Agile Software Development for Developers

Session 4: Estimation (Part 2)

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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

Review

- Session 3
  - ▸ Estimation: what and when
  - ▸ Estimation: Basic concepts
    - EC: Words are important
      - – Guesstimate, Estimate, Commit, Guarantee
      - – An estimate is a probability, and a **commitment** cannot be made to a **probability**.
    - EC: Size or Duration
      - – What do we estimate? **Size** or **Duration**?
    - EC: Planning by Feature Rather Than Activity
    - EC: Estimation Gamification!
      - – **Reward** and **Penalty**
    - EC: Estimate as a Team
    - BC: Accuracy versus Precision
    - EC: Relative Size Estimation
    - BC: Backlog, So Close, So Far
      - – Top: small, detailed, estimated; Bottom: large, very rough
    - BC: Backlog, Sprintable or Implementable Stories
    - EC: Assumptions (unvalidated knowledge, Complex Domain)
      - – An assumption is a guess, or belief, that is assumed to be true, real, or certain even though we have no validated learning to know that it is true.

"You must trust and believe in people or life becomes impossible."

Anton Chekhov

Estimation

PBI Estimation Unit and Scale

PBI Estimation Units

- Story point
  - ▸ A measure of the relative size of product backlog items that takes into account factors such as complexity and physical size.
  - ▸ Influenced by complexity, uncertainty, risk, volume of work, etc.

- Ideal day
  - ▸ A unit for estimating the size of product backlog items based on how long an item would take to complete if it were the only work being performed, there were no interruptions, and all resources necessary to complete the work were immediately available.
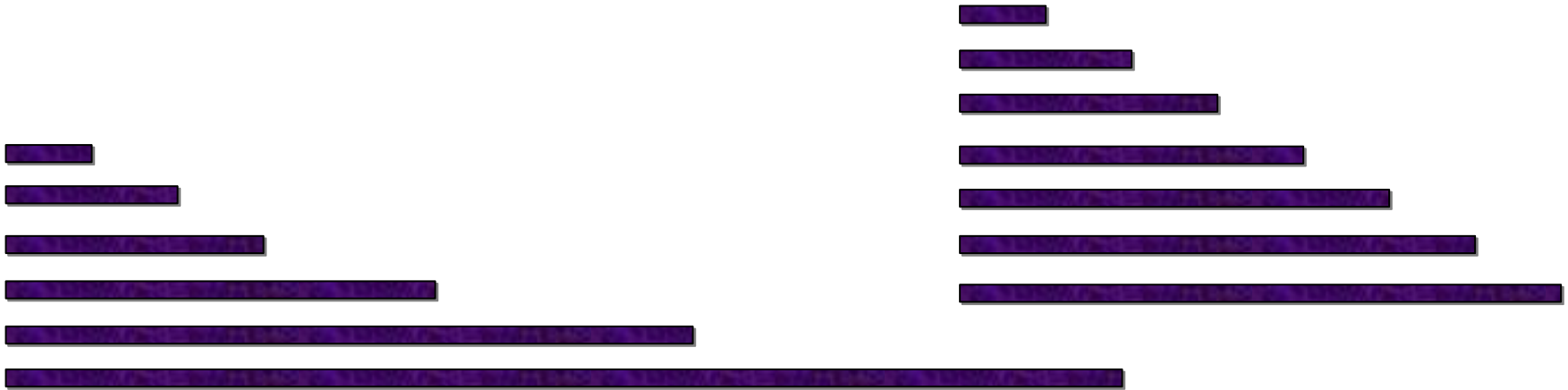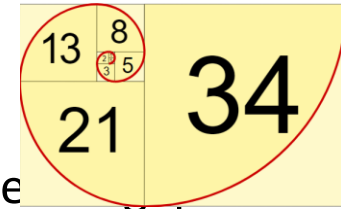
Estimation Scale (1)
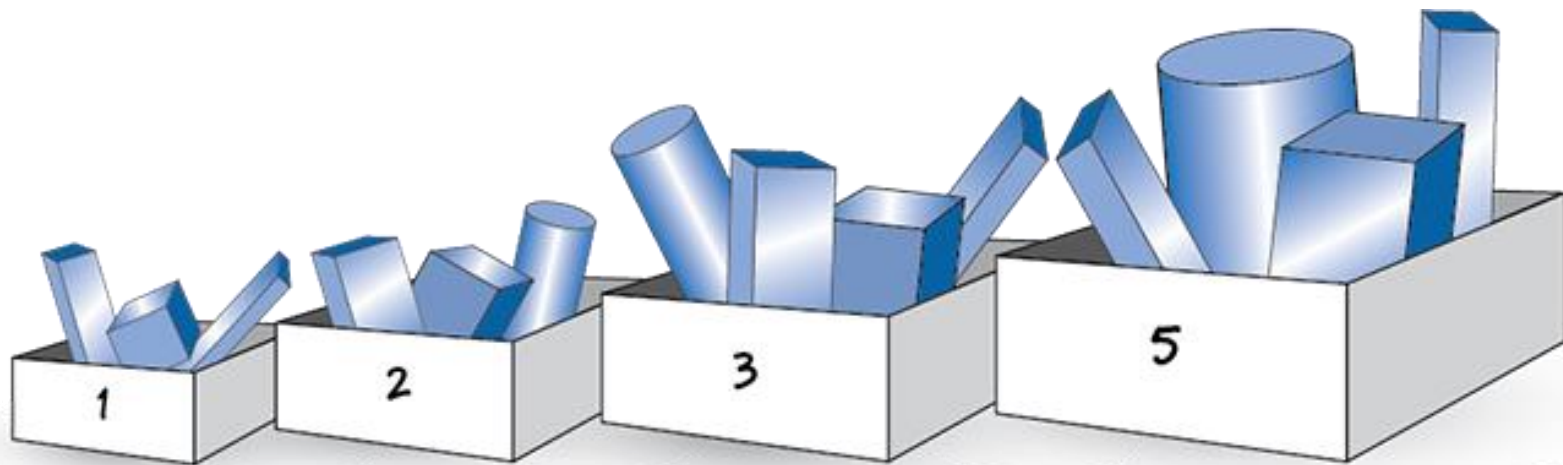
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Estimation Scale (2)

