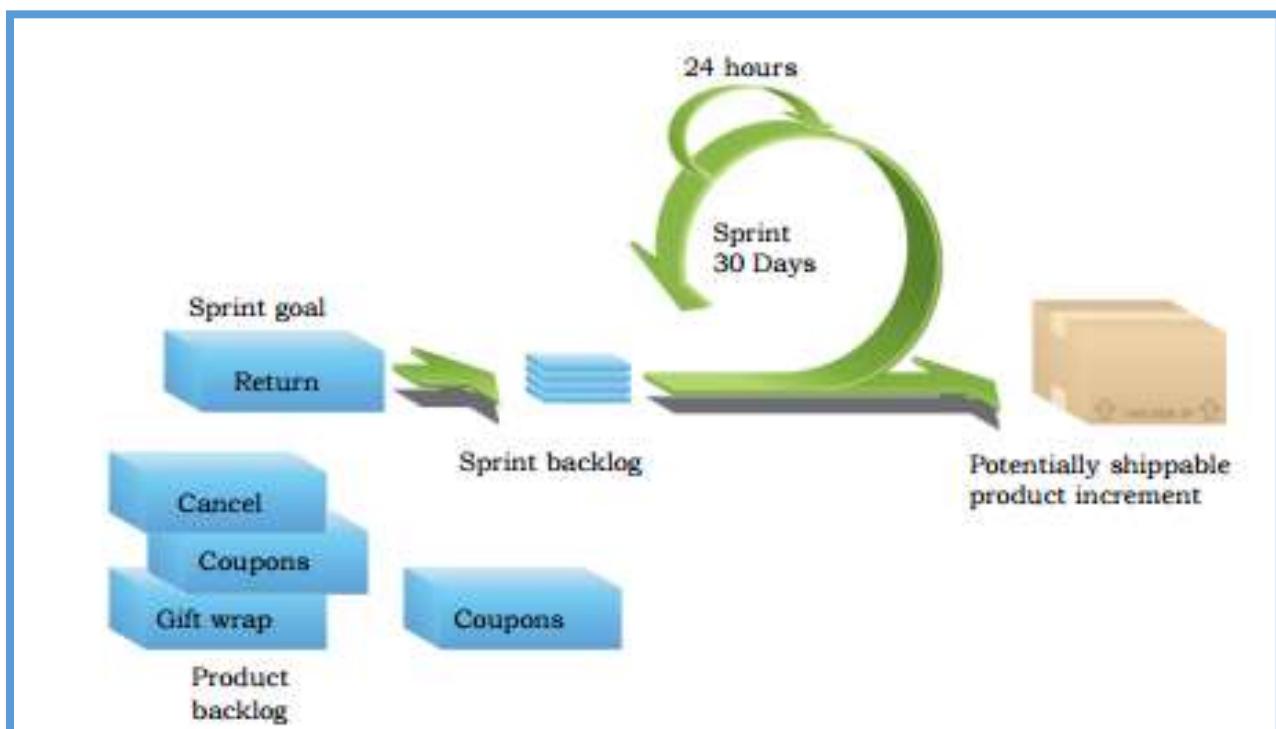
- Collaboration
- Release early and often
- Continuous Improvement

## Scrum – Agile Framework in Focus

### What are the characteristics of Scrum?

- The most popular ‘Agile Process’ for software development
- A project management/execution process framework
- Well suited for projects that require Empirical process control
- Focuses on self-organizing teams
- Requirements are captured in a prioritized list (Product Backlog)
- Product progresses in a series of month-long “sprints”
- No specific engineering practices prescribed

### Scrum Framework





### Activity 7.1: Evaluation of an Agile Framework

1. Based on your personal experience, discuss the positives and the challenges with an Agile framework of your choice.
2. Prepare a chart, listing top 3 to 5 most important positives and 3 to 5 key challenges.
3. Share your analysis with the class.

### SCRUM

Positive	Challenges
<ul style="list-style-type: none"> <li>\$ Inspect   Adapt   Transparency</li> <li>\$ Fail fast   Faster feedback</li> <li>\$ Collective ownership</li> <li>\$ Continuous Improvement</li> <li>\$ Self-Organized team</li> <li>\$ Collaboration</li> <li>\$ Engagement</li> <li>\$ Self-Delivery Teams</li> <li>\$ Well defined roles / ceremonies</li> <li>\$ Early Feedback</li> <li>\$ Accountability</li> <li>\$ Shared risk</li> <li>\$ High Quality</li> <li>\$ Excellent Productivity</li> </ul>	<ul style="list-style-type: none"> <li>\$ Skill Sets for co-locations</li> <li>\$ Delivery commitment of every two weeks</li> <li>\$ Not having deliverable after every Sprint</li> <li>\$ Larger Team</li> <li>\$ Mind-set Change</li> <li>\$ Ad-hoc requirements within the Sprint</li> <li>\$ Resource Criticality</li> <li>\$ Inefficient resource utilization (Testers are free at the beginning and over busy at the end)</li> <li>\$ Adaptability &amp; Sustainability</li> <li>\$ Time-box collaboration</li> <li>\$ Team level limit (Only for smaller teams)</li> <li>\$ Cross functional team structure</li> <li>\$ Framing Agile centric metrics</li> <li>\$ Sometimes story point estimation</li> </ul>

## KANBAN

Positive	Challenges
<ul style="list-style-type: none"> <li>\$ Supports dynamic requirements prioritization</li> <li>\$ No time-box value</li> <li>\$ Lead &amp; cycle time delivery can be calculated</li> <li>\$ Visualize blockage through the cumulative flow diagram   workflow</li> <li>\$ Limit Work in Progress</li> <li>\$ Manage Workflow, Pull</li> <li>\$ Faster Throughput</li> <li>\$ No Team Limit, Allows Specialist</li> <li>\$ Well defined Roles</li> <li>\$ Improves [Kaizen] Process</li> <li>\$ Expose Bottleneck</li> </ul>	<ul style="list-style-type: none"> <li>\$ Knowledge work industry (Green –New Brown-Existing project)</li> <li>\$ Arriving optimum WIP limit</li> <li>\$ Lesser Collaboration</li> <li>\$ No Control limit on changes</li> <li>\$ Higher degree of variation</li> <li>\$ Starvation</li> <li>\$ New Product Development</li> <li>\$ Limited Estimation / Commitment</li> </ul>

Scrum	Kanban
<ul style="list-style-type: none"> <li>\$ Quicker Value Realization</li> <li>\$ Empower &amp; Motivated Teams</li> <li>\$ Customer Satisfaction</li> <li>\$ Good Quality</li> </ul>	<ul style="list-style-type: none"> <li>\$ Better Visualization</li> <li>\$ Faster Throughput, Higher Cyclic Team</li> <li>\$ No Team limit, Allows Specialist Roles</li> </ul>

## SAFe

Positive	Challenges
<ul style="list-style-type: none"> <li>\$ Engagement across layers</li> <li>\$ Clear roles</li> <li>\$ Scalability</li> <li>\$ Value Driven</li> <li>\$ Program Board</li> <li>\$ ART</li> <li>\$ Themes -Capabilities – Feature – Stories</li> <li>\$ Applicable to Larger Teams</li> <li>\$ Feedback at value stream level (Solution Demo)</li> <li>\$ Rapid Development</li> <li>\$ Feature Roles</li> <li>\$ Good Cadence</li> </ul>	<ul style="list-style-type: none"> <li>\$ Cannot be applied to smaller teams</li> <li>\$ Relatively Heavy (Multiple Roles)</li> <li>\$ Costly Ceremonies</li> <li>\$ Cadence &amp; Synchronization is tedious to maintain</li> <li>\$ Mandatory Architecture Runway is tedious (Requires at least PI Planning)</li> <li>\$ Huge Collaboration</li> <li>\$ Huge Upfront Cost</li> </ul>

