



AGILE MODELS



Credentials
PMP, PSM, CDCCP



Contact Number
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Why choose Agile Modeling?



Frequent interaction between clients, developers & testers



Working software is delivered frequently



Face-to-face conversation is the best form of communication.



Regular adaptation to changing circumstances.



Continuous attention to technical excellence & good design.



Customer satisfaction by rapid, continuous delivery of useful software.



Agile Vs Waterfall Methodology

Agile

VS

Waterfaall

Changes – Oriented

Carefully Planned

Product Mindset

Project Mindset

Minimal Paperwork

Comprehensive And Extensive Documentation

Iteration,
All Processes

Fixed And Separate Stages

Short Feedback Loop

No Feedback Until The Testing

Unit Testing

End Product Testing

Unclear Requirements

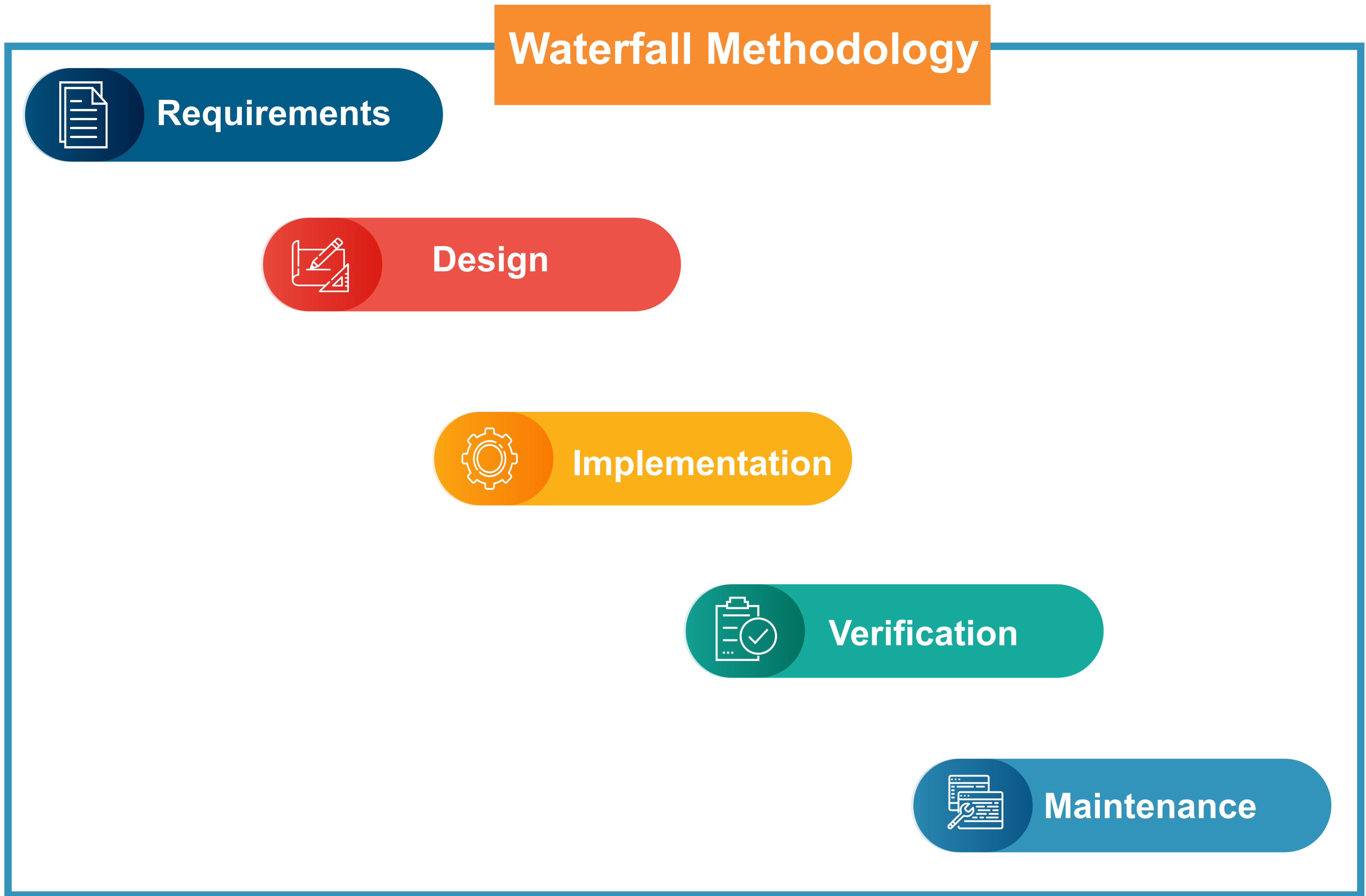
Fixed Requirements

Collaboration

Teams Work In Turns



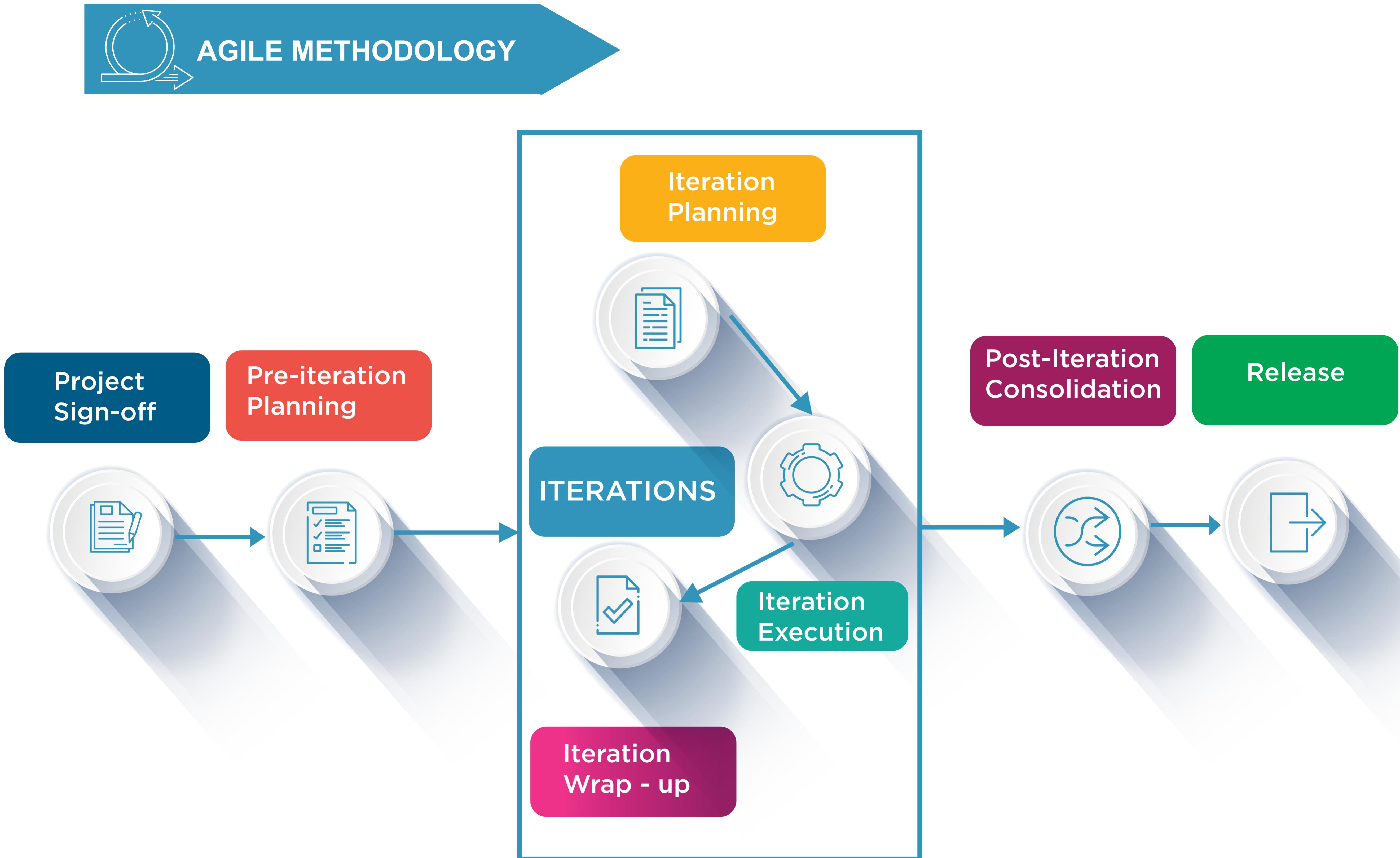
Agile Vs Waterfall Methodology



Waterfall is a serial method for managing software projects through following five stages. It features distinct phases with checkpoints & deliverables at each phase.

