

# **The Envirometer with CO<sub>2</sub>-meter for entrepreneurs,**

A successful internet environmental barometer for improving the environmental achievements of nearly 1000 enterprises in the Netherlands;

An initiative of the Stimular Foundation.

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Authors:

Adriaan van Engelen (MSc); Marc Herberigs (MSc),

Stimular Foundation, Scheepmakershaven 27c, 3011VA ROTTERDAM, The Netherlands

## **Abstract:**

The Envirometer is an internet registration tool for monitoring of the environmental pressure of a company. The Envirometer can be used as a steer on the dashboard of the company. It is used by over 800 companies in the Netherlands. The number of users is growing rapidly. The Envirometer can be seen as a new language in working at sustainable management for SME, large enterprises and organisations. The success of the instrument lays in the simplicity (easy to use), accessibility (easy to connect) and communication (easy to communicate). Over 75 business organisations and governmental organisations in the Netherlands support the Envirometer. Recently, the Envirometer has been translated into English.

## **What is the Envirometer**

The Envirometer presents the annual environmental barometer of an enterprise or organisation. It is a flexible internet tool for environmental administration. The total environmental performance is expressed as an environmental graph, a cost graph, a CO<sub>2</sub> foot-print, and a set of Environmental Performance Indicators (EPI's). Furthermore it facilitates the communication about environmental issues within an organisation and with external stakeholders.

The Envirometer gives the entrepreneur insight in environmental cost and environmental performance. The Envirometer encourages the company to work on environmental prevention. For example, this leads to measures for energy conservation and improvement of the separation of waste collection and recycling. Many companies show, having used the Envirometer for 5 years, up to 20-50% decrease on their environmental impact, in combination with significant cost savings.

## **How to use the Envirometer**

### **1 Preparation**

Collect information and data from the previous year regarding: energy, water, waste water, emissions, industrial waste, hazardous waste and transport.

### **2 Fill in**

It is surprisingly easy to enter information in the Envirometer. The Envirometer can be customised to one's own organisation, thus recording only relevant information. First time users may take approximately four hours to fill in the tool. Yearly updates will take you about one or two hours. Almost all the numbers can be copied from the business administration.

