

## El Proyecto de GOAL en Graz: Fomento del uso peatonal y ciclista para el bienestar de los ciudadanos

### *The GOAL Project in Graz – Promotion of walking and cycling for the citizens' personal well-being*

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#### Resumen / Abstract

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GOAL es un proyecto de LIFE con una duración de 2,5 años (cofinanciado por el Entorno DG), con un volumen financiero de, aproximadamente, 1 millón de Euros.

El objetivo principal radica en reducir tanto el nivel general de ruido y la contaminación del aire provocados por el tráfico motorizado como incrementar el bienestar general de los habitantes por medio del fomento del uso peatonal y ciclista.

Entre los grupos a los que está dirigido GOAL se hallan los empleados y los empresarios, los habitantes de Graz, los niños y sus progenitores, los conductores sensibles al tema de la salud, determinados grupos de riesgo (personas que realizan poco ejercicio y no se hallan en forma), encargados de la toma de decisiones y multiplicadores.

Las **estrategias** y las **metodologías** son:

- Protección medioambiental en aras del beneficio personal: Animar a las personas para que caminen o utilicen la bicicleta para desplazamientos cotidianos cortos con el fin de mejorar su salud personal y su puesta en forma.

Demostración con amplia participación de los ciudadanos (planteamiento emotivo) y con consecuencias a largo plazo y de gran alcance.

Incluir niños como “embajadores” para campañas y asesores para los modos de transporte no motorizados.

**El proyecto está dividido en diferentes módulos.** Algunos de estos módulos son:

- **Compañía:** Creación de una relación “todos ganan” entre los empresarios y los empleados. Desarrollo y organización de un programa sobre “Movilidad – Medio Ambiente – Salud”, destinado a fomentar el tráfico no motorizado o las formas de tráfico combinadas (bicicleta y medio de transporte rodado) para el desplazamiento, a y desde, el trabajo con comprobaciones de la puesta en forma; movilidad cotidiana como programa de formación, grupos de “vigilantes” para facilitar el intercambio de experiencias.

- **Aceleración subjetiva del transporte público:** Los tiempos de espera en las paradas de transporte público parecerán más breves cuando los clientes reciban información especial y sean motivados para llevar a cabo ejercicios breves y discretos (de relajación, reducción de tensiones, etc.) mientras esperan. Un tema especial es el camino a y desde la parada de transporte público. GOAL desea señalar que este desplazamiento puede realizarse de un modo que sea, al mismo tiempo, un tipo de “entrenamiento para el bienestar personal”.
- **Grupos de riesgo:** Creación de un programa de movilidad para los desplazamientos cotidianos, tanto para personas que realizan su chequeo sanitario anual y se les diagnostica mala forma física (lema: transformación del movimiento en movilidad cotidiana) como para personas que han padecido un ataque y se recuperan en esos momentos en un hospital (primer contacto en el hospital).
- **Escuelas / guarderías:** Programas de acción y concienciación para niños, dando por sentado que los niños tendrán un efecto multiplicador sobre sus progenitores. Está planificado el incremento de la responsabilidad y la independencia de los niños a la hora de ir a la escuela (caminando, en bicicleta, transporte público) y, por tanto, eliminar parte de la carga que recae sobre los progenitores.
- Desarrollo de un programa de movilidad progenitor-niño integrado para las guarderías.
- Proyecto escolar para fomentar un cambio de determinados modelos de movilidad en la familia y entre los amigos. Campañas interactivas que implican a conductores de automóviles y alumnos con incentivos.
- **Conjuntos residenciales:** Estudio de las ofertas atractivas ya existentes (tiendas, tiempo de ocio, deportes, entretenimiento, etc.) para peatones y ciclistas en conjuntos residenciales grandes. Desarrollo de un programa para fomentar el uso de dichos servicios entre los habitantes. Organización de eventos informativos y campañas sanitarias para fomentar el uso peatonal y ciclista.
- **Educación de adultos:** Organización de seminarios para familias: Viajes de ocio utilizando medios de transporte alternativos. Talleres con encargados de la toma de decisiones y multiplicadores (políticos, periodistas, etc.) para fortalecer la necesidad de la planificación, la puesta en práctica y el fomento de medidas para caminar y montar en bicicleta.