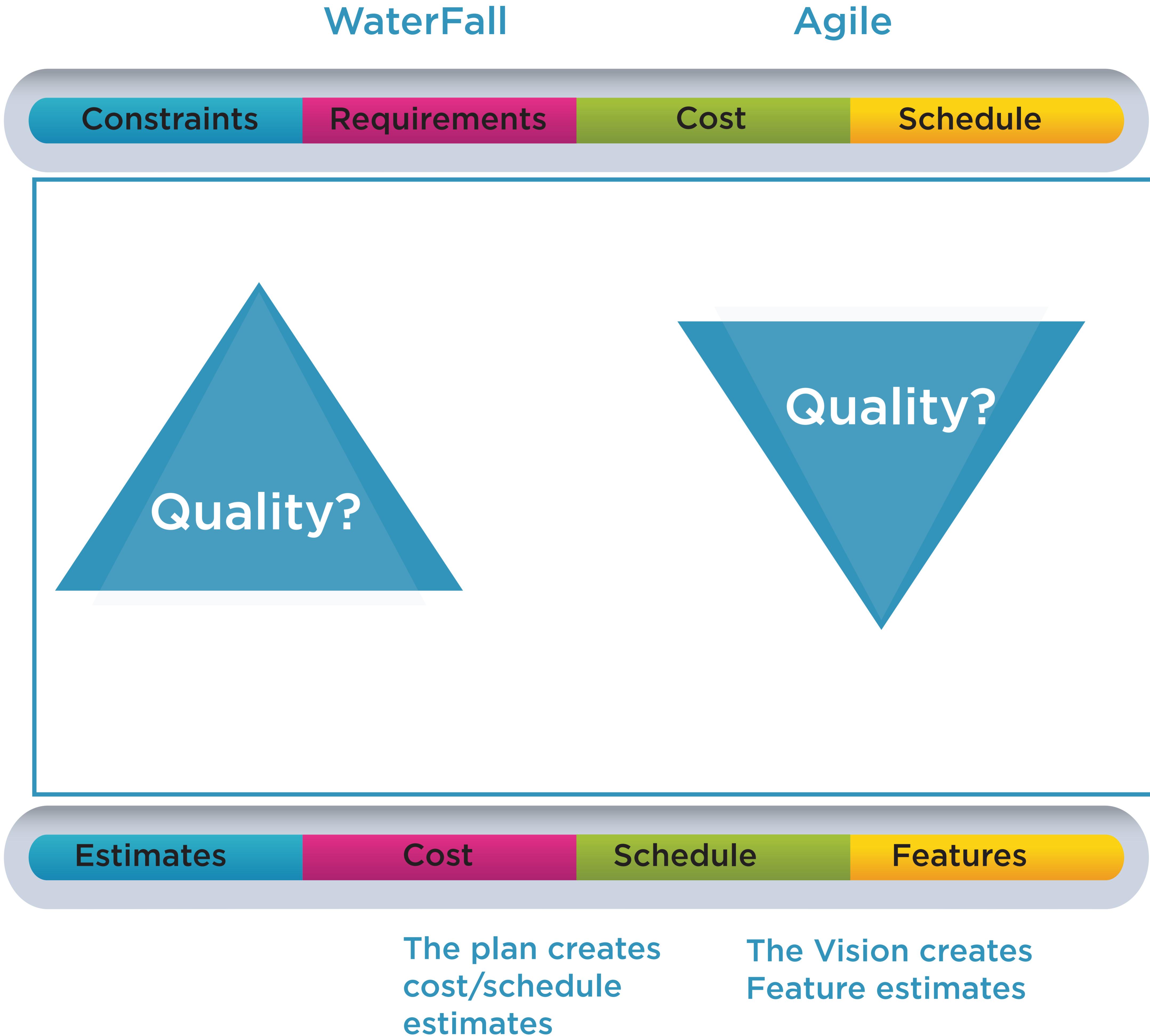


Agile Vs Waterfall Methodology (2/2)



Agile methods have iterations rather than phases. The outputs of these iterations are working codes that can be used to evaluate and respond to changing and evolving the user requirements

Project Management Triangle – Waterfall Vs Agile

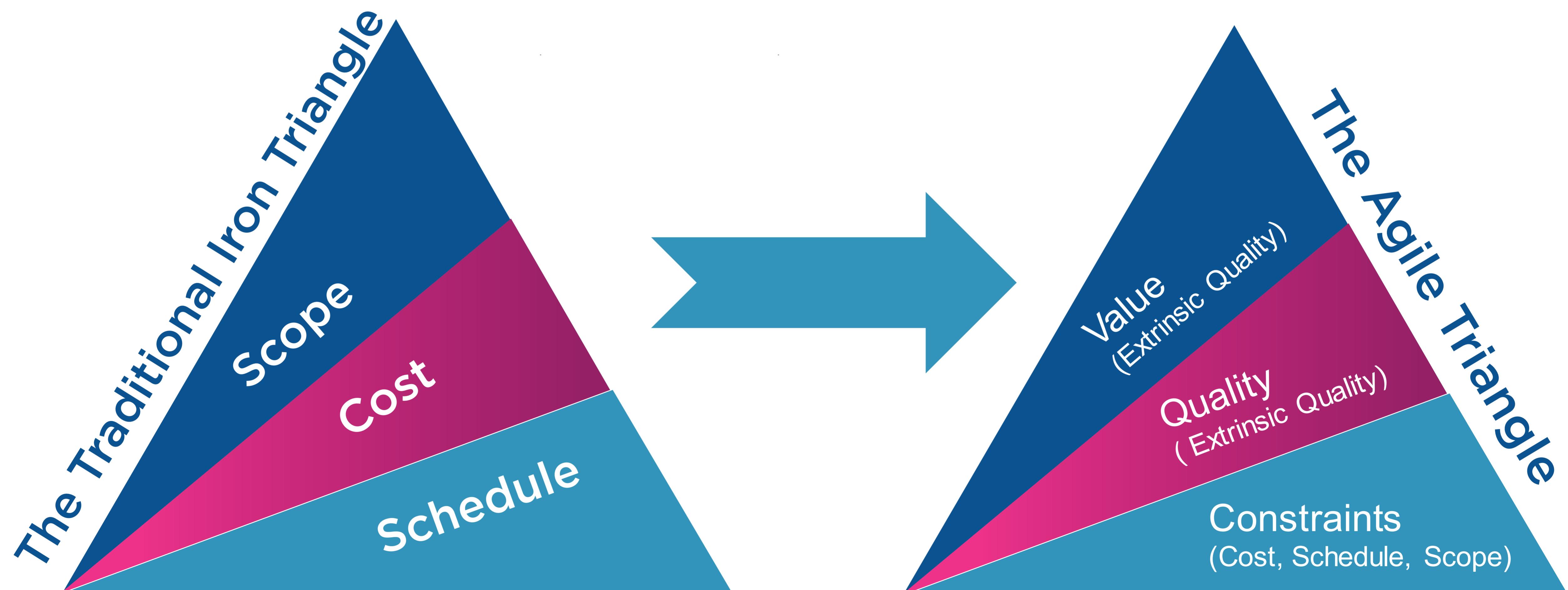


Why Apply the Agile Triangle?

When agility is about delivering customer value by being flexible, then the natural question appears: How can a Traditional Iron Triangle be the best way to measure performance?

It can't, so it is worth considering the Agile Triangle that is focused on quality, value, and constraints.

The Iron Triangle includes scope, scheduling, and cost to deliver quality. Agile wants teams to be flexible concerning the project scope and schedules.



The four values of the Agile Manifesto



01. Individual and Interactions Over Process and Tools



Agile places more importance to people than tools. Tools and processes are less responsive to change and are unable to meet the customer needs.



02. Working Software Over Comprehensive Documentation



Agile focuses on streamline and not on documentation. The software is paramount.



03. Customer Collaboration Over Contact Negotiation



Agile champions collaborate with customers and project managers and includes targets customer's project lifecycle and values their feedback



04. Responding to Changes Over Following a Plan



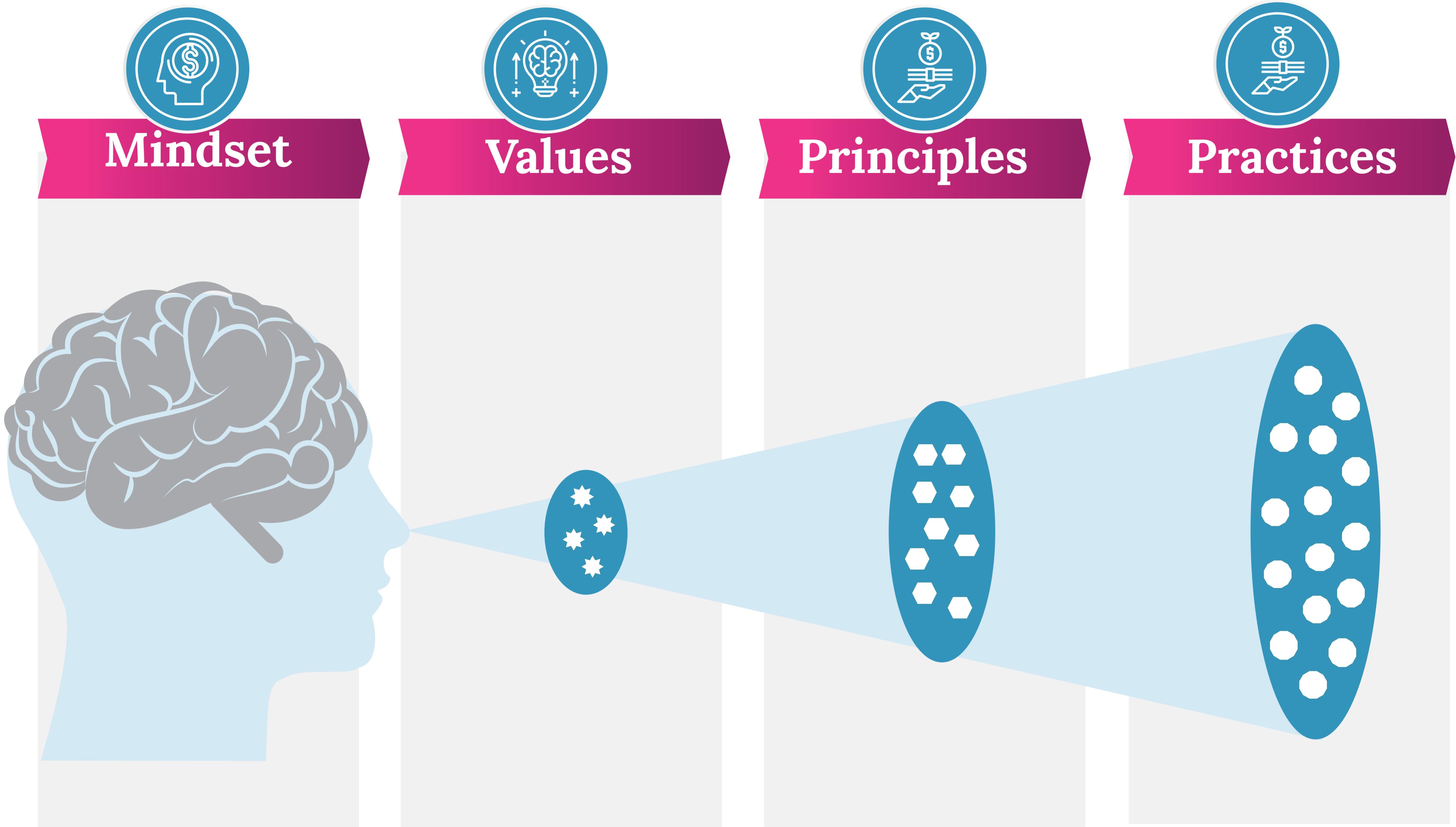
Agile works in sprints, which are short iterations and helps in improving project and add value.

