



PMP® EXAM PREP

PMI Authorized Training Partner

BOOTCAMP

Session 5

Class will begin at 10 am EST

Attendance Alert
**Please make sure you log into
Zoom with your correct first
name and last name and enter
the same information for
every session.**

Instructors:
Barb Waters, MBA, PMP®
Susan Daniels, MBA, PMP®

PMP® Exam Prep

This course will assist learners in preparing
for PMI's PMP Exam (2021 Update)

Today's Session Topics (Mapped to the PMP Student Manual)

	Creating a High-Performing Team Lesson 1	Starting the Project Lesson 2	Doing the Work Lesson 3	Keeping the Team on Track Lesson 4	Keeping the Business in Mind Lesson 5
Topic A	Build a Team	Determine Appropriate Project Methodology/Methods and Practices	Assess and Manage Risks	Lead a Team	Manage Compliance Requirements
Topic B	Define Team Ground Rules	Plan and Manage Scope	Execute Project to Deliver Business Value	Support Team Performance	Evaluate and Deliver Project Benefits and Value
Topic C	Negotiate Project Agreements	Plan and Manage Schedule	Manage Communications	Address and Remove Impediments, Obstacles, and Blockers	Evaluate and Address Internal and External Business Environment Changes
Topic D	Empower Team Members and Stakeholders	Plan and Manage Budget and Resources	Engage Stakeholders	Manage Conflict	Support Organizational Change
Topic E	Train Team Members and Stakeholders	Plan and Manage Quality of Products and Deliverables	Create Project Artifacts	Collaborate with Stakeholders	Employ Continuous Process Improvement
Topic F	Engage and Support Virtual Teams	Integrate Project Planning Activities	Manage Project Changes	Mentor Relevant Stakeholders	Plus, BONUS Agile Content!
Topic G	Build Shared Understanding about a Project	Plan and Manage Procurement	Manage Project Issues	Apply Emotional Intelligence to Promote Team Performance	
Topic H		Establish Project Governance Structure	Ensure Knowledge Transfer for Project Continuity		
Topic I		Plan and Manage Project/Phase Closure			



Evaluate and Deliver Project Benefits and Value

TOPIC B

Deliverables and Tools



Benefits Management Plan



Value Analysis
Cost Analysis
EVM, ETC analysis
ROI, NPV, IRR
Benefit Cost Analysis
Decision Trees, EMV
Monte Carlo
Net Promoter Score
A/B Testing

Benefits Management Plan

Target benefits	Expected tangible and intangible business value to be realized from the project.
Strategic alignment	How the benefits align with the organization's business strategies
Timeframe	When the benefits (short-term and long-term) will be realized, usually by project phase
Benefits owner	Person or group that monitors, records, and reports the benefits
Metrics	Direct and indirect measurements of the realized benefits
Risks	Risks associated with achieving the targeted benefits

Sprint Reviews /Demos

- ✓ At the end of each iteration or sprint, the team conducts a sprint review or demo.
- ✓ In early stages, obtain the product owner's **acceptance of the story** and **any feedback** to enable the team to make changes to **optimize business value**.
- ✓ **Focus on completing whole user stories** in each sprint.
- ✓ Verify that the capability is “**potentially shippable**”.





Release Management

In traditional projects, product release occurs at the end when everything is complete.

However, in today's complex business environment, where **work is hardly ever “done”**, we need to **factor change into our thinking** about work.



Agile projects can convert high-value capabilities into delivered solutions early.

Disciplined Agile (DA) Approaches

- ✓ Use DA approaches to support **dynamic work environments**.
- ✓ A Product Owner creates a **minimum business increment (MBI)** that defines work requirements to deliver the stated value.
- ✓ The MBI **creates value quickly** and incrementally, so the business can start using and benefitting from it.

Advantages:

- Feature or capability assessment
- Improve organizational tolerance for change
- A time cadence for subsequent releases



Benefit Cost Analysis

- ✓ Frequently used to **compare potential projects** to determine which one to authorize.
- ✓ Select the alternative which demonstrates that **benefits outweigh costs by the greatest amount**.
- ✓ Alternative **should not be chosen** when costs exceed benefits.
- ✓ The **accuracy of the estimates** of cost and benefit determines the **value of the benefit cost analysis**.



Present Value (PV) Calculation

The PV formula is:

$$PV = \frac{FV}{(1 + r)^n}$$

Present Value (PV)
Calculation

If you need \$USD 3,000 in three years and can invest your money at 8 percent (8%) interest, the present value of your initial investment is calculated:

$$\$2,381.50 = \frac{\$3,000.00}{(1 + 0.08)^3}$$



Course: Delivering Project Benefits and Value (2021 Update)
Video: Calculating Tangible Benefits and Value (9:29 run time)

Watch: Start to 3:55

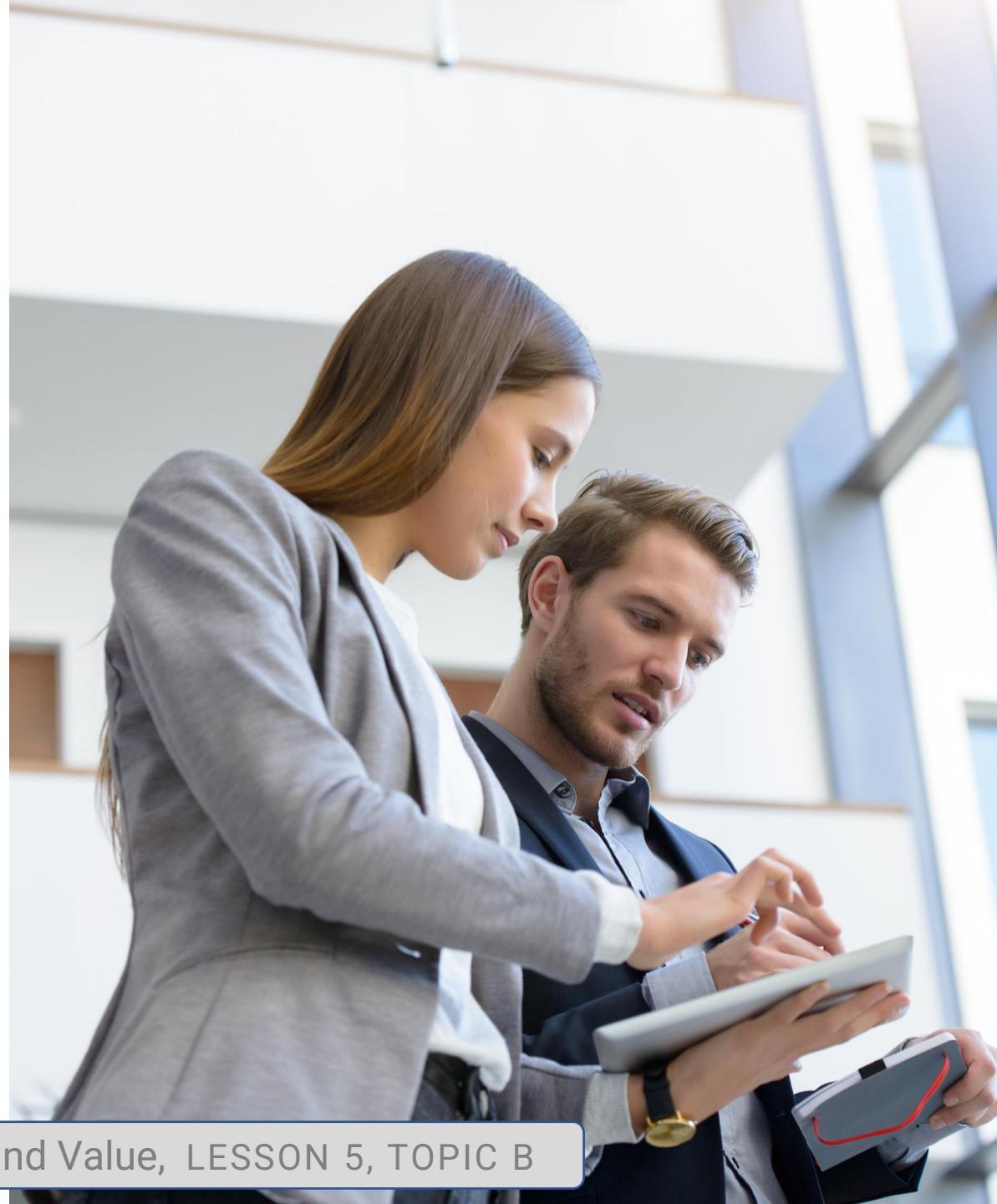
**More
about...**

Calculating Tangible Benefits and Value

Net Promoter Score (NPS)

NPS is a metric used in customer experience programs to measure customer loyalty.

Customers rate their experience with a number from -100 to +100. A higher score is desirable.



