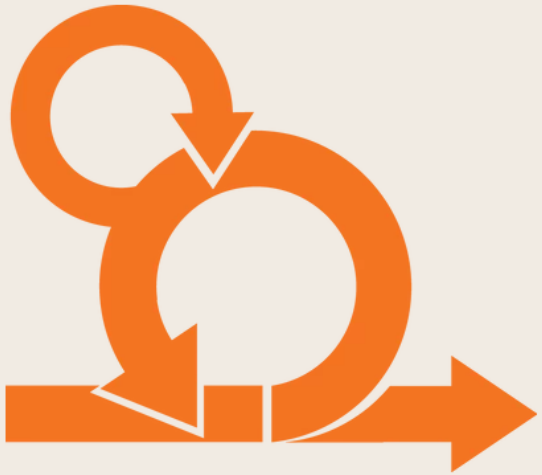
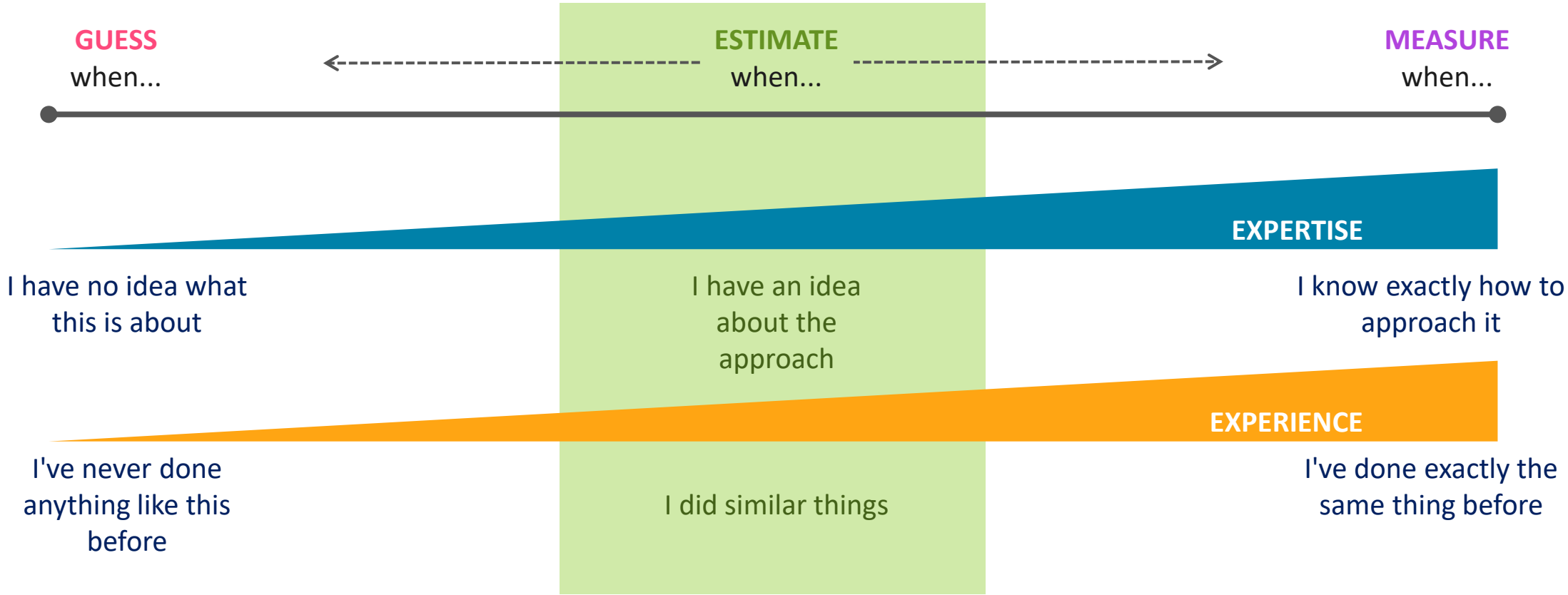


AGILE SOFTWARE DEVELOPMENT

Estimations in Agile

What is estimation?

