

Agile Software Development for Developers

Session 6: Sprint Planning

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Review

■ Session 1

- Paradigm and paradigm shift
- Agility: An elephant in the dark
- Agility: A definition
- Agile values, principles, and practices
- ▶ The Cynefin: clear, complicated, complex, chaotic, disorder

■ Session 2

- ▶ Product backlog items: feature (user story), defects, technical work, and knowledge acquisition (spike)
- ▶ User story: title, description, acceptance criteria
- ▶ Questions words: who, what, why
- ▶ User story is something like order

■ Session 3

- ▶ Estimation: what and when
- ▶ Estimation: Basic concepts
- ▶ Estimation: Product backlog estimation concepts

Review

■ Session 4

- ▶ PBI Estimation Units
- ▶ Estimation Scale
- ▶ Planning Poker

■ Session 5

- ▶ Velocity in Physics
- ▶ Velocity for An Agile Team
- ▶ Velocity like Stock Price
- ▶ Yesterday's Weather
- ▶ Release Planning (Fixed Scope)
- ▶ Exercise: Story points are influenced by
 - The Amount of Work
 - Uncertainty and Risk
 - Complexity
 - Definition of Done
- ▶



I'm not a great programmer; I'm just a good programmer
with great habits.

Kent Beck

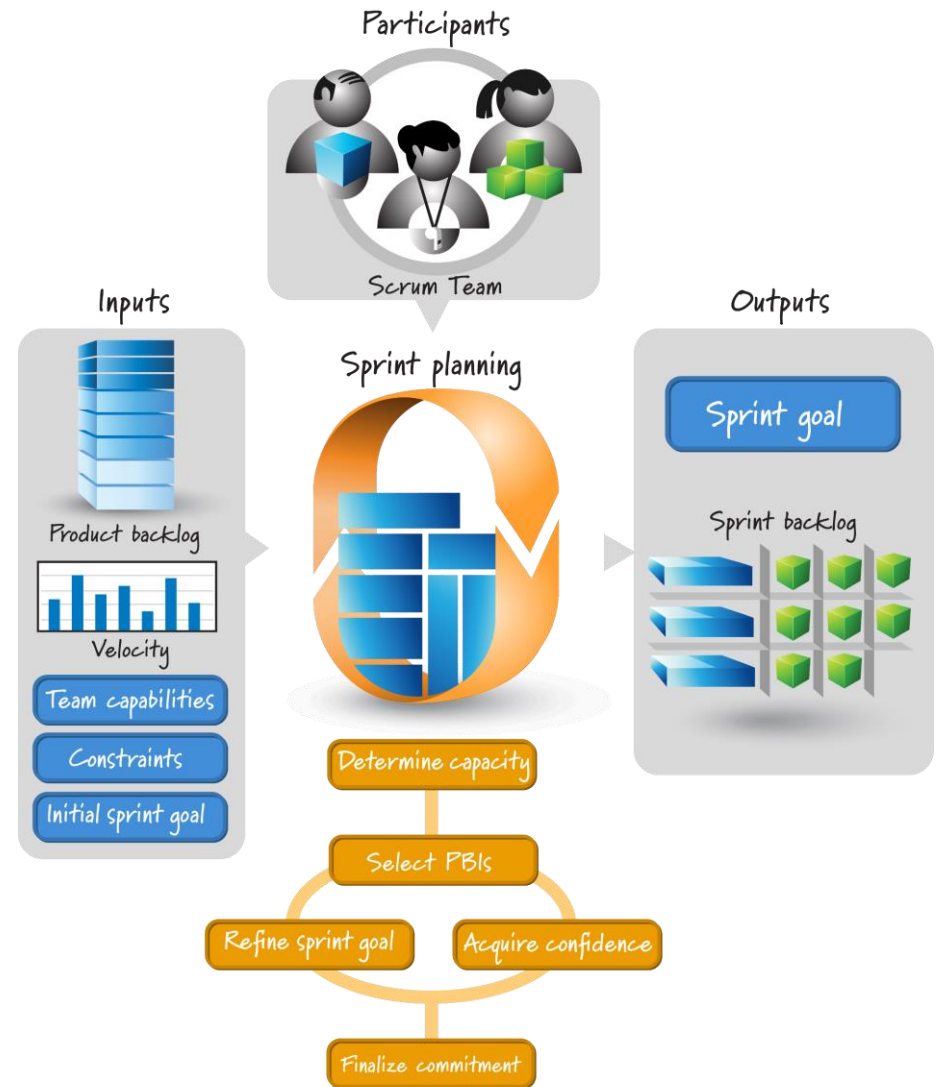
Sprint Planning

Context and Approaches

Sprint Planning: Overview

Sprint Planning answers the following:

- What can be delivered in the Increment resulting from the upcoming Sprint?
- How will the work needed to deliver the Increment be achieved?



