

Data Analytics Immersive

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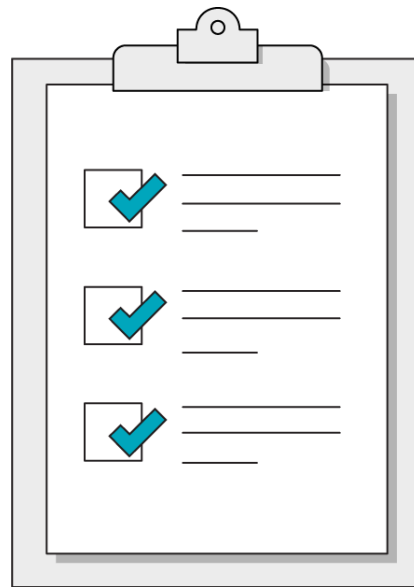
# Data Sprint Prep Session

*Unit: Capstone projects*

# Learning Objectives

In this lesson, we'll:

- **Recap** the data sprint scenario
- **Research** the wind turbine market in the U.S.
- **Review and refine** the product backlog for the data sprint project
- **Consider** what you'll be able to accomplish on day one



Any questions?

# Agenda



Recap of the scenario



The product backlog



Team time



Wrap up and Q&A

Data Sprint Prep Session

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# Scenario Recap



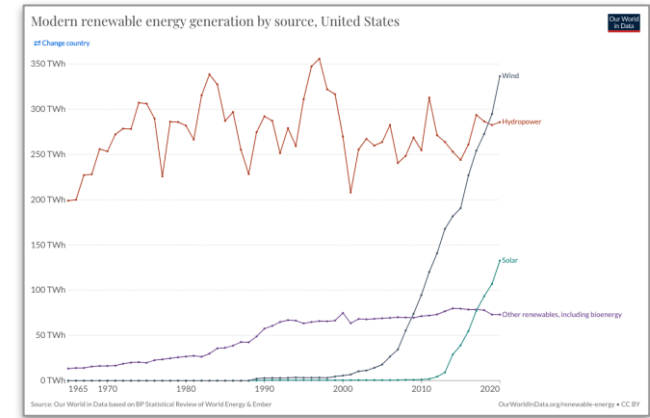
# The Scenario

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.



# 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

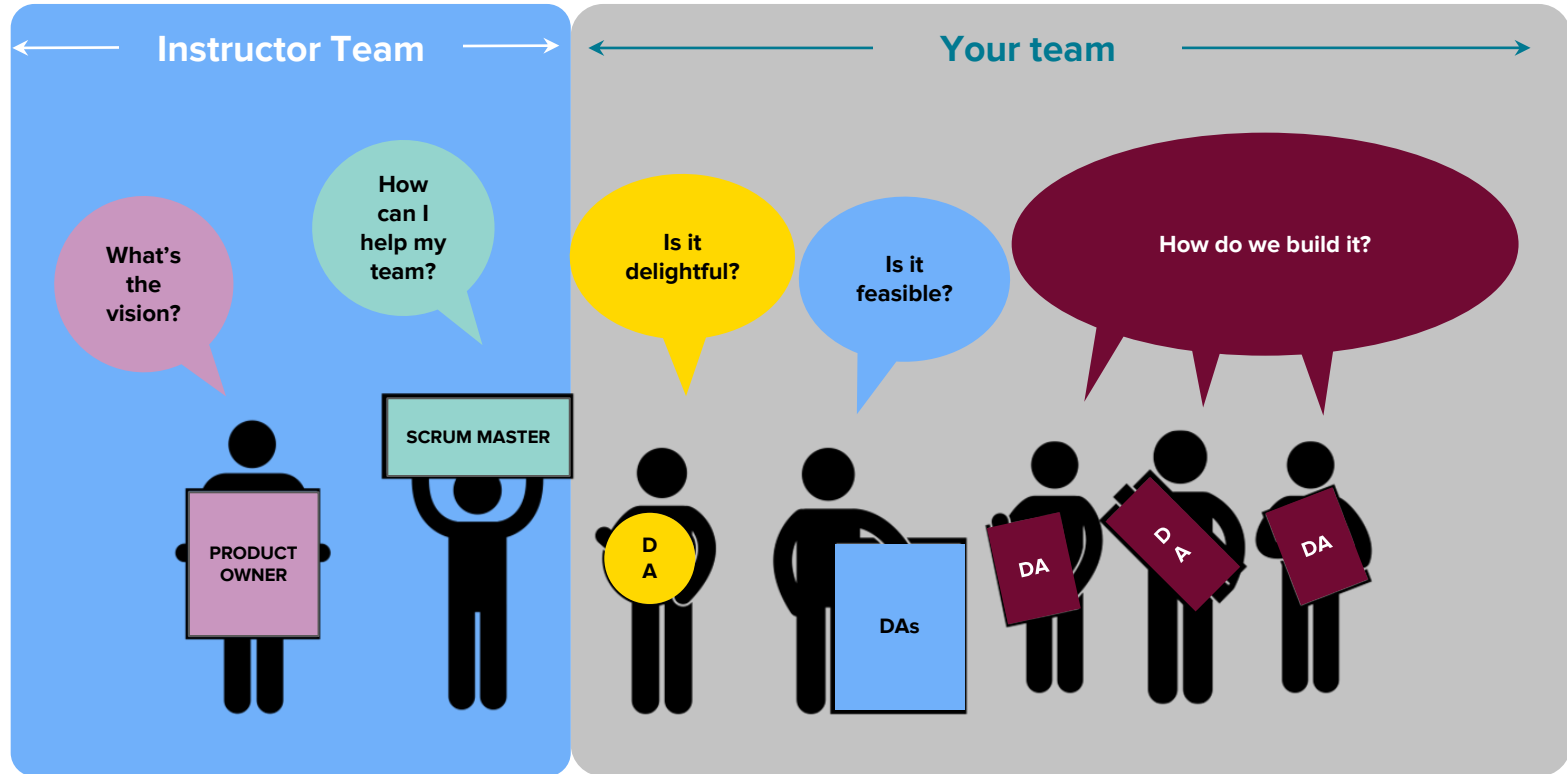
- You will be put into groups and will work in those breakout groups throughout the day.
- Instructors will be playing the role of product owner and scrum master, and will help prioritize your work and coach you. The product owner has already created a product backlog and estimated the effort it will 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

