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# AGILE

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# WHAT IS AGILE?

# AGILE

- Agile methodology is an alternative to traditional project management, typically used in software development
- It helps teams respond to unpredictability through incremental, iterative work, known as *sprints*

# THE 12 PRINCIPLES OF AGILE SOFTWARE

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1 - Our highest priority is to satisfy the customer through the early and continuous delivery of valuable software

2 - Welcome changing requirements, even late in development. Agile processes harness change for the customer's competitive advantage

3 - Deliver working software frequently, from a couple of weeks to a couple of months, with a preference to the shorter timescale

# THE 12 PRINCIPLES OF AGILE SOFTWARE

- 4 - The most efficient and effective method of conveying information to and within a development team is a face-to-face conversation
- 5 - Business people and developers must work together daily throughout the project
- 6 - Build projects around motivated individuals. Give them the environment and support they need, and trust them to get the job done

# THE 12 PRINCIPLES OF AGILE SOFTWARE

- 7 - Working software is the primary measure of progress
- 8 - Agile processes promote sustainable development. The sponsors, developers, and users should be able to maintain a constant pace indefinitely
- 9 - Continuous attention to technical excellence and good design enhances agility

# THE 12 PRINCIPLES OF AGILE SOFTWARE

- 10 - Simplicity - the art of maximizing the amount of work not done - is essential
- 11 - The best architectures, requirements, and designs emerge from self-organizing teams
- 12 - At regular intervals, the team reflects on how to become more effective, then tunes and adjusts its behavior accordingly

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# SCRUM

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# SCRUM

- Scrum is perhaps one of the most popular agile methodologies
- It uses iterative, incremental practices
- It increases productivity by focusing on building features that the customer really needs



