Data Analytics Immersive

Data Sprint Overview

Unit: Capstone projects

GENERAL ASSEMBLY

Learning Objectives

In this lesson, we'll:

- **Recap** what scrum is.
- **Give an overview** of the data sprint project.
- **Form** teams.

Any questions?

Agenda

- Recap of Scrum
- The Scenario
- Team Forming
- Wrap Up and Q&A

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Data Sprint Overview

Recap of Scrum

Discussion:

What Is Scrum?

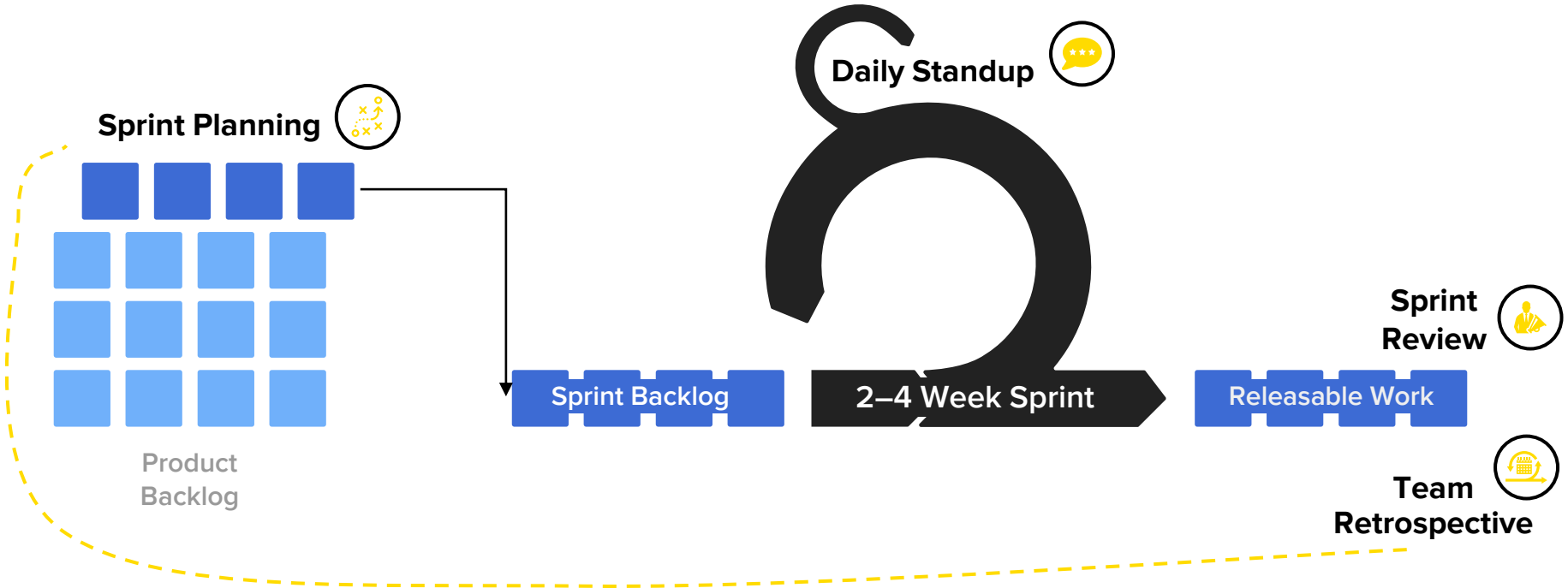
5 minutes

What is scrum?

How does it differ from other agile frameworks?

Source: flickr.com

Recap: Scrum at a Glance



What Is a Sprint?

In agile product development, a sprint is a **set period of time** during which specific work has to be completed and made ready for review.

Source: pixabay.com

Recap: Scrum at a Glance

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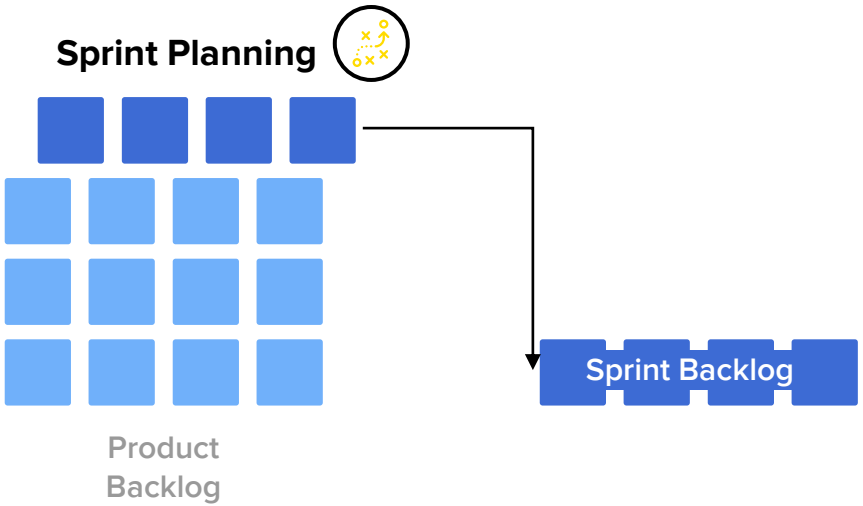

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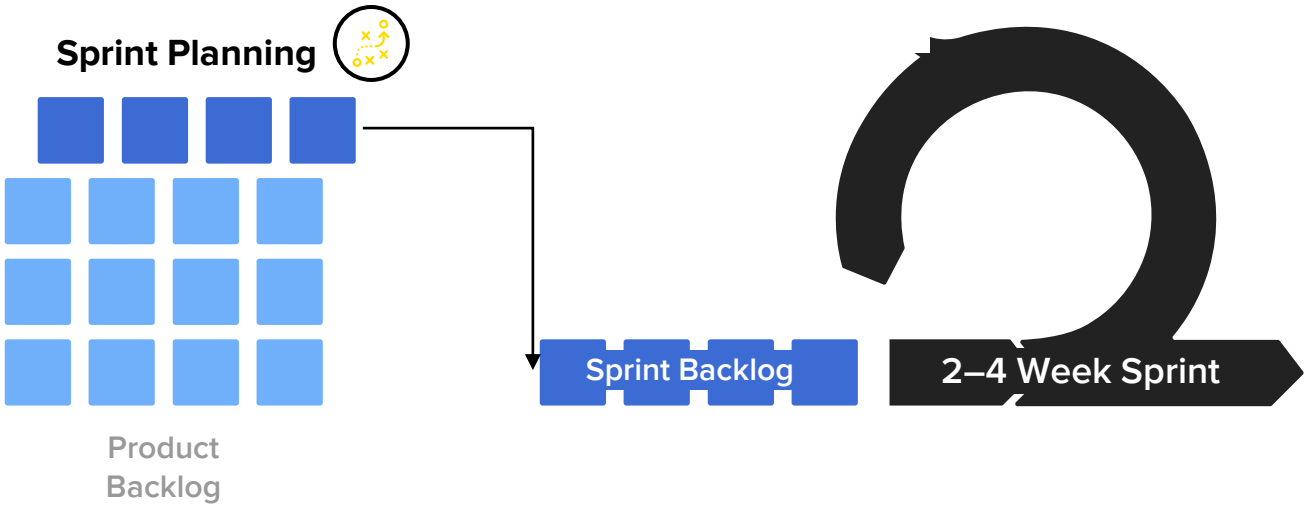