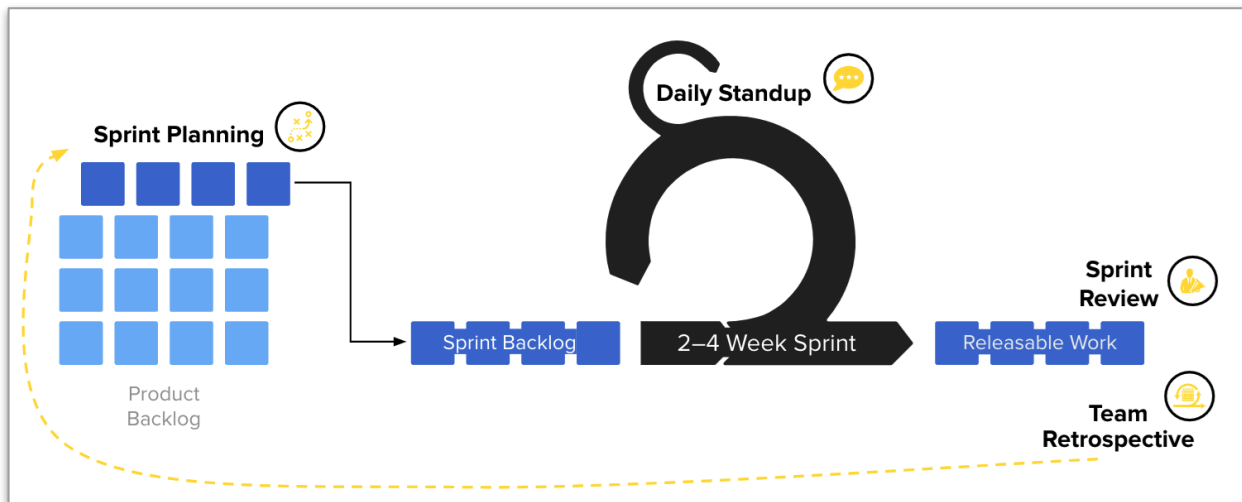
1. Create a team name!
2. Investigate the product backlog and create a sprint backlog for each day of the three-day sprint. (This may require some negotiation with the product owner on your part!)
3. Investigate the data and produce an analysis for WOW!'s investment committee.
4. Present your analysis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

