Principles of Scrum estimating

overview as requested at #16 retrospective
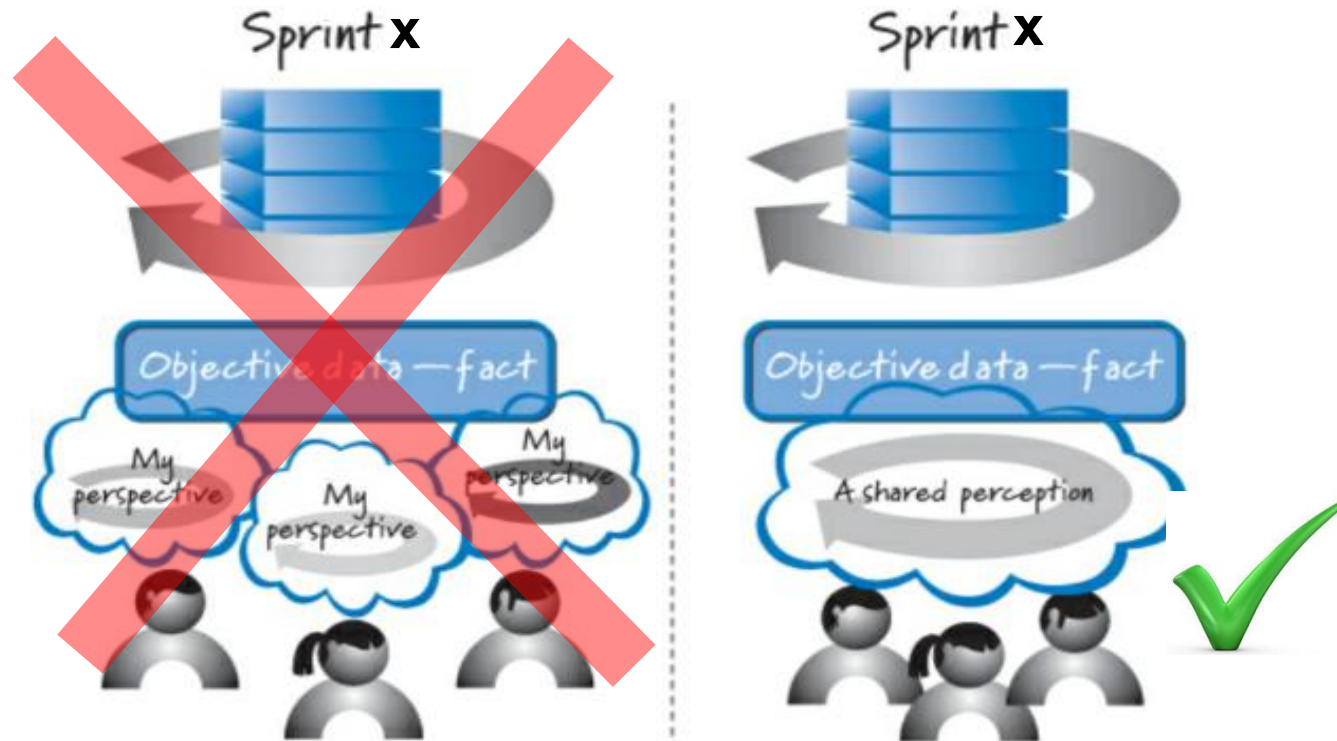
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INTERNAL

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Main difference is ..
Planning and estimating is from a 'shared perspective'

(diagram based on Essential Scrum: A practical guide ISBN-13 :978-0-13-704329-3)

Agenda

Talk thru estimation in a casual scrum manner

SCRUM IS NEITHER RIGHT,WRONG, OR MANDATED IT IS APPLIED

- **We can progress <u>ONLY</u> if we agree this is about applying SCRUM theory not critically assessing how it has been done, will be done or is done!!**

It is fine to disagree we save time and I can get an extra coffee or rooibos tea if we dont proceed

Estimating and velocity

- In SCRUM we need to estimate
  - Size of what we are building (small, big, medium, gigantic)
  - Measure the rate at which things can be done (velocity)
  - Cost is really the size divided by how quick the team does stuff
    - Theoretically Scrum doesn't deal with money .. Realistically it does
      - A three week sprint costs the sum of the team member day rate times 15
      - Neat thing about Scrum we dont have to worry about that ..
  - Scrum is human centric so there are three perspectives
    - Portfolio backlog: Strategic the senior guys (perhaps SAP process backlog)
    - Product backlog: Departmental the operational guys (perhaps SAP delivery backlog)
    - Sprint backlog: Capability providers (perhaps SAP execution backlog)

What follows is scrum theory different organisations implement it differently .. Functional

and Integration scrums work ... they have gone live in an acceptable timeframe ..