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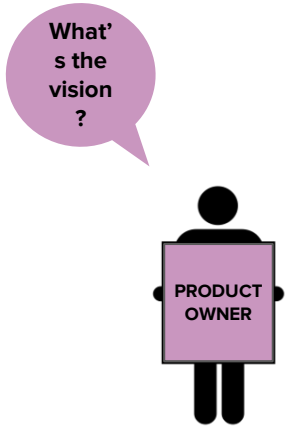

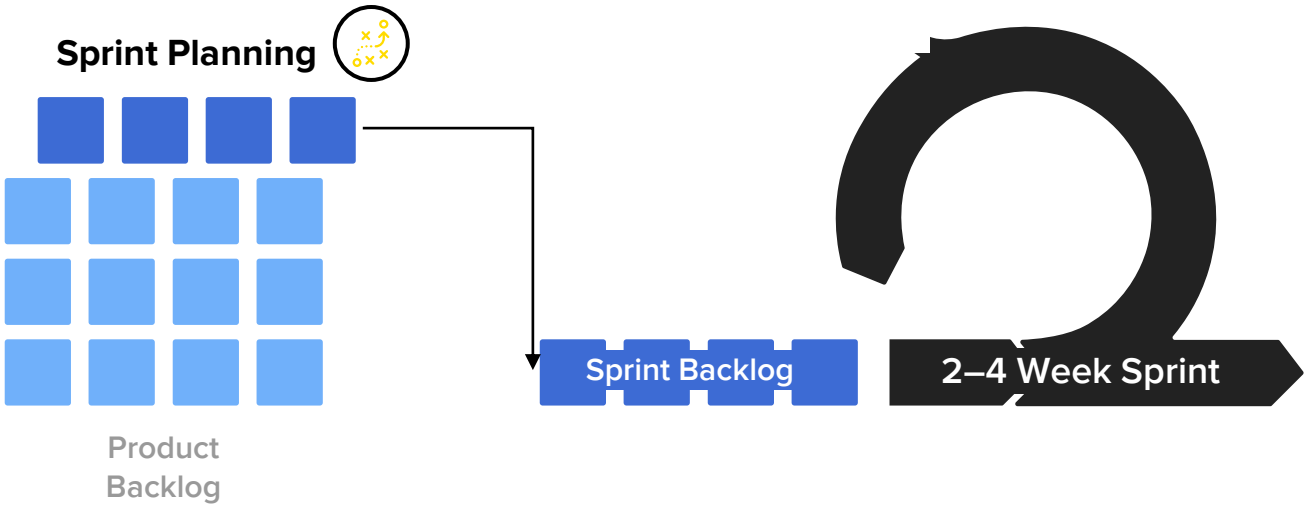

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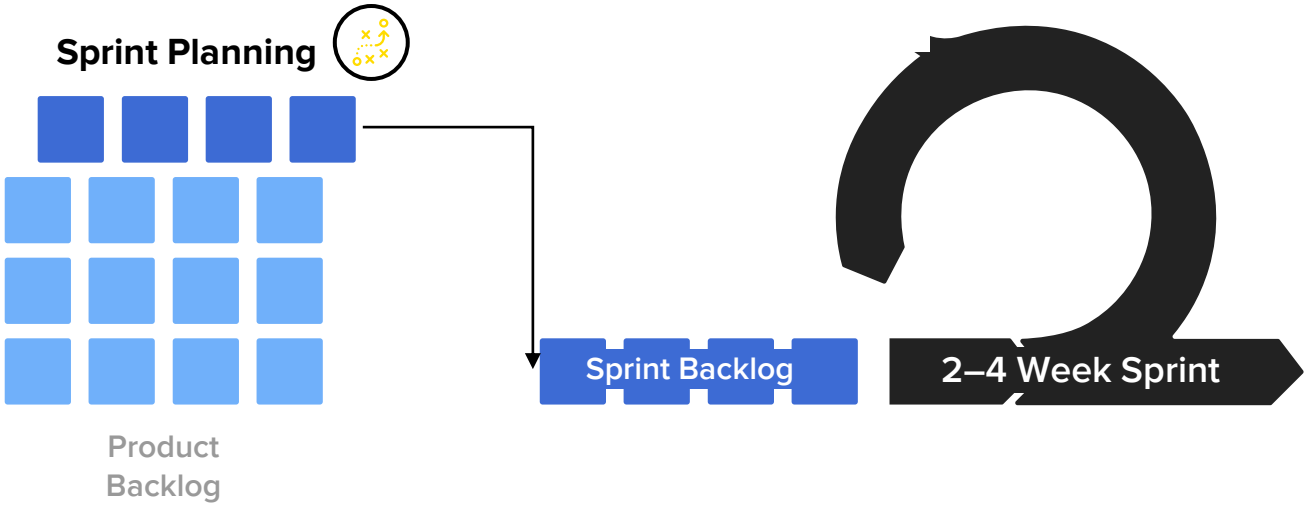