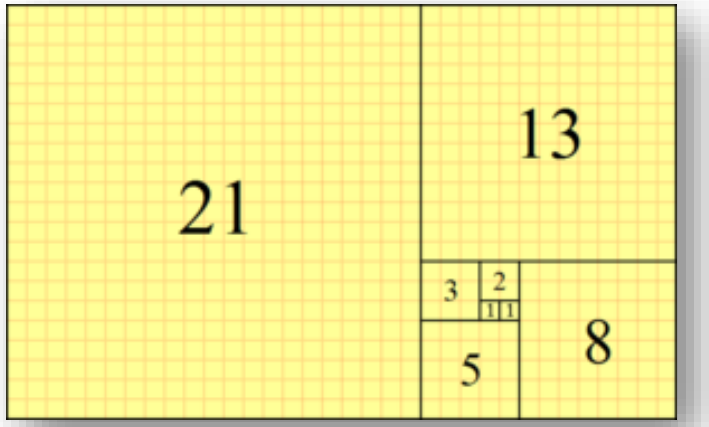


Cambridge Dictionary: *a guess or calculation about the cost, size, value, etc. of something*

Story points

- How long a user story will take (effort) in relative.
- Influenced by complexity, uncertainty, risk, volume of work etc

Relative sizing and story points



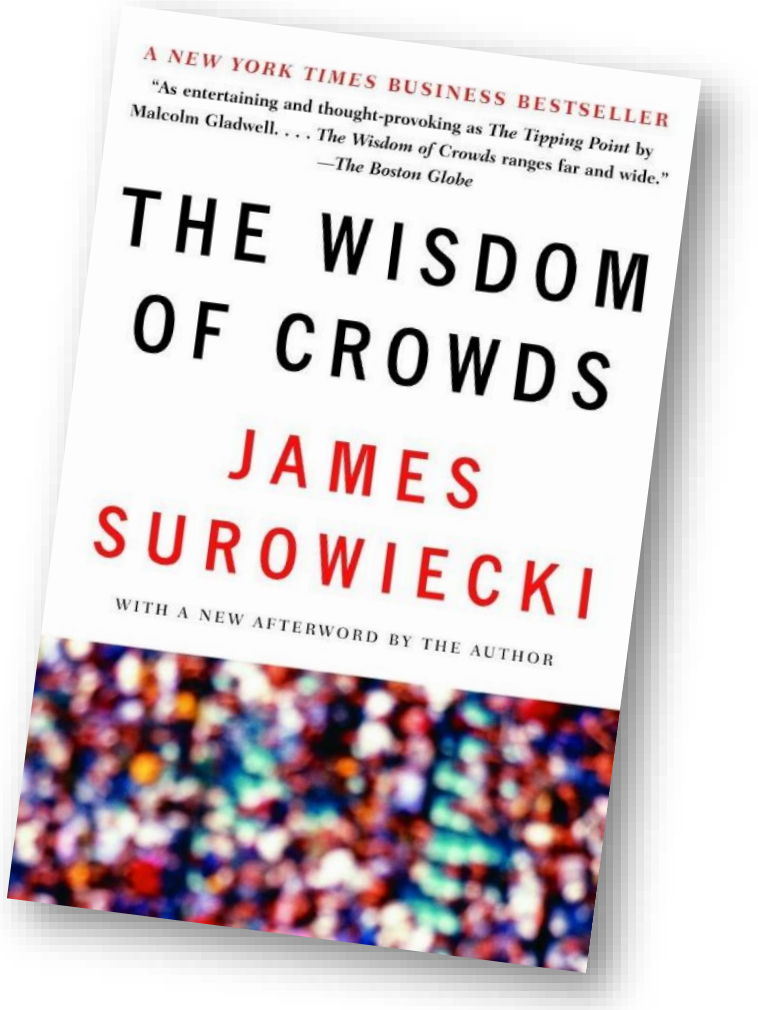
- Estimation technique that ranks stories by their size relative to each other and estimates based on those rankings.
- Story points are typically expressed using the Fibonacci sequence of numbers
  - Using this technique the estimation would be quick because one story it not evaluated from the scratch, it is evaluated by its position relative to other stories
  - It is useful when planning for the next iteration to decide which stories can be completed in that iteration
- Guidelines:
  - The team should own the definition of story points
  - Story points definition should be all-inclusive
  - Point sizes should be relative
  - When disaggregating, totals don’t need to match
  - Estimate should include complexity, effort and risk

Poker planning

- Planning poker is a consensus-based estimation technique, mostly used to estimate effort or relative size of user stories. After each player has selected a card, all cards are exposed at once and consensus is reached in steps.
- Advantages:
  - Minimizing the “bandwagon effect” (grouping around most popular opinion)
  - Preventing HIPPO decision making (Highest-Paid Person Opinion)
  - Minimizing the “groupthink” effect (excessive concern for group harmony)