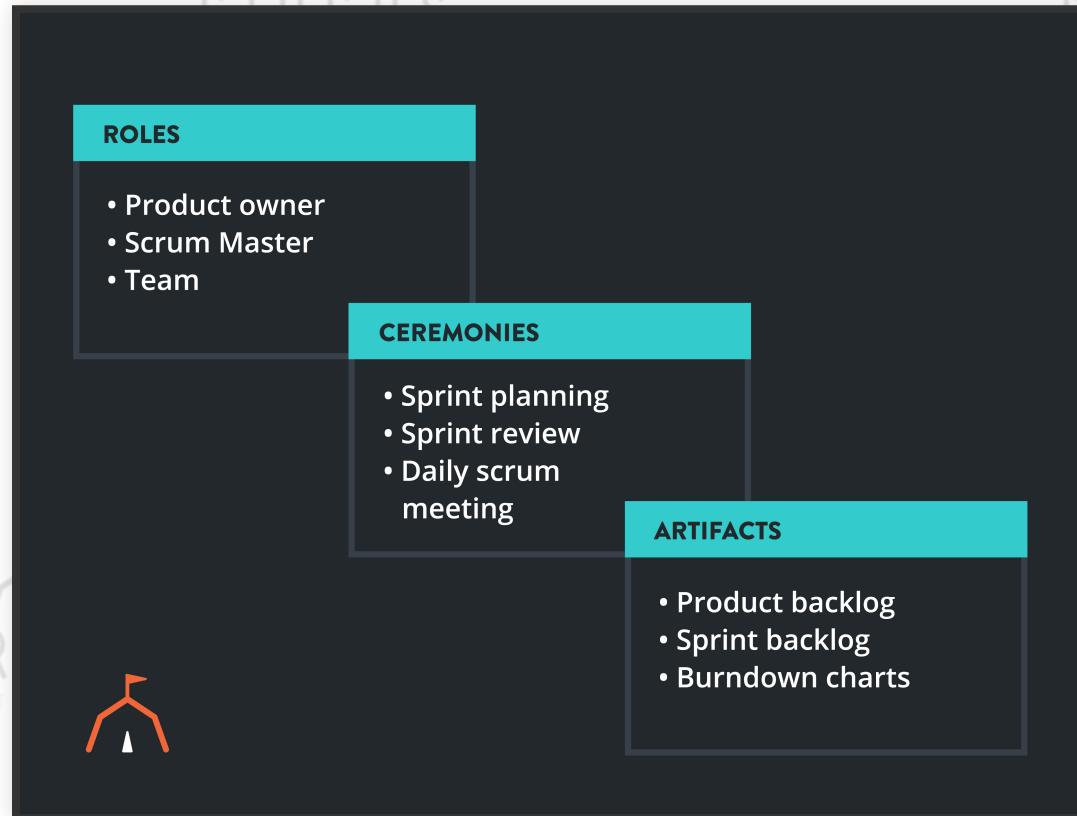
# WATERFALL



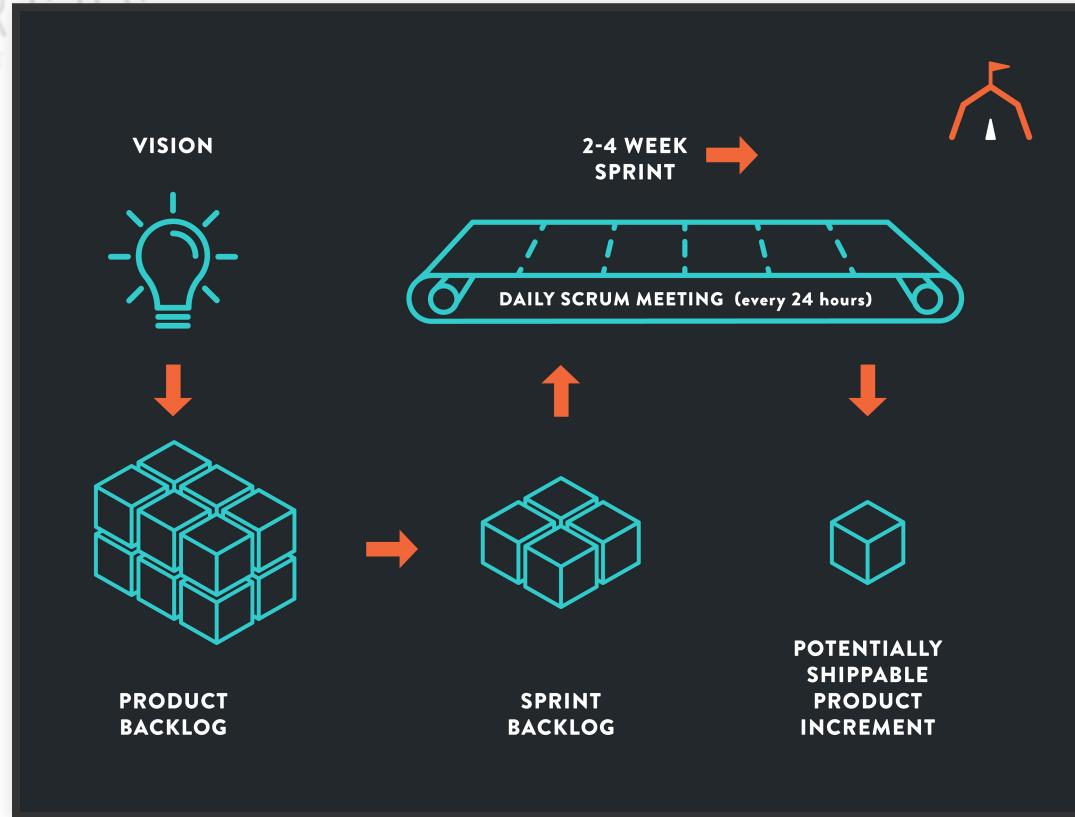
# WATERFALL VS SCRUM

- Using a waterfall process (as opposed to an agile one) involves writing down everything that is necessary for a project to the fullest extent possible and then building precisely that
- Using a scrum process is broken up into feedback loops so that problems can be identified and fixed along the way and a minimum amount of work and time is wasted

