



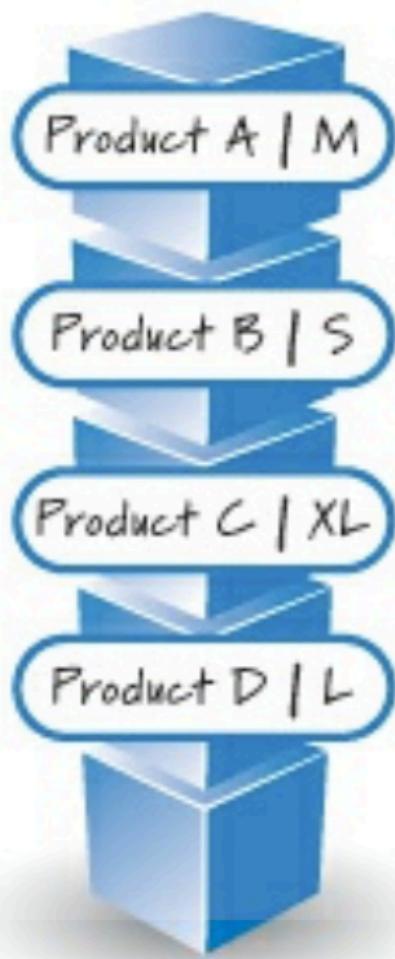
User stories: Estimation

Planning and managing the development of a product

We need to answer important questions such as:

- “How many features will be completed?”
- “When will they be done?”
- “How much will this cost?”

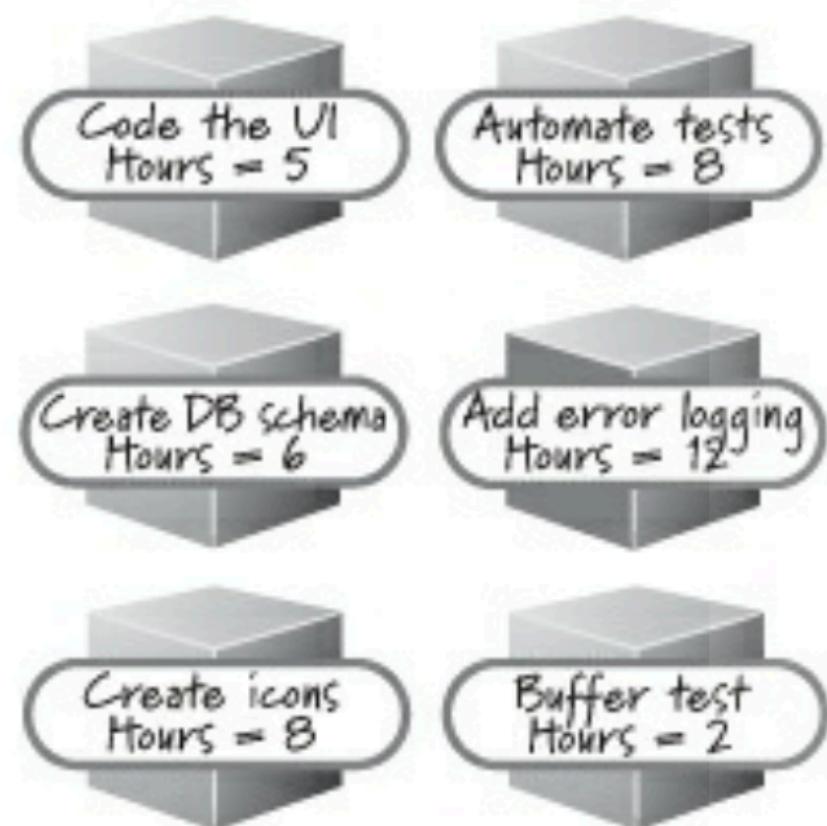
Portfolio backlog



Product backlog



Sprint backlog tasks



Estimated size + measured velocity = (number of sprints)

