

What is Agile

A brief overview of some terms you will hear while developing software in industry

Please sit with your project 3 teams

If you are going solo, join up with a team for the rest of the presentation

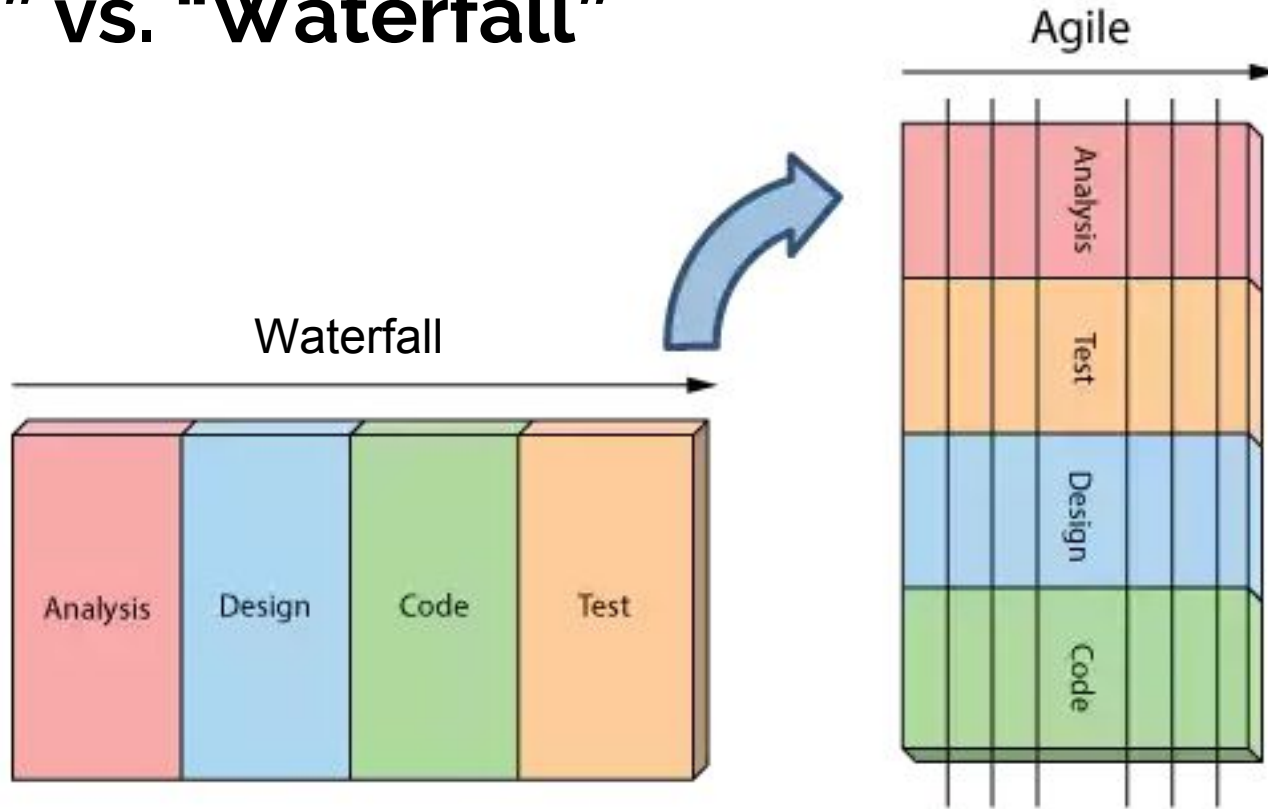
Agile is: **A way to move fast in environments of uncertainty**

Types of uncertainty:

- Unknown requirements
- Unknown funding amounts
- Unknown product market fit

Allows you to **frequently reassess** current assumptions and **course correct** when necessary

“Agile” vs. “Waterfall”



Agile Is: **A methodology for Project Mgmt.**

Tools

- **User Stories**
 - Focus on the end user

- **Sprints**
 - How long do we work

- **Kanban Boards**
 - To do / in progress / Done

Sprint Process

- **Sprint planning**
 - What do we work on

- **Daily Standup**
 - Status Reporting

- **Retrospectives**
 - Continuous Improvement

What is a **User Story**

A way to write a requirement with the user in mind. Does not dictate any technical requirements, focuses on **user value**.