# SCRUM FRAMEWORK



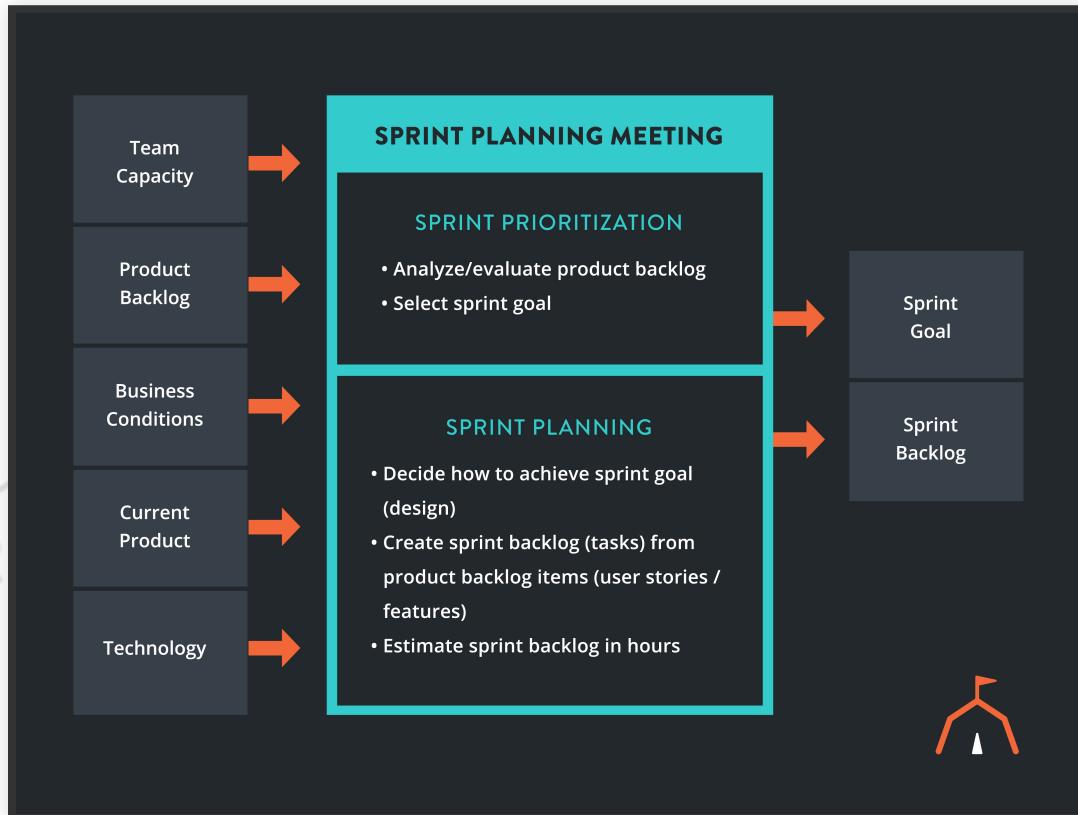
# SCRUM PROCESS



# SCRUM ROLES

- **Product Owner**
  - Possibly a product manager or project sponsor
  - They decide features, release date(s), and prioritization, \$\$\$
- **Scrum Master**
  - Typically a project manager or team leader
  - Responsible for enacting Scrum values and practices
  - They keep the team productive
- **Project Team**
  - 5-10 members
  - Teams are self-organizing
  - Membership should change only between sprints

# SPRINT PLANNING MEETING



# DAILY SCRUM MEETING

- These are daily meetings that you will have with your team, often called stand-ups
- Ideally, the meetings should never exceed 15 minutes
- They are not for problem-solving
- They are designed to ask three questions, which each team member will answer:
  1. What did you do yesterday?
  2. What will you do today?
  3. What obstacles are in your way?