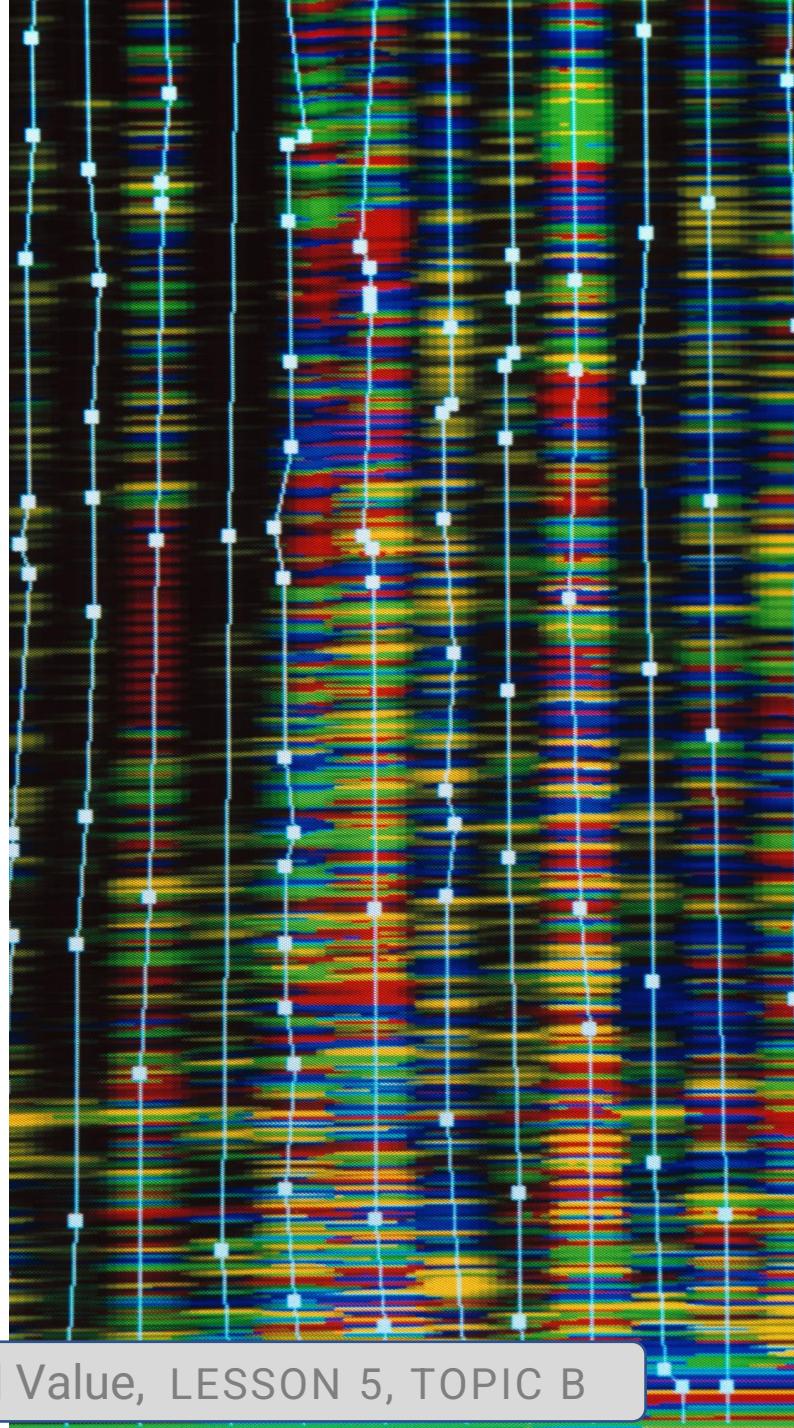
A/B Testing



Monte Carlo Simulation

Outputs are generated to represent the **range of possible outcomes** for the project.

Monte Carlo refers to not one single analysis method but to a **wide class of techniques**, mostly making use of sophisticated computers and inputs of **random numbers, probabilities, and algorithms**.



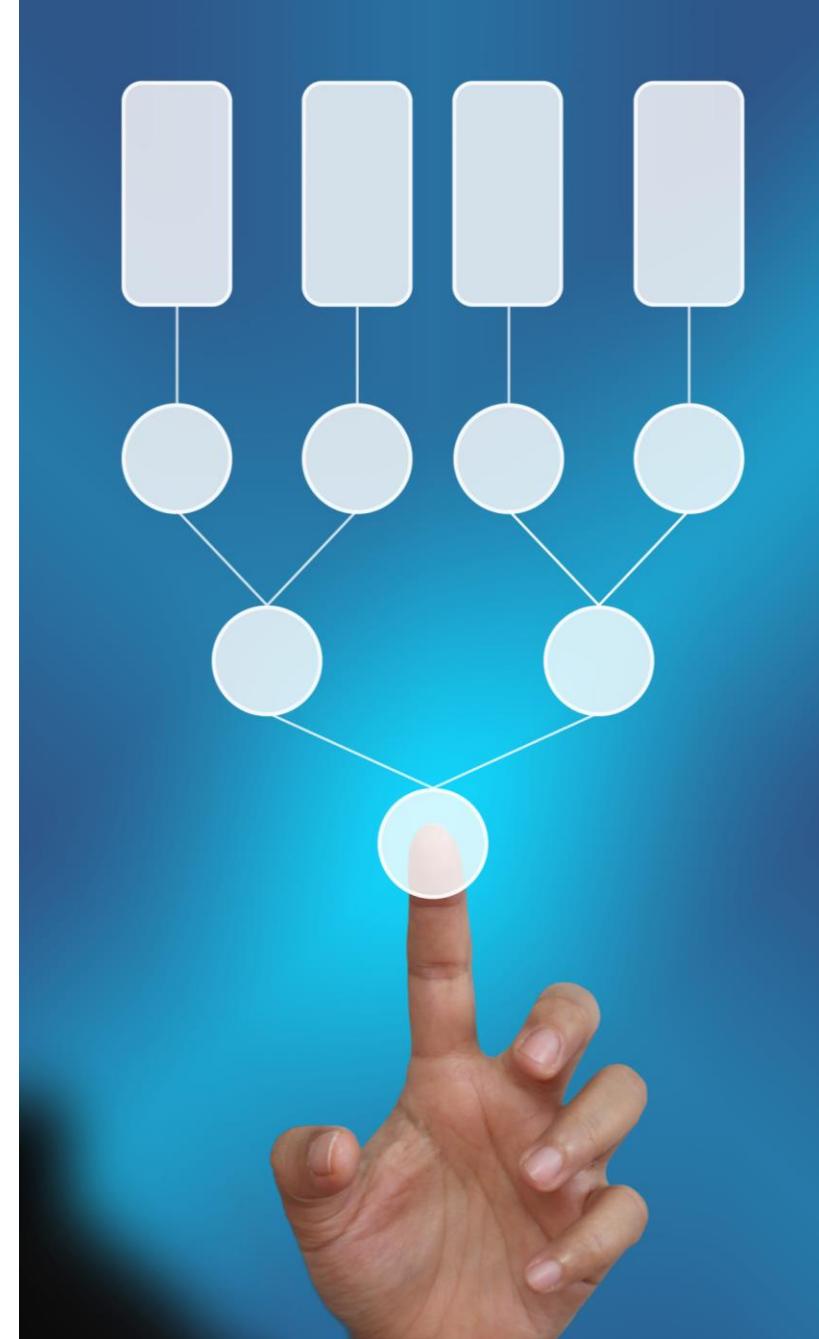
Using Simulations

- ✓ Uses computer models and **estimates of risks**.
- ✓ Translates **uncertainties** into **potential impact**.
- ✓ Involves **calculating multiple project durations**, using **varying sets of assumptions**.



Use Decision Trees to Find Benefit and Value

- ✓ Use to support **selection** of the best of several action options.
- ✓ Branches represent different **decisions or events**, each of which can have **associated costs and risks**.
- ✓ The **end-points** of branches in the decision tree represent the **outcome** from following that path, which can be **negative or positive**.
- ✓ Calculate the **expected monetary value** of each branch and select the optimal one.





Evaluate and Address Internal and External Business Environment Changes

TOPIC C

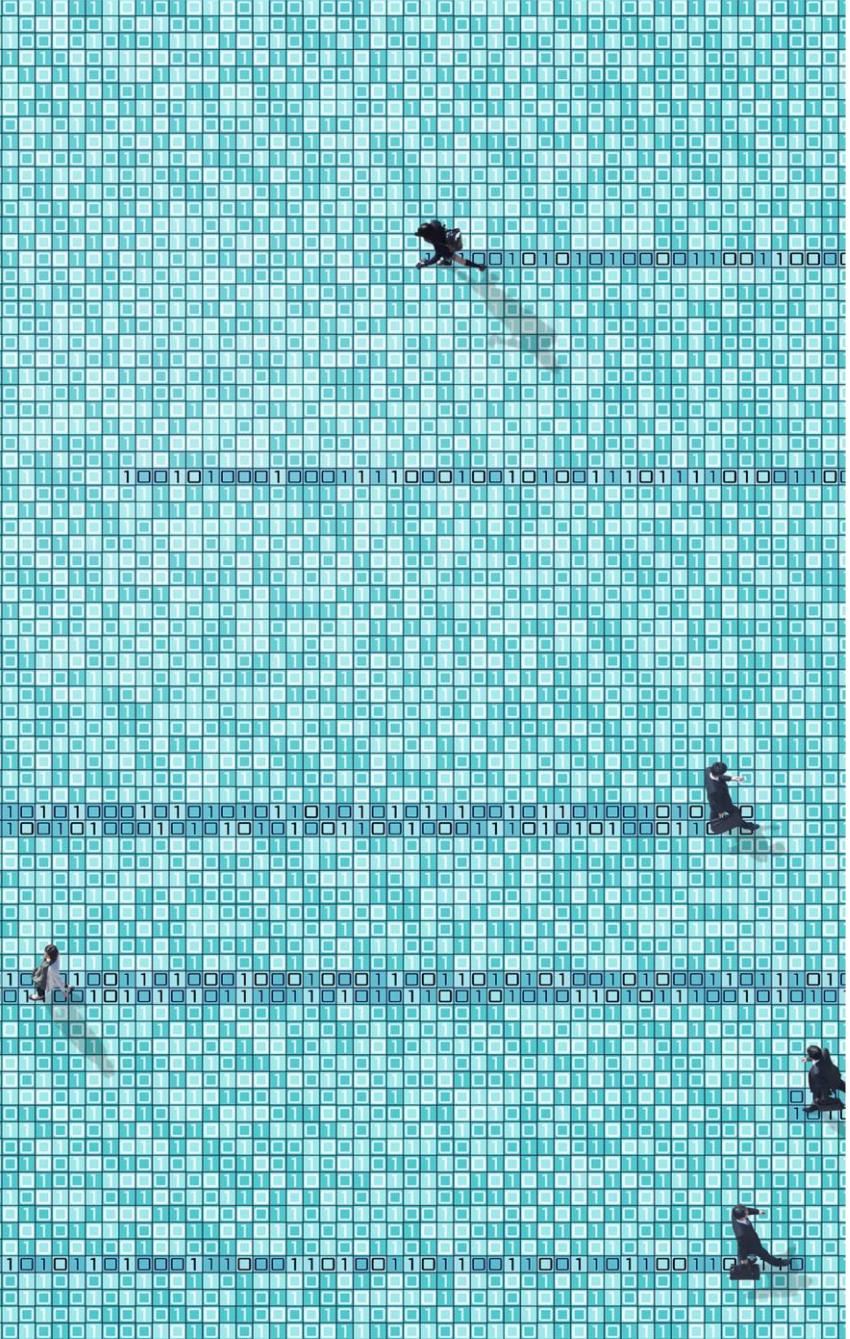
Deliverables and Tools



Baselines
Configuration Management System
Backlogs
(Updated) Roadmaps



Change Control Boards
Backlog Reprioritization
Product Owner Duties
Release Planning
Governance



Internal Business Environment

- ✓ **Organizational changes** can make a dramatic impact on the **scope** of a project.
- ✓ The **project manager** and **project sponsor** need to have visibility into business plans, reorganizations, process changes, and other internal activities.
- ✓ Because internal business changes might cause:
 - Need for new deliverables
 - Reprioritization or removal of existing deliverables

Get to Know the External Business Environment

The PESTLE acronym identifies the external business environment factors that can **affect the value and desired outcomes** of a project.