Estimating and velocity

Context

- Put simply the same old questions need to be answered as in any project:
  - How many features will be completed?
  - When will it be done?
  - How much will it cost ?

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The scrum principles: use to work towards

Three perspectives
Portfolio backlog: Strategic the senior guys (perhaps SAP process backlog)
Product backlog: Departmental the operational guys (perhaps SAP delivery backlog)
Sprint backlog: Capability providers (perhaps SAP execution backlog)

Item	Portfolio Backlog (big sized stuff)	Product Backlog (medium sized stuff)	Sprint Backlog (executable sized stuff)
Unit	T shirt sizes	Story points/ideal days	Ideal hours / effort (task) hours
When	Portfolio planning	Product backlog grooming	Sprint planning

Process BL *Delivery BL* *Execution BL*

- **This is a good framework. [**Confession: I have been using Scrum since the mid 1990s and the closest I have ever come to this framework is grooming the Sprint backlog using story points, Then at sprint planning time using task hours because the real world is still there!]
  - Real life application of Scrum principles ..
    - Virgin Mobile launch integration .. Zero to telco launch 9 months
    - C&W divest US division .. No source code, lift and shift, customise and data split '8' weeks
    - ..and many more lesser feats of IT delivery derring do ..

Scrum when well applied works because it is people centric

Story points: Abstract relative a subjective measure; the team's `gut feeling`

Calling them points when they're really just hours introduces needless complexity (and loses one of the main benefits of story points).

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Mike Cohn is a leading bloke in Agile circles. Doesn't mean he is right! He does have a point though; if one story point equals one hour then why not call it an hour?
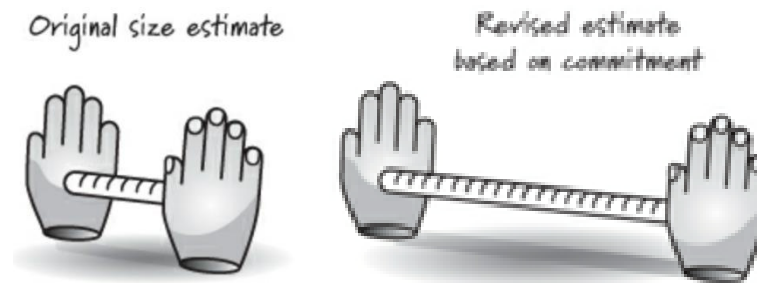
- People work at different rates which is why relative measures are useful for collaborative learning

- Two builders may regard a three bedroom house as a medium sized house. They agree to work together to build a scheme of twelve houses. By working collaboratively they will complete the scheme of twelve houses together (**at the same time, at some point in the future**)

  - However, one builder may complete 7 houses the other 5

- It can be tricky but don't worry… in scrum you learn as you go

🌀 **Story Points – It's All About Relative Size**

Story points aren't precision tools—they're gut feel. Sometimes we overshoot, sometimes we underestimate, and sometimes we hit the sweet spot. That's okay. The point is to size things *relative* to each other, not predict the future. Think of them as a way to keep scope and effort in proportion—not as a stopwatch.

PBI Estimating Approach: a few ground rules

- **TEAM FOCUS:** It is important to estimate as a TEAM, better to work together than individually
- Agile works best when we are **NOT** held back by **UNNECESSARY COMMITMENT**
  - estimating when your bonus depends on it is counter productive because estimates will be artificially increased
  - estmating because you are motivated to give it a go will lead to more accurate estimates (`we can only know if we give it a go!`)

Original size estimate

Revised estimate based on commitment

(diagrams based on Essential Scrum: A practical guide ISBN-13 : 978-0-13-704329-3)

Large

Medium

Small

pt

20 pts

? pts

?

No sweat

Nothing we can't handle

This is going to take some effort

- **ACCURACY NOT PRECISION:** Time and effort required in getting a precise estimate is not as efficient as a **ROUGHLY RIGHT** estimate (Agile relies on **empirical, expert, experience based learning**)
- **RELATIVE NOT ABSOLUTE SIZE:** As humans we find it more natural to think in relative terms eg UK beer is ordered precise quantity e.g. pint, half pint.. In other countries small or large.