## **Activity 7.2: Elevated Pitch for Agile – Demo**

We need volunteers who will present the following topics to the entire class (timeboxed to 5 min):

- 1. Why transition to Agile?**
- 2. Essence of Scrum**
- 3. Essence of Kanban Class provides feedback after the presentation.**

### **1. Why transition to Agile?**

Agile creates wonders with every life nowadays. more easy adaption , global model, good imagination clients thoughts get reflected immediately, provides good leadership level for organization to support customers, as an entrepreneurial customers, it shows the value of an organization at higher level

### **2. Essence of Scrum**

- Quicker Value Realization
- Empower & Motivated Teams
- Customer Satisfaction
- Quality

### **3. Essence of Kanban Class provides feedback after the presentation.**

- Better Visualization
- Faster Throughput, Higher Cyclic Team
- No Team limit, Allows Specialist Roles

## **Activity 7.3: Elevated Pitch for Agile**

Form groups of 2-3 persons, everyone in the group prepares elevated pitch for agile, scrum or Kanban and presents within the group – Timebox to 5 minutes max

The group provides feedback after each presentation

Make videos of the presentation for the self-review (Optional)

## Module 8 - Mentoring Agile Roles and Transitions

### Learning Objectives

- Mentoring and coaching the roles in Agile
- Mentoring and coaching the key transitions for Agile roles
- Identifying and handling resistance from individuals
- Review of Agile Coaching

### Resistance to Agile Transition

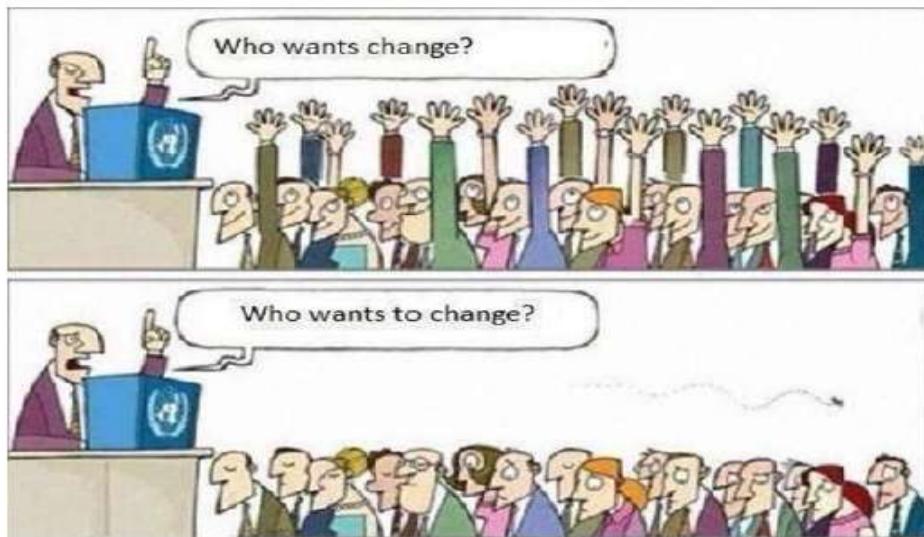
#### Activity 8.1: The Flight of Agile Transition

Thinking about your recent or current agile transformation, identify as a group (up to three items in each section): Draw the plane and create the parts: -

1. Where do we want to go, the ideal destination? Business Value
2. Who are the stakeholders (passengers)? Scrum Team | Customer | Leadership
3. Who is flying the plane (pilot)? Product Owner
4. What gives us power (engine)? Development Team
5. What gives us the lift/support (wings)? Scrum Master
6. What helps us control the path (tail)? Metrics
7. What are the obstacles (wind)? Lack of knowledge | Old roles and process

### Transition is a Long Change Process

*Usually, the bigger the change, the stronger the resistance!*



## **Activity 8.2: Resistance to Agile Transition**

**Agile transition brings changes in roles, responsibilities and team structure that people may not feel open to.**

**1. From your personal experience, WHO typically resists WHAT kind of change during Agile transition process?**

**–Write each discomforting change on a separate sticky note and post it on the board.**

**2. Map the resistance stickies to different SCARF categories.**

**(Note: Relatedness & Fairness fails in Agile Transitions)**

**Status Certainty Autonomy Relatedness Fairness**

### **Team**

New Process – Certainty

More Transparency & Accountability -Autonomy

Knowledge Sharing – Autonomy

Colocation – Autonomy | Certainty

### **TL/TM**

Dynamic Planning – Certainty

Roles Change – Status

Self-Managing Teams – Autonomy

Customer Collaboration – Autonomy

### **Senior Management**

Empowerment – Autonomy

Transparency to Customer – Autonomy

Variability in Productivity – Certainty

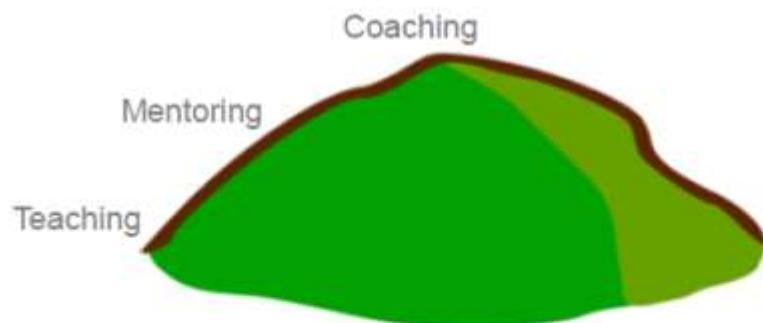
### **Customer**

Time Availability – Autonomy

Contract Model Changes – Certainty

## Coaching Agile Roles

### What are the Agile Coach Roles?



- **Teaching:** Share knowledge to help them understand agile values, principles, and their role
- **Mentoring:** Show and help them practice how work gets done in an agile process
- **Coaching:** Help them find solution to their problems on their own, in line with Agile values and principles

### Coaching Agile Roles – Focus Areas

- Train them on Agile Framework
- Develop Agile Mindset
- Develop Lean Mindset
- Develop T-Skilled Professionals

### Ground Work for One-On-One Coaching

- Guarantee Safety
- Partner with Manager
- Create a positive regard
- Meet them a half-step ahead

### Activity 8.3: Agile Roles – Do's and Don'ts (This is a group exercise)

1. For each Scrum Role, discuss and create a list of “Do’s and Don’ts” – limit to 3-4 max

2. Discuss your final sheet with the entire class

#### SCRUM Master

Do's	Don'ts
\$ Building Team Capability and Predictability \$ Facilitation \$ Servant Leadership \$ Process Champion \$ Remove Impediments \$ Protects the team \$ Coach the team as well “SM become Coach” \$ Lead by example \$ Effective Communication \$ Active Listening \$ Keep up the balance \$ Set realistic pace \$ Open to learn \$ Accept Feedback	\$ Manage the Team – Performance Review   Authority \$ Allocation of Work \$ Planning of work \$ Taking Decision

#### Product Owner

Do's	Don'ts
\$ Product Vision \$ Product Backlog Grooming \$ Prioritization \$ Writing Stories \$ Schedule Demo \$ Involving in Ceremonies \$ Involving with customers \$ Attending Sprint Demo's \$ Product Roadmap \$ Release Dates (Pre   Postpone)	\$ Should interact directly with the team \$ Not changing requirement in middle of the sprint in team meeting \$ Should not give story points to strategy \$ Not involve in Story Point estimation \$ Should not compare multiple Scrum Team

