



MOBILITY TOOL

The objective of this calculation tool is to allow an initial analysis of the sustainability of travel associated with the operations of a company or a business park. It is based on the ADEME Carbon Balance® principles for calculating CO² equivalents and energy consumption. It does not claim to be exhaustive.

The tool starts by looking at commuter travel, before moving on to business travel. Travel related to visitors and freight transportation is not looked at. Nevertheless there is nothing to prevent visitor traffic being included separately as business travel.

This tool also allows an initial analysis of the sustainability of the mobility associated with a whole business park, again without claiming to be exhaustive.

There follows a description of the data needed to be collected within the company or the whole business park and which need to be entered into the tool.

A/ Commuter travel

To be collected from each employee:

1) the average distance from home to work (in km) by employee and by means of transport

This is the main indicator, whether actually known or estimated (for example by using Google Maps).

Ideally, each journey with a different means of transport is to be recorded:

Example: An employee travels 5km by car to the station, takes the train for 35km and walks the last 0.5km from the station to the office. There will therefore be three rows created for this employee in the worksheet "5-Mobility tool A"

Users will find the following means of transport available in the drop-down list:

Car (diesel); Car (petrol); Car (LPG); Car-pooling; Motorbike; Train; TGV; Bus; Bicycle/on foot

To make things easier, one can add up the kms travelled by means of transport and employees with the same working hours. Example: Paul travels 10km, Marcel 50km and Henri 25km by diesel car. A row can be entered containing 85km for all three – the result is the same as for three separate rows.



2) Working time

This indicator is used to calculate how many times a year the journey is supposed to be done.

If the employee travels by car half the time, and by bus the other half, one uses each means of transport half time. Users can enter working time as a decimal, as in the example below.

Full-time	1.00	Half-time	0.50
'4/5	0.80	'2/5	0.40
'3/4	0.75	Third-time	0.33
'3/5	0.60	Quarter-time	0.25

3) Travel allowances

The user can enter the real annual cost reimbursed by the employer, either as a flat sum or dependent on mileage. For example, if €0.21 is reimbursed for each km cycled, and the employee cycles 2200 km a year to work, the annual cost for the employer is $2200 \times €0.21 = €462$.

The price of a train season ticket is estimated based on the length of the journey stated. The actual price may be entered if known.

If the amount is fully or partly reimbursed, the estimated cost is to be deducted.

B/ Business travel

To be collected from the accounts department / secretary's office:

The user can choose between the following means of business transport (with others eventually to be added): Car (diesel); Car (petrol); Car (LPG); Car-pooling; Motorbike; Train; TGV; Bus; Bicycle/on foot; Short-haul plane (< 1000 km); Long-haul plane (> 1000 km).

1) The annual fuel consumption (invoiced) or the annual mileage by each company car by type of fuel.

2) Expense accounts (amounts and mileages)

If mileages are not stated:

- for airports: <http://www.ephemeride.com/atlas/distanceaeroport/0/>
- for trains: use websites like Google Maps to estimate the distance by road ...
- for distances by road: <http://maps.google.be>



C/ Mobility measures for companies

The worksheet "**5-Mobility Tool B**" allows the user to indicate (by selecting YES or NO in each cell of the "Action" column) which measures and actions have already been introduced by his company in various fields associated with mobility. This provides the opportunity of showing the whole range of possibilities available for developing sustainable mobility.

The choice of these actions does not interfere with the result of the sustainability level, as only actual travel resulting from one or more actions are taken into account in the calculations. One therefore has a performance obligation rather than a best endeavour obligation.

D/ Mobility measures for the whole business park

The worksheet "**5-Mobility Tool C**" enables the manager of a business park to indicate (by selecting YES or NO in each cell of the "Action" column) which mobility-promoting measures have already been introduced by the business park in various fields. Both the number of measures and the range of fields have an influence on the final result. Where a park is situated a long way away from a public transport network, it will automatically be penalised.



Presentation of results

CO2 emissions, energy consumption and costs

A chart summarises travel. This travel analysis uses automatic calculations of energy consumption (in kWh), the corresponding emissions (in CO² equivalents, GHG emissions using the Carbon Balance method) and their estimated cost (in €). To arrive at these figures, employee and company expenses are added up. A sample result in chart form is provided in chart form in Figure 1.

