

Agile Project Management

→ Waterfall method is popular project management methodology that refers to sequential or linear ordering at phases.

- Completing one phase at a time, not proceeding to the next step until it's done.

→ Agile (It is a mindset)

- Being able to move quickly and easily
- Flexibility and the willingness and ability to change and adopt
- Iterative approach : Project processes are repeated.

→ Agile iterative approach enables a project to move quickly, as well as making it adaptive to change.

→ Agile project management : It is an approach to project and team management that embodies agility and it is based on the Agile Manifesto.

- Manifesto is collection of 4 values and 12 principles that defines the mindset that all Agile teams should strive for.

→ Agile Manifesto 4 Values (Left side is valued more)

- Individuals and interactions OVER process and tools
- Working software OVER comprehensive document
- Customer collaboration OVER contract negotiations
- Responding to change OVER following a plan

→ Agile Manifesto 12 Principles;

- Value Delivery : Delivering the work as quickly as possible in order to get feedback and mitigate time risk
 - Our highest priority is to satisfy the customer through early and continuous delivery of valuable software.
 - Deliver working software frequently, from a couple of weeks to couple of months, with a preference for the shorter timescale
 - Working software is the primary measure of progress
 - Simplicity - the art of maximizing the amount of work not done - is essential.
 - Continuous attention to technical excellence and good design encloses agility
- Business Collaboration : Collaborating with your customers help the team get critical business information immediately, allowing them to adjust and adopt to any new information instantly.
 - Welcome changing requirements, even late in development. Agile processes harness change for the customer's competitive advantage.
 - Business people and developers must work together daily throughout the project.
- Team Dynamics and Culture : Creating an effective team culture that is inclusive, supportive and empowering
 - 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
 - Agile processes promote sustainable development. The sponsors, developers, and users should be able to maintain a constant pace indefinitely.
 - The best architectures, requirements, and designs emerge from self-organizing teams.

- Retrospectives and Continuous Learning : Strive to continuously learn and adopt to what's working and what's not.
 - At regular intervals, the team reflects on how to become more effective, then tunes and adjust it's behavior accordingly.

→ VUCA : An acronym that defines the conditions that affect organizations in a changing and complex world.

- Volatility : It refers to rate of change and churn in a business or situation.
- Uncertainty : It refers to lack of predictability or high potential for surprise.
- Complexity : It refers to high number of interrelated forces, issues, organizations, and factors that would influence the project
- Ambiguity : It refers to the possibility of misunderstanding the conditions and root causes of events or circumstances.

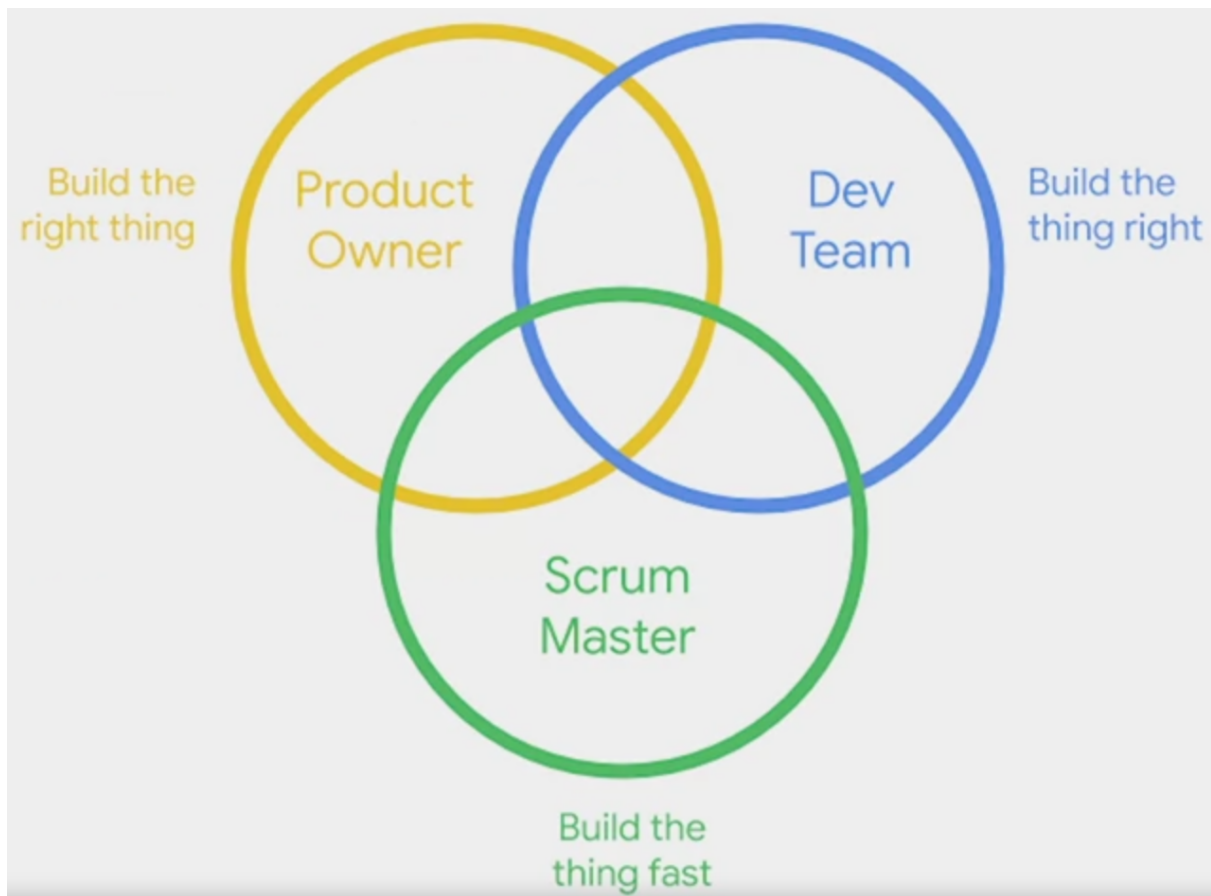
→ Scrum : it is an agile project methodology that task are handled in short cycles.