#### Dev Team

Do's	Don'ts
\$ Collaboration \$ Knowledge Sharing \$ Accountable \$ Transparency \$ Common Team Goal	\$ Non-Collaborative behaviour (Groupism   Selfishness) \$ Wait for Orders \$ Resistance to Agile Mind-set / Productivity \$ Depend on SM alone \$ Be the Change

## **How to coach the Product Owner based on the role?**

- Business Value Driver
- Vision keeper
- Daily Decision maker
- Heat shield
- One ultimately responsible

## **What are the key tasks in Coaching the Product Owner?**

Mentor Product Owners understand their priorities: -

- Be the vision keeper – in sync with sponsor
- Move from schedule-driven to business-value-driven planning
- Cultivate Business value driven thinking in all interactions
- Maintain a DEEP product backlog
- Match demand with capability
  - Learn to trust the team
  - Avoid micro-management
- Hold the team for their commitments

## **How to coach the Scrum Master based on role?**

- Caretaker of the agile process
- Servant leader
- Facilitator
- Progress tracker towards the goal
- Bulldozer for impediments
- Guardian of quality

## **Coaching Scrum Master – Key Tasks**

- Coach Scrum Master understand their priorities:
- Facilitator, not decision maker
- Self-managing teams
  - Planning work
  - Pulling work
  - Tracking work
  - Getting work done
- Sustainable pace of development

#### **Activity 8.4: Coaching Agile Roles**

This is a class discussion exercise.

**1. Participants share difficult role specific situations from their real-life experience that an Agile Coach may have to deal with.**

**2. The class discusses possible approach to deal with that situation, highlighting specific questions that may help.**

- **Resolve First**
- **What makes you feel really?**
- **What happened really?**
- **What's going on?**
- **What else made you feel?**
- **What possibility do you go with?**

# AGILE COACHING INTERVIEW TIPS

Tell me about your introduction before proceed with?

- Worked as an **Agile coach** in Syntel with **16+ years of IT experience** out of which **6 Years have been dedicated to Agile, Scrum & SAFe practices** at enterprise level
- My Agile Certifications are - ICAgile Certified Professional in Agile Coaching (**ICP-ACC**) & SAFe Program Consultant (**SPC 4**), Certified Scrum Professional (**CSP**)
- I am **expertise** in Agile transformations, Coaching, training and mentoring & Lead a proposal with a big win to generate more business value, trained more than **1000+ Professionals** on Agile Principles & Practices, XP, Scrum, Kanban, Scaled Agile framework by making the organization as an Agile Organization, build agile culture across 3 continents as an agile coach for **distributed team**
- Review how teams are conducting Sprint Planning, Scrum Daily calls, Sprint Review and Sprint Retrospective ceremonies and provide feedback., track **team velocity** for teams after each sprints and plan to Increase it each quarter using Graphs like CFD (Cumulative Frequency Diagram)
- My agile **websites and books** are released by Syntel CEO & President -Rakesh Khanna & Temenos CEO - Susan Gibson. I have published my agile books in amazon such as Handy Agile, Agile A Key of Success, Scrum Alliance Professional, Agile Coaching, SAFe Q&A
- Having good **experience in technology** such as Java, Big data, SharePoint & .Net projects to support the development team

What is your achievement in Agile Coaching Journey?

- Trained more than **1000+ Professionals** on Agile Principles & Practices, XP, Scrum, Kanban, Scaled Agile framework by making the organization as an Agile Organization.
- Lead a proposal with a big win to generate more business value across **3 continents** as an agile coach for **distributed team**



**How Coaching starts for the project from the day 1? (or) You have been appointed a coach in an organization. What would be your starting point?**

- Evaluate the current status of the team, identify whether the project is new or existing project or transformation from waterfall to agile project.
- Develop short term plan for 1-3 months for agile coaching. Engage the coachee in the coaching process.
- Based on the coaching agreement, I will coach the team | enterprise and maintain the confidentiality of each team to grow as a high productive team
- For the existing projects, start coaching them from the current status and guide them through ceremonies, ensures that team is delivering consistent throughput.
- For new projects guide the team in Agile planning to develop the important things for the project such as Project Plan, Release Plan, Iteration Plan, Test Plan, User Stories, Product Backlog & Sprint Backlog.

**Start Sprint 0 to be conducted at the start for every release. Mandate to proceed further.**

- Validate the core and extended **team members**
- Identify all dependent group sign off need
- Identify the development and test **environment**
- Identify dependencies on other projects, teams & resource that may influence the release schedule
- Identify the **deliverables** and sign off needed
- Identify **number of iterations** for the release using the team velocity
- Identify the **schedule for release testing** and release iterations, as a guideline, have release iteration (Release Testing) after every three-time boxed development iterations
- Identify any **assumptions** made
- **Risk involved in the project**
- Identify the project with **release schedules**
- Create a **release plan**

**Start from Sprint 1,** guide the team to pull the user stories from the product backlog items to start the sprint in a meaningful way to complete without any dependencies along with the commitment from the development team to complete within the sprint. Start coaching them through ceremonies, ensures that team is delivering the consistent throughput. High risk |value items are to be considered for the first set of sprints.

Review how teams are conducting Sprint Planning, Scrum Daily calls, Sprint Review and Sprint Retrospective ceremonies and provide feedback. Track Team Velocity for Teams after each sprint and guide them to Increase it each quarter using Graphs like CFD (Cumulative Frequency Diagram).

Adopt Agile Life Cycle Management (ALM) tools like Rally, JIRA & Agile AGM to track Epics, Features and User Stories and to capture metrics like Velocity and Burn down Chart, KPI, delivery-commitment index, resource-resource burndown, quality-bugs classification and goals against it

Provide feedback to the team with respective stage to grow further and produce high performance team in the organization. Likewise execute the remaining sprint | iterations as per plan.

### **What is Coaching? How do you coach the team?**

Coaching is partnering with clients in a thought-provoking and creative process that inspires them to maximize their personal and Professional Potential. **Coaching helps them to learn rather than teaching them. The art of Agile Coaching is understanding the situation, the values underlying Agile software development, and how the two can combine.** Do the experiments to hit on the right approach, work with the teams, come up with great solutions and learn from every team we work with gives the great experience in coaching.

“The key motivations of Coaching presence are to build rapport with the coachee, engage coachee in the coaching process & Keep the coachee in ‘towards’ state. Apply different techniques they need training, mentoring & coaching based on their roles to help the team. Create an adaptive approach for the current status of the team based on their coaching needs. Coach the Product Owner, Scrum Master & Development Team on key agile practices & day to day activities involved in their project. “

### **During project execution, Coaching through ceremonies: -**

- Coach the team on **how to estimate work** using Planning Poker. Prepare required outcome for the planning session.
- **Sprint planning:** Plan team sprints, with the outcome being the sprint backlog, sprint goals, and a team commitment.
- **Release Planning:** Facilitate a conversation about the stories with the scrum team.
- **Daily Scrum:** Coach the teams to self-organize around the work in the current sprint asking the three stand-up questions.
- **Backlog refinement:** Facilitate regular meetings with the scrum team to discuss the stories for next sprint.
- **Sprint Review Prep:** Prepare for the Sprint demo with team, work through the story DoD, how to demo the stories, etc.
- **Sprint Retrospective:** Conduct sprint retrospectives. Use decided-on team metrics. Make items actionable for continuous self-improvement (Kaizen).
- **Collaboration and Coordination:** Work closely with the PO and Architects as needed, helping write stories and to prioritize the backlog.

