



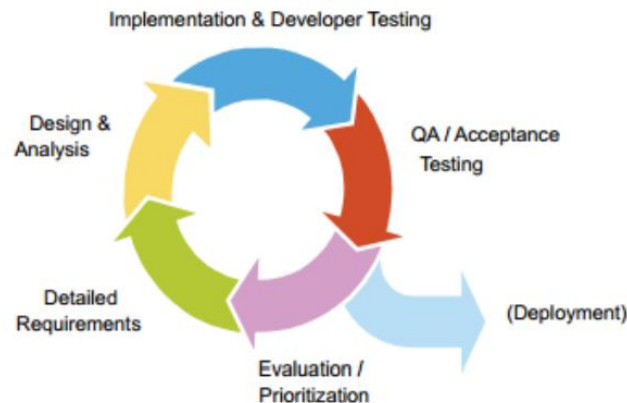
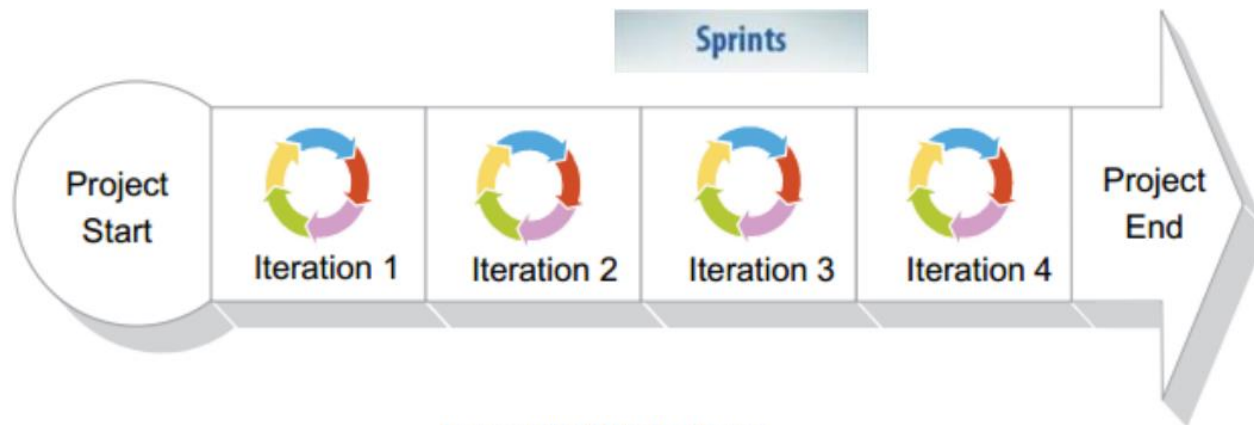
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SCRUM