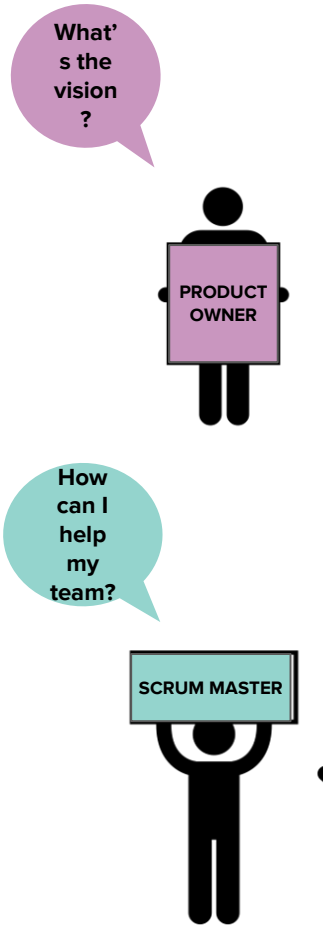

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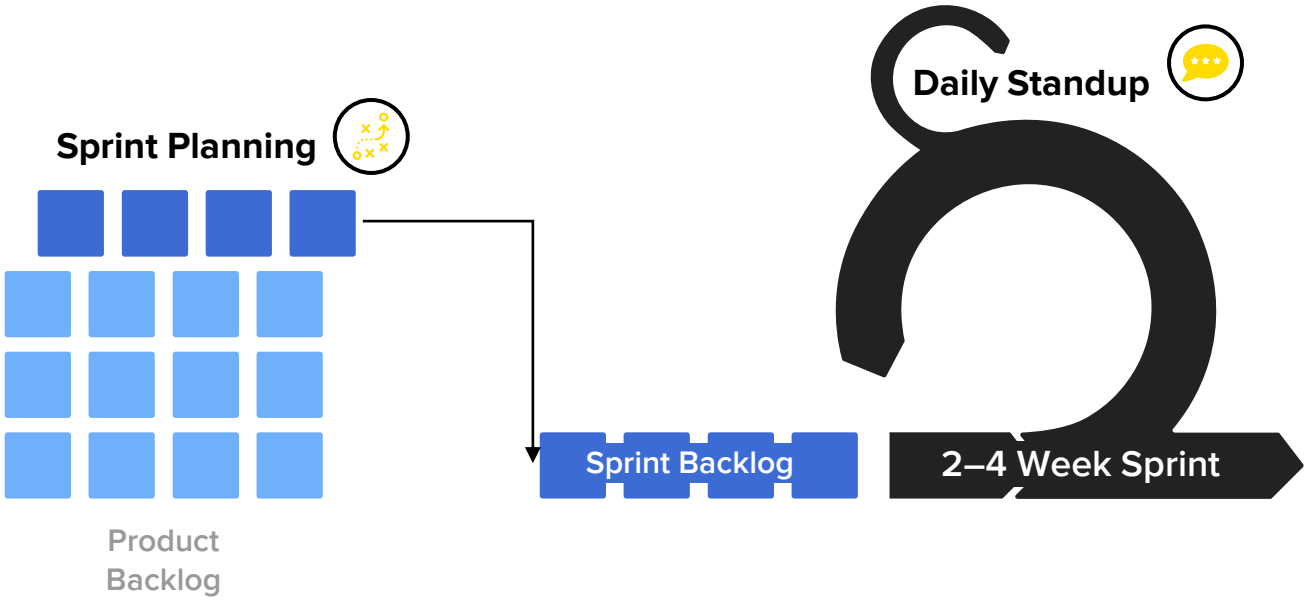

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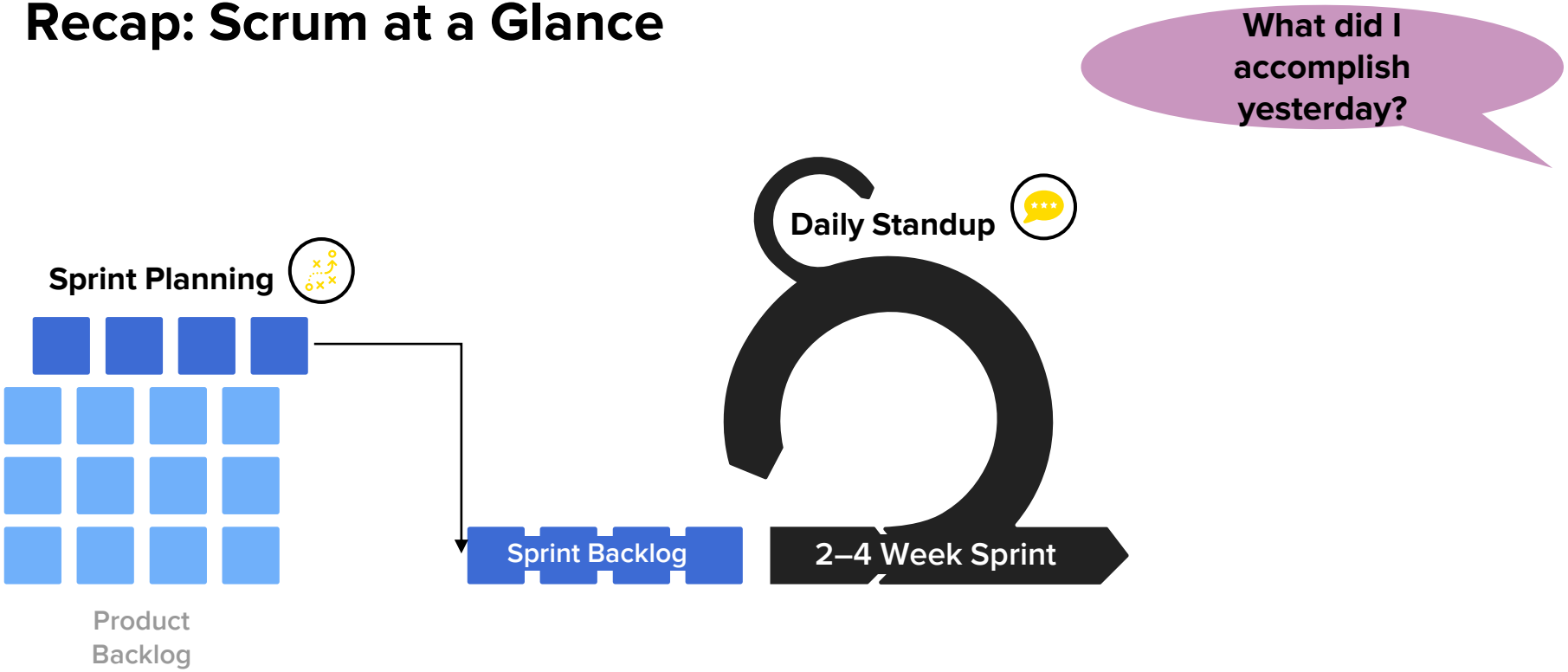

