Weighted Decision Matrix

Some decisions have several good options and many things to consider. A weighted decision matrix puts them all in one simple table, so that we can compare the options fairly. Each option is scored against a list of criteria, and each criterion gets a weight that shows how much it matters. The British engineering professor Stuart Pugh made a related method popular, in which each option is compared with a baseline and marked as better, worse or the same. Weighted scoring adds numbers to this idea, so that the most important criteria count the most.

1. List the Options

The first step is to write down the real options side by side. Three to five options are usually enough, because too many make the table hard to use. It helps to include the current situation as one option, because doing nothing is also a choice. In the Pugh method, this reference option is called the baseline or datum.

Example: A family looking for a new flat lists the options: three flats they have visited, plus staying where they are. Now every choice is visible on one page.

At work: Noha, a purchasing manager, must choose a new packaging supplier. She lists the options: suppliers A, B and C, with the current supplier as the baseline. The team stops arguing about names and starts comparing.

2. Choose the Criteria

The second step is to decide what makes a good choice. Criteria are the things that really matter, such as cost, quality or time. Good criteria are clear, can be checked, and do not overlap with each other. Four to seven criteria are usually enough, and the people affected by the decision should help to choose them.

Example: The family chooses the criteria: rent, distance to school, size and noise. The colour of the walls is left out, because it is easy to change.

At work: Noha asks the team to choose the criteria together: quality, delivery time, price and service. Each criterion is something they can check with facts.

3. Weight the Criteria

The third step recognises that not all criteria are equally important. Each criterion gets a weight, for example from one to five, or a percentage, with all the percentages adding up to one hundred. The weights should be agreed before anyone scores the options. Otherwise, people may change the weights to help their favourite option win.

Example: The family weights the criteria: rent gets five, school distance four, size three and noise two. Now the budget counts the most, as it should.

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At work: Noha's team weights the criteria before seeing any scores: quality five, delivery four, price three and service two. Nobody can bend the weights later to favour one supplier.

4. Score Each Option

The fourth step is to score every option on every criterion, using the same scale, for example from one to five. In the Pugh version, each option is simply marked as better, worse or the same as the baseline. Scores should be based on facts, such as prices, samples or references, and not on feelings. It is fairer to score one criterion at a time across all options, and to let more than one person score.

Example: The family scores each flat from one to five on each criterion. Flat A gets five for rent but only two for noise, because it is next to a busy road.

At work: Noha's team scores each supplier with facts from samples, test orders and references. Supplier B scores high on quality and delivery, while supplier A is the cheapest.

5. Calculate and Decide

The last step is to multiply each score by the weight of its criterion and add up the results for each option. The option with the highest total is the strongest candidate. Before deciding, we check the result: does it still win if a weight changes a little, and does it feel right? A matrix supports good judgement, but it does not replace it.

Example: The family multiplies and adds, and flat B wins with sixty points, ahead of flat A with fifty. They check the result by visiting flat B once more, and then they sign the contract.

At work: Noha multiplies and adds, and supplier B wins, even though it is not the cheapest. She checks the result by changing the price weight a little, and supplier B still wins, so the team decides with confidence.

Conclusion

In summary, a weighted decision matrix turns a difficult choice into five clear steps: list the options, choose the criteria, weight the criteria, score each option, and calculate and decide. It makes our reasons visible, so that others can understand and question them. It also reduces the influence of the loudest voice in the room. When the options are many and the stakes are high, a simple table can lead to a fairer decision.

Sources

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