- **Coaching and Mentoring:** Help coach the team in the proper application of agile and mentor new team members who have not worked in an agile model in the past.
- Help define and promote the company's Agile vision, methodology, practices and tooling.
- Worked with the Scrum Framework model while working closely with product owners, architects, and other scrum masters to deliver the overall project functionality.
- Coordinate dependencies across the various Scrum teams' work tasks.

### **How will you coach the Product Owner? How will you support the Product owner to handle the product backlog?**

Educate the Product Owner (**PO**) how to maintain and groom the deep product backlog and guide them how product backlog items are prioritized Using MoSCoW technique and how many iterations & respective sprints to be executed for the project. Ensures that product backlog item has more focus on business-value-driven. Ensures that effective Product Owner should be Committed, Responsible, Authorized, Collaborative & Knowledgeable (CRACK).

### **What are the key tasks in coaching the Product Owner? How will you support PO?**

The key tasks in coaching the Product Owner has to understand their priorities: -

- Be the vision keeper – in sync with sponsor
- Move from schedule-driven to business-value-driven planning
- Cultivate Business value driven thinking in all interactions
- Maintain a DEEP product backlog
- Match demand with capability
- Learn to trust the team
- Avoid micro-management
- Hold the team for their commitments

### **How will you coach the Scrum Master?**

Educate the Scrum Master (**SM**) to take-care of the agile process. Guide them to facilitate the scrum ceremonies and help the team to act as a bulldozer for impediments. Be a Servant leader, to lead by serving others and progress tracker towards the goal and ensures the guardian for quality of work to be performed.

### **What are the key tasks in coaching the Scrum Master? How will you support SM?**

The key tasks in Coaching Scrum Master has to understand their priorities: -

- Facilitator, not decision maker, Keep sustainable pace of development
- Grow Self-managing teams -> Planning work, pulling work, tracking work & getting work done

### **How will you coach the Development Team?**

Educate the Development Team (DT) with key agile practices and frameworks. Motivate the team to grow cross-functional & self-organizing. Guide them to work together as a Collective ownership to make them in Continuous improvement. Walk through ceremonies and provide feedback to grow at higher productive team to generate high productive and quality output.

### **Team having Too Strong Product owner, Scrum Master is weak enough and Development Team is also not performing up to the expectation. How will you handle the situation as an agile coach?**

In this situation, understand the product owner expectations, coach the Scrum master and development team with the agile mind-set, project activities and motivate them continuously for the gap fulfilment and establish smooth flow across the team to meet the product owner expectations. If unforeseen situation occurs again, by replacing with the efficient person.

### **How to ensure team is currently doing progress correctly?**

To verify whether how the development team is doing progress based on: -

- By sharing the metrics to reflect current state (NOW) & productivity of the team
- How the team meetings & daily Stand-ups are progressing as per the expectation of client
- How the team is adapting flow, process & technical approaches
- How the team is taking situational decisions
- How the team is delivering frequently as per DOD

### **Technical Lead is facing the technical issue, how would you resolve it?**

Understand the technical issue faced by the technical lead and help them in: -

- Team Brain storming
- Sit with the team, explore the ideas and resolve it

### **How will you coach during sprint planning?**

During the sprint planning: -

- Verify the planning objective
- What can be delivered in the increment resulting from the upcoming sprint?
- How much work needed to deliver the increment can be achieved?
- Plan team sprints, with the outcome being the sprint backlog, sprint goals, and a team commitment.
- Verify the stories selected in the current sprint from the prioritized product backlog, selected stories are estimated with agreed acceptance criteria and how the team identifies and estimates task using planning poker method
- Share the current velocity, and guide them to grow in a consistent velocity or higher. The accepted stories / sprint only considered for the velocity consideration

**Note:** Before Sprint Planning, feasibility study has to be conducted – the team has enough capacity to proceed with, whether the product backlog is groomed properly, met the business requirements with respect to current market conditions, current product developed status & technology to be considered. Without proper planning, execution of the sprint is not effective.

### **How will you guide the team to split the user Stories?**

A Planning poker is used for user stories estimation. For splitting or decomposing a user story ensure every story address all the architecture layers such as Presentation layer, Validation layer, Business layer, Database layer. The best way to slice vertically through the layers.

### **There are some user stories pending at the end of the sprint. How will you handle?**

At the end of the sprint, unexpectedly some user stories are pending it may be due to the requirement not clear with technical feasibility, insufficient time to execute the stories based on the resource skills & availability. Understand the ground reality the incomplete tasks are moved to product backlog, executed in upcoming sprint planning based on the priority. The unforeseen situation occurs some time, but this can be overcome with efficient planning.

Ref: <https://www.mountaingoatsoftware.com/blog/handling-work-left-at-the-end-of-a-sprint>

### **Team is doing at the end of the day during the sprint, not working properly during the sprint?**

#### **How would you handle this situation?**

Stories have to be delivered in specified intervals, not at the end of the sprint. Daily Scrum ensures that stories are executed on day to day basis without any impediments. In case of any impediment there, resolve asap. So, motivate the team consistently to get the things done as per schedule and don't encourage them to do in a last day, last minute. The factors to be considered during the sprint such as Velocity, requirements stability and capacity maturity, efficiently to work with the product.

### **Getting buy-in from Leadership team and Senior Executive? How about Controversies?**

The Main Reasons for buy-in leadership team and senior executives in agile arena are: -

- Managing optimized backlogs of work with constantly changing business priorities
- Sincerity in engagement and collaboration between various departments including business customers
- Effective planning and estimating for larger initiatives
- Faster time to market, no wait cycles to get work completed
- Eliminated Errors, no rework and no miscommunication on expectations

In Controversy, some of the organization facing difficulties in buy-in from leadership team and senior executives in agile arena are: -

- Managing large backlogs of work with constantly changing business priorities
- Lack of engagement and collaboration between various departments including business customers
- Ineffective planning and estimating for larger initiatives
- Slow time to market, long wait cycles to get work completed
- Errors, rework and miscommunication on expectations

**How would you measure the team maturity? How did you track Agile Maturity level of various teams?**

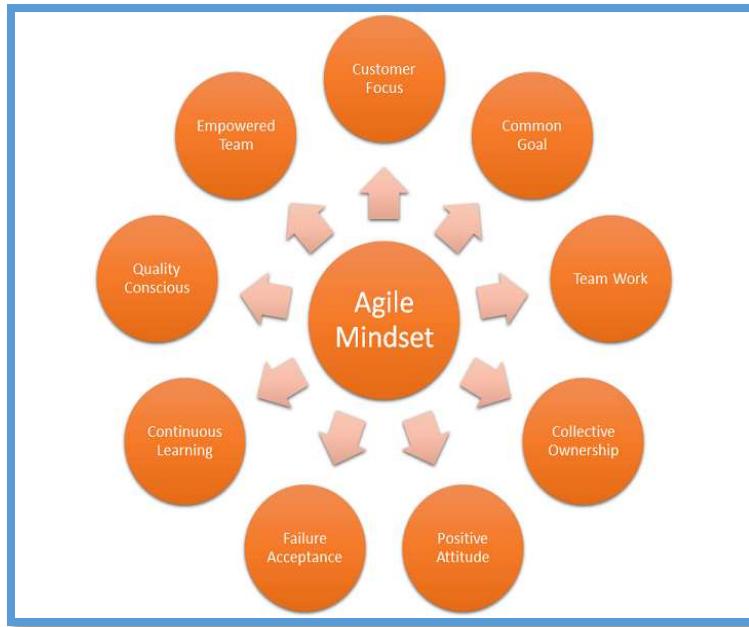
To measure the team's maturity: -

- How the team is adapting flow, process & technical approaches
- How the team is matured enough in executing ceremonies. For example, in sprint planning, the matured teams will conduct Pre-Sprint Planning, user stories estimation has to be completed
- How the team is adapting the agile principles, practices and values (in the range of 0-5)
- How the team is taking situational decisions
- How the team is delivering frequently as per DOD
- Whether The team is delivering in consistent team velocity and it has been increased in each sprint or not
- Whether the team is deliver in consistent throughput or not

**What Agile ALM tool set did you recommend and implement?**

Adopt Tools like Rally, JIRA and Agile AGM to track Epics, Features and User Stories and to capture metrics like Velocity and Burn Down Chart, KPI, delivery-commitment index, resource-resource burndown, quality-bugs classification and goals against it. Note: Planning Poker is an activity the development team uses to estimate the relative size of the product backlog items.