Agile Marketing Values

Agile Manifesto



Agile Marketing Mindset



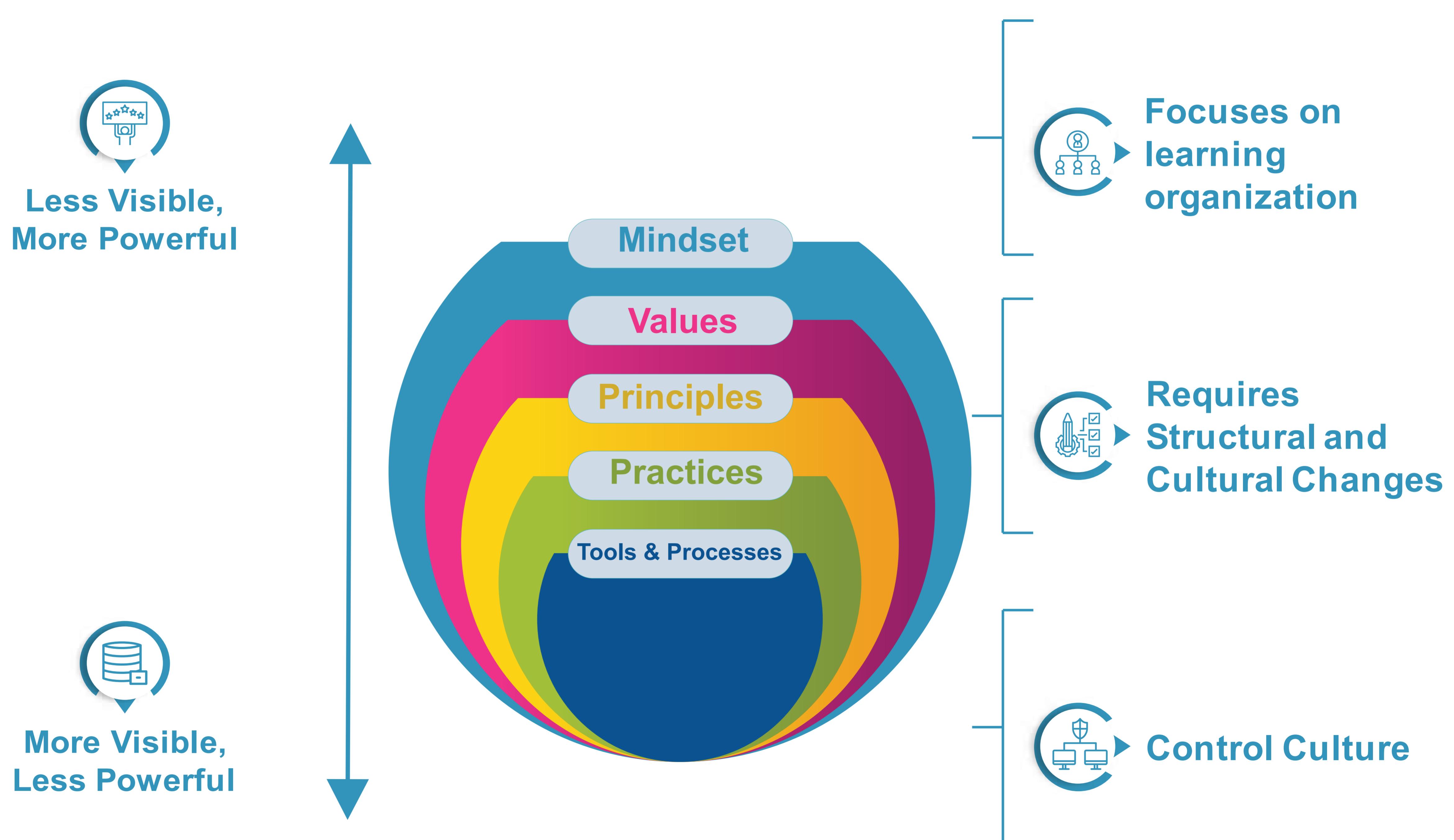
Being Agile

Doing Agile

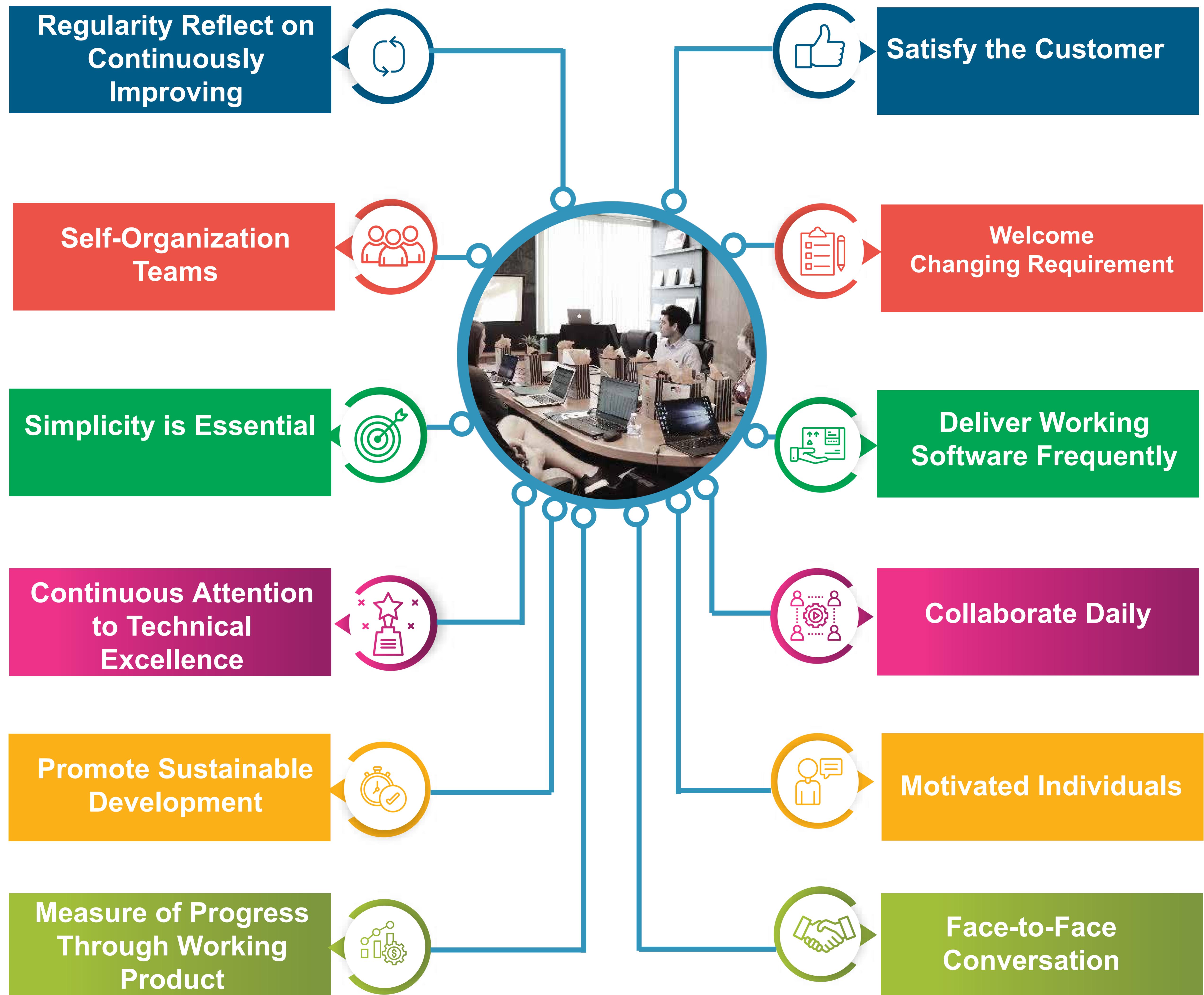
“Agile is all about mindset”

Agile Marketing Mindset

Agile Manifesto



12 Principles of Agile Manifesto



Categories and Principles of Agile Manifesto

Categories	Agile Manifesto Principle
Customer Satisfaction	Early and continuous software delivery Face-to-Face Interaction Regular reflection for effective approach
Quality	Accommodates Changing Requirements Throughout the Development Process Simplicity Business and developer are collaborated
Teamwork	Timely and Frequent Delivery of Working Software Believe, Support and Encourage the People Involved Consistent development pace with agile processes The Self-Organizing Team Encourage Great Quality
Project Management	Working Software is Primary Measure Attention to Technical Details and Design Enhance Agility

Agile Principle 1 and Ways it can be Performed in Organization

Principle 1 - Satisfy customer by providing early and continuous software delivery



How is it performed in an organization:

1

Product teams uses minimum viable products and experiment to test hypothesis and validate ideas

2

Frequent releases helps in continuous feedback cycle between customer and product

3

Iterations are continuously done for incremental improvements of product based on customer and market feedback.

Agile Principle 2 and Ways it can be Performed in Organization

Principle 2 - Harness change for customer's competitive advantage



How is it performed in an organization:

1

Product teams are instructed high level strategic goals and progress is measured on regular basis

2

Products are monitored constantly in the market based on customer's feedback and other factors

3

Product strategy and tactical plans are reviewed, adjusted and shared based on changes reflected and new findings implemented.

Agile Principle 3 and Ways it can be Performed in Organization

Principle 3 - Delivering working software frequently with shorter timescale



How is it performed in an organization:

1

Agile development cycles known as “sprints” or “iterations” break down products into smaller chunks which can be completed in a set timeframe, mostly between 2 and 4 weeks

2

Continuous deployment helps software frequently in less time.

Agile Principle 4 and Ways it can be Performed in Organization

Principle 4 - Business people and developers works together in project regularly



How is it performed in an organization:

