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Planning Poker

A slightly different take on estimating



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1 Typical Estimating Session

2 Estimating with Planning Poker

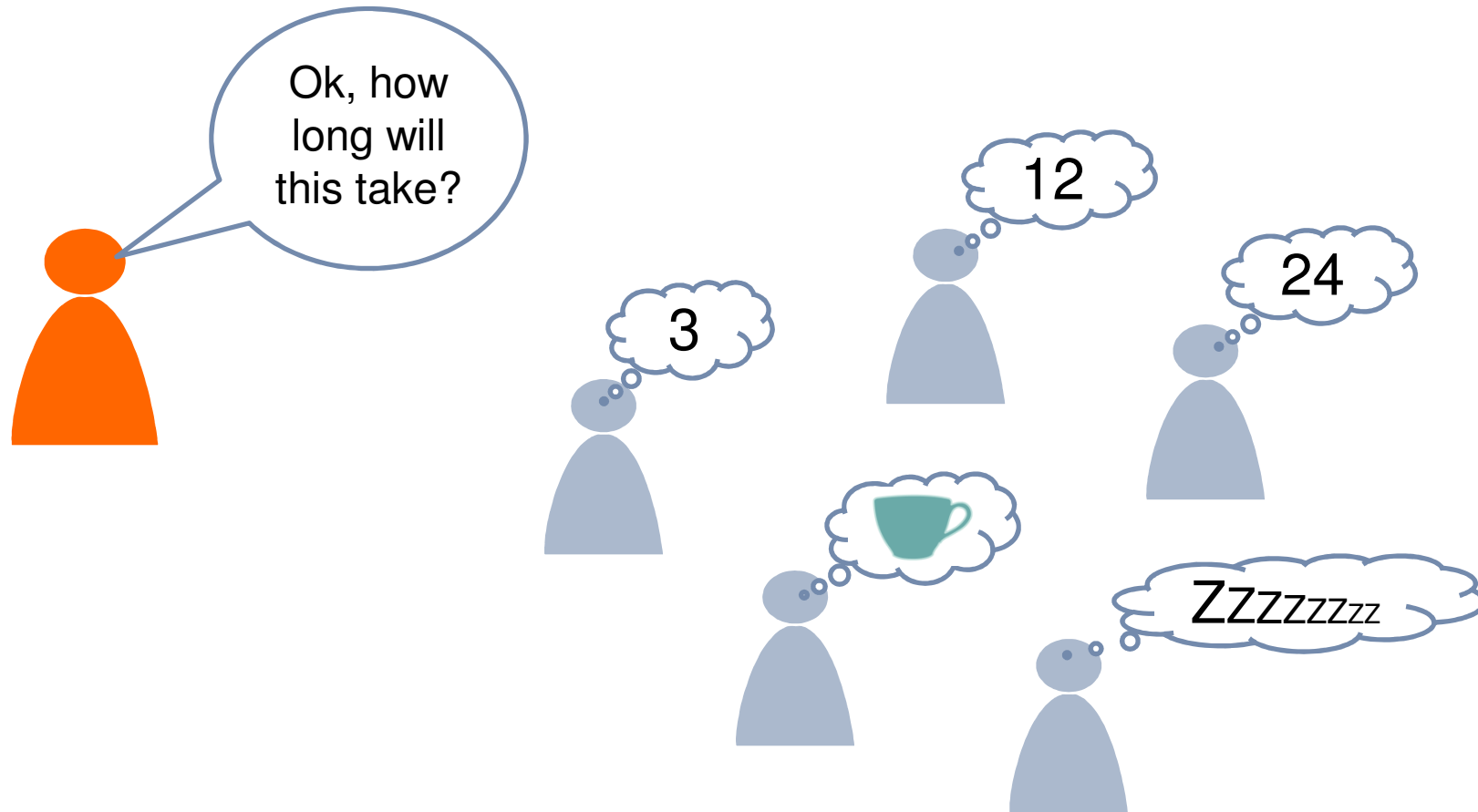
3 Planning Poker in Detail

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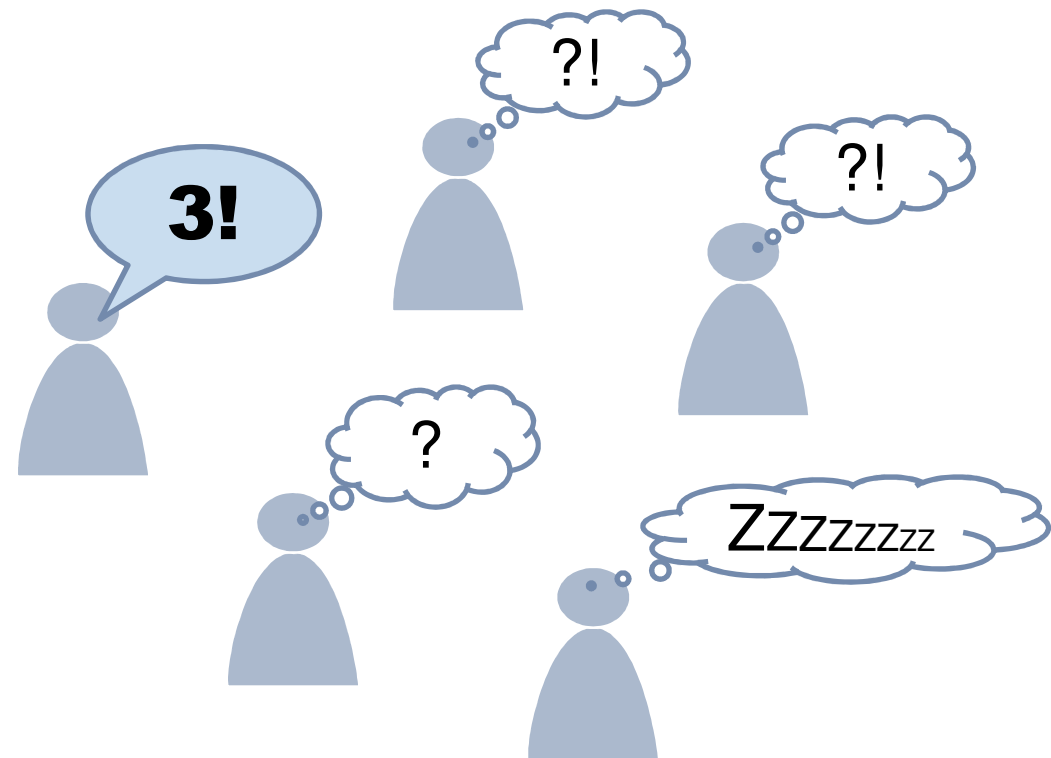


