

## Deciding Where to Start

### Decision Matrix / Selection Matrix

#### Evaluating Alternative Choices

A decision matrix is a chart that allows a team or individual to systematically identify, analyse, and rate the strength of relationships between sets of information. The matrix is especially useful for looking at large numbers of decision factors and assessing each factor's relative importance.

A decision matrix can be used for multiple purposes. It may be used when trying to identify what decisions or solutions are the most viable, or it may be used to help select a problem to work on. It is frequently used during quality planning activities to select product or service features and goals and to develop process steps and weigh alternatives.

A decision matrix or selection matrix is essentially an array that presents on one axis a list of alternatives, options or solutions. These are evaluated with respect to a list of criteria which are weighted by their respective importance in the final decision. These criteria and their weights are shown on the other axis.

### How to use the tool

This tool may be utilised using the COWS method as follows:

**C** – Criteria. Develop a hierarchy of criteria, also known as decision model. Place these on one axis.

**O** – Identify the options, also known as solutions or alternatives. Place these on the second axis.

**W** – Assign a weight to each criterion based on its importance in the final decision.

**S** – Rate each option on a ratio scale by assigning it a score or rating against each criterion. The score is calculated as Ratings x Weight

- The scores are then evaluated, and solutions with the highest scores are the ones that best meet the criteria.

An example is shown below.

#### Example of Decision or Selection Matrix Tool

Criteria	Weight	Alternatives							
		Option A		Option B		Option C		Option D	
		Rating	Score	Rating	Score	Rating	Score	Rating	Score
Criterion 1	1	3	3	1	1	2	2	3	3
Criterion 2	2	1	2	2	4	2	4	1	2
Criterion 3	3	2	6	3	9	1	3	2	6
Criterion 4	4	3	12	2	8	2	8	1	4
<b>Total</b>	<b>10</b>	<b>9</b>	<b>23</b>	<b>8</b>	<b>22</b>	<b>7</b>	<b>17</b>	<b>7</b>	<b>15</b>

Source: [https://www.washington.edu/research/rapid/resources/toolsTemplates/Decision\\_Selection\\_Matrix.pdf](https://www.washington.edu/research/rapid/resources/toolsTemplates/Decision_Selection_Matrix.pdf) accessed on 02/11/2015