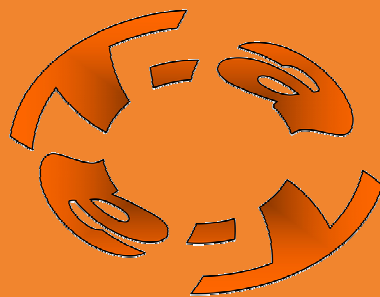
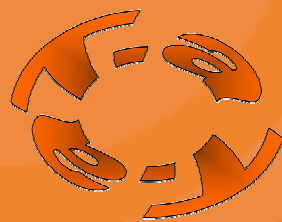




STUDENTS TODAY CITIZENS TOMORROW



making university life more sustainable



Intelligent Energy  Europe

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SUMMARY



“Students Today, Citizens Tomorrow” this is the slogan that best resume the philosophy and the concrete essence of this project. In Europe, every day, millions of students, professors and workers move from their homes, towards the university buildings and premises using different transport means and being responsible of a high consumption of energy resources and consequently of a high environmental impact due to CO₂ and other gas emissions.

Implementing actions that help solving university mobility problems means introducing “less energy intensive transport modes” and educating students to use them. Encouraging responsible transport behaviours among university students means to orient the mobility choices of the future citizens.

The “Today and Tomorrow” project intends on one side to identify, define and apply energy policy interventions to reduce the environmental impacts related to the university mobility and, on the other side, to contribute stimulating an energetic - environmental consciousness in order to increase the general awareness of the effects linked to the use of traditional transport means.

The more ambitious aim of the project is to succeed in orienteering future transport choices of the university population, towards more efficient solutions and cleaner mobility models.

Our wish is that you will enjoy reading about T.aT. project and that you’ll find inspiration and good solutions to solve the mobility problems of your university.

Antonio Di Nunzio
Project Co-ordinator
T.aT. Project

A handwritten signature in black ink, appearing to read 'Antonio Di Nunzio'. The signature is stylized and cursive.

INTRODUCTION AND OVERVIEW

European universities are characterised by a high degree of heterogeneity, which is reflected in organisation, governance and operating conditions, including the status and conditions of employment and recruitment of teaching staff and researchers. There are some 3.300 higher education establishments in the European Union and approximately 4.000 in Europe as a whole, including the other countries of western Europe and the candidate countries. They take in an increasing number of students, over 12.5 million in 2008, compared with fewer than 9 million ten years previously. Every day millions of students of age between 19 and 29 years move to and from universities all over Europe in order to attend lessons, have meetings with professors and sit for examinations. This represents a great mobility problem for lots of big and little European cities.

The travels of the students are regulated by university hours fixed by university management, and each student decides to move in a different way according to various factors like: availability of a private car, availability of money to travel with a private car, closeness to public

transport stations (Metro Bus, Tram) availability of public transports connected to university hours, will to reach the university by low energy intensive modes (Bike, Walking), awareness about alternative transport ways. T.aT. project intended to influence many of these factors in order to obtain a general improvement of mobility in university areas, reducing energy intensity of transport, lowering CO₂ emissions, transferring of traffic to less energy - intensive modes.

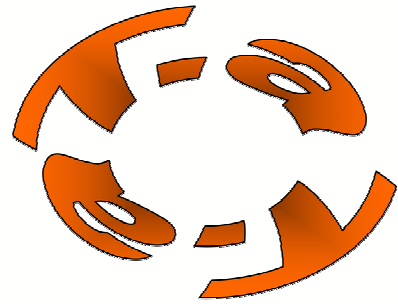
The most important challenges regarded: the improvement of cooperation among local public administrations, universities and local transport companies through the promotion of University Mobility Managers; increasing the attractiveness of public transport (road and rail) and non motorized modes through innovative awareness campaigns for travellers; improvement of information and greater awareness of students about implications of transport behaviours to orient their present and future transport choices; supplying new mobility services like car pooling and bike sharing.