1

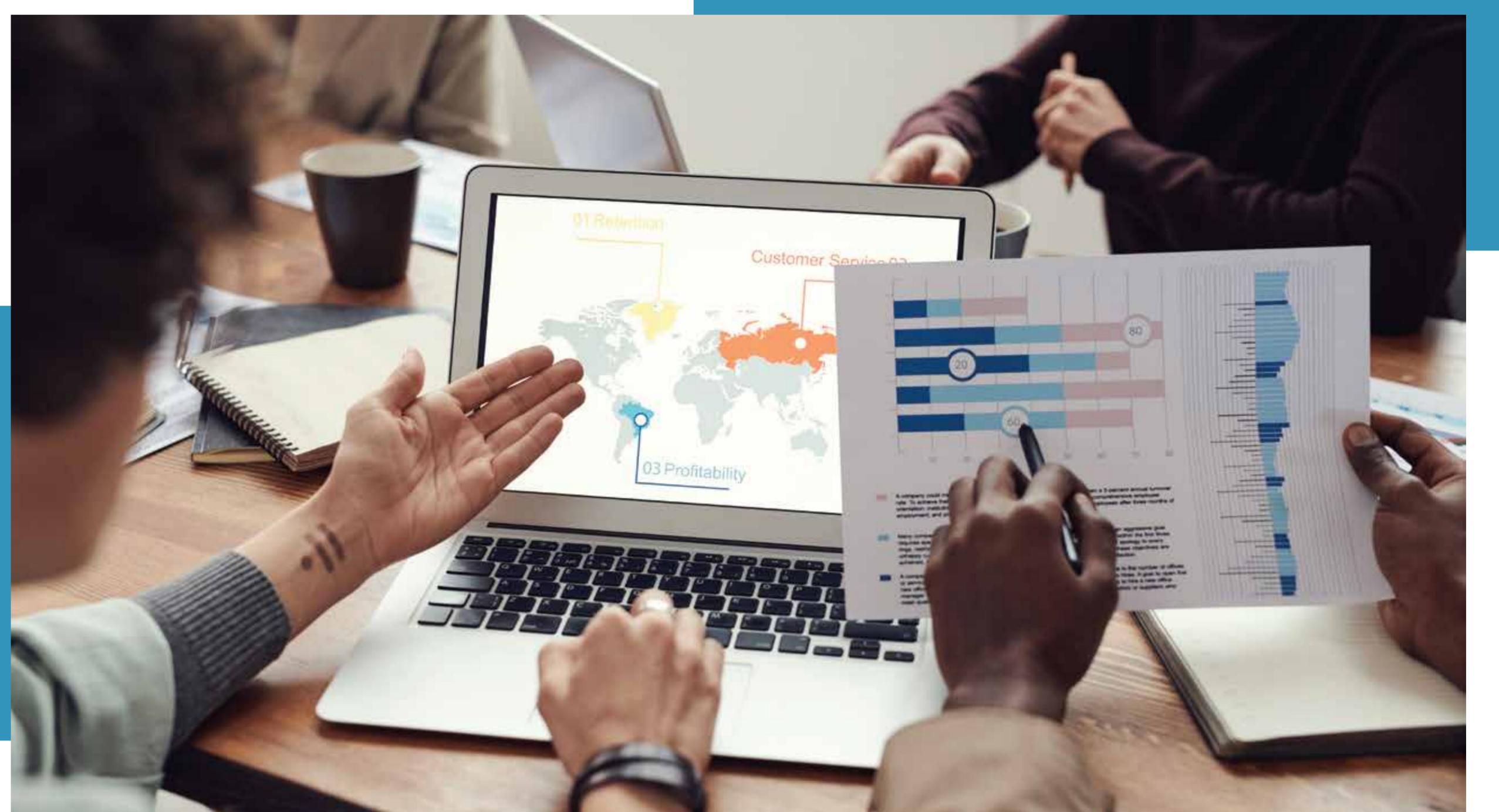
Cross-functional agile product development teams where in the product is represented on development team and understand the gap between product's technical and business aspects.

2

Continuous deployment helps software frequently in less time.

Agile Principle 5 and Ways it can be Performed in Organization

Principle 5 - Building projects around motivated employees and providing them the need and trust required to complete a particular job



How is it performed in an organization:

1

Cross-functional agile product development teams where in the product is represented on development team and understand the gap between product's technical and business aspects.

2

Product sprints provides the support needed by the company.

Agile Principle 6 and Ways it can be Performed in Organization

Principle 6 - Face to face conversation is the most efficient and convenient way of communication



How is it performed in an organization:

1

Cross-functional agile product development teams where in the product is represented on development team and understand the gap between product's technical and business aspects.

2

Product sprints provides the support needed by the company.

Agile Principle 7 and Ways it can be Performed in Organization

Principle 7- Major progress measure is “Working software”



How is it performed in an organization:

1

Designing “Minimum Viable Features” instead of fully-developed feature to think about the smallest things company can ship to start getting customer feedback

2

Fail fast mentality where in company moves forward rapidly even in times of uncertainty and testing ideas

3

Company ships software often, since a useful product now is better than a perfect one later.

Agile Principle 8 and Ways it can be Performed in Organization

Principle 8 - Sponsors, developers and users maintains constant work pace everytime.



How is it performed in an organization:

1

Amount of work considered is made before every sprint. Effort estimations are made by development teams in setting output

2

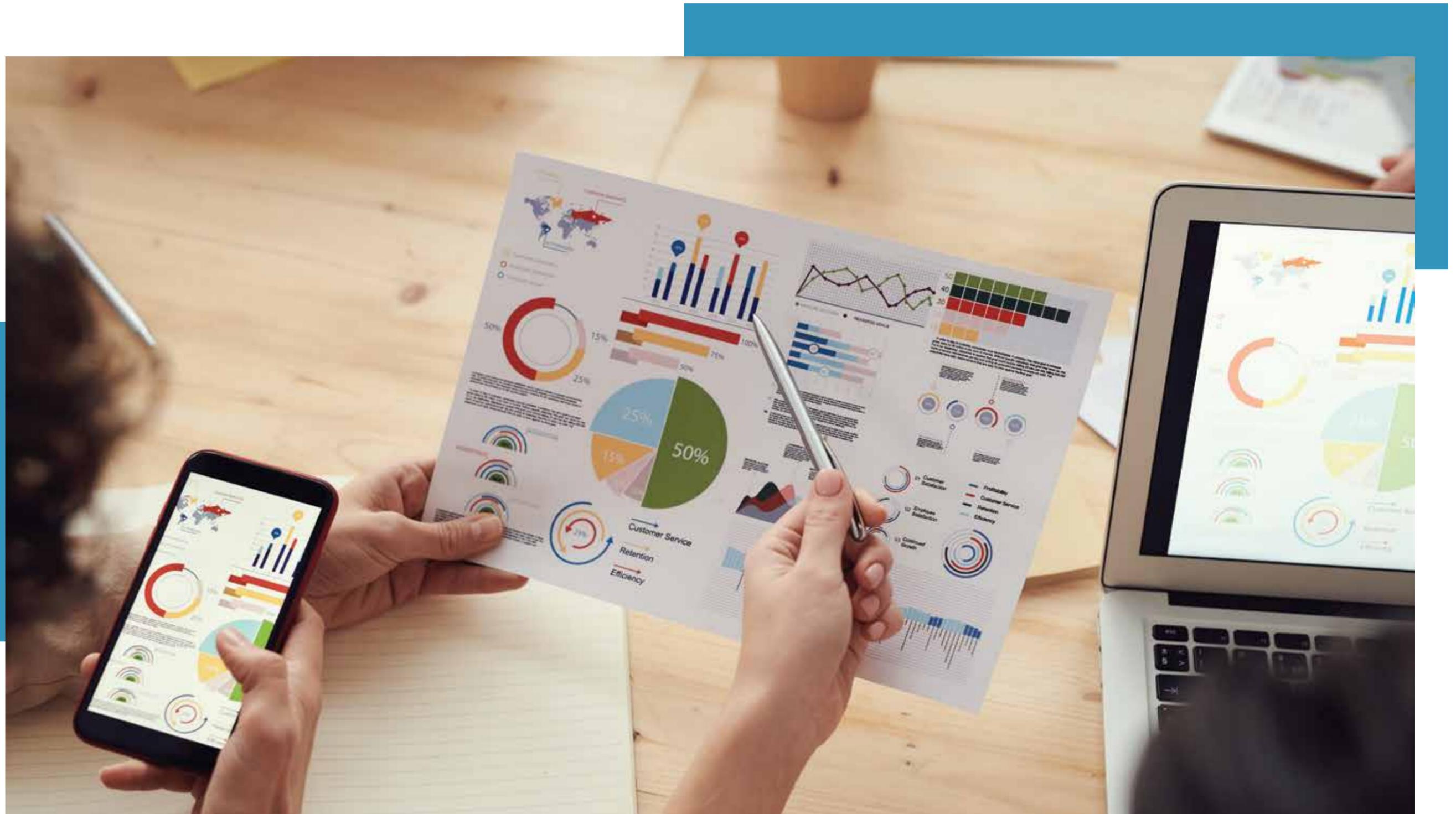
Product managers act as gatekeepers to reduce the noise from other stakeholders and to avoid additional unplanned work during an ongoing sprint.

3

Cross-functional team encourages open communication and free flow of feedback.

Agile Principle 9 and Ways it can be Performed in Organization

Principle 9 - Agility is enhanced due to continuous attention of technical excellence and improved de-



How is it performed in an organization:

- 1 → Developers and product team must work together to understand the technical debt acceptance.
- 2 → Product needs to be allocated in development resources to refactoring efforts, which needs to be an ongoing consideration.

Agile Principle 10 and Ways it can be Performed in Organization

Principle 10 - Work can be maximized by simplicity and using 80/20 rule wherein 80% of the results are attained by just 20% of work



How is it performed in an organization:

1

Product managers must be focused in product decisions and product strategies are aligned with organizational goals using prioritization techniques

2

Short agile sprints reduces uncertainty and validate ideas before building them to specifications

Agile Principle 11 and Ways it can be Performed in Organization

Principle 11- Self organizing teams emerges best architecture, requirements and designs



How is it performed in an organization:

1

Such autonomous groups within the organization takes control and responsibility over their projects and have ownership of the areas.

Agile Principle 12 and Ways it can be Performed in Organization

Principle 12 - Team regularly reflects on how to become more effective



How is it performed in an organization:

1

Agile teams are encouraged to experiment with the processes

2

Product managers and product owners communicate effectively with developers and give support to them according to their needs before, during, and after sprints.

3

Creates a culture of trust and transparency which encourages openness and frequent sharing of feedback

Agile / SCRUM – Things You Should Know 1/2



AGILE

Agile is a methodology that assists in the constant iteration of SDLC processes like development, testing and many more

Approaches to Implement Agile

Extreme
Programming (XP)

Lean Software
Development (LSD)

Feature Driven
Development (FDD)

Adaptive System
Development (ASD)

Kanban

Scrum

Dynamic Systems
Development Method (DSSM)