Others are:

- ✓ **TECOP** (technical, environmental, commercial, operational, political)
- ✓ **VUCA** (volatility, uncertainty, complexity, ambiguity)

These frameworks can help you to better understand external factors that can introduce **risk, uncertainty, or provide opportunities**.



Update Baselines

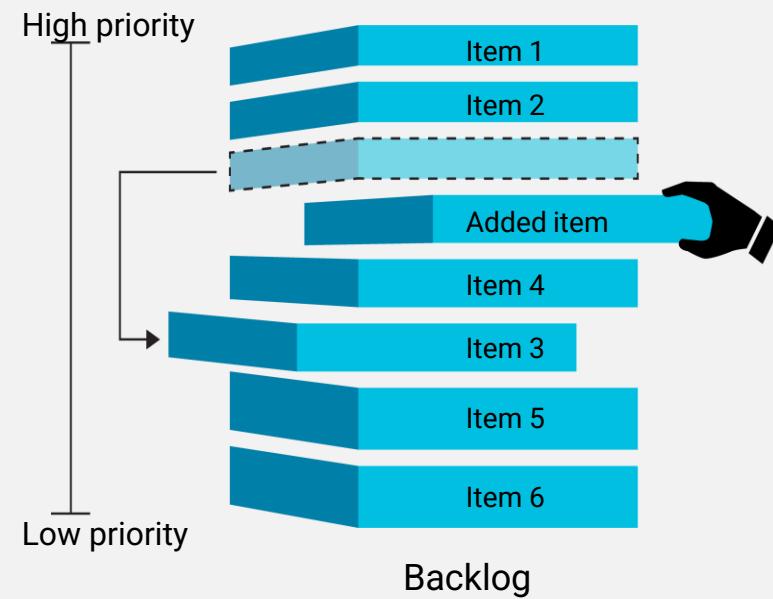
- ✓ In traditional project plans, the **completed initial plan** contains the baseline.
- ✓ As changes occur in the project, you **update** the baseline to reflect any **new requirements**.
- ✓ Agile projects process change continuously, in iterations or increments. Work is prioritized and updated in the **product backlog** or in the **value stream** (Disciplined Agile).



Backlog Reprioritization

Product owner **re-prioritizes** the backlog as stories or requirements change.

Business value determines the priority of the changes.



Recommended Options for Changes

- ✓ When change is proposed, the product owner should **focus on the intended business value** of the change.
- ✓ Give the **project team** discretion to consider the change and **identify potential solution options**.





A clear governance structure becomes critical when project changes are driven by changes in the internal or external business environments.

Governance Steering Committee

- ✓ 'The Project Board' or overall governance or steering committee that coordinates the project:
- ✓ Might include: the project sponsor, a senior user, and PMO resources.
- ✓ Are responsible for:
Clarifying the project charter and objectives; and allocating resources to the project.



GUIDELINES

Assessing the Impact on Project Backlog Based on Business Environment Changes

- Understand the project's organizational context.
- Understand the external factors that may impact your project.
- How is the project work prioritized?
- What is the project governance model?

Evaluate and
Address
Internal and
External
Business
Environment
Changes,
LESSON 5,
TOPIC C





Support Organizational Change

TOPIC D

Deliverables and Tools



Change Management Plan

Roll Out Plan

Training Plan

Training Artifacts



Project Management Plan updates

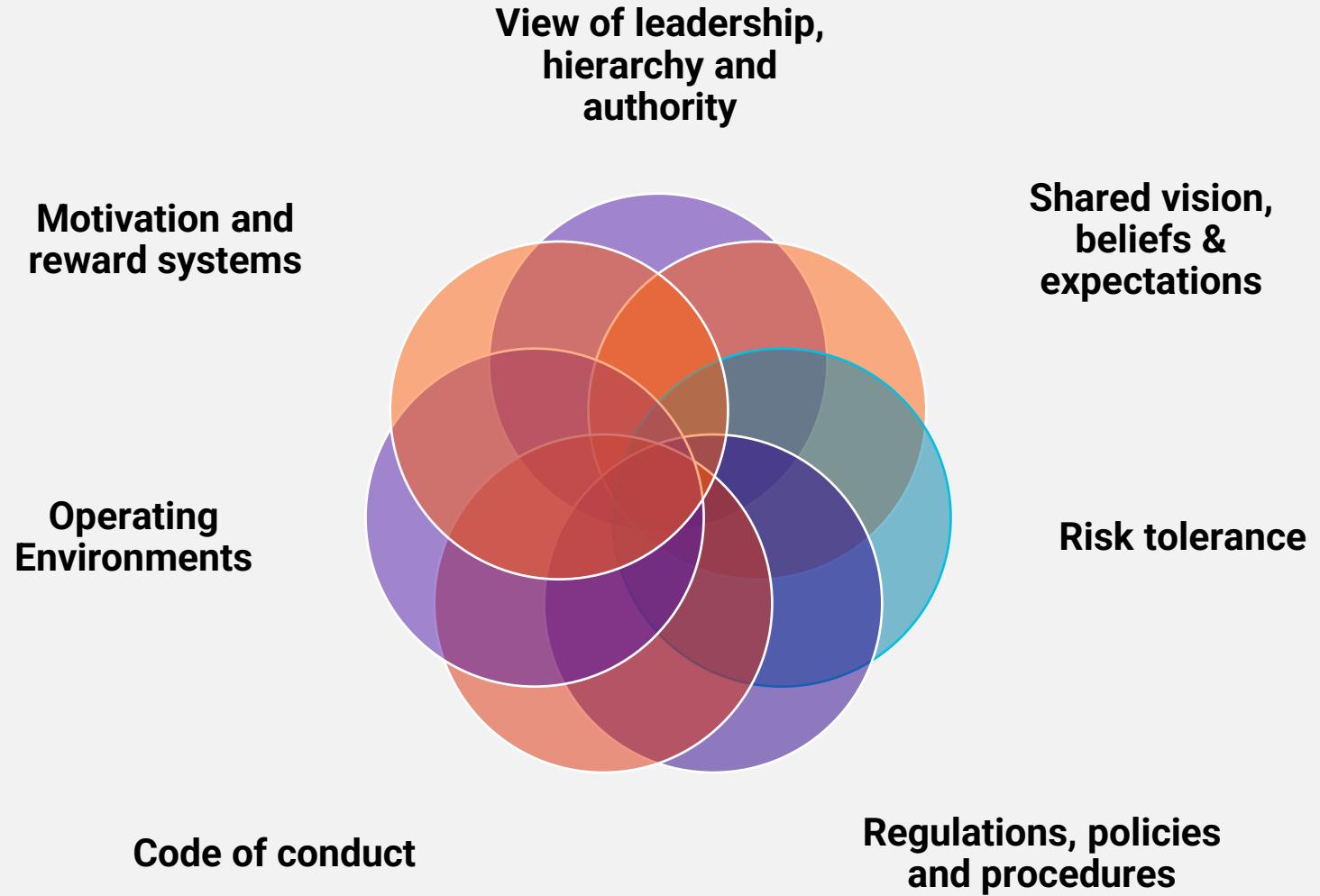
EEFs

OPAs

Demos

PM / PMO org structures

Organizational Cultures and Styles





Organizational Structures

- ✓ Affect **resource availability**
- ✓ Affect how projects are **conducted**
- ✓ Main structures include **functional, project-oriented, matrix, and composite.**

Relative Authority in Organizational Structures

Consider your authority relative to the functional manager's authority over the project and the project team.

Relationship	Functional	Matrix	Project-oriented
Team members are loyal to	Functional department	Conflicted loyalty	Project
Team members report to	Functional manager	Both functional manager and project manager	Project manager
Project manager's role is	Part-time	Full-time	Full-time
Team members' role is	Part-time	Part-time	Full-time
Control of project manager over team members is	Low	Medium	High

Roll Out Plan

- ✓ You need to plan for successful implementation of changes.
- ✓ Roll out plans enable you to define the knowledge transfer, training, and readiness activities required to implement the change.
- ✓ Depending on the size, scope, and nature of the change, the plan details might include:
 - The Project team and the affected customer and users
 - Training and support activities





Project Management Plan Updates

Based on the scope of changes, you may need to **update the project management plan** for:

- ✓ Scope
- ✓ Timelines
- ✓ Work packages
- ✓ Team member assignments

In **agile** projects, the team might remove lower-value deliverables from scope to make room for the change.

Training Plan

Changes to the project plan that will likely impact the training plan:

- ✓ Scope of the training and knowledge transfer required
- ✓ Roles and responsibilities of the stakeholders
- ✓ Timelines



Training Artifacts

Changes to the plan and deliverable set requires changes to the training artifacts, including:

- ✓ Training courseware
- ✓ Lab configurations and exercises
- ✓ Knowledge requirements and potentially credentials, if certification of skills is expected
- ✓ Updates for the trainers to gain the necessary knowledge transfer required to deliver the updated training



Whether in-house or outsourced, you have to ensure these changes to training are made.



Demos

- ✓ Changes to **software solutions** may require demonstration of changed configurations, processes, workflows, and roles and responsibilities.
- ✓ **Key customer and user stakeholders** need to review the demo and provide feedback to ensure the changes work as intended and do not impact the workflow of the solution.
- ✓ Early feedback allows for adaptation, while the feedback is immediately relevant and should **improve the quality of the change** while reducing overall cost and risk.