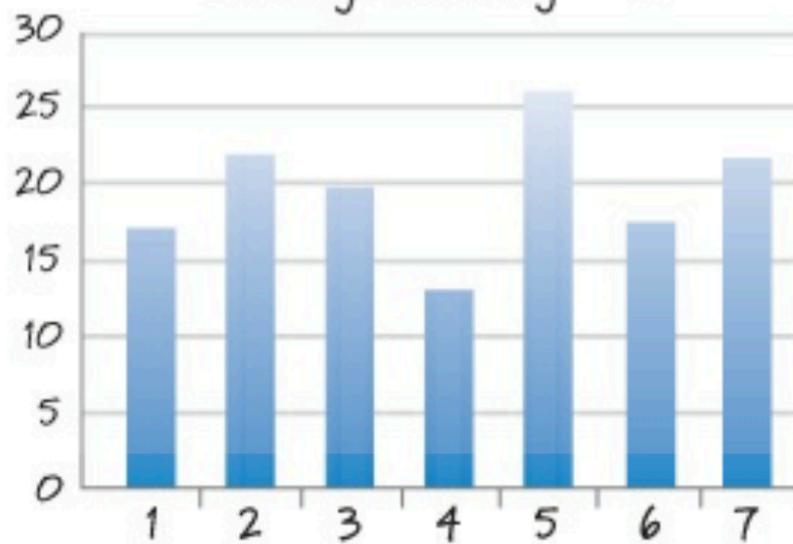
Item	Size
Feature A	5
Feature B	3
Feature C	2
Feature D	8
Feature E	2
Feature F	5
Feature G	3
Feature
Feature ZX	5
Feature ZY	2
Feature ZZ	1
Feature