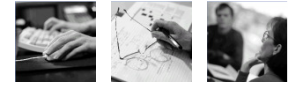
Typical Estimating Session



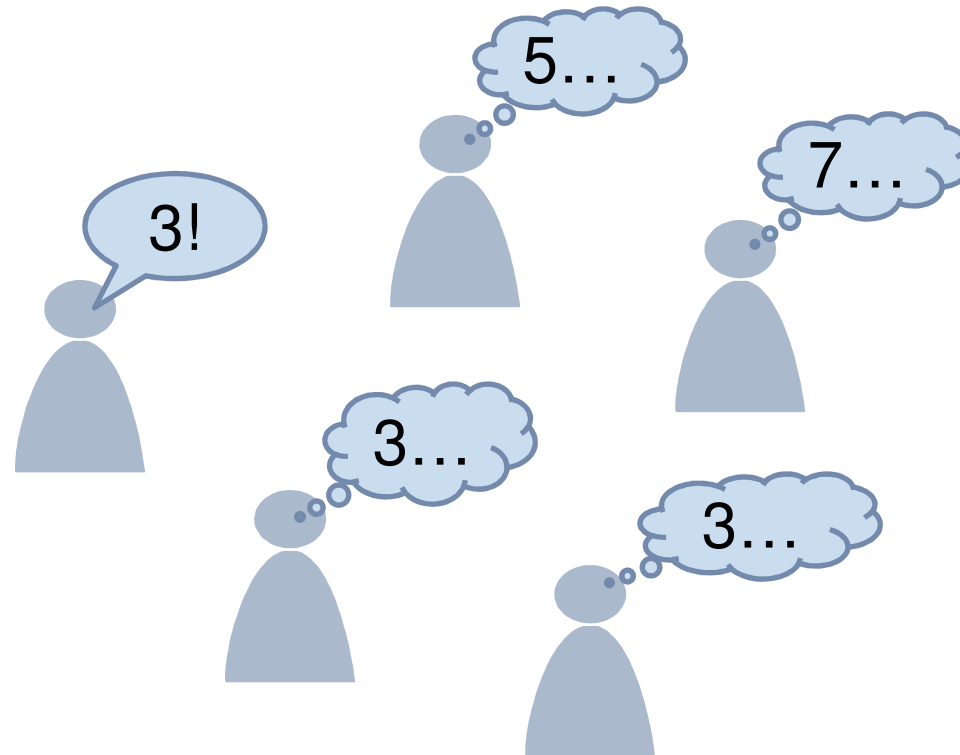


Typical Estimating Session





Typical Estimating Session



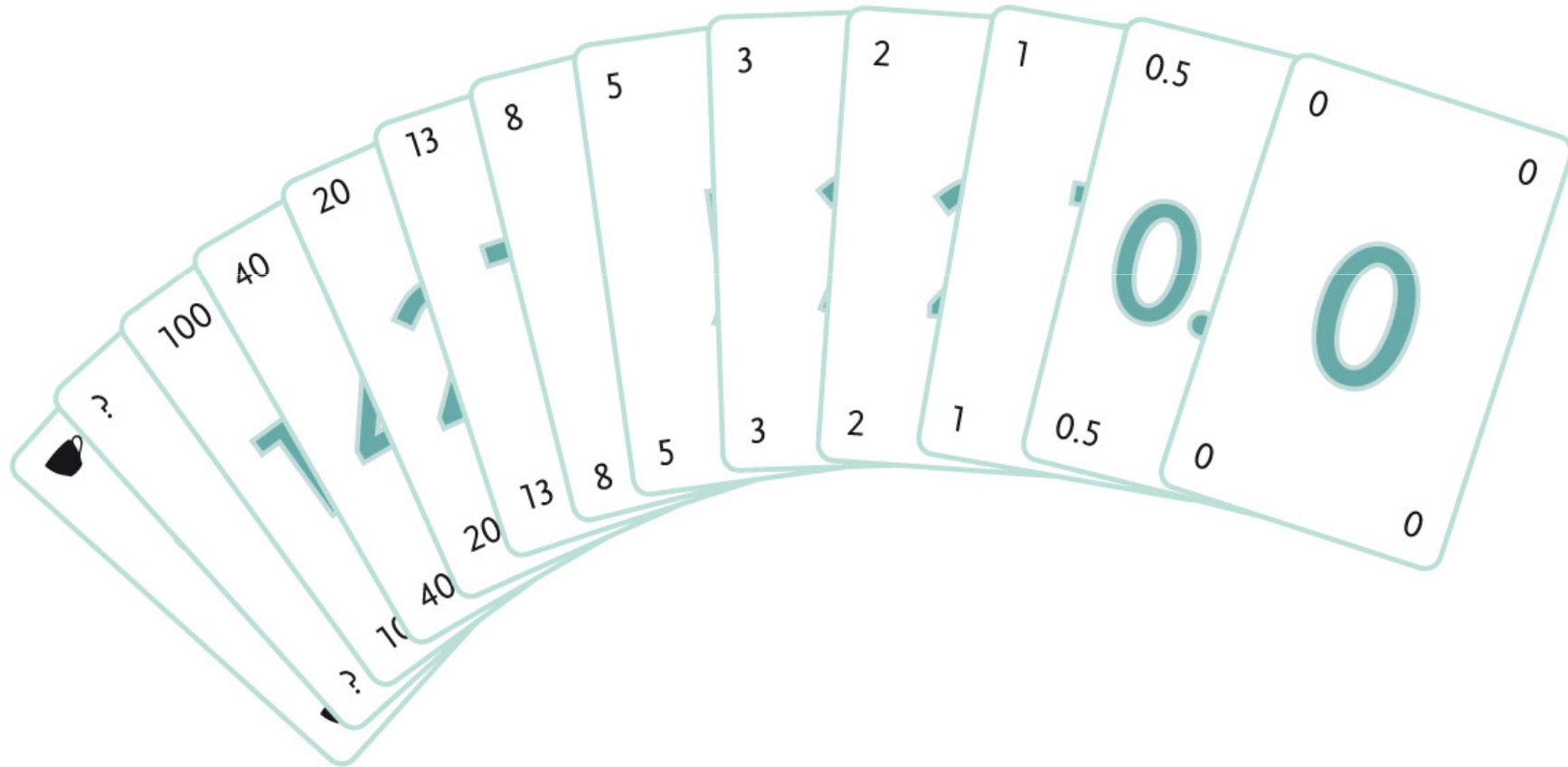