- ## Fibonacci Series
  - ▸ 1, 2, 3, 5, and 8
  - ▸ this to be a very useful estimation sequence because   e sequence become appropriately larger as the numbers increase

- ## Nonlinear Series: 1,2,4,8
  - ▸ These nonlinear sequences work well because they reflect the greater uncertainty associated with estimates for larger units of work.

Estimation Scale (3)

- Mike Cohn:
  - ▶ Suppose you have **10** liters of water you need to store. You also have an **8**-liter bucket and a **13**-liter bucket. Which bucket would you store the water in?

  - ▶ The 13-liter bucket, right? Ten liters of water doesn't fit in an 8-liter bucket. The water would overflow and spill out.

  - ▶ Extrapolating further, you'd use the 13-liter bucket for all amounts of water from 9 liters through 13 liters. Once you hit 14 liters, though, you'd once again need a bigger bucket.

Planning Poker (Game) Cards
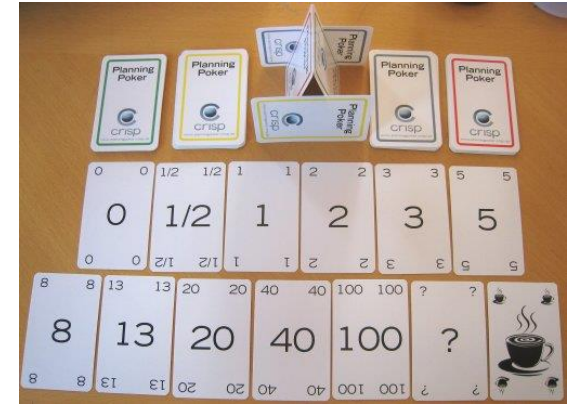
0	already completed or it is so small
1/2	Used to size tiny items.
1, 2, 3	Used to size small items.
5, 8, 13	Used to size medium items
20, 40	Used to size large items (for example, feature- or theme-level stories).
100	Either a very large feature or an epic.
∞ (infinity)	Used to indicate that the item is so large it doesn't even make sense to put a number on it.
? (question mark)	Indicates that a team member doesn't understand the item and is asking the product owner
π (pi)	"I'm tired and hungry and I want to get some pie!"

Estimation

Steps

Planning Poker (Game) Cards

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.

5. If everyone selects the same card, we have consensus, and that consensus number becomes the PBI estimate.

6. If the estimates are not the same, the team members engage in a focused discussion to expose assumptions and misunderstandings. Typically we start by asking the high and low estimators to explain or justify their estimates.

7. After the discussion, we return to step 3 and repeat until consensus is reached.

Exercise

Steps

- Review User Stories

- Planning Poker

- http://www.pointingpoker.com/16483

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