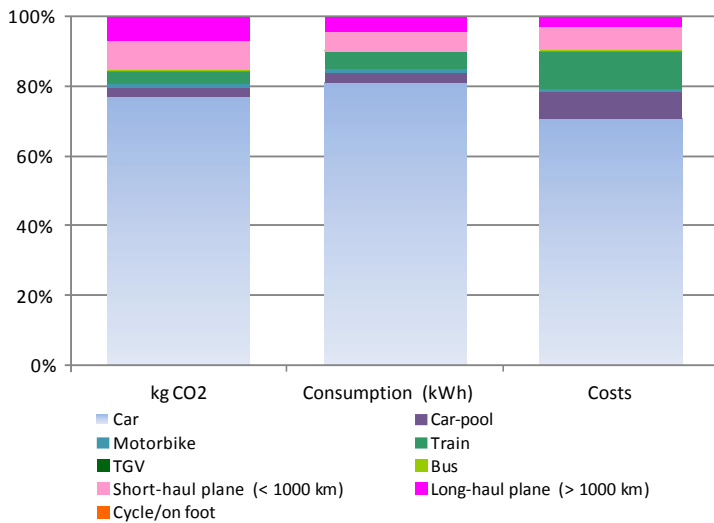


Figure 1

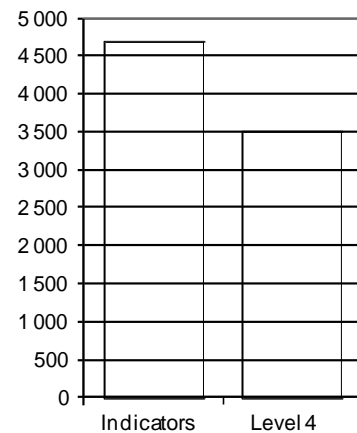


Figure 2

Specific Indicator: emissions per employee

A specific indicator is achieved by dividing CO₂ emissions by the number of employees. A chart (see example in Fig. 2) allows users to check, for this indicator in total kg CO₂ /employee, how well the company is doing with regard to the most sustainable level 4.

Mobility measures to be carried out at company level to improve the score

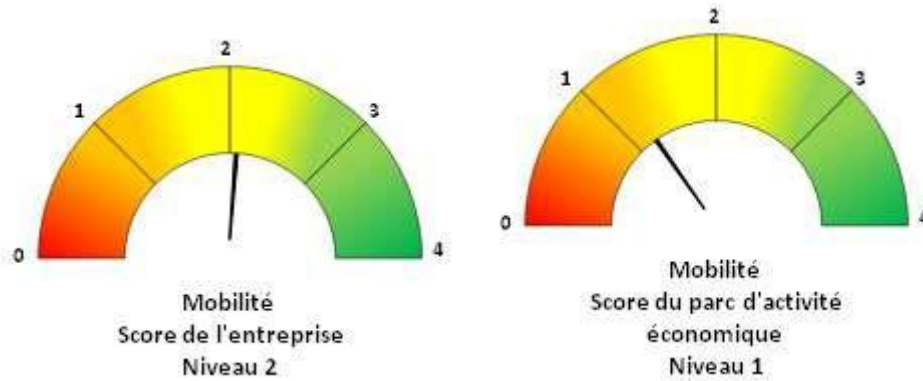
A list presenting the percentage of measures already implemented by the company in each of the fields of action appears in the tool alongside the above chart. This is based on the measures selected by the company in the "5-Mobility Tool B" worksheet. This may induce the user to check which other measures and which other incentives are available in the worksheet for encouraging more sustainable forms of transport and can help to improve attainment of the sustainability target set by his company.

The sustainability level of the company and the business park

The "3-Summary of results" worksheet graphically presents the sustainability score achieved by the company in the field of mobility using a scale ranging from 0 (least sustainable) to 4 (most sustainable). These levels are adapted to the individual situation of the company, being defined on the basis of the total annual distance travelled by all its employees.



Level 4 is achieved when the following 4 conditions are met: less than 50% of employees commute to work alone in a car; more than 10% use car-pooling; more than 30% use public transport; and more than 10% cycle or walk to work. Average figures for Wallonia in 2010 were 77.5%; 4.8%; 8.8% and 4.7% respectively for these four means of transport.



The "**3-Summary of results**" worksheet also graphically presents the sustainability score of the business park, again using the 0 – 4 scale. This is calculated on the basis of the measures already carried out in the park.

Level 4 is achieved when all measures have been selected (checked as YES).

The sum of all "Coordination" and "Location" measures each accounts for a quarter of the score. The development measures covering "Infrastructure" and "Organised collective transport" account for a further quarter. Finally, "car-pooling", "information" and "partnership" represent the remaining quarter.