Crystal Clear

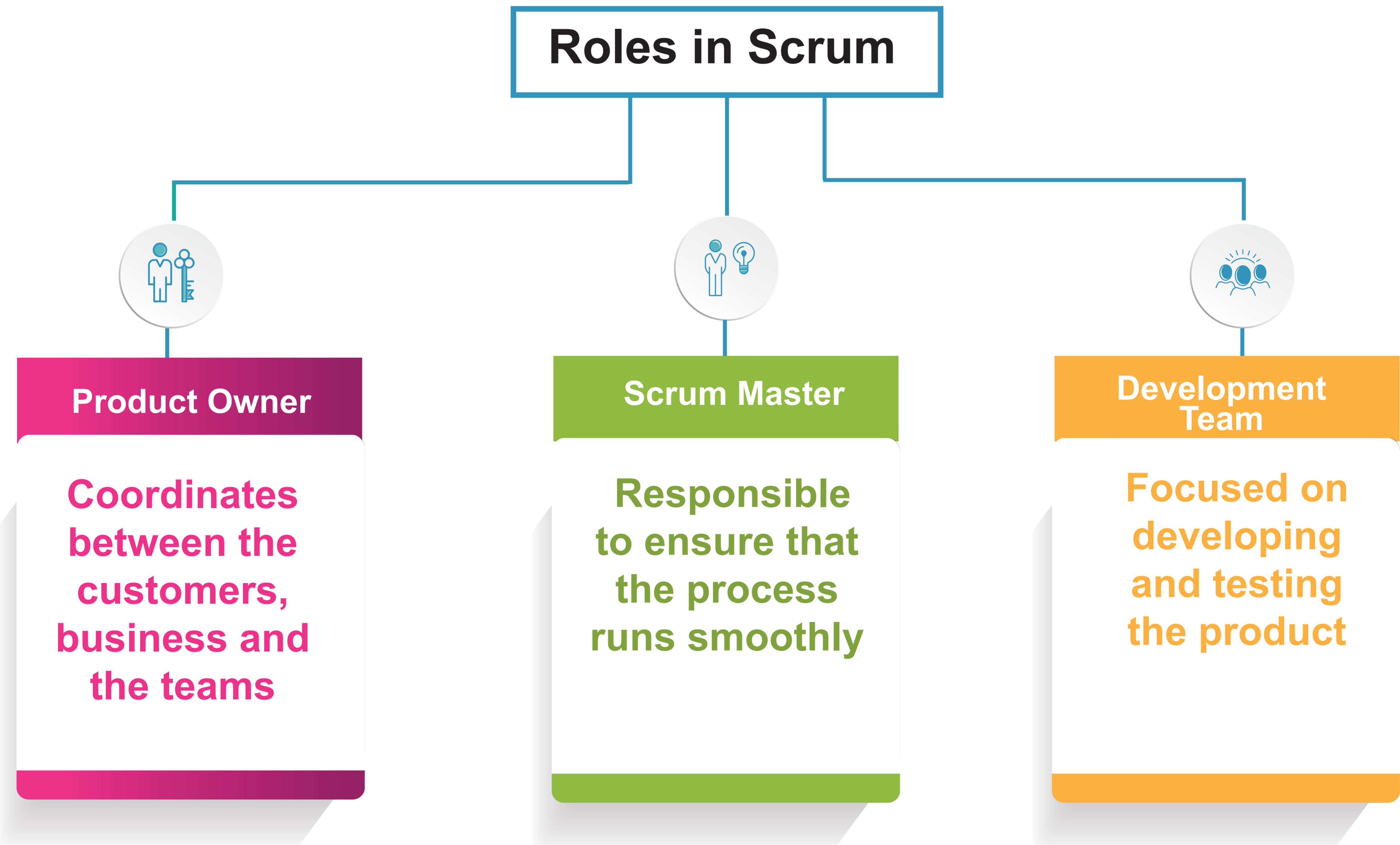


Agile / SCRUM – Things You Should Know 2/2

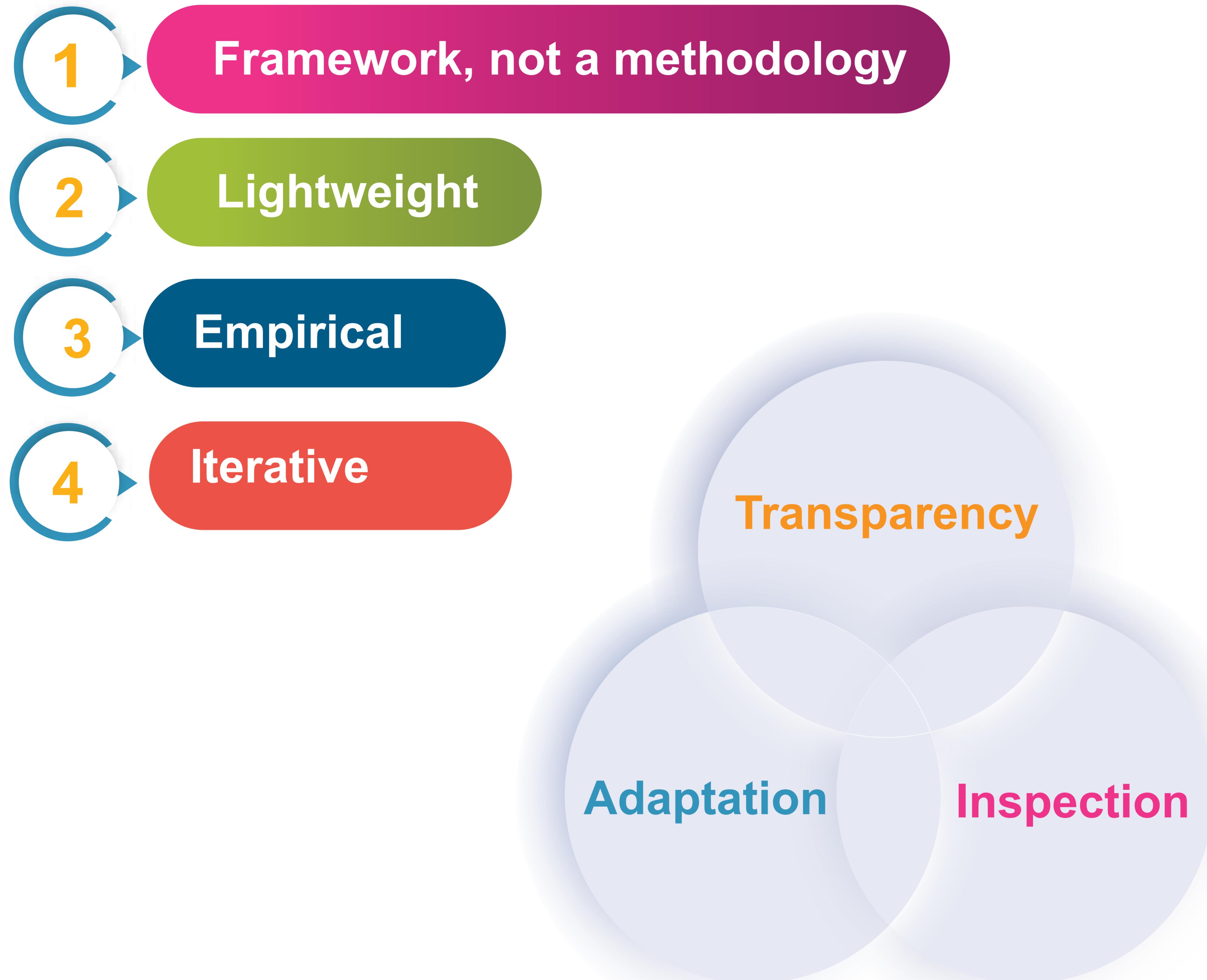


SCRUM

Scrum is a framework of agile methodology which can be used to address complex problems as well as delivering products with highest possible value



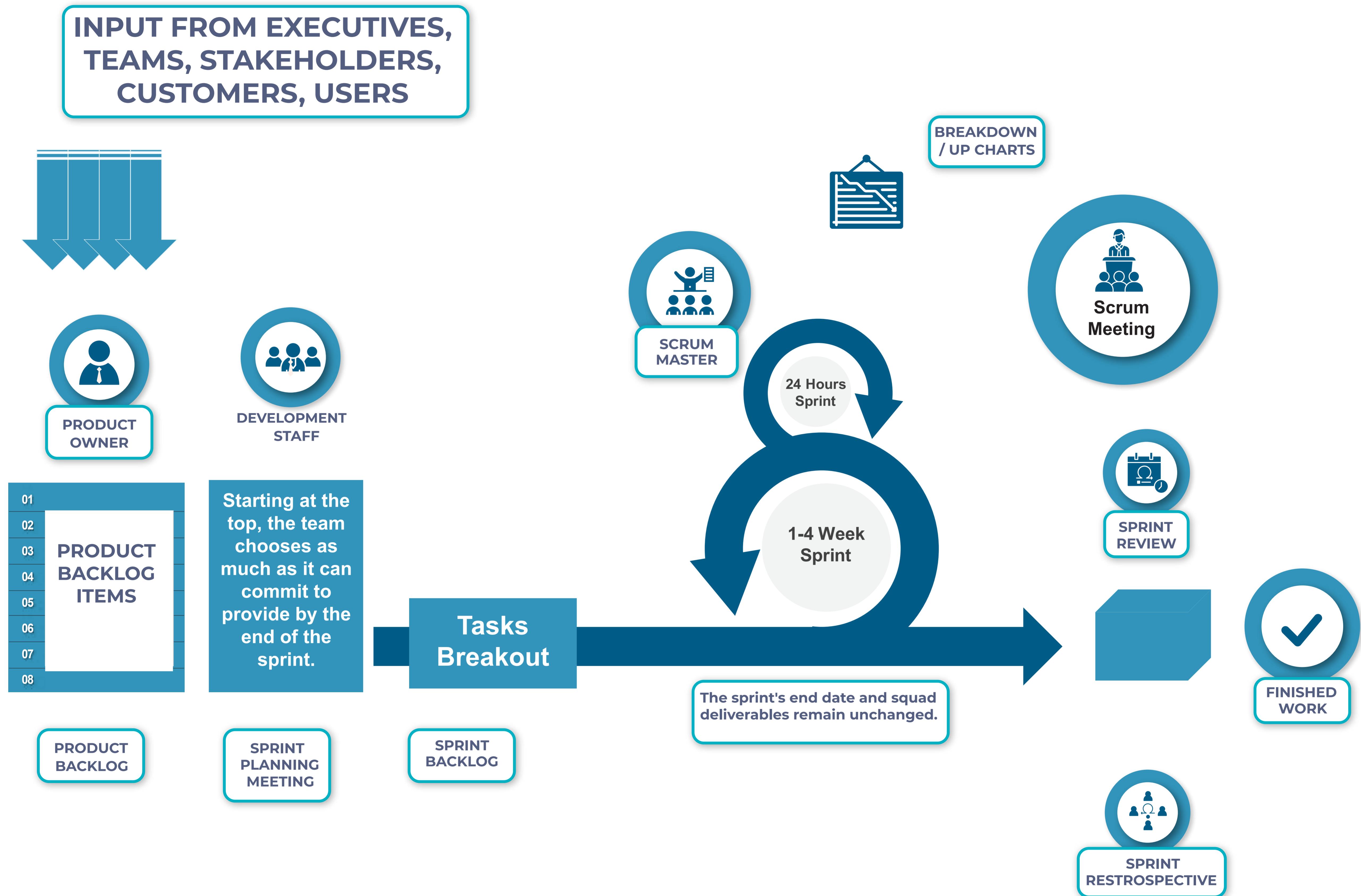
What is Scrum?