Wisdom of Crowds

- Diversity of opinion
- Independence
- Decentralization
- Aggregation
- Trust



Wisdom of Crowds

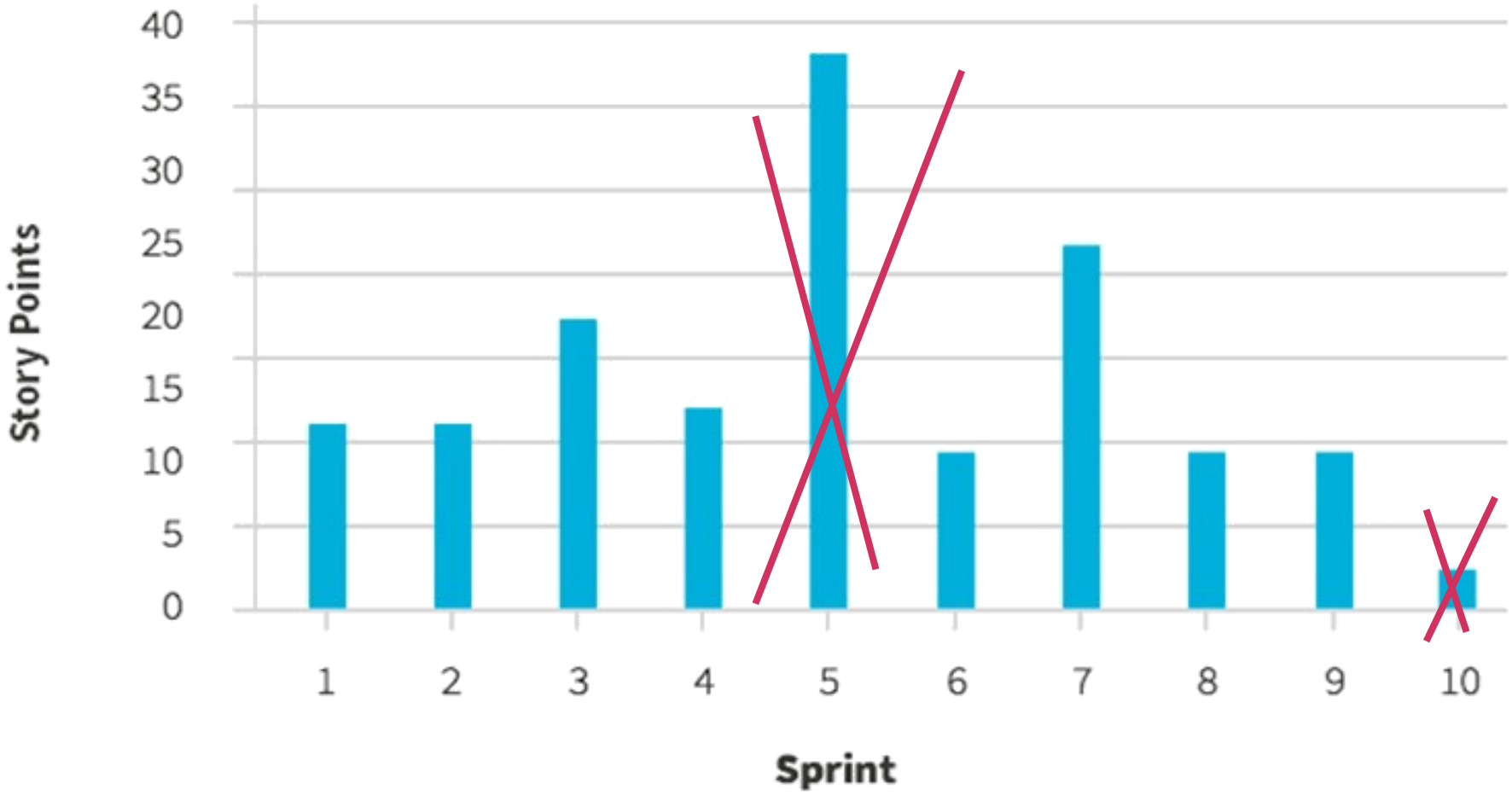
Planning Poker

- Diversity of opinion
- Independence
- Decentralization
- Aggregation
- Trust

Velocity

- The sum of the effort estimates associated with user stories that were completed during that iteration