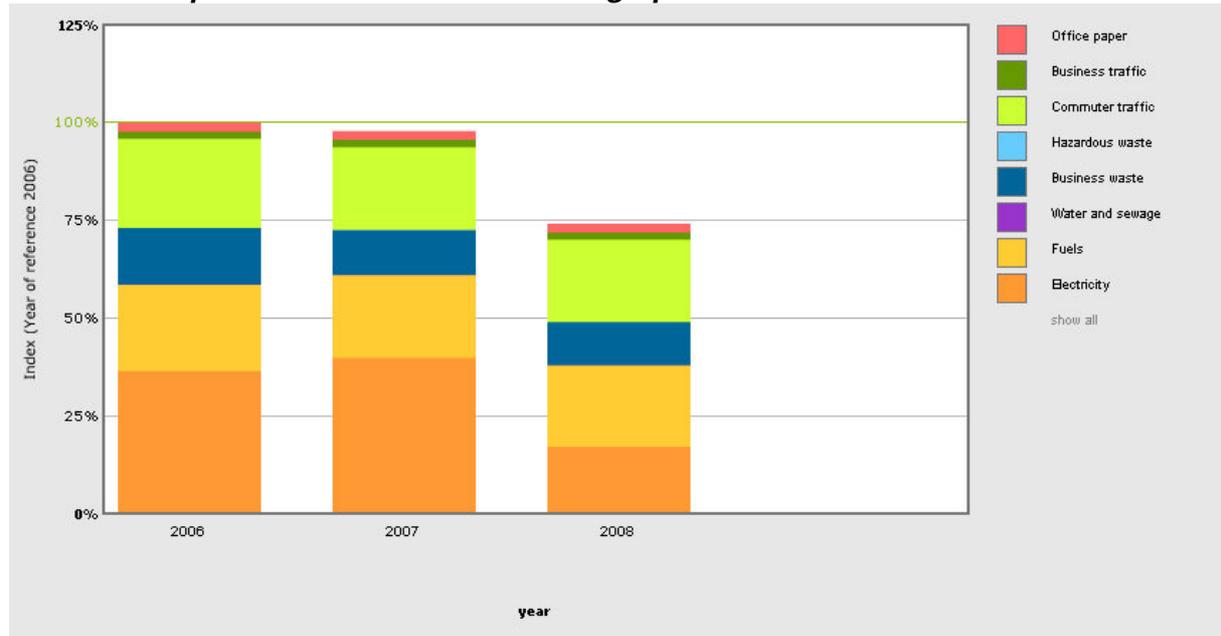
### 3 Analyse

From the graphs and the efficiency indicators table one will be able to deduce the environmental priorities of the company or organisation. For an increasing number of sectors benchmark features are available.

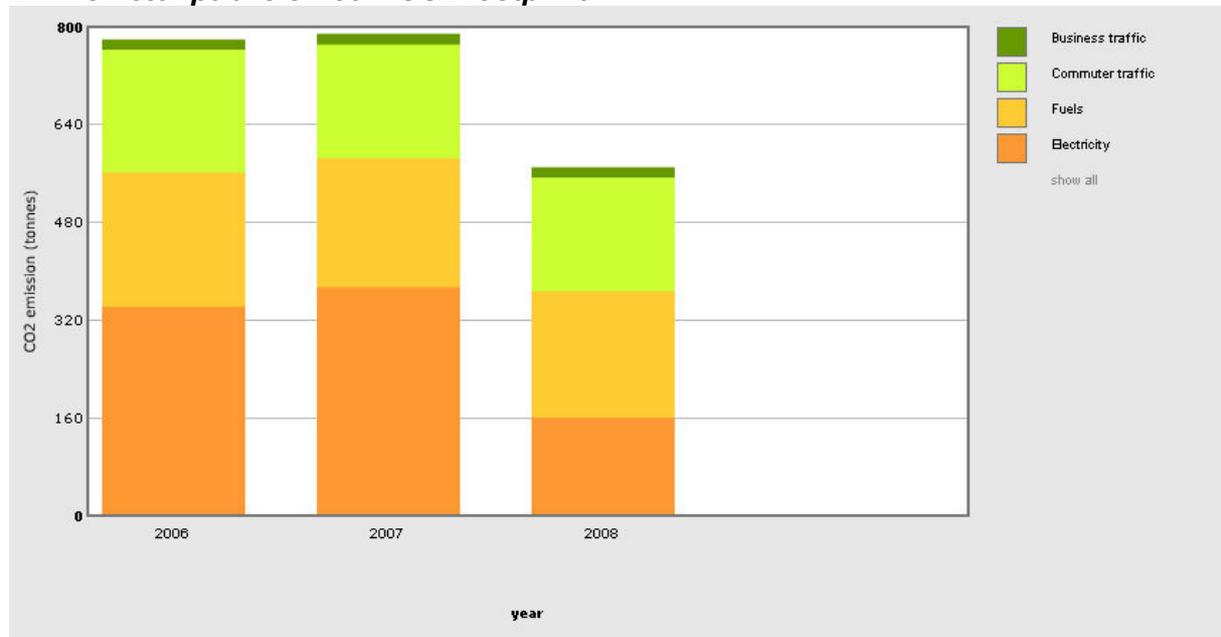
### 4 Implementation

after the analysing phase, one can start focussing on reducing the environmental costs and increase the environmental performance of the organisation. Tips and tricks are available on the Envirometer website. Next year's results will definitely show improvements.