- **As a** { USER TYPE },
 - **I can** { ACTION },
 - **so I can** { ACHIEVE VALUE }.

User Story Template

Example story:

- **As an** admin user, **I can** run daily spend reports, **so I can** view details of my account spending history.

You try (5 min): Writing user stories

- **As a** { USER TYPE },
 - **I can** { ACTION },
 - **so I can** { ACHIEVE VALUE }.

User Story Template

Try writing a user story or two that is relevant to your project. Use the template above for guidance. Be prepared to **share**

Remember: the story should be small enough to accomplish within a max of 1 **week**, and should have **acceptance criteria**

What are **Story Points**?

- A way for developers to **estimate** how long a particular story will take to complete
- Points represent **relative estimates** of difficulty
- **Estimating is one of the hardest things developers have to do.**
 - But estimates are **not set in stone**, and can change as more information is learned

What is **Planning Poker**?

- A way to perform group estimates of stories
- Generally estimated on a fibonacci scale:
 - 1 2 3 5 8 13 21
- **Stages of Estimation:**
 - Review the story as a group
 - Estimate all at once (hold up fingers)
 - Discuss outliers, come to final estimate

You try (10 min): Planning Poker

Estimate **as a group** the **user story** you created from the first activity using **planning poker**.

Stages of Estimation:

- Review the story as a group
- Estimate all at once (hold up fingers)
- Discuss outliers, come to final estimate

Planning Poker:
1 2 3 5 8 13 21

Make sure you discuss all of the **acceptance criteria**, and that the user story is **100% clear** to all group members.

What is a **Sprint**

- A period of time during which certain **user stories** are worked on
- Most often in periods of **2 weeks**.

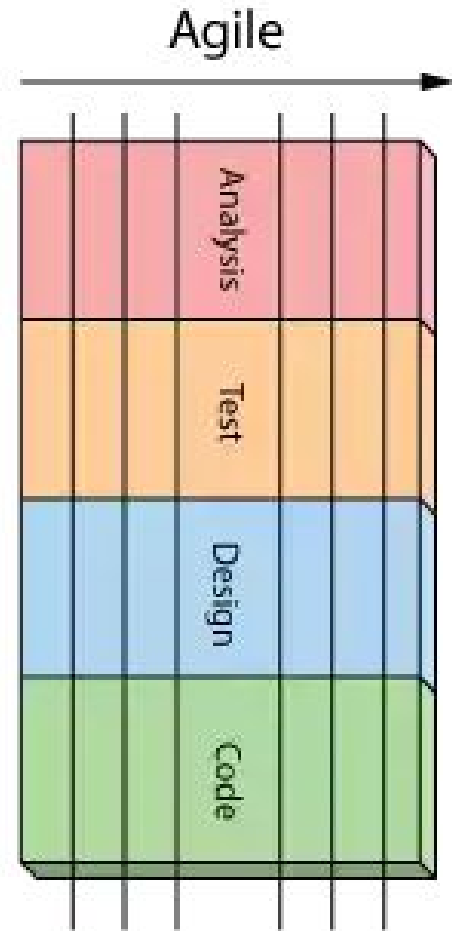
3 components:

- Sprint Planning
- Daily Standups
- Sprint Retrospectives

What is a **Sprint**

Each vertical slice through the development process can be considered a sprint

Ideally **customer value** is delivered (and demo'ed) at the end of each sprint!

