# Principles behind the Agile Manifesto

We follow these 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, developers, 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 adjusts its behavior accordingly.

# Notes

## **Scrum Theory**

Empirical process control theory, or empiricism --> knowledge comes from experience, *and* making decisions based on what is known. Employs iterative, incremental approach to optimize predictability, and control risk.

3 pillars:

1. Transparency
   * Significant aspects of the process must be visible to those responsible for the outcome
   * Those aspects be defined by common standard e.g. common language to refer to the process, common definition of “Done”
2. Inspection
   * Scrum users must frequently visit scrum artifacts, and progress towards sprint goal to detect undesirable variances
   * Most beneficial when performed by skilled inspector at the point of work
3. Adaption
   * Adjustments – asap to minimize further deviation

## **Scrum Values**

5 values: commitment, courage, focus, openness and respect

Values brings Scrum pillars to life

## **Team**

Self-organising, cross functional, self-contained

Have all the competencies needed without relying on external inputs

Incremental deliveries of “Done” product ensure a potentially useful version of working product is always available.

### Scrum Product Owner

* Maximising value of the product resulting from the work of Dev team.
* Sole person managing Prod Backlog (PB)
  + PO or DT may do the maintenance but PB is responsible
* Sole decision authority on PB
* PB decisions must be respected by entire organization
* PB decisions are visible in content and ordering of PB
* No one else can force DT to work on a different set of requirements

### Scrum Master

* **Promote and support Scrum** as defined in the Guide
* Servant-leader for the Scrum team
* Helps outsiders understand which of their interactions are useful and which aren’t
* **Change interactions to maximise value created** by Scrum team

### Development Team

* Work on potentially releasable increment of done product at each Sprint
* A “done” increment is required at the Sprint Review
* Only DT can create increments
* Self-organising (even SM cannot direct them on dev work)
* Cross-functional
* No- titles, no sub-teams (of testing, ops, BA, etc.)
* Accountability belongs to DT as a whole

Team size

* 3 =< DT =< 9
* Less = skill constraints
* More = too much coordination; generate too much complexity for empirical process to be useful
* PO & SM not included unless they also execute

## Events

Create regularity and avoids ad hoc meetings

Time-boxed

Formal opportunity to inspect and adapt

Failure in setting-up these events --> reduced transparency and a lost opportunity to inspect and adapt

### The Sprint

A time-box of one month or less during which a “Done”, useable, and potentially releasable product Increment is created.

Consistent durations; one after another.

Container for other events, and dev work.

Each Sprint has a goal of what is to be built, a design and flexible plan that will guide build it, dev work, and the resultant product.

During Sprint:

* No Change that would endanger Sprint goal
* Quality goals do not decrease
* Scope may be clarified and re-negotiated between PO and DT

### Sprint Planning

Work to be performed during Sprint

Collaborative work of entire Scrum team

Max 8 hrs for 1-month Sprint; shorter if Sprint is shorter

Scrum Master ensure the event takes place, attendees understand its purpose and teaches the team to keep it within the time-box.

1. What can be delivered?

Inputs: PB, latest product increment, projected DT capacity, and past performance of DT

PO discussed PB items and objectives of the Sprint

DT forecast the functionality that will be delivered

DT chooses no. of PB items for the Sprint

Only DT can access what can be delivered

Output: Sprint Goal

objective that will be meet by implementation of PB items

provides guidelines to DT on why the increment is built.

Selected PB items deliver one coherent function or can be any coherence that causes DT to work together (rather than separately)

1. How to achieve the work?

DT decides how it Sprint goal will be built into a “Done” product increment

Sprint Backlog = PB items for the Sprint + plan for delivering them

DT designs the system and the work needed

Enough work planned for upcoming Sprint

Planned work is broken down, often to units of day or less

PO explains PB items and make trade-offs; DT renegotiates with PO for “right” amount of work.

DT invites other to provide tech or domain advice.

By end of Sprint Planning, DT should be able to explain to PB and SM how it intends to accomplish Sprint goal and create the anticipated Increment.

