PAIR COMPARISON METHOD

The weights were derived by paired Comparison method

Paired comparison[1]

Paired comparison approach is a scaling approach. In simple terms using this approach in order to derive criteria weights the only question to be answered is "is this criterion more important than the other?". This means that the paired comparison matrix (see Table A-I next) can be filled with zeros and ones, where one represents "is more important". By adding these values over the column, a measure is obtained for the degree to which a criterion is important compared to all other criteria, if finally these measures are standardised, a set of criteria weights is created.

	W_1	W_2	…	W_N
W_1				
W_2				
…				
W_N				

Table 1: An example of Paired Comparison matrix

Standardisation formulas for this task are many, but for this project there is only one that suits us:

Standardisation formula: a transformation of 'raw' scores to scores with a range from 0 to 1 with an *additivity constraint*[2]. The formula is as follows:

$$\text{Standardised score } w_i = \frac{'raw'\ score..w_i}{\sum 'raw'\ scores} \qquad \textbf{(A-I)}$$

Basically each 'raw' score is divided by the sum of all 'raw' scores. This kind of transformation is especially appropriate in standardising various sets of different criterion weights; since an application of **(A-I)** implies that all those weights will then add up to unity.

[1] The idea was based on **Appendix 4.II, pg.60 – Chapter 4: Assessment of priority weights and preferences** from the book **"Multicriteria Evaluation in Physical Planning"** by **P.NIJKAMP, P.RIETVELD** and **H.VOOGD**.
[2] Final scores added should equal 1