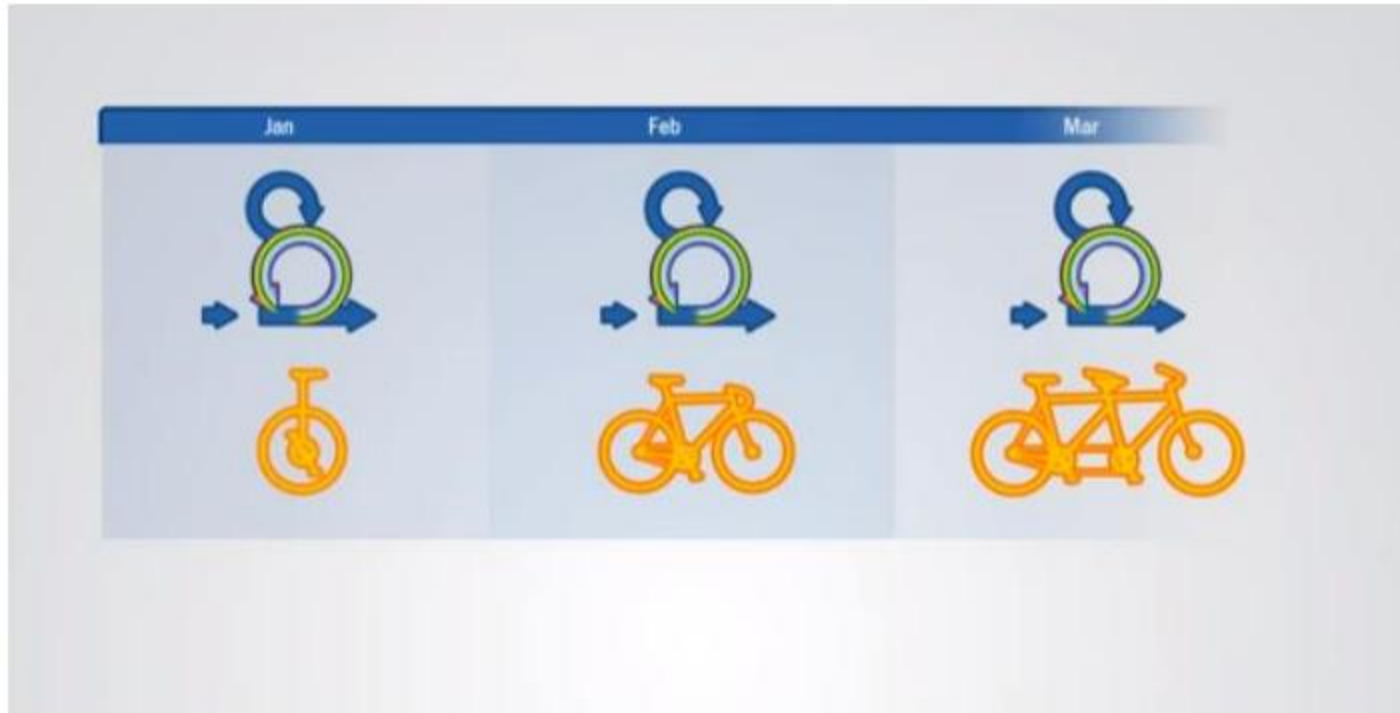
Dr John C Murray
21st October 2016

What is SCRUM?

- An agile methodology



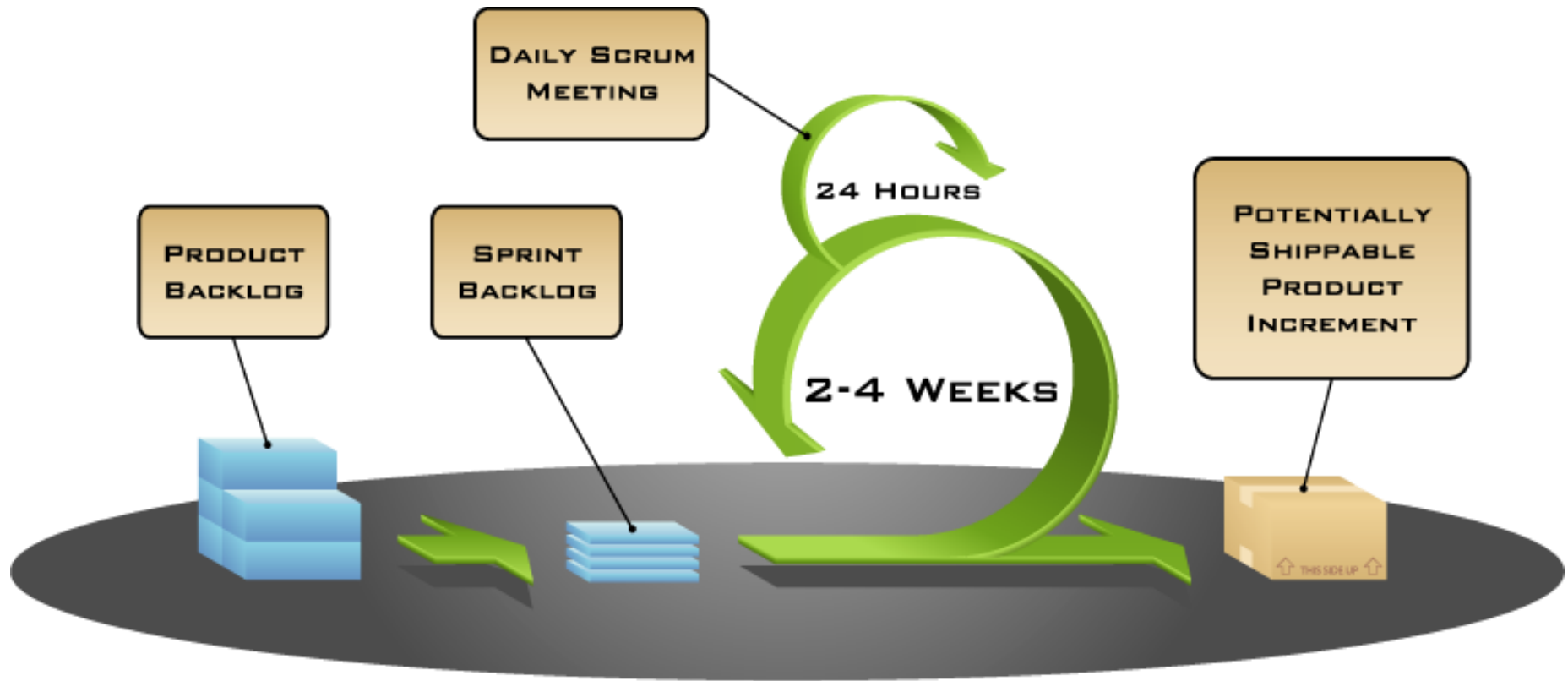
What is SCRUM?



