

WP7

Extrenal cost calculation module

Objectives

- Transform the methodological aspects of especially WP4 into a general and practical applicable tool
- Make it possible to perform real cost calculations (including both internal as well as external costs) on the most predominant/commom intermodal and all road corridors

This is to be done by implementing:

- **A procedure for a "bottom up" calculation for a variety of all road and intermodal chains, representative of the "European transport landscape"**
- **A flexibility in the calculation module which makes it possible to ask "what if" questions as well as introducing sensitivity aspects (answer to: "how to be done") into the calculation module**

In order to achieve such possibilities, it shall be necessary to:

Make a classification of lines and nodes (corridors), based on a number of descriptors. These descriptors could be of the following nature:

- **physical (landscape, density etc)**
- **meteorological**
- **technical (mode, energy-mix, EURO class etc)**
- **traffical (number of vehicles, speed, congestion etc)**

- **These valuations will be performed in EURO per km**
- **The values will be obtained from the bottom up analysis performed in the three corridors**

Therefore-- successful/correct calculations will be 100 % dependent on our ability to attach the correct values to the descriptors, when analysing a new corridor

This can only be done by putting together values obtained from the detailed study of the three corridors

Detailed descriptions of the nature of the segments of the three corridors will make it possible to identify which set of values to be used when analysing a new corridor

Calculations for new corridors

When finally calculating the external costs for a new corridor (lines and nodes), it will be carried out by:

- **Identifying the descriptors**
- **Classify these correctly referring to for instance population density (high, medium, low)**
- **Make the decision making tool calculate the external costs for this new corridor, by comparing the mix and classification of the descriptors for the new corridor with similar ones from already existing ones**

An example

To calculate the external costs for a new corridor you have to:

- **Describe the corridor in such detail, that the descriptors can be identified**
- **Identify which class the descriptor belongs to**
- **Compare the corridor with already calculated corridors, based on the composition and class of descriptors, in order to determine which values for the external effects should be used**
- **Let the decision making module carry out the external cost calculation**

The results of this calculation will be given for:

- Global warming**
- Air pollution**
- Noise**
- Accidents**
- Congestion**

For very rough calculations, a set of values for each class of descriptors will also be obtainable in the module, but as these values are given as discrete values, they should be handled with caution when used for calculatory purposes