

## UNDERSTANDING, CLUSTERING, AND RANKING OPTIONS

## DECISION MATRIX

A more analytical approach to decision making to use when multiple factors need to be taken into account.

<b>Duration</b>	<b>Preparation:</b> the preparation of this exercise, especially collecting decision factors and weighting them, is a valuable part of the activity itself and may take from 15 minutes to several hours <b>Activity:</b> depending on the number of ideas, from 20–60 minutes
<b>Physical requirements</b>	A set of options, and space to write up a table
<b>Energy level</b>	Low and thoughtful
<b>Facilitators</b>	1
<b>Participants</b>	1 or more
<b>Expected output</b>	A numerical evaluation of each option

If your decision is based on multiple criteria, one- or two-dimensional approaches (for example, the idea portfolio) might not seem enough. A decision matrix<sup>01</sup> allows multiple weighted criteria to be incorporated in the decision, but lets us consider them one at a time.

The options available are listed along one axis of a table; the various decision factors along the other. The decision factors may be weighted. The team consider each criterion for each option and give it a value, modified by the weighting. The arithmetical result suggests which option to address first. This method is especially welcomed by analytical thinkers.

<sup>01</sup> Pugh, S. (1991). *Total Design: Integrated Methods for Successful Product Engineering*. Addison-Wesley.



### Step-by-step guide

- 1** Consider if and how you will bring previous knowledge into the room (for example, as a research wall or as key insights).
- 2** Invite the right people to work beside your core team for the exercise (this might include people who know the background, people with no preconceptions, experts, representatives of the implementation team, people who will deliver the service, users, management, etc.).
- 3** Collect your potential options. For example, in a wayfinding project the options might be new signage, a system of touchscreens, human helpers, or a digital app. Write them as headings for the rows of a table.
- 4** Consider the factors or criteria which will guide your decision: for example, implementation cost, fit to brand, time to implement, impact on customer satisfaction, maintenance cost. Write these as headings for the columns of the table.
- 5** If you want, give each decision factor a weighting. Be careful – small differences in weighting will strongly affect the outcome.
- 6** For each idea, assign a value on a fixed scale (0 to 5 is good) for each factor. Multiply the value by the appropriate weighting and write it in the box.
- 7** Continue for all ideas. Write total values for each idea in the last column.
- 8** The idea with the highest total value is the one to consider first, but you should choose a mixed group to take forward.

## Method notes

- This is an MCDA (multiple criteria decision analysis) technique. Look into that term for more options and background.
- Like with many “decision” tools, the discussion you have while using the tool – even while setting up the decision factors and weighting – is as important as the tool itself.
- This particular tool can lead to very long discussions, on both the weighting and the values. Often, teams are basically guessing values – they do not know enough about the individual options to make a reliable estimate. Draw attention to this, and perhaps use the tool to highlight those gaps in understanding. Once they have been identified, use research or prototyping to inform or replace the discussion.
- A wide variety of decision matrix templates are available online. ◀

FACTOR	COST TO IMPLEMENT	TIME TO LAUNCH	CUSTOMER SATISFACTION	TOTAL
WEIGHTING	x2	x3	x2	
NEW SIGNS?				
TOUCH-SCREENS?				
STAFF HELPERS?				
DIGITAL APP?				

- A Like all decision tools, this does not make the decision, but supports the process and the conversation around it.