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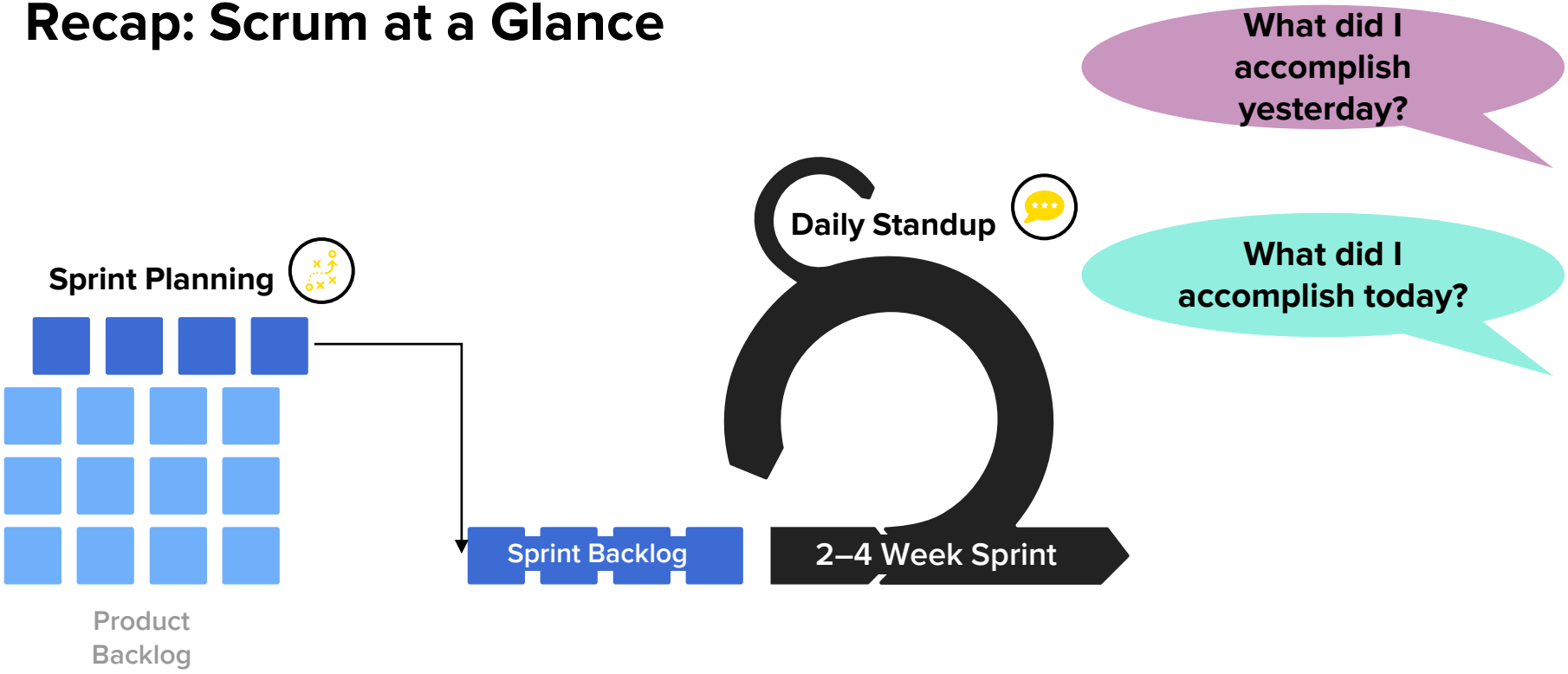

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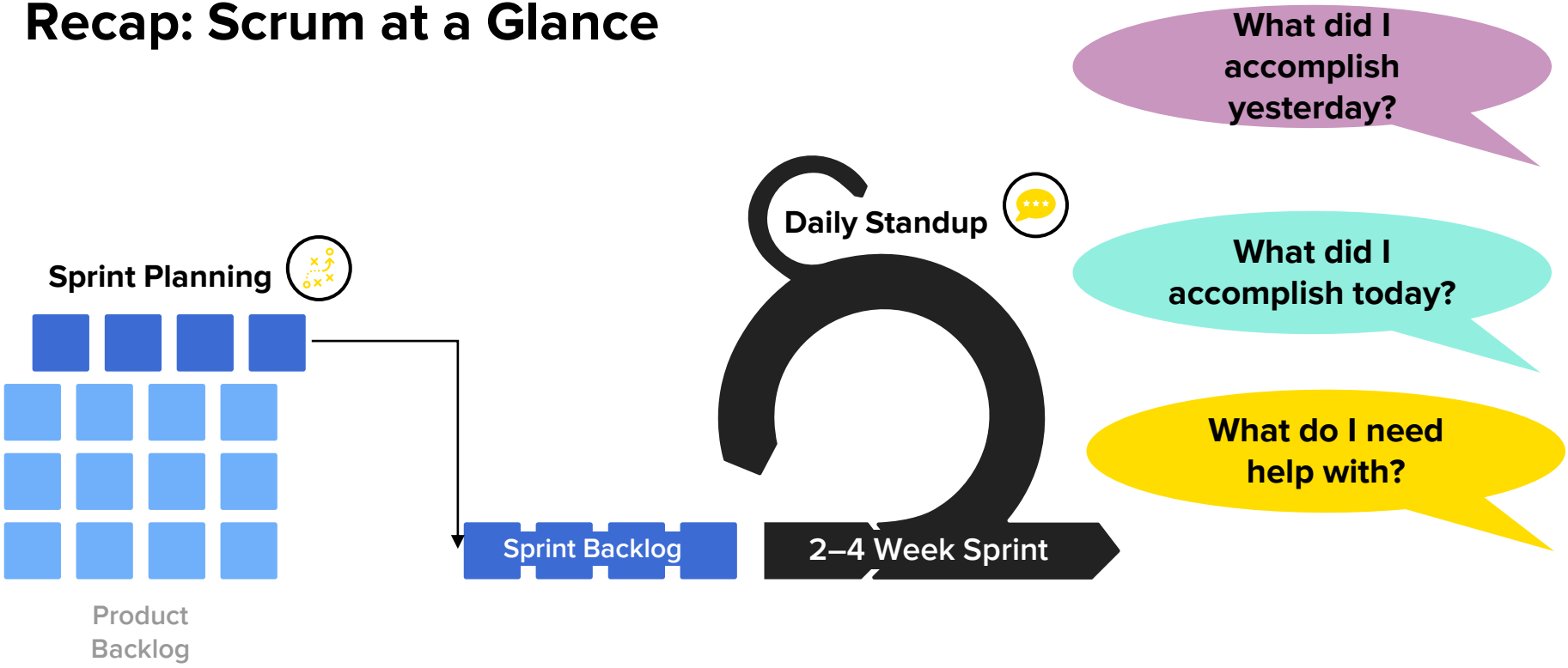