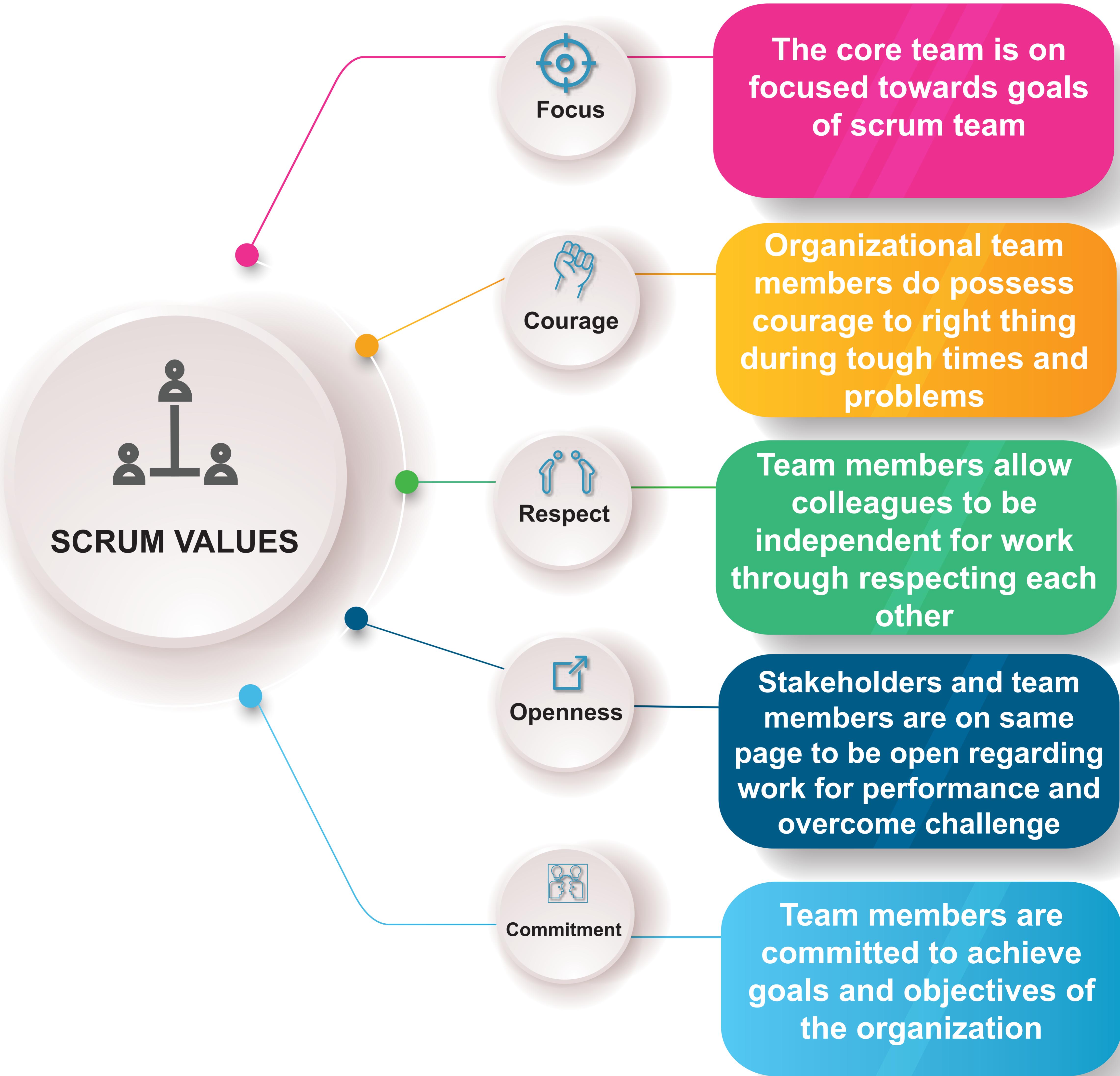
Benefits of Scrum Methodology to Business



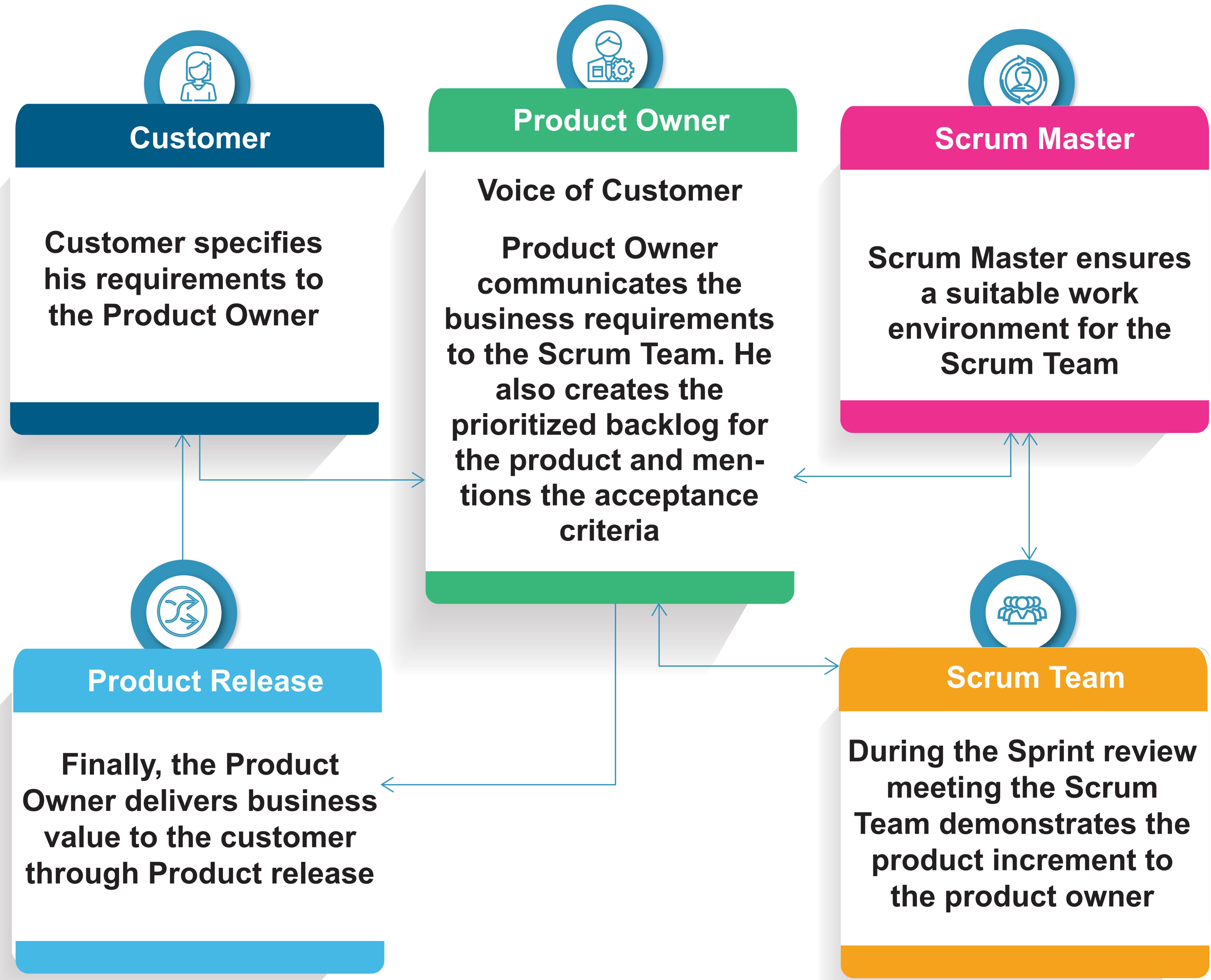
Framework for Agile Iteration with Sprint Planning and Management



