

"i pledge my honor that I have abided by the Stevens Honor System."

**You are hired as a new Agile Leader (Scrum Master) and leading a new development team (10 Developers). You received the requirements (100 User Stories) and asked to size the development effort. You plan on using Scrum as your development method with 2 week Scrum cycles. Your leadership would like to understand the following:**

1. **What data-driven techniques are available to estimate effort in agile user stories? What are the pros and cons of the top three techniques? What information is missing to accurately size the project using data-driven techniques? (Max 200 words)(Hint: Expert Judgement, LOC, Planning Poker, the method taught in class, etc.)**

- **Planning Poker**

- creates a consensus of the amount of effort
- story points given numbers based on time it'll take to complete
- custom deck of card that's team members pick card #s to correlate time expectancy and then discuss until consensus made

PRO:

- senior leadership developers use a consensus format for all to have input
- those doing the work are estimating the time
- quick and fun - doesn't waste time over meaningless arguments

CON:

- be convinced by authority (bullied by seniors or strong others)
- or could never come to consensus
- based upon experience and knowledge so only estimation
- difficult with project plans

- **Biggest Bang for Your Buck**

- Buck Score = Value points / story point

PRO:

- takes into account difficulty AND importance
- facilitates discussion
- estimates velocity after first iteration
- logical planning meshing

CON:

- can find that velocity estimated in first iteration is not accurate to rest
- might need to re-prioritize creating new value points

- **Expert Judgement - Delphi**

- experts consulted in estimation process for effort

PRO:

- experts use historical data including characteristics from similar projects to estimate, not just effort values taken into count
- Delphi focuses on anonymous experts' estimations removing any bias / intimidation
- several iterations done till agreement reached

CON:

- experts may have difficulty correctly estimating time based on difficulty for the team
- could potentially be 1 expert - doesn't often facilitate open discussion
- can be structured on systematic techniques or unstructured

2. **What information is missing to accurately size the project using data-driven techniques?**

- We are missing a few data points or information for accurately sizing the project. These include data values for the 100 user stories as well as our velocity - how many story points we are aiming to complete in our 2 week scrum cycles. If we were a new team, we would also not have an estimate on how we work as a team and if that will effect our estimates.