Velocity



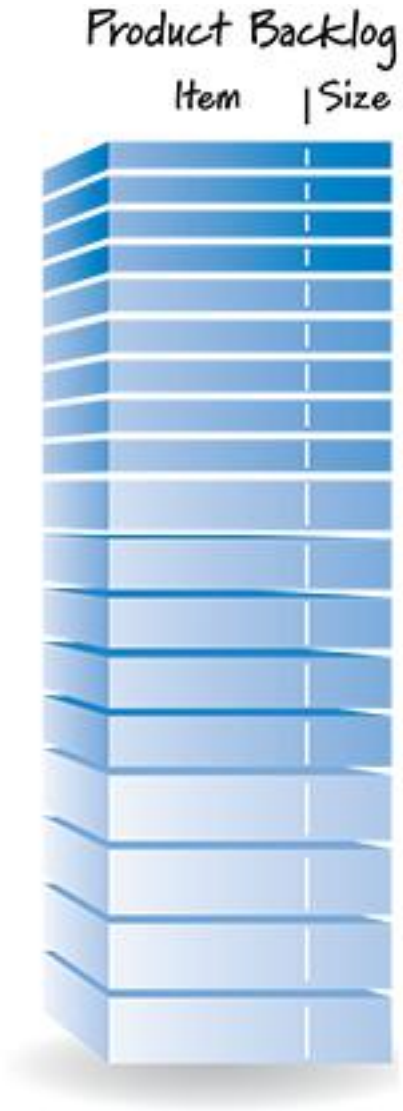
Velocity

Sorted velocities
27
34
35
38
39
40
40
41
45

90% confidence interval

No of historical iterations	Iterations to throw out from each end
0-7	0
8-10	1
11-12	2
13-15	3
16-17	4
18-20	5
21-22	6
23-25	7
26+	8

Extrapolate the velocity range



Will have

5%

5 * 34 = 170 story points – “We’ll be at least here in 5 sprints”