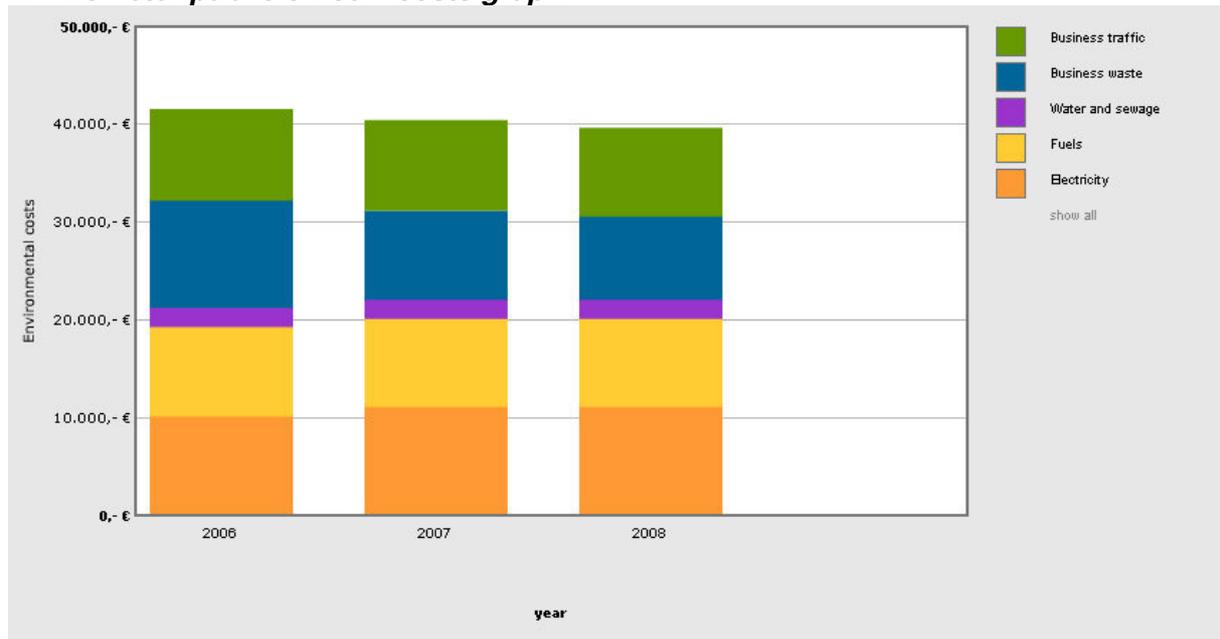
#### ***Envirometer public office – environmental graph***



#### ***Envirometer public office – CO2 footprint***



## Envirometer public office – costs graph



## Envirometer public office – Environmental Prestation Indicators

Demo office		2006	2007	2008
Jaartal:		2006	2007	2008
<b>General</b>				
square meter surface building per employee	m2/fte	37,9	37,5	37,5
<b>Energy</b>				
electricity consumption per in kWh per square meter	kWh/m2	77,5	84,8	61,3
electricity consumption in kWh per employee	kWh/fte	2.938	3.183	2.302
fuel use for heating in m3 natural gas per m3 building	m3 gas eq./m3	5,85	5,61	5,61
fuel use for heating in m3 natural gas per employee	m3 gas eq./fte	576	548	548
<b>Water &amp; waste water</b>				
drink water consumption in m3 per employer	m3/fte	8,49	8,56	8,56
<b>Waste</b>				
percentage waste separation	%	34,4	47,9	48,8
company waste in kg per employee	kg/fte	327	283	269
company waste in kg not separated per employee	kg/fte	215	147	138
paper waste per employee	kg/fte	112	135	130
<b>Transport</b>				
traffic in km per employee for work - living	km/fte	6.309	5.876	5.876
percentage public traffic in km per employee for work - living	%	20	21,3	21,3
<b>Costs</b>				
environmental cost per employee	€/fte	196	189	170
<b>Office paper</b>				
paper use per employee	kg/fte	63,1	62,6	61,4

## Who are the users of the Envirometer

The Envirometer is used by all types of industries and organisations. Over 800 Envirometer licences are active. For example over 100 government and commercial offices, over 100 trade companies, over 50 printing industries, over 50 metal industries, over 30 hospitals and over 50 other healthcare organisations, etcetera are using the Envirometer.

### **Scientific background**

Environmental data are processed by an scientific model to scores for different themes and presented in a yearly graph. So energy consumption, waste production and emissions are cumulated. The scientific model is developed on basis of the Life Cycle Analysis data and the shadow price methodology taking European policy and the environmental load of different parameters into account.

At this time the model is being updated to recent European policy. The results are expected in September by CE Delft.