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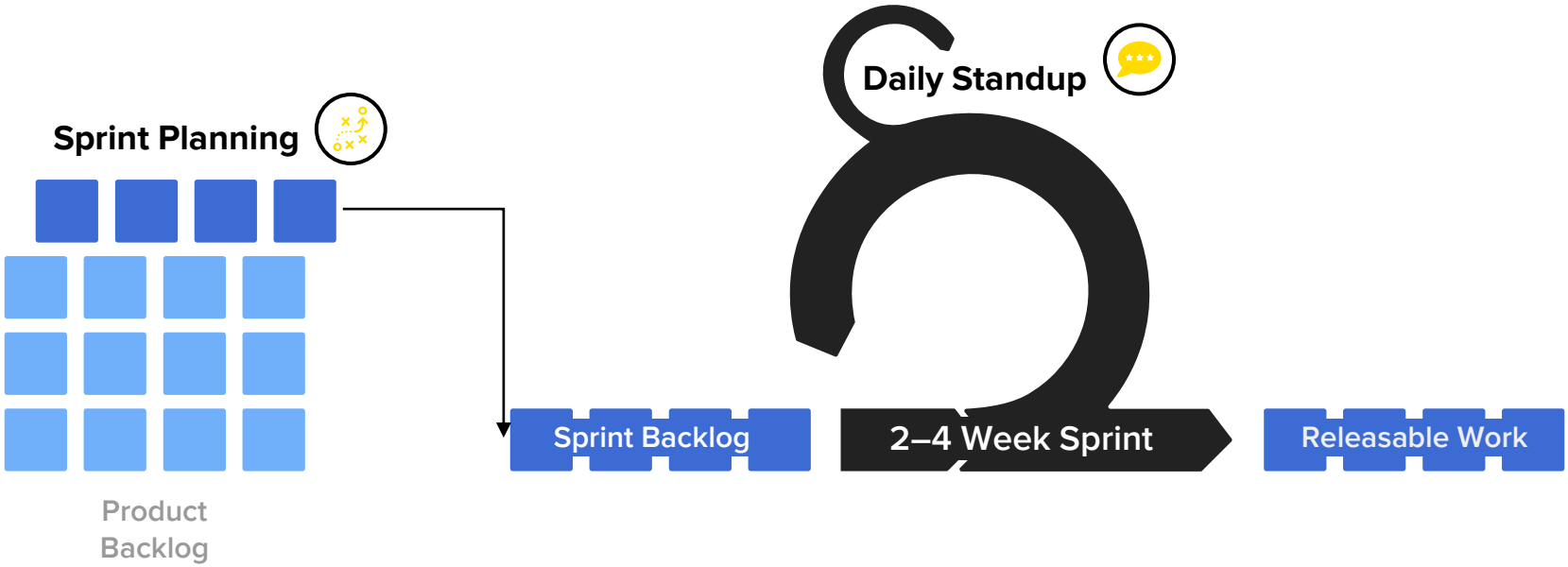

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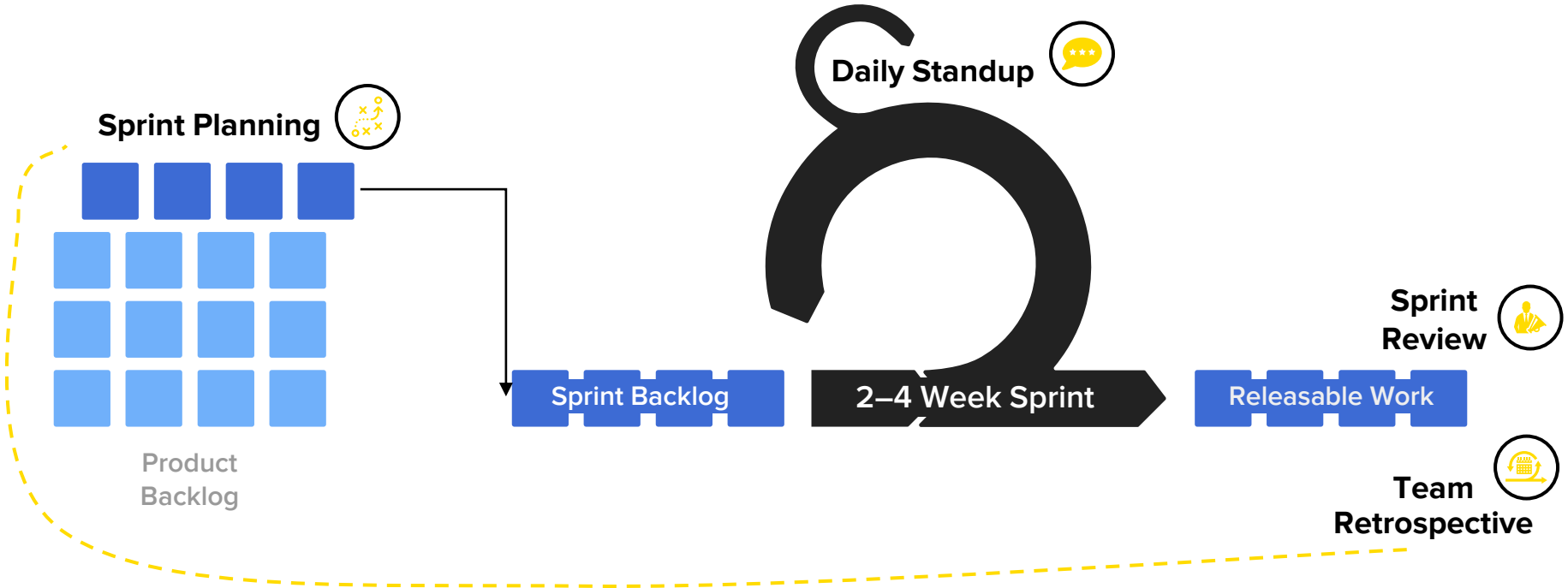

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Summary: What Is a Sprint?

- In agile product development, a sprint is a **set period of time** during which specific work has to be completed and made ready for review.
- Each sprint **begins with a planning meeting**, during which the development team agrees upon exactly what work will be accomplished over the course of the sprint. The work that is agreed upon for that sprint is called the **sprint backlog.**
- Traditionally, a sprint lasts between **two and four weeks**. There are also specific roles within a product development team, including the **Product Owner** and **Scrum Master.**
- During the sprint, the team holds **daily stand-up meetings** to discuss progress and brainstorm solutions to challenges. Teams often structure these meetings by answering:
    - What did I accomplish yesterday?
    - What will I accomplish today?
    - What do I need help with?
- At the end of the sprint, the **team presents its completed work.**

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What Makes a Sprint?

1 Setting Requirements

Planning and prioritization at the start of each sprint

2 Planning

Clearly defining tasks with deliverables and timelines.