SCRUM Sprints

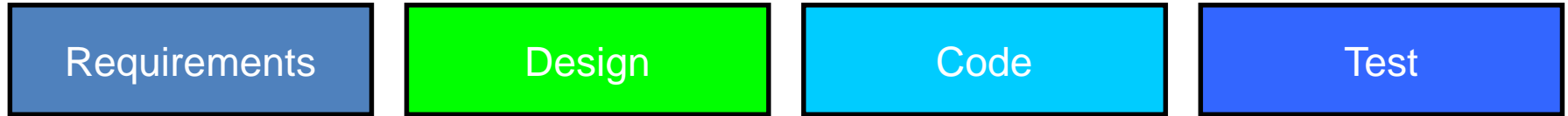
- SCRUM projects make progress in a series of **sprints**
 - Similar to XP iterations
 - Typical duration is 2–4 weeks or a calendar month at most
 - Product is designed, coded, and tested during each sprint

SCRUM Cycle



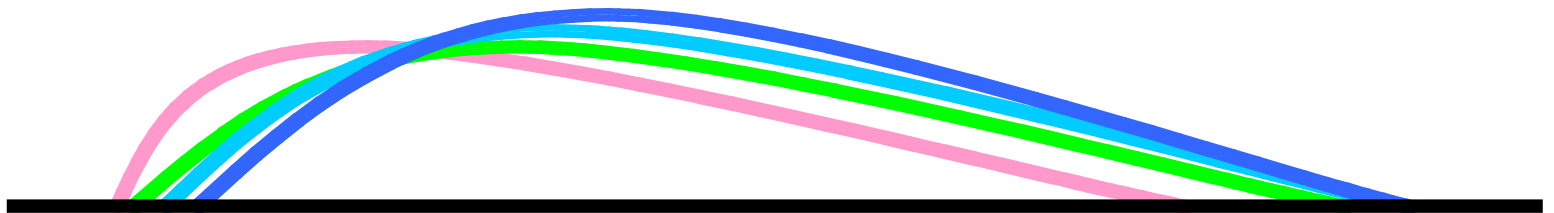
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Sequential vs Overlap