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## Ponencia / Paper

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### Idea and strategy.

Apart from few exceptions, projects promoting socially and environmentally “safe” means of transport, particularly walking and cycling, have only been modestly successful. Although finding a solution to traffic problems in urban centres is considered to be one of the main challenges of the future in Europe, and although everyone underlines the importance of promoting PT and, more recently, non-motorised means of transport, the measures taken are ambitious but not always suitable. This is especially true for measures aiming towards a change in behaviour.

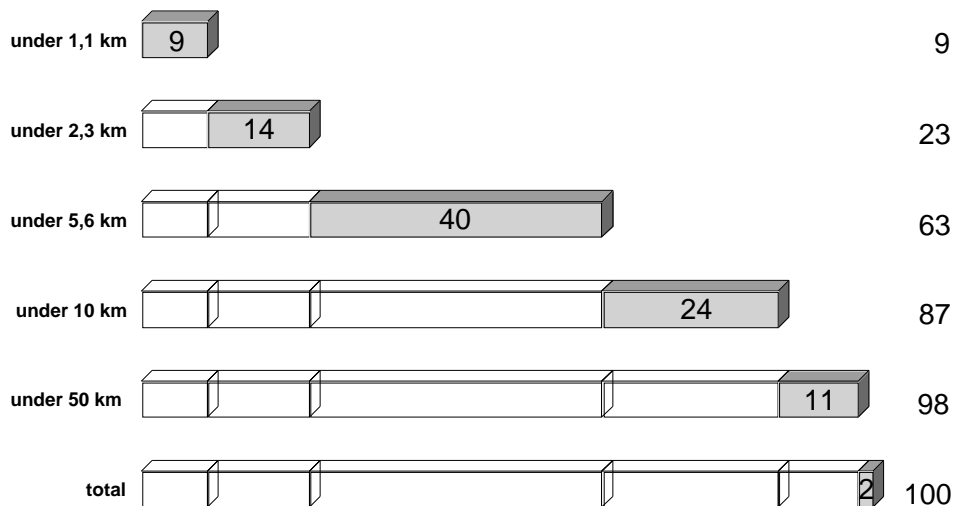
The main problem with a change in behaviour is that switching from driving to walking, cycling or PT is usually seen as a loss of comfort and speed and even as a sacrifice. If I change my behaviour, the environment or the public will benefit while I personally will experience the disadvantages mentioned above.

GOAL therefore tries to develop and implement strategies and measures to avoid this dilemma. Our motto is “Environmental protection for one’s personal benefit” and we want to inform

citizens of the advantages of walking and cycling. Unlike previous projects, the emphasis lies not primarily in encouraging people to walk and cycle in their leisure time but to use non-motorised means of transport for daily trips. Of course the project focuses on short and shortest trips, i.e. distances that can easily be covered on foot or by bicycle. There is a large potential for change.

In Graz, Austria's second largest city with approximately 240 000 inhabitants, 9% of all distances covered by car are shorter than 1,1 km. 23% of all car trips within the city are 2,3 km – the same distance as the average bicycle trip in Graz. Thus, almost a fourth of all distances covered by car is short enough to cycle or walk instead. This calculation does not yet include the potential of a combination of PT and bicycle: For trips to and from one's flat to the PT stop the bicycle could be used and then a mode of public transport (Bike & Ride)

## Distances of car trips in Graz



Source: Socialdata

Percentages

Figure 1: Distances of car trips in Graz

### Project and target groups

GOAL (Graz: Noise and emission reduction through the promotion of alternative means of transport for the citizens' personal well-being) is a 2,5 year project sponsored within the framework of the EU programme LIFE. It is supported by the city of Graz with the partners Forschungsgesellschaft Mobilität FGM – AMOR Austrian Mobility Research, Zentrum für Gesundheitsförderung ZfG (Centre for the promotion of health), Grazer Verkehrsbetriebe GVB (PT company of Graz) and Taxi 878.