3 Design and Development

User research and testing

4 Tracking and Monitoring

Experimentation and analytics

5 Presenting Findings and Iterating

Retrospectives and demos at the end of each sprint which inform the plan for the next sprint

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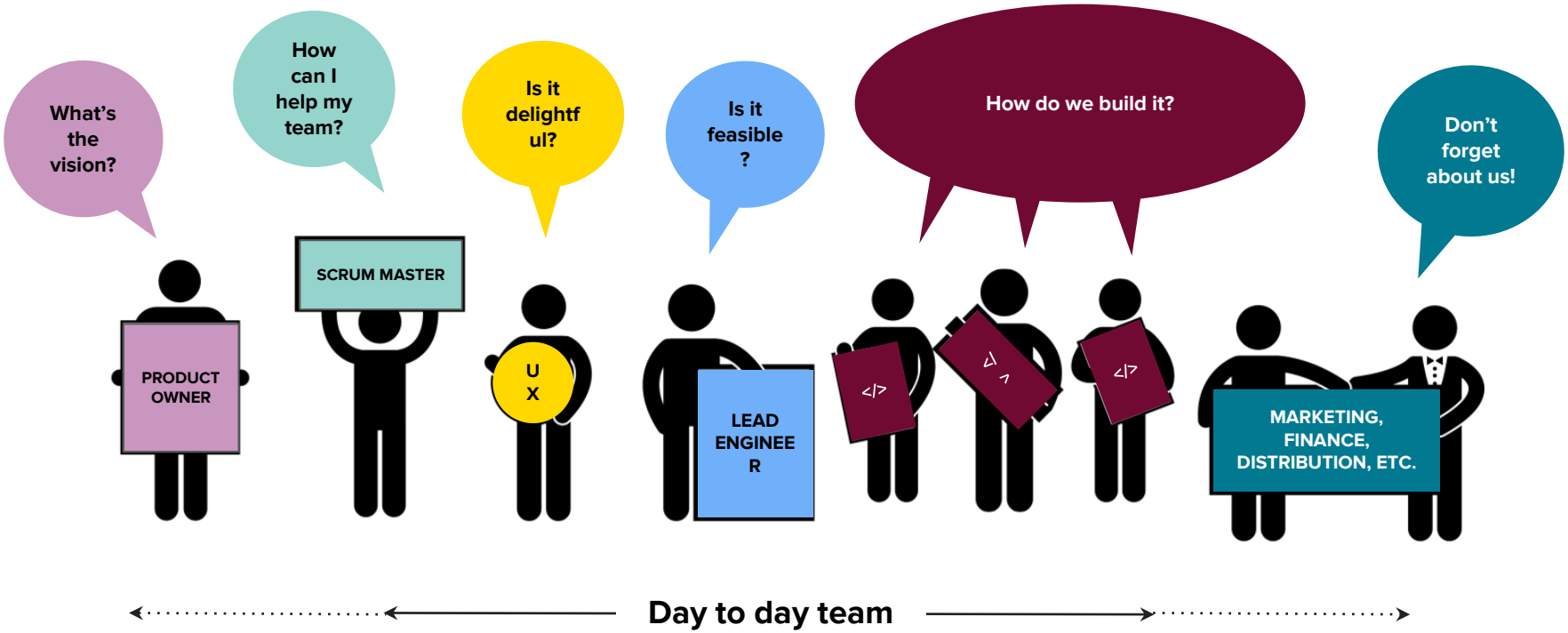
The Typical Scrum Ecosystem



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User Story Format

As a

1. {type of user},
2. I want to {goal}
3. so that I can {reason}.

Who is this functionality for?

What should we create?

Why is it valuable to the user?

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Put a Stake in the Ground

Good Story? Bad Story? I'm Unsure?

3 minutes

Story 1
As a student, I want to purchase a parking pass so that I can park at school.

Story 2
The user can run the system on Windows and Linux.

Story 3
As a commercial advertiser, I want to have filtering option on the ad management system.

Story 4
As a user, I want to indicate folders not to back up so that my backup drive isn't filled up with things I don't need saved.

Using Zoom Annotate stamps:

- **Check mark** ✓ if it's a **good** user story.
- **X mark** ✗ if it's a **bad** user story.
- **Question mark** ? if you're **unsure**.

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Scrum Ceremonies

Sprint Planning

Determine what work will be completed in the upcoming sprint based on the backlog.

Daily Standup

A 15-minute meeting for team to share what they did yesterday, what they'll do today, and blockers.

Sprint Review

Share work completed in the sprint with stakeholders to get feedback early and often.

Retrospective

Reflect on what did/did not go well in the previous sprint and identify improvements.

Scrum ceremonies help us practice agile principles. They provide:

- A framework to help teams move faster.
- Shared understanding.
- Increased synchronization.
- Structure for collaboration.

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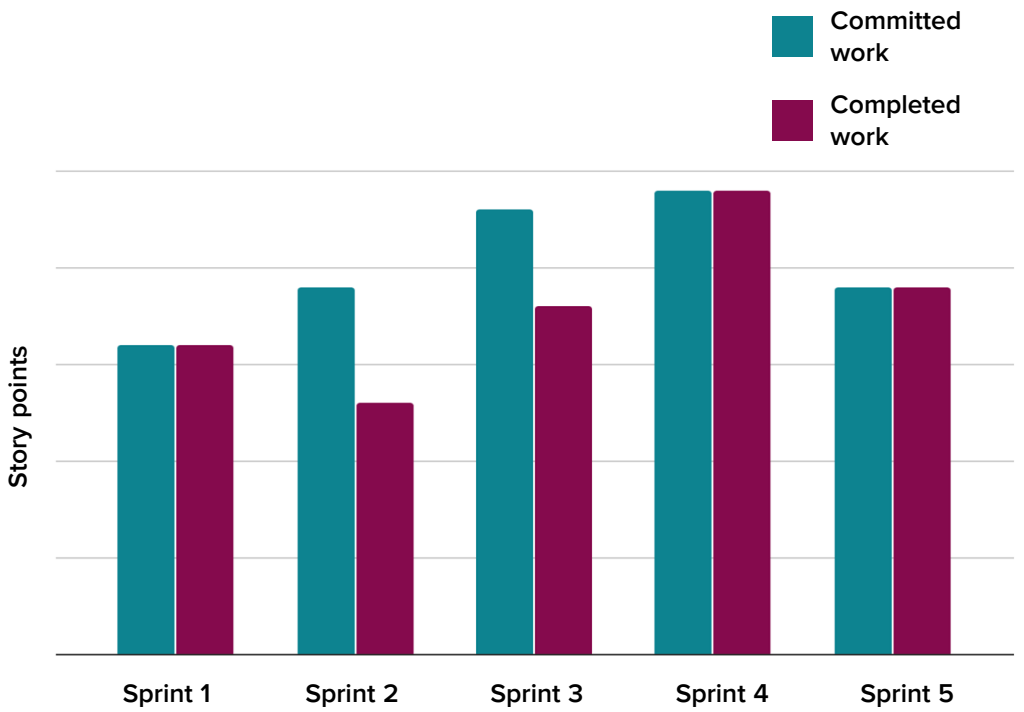
Measuring an Agile Team's Performance

Velocity:

How much work is completed in each sprint.

This is typically measured by the number of **story points** the team completes in a sprint.