1 Typical Estimating Session

2 Estimating with Planning Poker

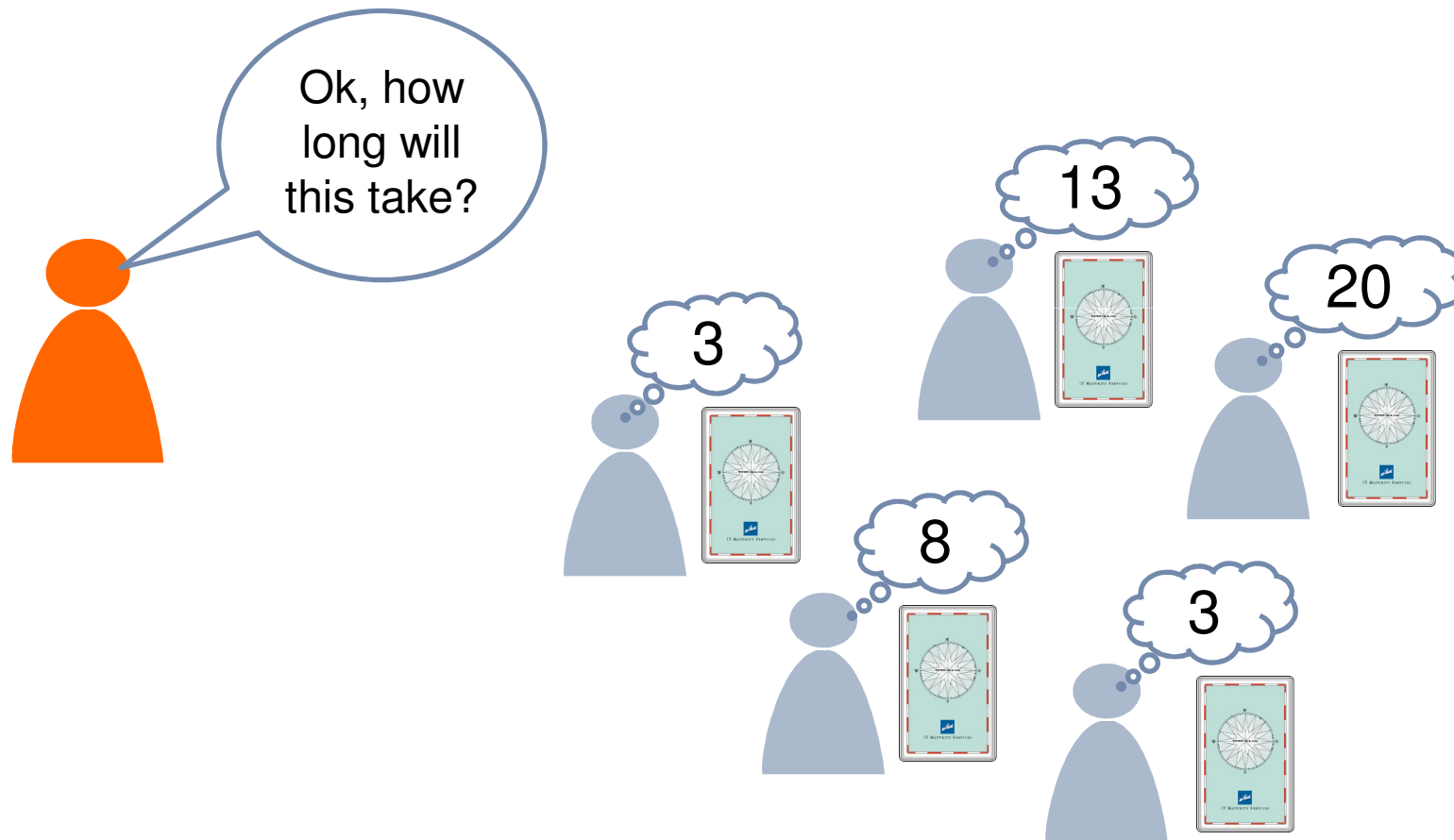


Planning Poker is based on a list of items to be estimated and a deck of cards. The whole team participates. Each