### Daily Scrum

15mins time-boxed for DT; held at same time and place

DT plans work for next 24 hrs

Inspect: work since last Daily Scrum; progress towards Sprint goal, and how progress is trending

forecast upcoming Sprint work

DT optimises the probability that DT will achieve Sprint goal

DT may meet immediately after Daily Scrum for detailed discussions

SM ensure Daily Scrum is held but DT is responsible for conducting it

DS improves communications, eliminate other meetings, identify impediments, highlight and promote quick decision making, and improves DT level of knowledge. This is key inspect and adapt meeting.

### Sprint Review

At the end of the Sprint – informal meeting

Inspect increment and adapt PB

Scrum Team and stakeholders, invited by PO, collaborate about what was done

Attendees collaborate on the next things that could be done to optimize value

At most 4 hrs; shorter for shorter Sprints

Sprint team + stakeholders invited by PO

PO explains what PB items are “Done” and what has not been “Done”

DT discussed what went well, what problems occurred and how it was overcome

DT demos “Done” work and answers questions about the Increment

PO discusses PB as it stands; projects likely target and delivery dates (if necessary)

Entire group collaborate what to do next. Sprint Review --> Sprint planning

Review how marketplace or potential use of the product might have changed and what is most valuable to do next

Review timeline, budget, potential capabilities, and marketplace

Result: revised PB that defines portable PB items for next Sprint; PB may be adjusted overall to meet new opportunities.

### Sprint Retrospective

## Artifacts

* Product Backlog
* Sprint Backlog

## Artifact Transparency

# Assessments

Question 1 of 15

Learning turns into 'validated learning' when assumptions and goals can be assessed through results. What is a key way for a Product Owner to apply validated learning?

Correct answer: A)  
You chose: A)  
Note: This question displayed answer options in random order when taking this Test.

Correct answer**A)** Release an Increment to the market to learn about the business assumptions built into the product.

**B)** Accept an Increment at the Sprint review to learn about the forecast of functionality that was developed.

**C)** Set the Sprint Goal before selecting Product Backlog items at Sprint Planning to learn about a Development Team's productivity.

Points: 1 out of 1

Feedback

The Product Owner manages Product Backlog against the assumption that value will be generated. This assumption remains invalidated when not checked against users and market.

Question 2 of 15

What are two typical activities for a Product Owner in a Sprint?

Correct answer: C) E)   
You chose: A) E)   
Note: This question displayed answer options in random order when taking this Test.

Incorrect answer **A)** Attend every Daily Scrum to answer functional questions on the discussed Sprint Backlog items.

**B)** Update the work plan for the Development Team on a daily basis.

Missed correct answer **C)** Work with the Development Team on Product Backlog refinement.

**D)** Create financial reporting upon the spent hours reported by the Development Team.

Correct answer **E)** Collaborate with stakeholders, user communities, and subject matter experts.

You did not select all available correct options.

Points: 0 out of 1

Feedback

The Product Owner represents the stakeholders to the Scrum Team. This typically requires active interaction in order to be able to represent stakeholders and their needs.  
Product Backlog refinement is an ongoing process in which the Product Owner and the Development Team collaborate on the details of Product Backlog items.

Question 3 of 15

The Sprint Review is the only time at which stakeholder **Feedback** is taken into account.

Correct answer: B)  
You chose: B)

**A)** True

Correct answer **B)** False

Points: 1 out of 1

Feedback

A Product Owner engages actively and regularly with stakeholders. However, to limit the disturbance to the development progress and keep focus high, the stakeholders have a formal role in the process at the Sprint Review only.

Question 4 of 15

What variables should a Product Owner consider when ordering the Product Backlog?

Correct answer: E)  
You chose: E)  
Note: This question displayed answer options in random order when taking this Test.