Might have

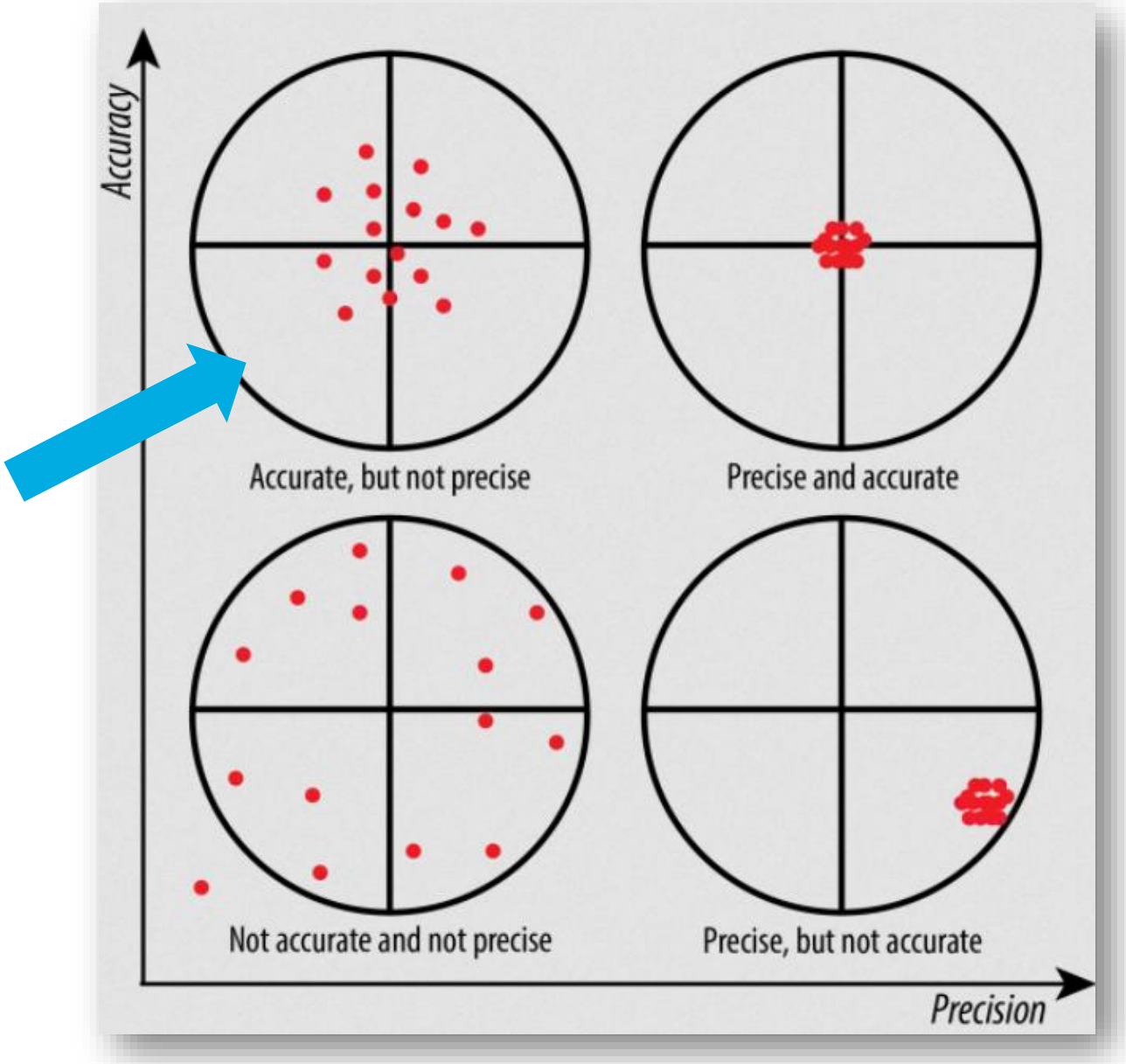
90%

5 * 41 = 205 story points – “We might be here in 5 sprints”