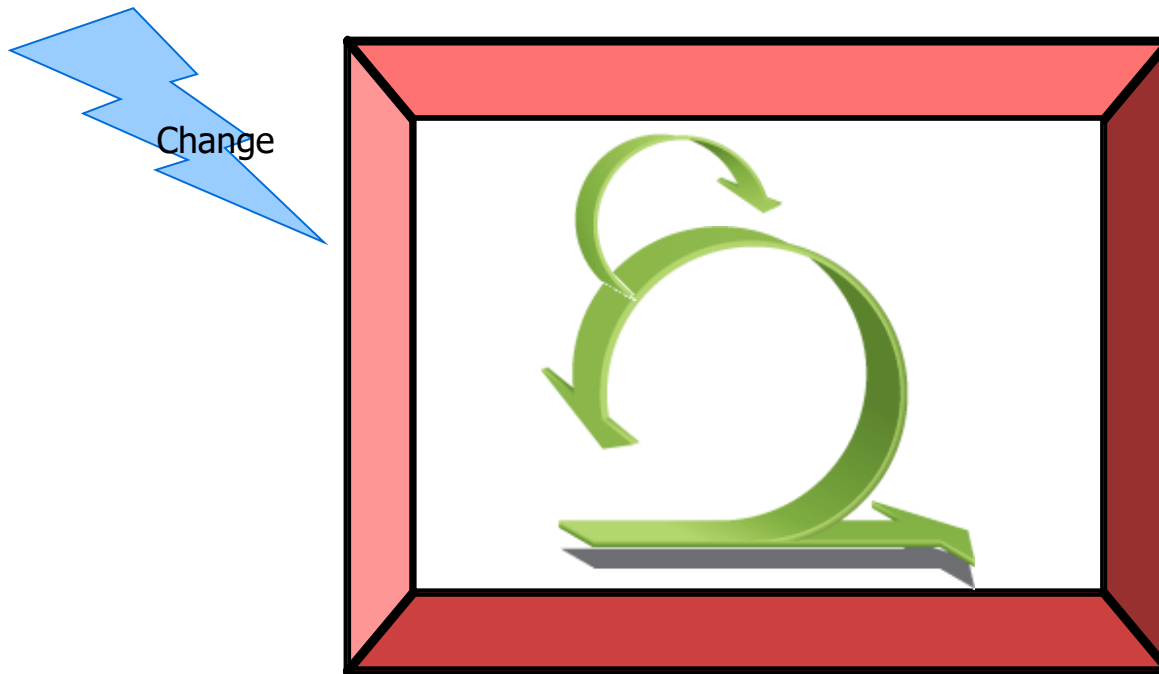
Rather than doing all of one thing
at a time...

...Scrum teams do a little of
everything all the time



Sprints are Locked

- During a Sprint, no changes are allowed
 - When planning Sprint duration, take this into account



SCRUM Framework

Roles

- Product Owner
- Scrum Master
- Team

Ceremonies

- Sprint Planning
- Sprint Review
- Sprint Retrospective
- Daily Scrum Meeting

Artifacts

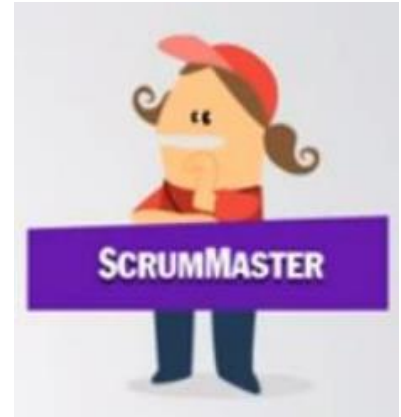
- Product Backlog
- Sprint Backlog
- Burndown Charts

Product Owner



- Define the features of the product
- Decide on release date and content
- Be responsible for the profitability of the product
- Prioritise features according to market value
- Adjust features and priority for every iteration, as needed
- Accept or reject work results