**What aspects of the mindset do you have to change and how do you as an agile coach go about doing it? Also, give the example of what you have done in this regard?**



- As an Agile Coach with clear mindset, I have to Create an adaptive approach for the current status of the team based on their coaching needs. Apply different techniques they need training, mentoring & coaching based on their roles to help the team. Coach the Product Owner, Scrum Master & Development Team on key agile practices & day to day activities involved in their project based on the agile mindset.
- Exhibit “RI” stage like Doing Agile & Being Agile. **Before sharing to the team, internally feel how we can adapt successfully and then share to the team.** (Shu - Learn exactly what they taught by master, Ha - Experimental Stage RI - Doing Agile and Being Agile). **“You have to believe in yourself and you should be the change agent, trust the change begins from you. So, you need to give has to give the confidence to the team that you will be there to assist and support them”**
- To change the team mindset and **adapt the key agile practices** to become a high-performance team.
- To **cultivate the agile mindset** with a team, the team has to focus on a common goal, collective ownership, failure acceptance, positive attitude and continuous learning, quality conscious and team empowerment.
- In my experience with one of the client, where team has not efficient to do their daily routines and many slippages happens after I have given mentoring program by adapting agile principles, practices and project based coaching, they have grown and achieved a high-performance level over a period of time.
- In my career, I have trained 1000+ peoples in Agile practices for embracing the agile mindset.

**What parts of being an Agile Coach you struggle the most with (from a personal & professional point of view) and how do you handle them?**

As an experienced agile coach, I am feeling very happy to help the team without any struggle.

I handled from a **personal point of view** by

- Holding people accountable
- Maintaining neutrality and confidentiality
- Challenging the status quo
- Personal bias
- Difficult to stay out of politics

I handled from a **professional point of view** by

- To handle the team, move into the agile
- Based on Agile Mind-set and Culture
- Team Maturity

**What are the most useful tools in your coach toolbox (give an example of using them successfully in the past)?**

The most useful tools in my experience is Rally, JIRA & Agile Manager used to track Epics, Features and User Stories and to capture metrics like Velocity and Burn Down Chart, KPI, delivery-commitment index, resource-resource burndown, quality-bugs classification and goals against it.

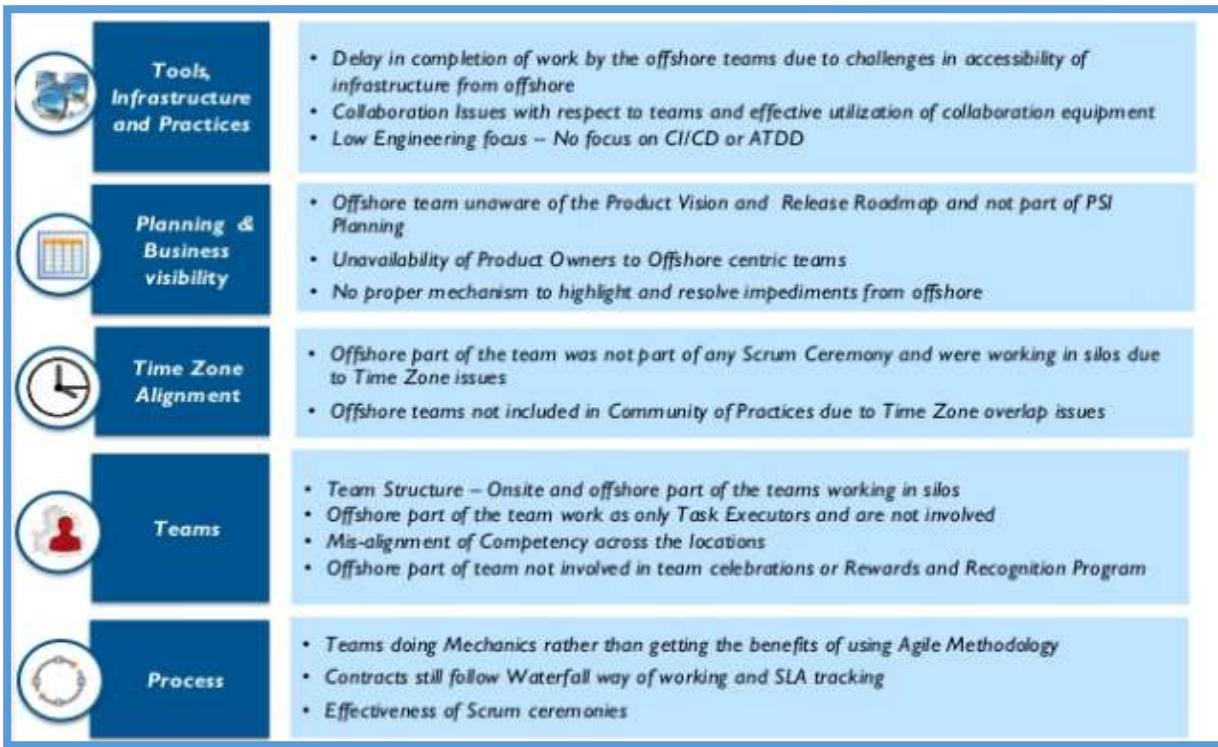
**From the agile coach goals, which one do you find the most challenging and why? Also, which one you are more comfortable with?**

From the agile coach job goals, the most **challenging** goal are:

- Onshore & Offshore collaboration sync is difficult while handling multiple vendors in multiple time zones.
- Enhancing the Lean-Agile mindset & behaviors, Grow the team experience in Agile related practices & tools.
- Increase cohesion within a distributed & multi-cultural organization contribute and rollout our ever-evolving agility operational model with specific skill | experience.
- With my professional experience, I handle efficiently without any challenges.

From the agile coach goal, the most **comfortable** are:

- Handling either Onshore or Offshore with multiple vendors in comfortable in execution. Not in a mix.
- Matured Team members adapting the agile practices and embracing with the lean agile mindset and delivering with high value
- Matured Team accustom with distributed, collaborate & multi-cultural environment to execute ceremonies



**(Scenario) An Admin, HR, Finance & Quality has not yet heard about the word Agile and they need your help to reduce the lead time in the daily hiring routine process. How would you go about helping the team?**

In my experience, I have created the Agile awareness and provide the Agile key practices and tools to handle the job efficiently by reducing surface delays this makes a good success for other departments associated with IT.