The project is broad and addresses several different target groups of the population of Graz. It is a demonstration project, which is why we attach great importance to an active participation of the citizens. Therefore different target group members are invited to actively take part in the project. Since the project consists of modules, there are different possibilities to participate.

The following pages will shortly describe each module. The GOAL project will last until mid-2003 but the module "mobility and health" has already been carried out and there are already results available. This and the fact that it is most appropriate for the subject of this conference / workshop is why we will focus on that particular module.

**Module 1, which is divided into 3 sub-modules, deals with noise reduction**



1.A.) Training of professional drivers to acquire good driving practice

Target group: bus, tram and taxi drivers

The style of driving greatly influences the urban noise level and air pollution, which is why special courses will be offered for professional drivers to reduce pollution, focusing on techniques of low-noise driving and becoming aware of the issue. We chose these target groups because public transport

drivers have to manoeuvre large vehicles through residential areas while taxis are among the most important sources of noise at night.

1.B.) Mapping of noise levels and action programme for urban areas especially sensitive to noise

A map indicating noise emissions produced by motorised traffic on the streets of Graz will be available. It will show noise emissions on streets and separate rail tracks. These "noise maps" will be connected to the digital city map and will be accessible to all citizens via the internet.

Plans for noise reduction in accordance with the guideline "directive of the European Parliament and of the Council relating to the Assessment and Management of Environmental Noise



COM (2000)468" will be set up for specific areas especially sensitive to noise (hospitals, schools, kindergartens, residential areas at night, etc.). Various measures and their impact on noise reduction will be demonstrated at a typical road section. Speed- and noise-measuring devices will be used to instruct passing car drivers how to change their behaviour behind the wheel. In addition, pupils will be promoters for a low speed and low noise style of driving near their schools.



#### 1.C.) Awareness campaign on noise

An innovative anti-noise campaign will be carried out, on the basis of the existing register of noise sources in the city. This anti-noise campaign is directed both towards those affected by noise and those causing it. For residents affected by noise a booklet will be prepared with guidelines for self-help measures (for example criteria for obtaining housing subsidies and addresses of companies supplying soundproof windows). Apart from the measures mentioned above, informative material on the causes of noise and a low-noise style of driving will be available at driving schools for the noise producers.

A special component of the anti-noise campaign is the development and use of a mobile noise-awareness demonstration unit. This device will help the public to become more familiar with the causes and effects of environmental noise as well as possible remedial measures, and to heighten sensitivity and awareness on these issues. The unit will be used at various public events, in schools and workplaces.

### Module 2 - Transport in the company and health

Companies often neglect the issue of motorised transport of employees in their environmental and health programs. Initiatives in company mobility management most often simply suggest to their employees a change in the mode of transport used for getting to work but fail to set up further measures. This module aims at creating a win-win relationship between employers and employees. Employers have a strong interest in fit employees and fewer sick-leaves. Likewise, employees have a strong interest in their own physical fitness and well-being. This win-win relationship based purely on the self-interest of employers and employees becomes a win-win-win relationship through the spin-off of less pollution due to (less) motorised traffic (particularly during the morning peak hour).

A combined “environment-mobility-health” action programme will be developed, tested and evaluated.

The results of the module serve as guidelines for follow-up programmes.



### Module 3 deals with health and non-motorised modes of transport



3.A.) People who are diagnosed as having a “lack of physical exercise” at their annual medical check-up receive an individual programme on how to improve their fitness through everyday cycling or walking. Besides the medical part of the examination, the patients’ mobility patterns are discussed with them in order to identify which of their regular trips could be done on foot or by bicycle instead of by car. The overall goal of this module is to implement a permanent co-operation between health / medical staff and mobility consultants to strengthen the idea of “transferring physical activity into everyday mobility”. This goal is also valid for 3B.