- Product backlog : The central artifact in Scrum, where all possible ideas, deliverables, features or tasks are captured for the team to work on.
- Sprint : Time boxed, iteration in Scrum where work is done. (One to four weeks long)
- Daily Scrum : A meeting of 15 or fewer minutes every day of sprint.

→ Roles in Scrum

- Scrum Master
 - Ensures team lives agile values and principles
 - Ensure team follows the process and practices agreed on
 - Responsible for sharing information to larger project team
 - Responsible for helping others focus on doing their best work
- Product owner

- Responsible for maximizing the value of the product and the work of the team
- Responsible for the inventory of work and has final say on how to prioritize the work
- Development Team
 - Responsible for how a team will deliver that product



→ Agile Methodologies : Scrum, XP, Kanban, Lean

→ Work - In - Progress (WIP) Limit : Tasks are limited to what the team can actually handle during a certain amount of time.

→ Flow : A core principle of kanban that aims to maximize efficiency.

→ Kanban : It measures the work cycle being completed through the principle of Work in Progress

- Provides transparent visual feedback
- It ensures that the project team only accepts a sustainable amount of in progress work.

→ XP (Extreme Programming)

- Aims to improve product quality and the ability to respond to changing customer needs.
- Tasks best practices for the development process to extreme levels

→ Lean Methodology : It aims to fully optimize your team's process and output through continuous improvements.

- Define Value : Identify and focus on what customer wants
- Map Value Stream : Map out the steps to production and challenge all unnecessary steps.
- Create Flow : Ensure the product flows through the value stream efficiently, eliminating waste throughout the cycle.
- Establish Pull : Ensure customer is pulling on the product through this stream by asking for features and incremental delivery
- Pursue Perfection : Push the team to continuously improve the first four process steps.

→ Scrum Guide : A main source of truth for scrum teams and is available for free at [scrumguides.org](https://www.scrumguides.org)

→ Agile is the foundation philosophy and mindset, while scrum is a framework that materializes or brings that philosophy to life.

→ Scrum : A framework for developing, delivering and sustaining complex products.

- It has 3 pillars
 - Transparency : Make the most significant aspects of our work visible to those responsible for the outcome.
 - Inspection : Conducting timely checks towards the outcome at a sprint goal to detect undesirable variances.
 - Adoption : Adjusting project, product or processes to minimize any further deviation or issues.
- It has 5 values
 - Commitment : Personally committing to achieving the goals of the Scrum team
 - Courage : Scrum team members must have the courage to do the right and work on tough problems.
 - Focus : Everyone focusing on the work of the sprint and the overall goals of the Scrum team.
 - Openness : The Scrum team and its stakeholders agree to be open about all of the work and challenges with performing the work
 - Respect : Team members should respect the opinions skills and independence of their teammates.

→ The scrum master promotes and supports the scrum process by helping everyone understand and implement scrum.

- Coaching team members on agile and scrum practices
- Helping to find ways to manage product backlog effectively
- Facilitating scrum events
- Helping the team remove blockers
- Preventing unhelpful interactions from outside of the team

→ Product backlog : The single authoritative source for things that a team works on to achieve the project goal.

- Product features
- Product requirements
- Activities associated with product deliverables

→ Product backlog : It is a guide and road map of the product.