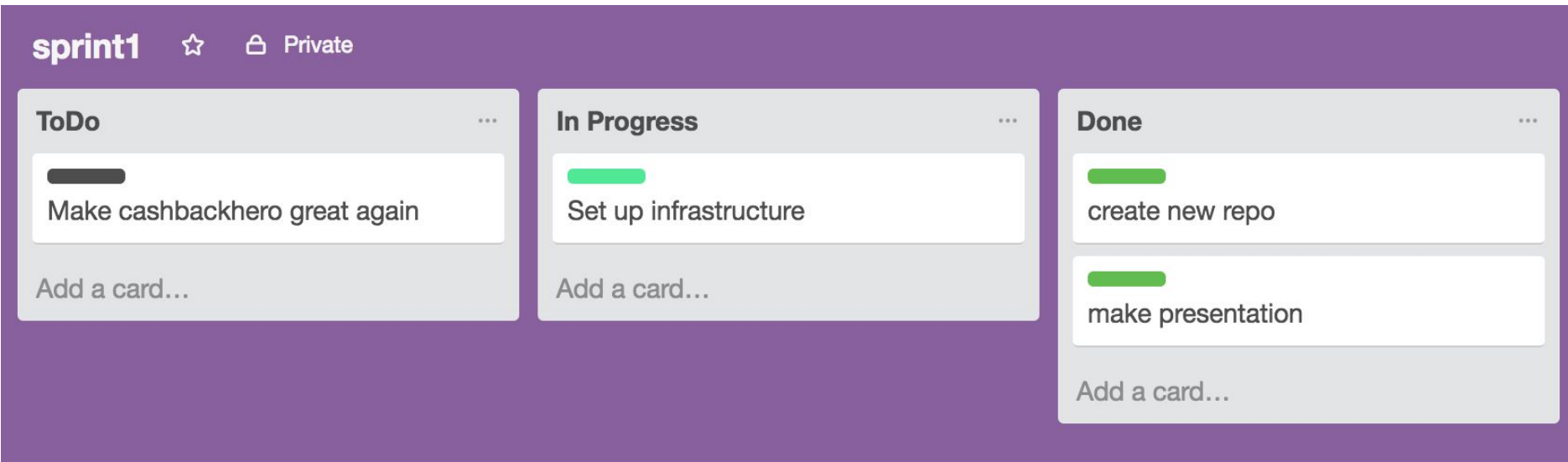


Anatomy of a sprint: **Sprint Planning**

- Happens before the sprint starts, to **pull in** stories to work on and **estimate** those stories for difficulty (using **story points**)
- Sets expectations for the rest of the sprint. You signed up for it!
- **Planning Poker** is often used to estimate as a group

What is a **Kanban Board**

- A visualization tool used to communicate the **state of different stories** during the sprint



Different **Kanban Tools**:

- Jira by Atlassian ← the favorite of engineers
- Trello
- Github Projects ← I like this one too
- Pivotal Tracker
- Post-it Notes!

Discuss with your team
which kind of kanban
system you'll use for
project 3!

Anatomy of a sprint: **Standup (aka Scrum)?**

- A **daily check-in** for the team to communicate status on stories they have been assigned
 - Should take **15 minutes** MAX
 - Use a “Parking Lot” to table items you want to discuss at length with the team **after standup ends**
 - Centered around the **Kanban Board**

- **3 items to communicate:**
 - **Status** on your in-progress stories
 - What you plan on working on for the **rest of the day**
 - Any **blockers** you’ve encountered