Velocity-Driven vs. Capacity-Driven Sprint Planning

Two alternative approaches to sprint planning:

- Velocity-Driven Sprint Planning
- Capacity-Driven Sprint Planning

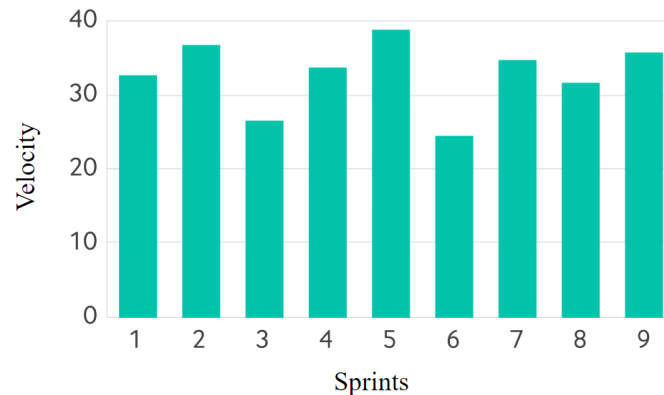
Sprint Planning

Velocity-Driven Sprint Planning

Velocity-Driven vs. Capacity-Driven Sprint Planning

■ Velocity-driven sprint planning

- ▶ a team selects a set of product backlog items whose high-level estimates (usually in story points but possibly in ideal days) equals their **average velocity**.
- ▶ 1. Determine the team's historical average velocity.
- ▶ 2. Select a number of product backlog items equal to that velocity.



- Reference: mountaingoatsoftware.com

Sprint Planning

Capacity-Driven Sprint Planning

Velocity-Driven vs. Capacity-Driven Sprint Planning

- Capacity-driven sprint planning
 - ▶ In capacity-driven sprint planning, a team selects one product backlog item at a time by roughly identifying and estimating the tasks that will be involved and stopping when they feel the sprint is full.



- Reference: mountaingoatsoftware.com

Capacity-Driven Sprint Planning: The Approaches

■ Two-Part Sprint Planning

▶ Part One: What

- the development team determines its capacity to complete work and then forecasts the product backlog items that it believes it can deliver by the end of the sprint.
- If the team believes it can accomplish 20 story points, it will select about 20 story points' worth of work.