**A)** Effort first, then value

**B)** Development cohesion as indicated by the Development Team

**C)** Lowest development cost in order to maximize ROI

**D)** The availability of resources and skills for implementation

Correct answer**E)** Whatever is most appropriate for the Product Owner to achieve the product's goals and to optimize the value received

Points: 1 out of 1

Feedback

The Product Owner is responsible for ordering the items in the Product Backlog to best achieve goals and missions, thereby optimizing the value of the work the Development Team performs. How this is done, and what value means, may vary widely across organizations.

Question 5 of 15

The Product Owner's authority to change and update the Product Backlog is unlimited, except for:

Correct answer: B)  
You chose: B)  
Note: This question displayed answer options in random order when taking this Test.

**A)** Decisions by the CFO, the CEO or the board of directors.

Correct answer**B)** Nothing. The entire organization must respect a Product Owner's decisions.

**C)** Decisions by the chief program manager.

**D)** Technical and architectural work that needs to be done first, as indicated by the chief enterprise architect.

**E)** High impact changes that have not been approved by the change request board.

**F)** Work for which impediments exist that the Scrum Master still needs to resolve.

Points: 1 out of 1

Feedback

For the Product Owner to succeed, the entire organization must respect his or her decisions. No one is allowed to tell the Development Team to work from a different set of requirements, and the Development Team isn't allowed to act on what anyone else says.

Question 6 of 15

A Product Owner is essentially the same thing as a traditional Project Manager?

Correct answer: B)  
You chose: B)

**A)** True

Correct answer**B)** False

Points: 1 out of 1

Feedback

A traditional project manager is responsible for all aspects of a project; costs, resources, execution, release, planning, capacity. Scrum is a framework for complex product development, regardless of whether the work is organized in projects. The Product Owner is responsible for maximizing the value of the product and the work performed, a responsibility that is complemented by the specific accountabilities of the Development Team and the Scrum Master.

Question 7 of 15

The Product Owner manages the Product Backlog. Who is accountable for estimating the effort to complete the Product Backlog items?

Correct answer: A)  
You chose: A)  
Note: This question displayed answer options in random order when taking this Test.

Correct answer**A)** The Development Team. As a collective, they have a complete view of the work needed to transform Product Backlog items into Increments of product.

**B)** The PMO. They have all the history on projects delivered, and this enables the IT department to make delivery commitments.

**C)** The Product Owner. The Product Owner is required to commit on delivery to the users and the stakeholders.

Points: 1 out of 1

Feedback

The Development Team is responsible for all estimates. The people who will perform the work make the final estimate.

Question 8 of 15

The process of regular inspection and adaptation employs knowledgeable and skilled inspectors. What are two ways in which the Product Owner takes the lead in the inspection process?

Correct answer: A) D)   
You chose: A) D)   
Note: This question displayed answer options in random order when taking this Test.

Correct answer**A)** At the Sprint Review the Product Owner shares the current state of Product Backlog, which, combined with the inspection of the Increment, leads to an updated Product Backlog.

**B)** At the Daily Scrum the Product Owner inspects the Sprint burn-down for progress towards a complete Increment and re-planning the team's work.

**C)** At the end of Sprint Planning the Product Owner verifies the Sprint Backlog for completeness in order to allow the Sprint to start.

Correct answer**D)** The Product Owner invites stakeholders to the Sprint Review to learn how the current state of the marketplace influences what is the most valuable thing to do next.

Points: 1 out of 1

Feedback

Scrum users must frequently inspect Scrum artifacts and progress to detect undesirable variances. The primary tool for the Product Owner to uphold transparency is the Product Backlog. Product Backlog is a living artifact that is actively maintained and updated to reflect reality. At the Sprint Review, attendees collaborate on the next things that could be done to optimize value, which is processed into an updated Product Backlog.

Question 9 of 15

The Development Team finds out during the Sprint that they aren't likely to build everything they forecast. What would you expect a Product Owner to do?

Correct answer: C)  
You chose: C)  
Note: This question displayed answer options in random order when taking this Test.