Five Organizational Team Members Scrum Value



Agile Team Structure



Key Objectives of Scrum Master in Agile Scrum Team

Teacher

Teaches about scrum roles, accountability, event and their purpose



Coach

Reminds the team of their potential, by asking open ended questions

Reward

Appreciate and celebrate success when the team does well

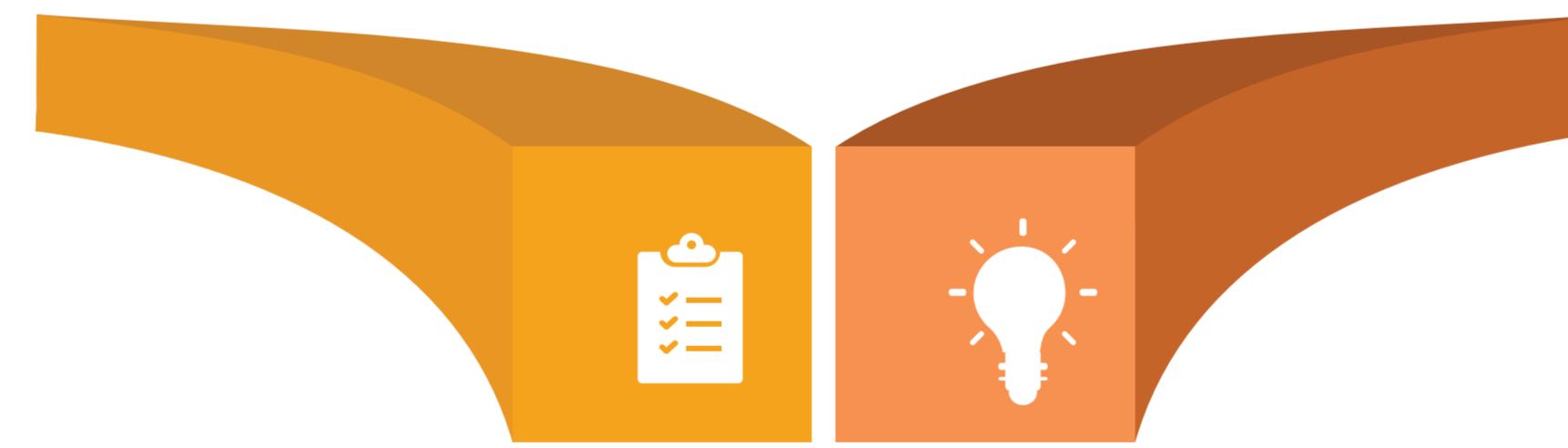


Protect

Protect the team from external obstacles

Mentor

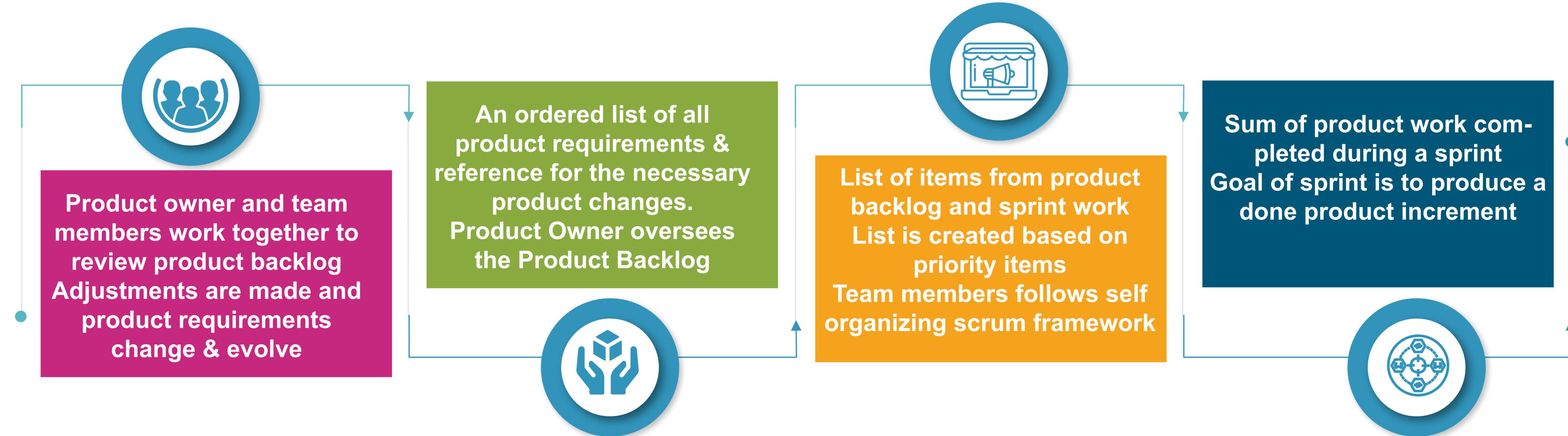
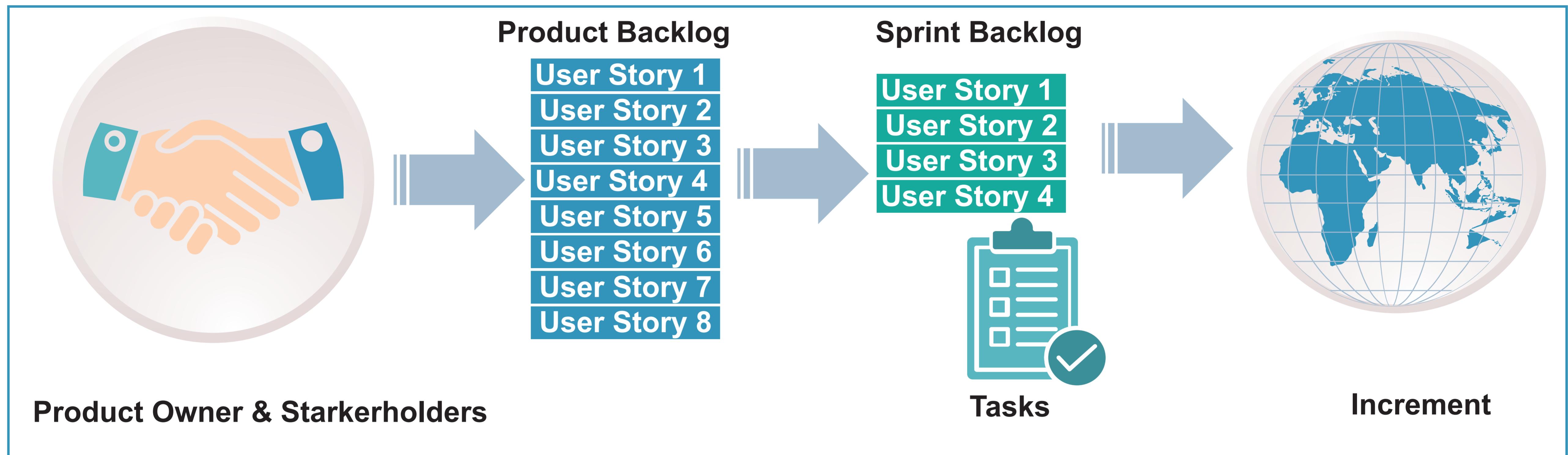
Shares knowledge and experiences and helps mentee to move to next level
Acts as a guide to mentee



Facilitator

Team collaboration with stakeholders
Team Release Planning

Scrum Artifacts



Tips for product backlog management optimization



START WITH THE END IN MIND

Clearly define and validate a product strategy
Agree on a product vision that will guide prioritizing the backlog



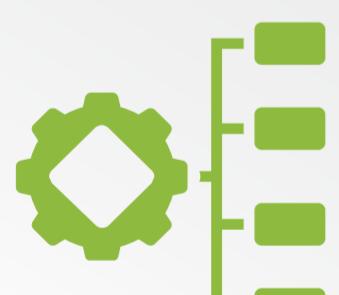
MAKE THE BACKLOG MANAGEABLE

Work on maximizing outcome by keeping the backlog manageable
Decide what not to do and remove it from backlog list



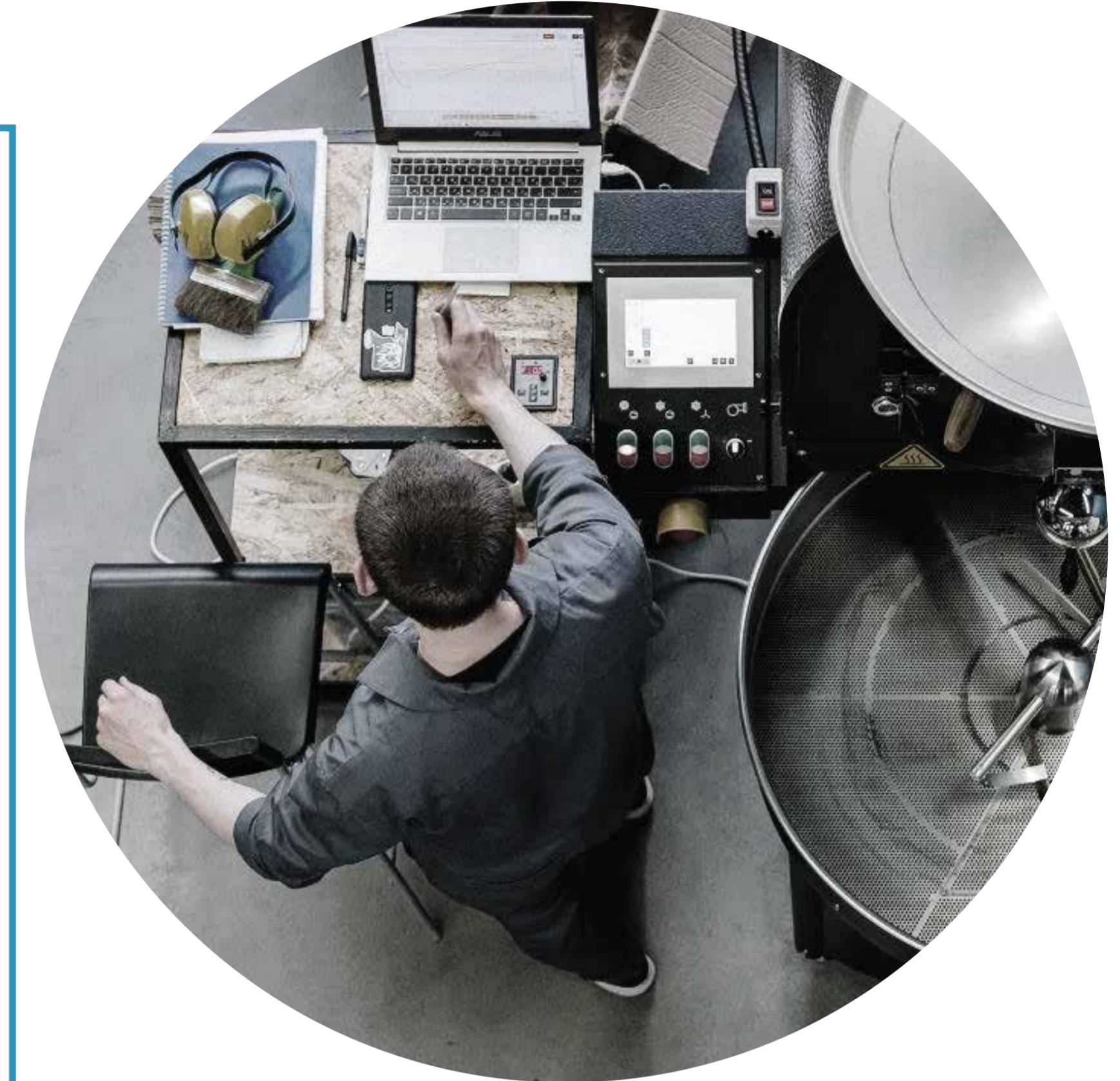
KEEP STAKEHOLDERS UPDATED

Provide backlog transparency to all stakeholders
Allows stakeholders to review the latest updates, current status and provide useful feedback



SET PRIORITIES

Should be clearly aligned with the mutually agreed upon product vision and KPIs
Formulate value vs efforts matrix



Defining the 4 Scrum Ceremonies



Ceremony

Sprint Planning



Purpose

Identify sprint goals and create sprint backlog

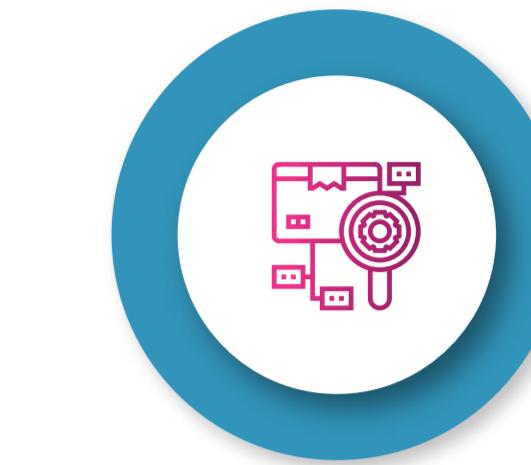
Daily Scrum



Attendees

Entire scrum team

Sprint Review



Tips and Tricks

Encourage team members to discuss and negotiate items related to sprint goal

Facilitate scrum team with an opportunity to discuss progress and announce daily commitments

Showcase the work completed during the sprint

Allow scrum team to inspect and plan for improvements in next sprint

Scrum master and development team

Entire scrum team with product manager, stakeholders and customer

Scrum master and development team

Don't let the meeting to exceed by 15 minutes

Capture actionable feedback as items in backlog

Sprint Retrospective

Ensure that actionable suggestion is captured, assigned and tracked

DEFINITION OF DONE



The Definition of Done is an agreed-up-on set of items that must be completed before a project or user story can be considered complete"