GUIDELINES

Recommend, Plan, and Facilitate Change (Part 1 of 2)

- Establish a **single change request method** which includes:
 - A description of the proposed change
 - The business value of the change
 - Any risk and risk mitigation recommendations
 - Likely cost of the change
- Ensure that a CCB can assess the change cost, risk, and value, other potential impacts to the project, and make recommendations.
- Check the project's tolerance – can you approve the change or do you need to escalate it to the governing board for review and approval?

Support
Organizational
Change,
LESSON 5,
TOPIC D



GUIDELINES

Recommend, Plan, and Facilitate Change (Part 2 of 2)

- Follow **organizational change management** best practices:
 - Build a compelling case for change
 - Get buy-in and commitment of key stakeholders
 - Communicate the change vision
 - Enable other stakeholders to engage
- Ensure changes are properly aligned and updates are made to relevant project artifacts – i.e. project plan, training plans, training artifacts, and software configurations or demos.

Support
Organizational
Change,
LESSON 5,
TOPIC D





Employ Continuous Process Improvements

TOPIC E

Deliverables and Tools



Processes and standards



Quality Theory methods
CI approaches
Lessons learned
Retrospectives
Experiments

Continuous Improvement

- ✓ Aim for small, incremental improvements or large breakthroughs.
- ✓ A business strategy that is developed at the organizational level for projects to adopt and use.
- ✓ Might be implemented by an organization's PMO.



Culture of Continuous Improvement

W. Edwards Deming's philosophy of improving quality aims to reduce expenses, increase productivity, and thus increase market share.

Be guided by these four concepts:

- ✓ **Better design** of products to improve service.
- ✓ **Higher level** of uniform product quality.
- ✓ **Improvement** of product testing in the workplace and in research centers.
- ✓ **Greater sales** through global markets.



A close-up photograph of a woman with blonde hair and black-rimmed glasses. She is looking slightly to her left with a thoughtful expression. The background is blurred, showing warm indoor lighting.

Further Study in Quality Theory Methods

*Approaches by industry
thought leaders can help
you understand how to
improve business results.*

Six Sigma - respond to customer needs and improving processes by systematically removing defects.

William Smith, Jr.

Break quality management into quality planning, control and improvement

Joseph M. Juran

Continuous process improvement in which quality must be continuously improved to meet customer needs

W. Edwards Deming

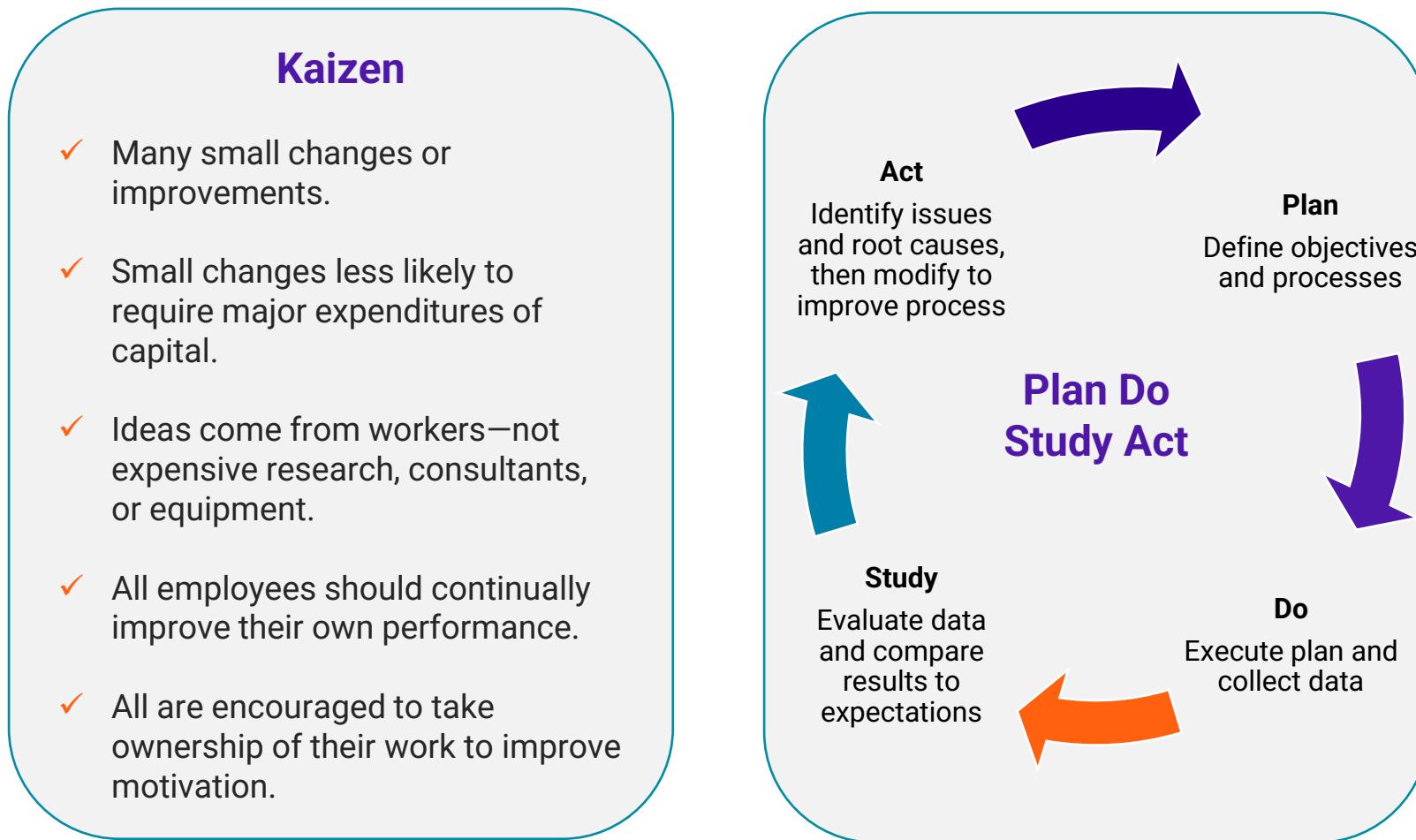
Four absolutes: conforming to requirements, quality achieved by prevention, standard of zero defects, and quality measured by determining CoQ.

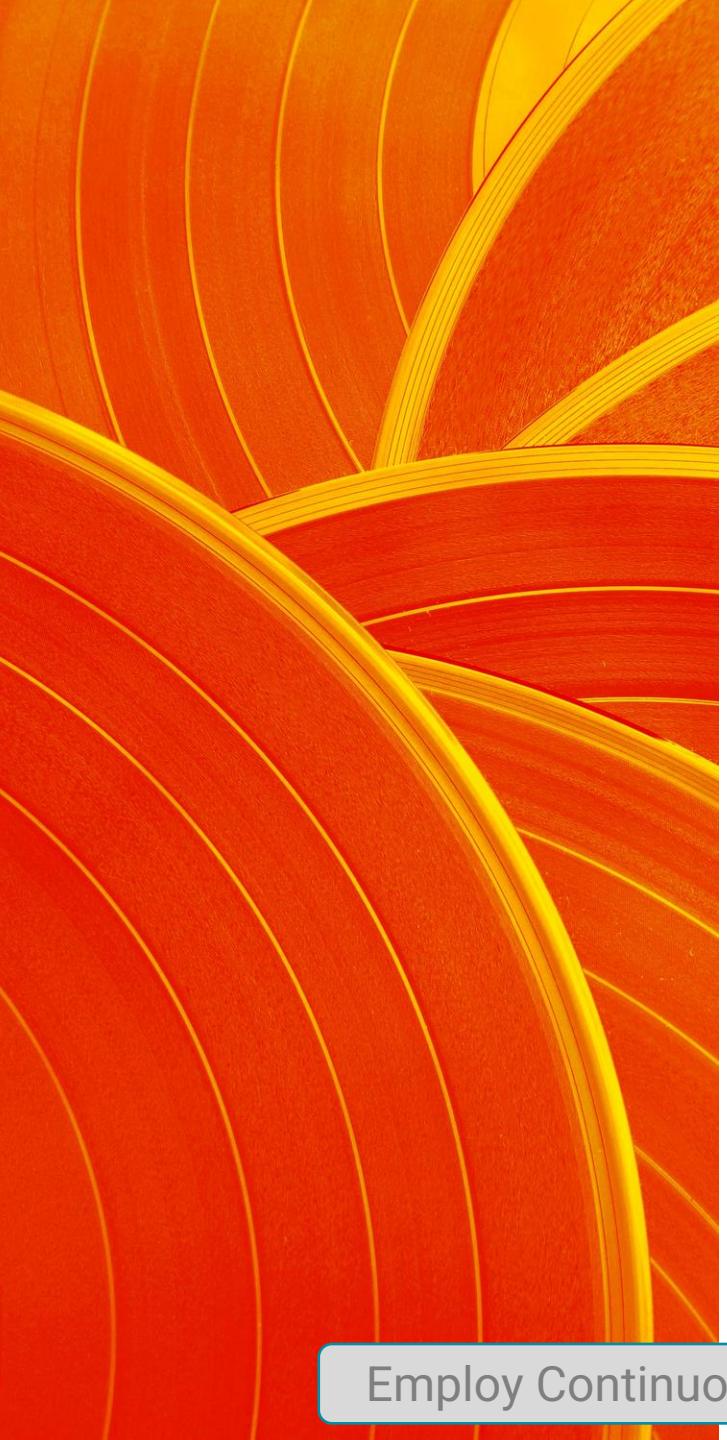
Philip B. Crosby

Design quality into the product so factors that cause variation can be identified and controlled.

Genichi Taguchi

Continuous Improvement Approaches





Continuous Improvement Tools

Lessons Learned Register is an important component of each project.

- ✓ Use it as a source of improving the processes in other projects.
- ✓ Avoid filing it away at the end of a project and not referring to it.

Retrospectives:

- ✓ Common in agile projects at the end of each iteration.
- ✓ Helps the team look back at an iteration and plan improvements for the next one.