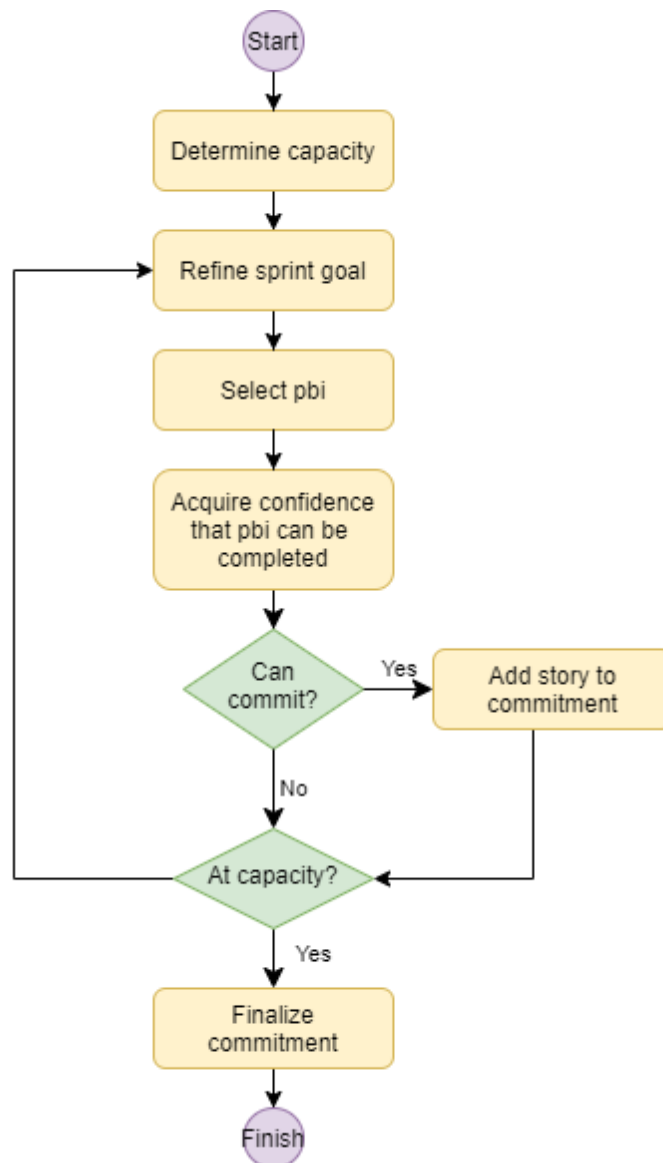
▶ Part Two: How

- The team acquires confidence in its ability to complete the items by creating a plan.
- **Most** teams create the plan by breaking the product backlog items into tasks and then estimating (in hours) the effort required to complete each task.