3.B.) People who have recently suffered from an acute cardiovascular crisis and are in the phase of in-patient convalescence (first contact while still in hospital) are particularly amenable to rethinking their lifestyle (including mobility and fitness). These patients should be encouraged to cycle and walk more. In a pilot project with approximately 20 subjects, it is envisaged that a team consisting of doctor, physiotherapist and mobility adviser will develop and test a rehabilitation guidance package, embodying the principle of integrating physical activity into everyday mobility.



### Module 4 - Attractive public transport through the reduction of the subjective time for the journey.



Mobility studies show that journeys by public transport feel longer than they really are. This effect is especially true for waiting times. One possibility to shorten the subjective journey time is to occupy the passenger in some way while waiting. This can be achieved through small exercises that are not obvious to other passengers (relaxation exercises, eye exercises etc.). The goals are to elaborate a programme which consists of information, awareness and instructions for practical exercises to prevent a bad posture or to reduce stress etc. This programme will be employed at PT stops and in PT vehicles. It will be disseminated with the help of

experts and the media. The citizens are invited to participate in the programme. Special coaches will ensure the participation of the public.

As a result, the concept, the information, an exercise programme and awareness material will be available.

### Module 5 - Schools and kindergartens

Nowadays, children are often no longer used to taking environmentally friendly means of transport- a fact that affects their mobility as adults. Children who experience mobility primarily as car passengers are more likely to become keen car users themselves.

On the other hand, children also strongly influence the behaviour of adults. In analogy to the success achieved in recycling at home, the awareness and behaviour of parents could be influenced by a positive attitude of their children to environmentally friendly modes of transport. This module has the following goals:



- An increased awareness of children and their multiplier effect on their parents
- Independence and responsibility of children in using public transport and as a consequence less pressure on the parents. The parents no longer have to drive their children to various destinations as often and thus the necessity to use the car is reduced (for example by eliminating the need to drive the child to school on the way to work).
- Information about the personal benefit of using non-motorised modes of transport
- To make the school surroundings safer and to reduce noise caused by motorised traffic
- To inform the pupils of the relation between style of driving, speed and noise and possible measures to influence noise emissions

### Module 6 - Family and multiplier workshops



In order to reach families and to influence their decision-making processes, strategies for changing mobility patterns in one's own family will be taught in workshops for parents. For optimal exposure of the central idea "Integration of exercise into everyday mobility while simultaneously reducing negative effects of motorised traffic", opinion-formers and multipliers will be informed about

these issues in special awareness-raising promotions, so that they can themselves be convinced of the advantages of this project. Therefore journalists (TV, radio, newspapers) will be informed about the relation between traffic, noise and health. Decision-makers from companies will be trained in a workshop on „Company health and non-motorised mobility of employees“. A workshop on „speed and noise“ will be organised for the police of Graz. The police will be informed about the relation between speed checks and noise reduction. A further goal is the establishment of these workshop as an essential component of the programme of the Family Academy. For quantitative targets see WP description forms.

### **Module 7 - Enhancement of residential areas - promotion of mobility in a small radius**

A major reason for increased pollution caused by motorised traffic is the emphasis on longer journeys within urban areas (e.g. relocation of shopping centres and leisure facilities to the city limits) which leads to the neglect of facilities located near home. In order to change this tendency, it will be necessary to provide more information about facilities available in local neighbourhoods, to improve the image of local areas and improve social networks in the neighbourhood.

This would discourage the "escape mobility" and promote shorter journeys that can be made using non-motorised means of transport. Measures could include neighbourhood fitness checks coupled with advice on exercise programmes and routes, as well as awareness-raising promotions, informative events staged by the mobility centre. For a lasting implementation of the concept, training of Agenda-21 neighbourhood coordinators, who should also be active in areas such as waste avoidance and energy saving, is essential.