T.aT. PROJECT

Students Today

Citizens Tomorrow



Program: Intelligent Energy - Europe (IEE)

Key action: energy-efficient transport

Coordinator: Antonio Di Nunzio - A.L.E.S.A. Srl, Italy

E-mail: info@alesachieti.it

Tel: 0039 0871 41421

Fax: 0039 0871 41944

Website: www.tat-project.eu

Benefits: CO₂ reduction, shift towards less energy intensive transport modes, students' education, dissemination of best practices.

Duration: 15/10/2007 - 14/04/2010

Budget: EUR 946.755,00 (EU contribution: 50%)

Contract number: EIE/07/239/SI2.466287

The T.aT. project

The T.aT. project moves from the idea that educating university population towards sustainable mobility means, on one side, reducing the energy and environmental impacts of the traditional transport means in the university areas and, on the other side, orienting the mobility choices of the future generations with concrete benefits on the livability of our cities.

The key words of the T.aT. project have been:

- **Planning:** Sustainable mobility plans have been drafted in order to orient the policy of the local administrations towards environmental friendly mobility systems and low energy intensive transport modes (highlighting the advantages for the community of the alternative

transport means). The finding of shared solutions (among citizen, students, workers, transport companies, administrations) will facilitate their realization.





- Car Pooling and Bike Sharing: Target Groups are quite tired to be only informed, or trained towards sustainable mobility, they want to test them!. Development of three car pooling systems (one in each country) and setting of permanent bike sharing fleets were the bets to win, and local action committees (L.A.C.), acting according local background conditions, succeed in the goals.

Objectives

As regards the main objectives of the project, they can be divided in long term and short term ones. The long term objectives were: obtaining changes in people's attitudes and behaviours in transport towards less energy intensive modes; overcome the lack of awareness about the external costs of traditional transport; overcome the cultural barriers to the implementation of alternative transport modes; reducing the use of private car in favour of public transport, promotion of car sharing and car pooling services. Long term goals are linked to the strategic results of the project, to be reached above all through the creation of an environmental-energetic consciousness in the target groups.

As regards the short term aims, they are strictly linked with the outputs of the project work programme and have been



Education and Communication: Education and Communication have been functional each other to stimulate the interest of the target groups towards sustainable mobility. Training courses have been organized within universities in order to explain the real external costs of the traditional transport and to evaluate the consequences on the human health and on the environment.

Communication campaigns have been realized in each country and the partners worked above all to ideate smart slogans and attractive gadgets able to stimulate the interest and the curiosity of the target groups.

monitored during the development of T.aT. through the performance indicators. Following, a short resume of the main ones: introducing measures aimed to mobility demand management in university areas;



reduction of CO₂ gas emissions due to university mobility of 5% by the end of the project in each territory; mobility education towards university students; growing of the percentage of public transport use among students of 10% in each university area; promote the figure of University Mobility Manager; induce the 5% of the students that don't have a bike to buy it by the end of the project; activate new patterns of partnership among target groups; dissemination of good examples and best practices.



Description of the Work

The project started on 15/10/2007 and finished on 14/04/2010. It was organized in eight work phases that can be summarized as follows:

- Work Package 1: it was related to the management of the project. It dealt with the buildings of the project committees (Local Action Committee – L.A.C. and Project Pilot Committee – P.P.C.), necessary to guarantee a correct development of the project work programme and with the organization of the project meetings, useful to the exchange of information among the partners and to define common best practices;



- Work Package 2: it was related to the evaluation of the state of art of the university mobility in each country. It dealt with the analysis of the present situation of university mobility (status quo) both from an energetic and environmental point of view. During the WP with the figure of University mobility Manager was promoted and European best practices in the field of sustainable mobility were gathered.



- Work Package 3: it was related to the drafting of new sustainable mobility plans for the university areas. It dealt above all with the realization of technical-economical feasibility studies about interventions of sustainable mobility, in order to

evaluate the best cost-benefits actions.

- Work Package 4: it was related to the ideation and implementation of a university car pooling service in each university area. It dealt with the realization of a simple software and above all with the promotion of the system through communication campaigns.
- Work Package 5: it was related to the setting of a permanent bike sharing fleet in each university area.