$$200 \text{ points} \div 20 \text{ points/sprint} = 10 \text{ sprints}$$

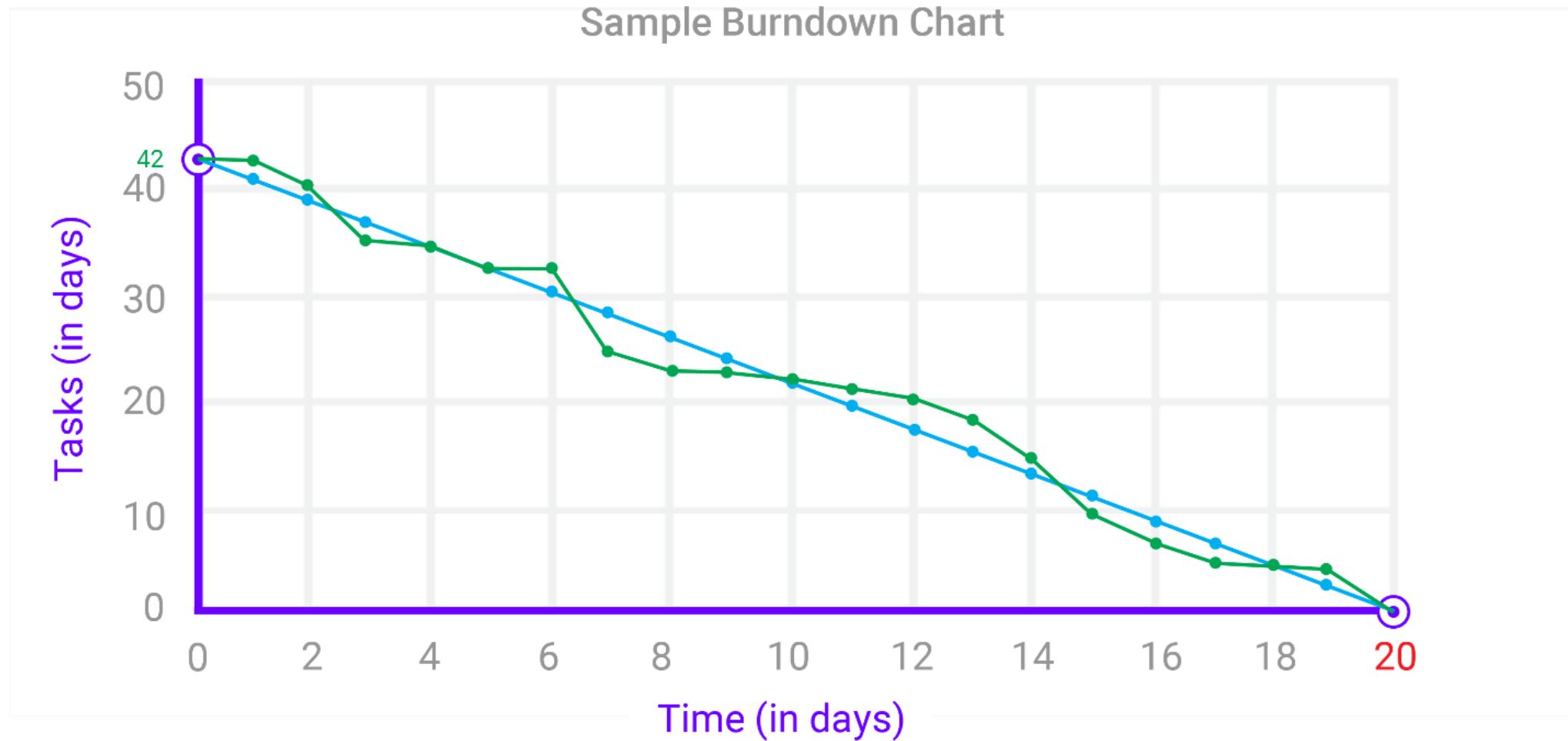
$$\sum = 200 \text{ points}$$

Release 1

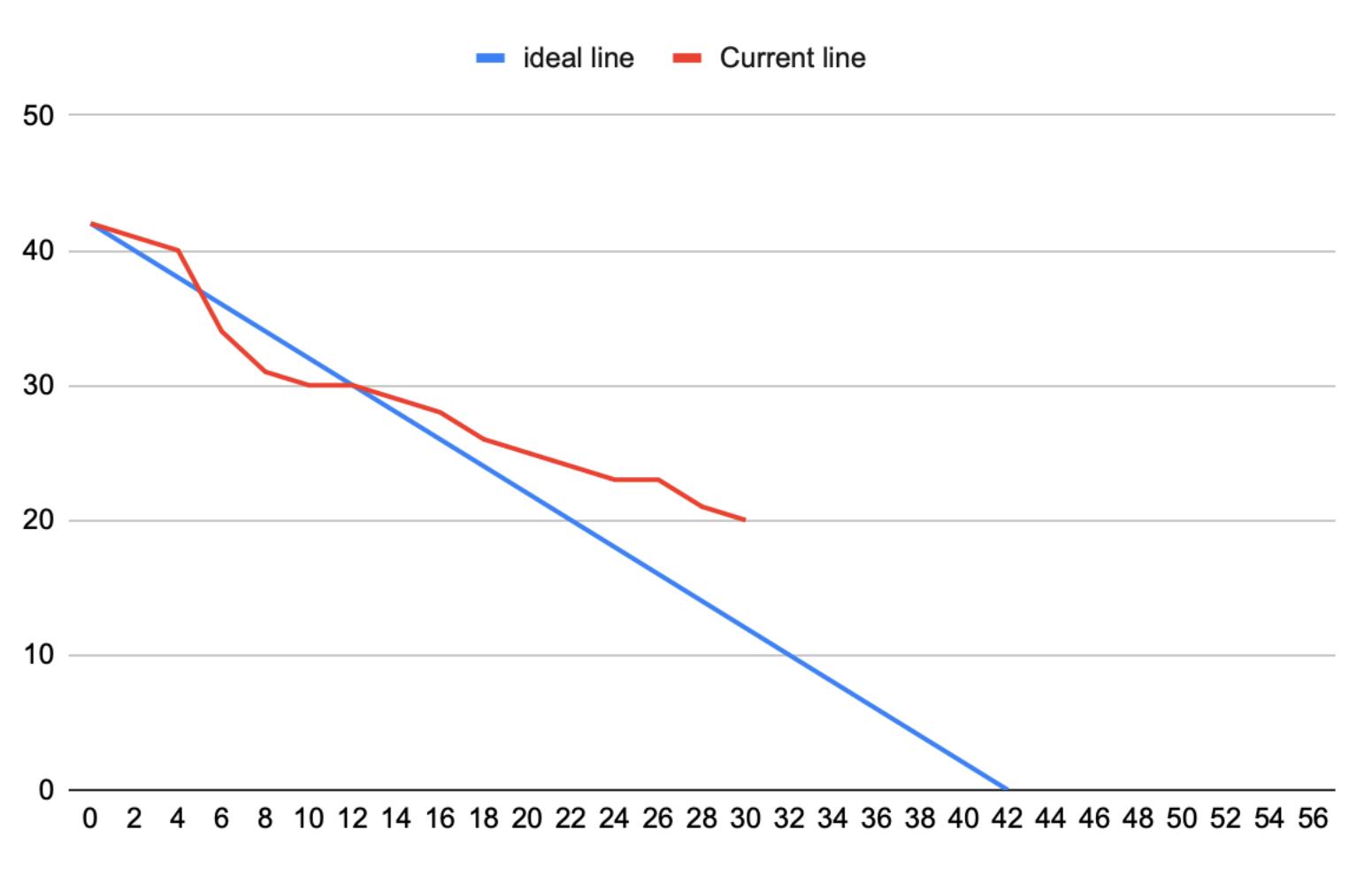
Average velocity = 20



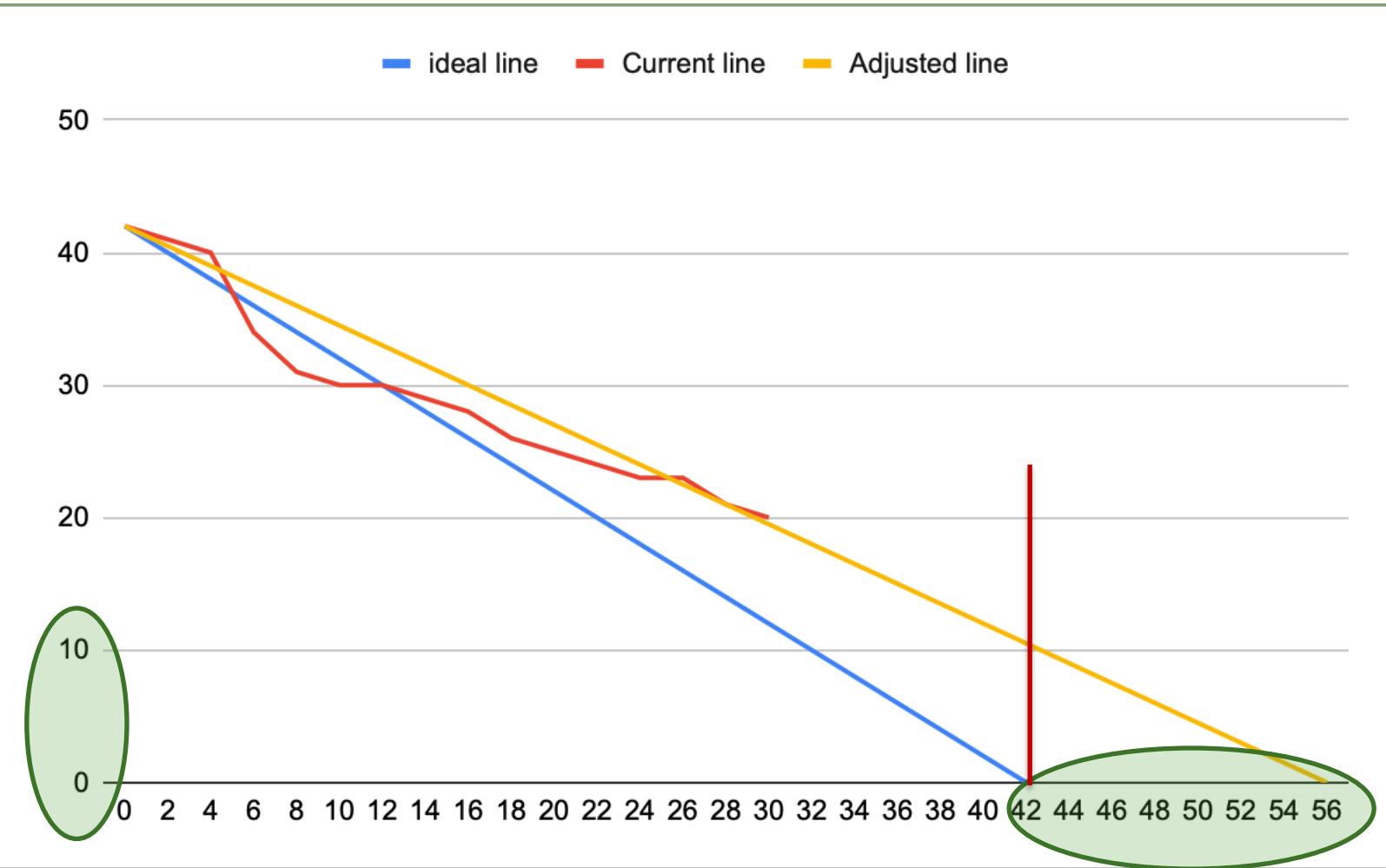
Development process visualization



What if estimations were wrong?