### **Module 3 – Health and Non-Motorised Transport**

#### **The objective:**

The objective of the programme is to encourage participants to become more physically active in their everyday routine. At best, the participants will no longer use the car for short trips but walk or cycle. Another possibility to improve their fitness is to climb stairs instead of taking the elevator. In addition to these suggestions, there are many other ways to transfer physical activity into everyday routine.

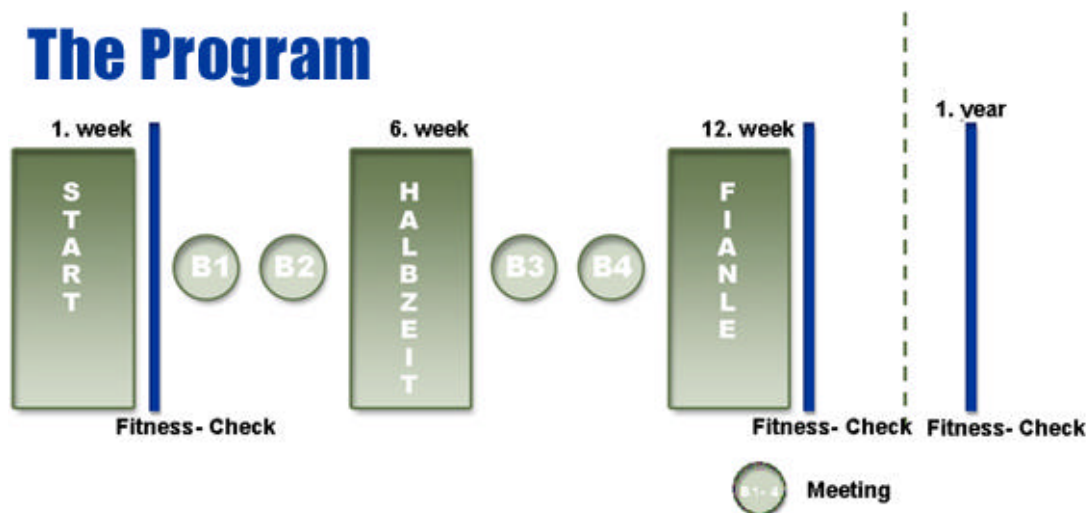
#### **The programme and the participants**

The programme consists of a 12-week active phase, in which the participants are encouraged to change their behaviour and to test their possibilities to transfer more physical activity into everyday routine. However, this additional exercise should involve little or no extra time.

100 clients of the Merkur insurance company were divided into three groups and accompanied, coached and motivated during the entire project period. Each group had 33 members at the most so that all participants could benefit from personal attention and best coaching.

The programme includes three large meetings (at the beginning, mid-way and at the end) for each group with lectures and presentations but also work by the participants themselves. For this work, the groups were further divided into small groups with a maximum of five members and a consultant. All the participants at the programme had been diagnosed with a lack of exercise at their annual medical check-up. The youngest participant was 28, the oldest 69 years old. Most of the participants (2/3) were female (1/3 male).

## The Program



### 12 weeks of self-observation

Each participant sets his/her goals individually and decides when he/she can and wants to leave the car in the garage and how he/she can become more physically active in everyday routine. 30 minutes of additional exercise per day would be the optimum. It does not make a difference whether these 30 minutes of exercise are done at once or split into smaller units of physical activity. A specially developed mobility-health-journal helps the participants in their self-observation and facilitates individual qualitative and quantitative evaluation of success.



### Walking tests

At the beginning of the project, each participant's fitness values are taken at a walking test. The same test is repeated after 10 – 12 weeks in order to determine changes in the fitness level. One year after this testing phase, we will offer another walking test to find out whether there was a permanent change in behaviour (more physical activity).

### Lecture evenings

In addition to the events at the beginning, mid-way and at the end, we also offered several lecture evenings to the participants on fitness, health and mobility.

### Mobility-fitness meetings

The participants had the possibility to regularly attend mobility-fitness meetings, which allowed them to discuss questions with the assistance of experts on health and mobility, to give each

other advice and to motivate each other. These meetings took place once a week in a relaxed atmosphere.