person is given one set of cards.



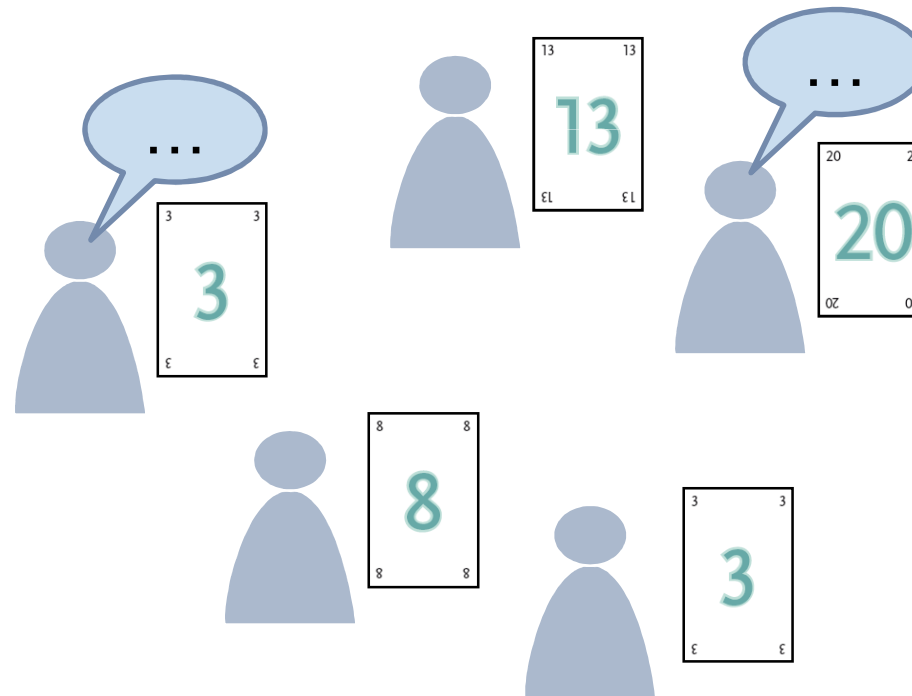


Each item is presented for estimation. The team briefly discusses each item. Each estimator lays a card face down representing his estimate.