Won’t have

5%

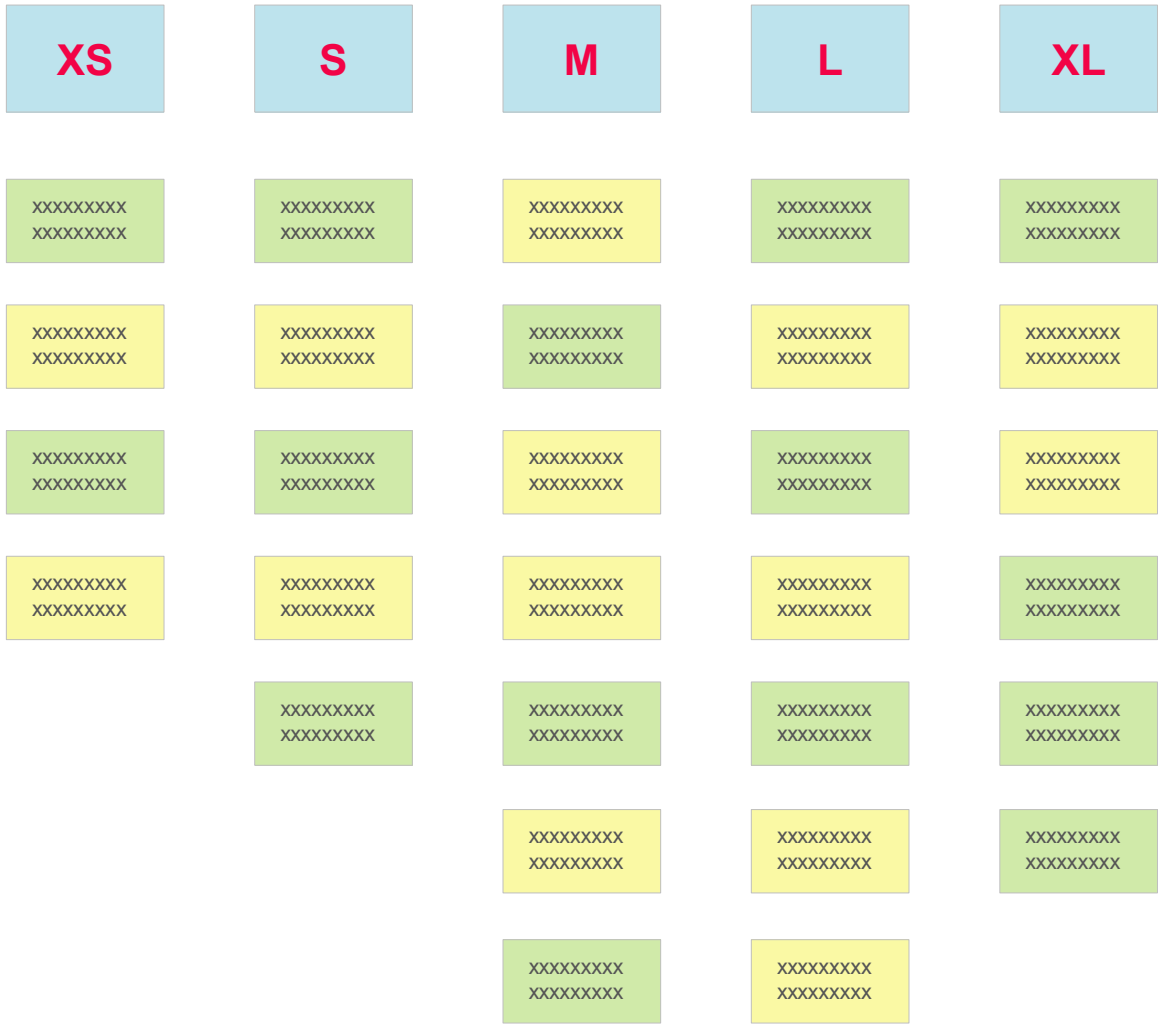
Accuracy vs Precision



"It is better to be roughly right than precisely wrong"

J.M. Keynes

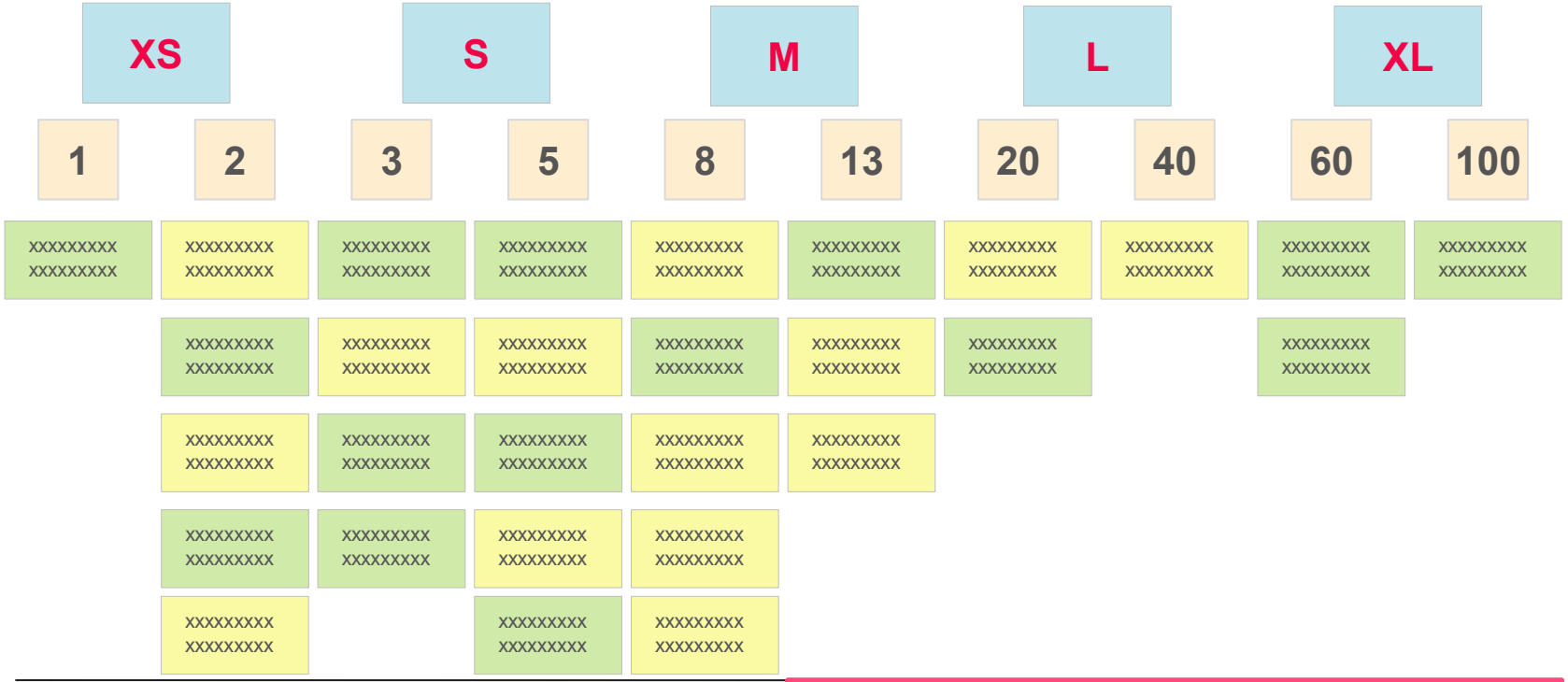
White Elephant Sizing



1. Prepare a set of user stories
2. Organize a workspace with t-shirt sizes as columns
3. Ask the project team to estimate each user story through placing it on a column
4. Answer the questions asked by the team, but don't go into too much detail