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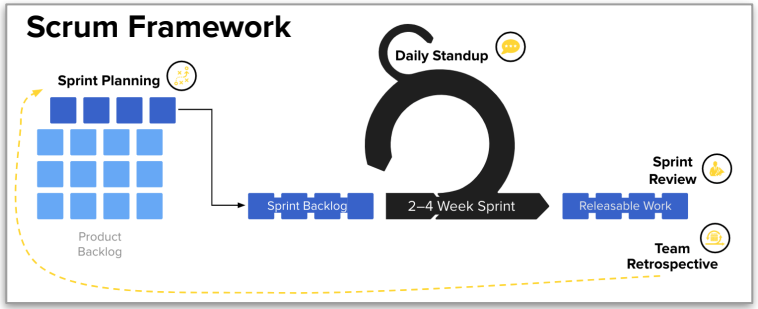
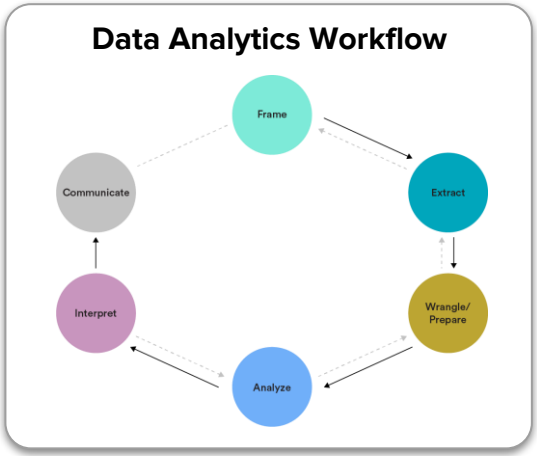
How The Data Analytics Workflow Fits Within An Agile Framework





How the DA workflow fits within an agile framework depends on the team in any given situation, and what their objectives are. For example:

- For a team focused on building a new product, the DA workflow may be most helpful in helping to shape the product backlog:
  - For market insight.
  - To see how the product has performed after launch.
- For a (data) team whose primary focus is in analyzing data, the DA workflow is a necessary part of getting any work done within a sprint.

Data Sprint Overview

The Sprint

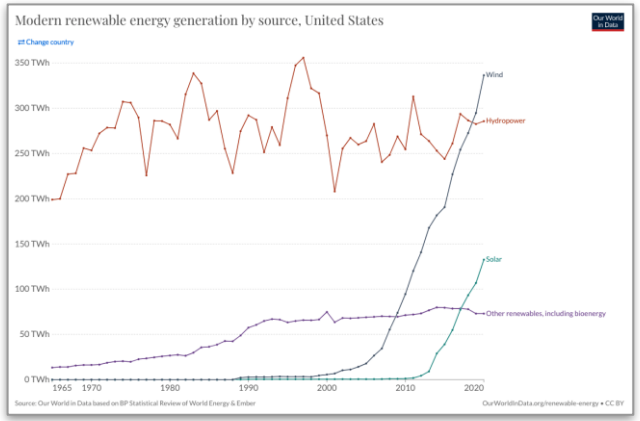
The Scenario

You work for **WOW!**, a clean energy private equity firm based in Chicago.

So far their investments have been in U.S. hydropower and they are now thinking about investing in U.S. wind power.

Your manager comes to speak with you and tells you that a team of data analysts is being formed **to assess the U.S. wind turbine market on a short turnaround.**

The team needs to present its findings to the investment committee in time for their quarterly investment decisions.



Source: ourworldindata.org

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Learning Objectives and Structure of the Data Sprint

Learning Objectives

- Conduct market research on opportunities for **WOW!** in the U.S. wind turbine market: **Should WOW! invest in the wind market? If so, who should they approach to fund?**
- Utilize the data analytics workflow within an agile development framework.
- Transform data into useful information to help support business decisions.