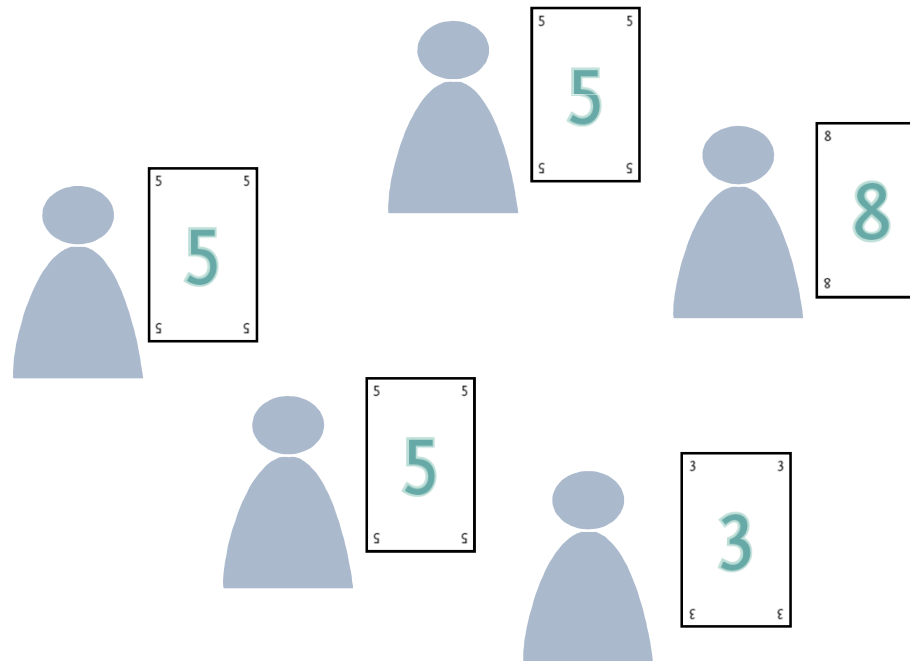


**Everyone calls their cards simultaneously by turning them over.
People with high estimates and low estimates explain their estimate.**





The team does a second round of estimation.





1 Typical Estimating Session

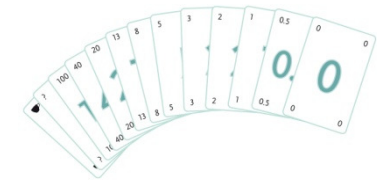
2 Estimating with Planning Poker

3 Planning Poker in Detail



In Planning Poker, the whole team estimates.

Planning Poker is based on a **list of items** to be estimated and a **deck of cards**. The list of items could e.g. be software items or a work breakdown structure.



The **whole team** participates. Each person is given one set of the cards.



A **moderator** who will not play chairs the meeting. The team decides what units are estimated. They can be days duration, ideal days or story points.





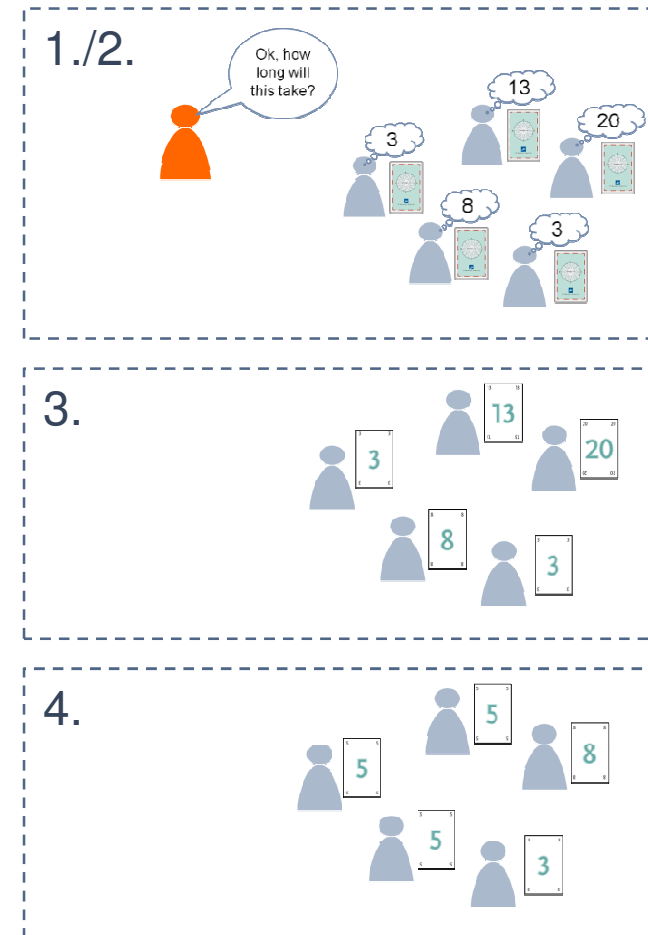
Each item is estimated in 4 steps until consensus is reached.

The steps are:

1. Each **item is presented** for estimation. The team briefly discusses each item.
2. Each **estimator lays a card** face down representing his estimate.
3. Everyone **calls their cards** simultaneously by turning them over.
4. People with high estimates and low estimates explain their estimate. The group continues to discuss and re-estimate the item **until the estimates converge**.

Hints:

- The point is not absolute precision but reasonableness.
- It's a good idea to write down a short summary of the discussion for each estimated item.