Examples of real story points estimated by team (functional sprint)

Key IN (ITSPAR-533, ITSPAR-246, ITSPAR-552, ITSPAR-468, ITSPAR-391, ITSPAR-529, ITSPAR-495)

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P	T	Key	Story Points	Summary	Assignee
⊘	☑	ITSPAR-552	15	additional field for the HSN code available in the SRM shopping cart for Indian company codes	Betsch, Otto (d034123)
↑	☑	ITSPAR-533	8	ECC/P2O: Update Master Data Tracker with Manual Loads	Klose, Lars (d039013)
⌃⌃	▣	ITSPAR-529	30	ITSPAR-515 / Implementation of UNSPSC field in ISQ and ISD	Nalabothu, Balakrishna(C5257780)
↑	☑	ITSPAR-495	20	Change / edit/ cancel the order in Ariba	Remetz, Steve(I848965)
⌃⌃	☑	ITSPAR-468	8	ECC/P2O: PO Integration (create, change, cancel) - sapglobal-d and ISD	Ramappa, Mamatha(C5231966)
⌃⌃	☑	ITSPAR-391	40	P2O/ECC: Invoice - AN Integration to be established in ISQ	Mitra, Pratik(C5255380)
⌃⌃	☑	ITSPAR-246	30	ECC/P2O: Concept of Purchasing Units based on Company Codes	Klose, Lars (d039013)

- Cursory glance indicates more story points when capability needs to be implemented across different platforms e.g. Ariba, SAP ERP
- ITSPAR-468 and ITSPAR 495 illustrate **similar** functionality **different** story points. Neither is right or wrong, thats why we collaborate and agree on story point estimates for each backlog item
- Important to re-state estimates are a FORECAST not a COMMITMENT. At the end of the sprint we compare actuals, have a retrospective and build on experience

Agile planning poker cards based on [Fibonacci series](#)

- Planning Poker is an agile estimating and planning technique that is consensus based. To start a poker planning session, the product owner or customer reads an agile user story or describes a feature to the estimators.

- Each estimator is holding a deck of Planning Poker cards with values like 0, 1, 2, 3, 5, 8, 13, 21 etc. The values represent the number of story points, ideal days, or other units in which the team estimates. (note Mountain Goat Software use a slightly different sequence 0, 1, 2, 3, 5, 8, 13, 20, 40 and 100 https://www.mountaingoatsoftware.com/agile/planning-poker

- The estimators discuss the feature, asking questions of the product owner as needed. When the feature has been fully discussed, each estimator privately selects one card to represent his or her estimate. All cards are then revealed at the same time.

- If all estimators selected the same value, that becomes the estimate. If not, the estimators discuss their estimates. The high and low estimators should especially share their reasons. After further discussion, each estimator reselects an estimate card, and all cards are again revealed at the same time.

- The poker planning process is repeated until consensus is achieved or until the estimators decide that agile estimating and planning of a particular item needs to be deferred until additional information can be acquired
  - To mitigate deferral you can take the likely assignee estimate as the SP estimate to use

Estimating using real hours: There are differences of opinion I use the Scrum alliance task hours

- **In a sprint known knowns are:**
  - **Number of team members**
  - **Team member availability e.g. Jonny is on holiday for 3 days, Jane has support commitments, Jack is managing ad hoc issues arising from testing**
  - **So you have a capability that is:**
    - **Each team member hours e.g. two weeks .. Ten eight hour days is 80 hours**
    - **Total number of hours is the sum of the team member hours e.g. team size of 9 on a two week sprint is 680 hours**
    - **When estimating the sprint tasks use hours to evaluate what can be commited to in the sprint**

Parable of the three stone-cutters

- Three stonemasons, each doing the tedious, back-breaking job of carving rocks.
    - The first one is cutting rocks because he needs the money. Good ethic 'honest day's work for an honest day's pay'
    - The second is doing the job because he perceives himself to be the best stone-cutter around.
    - The third is hammering away with zeal and, when asked what he is doing, answers with '*I am building a cathedral.*'
- We need to create the environment within which we are motivated to reach beyond the task in hand and connect with the broader vision
- The stone-cutters' merits:
    - First stone-cutter needs guidance and support to act autonomously.
    - Second stone-cutter thinking is a concern. Great technical ability but never looking beyond the task in hand. The functional work 'becomes an end in itself'
    - Third stone-cutter's merits speak for themselves

- Let the people who understand the technical lead the delivery .. It's a Skunk Works

https://www.amazon.de/Skunk-Works-Personal-Memoir-Lockheed/dp/0316743003