Experiments provide a way to improve team efficiency and effectiveness:

- ✓ Some techniques include A/B testing and team feedback to identify improvements.
- ✓ Perform experiments one at a time to isolate the results.

Update to Process and Standards

- ✓ Lessons learned at the project level can apply to the **organization's continuous improvement process**, in addition to the project management processes.
- ✓ Escalate these lessons and evaluate them for consideration at the organizational level.



GUIDELINES

Execute Continuous Improvement Steps

- Review the organization's continuous improvement strategy.
- Develop a continuous improvement approach for your project, keeping in mind the project goals and the expectations of the stakeholders.
- Use lessons learned from your project and other projects—as sources of continuous improvement.
- For agile projects, use retrospectives to improve the next iteration.
- Use lessons learned at the project level to improve the organization's continuous improvement process.

Employ
Continuous
Improvements,
LESSON 5,
TOPIC E



BONUS SKILLSOFT TOPIC! OVERVIEW OF AGILE AND SCRUM



THE AGILE MANIFESTO

In 2001, seventeen software developers met at a resort in Snowbird, Utah to discuss existing software development methods, among others Jeff Sutherland, Ken Schwaber, Jim Highsmith, Alistair Cockburn, and Bob Martin. Together they published the *Manifesto for Agile Software Development*.

The Four Values of the Agile Manifesto

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

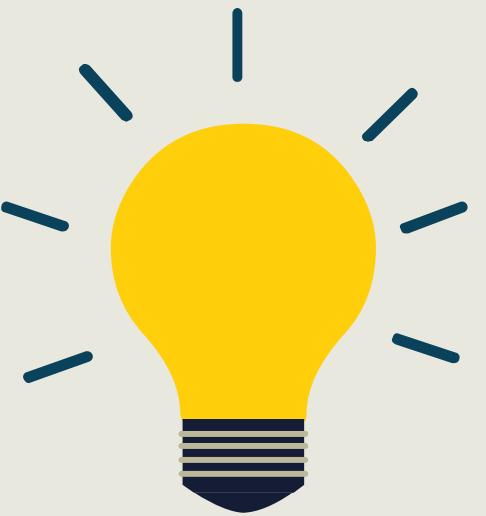
1. **Individuals and interactions** over processes and tools
2. **Working software** over comprehensive documentation
3. **Customer collaboration** over contract negotiation
4. **Responding to change** over following a plan



There is value in all of these, but we value the items in **bold** more.

THE 12 CLARIFYING PRINCIPLES

- Our highest priority is to satisfy the customer through early and continuous delivery of valuable software
- Welcome changing requirements, even late in development. Agile processes harness change for the customer's competitive advantage.
- Deliver working software frequently, from a couple of weeks to a couple of months, with a preference to the shorter timescale.
- Business people and developers must work together daily throughout the project.
- Build projects around motivated individuals. Give them the environment and support they need, and trust them to get the job done.
- The most efficient and effective method of conveying information to and within a development team is face-to-face conversation.
- Working software is the primary measure of progress.
- Agile processes promote sustainable development. The sponsors, developer, and users should be able to maintain a constant pace indefinitely.
- Continuous attention to technical excellence and good design enhances agility.
- Simplicity – the art of maximizing the amount of work not done – is essential.
- The best architectures, requirements, and designs emerge from self-organizing teams.
- At regular intervals, the team reflects on how to become more effective., then tunes and adjust its behavior accordingly.



AGILE METHODOLOGIES

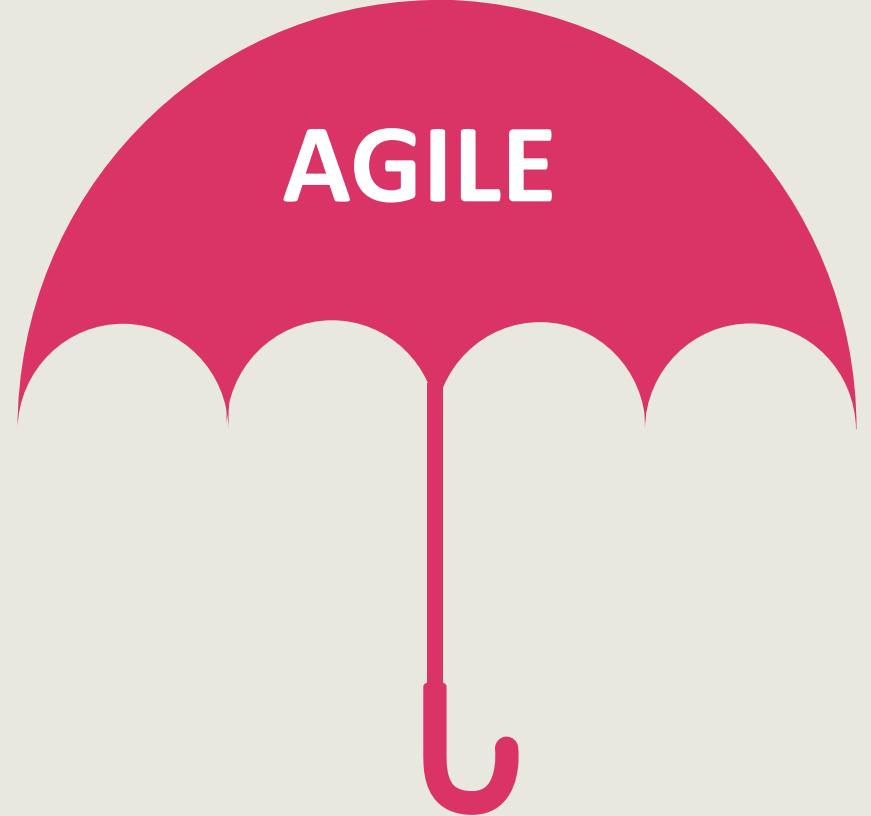
There are over a dozen agile methodologies

No single right way

Can be tailored once a team is experienced

Most common

- Scrum (really a framework)
- Disciplined Agile
- Extreme Programming (XP)
- Lean product development
- Kanban
- Feature-driven development (FDD)
- Dynamic Systems Development Method (DSDM)
- Crystal



SCRUM

- Framework rather than a methodology
- Scrum is one of many Agile approaches
- Can be applied to any industry
- Employs various techniques
- High-performing cross functional teams
- Iterative, incremental approach
- Iterations are known as “Sprints”

The term “Scrum” comes from rugby.

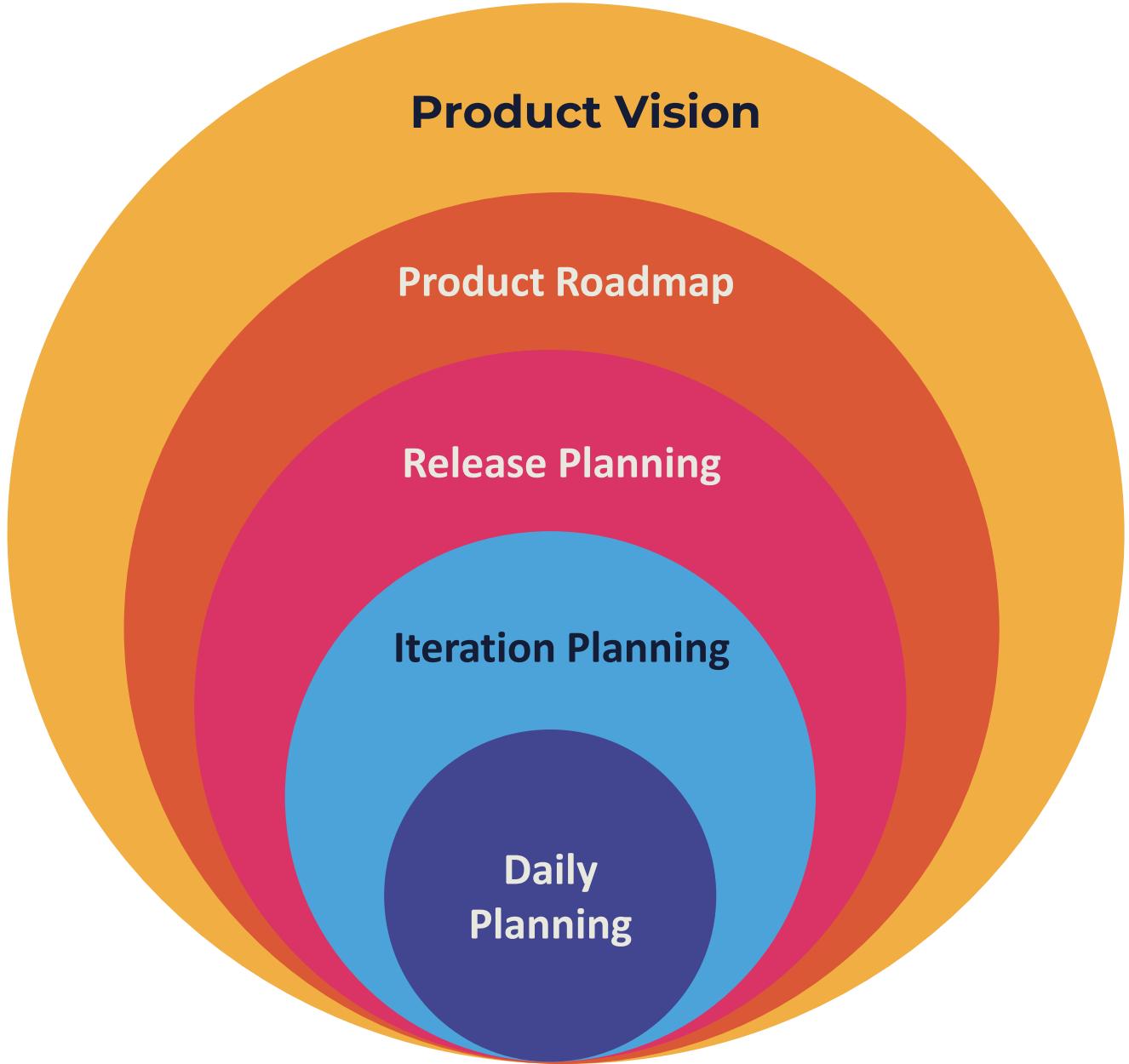
A scrum (short for scrummage) is a method of restarting play. The players pack closely together with their heads down and attempt to gain possession of the ball.