The SCRUM Master



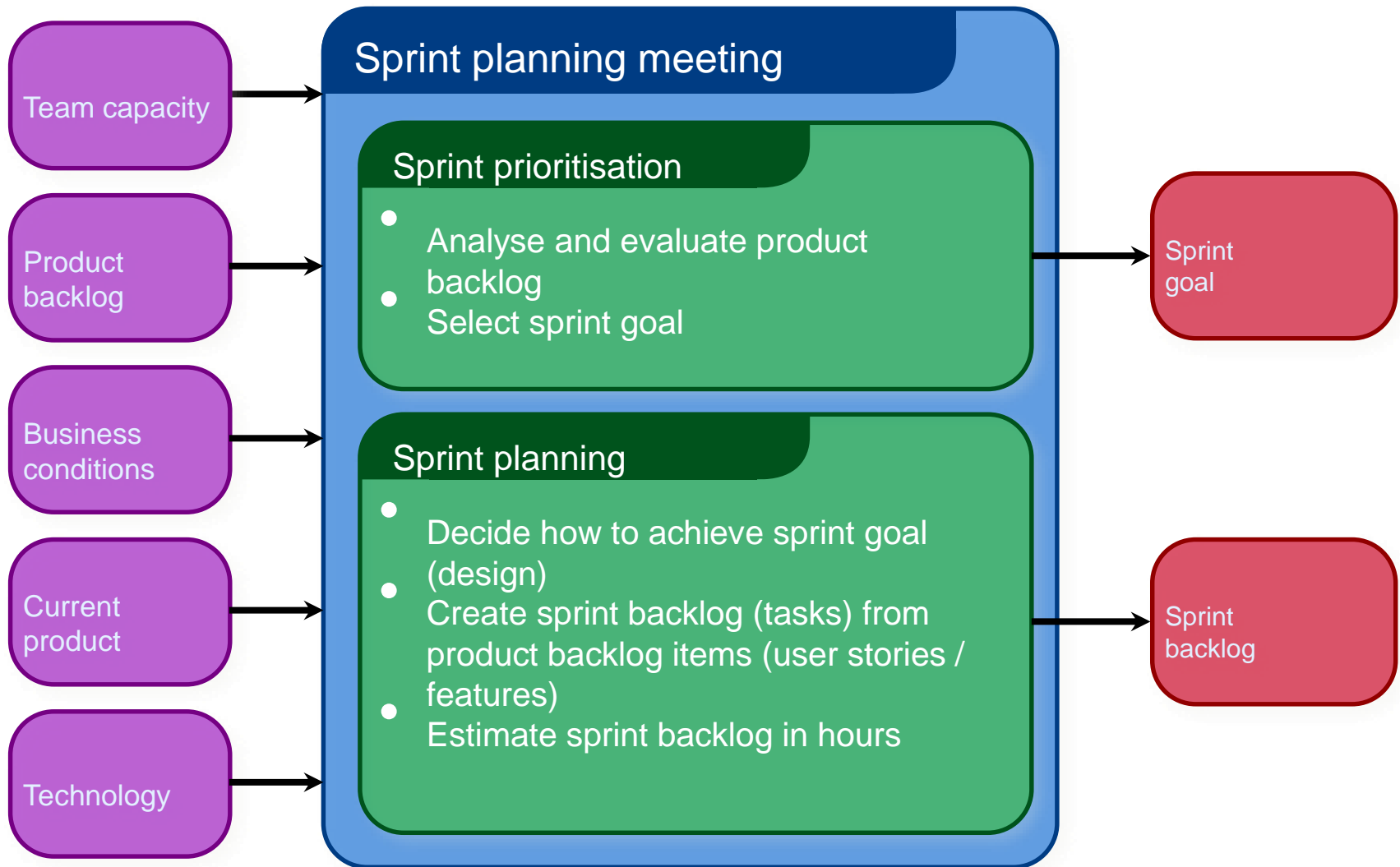
- Represents management to project
- Responsible for enacting SCRUM values and practices
- Ensure that the team is fully functional and productive
- Enable close cooperation across all roles and functions
- Shield the team from external interferences

The Team

- Typically 5-9 people
- Cross-functional:
 - Programmers, testers, user experience designers, etc.
- Members should be full-time
 - May be exceptions (e.g., database administrator)
- Teams are self-organizing
- Membership should change only between sprints



Sprint Planning



Sprint Planning

- Team selects items from the product backlog
 - Only ones they can commit to completing
- Sprint backlog is created
 - Tasks are identified and each is estimated (1-16 hours)
 - Collaboratively, not done alone by the Scrum Master
- High-level design is considered

As a holiday planner,
I want to see photos
of the hotels.

Code the middle tier (8 hours)
Code the user interface (4)
Write test fixtures (4)
Code the foo class (6)
Update performance tests (4)

Daily SCRUM

- Parameters
 - Daily
 - 15-minutes
 - Stand-up
- Not for problem solving
 - Whole world is invited
 - Only team members, ScrumMaster, product owner, can talk
- Helps avoid other unnecessary meetings



Everyone answers 3 questions

1

What did you do yesterday?

2

What will you do today?

3

Is anything in your way?

- These are **not** for the Scrum Master to **check** on people
 - They are commitments in front of **peers**

Product Backlog



- The requirements
 - A list of all desired work on the project
- Ideally expressed such that each item has value to the users or customers of the product
- Prioritised by the product owner
- Reprioritised at the start of each sprint

Product Backlog

Backlog item	Estimate
Allow a guest to make a reservation	3
As a guest, I want to cancel a reservation.	5
As a guest, I want to change the dates of a reservation.	3
As a hotel employee, I can run RevPAR reports (revenue-per-available-room)	8
Improve exception handling	8
...	30
...	50