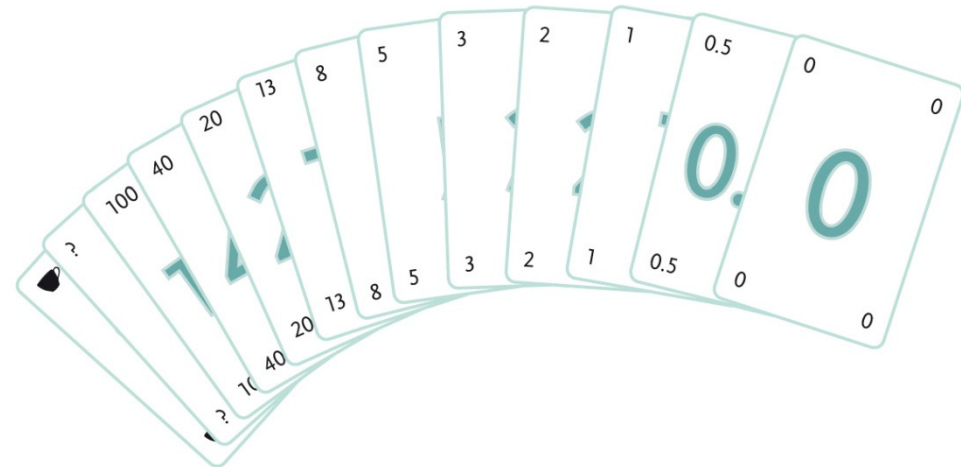


The card deck consists of the numbers 0, 0.5, 1, 2, 3, 5, 8, 13, 20, 40, 100, a question mark and a coffee break card.

The cards are numbered to account for the fact that **the higher an estimate is, the more uncertainty it contains.**

The **defined set of numbers**

- Speeds up the estimation process by limiting the number of choices,
- Avoids a false sense of accuracy for high estimates,
- Encourages the team to split large items into smaller ones.



Special cards:

- The question mark is used when an estimator has not enough information to make an estimate.
- The coffee break card is used when an estimator needs a break.
- “0” means that item is already done.



Planning Poker is a consensus-based estimation technique for estimating. It is a variation of the Wideband Delphi method.



Planning Poker is a variation of the **Wideband Delphi** method. It is simple, quick and fun to use, and results in reliable estimates.

Instead of estimating a list of items iteratively by experts, the **experts gather together and estimate each item in a few rounds** using the planning poker cards until the team reaches consensus.

Planning Poker **can be used to estimate anything**. It is often used to estimate effort or relative size of tasks in software development.



1 Typical Estimating Session

2 Estimating with Planning Poker

3 Planning Poker in Detail

4 Relative Estimates



Absolute estimates are easy at first sight. But the larger an estimate becomes, the less accurate it becomes. With absolute estimates it is also difficult to incorporate actual values.



How large are our planets?	Size (diameter in km)
Mercury	?
Venus	?
Earth	?
Mars	?
Ceres	?
Jupiter (=Saturn + Erde)	?
Saturn	?



Instead of estimating absolute efforts we estimate the complexity of items relative to each other.



How large are our planets?	Relative Size
Mercury	0.5
Venus	2
Earth	2
Mars	1
Ceres	0
Jupiter (=Saturn + Erde)	20 + 2
Saturn	20



After the estimation, the relation of the points to the desired units is determined. In the example above, we might determine that 2 points equal 12.756 km, because we know it for earth.



How large are our planets?	Relative Size	Absolute Size (diameter km)	Size Estimate (diameter km)
Mercury	0.5		3189
Venus	2		12756
Earth	2	12.756	
Mars	1		6378
Ceres	0		0
Jupiter (=Saturn + Erde)	22		140316
Saturn	20		127560



Relative estimates are often easier to come up with and more accurate. Relative estimates remain valid even if assumptions about the estimation units change.

Relative estimates are more accurate:

- Smaller estimates are more accurate.
- The relation of items to each other is often smaller than the effort for a task itself.
- Therefore (smaller) relative estimates are often more accurate than (larger) absolute estimates.

Relative estimates remain valid:

- While the absolute value might change, the relation mostly stays the same.

Note: If you use relative estimates, the team must avoid relating the estimates to the actual units during the estimation session.