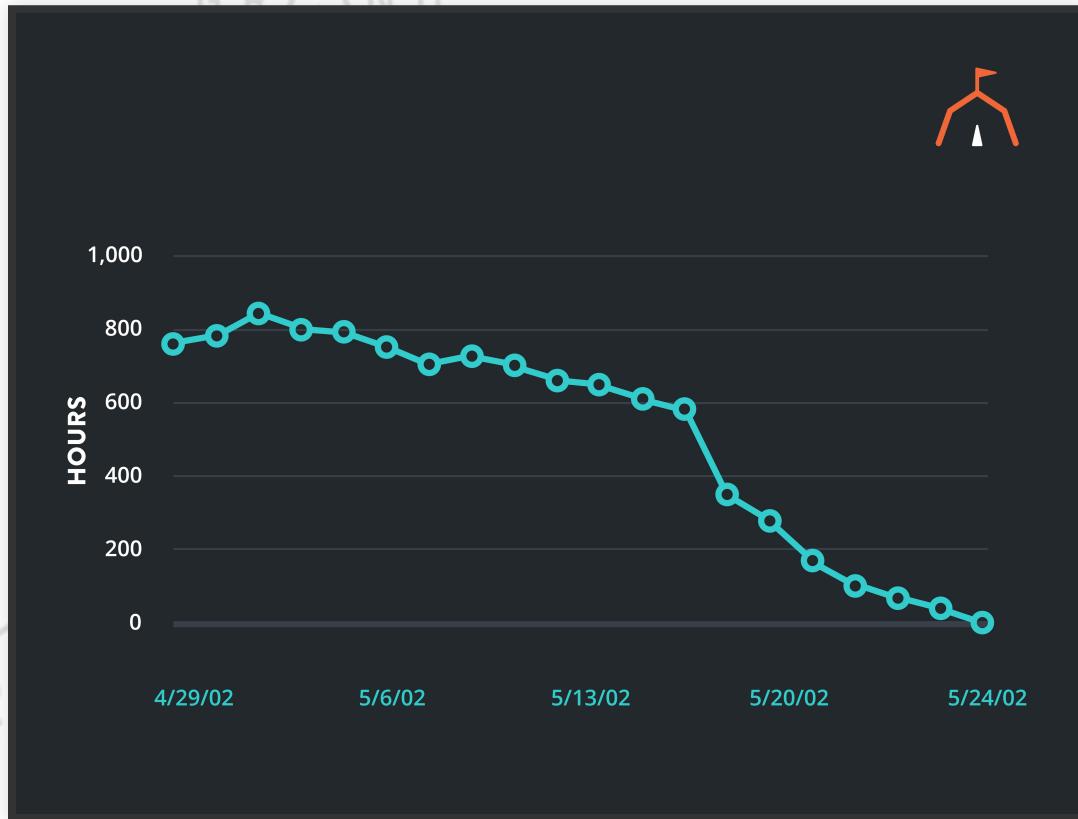
# SPRINT BACKLOG

- This is used to keep your tasks organized.
- Estimated work remaining is updated daily
- Any team member can add, delete, or change the sprint backlog
- If work is unclear, define a sprint backlog item with a more substantial amount of time and break it down later
- Update work remaining as more becomes known

# SPRINT BURNDOWN CHART

- A display of what work has been completed and what is left to complete
- One for each developer or work item
- Updated every day
- Make best guess about hours/points completed each day

# SAMPLE BURNDOWN CHART



# THE SPRINT REVIEW

- Team presents what it accomplished during the sprint
- Typically takes the form of a demo of new features or underlying architecture
- Informal - 2 hour prep time rule, no slides
- The whole team participates
- Invite the world

# RECAP

- Agile and SCRUM definitions
- The 12 Agile principles
- Scrum roles, process, and how to conduct the daily meetings
- What is a Sprint backlog
- What is the Sprint burndown chart