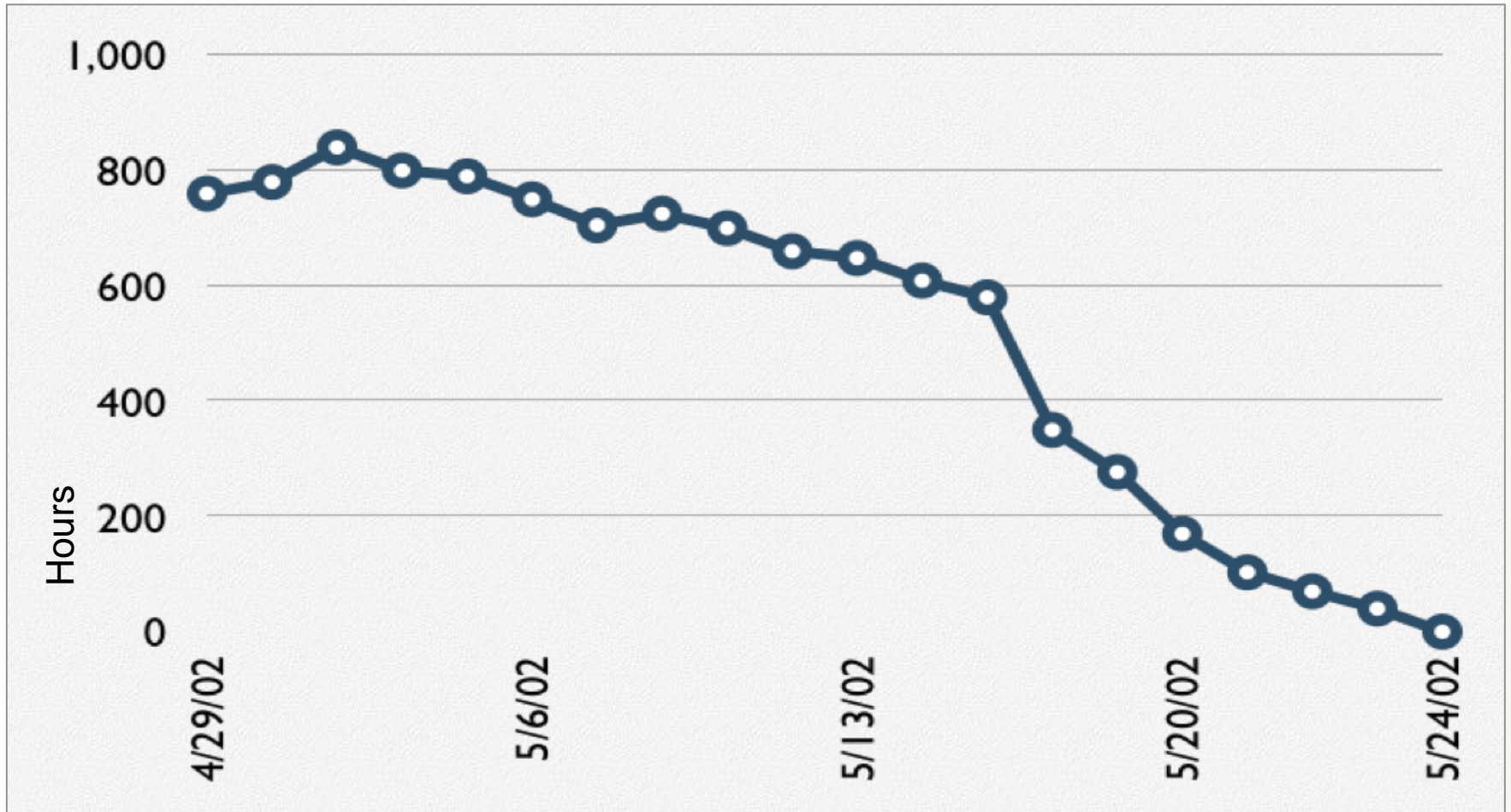
Sprint Backlog

- Individuals sign up for work of their own choosing
 - Work is **never** assigned
- Estimated work remaining is updated daily
- Any team member can add, delete or change the sprint backlog
- Work for the sprint emerges
- If work is unclear, define a sprint backlog item with a larger amount of time and break it down later
- Update work remaining as more becomes known