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Development process visualization

Make a decision for release:

- Fixed scope of tasks – how many sprints do we need to complete all the tasks scheduled for release?
- Fixed time – how many time we will complete the tasks for the release (for a limited number of sprints)?

PBI Estimation Concepts

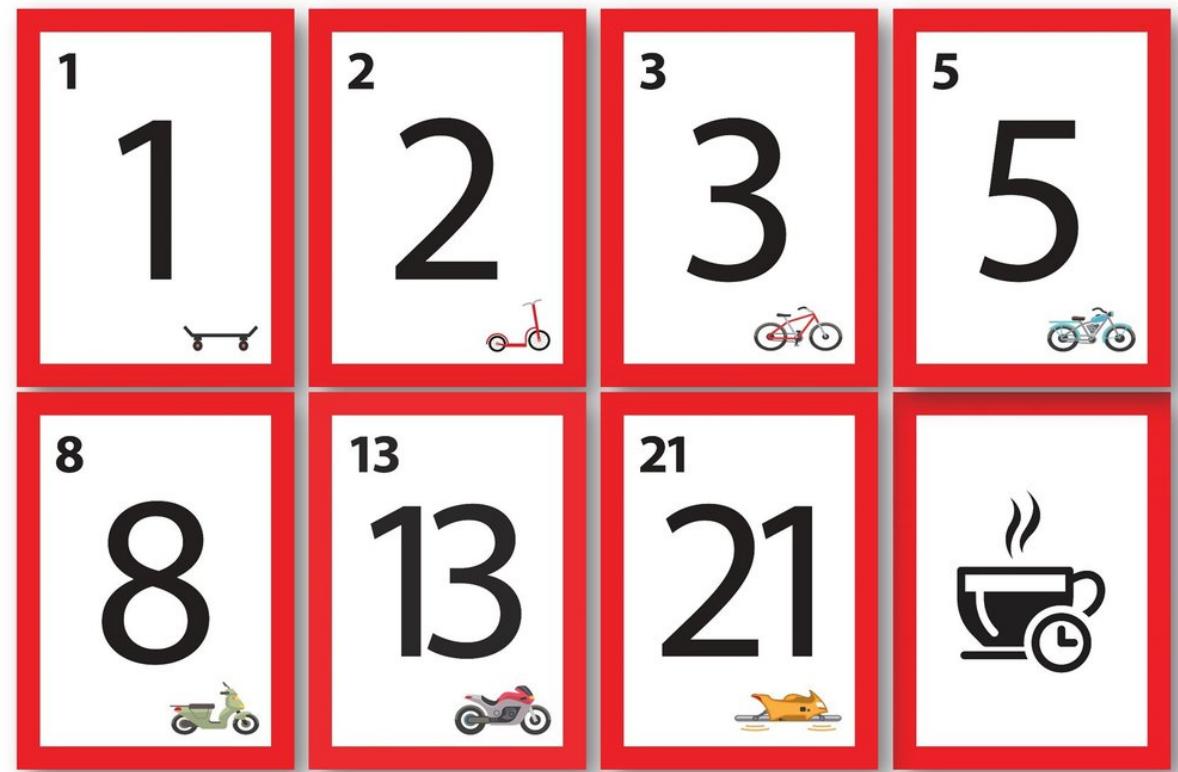
Estimate as a Team

Estimates are not commitments

Focus on accuracy, not precision

Use relative versus absolute sizes

The principle of Magical estimates



Estimate as a Team

In Scrum, we follow a simple rule: The people **who will do the work** collectively provide the estimates.