**(Scenario) Your manager holds a meeting of 3h every week that you strongly believe adds no value to the team (10 people, all direct-reports) How would you go about addressing the potential issue?**

I request the manager to follow the agenda, not to deviate from the focus and execute the ceremonies as per plan

In my experience to address the potential issue, First I will ensure the team to follow first adapt GROW model that helps in better achievements such as G- Goal, R-Reading, O-Options, W-Will (What | When)

Second updating the team growth status by

- Facilitate Learning goals – Mastery and Competence
- Metrics reflect current state (NOW) – Measuring potential or productivity is a lower priority

- Focus on positive emotion
- Performance and Enjoyment – Decrease negative emotion

**(Scenario) A Scrum Master is running out of time asking agile coach to skip some meeting by today. As an agile how would you handle?**

As an agile coach, I advise Scrum Master not to skip any meeting, plan well accordingly and try to adjust without any slippages. In worst-case you can send the prior communication for postponement schedule or send the alternate available scrum master to handle the meeting.

**(Scenario) A person travelling from ground floor to third floor in the lift in 30 secs. During this time, you have to convey the benefit of agile to that person? How would you convey?**

The benefits of applying | adopting agile in the project are: -

- Reduce turnaround time for features
- Predictability of market releases with respect to content and timing
- Ability to handle complex product enhancements

### **Comparison Waterfall & Agile?**

#### In Waterfall

Plan driven process, predictive, fixed scope, adjust schedule to preserve scope

Long development cycle, linear, organize work into major phases, delivers value at project completion

#### In Agile

Agile value driven Process, Adaptive, Fixed Schedule, Adjustable scope to preserve schedule

Short development cycle 2-4 weeks, cyclic, organizes work into small deliverables, delivers values incrementally over time

**Do you think Agile can be applied to all projects? What benefits you got by applying Agile in your Project?**

Not necessary to apply agile for all project. Suppose If my requirements, time, cost etc are all fixed, there is no reason I should follow the agile Life Cycle Methodology. Agile is not a panacea of all the business problems. The problem in the industry today is that organizations think with an Agile approach they would be able to solve all their problems. But that isn't the case. Agile and Digitization are just enablers to solve the business problems. If following a waterfall or a mini waterfall cycle, I can periodically deliver minimum business requirements, I need not go with a full blown agile implementation.

The benefits of applying | adopting agile in the project are: -

- Reduce turnaround time for features
- Predictability of market releases with respect to content and timing
- Ability to handle complex product enhancements

How can you apply Scrum/Kanban in projects, organizations which are highly regulatory in nature?



Yes. It's possible for a team to take an agile approach in a regulatory environment. To addresses regulatory compliance issues via several key strategies: -

- **Adopt a hybrid process.** A hybrid framework that adopts strategies from a range of sources including Scrum, XP, Agile Modelling, Kanban, Unified Process
- **Adopt a full delivery lifecycle.** Most regulations address the full delivery lifecycle, not just construction
- **Focus on solutions, not just software.** Disciplined agile teams produce consumable solutions, not just “shippable software”
- **Take a goal-driven approach.** Recognizing that solution delivery teams find themselves in unique situations
- **Adopt an explicit governance strategy.** DAD has agile governance strategies built right in, including explicit light-weight milestones, metrics, named phases, and many other aspects of governance expected by many regulations.
- **Be enterprise aware.** DAD promotes the concept of enterprise awareness, the recognition that agile teams do not work in a vacuum. This includes strategies for engaging with enterprise architects, how to deal with enhancement requests and defect reports coming in from operations, and how to work with other enterprise professionals. These can be key issues to

understand when tailoring agile to be compliant within an existing organizational ecosystem – your entire process needs to comply to the regulations, not just the development portion of it.

### **What can be the role of the Senior Management in the SAFe organization?**

In SAFe Organization, Senior Management will play in SAFe portfolio level and organization level

#### In Portfolio Level

- Handle multiple Portfolios at Enterprise level
- Lean-Agile budgeting empowers decision makers, so Enhance Lean-Agile Budgeting with Value Stream funding, “CapEx and OpEx”
- Enterprise architecture guides for larger technology decisions
- Monitor and guide metrics support governance and improvement
- Make sure that planned epics are delivered with good value and on time.

#### In Organization Level

- Lead the change
- Know the way, Emphasize Lifelong Learning
- Develop People
- Inspire and align with mission and minimize constraints
- Decentralized Decision Making
- Unlock the intrinsic motivation of knowledge workers

### **Which metrics you think are the most relevant to you?**

The metrics relevant to the agile projects that I handled

- Sprint | Iteration – Burnup | Burn down chart
- Release Burn down chart | Risk Burn down chart
- Velocity Chart

### **Do you think we can always have dynamic requirements?**

Not always but sometimes projects we have dynamic requirements. It may raise due to market dynamics, client expectations, technology & competition in the industry. Self-managed development team will handle all the challenges and deliver as per the expectation through self-learning and self-growth.

### **Contracts- What challenges you see with Agile contracts?**

The challenges in Agile coaching contracts are: - Scope | Priorities | Time & Cost

- Maintain the confidentiality between the coachee and other employees in the organization
- Termination of coaching contract in earlier
- Maintain the coachee records confidentially and submitting to senior management

- Cancellation of Coaching process should be communicated well in advance to coachee

### How Scrum Master can become a good agile coach?

In Agile career, Scrum Master role is the stepping stone to start the agile career in dealing the team and working with ceremonies, day by day coaching experience grows in the agile career to become a good agile coach.

A scrum master can also become a good Agile Coach. First of all, scrum master has to develop the positive attitude and patience. Scrum Master have to believe in himself and he should be the change agent, trust the change begins from him. So, the Scrum Master has to give confidence to the team that he will be there to assist and support them. Some important things habits have to adapt.

- Lead by Example
- Keep up the balance
- Set realistic pace
- Be cautious about your language
- Open to learn
- Accept feedback

### How is your role as a coach different from a Scrum Master?

**Scrum Master** role will be focus on

- Team level | One or more team
- Expert in Scrum
- Shielding the team
- Bulldozer of Impediments
- Servant Leadership
- Good Facilitator – A neutral process holder who guides and groups through processes that help them come to solutions and make decisions
- A Scrum Master ensures that the team is following the Scrum process, doing the ceremonies and behaving the right way.

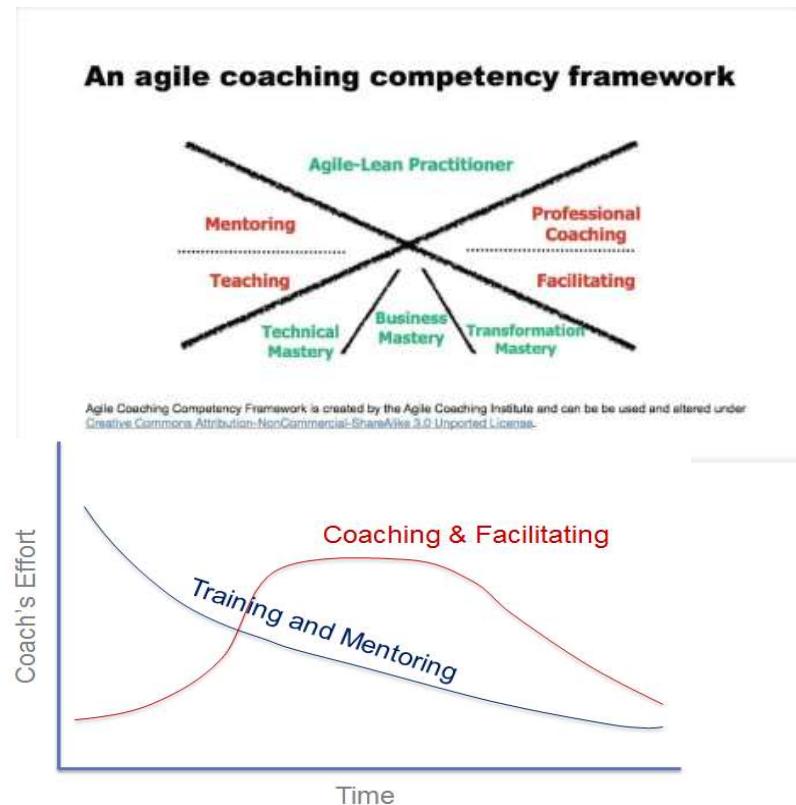
**Agile coach** role will be more focused at

- Enterprise level | All the teams
- Expert in all Agile Framework with broader and deeper knowledge
- Supporting the entire organization with training, mentoring and coaching needs
- More like hood to support organizational changes
- Professional Coaching unlock the person's potential to maximize their own performance and help them to learn rather than teaching them & Partnering with clients in a creative process that inspires their personal and professional potential
- An Agile Coach helps to define what is to be done, how, who does it, when, why, how it fits in with the organization, change management, people management and interactions between agile

teams and other parts of the organization (like Dev Ops, Hosting, Build teams, Education, UX/UI, etc.).