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4 Relative Estimates

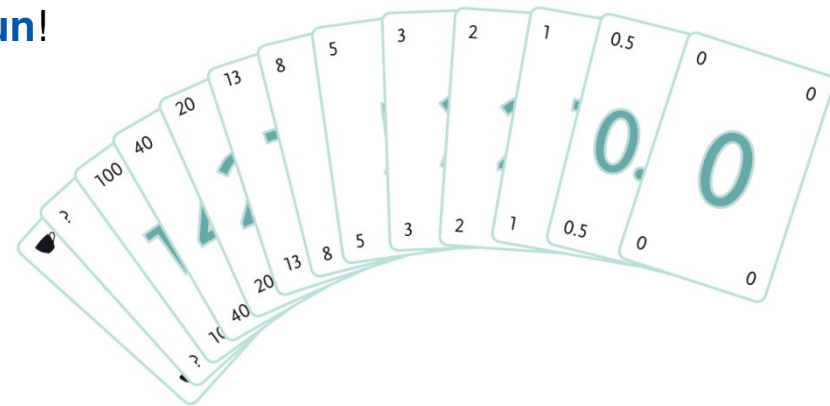
5 Summary



Planning Poker works because multiple experts of a cross-functional team reach consensus on their estimations through discussions – and it is also fun.

Why Planning Poker works:

- Planning Poker brings together **multiple expert opinions** to do the estimating.
- **Cross-functional teams** are better suited to the estimation task than anyone else.
- The **group discussions** that take place during planning poker improve the accuracy of the estimates. Being asked to justify estimates results in estimates that better compensate for missing information.
- The need to reach a **consensus** leads to averaging the individual estimates through group discussions. This leads to reliable estimates.
- Finally, planning poker works because it is **fun!**





You can use Planning Poker to estimate anything.

Use planning poker to estimate:

- Days or hours needed for items of a work breakdown structure
- Relative complexity of features (e.g. Story Points of User Stories)
- (Relative) time for topics of a workshop
- (Relative) costs of items to be bought
- Impact of risks
- The money your colleagues have in their pockets
- ... any many more

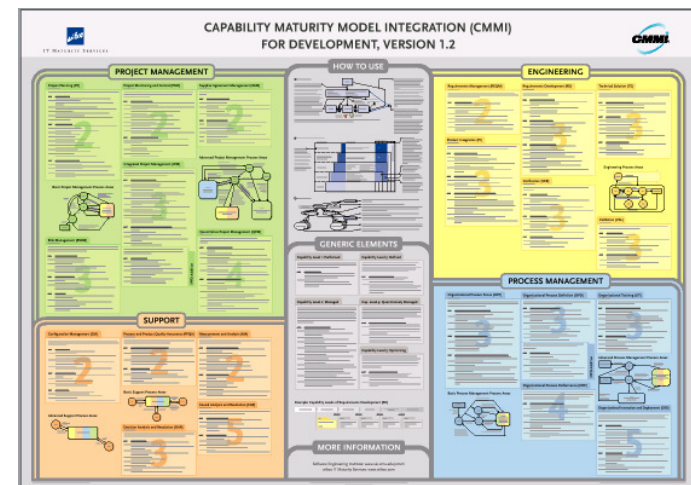


Exercise: Estimate the characters of the CMMI poster.

Divide in teams of 6.

Each team estimates for each process area its relative “character size”. Use the process area PMC as a reference with 8 points.

1. Do a round of planning poker to estimate the characters for each process area.
2. Calculate – on the basis of the number of characters of the process area PMC – the estimated characters of the other process area.
3. Show your results to all.





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Revision History

Target status: finished
 Template-Version: 3.5

Rev. no.	State	Date	Comments	Responsible
0.1	Unfinished	25.01.2008	Initial version	Patrick Scheuerer
0.2	Unfinished	30.01.2008	Layout angepasst, Rev. History gepflegt	Malte Foegen
1.0	Finished	21.07.2008	Added Planning Poker explanation	Malte Foegen
1.1	Finished	22.07.2008	Review and minor corrections	Patrick Scheuerer
1.2	Reviewed	22.07.2008	Reviewed mit Patrick	Malte Foegen
1.3	Finished	20.10.2008	Revised version	Malte Foegen



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