THREE PILLARS OF EMPIRICISM

- **Transparency**
 - Discuss product requirements
 - Establish shared product vision
 - Create a Definition of Done
- **Inspection**
 - Assess productivity during Daily Scrum
 - Burn-down chart
 - Demonstrate product increment during Sprint Review
 - Objective assessment based on Acceptance Criteria and Definition of Done
- **Adaptation**
 - Welcome change
 - React quickly to variance in order to meet Sprint goal
 - Sprint Retrospective promotes continuous improvement



LEVEL OF
DETAIL

CREATING THE PRODUCT VISION

Interview stakeholders

Focus on how a product adds value

Motivates Developers



PRODUCT VISION

Why you're building a product

Benefits of product

Who you're building it for

Why you are positioned to develop it

Since scope is evolving it is important to share an understanding of what is being created





Product Box – Collaboration Game

Technique used to explain an overarching solution.

Stakeholders try to **describe aspects of a solution** in the same way a marketer might describe **product features and benefits** on a box.

Helps with understanding:

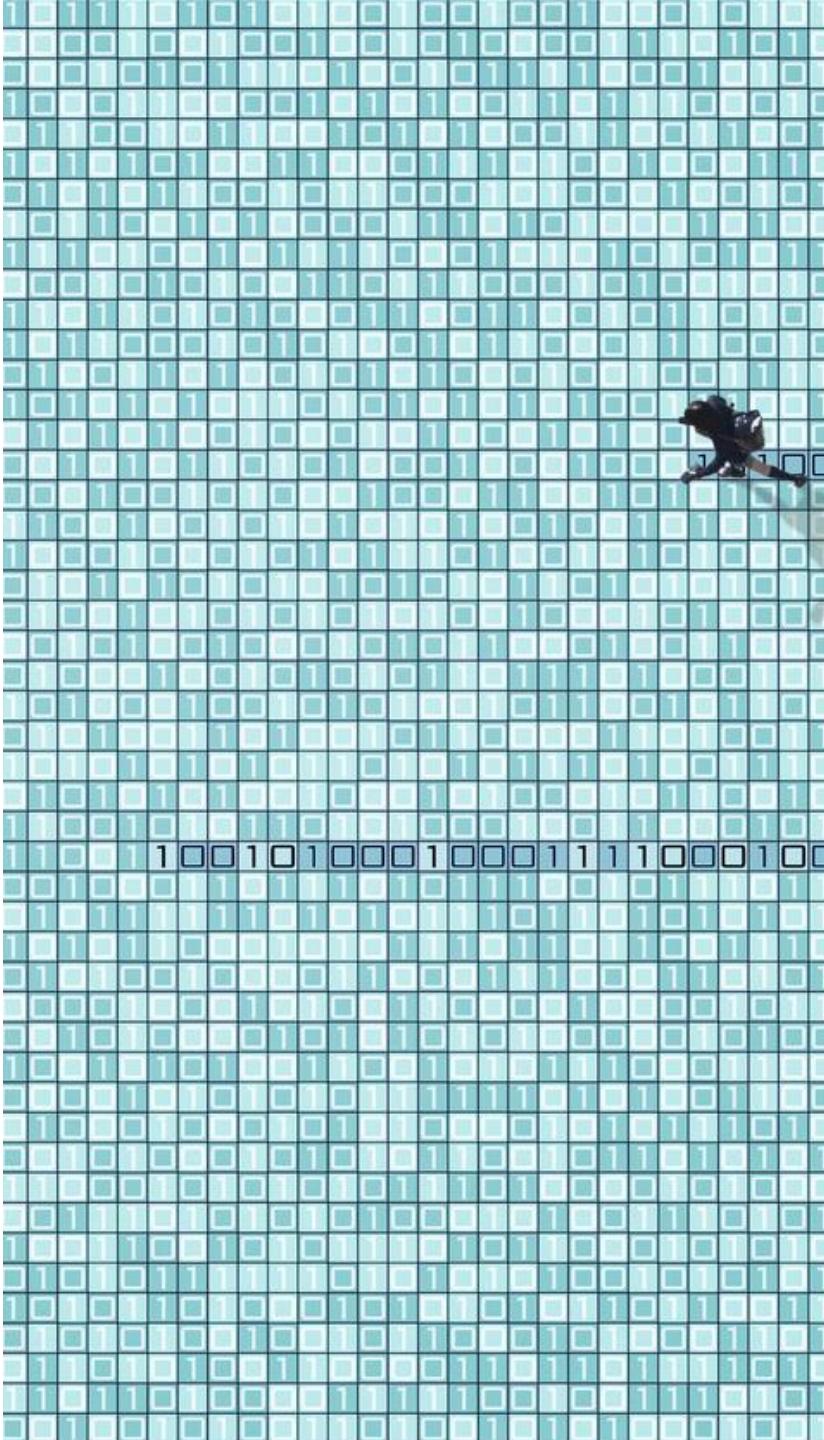
- ✓ Different types of users of a solution
- ✓ Their priorities and likes/dislikes
- ✓ Key aspects of a solution that drive the most critical value aspects

XP Metaphor

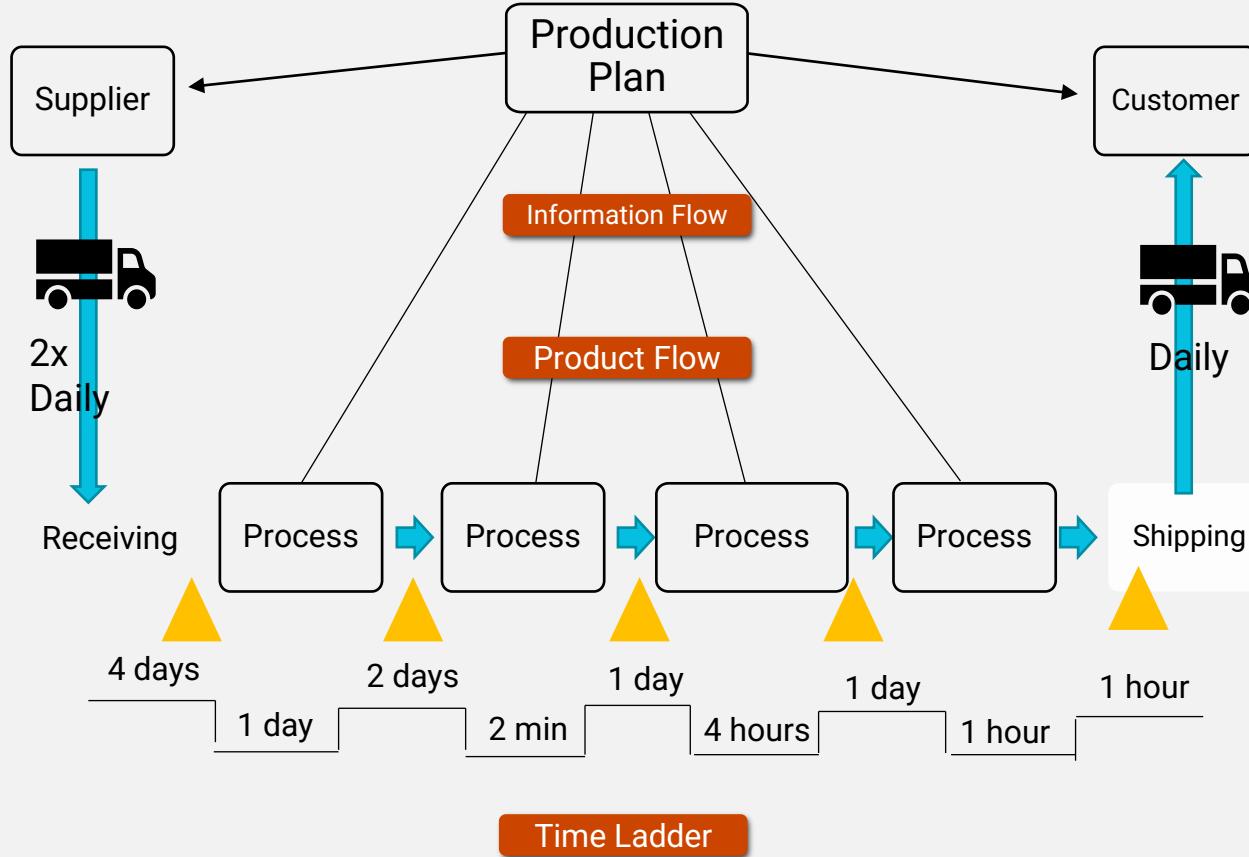
Metaphor is an Extreme Programming (XP) technique that **describes a common vision** of how a program works.

Metaphors should be simple and non-technical.

Enables the team to understand the overarching approach that is being taken to provide a capability or solve a problem.

