Measure title : Mobility concept of the Technical University of Graz following the Push&Pull principles
Country: Graz, Austria
Year(s): 2006 up to 2014

A1 Objectives

I. Optimisation of mobility of employees, students and deliverers
II. Establish an environmentally friendly mobility system
III. Re-use of TU-space – more buildings instead of parking lots and more recreation and communication area for students and employees

A2 Description of the CS

The Technical University of Graz has approximately 2.300 employees and 12.500 students. The University is located at 3 main places (2 very central) – all of them well accessible by public transport, bicycle and on foot. The public space surrounding of the campus is paid parking area.
In 2006 the TU Graz started to develop a mobility concept which contains of a parking management system and mobility management measures to encourage the use of sustainable mobility modes – the approach was a classical push & pull one.

The Push side: The parking management system contained as a first step a reduction in available parking spaces from 1.340 to 1.100. The criteria for getting a permission to park was the distance to the living place. Those who live less than 1,5 kilometres from the University weren't allowed to park their car at one of University's parking lots any more. Additionally the University introduced parking fees.

- 20 € / month – permit to park but no allocated parking lot
- 15 € / month - permit to park for employees with 20-30 hours employment / week
- 40 € / month - permit to park at a roofed parking space / garage

In a second step the available parking lots were reduced from 1.100 to 740 only by increasing the radius of the exclusion zone to 2,5 km.

The Pull side: To encourage the use of sustainable mobility several measures have been implemented such as

- Financial support for public transport tickets for those who would fulfil the criteria (the ticket has to be shown and then one could receive approx. 50% of the 6-months or annual tickets)
- The TU Graz built hundreds of safe, weather protected bicycle racks at the entrances of the different buildings
- In one week each year employees could bring their bikes to be repaired at the TU location. A service contract with a local bicycle dealer enables employees to receive that service free of charge. Only material has to be paid. The rest is paid by the revenues of parking management. During the rest of the year bikes could be delivered at the repair shop of the bike dealer and substitute bikes are handed over to TU employees for the time when the bike is repaired.

- A business bike model has been developed. Employees can buy a high quality bicycle which is strongly subsidised by the University.
- 700 bikes have been purchased.

Additionally to the mobility concept for employees and students on commuter trips a business trip model has been implemented which has as main objective to carry out business trips between different University locations and other scientific entities by bicycle.

B Costs and who paid them

The development and implementation of the first step of the whole program cost approx. 500.000,- Euro. 30% of the investment costs are funded by the Austrian initiative “klimaaktiv” and similar other ones.
The costs of the pull measures are funded by the revenues of the parking management system. Approximately 170.000,- Euro revenues from parking management are invested every year into sustainable mobility.

Fig.: High quality TU-Bike with own design.
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C Project objectives, indicators, data and impact/results

OBJECTIVE	INDICATOR	DATA USED	IMPACT/RESULTS
Reduction of employees commuting by car.	*Distance home-work.* *Parking fees have been implemented*	*Number of permits to park.* *Money that has been gained.*	*The number of people with parking permit has been reduced from 1340 to 740.*
Financing sustainable transport measures (pull) through parking revenues	*Money from parking fees* *Spent money on PT-ticket subsidies and on bicycle measures*	*Receipts and expenditures costs*	*In total ca. 500.000 Euro have been invested in the first phase.* *Per year ca. 170.000,- Euro are gained as revenues from parking and invested into the maintenance of the system and into encouraging sustainable transport modes.*
Reduction of the negative impacts on the environment	*Average car km which were shifted* *220 working days*	*Calculation of shifted km*	*In total ca. 244 t CO_2 / year was saved*

D Implementation process

D1. Stages

The Case Study was implemented, as follows, in the following stages:
Stage 1: 2006 start of the development of a mobility concept with phase one (reduction of parking spaces from 1.340 to 1.100).
Stage 2: By 2013 the 2nd phase was finalised with a further reduction of parking permits to 740 and a building of 880 bicycle racks.
Stage 3: In 2014 another 170 bicycles have been purchased to be forwarded to the employees.

D2 Barriers – what were the key problems or difficulties in implementing the CS?

When setting up the system – which formed a significant change in the general habits of the University – the fear of opposition and resistance was quite high. Therefore the persons in charge of the system were really astounded that when the scheme was finally implemented a major clash did not and no additional measures needed to be taken.

D3 Drivers – what factors really helped in implementing the CS?

The driving force behind the mobility concept based upon the push & pull principles was the Technical University itself. DI Gerhard Kelz, head of the department of Buildings and Technic took over the responsibility.

For more information (in German only) see:
http://portal.tugraz.at/portal/page/portal/Files/Services/gut/files/Mobilit%C3%A4tsmanagement%20TU%20Graz_07%202013.pdf