**Results:**

Fitness values:

75% of the participants notably improved their fitness within the 12 weeks of the project period.

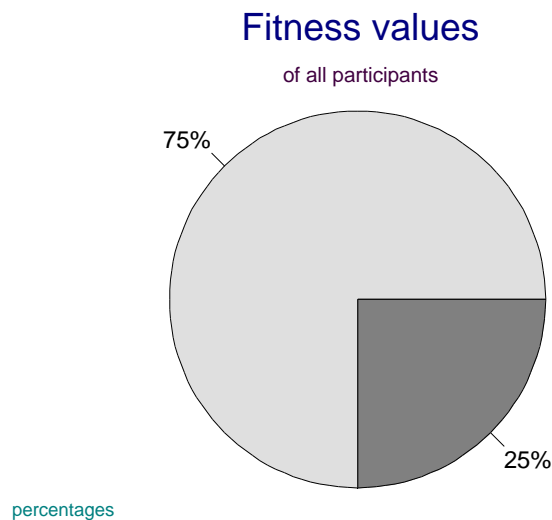


Figure 2: Results of the programme - Fitness Values

**Body fat percentage:**

73% of the participants had better body fat values after the 12-week programme. This development is especially positive because it is against the general tendency: In the colder season (project period September to December 2001) the body fat percentage usually increases.

**Health and physical efficiency:**

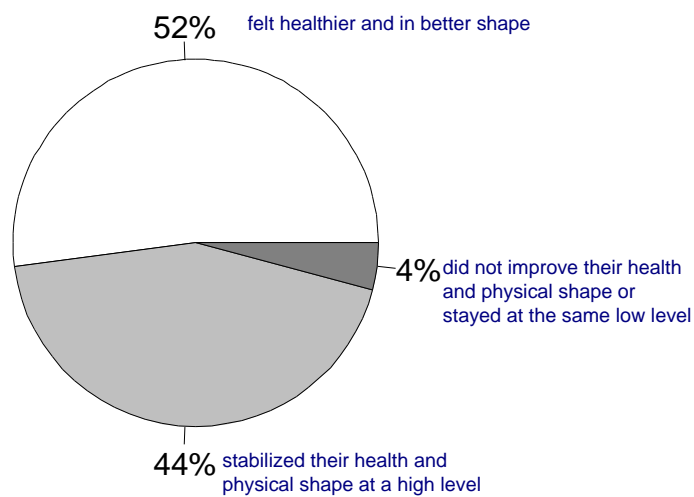
According to their personal judgement, 52% of all participants felt healthier and in better shape after the 12-week programme.

44% stabilised their health and physical shape at a high level.

Only 4% of all participants did not improve their health and physical shape or they stayed at the same low level.

## Health and physical efficiency

Of all participants



percentages

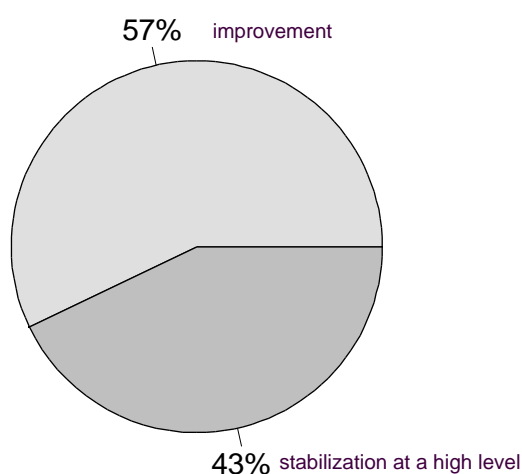
Figure 3: Results of the programme –Health and physical efficiency

### Well-being:

Well-being is a collective term for physical and psychological elements and therefore a very important indicator of health. It was very satisfactory to see that concerning the indicator “well-being”, all participants indicated “improvement” (57%) or “stabilisation at a high level” (43%).