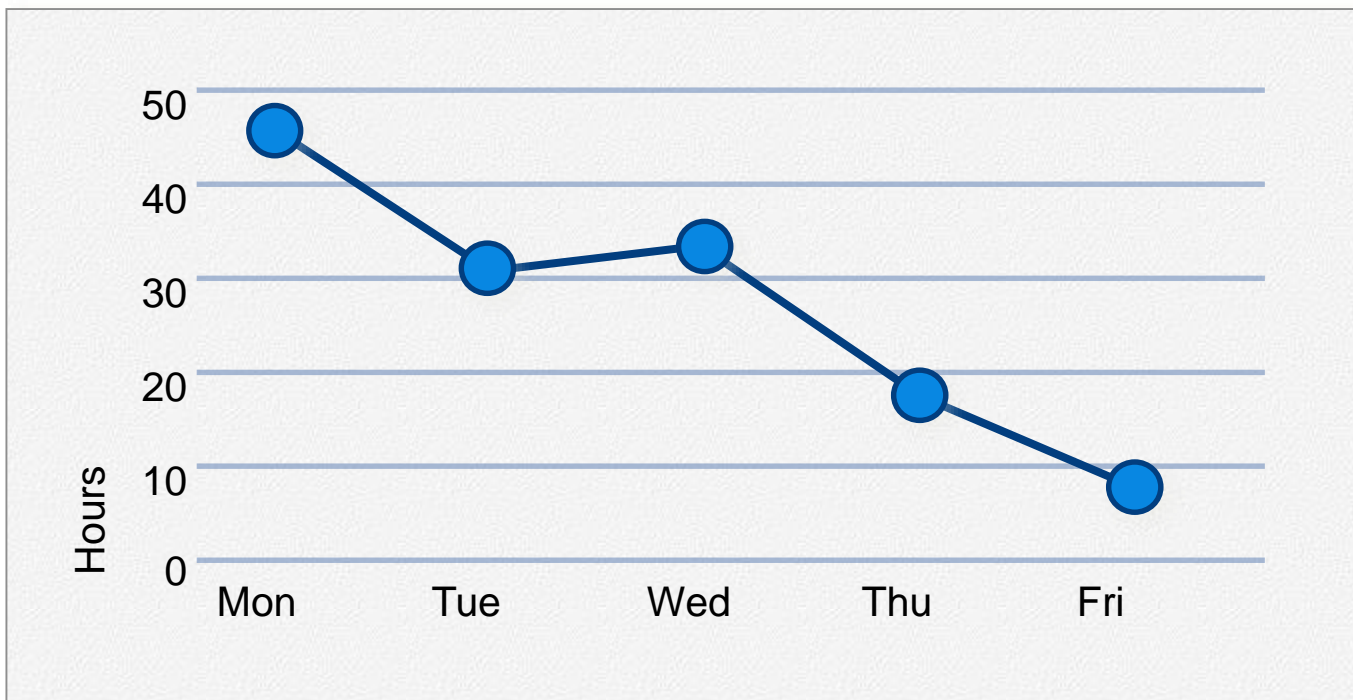
Sprint Backlog

Tasks	Mon	Tues	Wed	Thur	Fri
Code the user interface	8	4	8		
Code the middle tier	16	12	10	4	
Test the middle tier	8	16	16	11	8
Write online help	12				
Write the foo class	8	8	8	8	8
Add error logging			8	4	

Sprint Burndown



Tasks	Mon	Tues	Wed	Thur	Fri
Code the user interface	8	4	8		
Code the middle tier	16	12	10	7	
Test the middle tier	8	16	16	11	8
Write online help	12				



Question

- What is the difference between the Product Backlog and the Sprint Backlog?
- **Answer:** The Product Backlog contains everything we might ever work on, while the Sprint Backlog contains just the things we will work on during **one** Sprint.

Question

- Should the team expect to know all the tasks necessary to complete the committed backlog items during the Sprint Planning Meeting?
- **Answer:** No. According to Agile Project Management with Scrum, only 60% of tasks are likely to be identified during the Sprint Planning Meeting.
 - Other tasks will be discovered during Sprint Execution.

Questions

- What is the longest allowable iteration, or Sprint, in Scrum?
- In Scrum, is it acceptable to postpone testing until another Sprint?

Summary

- We've looked at the Agile Methodology
- Pair Programming
- XP
- SCRUM

Questions

