Waterford Institute *of* Technology

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Grid Matrix Analysis

This technique is alternatively referred to as the decision matrix, evaluation matrix, or weighted criteria matrix. However, regardless of the nomenclature, its purpose remains identical, to select one option from a range of alternatives based on a set of criteria. In order to accomplish this, the technique visualises the decision in a matrix. The criteria used in the evaluation are each individually given weights and each alternative is scored for each of the criteria. By multiplying the scores by the assigned weight and adding the weighted scores for each alternative, the solution that is most valued can be determined.

Using 'Grid Matrix Analysis'

Step 1: Alternative ideas are listed as columns in a matrix. Relevant criteria that must be considered as part of the decision-making process are represented by the rows.

Step 2: The alternative ideas are given a score for each of the criteria. This is based on a predetermined scale, usually 1-5, where 1 is the lowest score, and 5 the highest.

Step 3: Next, the importance of each of the criteria used for the decision-making process are evaluated and given a score. Again, this is usually from 1-5, similar to the previous step. This value is referred to as a weight.

Step 4: The 'weighted score' per alternative per criterion is calculated by multiplying the weight and the score assigned to the alternative idea.

Step 5: The total score for each alternative idea is calculated by adding all weighted scores for that alternative.

Step 6: The alternative, solution, or idea with the highest score is selected. In circumstances where this value does not seem realistic, the assigned scores and weights may be adjusted. An example of a typical matrix for this technique is illustrated below.

		Alternative 1		Alternative 2		Alternative 3	
Criteria	Weight	Score	Weighted Score	Score	Weighted Score	Score	Weighted Score
Criterion 1							
Criterion 2							
Criterion 3							
		Total Score		Total Score		Total Score	