## Well-being

Personal estimation of all participants



percentages

Figure 4: Results of the programme – Well-being

### Use of the bicycle in everyday routine

The increase of the use of the bicycle for daily distances is very satisfactory. There are two interesting aspects: First, it was possible to convince many people, who had indicated to never ride bicycle at the beginning of the programme, to use the bicycle for daily distances. Second, people who only rarely cycled use this means of transport much more often now for daily trips. The percentage of participants who rode bicycle as a sport remained at the same level during the period of the project.

There is a positive correlation between regular cycling and well-being. We found that people who cycle daily feel significantly better than those who said they never rode bicycle for daily trips (measured deviations from the average value).

In numbers this means a deviation index of  $-73,62$  for the non-users and  $29,71$  for the cyclists. The average value is 0.



### Minutes exercised – burned calories

During the project period the entire group exercised for approximately 357 000 minutes or 5950 hours. Figuratively speaking, each group member covered the distance from Graz to Mariazell, the famous Austrian place of pilgrimage, three times (basis: six hours of walking for four days).

The burning of calories through an increase in exercise further motivated the participants. During the 12 weeks of the programme, the group burned 2 675 800 calories through exercise. This corresponds to approximately 5000 wiener schnitzel (Viennese cutlets) or 11 000 half-litre mugs of beer.

### Consequences on mobility

More than one third of all exercised minutes (36,2%) are the result of switching from driving to walking or cycling.

## MINUTES EXERCISED

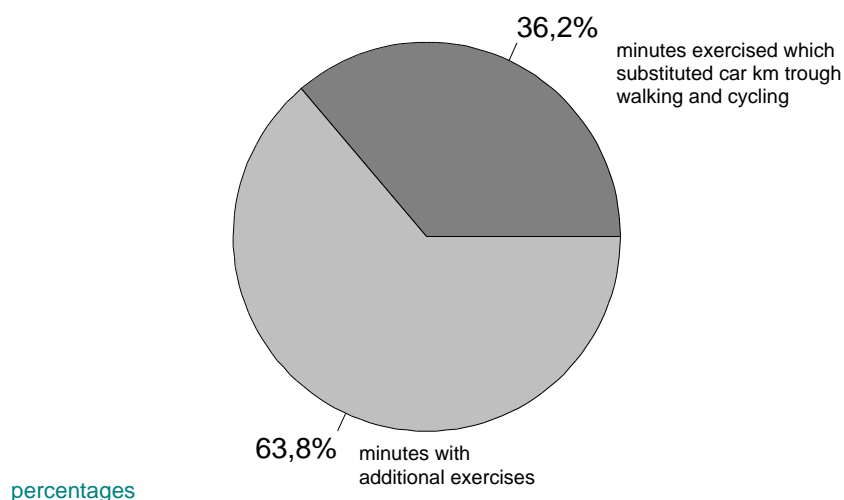


Figure 5: Results of the programme – Minutes exercised

### **The additional exercise units were achieved through**

additional leisure-time activities (going for a walk, using a home exercise machine etc.)

the substitution of activities only partly related to mobility such as climbing stairs instead of taking the elevator

substituting car rides by cycling and walking. In most cases the entire distance that was usually covered by car, was substituted by a non-motorised mode of transport. Furthermore, participants stressed the use of several means of transport; people who had originally practised park & ride were motivated to practice bike & ride instead. In some cases there were consequences on mobility because people walked all the way to the bus stop instead of driving there. A small part of saved car kilometres was achieved by those people who were encouraged to park their car farther from their destination and to walk or cycle the last distance (for example, when going to work park the car in an outlying district and walk the last 20 minutes to work).