- Work Package 6: it was related to the monitoring and evaluation of the project results. It dealt with the realization of a survey among the university population in order to evaluate the decrease of CO₂ emissions, fuel consumption and use of private cars following T.aT. action.
- Work Package 7 and 8 dealt respectively with local dissemination and common dissemination activities.

Results

T.aT. project succeed in reaching all the previewed aims, above all thanks to the good composition of the partnership (putting together an agency for energy, a local administration and a university



helped to find out and solve the main problems) and also thanks to a good territorial background (the work done by the agencies for energy in the previous years contributed to create a “favourable environment” towards sustainability themes).

The main results reached can be summarized as follows:

- sharing among the partners of a common model of analysis of mobility and definition of a shared platform of indicators (mobility awareness, mobility behaviours, energy efficiency, environmental);
- definition of the state of art of mobility in each university centre;
- drafting of innovative plans of sustainable mobility;
- implementation of a university car pooling service (in each territory);
- implementation of a university bike sharing (in each territory);
- definition and realization of a process/path of education on sustainable mobility towards university population;
- dissemination of best practices of sustainable mobility.



THE PARTNERS INVOLVED

Italy



A.L.E.S.A. - Local Agency for Energy and Environment



Ud'A - UNIVERSITY "G. D'ANNUNZIO"



PROVINCE OF CHIETI

Portugal



I.P.L. - Polytechnic Institute of Leiria



ENERDURA - Regional Agency for Energy of Alta Estremadura



MUNICIPALITY OF LEIRIA

Cyprus



UCY - University of Cyprus



STRATAGEM Ltd - Cyprian Agency for Energy



MUNICIPALITÀ OF AGLANTZIA





A.L.E.S.A. - Local Agency for Energy and Environment

Via Nicolini

66100 Chieti (CH) - Italy

Phone +39.0871.41421

Fax +39.0871.41944

E-mail info@alesachieti.it

www.alesachieti.it

A.L.E.S.A. – Local Agency for Energy of the Province of Chieti was born in the month of September 2001. The Agency was co-financed under the 2000 SAVE programme together with AGEDE – Local Agency for Energy of the Municipality of Ecija (Spain), that is the transnational partner of the project. A.L.E.S.A. has been fully operational since November 2001 with a staff composed of 5 full-time persons.

A.L.E.S.A. promotes RES and RUE at local level. In its first two years, it has contributed in the development of the provincial energy plan, through the collection of data and information regarding energy management, in order to define the energy strategies (Territorial Provincial Analysis, Analysis of the provincial energy production, Analysis of the provincial energy consumption, Analysis of the sales of electricity and fuels, Analysis of energy import – export).

The Agency also operated at European level, taking part in various EU Community projects. Another important activity is the dissemination of RES and RUE through the organization of conferences, seminars, meetings and workshops. The diffusion at various levels of news, good practices, possibilities of public and private co-funding for RES and RUE is one of the most important aims of the Agency. A.L.E.S.A. has already taken part in more than 10 EU level events, 10 national events and more than 30 regional events. Finally the Agency is also active in developing common actions with Universities, training Institutes and high schools. It took part in six degree thesis and organized ten training sessions.



Ud'A - UNIVERSITY "G. D'ANNUNZIO"

Via dei Vestini n. 31
66100 Chieti (CH) - Italy
Phone +39.0871.3551
www.unich.it



Established in 1965 as "Free University" in 1982 by state, the University "Gabriele d'Annunzio", holds twelve faculties that are located in university campus of Pescara and Chieti, where legal office with the University Rector and General Directorate offices have been placed.

The "G. d'Annunzio" University is situated in the Abruzzo region, in particular in and around the metropolitan areas of Chieti and Pescara. The region is located in the center of Italy. The "G. d'Annunzio" University derives its name from its most celebrated international literary figure - Gabriele d'Annunzio.

The main campus of the University, The Chieti Campus, is located in Chieti Scalo. The Chancellor's Office, Central Administration buildings and Faculties of Medicine, Pharmacy, Arts and Philosophy, Dentistry, Psychology, Social Sciences and Mathematics, Physics and Natural Sciences are all situated amidst the green oasis of this campus. The Faculty of Sport Medicine is near the campus, that is a short metropolitan bus ride or car trip from the Chieti city center.