# The Scrum Ecosystem for this Sprint





# 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)   |
|--|--|--|--|---|
| <b>Project Intro</b> <ul style="list-style-type: none"> <li>Familiarization with the scenario and the product (wind turbines)</li> <li>Obtain context on intended use and company objective(s)</li> </ul> <b>Team Work Tasks</b> <ul style="list-style-type: none"> <li>Form as a team</li> <li>Discuss how you will divide responsibilities for delivering as much value from the backlog as you can in two days</li> <li>Clarify any questions you have on how the sprint will work</li> </ul> | <b>Prep session</b> <ul style="list-style-type: none"> <li>Familiarization with the scenario and the product (wind turbines)</li> <li>Investigate the data sets</li> <li>Obtain context on intended use and company objective(s)</li> <li>Product backlog provided for workflow</li> <li>Opportunity to ask questions about the data sets</li> </ul> <b>Team Work Tasks</b> <ul style="list-style-type: none"> <li>Investigate the wind turbine industry in the U.S.</li> <li>Review the product backlog and refine it with the product owner, get ready for sprint planning (create the sprint backlog)</li> <li>Investigate the data sets</li> </ul> | <b>Sprint Backlog (1 hour)</b> <ul style="list-style-type: none"> <li>Agree on sprint backlog with product owner</li> </ul> <b>Team Work Tasks</b> <ul style="list-style-type: none"> <li>As determined by your agreed upon sprint backlog</li> </ul> <b>Sprint Review (30 minutes)</b> <ul style="list-style-type: none"> <li>10-minute show-and-tell of progress during the day</li> </ul> | <b>Retrospective (30 minutes)</b> <ul style="list-style-type: none"> <li>Reflect on day 1/2: Delivery versus sprint backlog</li> <li>Discuss and agree on any changes to ways of working for day 2/3</li> </ul> <b>Sprint Backlog (30 minutes)</b> <ul style="list-style-type: none"> <li>Agree on sprint backlog with product owner</li> </ul> <b>Team Work Tasks</b> <ul style="list-style-type: none"> <li>As determined by your agreed upon sprint backlog</li> </ul> <b>Sprint Review (30 minutes)</b> <ul style="list-style-type: none"> <li>10-minute show-and-tell of progress during the day</li> </ul> | <b>Retrospective (30 minutes)</b> <ul style="list-style-type: none"> <li>Reflect on Day 3: Delivery versus sprint backlog</li> </ul> <b>Team Work Tasks</b> <ul style="list-style-type: none"> <li>Present design and development</li> <li>Sketch and layout visual storytelling</li> <li>Describe the process of how you thought through each stage of the analysis, including how you handled the challenge</li> <li>Presentations to the class</li> <li>Retrospective</li> </ul> |



# 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.

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# The Product Backlog



# You are being given the product backlog in its current state.

| ID  | User Story  | Additional Detail   | Priority # | Story Points |
|-----|---|---|------------|--------------|
| 003 | As an investor, I want to know the dynamics of the wind turbine market in the U.S., so I can work out whether to invest in it | * How strong is the wind power market in the U.S?<br>* Is the wind power market a good market to be in? | 4          | 21           |

The ID reference in the backlog. Only useful for differentiating between two items.

**User Story** is what the product owner wants the team to complete

Any additional detail on the scope of the user story

The priority for the product owner. Priority goes from 1 to 16 (there are 16 items in the list, with item 1 being the highest priority).

## Story Points

These are estimates, and are not fixed units of time. They are relative to each other, so an item with a story point estimate of 8 is bigger than one with an estimate of 5.

The story point scale used is a Fibonacci scale, where each number in the scale is the sum of the two previous numbers, so 1,2,3,5,8,13,21,34,55,89. It's used because it's easier to estimate an item: Rather than saying 'this one is a 13 and that one is a 12', you are saying things are considerably different in size to each other (or roughly the same, if you give them the same story points value). This is common in sprint and backlog planning, and reflects the fact that things are estimated with the knowledge that the estimation won't be that accurate.

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# Team Time





## Group Exercise: Team Time

60 minutes



### Spend the first 30 minutes:

- Reading the detailed guidelines for the sprint.
- Researching the wind turbine market in the U.S. so that you can effectively analyze the data. To do this, read the links in the 'Background' and 'Preparation Session' sections in the guidelines document.

**Spend the second 30 minutes** in your teams reviewing the product backlog. Ask the Instructor Team any questions you have about any items on the backlog.

The **aim** is to be really clear on what you're being asked to do for each backlog item, and then on the morning of day one you can collectively commit to completing a certain number of tasks (not all!) on the backlog.