### What is the role of an agile coach?

- As an Agile coach, your goal is to develop productive agile teams that think for themselves rather than relying on you to lay down the path for them
- Your need to help them understand the agile from the value point of view rather than practice point of view
- You need to help them change the way of work, communicate, collaborate and understand team based value delivery. During this process, you need to help them unlearning some of their old habits, using your coaching skills, tools and techniques
- You need to understand, each team is different as they have different levels of skills, attitude and knowledge. That means your coaching strategy depends on what the teams need from you



### Which ALM tools do you use? Which one you find most relevant and why?

I have used JIRA. Most of my client used the JIRA and most beneficial to the end user and cover lot of features with low cost.

**What factors would you consider before you recommend a ALM tool to your organization or customer?**

**Any Application Lifecycle Management tool that claims to be a complete solution should consist of at least the following modules:**

- Requirements Management
- Software Development
- Collaborative Project Management
- Quality Assurance & Test Management
- Release Management
- Document Management
- IT Operations (DevOps)

You want your chosen solution's architecture to be flexible, allowing you to customize artefacts and workflows, reports or views (dashboard), and it should also support all your internal processes as well as any foreseeable development of these processes.

**In a nutshell, the following general capabilities and features are considered the most important when it comes to Application Lifecycle Management tools:**

- Agile capabilities
- Support for various work items
- Gapless traceability from requirements to release
- Integration points with other tools
- Consulting & training services, support
- Security and reliability
- Available hosting & license types

**What anti patterns did you notice with your coaches'? What did you do to handle that?**

An antipattern is a pattern that you think will improve things, but it doesn't.

The following is a list of antipatterns that I have observed.

- Backlog
- Planning
- Daily Stand Ups
- No Show Case
- Review | Retrospective
- Command and Control
- Big Bang Improvement
- Agile Education
- Quality & Definition of Done
- Lack of Long-term thinking

- Lack of communication
- Not making it in a Safe Environment

Reference: - <https://dzone.com/articles/agile-antipatterns>

#### PO and backlog

- ▶ Product Owner and team reach Iteration Planning without preparation
- ▶ There is more than one PO per team
- ▶ PO is not sufficiently involved during Iteration execution

#### Planning

- ▶ Planning is based on tasks, not on user stories and acceptance criteria

#### Commit

- ▶ Team does not commit to clear Iteration goals

#### Execute

- ▶ Developers don't work collaboratively on user stories
- ▶ Waterfalling Iterations: Team integrates and tests Stories only at Iteration end
- ▶ Done isn't Done, debt is carried forward Iteration to Iteration

#### Demo

- ▶ Team delays Demo or extends Iteration
- ▶ Story reported but not demonstrated (non-UI stories, spikes, refactors, etc.)

#### Retro

- ▶ "Idea fest" instead of focus on near-term, incremental improvements

**As a coach, you must have trained lot of people as well. What is the difference between a trainer and a coach?**

I have trained more than 1000+ Professionals on Agile Principles & Practices, XP, Scrum, Kanban, Scaled Agile framework by making the organization as an Agile Organization.

#### **In Training**

- The trainer provides specialized knowledge
- Trainer follows a standard agenda and curriculum
- The standard agenda is driven by the trainer
- Trainer provides similar experience for each trainee

#### **In Coaching**

- Providing live example of the depth and usefulness of agile values according to the project scenarios
- Being agile more than doing agile, makes everyone as agile
- Exhibit 'Ri' stage of Agile
- Coach provides similar experience for each coachee and make the organization as an agile organization

**What are the other domains of agility that you have worked with?**

I have worked with business, process and technical agility, work concert to create an agile organization.

Reference: <http://theagiledirector.com/article/2016/11/24/domains-of-agility/>

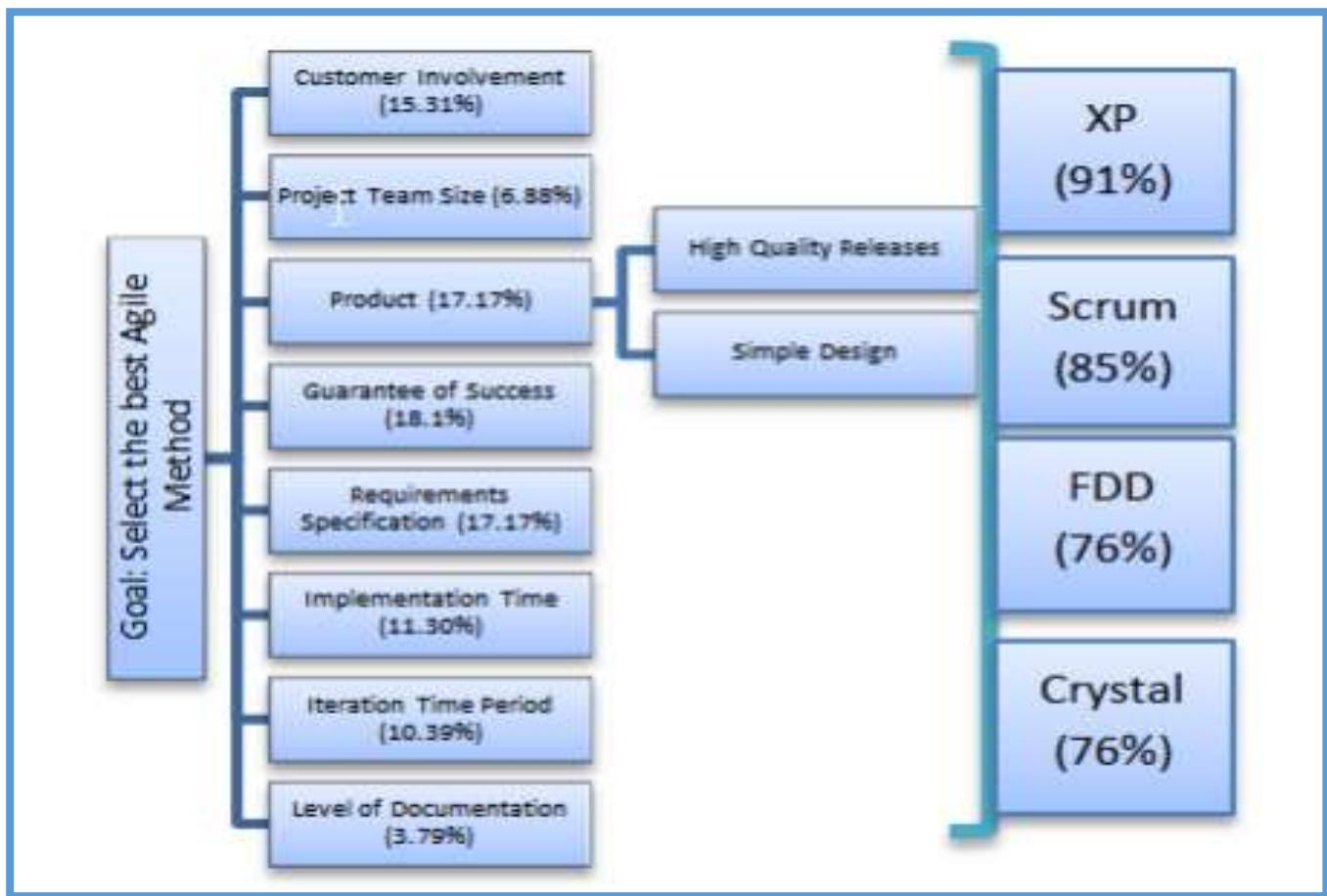
**You are talking to the CEO of a company with around fifty thousand employees. CEO has mandated to transform the organization to SAFe Agile. As a coach what do you do?**

