



Estimating tasks, activities, projects

How we all can be so wrong

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Outline

- Fundamentals
- What works
- Why things go wrong
- Questions & Answers

Estimates

- An estimate is really just a guess.
- Yet, we have to negotiate expectations for accuracy.
 - I'll check in the unit tests by noon
 - I'll have the search feature implemented by Friday
 - We will have the project done in December
- Why do we need to estimate?
 - We need to set expectations
 - We need to allocate time and resources
 - Other tasks depend on its completion
 - We need to make better estimates in the future

Effort

- Effort can be structured based on the visibility of results.
 - Tasks – effort that produces an identifiable and valuable output
 - Activities – a sequence of tasks
 - Projects – a complex sequence of activities
- Estimation with any accuracy gets increasingly hard, perhaps impossible for certain processes.
 - Complex projects
 - Changes in requirements or resources
 - Innovation
- Projects are seen to fail or succeed based on the accuracy of the initial estimates.

How we estimate

- Comparison – this task is similar to another task I completed
- Ranking – this task is harder (or easier) than another task
- Coercion– we are told how long a task will take
- Time-boxing – I can allocate only this amount of time
- We often neglect our experience in estimating tasks.
 - Estimates express ‘ideal’ time and effort
 - Communication
 - Meetings
 - Set up and tear-down

What works

- *Agile* and *Lean* development is driven by need to improve estimation
 - Requirements – user stories provide better focus
 - Simplicity- fine-grained tasks of 1 day or less
 - Responsibility - One resource per task
 - Clarity - ‘Done’ versus ‘Not Done’
 - Visibility – Progress related in daily standups
 - Accountability – Accuracy emerges over time
- Why are estimates still so hard?
 - Lack of experience with the tools or solution
 - We are late due to prior poor estimates or over-commitment

Points versus Hours

- Estimation in an agile process can be done as:
 - T-shirt sizes – small, medium, large, and poncho
 - Story points – a ranking or relative measure, typically 1, 3, 5, 8, 13
 - Hours – total hours to complete, including discussion, testing, etc
- Consistency amongst team members is more important than units
- Velocity can be measured in either points or hours
- We should avoid converting points to hours i

Activities and Projects

- Activities can be estimated accurately, if all tasks are known.
 - Defined - all tasks are specified
 - Well-defined – completed within a sprint
 - Testable – clear acceptance criteria or tests
- Yet, projects are much more difficult
 - Require planning without specified tasks
 - We don't yet understand requirements
- However, we use a similar process
 - Partition into well-defined activities
 - Examine similar projects