- It is a living artifact (it can change)
- Owned and adjusted by the product owner
- Prioritized list of features

→ Best backlog best practices : Description, order, value estimation fields are included

- It will ensure project manager to include enough information to meet product owner's vision for user value.

→ User stories : Short, simple descriptions of a feature told from the perspective at the user.

- User stories made of 3 elements
 - User
 - Action
 - Benefit
- Example : As a <user role>, I want this <action> so that I can get this <benefit>.

→ Each user stories should meet six different criteria;

- Independent : It should not be dependent on another story to finish
- Negotiable : There is a room for discussion about this item
- Valuable : User story should deliver value
- Estimable : Definition of done must be clear so task can be estimable
- Small : Each user story should fit within planned sprint

- Testable

→ Product owner is main person responsible for writing user stories, team has responsibility to give feedback on whether the user story is clear and fits investment criteria.

→ Acceptance criteria : The checklist you will use to decide whether the user story is done.

→ Backlog refinement : The act of keeping the backlog described, estimated, and prioritized so that the scrum team can operate effectively.

→ Estimation : How hard to complete task.

- Relative estimation : Instead of trying to determine exactly how long a task will take, we compare the effort that task to another task and that becomes the estimate. There are 2 common relative estimation methods can be used.
 - T-shirt size : Take one item that has a medium workload and then take another task and ask the question of if that was a medium, what size would I give this item be?
 - Story points : Pick an item as anchor item and conduct estimations relative to that item. (1 - easier 2 3 5 8 13 21 34 55 harder - Fibonacci)

Scrum

→ Sprints are main blocks of scrum

→ Scrum guide includes sprint, sprint planning, daily scrum, sprint review, Sprint Retrospective.

→ Sprint time-boxes can vary from 1 week to 4 weeks.

→ Sprint planning : The entire team comes together and meets to confirm how much capacity, meaning time and people are available during this sprint.

→ Definition of Done : Refers to an agreed upon set of items that must be completed before a user story or backlog item can be considered complete.

→ A key deliverable of the sprint planning event is the sprint backlog.

→ Sprint backlog : The set of product backlog items that are identified for completion during the upcoming sprint.

→ Daily scrum (Stand-up) : Time for the scrum team to synchronize and prioritize activities for the day (15 minutes - same time - same place - everyday) Every member should answer these questions.

- What did I do yesterday?
- What will I do today?
- Do I notice any impediment?

→ Scrum guide says daily scrum should be done everyday but you may find other frequency that may work for your team.

→ Sprint reviews : Another event or closing sprint. It is a meeting with the entire scrum team where the product is demonstrated in order to determine which aspects are finished and which aren't

- Explanation of which items should be considered done in the product backlog
- Demonstrate and inspect the product
- It should not be more than 4 hours

→ Product Increment : What is produced after a given sprint (achievement)

→ Release / Releasable : When the team has developed a minimum viable product, which has a set of implemented features or requirements.

→ Minimum Viable Product : Version of a product with just enough features to satisfy early customers.

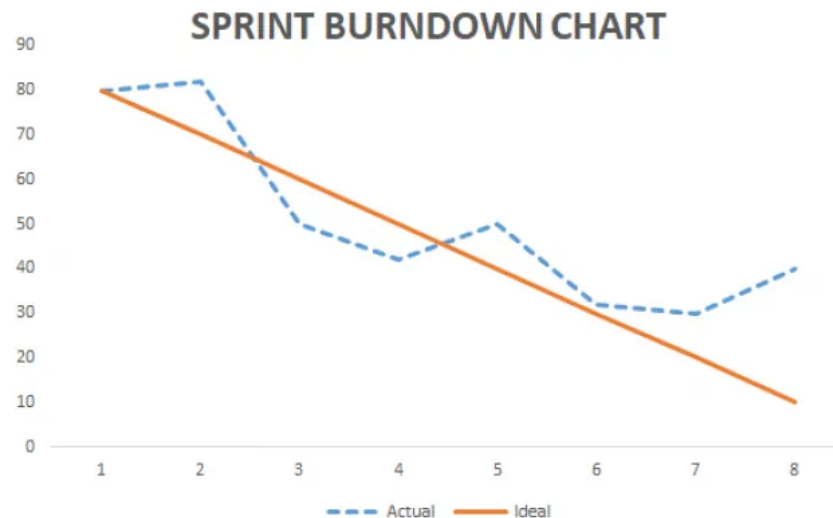
→ Sprint retrospective : An essential meeting of up to 3 hours for the scrum team to take a step back, reflect, and identify improvements about how to work together as a team.

- What is working or not working for the team regarding the people, process, and the tools?
- What improvements are worth exploring in the next Sprint?
- What improvements were put in place for the last sprint? Were they helpful or not? why?