### **Success factors given by the entrepreneurs**

The advantages of the Envirometer for the business community:

- a. Easy environmental registration system for small and large company management;
- b. Gives a direct stimulation for innovation and cost savings from an environmentally point of view;
- c. Useful for internal communication and motivation of employees;
- d. Adds EPI's into the strategy development of the company;
- e. Useful for business to business communication (marketing);
- f. Useful to inform the Environmental Protection Agency (EPA) & other local authorities;
- g. Useful to prevent unnecessary legislation rules in the dialogue with the EPA

### **Success factors given by local government:**

- a. Gives easy insight into the environmental achievements of the companies at control visits;
- b. Gives insight into the most serious environmental themes of companies and sectors;
- c. Gives insight into taken measures by the company
- d. Gives a tool for local projects to encourage the participating of companies to pursue a healthy economic development and at the same time decreasing their environmental impact.

### **The Envirometer can be used by**

The tool was originally designed to encourage SME-companies to register their annual environmental performance and to encourage them to take environmental prevention actions and work on sustainable development. Short after the introduction of the tool the larger companies recognized the value of the Envirometer as well, for monitoring environmental achievements between branches and monitoring the total performance. Further the tool is used for internal and external communication. Also the tool supports the implementation and use of ISO 14001.

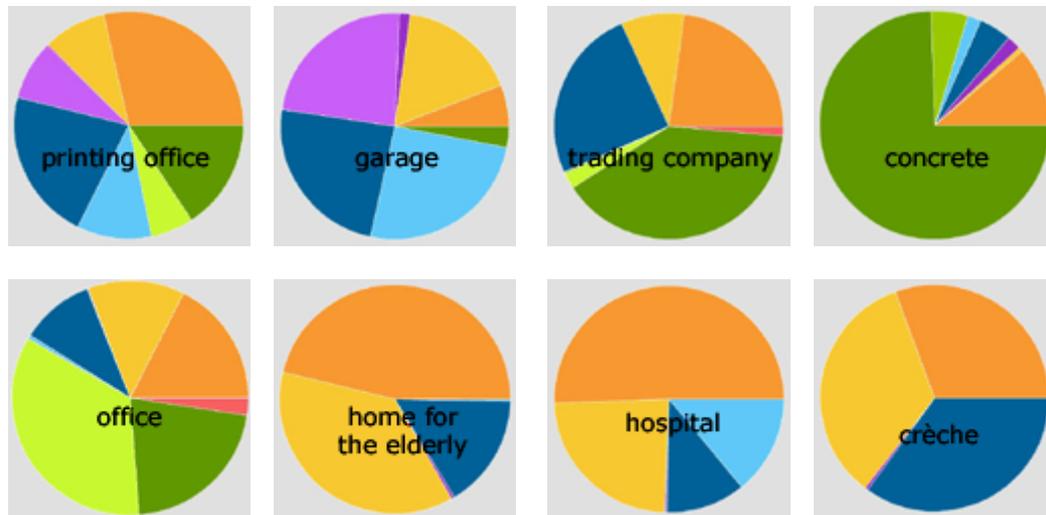
The Envirometer results in savings for any company with over ten employees and any office with over 20 employees. For smaller companies and offices savings are less and it is hard to start environmental registration, whatever method you used. For those smaller companies a list with the general saving measures for energy and material use will be of more practical use.

In the Netherlands, over 25.000 companies are potential users of the Envirometer, because they will be able to reduce the environmental cost significantly. In Europe, over half a million comparable companies can benefit from the Envirometer and improve their environmental management and reduce costs.

Even the government started to make use of the tool for monitoring the environmental pressure of their offices. They will give a good example to the colleagues and enterprises. At this moment over 100 Dutch governmental offices are using the Envirometer as part of their environmental care system.

## Sector environmental performances

The figures in colour below present the sector environmental performances of the concrete industry, the printing industry, garages, trade business, offices, nursery care, healthcare institutes and hospitals. Each colour represents a different environmental theme, equal as shown in the example of the Envirometer before.