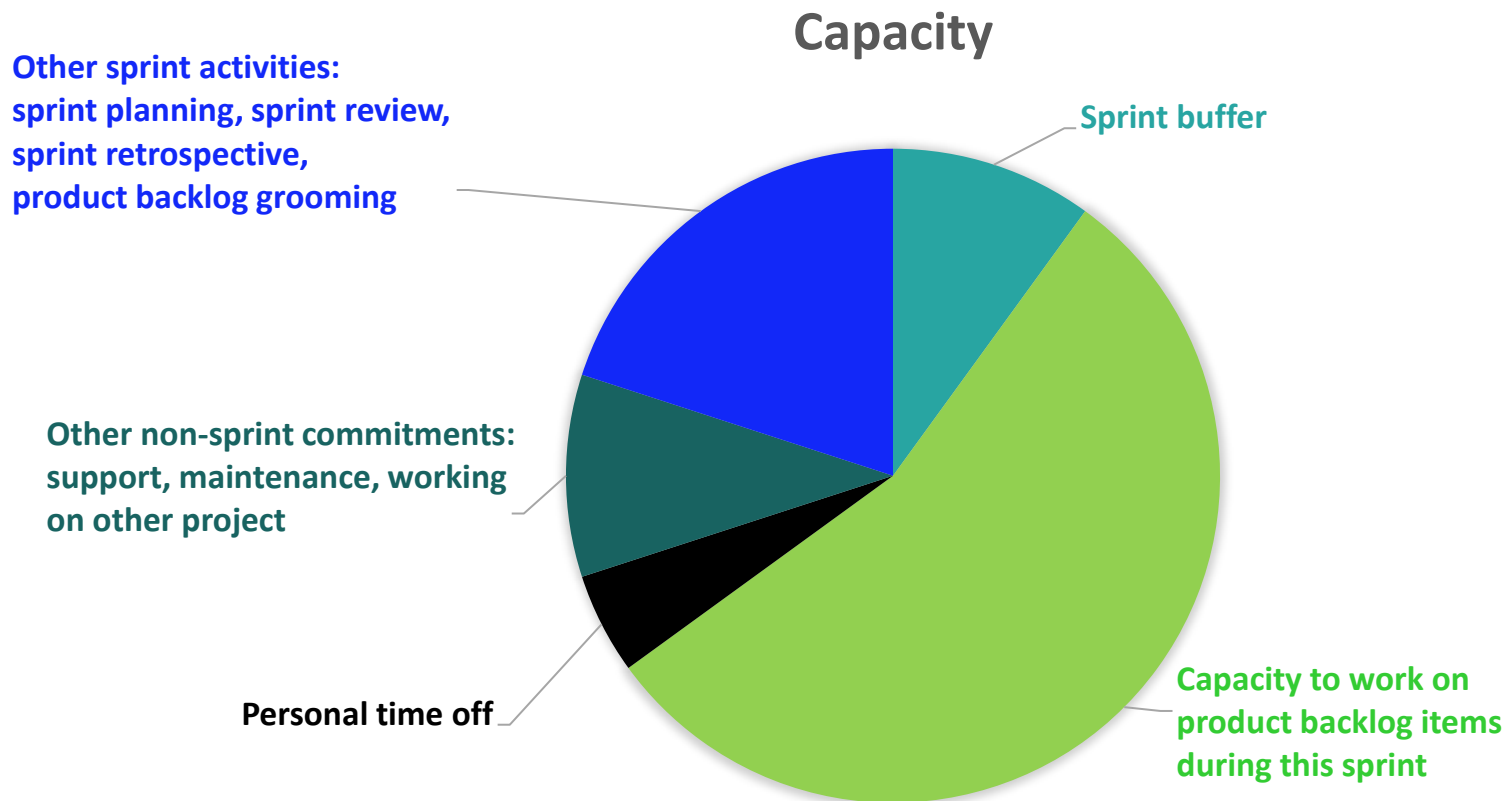
■ One-Part Sprint Planning

▶ Next slide

Capacity-Driven: One-Part Sprint Planning



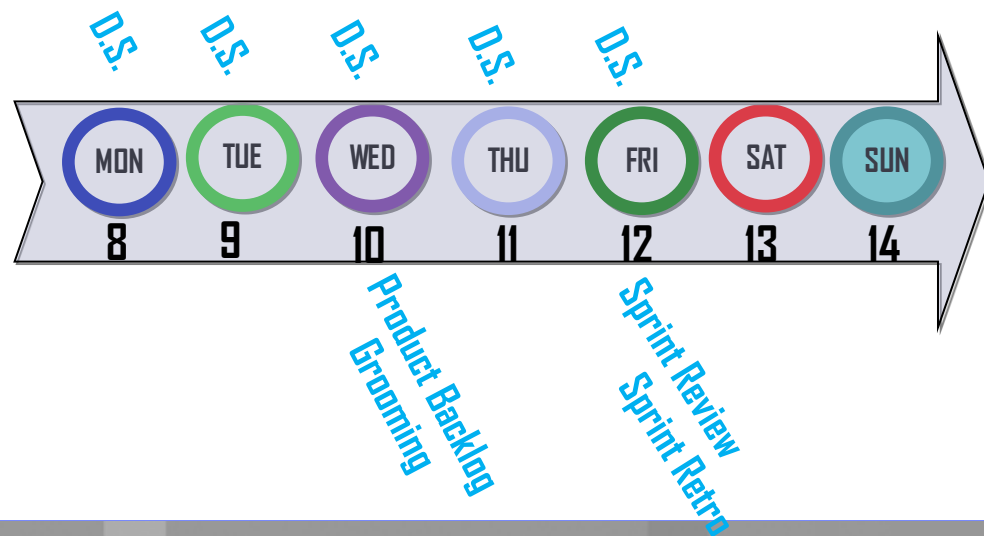
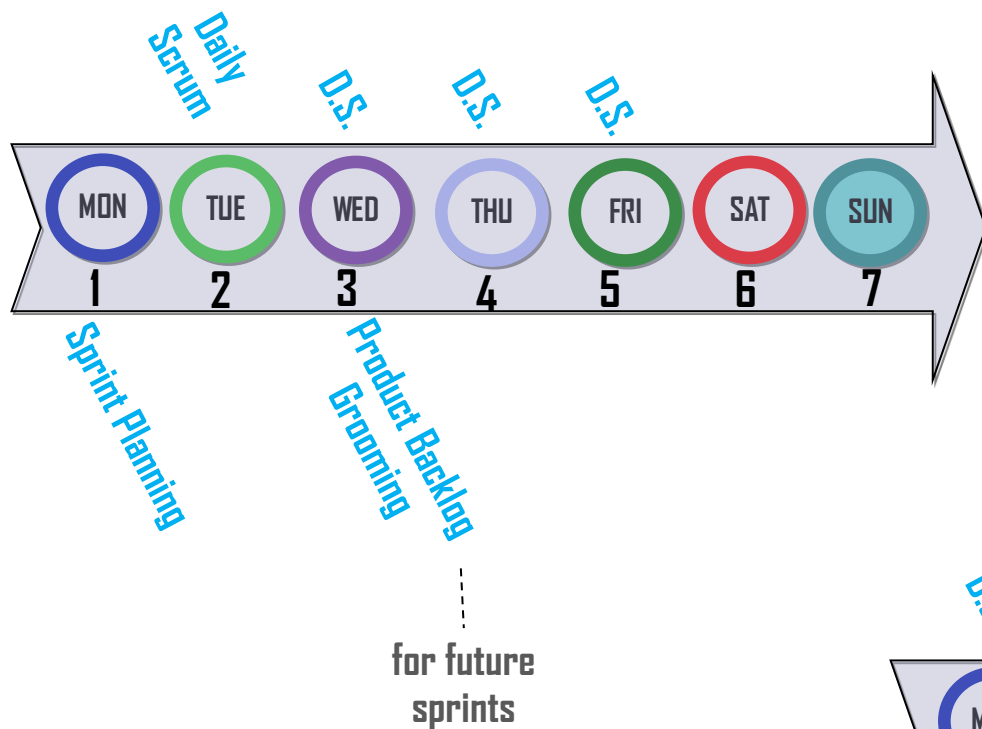
Determine Team Capacity