→ Key measures for successful sprint retrospective

- Blameless
- Participation encourage
- Balance negative and positive question
- Search for the best practices as project manager

→ Burn-down chart : Measures time againts the amount of work done and amount of work remaining



→ Velocity : The measure of how many points the team burns down task in a given sprint.

- There is no such thing as good or bad velocity
- Don't use velocity as performance metric
- For average velocity, you may take last 3 sprints

→ The end product of the project is what provides value to the user.

→ Value can mean different things for each customers based on what they expect the product to accomplish.

→ Value-driven delivery means you and your team are focused on delivering a product of high value.

→ Agile directs team focus to be about the product and ensures that the process for producing the product supports the goal of delivering value.

- How to be focused on value-driven delivery
 - Build right thing : What customer want and needs
 - Building the thing right : Building requested thing

- Run it right : Think about how user will interact

→ One way to help teams make sure they are staying focused is by following a value road map.

- An agile way of Mapping out the product development process
- It can be used in all type of businesses
- It is a guide that demonstrates
 - Where to go
 - How to get there
 - What to accomplish along the way
- It helps teams explain the vision of product
- It is used to identify important milestones

→ Value road map generally has 3 elements

1. Product vision : It is a critical step to starting any new scrum project.
 - What the product is
 - How it supports the customer's business strategy
 - Who will use it
2. Product roadmap : It provides high level view of the expected product, it's requirements and an estimated timeline for reaching milestones
 - Ensure the product release dates are only rough estimations
3. Release Plans

→ Product owner is responsible for creating and maintaining roadmap

- High level view of the expected product and it's requirements
- Estimated schedule for reaching milestones.

→ Product owner and project manager work together to develop release plans. Product releases occur when the team has developed a basic working version

of given feature or requirement. It includes approximate date when the team is expected to release and deliver certain features of the customer or users.

- Release plan
- List of backlog items
- Estimated release date
- Other relevant dates that impact a release

→ Common factors resulting in changes to release plan

- Team velocity change
- Change to product scope
- Improving the understanding of how much effort is needed to build certain features.

→ Coaching Agile Team

- Create the playbook and rules with the team
- Take them through new process together
- Always provide feedback as early as possible
- Celebrate and learn together, improve together

→ Challenges that agile comes across

- Value delivery : It is about making sure the team is delivering working solutions frequently.
 - Sign of Value delivery issues
 - Missing expected delivery deadlines
 - Burned out team, sign of exhaustion
 - Too many items in progress
 - Solution to Value delivery issues
 - More demos of the solutions
 - Use more retrospective

- Make sure that everyone understand what "done" means
 - Focus on only few user stories per sprint
- Business collaboration : It is about making sure the developers are collaborating with business people on how to build the right product
 - Sign of Business collaboration issues
 - Team is overwhelmed with critical feedback or change requests
 - Us vs Them mentality between team doing the work and management
 - Solutions to Business collaboration issues
 - Addressing critical feedback and change requests by doing more demo
 - Conducting solution design sprints
 - Ensuring changes to the backlog are introduced only in between sprints.
- Team dynamics and culture : It is about how human beings are complex creatures with a lot of different motivations and style of working.
 - Sign of Team dynamics and culture issues
 - Low on team morale
 - Lots of conflict
 - Low con conflict
 - Solutions to Team dynamics and culture issues
 - Run a team brainstorm session
 - Change up the workflow
 - Take a training class together
 - Retrospective Technique : Six hats cat thinking technique

→ Common Challenges in Coaching a Team

- Managing stable roadmap


- Product Ambition : Product leadership is overly ambitious about what the team can realistically deliver
- Product Assumptions : Too many assumptions can jeopardize the team's success
- Incomplete Implementations of Scrum
 - Loss of clear roles and responsibilities
 - Tempted to skip some events or blend them to save time
 - Not providing the team with the Scrum coaching they need
- Lack of Team Stability
 - Changes in team compositions (You may have onboarding process to solve this problem)

→ Dev-Ops : An organizational and cultural movement that aims to increase software delivery velocity, improve service reliability and build shared ownership among software stakeholders.

→ Business Agility : Incorporating agile principles into the wide sphere of management

References


Oyun ve Uygulama Akademisi

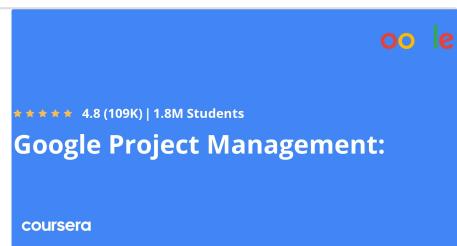
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SerhatKumas - Overview

Computer engineering student who loves coding in different fields instead of focusing on a one specific area. - SerhatKumas

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