The product owner's role is to describe the PBIs and to answer clarifying questions that the team might ask.

ScrumMaster's role is to help coach and facilitate the estimation activity.

Estimates Are Not Commitments

If you want people to estimate a story's size, you expect to get a realistic estimate.

BUT if you tell them their bonuses will be based on the estimate being correct, everyone (including me) will give a much larger estimate than the one we originally thought was correct.

PBI Estimation Units

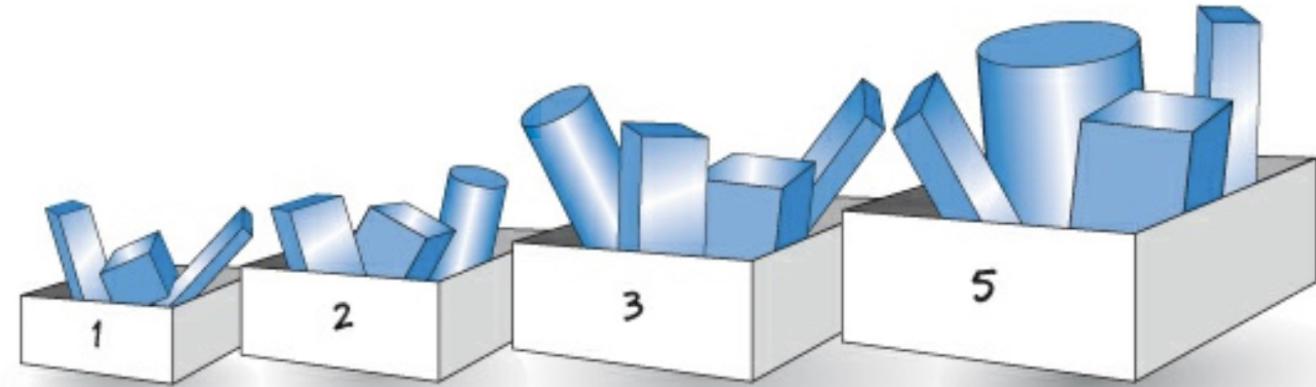
Story Points - measure the **magnitude of a PBI**. SPs combine factors like complexity and physical size into one relative size measure.

big != complex and small != easy

Ideal Days - represent the number of person-days needed to complete a story. **(the risk of misinterpretation)**