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## **Curriculum Vitae**

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**Robert Pressl**, Austria

**Formación académica:** Licenciatura en Geografía por la Universidad Karl-Franzens de Graz

**Carrera profesional:**

1992: Asesor de la Ciudad de Graz; desde 1993, trabaja en AMOR (Forschungsgesellschaft Mobilität FGM-AMOR Estudios Austríacos sobre Movilidad)

Proyecto (selección):

- Proyectos relacionados con la Gestión de la Movilidad en compañías de Austria y Alemania:
- PREPARE – Conjunto de herramientas para asesoramiento sobre movilidad,
- IMPACT – Paquetes informativos para una movilidad con eficacia energética,
- PROSITRANS – Asesoría sobre movilidad empresarial
- TOOLBOX – Herramientas para el asesoramiento sobre la movilidad en las compañías,
- PORTAL – Fomento de los resultados de la investigación y el aprendizaje sobre transporte,
- GOAL - Graz: Reducción de ruidos y emisiones a través del fomento de medios de transporte alternativos para el bienestar peatonal de los ciudadanos

**Manuales:**

- Pautas para Asesores sobre Movilidad
- Manual de Planificación del Transporte Municipal
- Gestión de la Movilidad en las Compañías – Manual

**Conferencias y presentaciones:**

- Formación en asesoría sobre movilidad en Austria, Alemania e Italia
- Presentaciones sobre asuntos relacionados con la movilidad en Bélgica, Alemania, Austria, Italia, Eslovaquia, Eslovenia y Portugal

**Dipl.-Ing. Karl Reiter**, Austria

**Formación Académica:**

1990: Licenciatura en Ingeniería Estructural-Ingeniería Mecánica por la Universidad Técnica de Graz

**Carrera Profesional:**

1990 - 1992: Asesor de la Ciudad de Graz en el ámbito de la concienciación pública sobre el tráfico en la ciudad

1991 - 1993: Asesor del Ministerio Federal de Ciencias y Tecnología en el campo de la investigación sobre el transporte

desde 1992 trabaja en AMOR (Forschungsgesellschaft Mobilität FGM-AMOR Estudios Austríacos sobre Movilidad)

Evaluador de EU DG TREN

**Áreas de Responsabilidad:**

Gestión, responsable de la adquisición y las campañas de la UE; gestión de proyectos en los campos de "Educación para la Movilidad" y "Asesoría sobre Movilidad para Empresas".

**Idiomas de Trabajo:**

Alemán, Inglés

**Robert Pressl**, Austria

*Education: University degree in Geography at the Karl-Franzens University in Graz*

*Professional Career:*

**1992: Consultant to the City of Graz; since 1993 employee of AMOR (Forschungsgesellschaft Mobilität FGM-AMOR Austrian Mobility Research)**

**Project (selection):**

- *Projects concerning Mobility Management in companies in Austria and Germany:*
- *PREPARE – Tool-kit mobility consulting,*
- *IMPACT – Information packages for energy-efficient mobility,*
- *PROSITRANS – Entrepreneurial mobility consulting*
- *TOOLBOX – Toolbox for mobility consultancy in companies,*
- *PORTAL – Promotion of results in transport research and learning,*
- *GOAL - Graz: Noise and emission reduction through the promotion of alternative means of transport for the citizens personal well-being*

**Handbooks:**

- *Guidelines for Mobility Consultants*
- *Handbook of Municipal Transport Planning*
- *Mobility Management in Companies – Handbook*

**Lectures and presentations:**

- *Mobility consultant training in Austria, Germany and Italy*
- *Presentations on mobility matters in Belgium, Germany, Austria, Italy, Slovakia, Slovenia and Portugal*

**Dipl.-Ing. Karl Reiter, Austria**

**Education:**

1990: *University degree in Structural Engineering-Mechanical Engineering at the Technical University of Graz*

**Professional Career:**

1990 - 1992: *Consultant to the City of Graz in the field of public awareness in city traffic*

1991 - 1993: *Consultant to the Federal Ministry of Science and Research in the field of transport research*

*since 1992 employee of AMOR (Forschungsgesellschaft Mobilität FGM-AMOR Austrian Mobility Research)*

*Evaluator for EU DG TREN*

**Areas of Responsibility:**

*Management, responsible for EU-campaigns and acquisition; project management in the fields of „Mobility Education“ and „Mobility Consulting for Companies“*

**Working Languages:**

*German, English*