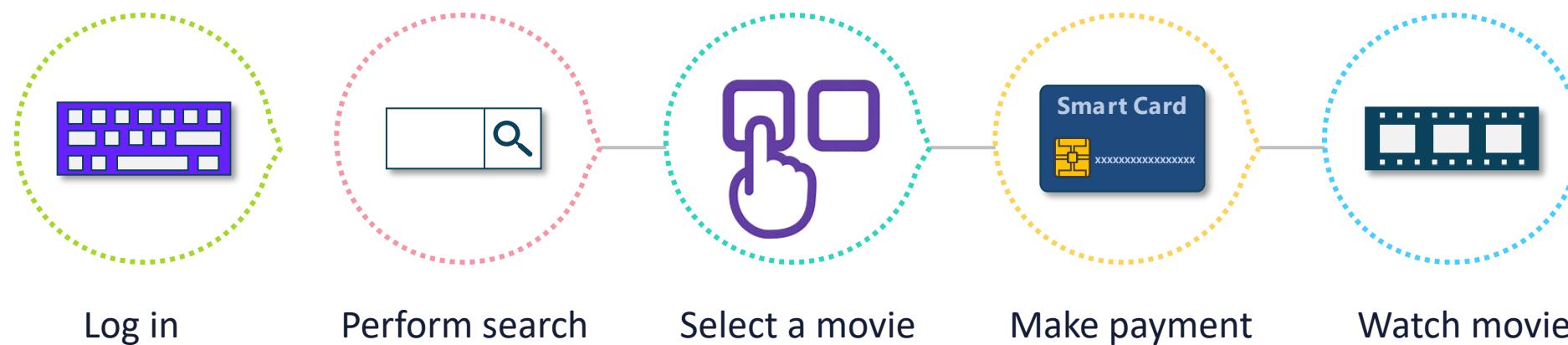


Value Stream Map

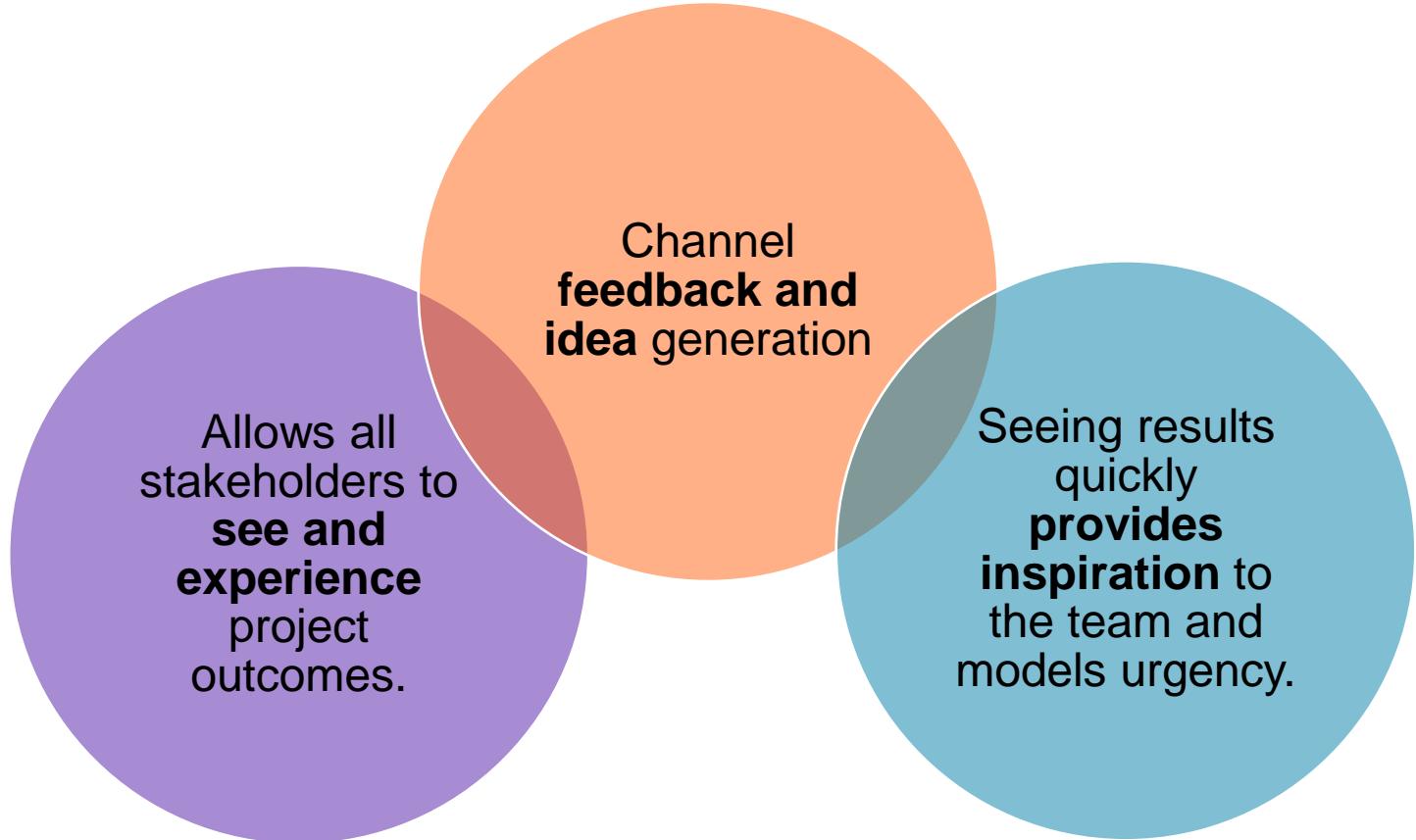


MINIMUM VIABLE PRODUCT

- Customer Journey
- Story Map
- End-to-end functionality
- Example: video streaming service



Benefits of Minimum Viable Product (MVP)



Minimum Business Increment (MBI)

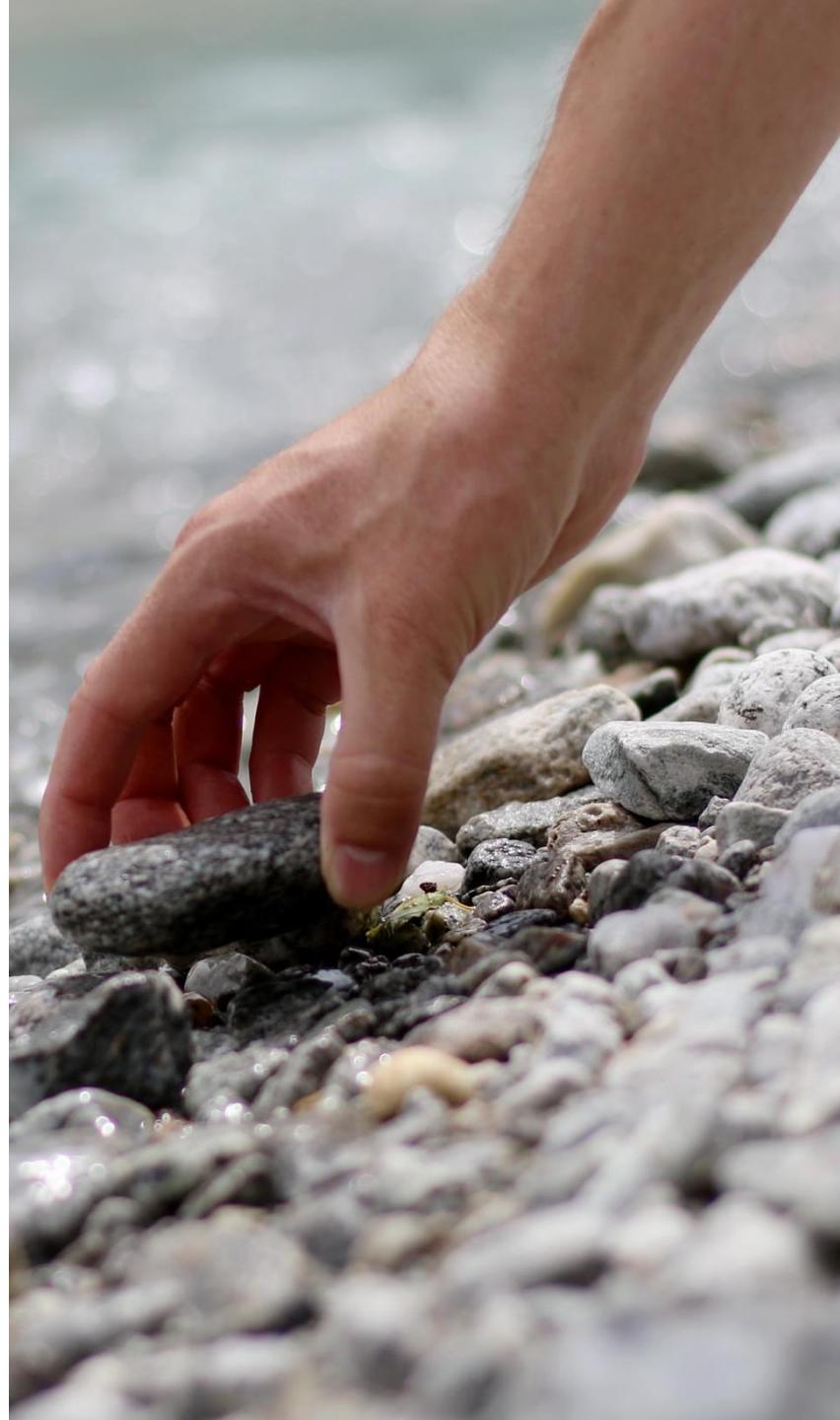
MBI is more viable when an MVP might disrupt the users and business, especially when a basic preliminary product, to gauge interest, is not necessary.

Optimize use of MBIs by:

- ✓ Ensuring the product and functions are understood.
- ✓ Pinpointing an incremental value increase.

Advantages of MBIs:

- ✓ Enable project team to deliver value sooner.
- ✓ Help team validate improvements.
- ✓ Enables team to incrementally build on success or pivot as needed.





Working with Features

- ✓ Scheduling aligned to features ensures associated work is coordinated.
- ✓ Estimating features offers visibility to when blocks of functionality can be released to the business and end users.
- ✓ Progress can be measured by drawing a ratio of accepted to remaining features.

Features and Epics

- ✓ Usually described as a short phrase. This term groups related functionality together to deliver business value.
- ✓ Includes activities and efforts such as documentation, bug fixes, testing, and quality/defect repairs.
- ✓ Delivers the capability that can be estimated, tracked, and managed as a set.
- ✓ Epics are responsible for producing a major deliverable, which may include various Agile features, for example.