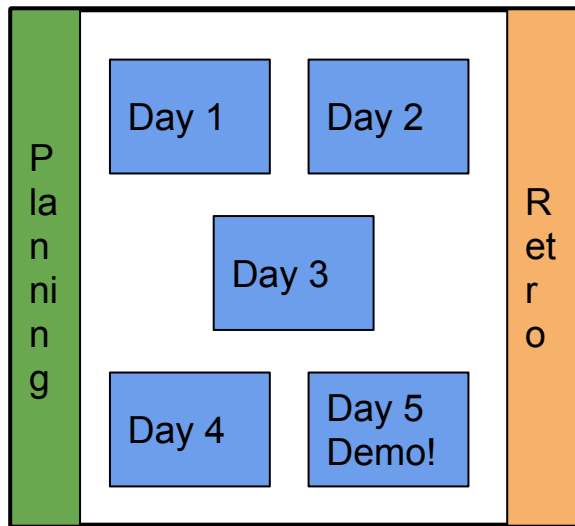
Anatomy of a sprint: **Sprint Retrospective?**

- A way to communicate **what went well**
 - e.g. keep doing
- **What went poorly**
 - e.g. opportunities for Improvement
- Have discussions and determine **who will take the lead** on improvement opportunities

What do a **series of sprints** look like?

Sprint 1:

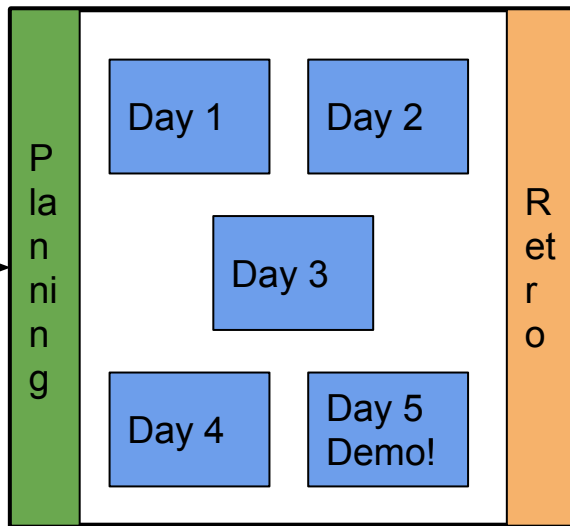
Signed up for **100 pts**



Oops... completed
50 pts

Sprint 2:

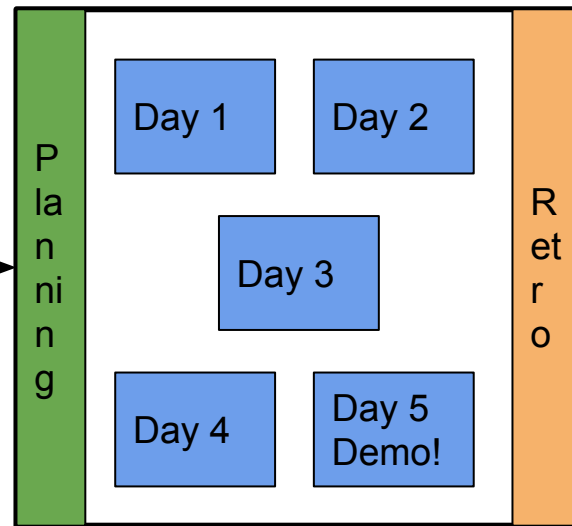
Signed up for **50 pts**



Completed
70 pts

Sprint 3:

Signed up for **80 pts**



Completed
65 pts

What does a **Technical Project Manager** do?

Interface between Product and Engineering

- Shield engineering from too much noise; keep them focused
- Answer questions that engineering has for Product team
- Voice of customer in some cases

Develops project plan based off of developer estimates

- Should be familiar with tech to give best-judgement estimations when developers are busy
- @Google and @Expedia TPMs must have engineering background

Runs sprint meetings

- Works to help unblock engineers / foresee issues ahead of time.

Where to go for project 3?

- **Try using these tools for project 3**
 - Not a requirement, but good practice for industry
 - Practice making Branches for each User Story
- **Maybe switch off being TPM periodically?**
 - Everyone can get practice with what TPM ownership feels like
- **Can feel like more overhead...**
 - ...but i've seen the benefits outweigh the set-up cost

Questions?