**A)** Cancel the Sprint.

**B)** Change the Sprint Goal.

Correct answer**C)** Re-negotiate the selected Product Backlog items with the Development Team to meet the Sprint Goal.

**D)** Skip Product Backlog refinement activities.

**E)** Inform management that more resources are needed.

Points: 1 out of 1

Feedback

During the Sprint scope may be clarified and re-negotiated between the Product Owner and Development Team as more is learned.

Question 10 of 15

Which description best fits the role of the Product Owner?

Correct answer: B)  
You chose: B)  
Note: This question displayed answer options in random order when taking this Test.

**A)** Project Manager 2.0

Correct answer **B)** Value Maximizer

**C)** Requirements Collector

**D)** Scope Protector

**E)** Chief Analyst

Points: 1 out of 1

Feedback

The Product Owner is responsible for maximizing the value of the product. How this is done will vary widely.

Question 11 of 15

To what extent does technical debt limit the value a Product Owner can get from a product? Select two answers.

Correct answer: A) D)   
You chose: A) D)   
Note: This question displayed answer options in random order when taking this Test.

Correct answer **A)** Technical debt causes a greater percentage of the product's budget to be spent on maintenance of the product.

**B)** Technical debt is not a Product Owner concern, because technical debt is only an issue for the Development Team.

**C)** Technical debt does not influence the delivery of value.

Correct answer **D)** The velocity at which new functionality can be created is reduced when you have technical debt.

Points: 1 out of 1

Question 12 of 15

What pre-conditions must be fulfilled in order to allow Sprint Planning to begin?

Correct answer: F)  
You chose: D)

**A)** A fully refined Product Backlog

**B)**Formal budget approval to conduct another Sprint

**C)** A clear and non-negotiable Sprint Goal

Incorrect answer**D)** A clear but negotiable business objective for the Sprint

**E)** Enough "Ready" Product Backlog to fill the Sprint

Missed correct answer**F)** There are no such pre-conditions

Points: 0 out of 1

Feedback

Sprint Planning serves to plan the work to be performed in the Sprint. This plan is created by the collaborative work of the entire Scrum Team. Sprint Planning is time-boxed to a maximum of eight hours for a one-month Sprint. What can be achieved in this time-box may be influenced by additional practices that are however not prescribed by Scrum.

Question 13 of 15

It is mandatory for the Product Owner to monitor and share progress of Product Backlog through:

Correct answer: D)  
You chose: D)

**A)** A Product or Release burn-down chart

**B)** A Value burn-up chart

**C)** A Gantt chart

Correct answer **D)** Any practice based on trends of work completed and upcoming work

**E)** A Sprint Review acceptance report

Points: 1 out of 1

Feedback

Various practices upon trending have been used to forecast progress, like burn-downs, burn-ups, or cumulative flows. These have proven useful, but none are mandatory and care should be taken because none can replace the importance of empiricism. What will happen is unknown, no matter what has happened.

Question 14 of 15

Must the Product Owner be present at the Sprint Retrospective?

Correct answer: B)  
You chose: A)  
Note: This question displayed answer options in random order when taking this Test.

Incorrect answer **A)** It is optional. Attendance is only required when the Product Owner gets invited by the Scrum Master.

Missed correct answer**B)** It is mandatory. The Sprint Retrospective is an opportunity for the Scrum Team to assess its performance and improve itself.

**C)** It is not allowed. The Sprint Retrospective is an opportunity for the Development Team to inspect itself.

Points: 0 out of 1

Feedback

The Sprint Retrospective is an opportunity for the Scrum Team to inspect itself and create a plan for improvements to be enacted during the next Sprint.

Question 15 of 15

True or False:  The Scrum Team should choose at least one high priority process improvement, identified during the Sprint Retrospective, and place it in the Product Backlog.

Correct answer: B)  
You chose: B)

**A)** True Correct answer

**B)** False

Points: 1 out of 1

Feedback

False, to ensure continuous improvement, the Sprint Backlog rather than the Product Backlog includes at least one high priority process improvement identified in the previous Sprint Retrospective meeting.