- First recognize the current structure so that we can build ART, we need to identify ARTs and the respective sizes based on the type of business they are performing.
- Secondly, we should not change the big bang, instead focus on bringing in evolutionary changes
- Thirdly pick an ART and train three to five agile teams to start with. Work with this way for two to three months and look for the better results next train the other teams

## How do you decide which agile framework would be applicable in your context?

Before Agile framework assessment with the client first conduct the cost benefit analysis.

- What is the business outcome for the applicable agile framework?
- What we have today and what we are going to become tomorrow?
- What is the gap against Engagement Status with Industry Practices?
- Conduct the maturity level of the organization and project teams over people maturity, technology practices & agile tools, Quality Conscious
- Based on the key factors applicable to the project based on that decide the applicable framework



## What are the day today activities of Agile Coach?

### Agile Coach Role & Responsibility

1. **Facilitator:** Facilitate the team with the knowledge so that team can start the project.
2. **Trainer:** Provide training to the team on the agile process; training will continue all the time during the project execution and continuous improvement on velocity, quality, processes etc.
3. **Make the winning strategy** according as per the ground conditions
4. Help in preparing the overall **planning** of the project that means he will work as a consultant. He will provide various ideas, suggestions, strategies.
5. Make sure that team is following **agile processes** in each sprint at user story level as per the Definition of Done (DoD); However, this is the responsibility of the Process Check Master but if project does not have a role of process check master, this activity should be handled by the agile coach.
6. Help team to **answer all the questions** on the agile process during the project execution; that means agile coach need to be on the ground so that he can answer the questions immediately.
7. **Identify project risks** and raise them proactively
8. **Mentor:** Focusing on people and Continuous Improvement all the time; provide team a platform for improvement not only during the retro but all the time. Create a safe environment for healthy conflict and meaningful collaboration.
9. **Identify process issues** and improve them
10. **Help product owner to write user stories**
11. **Help team on the estimating of the user stories** and prepare them for the same
12. **Provide capacity calculator template** for the team
13. Provide the **common tasking codes** for the team for better tracking on technical front
14. Help scrum master to **plan** meetings like: - preplanning, planning, daily scrum, Review & Retrospective

## In Scrum, Sprint get delayed not as per plan. How would you handle the situation?

The reason for the sprint get delayed may be due to: -

1. Team overcommits – how do you roll user stories (and other product backlog items) into the next sprint?
2. Team under commits – should you add new user stories mid-sprint?
3. External impediments – how should these be reflected in the burndown chart and velocity?
4. Product Owner changes – should you allow them to remove, add or significantly modify the sprint's user stories?

To handle this situation, first make the environment ready to execute the sprint, unless and until the sprint cannot be executed. Vendor organization will focus on billing purpose to generate more sprint without proper planning. In multi-vendor project, without proper plan, lot of money gets exhausted. So, plan carefully, before executing the sprint.

Ref: <https://www.axisagile.com.au/blog/planning-and-metrics/sprint-issues-when-sprints-turn-into-crawls/>

### **What are key success of your agile team?**

The Key success of my agile team is: -

- Cross Functional Teams
- Empowered Team Members
- Single Voice of Business
- Shared Accountability
- Servant Leadership
- Continuous flow of value
- Value over activity
- Attention to Technical Excellence
- Rapid Risk Reduction
- Early feedback adaptation
- Total Openness and Transparency
- Trust

Ref: <https://www.leadingagile.com/2011/01/12-keys-to-success-with-agile/>

### **What is your achievement in agile coach journey?**

My achievement in agile journey is: -

- Lead a proposal with big win to generate more business to the organization
- Worked across 3 continents as an agile coach for the distributed team
- Trained more than 1000+ professionals on Agile principles & practices, XP, Scrum, Kanban, Scaled Agile Framework by making organization as client organization
- I build the motivated individuals across the team
- I promote the organization as top listed companies in agile
- I will ensure the team stability for the welfare of employees
- Adding value to the customer with prompt delivery, sharing new innovation ideas of product

### **You are the scrum master joining in the middle of the sprint. What will you look for?**

- I will make sure that the current sprint is on track by looking into the burndown chart.
- I will make sure capacity planning is done and updated in Rally and the team is given 100% allocation or more with Stretch goals.
- If the team is under allocated, I will fix this.
- If capacity planning was never done for the team, I will start doing capacity planning as this is the beginning point of success for the Scrum teams. Without Capacity planning, Story Points and task estimations, teams will have no commitment to their deliverables. They will tend to push stories to the next sprint.

## When you carry forward a user story from one sprint to another, how will you manage the hours?

- I will move the ‘To Do’ hours as Estimates for the next sprints. Estimates and “To do” should remain the same in the starting of the sprint. I will also wipe off the Actual hours when I carry forward the stories.
- One can get this information from the history if they want to. If I carry forward the actual hours, I will have no control on the Actual hours worked in the current sprint.
- If a story is 90% done and only 10% is pending, I would still move the story and not split the story and carry forward only the unfinished tasks. If a Scrum Master starts doing it, the team will have no commitment to the stories. Though Rally has the option the option to facilitate splitting of the stories, organizations do not follow this generally. Also, this will create duplicate stories with the same title and this makes the product owners unhappy.

Name	Work Product	Release	State	Capacity	Estimate	To Do	Actuals
Adithya Yerram	(6 Tasks)		100%	60.0	75.0	40.0	37.0
Alice Arumalraj	(3 Tasks)		92%	24.0	22.0	8.0	14.0
Danish Mumtaz	(5 Tasks)		94%	54.0	51.0	14.0	41.0
Jawaharlal Vutukuru	(4 Tasks)		80%	40.0	32.0	17.0	21.0
Kasetty Koushik	(5 Tasks)		100%	60.0	61.0	37.0	25.0
Muhammad Riyaz	(10 Tasks)		93%	60.0	56.0	34.0	38.0
Parthasarathi Sendha	(12 Tasks)		92%	60.0	55.0	18.5	42.0
Suresh Babu	(10 Tasks)		90%	54.0	37.0	19.0	22.0
Swarnali Biswas	(7 Tasks)		90%	48.0	44.0	10.5	35.0
Tejaswi Naredy	(6 Tasks)		100%	54.0	65.0	31.0	36.0
Amruta Phadke	(0 Tasks)						
Frank Arjada	(0 Tasks)						
Praveen P.	(0 Tasks)						
Satyasimha Sriparanabhatu	(0 Tasks)						
Sreeram Bandla	(0 Tasks)						
Sura Saliwala	(0 Tasks)						

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**Agile Practitioner the Elixir of Agile Project**