- Capacity can be measured in
 - ▶ Story Point
 - ▶ **Effort-Hours** (My recommendation)

Time Needed for Sprint Activities

1








Determine Team Capacity (Effort-Hours)

Person	Days Available	Days for Other Scrum Activities	Hours per Day	Available Effort-Hours
Mary	10	2	5-6	40-48
Reza	9	2	2-3	14-21
Mohammad	8	2	4-6	24-36
Yazan	8	2	5-6	30-36
Simon	10	2	4-7	32-56
Total				140-197

Determine Team Capacity: Tools

🔍 Fabrikam Fiber Team ▾ ★ ⚙️

Taskboard Backlog **Capacity** | + Add user 📁 Save ↶ Undo ...

User	Days off	Activity	Capacity per day
 Christie Church	0 days	Unassigned ▾	0
 Cristina Potra	0 days	Unassigned ▾	0
 Jamal Hartnett	0 days	Unassigned ▾	0
 Johnnie McLeod	0 days	Unassigned ▾	0
 Raisa Pokrovskaya	0 days	Unassigned ▾	0
Team days off	0 days	These days off apply to the whole team.	

Create Tasks in Azure DevOps

agile-4-devs Team

Backlog Analytics + New Work Item View as Board Column Options ...

+ -	Order	Work Item Type	Title	State	Effort
	1	Product Backlog Item	sign-up with email	Approved	3
		Task	develop backend	To Do	
		Task	develop UI	To Do	
		Task	test	To Do	
		Task	update user manual	To Do	

NEW TASK *

develop UI

Unassigned 0 comments Add tag Save & Close

State To Do Area agile-4-devs Reason New task Iteration agile-4-devs

Details

Description

Click to add Description

Discussion

Details

Priority 2

Remaining Work 8

Sprint Backlog

🔄 agile-4-devs Team ▾ ☆ 👤

Taskboard Backlog Capacity Analytics | + New Work Item 🔧 Column Options

🔄 Sprint 1 ▾

⤴ Collapse all

To Do 16 h

In Progress

Done

2 sign-up with email

👤 Unassigned 16 h

State ● Approved

R1

3 develop backend

👤 Unassigned 5

State ● To Do

12 develop UI

👤 Unassigned 8

State ● To Do

13 test

👤 Unassigned 1

State ● To Do

14 update user manual

👤 Unassigned 2

State ● To Do



Sprint Planning

Tips

Do We Assign Team Members to Tasks?



Size of Tasks



4 Hours?
10 Hours?
30 Hours?

Sprint Planning: Estimation, Commitment or Guarantee



"Responsibility cannot be assigned; it can only be accepted. If someone tries to give you responsibility, only you can decide if you are responsible or if you aren't."

— Kent Beck

Exercise

Create an Agile Project in Azure DevOps

Steps

- Create a Project
- Add Product Backlog Items
- Groom Product Backlog

Thanks

- Faezeh Eshragh
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- Mohammad Nadi