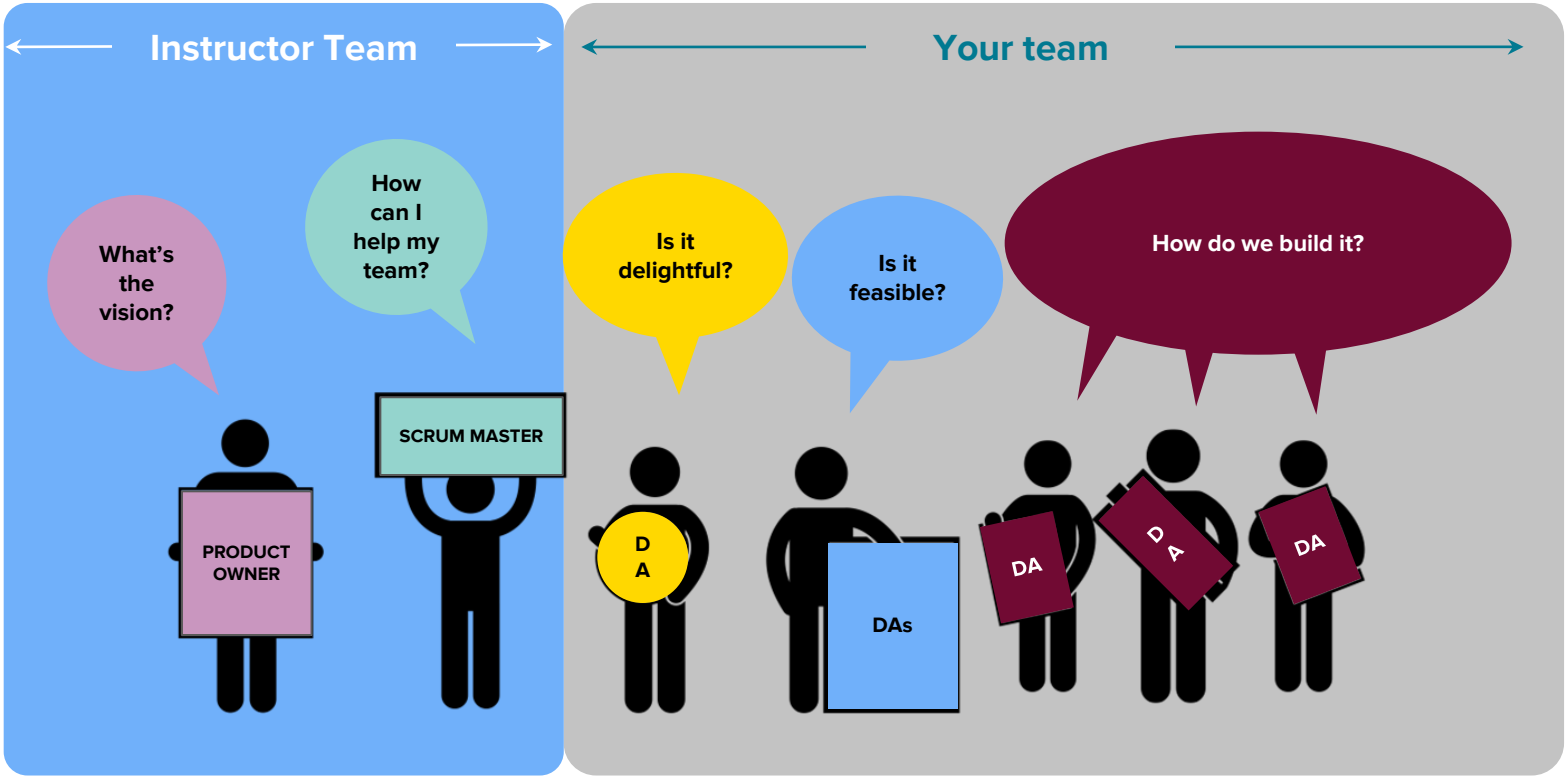
Structure of the Sprint

- You will be put into groups and will work in those breakout groups throughout the day.
- Instructors will be playing the role of product owner and scrum master, and will help prioritize your work and coach you. The product owner has already created a product backlog and estimated the effort it will take for each item.
- You need to agree on the sprint backlog (high-level milestones) to complete with your group each day; you will also need to agree on a strategy for the day and a plan to divide up the work amongst you.
- You will conduct a sprint review with your product owner at the end of days one and two, to show them what you have managed to complete from the sprint backlog.
- You will run a three-day sprint, and then wrap up the sprint at the end of day three, presenting your findings and what you have learned from the process in the morning of day four.

Key Deliverables During the Sprint

1. Create a team name!
2. Investigate the product backlog and create a sprint backlog for each day of the three-day sprint. (This may require some negotiation with the product owner on your part!)
3. Investigate the data and produce an analysis for WOW!'s investment committee.
4. Present your analysis on day four, along with the lessons you have learned from the experience.

The Scrum Ecosystem for this Sprint



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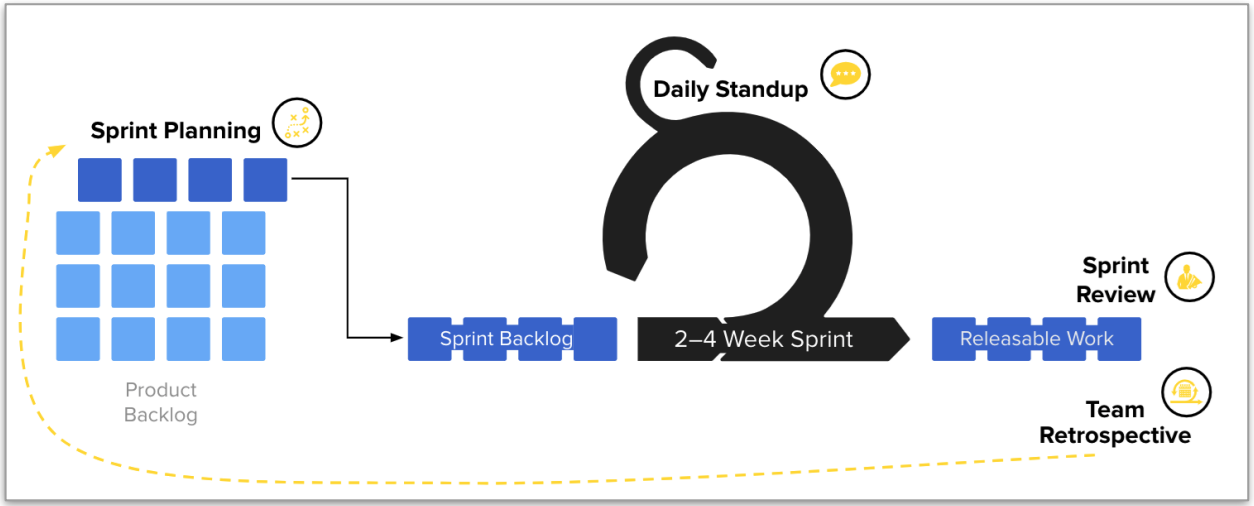
This Data Sprint Consists of Three Daylong Sprints



Days 1, 2, and 3

- Agree on Sprint Backlog
- Delivery of Sprint Backlog
- Sprint review of what was delivered

Day 4

- Team Retrospective on how you found it
- Present your sprints

We won't have daily standups — there's no need since sprint spans only 3 days — but you may want to agree on how and when you'll catch up with each other.

Structure of this Data Sprint

Project Intro	Prep Session	Day 1	Day 2 & Day 3 (Morning)	Day 2 & Day 3 (Afternoon)
Project Intro ● Familiarization with the scenario and the product (wind turbines) ● Obtain context on intended use and company objective(s) **Team Work Tasks** ● Form as a team ● Discuss how you will divide responsibilities for delivering as much value from the backlog as you can in two days ● Clarify any questions you have on how the sprint will work	**Prep session** ● Familiarization with the scenario and the product (wind turbines) ● Investigate the data sets ● Obtain context on intended use and company objective(s) ● Product backlog provided for workflow ● Opportunity to ask questions about the data sets **Team Work Tasks** ● Investigate the wind turbine industry in the U.S. ● Review the product backlog and refine it with the product owner, get ready for sprint planning (create the sprint backlog) ● Investigate the data sets	**Sprint Backlog (1 hour)** ● Agree on sprint backlog with product owner **Team Work Tasks** ● As determined by your agreed upon sprint backlog **Sprint Review (30 minutes)** ● 10-minute show-and-tell of progress during the day	**Retrospective (30 minutes)** ● Reflect on day 1/2: Delivery versus sprint backlog ● Discuss and agree on any changes to ways of working for day 2/3 **Sprint Backlog (30 minutes)** ● Agree on sprint backlog with product owner **Team Work Tasks** ● As determined by your agreed upon sprint backlog **Sprint Review (30 minutes)** ● 10-minute show-and-tell of progress during the day	**Retrospective (30 minutes)** ● Reflect on Day 3: Delivery versus sprint backlog **Team Work Tasks** ● Present design and development ● Sketch and layout visual storytelling ● Describe the process of how you thought through each stage of the analysis, including how you handled the challenge ● Presentations to the class ● Retrospective

Helpful Hints

- If in doubt, ask.
- Get help to unblock things.
- Don’t underestimate.
- Divide and conquer!
- Agree on ways of working with your team.

Data Sprint Overview

Your Teams

<insert list of who's in which teams here>

Group Exercise:

Forming Your Team

25 minutes

In your teams, come up with a team name and create a team meme (https://imgflip.com/memegenerator) or team logo (https://logo.zyro.com/).

Agree on how you will divide responsibilities for delivering as much value from the product backlog as you can in the sprint.

- Who will do what? What are your individual preferences? And individual strengths?
- How will you handle disagreements?

Ask instructors to answer any questions you have on how the sprint will work.

GA