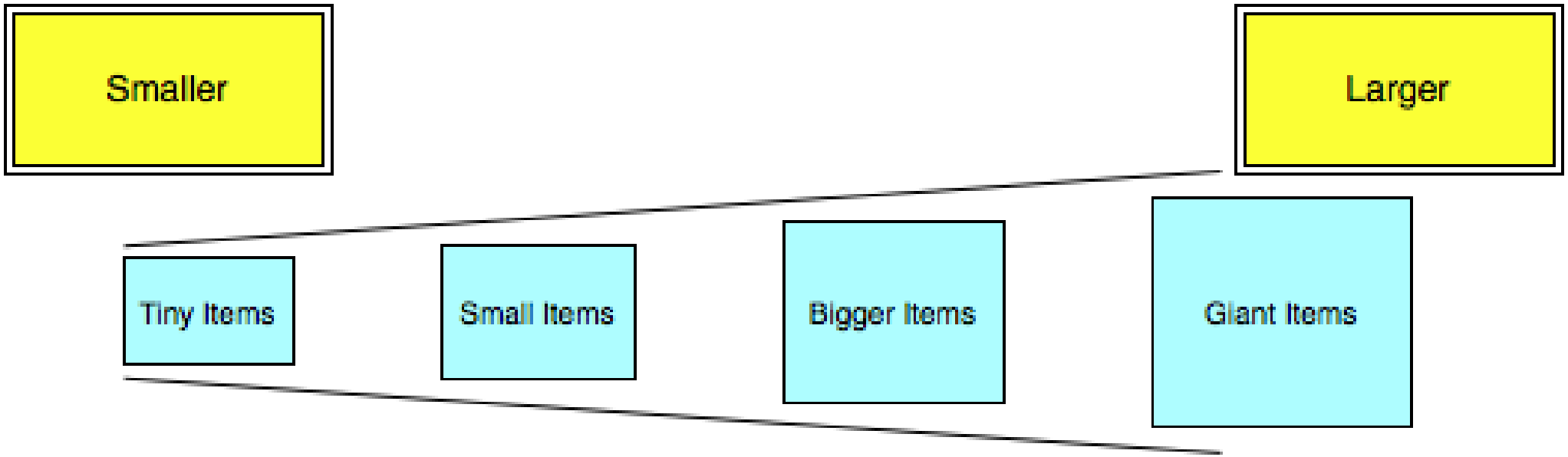
White Elephant Sizing

5. Prepare a second round using the Fibonacci sequence
6. Ask the project team to refine the estimates
7. Calculate the total size of the project user stories
8. Calculate the time estimated to complete using tolerance intervals