Ideal time != elapsed time

Planning poker

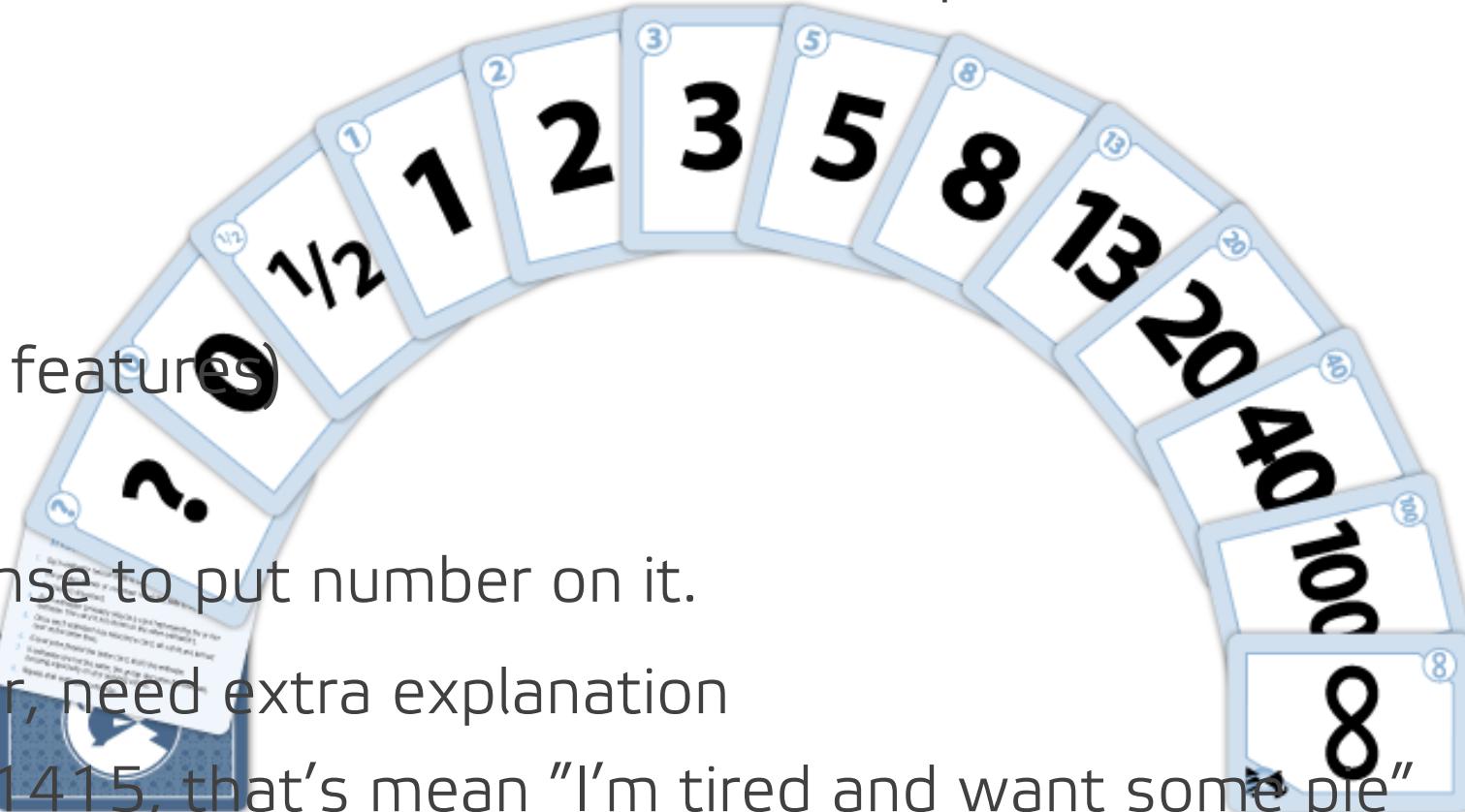


Product owner presents, describes, and clarifies PBIs.

Development team is collaboratively generating the estimates.

Cards meaning

- 0 – already done OR too small to be counted to implement
- $\frac{1}{2}$ – tiny items
- 1, 2, 3 – small items
- 5, 8, 13* – medium items.
- 20, 40 – large items (e.g. features)
- 100 – Epic
- ∞ – Doesn't make sense to put number on it.
- ? – Item doesn't clear, need extra explanation
- π – Doesn't mean 3.1415, that's mean "I'm tired and want some pie"



Rules for the game

1. The product owner selects a PBI to be estimated and reads the item to the team.
2. Development team members discuss the item and ask clarifying questions to the product owner, who answers the questions.
3. Each estimator privately selects a card representing his estimate.
4. Once each estimator has made a private selection, all private estimates are simultaneously exposed to all estimators.

Rules for the game

- 5.1. If everyone selects the **same card, we have consensus**, and that consensus number becomes the PBI estimate.
- 5.2 If the estimates are **not the same**, the team members engage in a focused **discussion** to expose assumptions and misunderstandings. Typically by asking the high and low estimators to explain or justify their estimates.
6. After the discussion, **return to step 3** and repeat until consensus is reached.

Rules for the game

Don't take averages or use any number not on the scale/cards.

The goal is not to compromise, but to reach a consensus

Usually the consensus can be achieved within two or three rounds of voting, during which the team members' focused discussion helps obtain a shared understanding of the story.

Benefits

Brings together the diverse team of people

An accurate estimate that is frequently much better than any one individual could produce.

Motivate people to think about the details of the PBIs and expose any assumptions