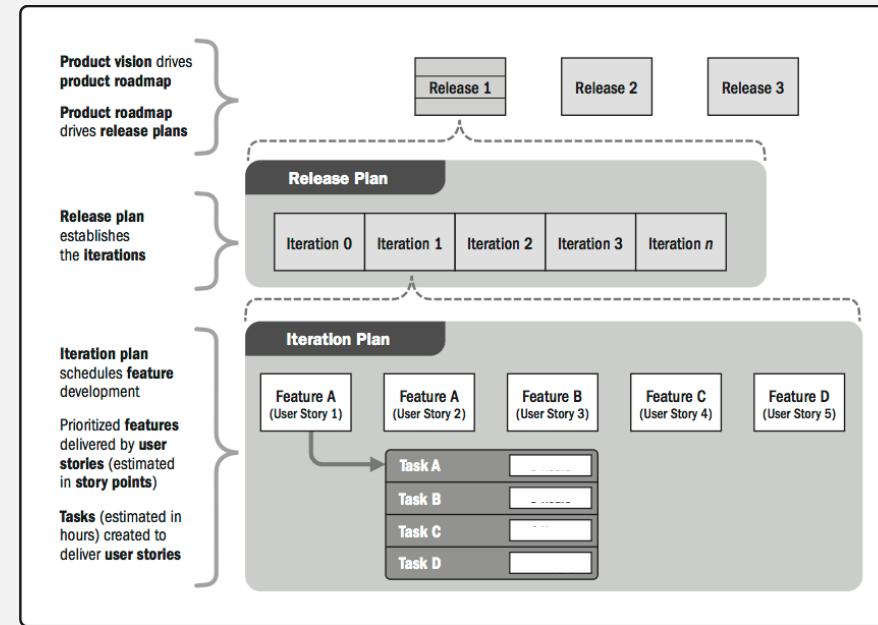


Product Roadmaps

- ✓ Vary in appearance and presentation.
- ✓ Display the **strategy** and **direction** of the product and the **value** it will deliver.
- ✓ Lead with the overarching vision of the product.
- ✓ Are progressively **elaborated over time** with information and work inputs and refinement of vision.
- ✓ Use themes (goals) to **provide structure and associations**.
- ✓ Provide **short-term** and **long-term** visualization of the product.

Agile Release Planning

- ✓ High-level summary timeline of the release schedule based on product roadmap and vision for the product's evolution.
- ✓ Determines the number of iterations or sprints in the release
- ✓ Allows product owner and team to decide:
 - how much needs to be developed
 - how long it will take to have a releasable product based on business goals, dependencies, and impediments.



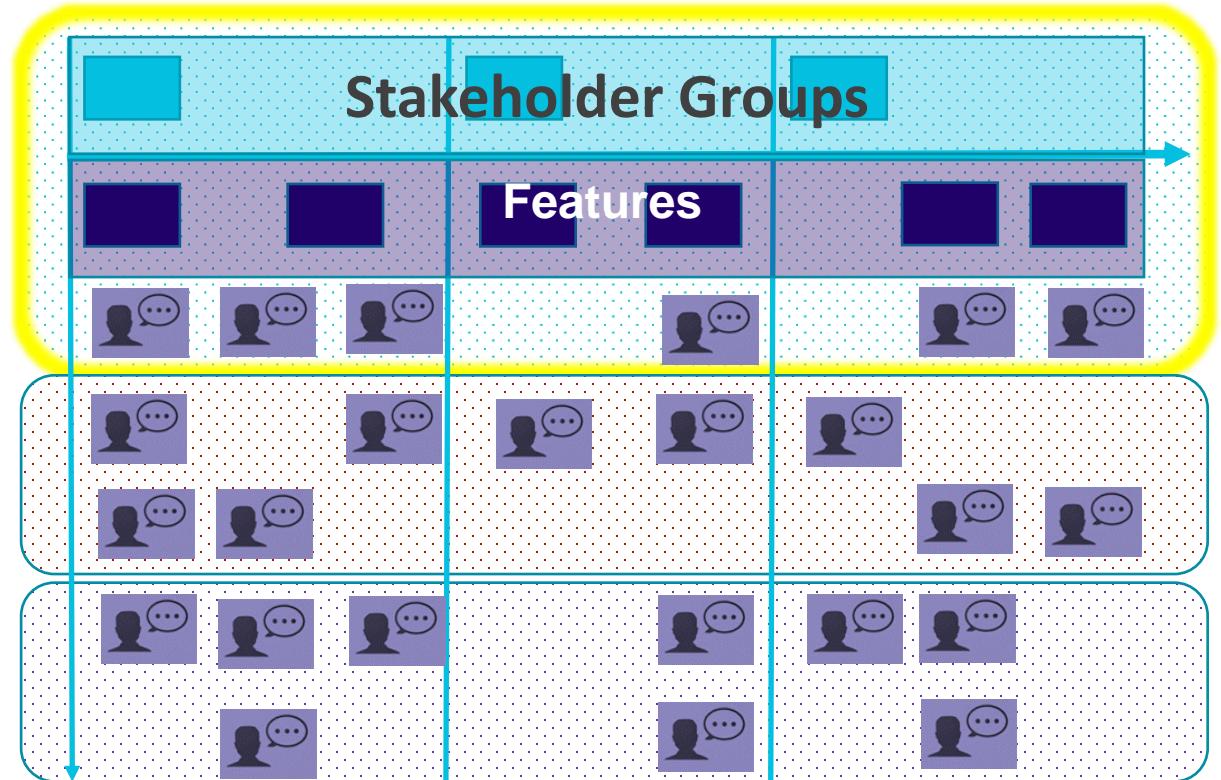
PRODUCT ROADMAP

- Story map with timing of deliverables
- Considers priorities against Developers velocity
- Subject to change as backlog is refined
- With each release the product becomes more robust

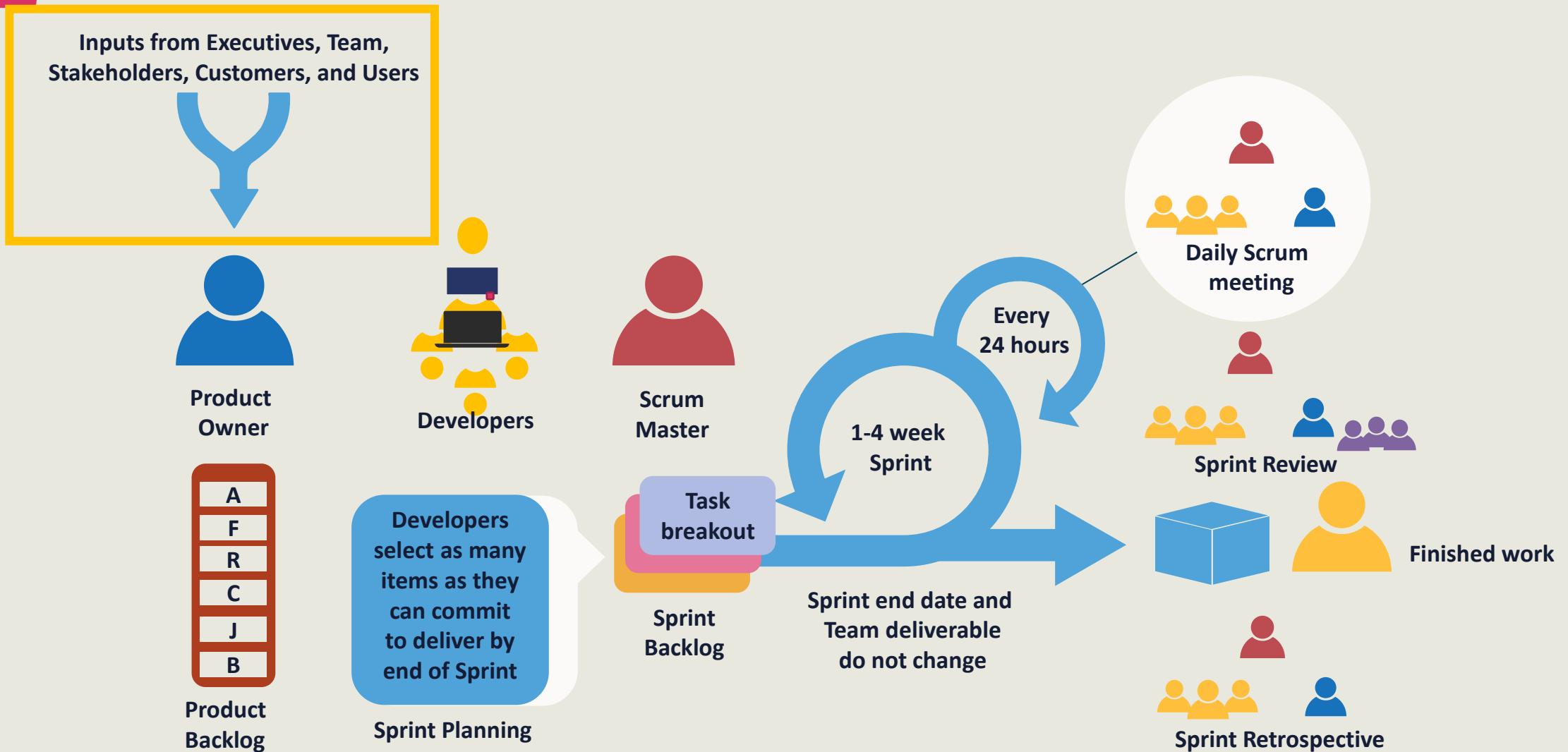
1st release

2nd release

3rd release



SCRUM FRAMEWORK



MASTERY BUILDER

Who is regarded as the father of the continuous improvement movement?

- Crosby
- Deming
- Juran
- Smith

Creating a
high
performing
team



MASTERY BUILDER

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Creating a
high
performing
team



MASTERY BUILDER

The methodology used to systematically test possible solutions, assess the results, and implement those that work is known as which of the following?

- Kaizen
- Continuous improvement
- Plan Do Study Act
- Retrospective

Creating a
high
performing
team



MASTERY BUILDER

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Creating a
high
performing
team



MASTERY BUILDER

Which of the following is not a benefit of planning for a minimum viable product?

- Risk reduction
- Early feedback
- Early value from the service
- Project team disband early

Creating a
high
performing
team



MASTERY BUILDER

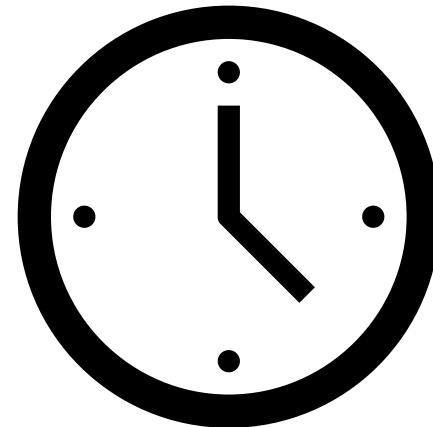
Which of the following is not a benefit of planning for a minimum viable product?

- Risk reduction
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Creating a
high
performing
team



1-Hour Break!



Class resumes at 2:30pm
Eastern Time