### Why this management tool Envirometer is “a new language”

Up to now most entrepreneurs are willing to follow the legislation rules and put some efforts in environmental matters. Also, most of them will take the measures with are cost effective. At the same time all these entrepreneur are unconscious about the real possibilities to reduce the environmental impact and the environmental costs. At the SME less than 10% has insight in the environmental cost and less then 5% has insight in there environmental performance. The discussion about the environment is based on subjective feelings. Only very few companies have a sustainable strategy and an useful set of environmental performance indicators to work with.

The local Environmental Protection Agency strengthens this misunderstanding about sustainability by their single focus on legislation rules. An entrepreneur gets the impression he is doing very well, when he is operating within the legislation rules. For the first time the Envirometer makes the environmental performances visible and understandable for the entrepreneur.

Hundreds of entrepreneurs are stimulated with the Envirometer to work on environmental cost reduction and environmental performance improvement. No longer external stakeholders as clients and suppliers are the only trigger to take measures. The simple indicator on the dashboard are extra triggers to ask their suppliers for better equipment and materials and for the marketing of their own products or services.

### Further development of the Envirometer

Before the end of 2009 over 1.000st Envirometer licences will be used in the Netherlands and over 100 governmental en sector organisations support distribution.

Besides the advantages in communication by the growing number of users, also a valuable database with growing content of environmental figures for sectors becomes available. This shows the environmental pressure of a sector in relation to the economic growth in detail.

Next year, the Envirometer will be extended with new modules. Benchmarks in different sectors will show effectively of national and European policy by the real facts of registrations.

## History

- 1998 The first Excel version of the Envirometer has been developed and tested with 15 entrepreneurs with success in Schiedam..
- 1999 The Envirometer was nominated for the national Energy-Award by Novem. A governmental agency for national environmental affairs.
- 2000 – 2006 The Envirometer is used by Stimular Foundation and consulting companies in over 50 projects. Over 600 Envirometers were implemented as a stand-alone Excel-tool.
- 2007: The province Zeeland and the local government Tholen got the prices “het Ei van Columbus” for training sessions with the Envirometer, A price for sustainability given by eight ministries.
- 2007: The Envirometer is further improved and launched as an internet webtool.
- 2008: The Dutch Prime Minister J.P. Balkenende launched the CO2-footprint as an extra tool in the Envirometer at the Sustainability Event Zeeland.
- 2009: The firm Spijkstaal Elektro of Spijkenisse won the 2009 Eco-Economy Award of the Metaalunie (metal sector organisation). This company showed their yearly improvements with the Envirometer from 1999 until present and e.g. over 50% savings on CO2 emissions during the last 10 years at equal production has been made visible.
- 2009: The Envirometer has been translated into English See [www.envirometer.eu](http://www.envirometer.eu)

## Involvement of local governments

On one hand local governments are involved as active users of the Envirometer (over 150 users). On the other hand the local governments are the perfect stakeholder for setting up projects with local companies.

Based on policies combating climate change and encouraging environmental protection, the environmental department of local governments use the barometer in a wide range of projects. The economical departments see the barometer as a trigger for durable innovation. Companies active with sustainable management show interest in investment in sustainable buildings and installations at new industrial areas.

## About Stimular Foundation, Stimulating Sustainable Management at SME

The business community and the governments of the Rotterdam region raised the Stimular Foundation in 1990. During the first ten years Stimular has successfully encouraged small and medium sized enterprises (SME) in the region to reduce waste and emissions, to save energy and to protect the environment. Since 2000 Stimular has extended its activities to Sustainable Management. Together with SME companies, Stimular develops new instruments and knowledge for Sustainable Management.

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**Websites**

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[www.milieubarometer.nl](http://www.milieubarometer.nl) (Dutch)  
[www.envirometer.eu](http://www.envirometer.eu) (English)

**Contact**

Adriaan van Engelen (MSc) / Marc Herberigs (MSc)  
Stimular Foundation  
Scheepmakershaven 27c  
3011 VA Rotterdam  
The Netherlands  
[mail@stimular.nl](mailto:mail@stimular.nl)  
[a.vanengelen@stimular.nl](mailto:a.vanengelen@stimular.nl)  
T ++31 -10 - 238 2828