Definition of Done

- Reviewed by stakeholder
- Completed unit acceptance testing of the user story
- Completion of quality assurance tests
- User story documents completed
- All issues are fixed

APPROVED

Core Practices of the Kanban Method

Evolve Experimentally, Collaboratively Improve

Encourages the application of the scientific approach and helps to implement tiny adjustments and progressively develop at a speed and scale that the team can handle



Visualize the Work Flow

To depict the process stages currently employed to provide work or services, either on a real board or an electronic Kanban Board



Use Feedback Loops

Encourages and assists in implementing many types of feedback loops, such as review stages in Kanban board workflow, metrics and reports, and various visual indicators that give constant feedback on job progress – or lack thereof – in the system



Work-in-Progress Limits

Limiting WIP encourages your team to finish current work before moving on to new projects



Make Clear Process Policies

Provide a common ground for all participants to understand how to conduct any sort of work in the system by defining specific process rules



Flow Control

Lets you manage flow by displaying the various stages of the workflow and the current work status in each stage



Agile Testing Methods

Scrum

Approach that focuses on task management in team-based development environments
Roles in Scrum

Scrum Master
Scrum Team
Product Owner

Extreme Programming (XP)

When customers' expectations or requirements are continually changing or when they are unsure of the system's performance, this practice is utilized

Crystal

Approach is divided into three concepts:
Chartering
Cyclic Delivery
Wrap Up

Fast application development software development technique that provides an agile project distribution structure
Techniques used
Time Boxing
Moscow Rules
Prototyping

Dynamic Software Development Method(DSDM)

Designing and Building aspects are the center of this technique
Unlike other intelligent approaches, FDD outlines the little work steps that each function must achieve independently

Feature Driven Development(FDD)

Notion of "just in time production" underpins the lean software development process
Refers to accelerating software development while lowering expenses

Lean Software Development

Employ Test-Oriented Software Development Management for Effective QA Transformation



Implementation of test-oriented management approaches is an excellent way of improving software quality



One way to achieve this is by using extreme programming (EX) – a software development methodology aimed at producing higher quality software that can adapt to changing requirements

The 2 Extreme Programming Practices

Test Driven Development

Software development process in which tests are written before any implementation of the code.

The components of TDD are:

Test Writing
Code Writing
Improving Design

Benefits of using TDD Approach:

High Quality products
•Cost Optimization
•Code Simplification
•Increased Productivity
•Executable Documentation

Pair Programming

This approach to development includes two engineers working in tandem on a single machine. One of them writes a code while the other watches the process and makes suggestions.

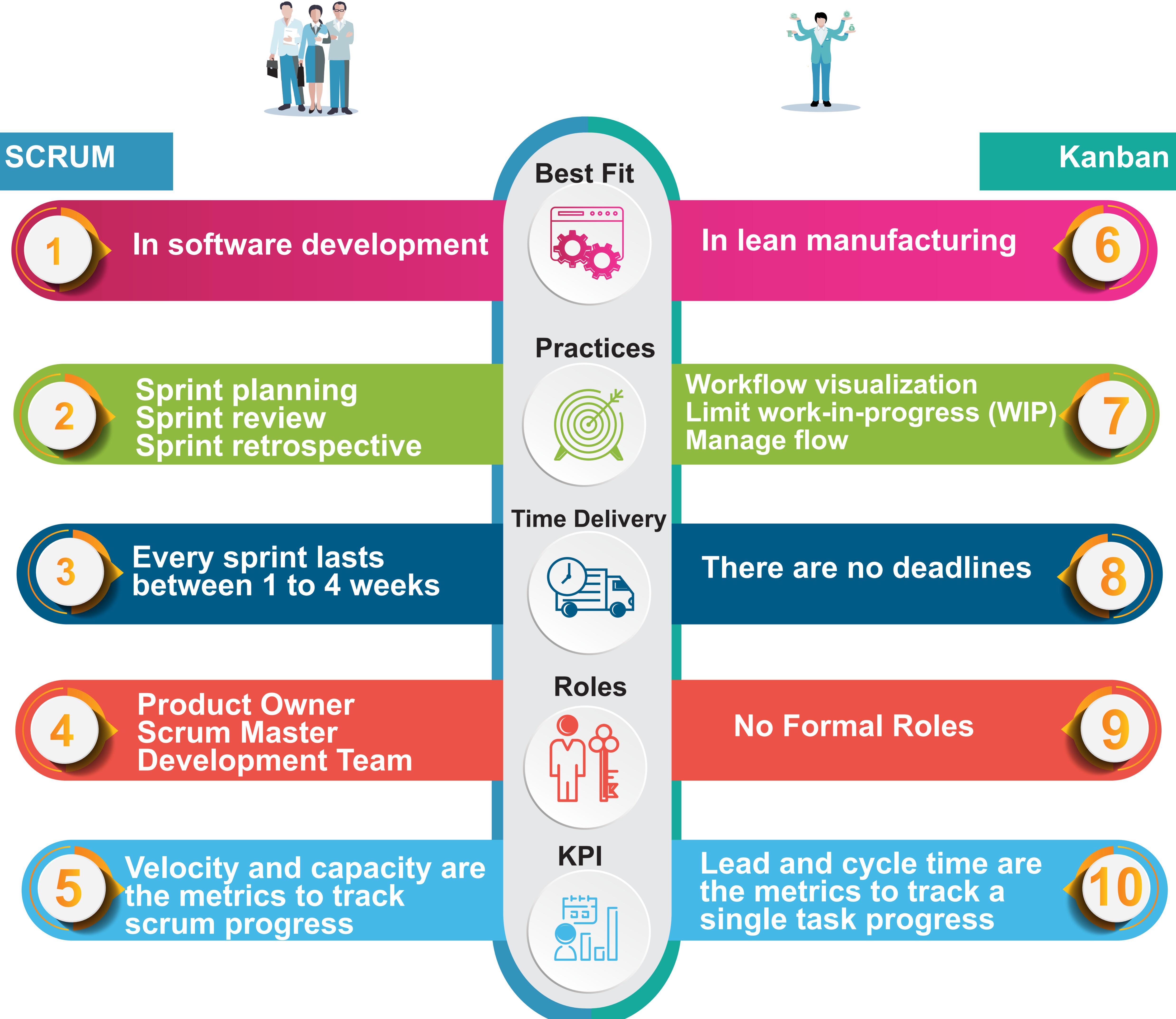
The increased code quality can reduce the debugging and project cost in long run

Benefits of using Pair Programming:

- High Code Quality
- Clear Code
- Better knowledge sharing
- Faster Problem Solving

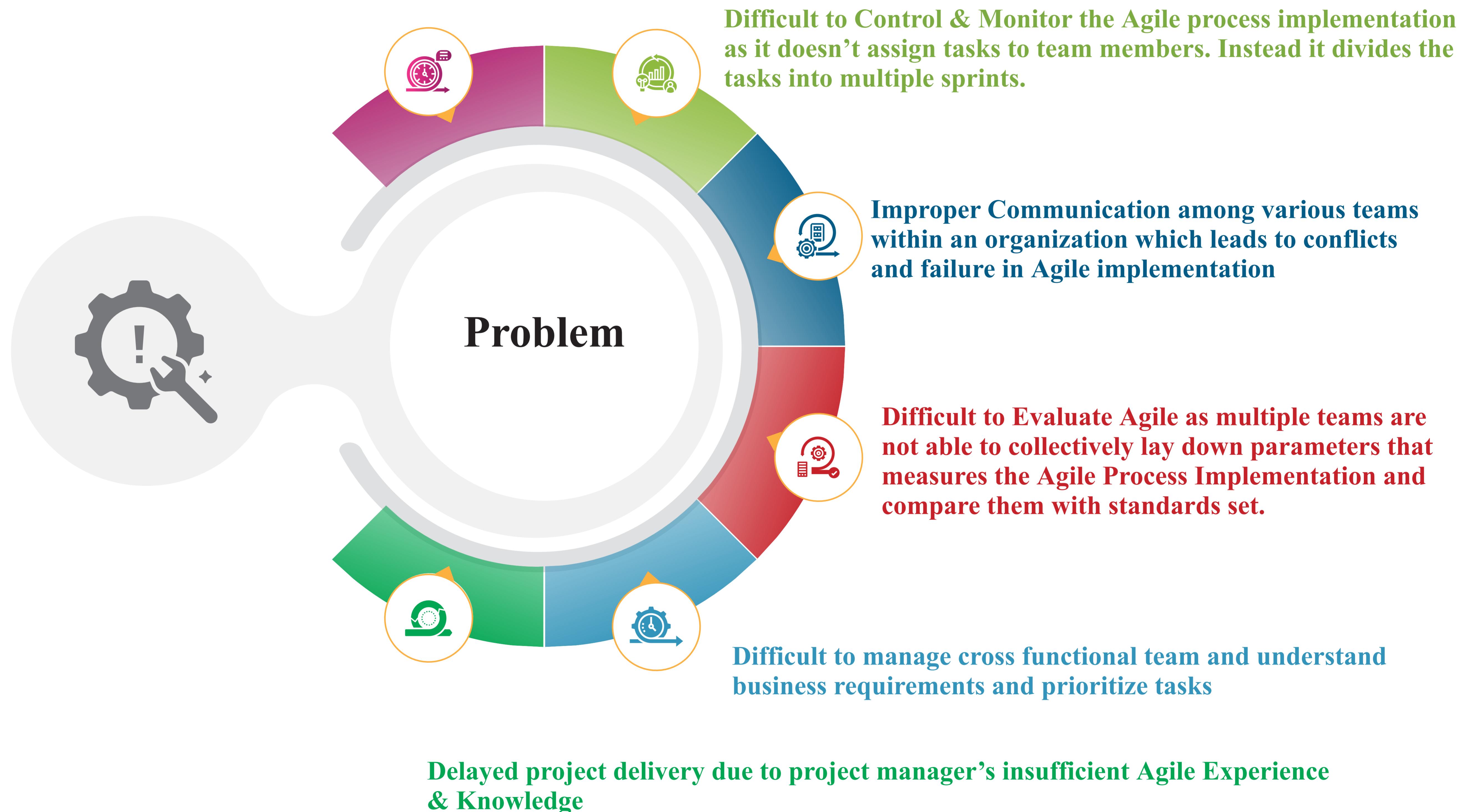
QA - Quality Assurance

Scrum Vs Kanban - A Comparison of Agile Methodologies



Current Challenges in Implementing Agile Methodologies

Lack of proper Agile Methodology (e.g. Kanban) training among the employees which makes them resistant and forces them to change their mindset.



THANK YOU



Credentials
PMP, PSM, CDACP



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