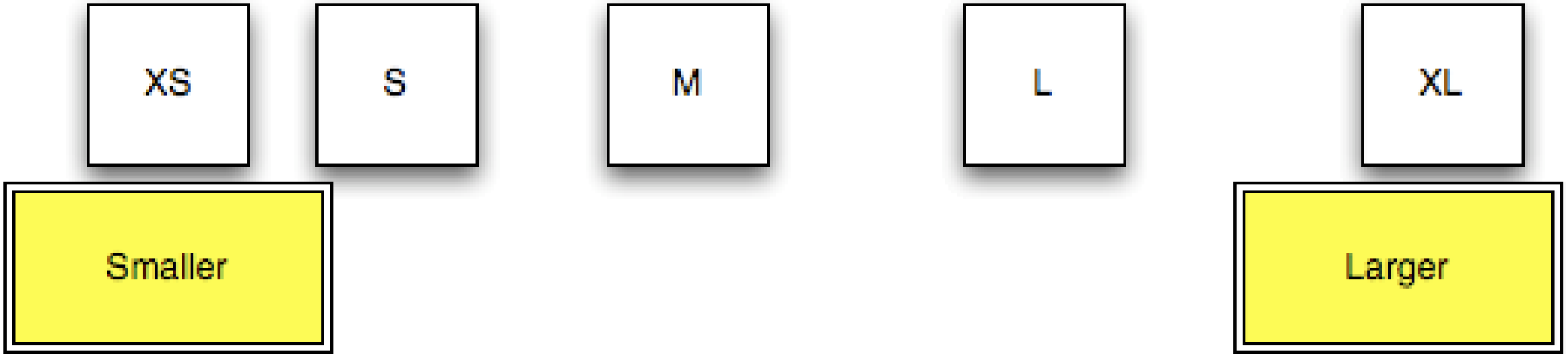


TOTAL **427 SP** **342 - 512 SP**

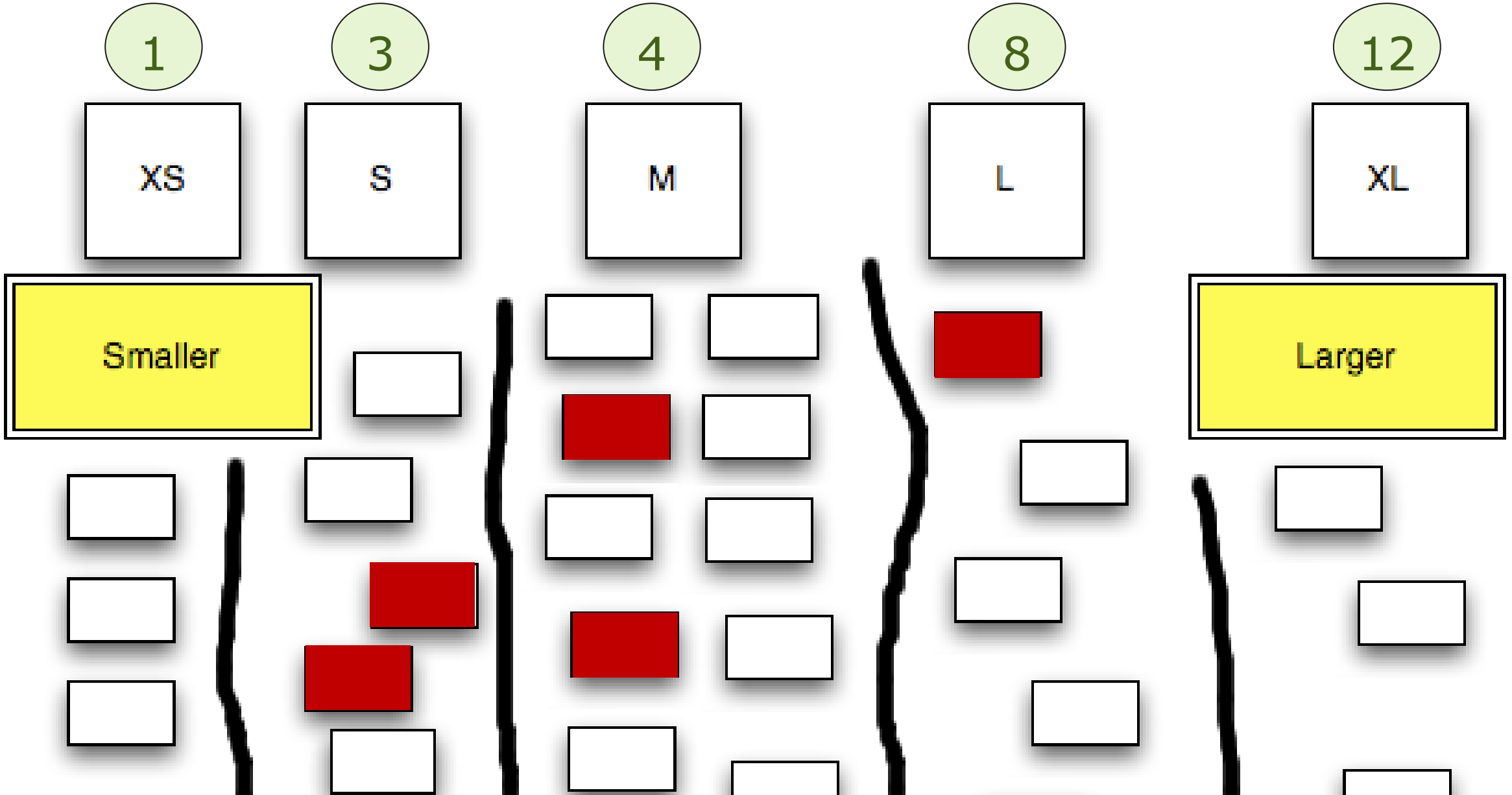
Affinity estimation



Affinity estimation



Affinity estimation



Velocity prediction

18

Velocity prediction