Estimation and Prioritization Petri Heiramo Agile Coach, CST



T-Shirt Sizing

- Very good tool for initial size estimation
 - Fast
 - Requires very little detail
 - Gives good approximation of the relative size
- Relative scale, works regardless of granularity
 - Also, no fixed ratio between categories
- Scale: Small (S) Medium (M) Large (L)
 - Optionally XXL for really really large stories



Exercise: T-Shirt Sizing for MyBooks

- As a group, estimate the size of each story using the T-shirt sizes
- Mark 3 piles on your table and place each story card (after necessary discussion) in one of the piles
 - If you feel you need XXL, just place that story outside the piles
- Once done, update the size to the left upper corner of the card





MoSCoW

- Prioritizes stories into four categories
 - Must A story that just has to be made. Release has to be postponed of all Musts aren't done
 - Should An important and should be included. However, missing one or two isn't going to prevent release
 - Could A nice-to-have feature that can have high value-added for the product
 - Won't (for now) A feature that has been shifted out-of-scope for current release or otherwise removed
- M's and S's usually comprise into Minimum Marketable Features (MMF)
 - Just having Must's done doesn't necessarily make a market-worthy product



Using MoSCoW

- A fast tool and suitable for large amount of stories
- Important to recognize the difference between Must's and Should's!
- Can be made from technical or business point of view
 - Comparing the differences between the two can be enlightening
- When planning releases, a maximum of 70% of size should be Must's (DSDM rule)
 - If more, the statistical probability of not getting the release out starts increasing



Exercise: MoSCoW for MyBooks

- As a group, estimate the business importance of each story using the MoSCoW scale
- Mark 4 piles on your table and place each story card (after necessary discussion) in one of the piles
- Once done, update the category to the right upper corner of the card





Defining Value by Desirability

- Uses Kano Model of Customer Satisfaction
 - Uses a specific type of customer research query
- Categorizes features into three categories
 - Threshold, or must-have, features
 - "Minimal acceptance criteria"
 - Linear features
 - "The more the better"
 - Exciters and delighters
 - Premium features
- Prioritization
 - 1. Get all threshold features
 - 2. Complete as many linear features as you can afford
 - 3. A few exciters for premium and differentiation





Relative Value

Story	Value	Size	RV
Story 1	M	5	1
Story 2	5	м	-1
Story 3	5	м	-1
Story 4	L	L	0
Story 5	M	5	1
Story 6	L	L	0
Story 7	5	5	0
Story 8	L	5	2
Story 9	5	м	-1
Story 10	5	м	-1
Story 11	M	5	1

- Assign Small, Medium and Large value for each story
- Estimate T-Shirt sizes for stories
- For value
 - L = +2
 - M = +1
 - S = +0
 - For Size

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- L = -2
- M = -1
- S = -0
- Sum numbers & sort



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Useful for early



Exercise: Rel. Valuation for MyBooks

- As a group, estimate the business value of each story using T-Shirt sizes
- Once done, calculate and update the relative value to the left upper corner of the card, next to the size estimate





Mañana Technique

- Mañana technique is a simple prioritization tool for filtering out items based on relevance
- Useful for narrowing down the amount of features under current evaluation
- At the start of the exercise, define the mañana threshold, e.g.
 - "Items we need to consider in some way during the first two sprints"
 - "Items that are relevant for the first beta release"
- Items are placed into two piles
 - "Now" These items have relevance within the given threshold
 - "Mañana" These items can be safely put aside for now
- Once divided, put the Mañana pile aside and focus on the items in the Now pile
- Can be run iteratively to identify different levels of Mañana
 - E.g. first for release, then for the next two sprints; the first Mañana pile can be put aside until next release, the second one only for this workshop



Exercise: Mañana Split on MyBooks

- As a group, use the Mañana technique narrow down number of items for more precise estimation
- Mañana threshold: "Items that have to be taken into account on day 1 of the project"
- Divide the items into the "Now" and "Mañana" piles (with appropriate discussion)
- Put the Mañana pile aside for now, leave the Now pile on the table
 - Don't throw any cards away!



Planning Poker

- Useful when there is relative low number of stories to estimate
 - Generates lots of discussion
 - Involves everyone equally in providing their initial estimate
- Not useful when there are lots of stories
 - Can be slow going, if there are unclarities



Exercise: Planning Poker on MyBooks

- As a group, use the Planning Poker technique to estimate the story point values of the items in the Now pile
- If you have more than 15 stories in that pile, sort them in priority order by MoSCoW (Must's first, then Should's, etc.) and relative value (2's before 1's etc. within each MoSCoW category). Estimate only the first 15 with Planning Poker.
- Mark down the sizes in the left bottom corners of the cards





Wideband Delphi Estimation

- Iterative approach for improved estimates
- Every developer gives his estimate
- Discuss differences, especially extremes
- Re-estimate until convergence
- If your customer wonders about Planning Poker, you can explain that it is directly based on this traditional, researched and proven estimation method



Three rounds from a Delphi Session



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"Bucketing" or Lane Estimation

- When the number of stories to be estimated is very large (> 50-100), Planning Poker is too slow. Bucketing gives a faster way to do it
- Instead of voting for sizes individually per story, lanes or "buckets" are placed on a table for certain sized stories
 - Bucket sizes are the same as in Planning Poker
- The stories are then placed into the buckets in any mutually agreeable manner
 - Review the bucket contents as appropriate

Example of Bucketed Stories





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Exercise: Bucketing on MyBooks

- As a group, use the Bucketing technique to estimate the story point values of the items in the Mañana pile
- If you had more than 15 stories in the Now pile, include the extra stories in this estimation
- Agree how you will collaborate to place the stories in the buckets





Dependency Map

- It is often very useful to explicitly chart out the key dependencies between the stories
- One quick way to do it, with a reasonably small number of stories, is create a dependency map
- Starting with any story, place other stories around it one by one
 - If the stories are not dependent, place the new story below or above the previous ones
 - If the new story is a prerequisite for a story already on the table, place it on the left side of that story
 - If the new story is dependent on a story already on the table, place it to the right side of that story
 - In case of connecting dependency chains, rearrange them appropriately immediately
- Once all stories have been placed, rearrange the table so that all stories start at the same vertical level



- There may be independent items that are not specifically dependent on any other story
 - These items are useful as "fillers" since they are very flexible in their placement in the release plan
- The first items in the chains are stories that need to be done very early in the project
 - By their nature, they have a high project risk associated with them as they postpone all dependent stories
- If there are stories with higher MoSCoW category than their predecessors, the predecessors have to updated to the same importance
- If there are high-importance items at the ends of long story chains, those stories are likely to form the "critical path" for the project
 - In planning, seek ways to shorten the chains or implement those chains with high priority



Example of a Dependency Map





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Exercise: Dependency Map for MyBooks

- As a team, go through the stories and create a dependency map
- From the map,
 - Identify needs to upgrade importance for prerequisite stories
 - Identify longest chains and their importance
 - Identify root stories
- Leave the dependency map on the table to be used in the planning exercises



THE PRODUCT BACKLOG HAS NOW BEEN PREPARED FOR THE FIRST PLANNING SESSION.



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Thank you

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