Leading the way for facilities, equipment and training, despite its young history, the University "G. d'Annunzio" shows a steady increasing of the population that reach the threshold of 36,000 students within the academic year.

In an urban and metropolitan context characterized by a high degree of receptivity and high standard of life, the University "G. d'Annunzio" aims to offer a highly qualified and diversified teaching, without losing the opportunity to use leisure-time through recreational, sporting, cultural activities.

Pescara is a contemporary seaside town with a commercial port, international airport, yacht club, sea link service to the nearby Balkan nations and it is the commercial hub of the Abruzzo region.

Provincia di Chieti



PROVINCE OF CHIETI

Corso Marrucino n.97
66100 Chieti (CH) - Italy
Phone +39.0871.4081
Fax +39.0871.321239
www.provincia.chieti.it

The Province of Chieti has a perimeter of 255 km and an area of 2568 kmq. It is situated in the south of Abruzzo and it is washed by the Adriatic Sea for 67 km. The provincial municipalities are 104 of which 9 on the sea. The Province of Chieti confines in the North with the Province of Pescara, in the west with the Province of Campobasso and in the east with the Adriatic Sea. Province of Chieti is divided in 10 Department and in the context of the coordinating Territorial Plan has individuated as strategically priorities for the development of the country, the better and qualification of the local professional training system, as also the sustainability of the development, especially in the key sector of the territorial organization, of energy and infrastructures. On the base of these guide lines, the provincial departments addressees the operative choices towards the application and management of DOCUP, the unique regional document of planning which the Province of Chieti has contributed incisive to define. In the planning of the service, also in the energy sector, the approach wants to involve all territorial resources also in the financial way and in the human resources, which are functional to the creation of strategically partnership and permit a planning at community level. The Province of Chieti, following this objective, has given its adhesion to the Aalborg document and works in a synergic way in the process LA 21, and together with the other Provinces of Abruzzo Region, Teramo, Pescara and L'Aquila, has undertaken as pilot experience in the Italian institutional overview. At operative level the first action has been the creation of a techno structure of support as Provincial Agency for Energy, which assumes a strategically role in the implementation of territorial policies of development, also like energy planning and achievement of the indicated objectives in the contract of the partnership (first Italian Province) with the European Union in the Take Off Campaign. This Agency has been created in the context of the Community Programme Save II – Year 2000 – with the partnership of Municipality of Ecija – Spain- and with the co financing of the European Community and local sectorial private and not enterprises (like local banks), with the right intention to involve the whole territorial system of the decisional activity. to involve the whole territorial system of the decisional activity. The guide and achievement of the programme has given to the agreement programme for the Take Off Campaign. In the energy field the Province of Chieti is carrying out the control campaign of heating systems on the territory and now it is one of the most vanguard Provinces about the application of the Italian Law 10/91 and of the D.P.R. 412/93 on energy saving and on security systems. On this base an important professional training of private operators (expert in maintenance) to better their own specific competences. The Province of Chieti is partner and promoter of several community and national initiatives (for example is Representing all the Italians Provinces in the project “Solar system town hall”) and it has developed in the last years a good experience in the management of complex projects not only in the energy sector. Furthermore in 2005 the provincial administration became partner of SUSTENERGY campaign 2005-2008.



I.P.L. - Polytechnic Institute of Leiria

Campus 2

Morro do Lena - Alto do Vieiro

Apartado 4163

2411-901 Leiria - PORTUGAL

Phone +351 244 820 300

Fax +351 244 820 310

E-mail estg@estg.ipleiria.pt

www.ipleiria.pt



The Polytechnic Institute of Leiria (IPL) is present in the cities of Leiria (*campus*1, 2 and 5), Caldas da Rainha (*campus* 3) and Peniche (*campus* 4), its mission is to promote knowledge, create, transmit and disseminate culture, science, technology and arts, guided research and experimental development. IPL is a national organization and a committed partner in the dynamics of the development of the Leiria and West region in which it is located.

The academic community of IPL integrates 11,500 students, 885 teachers and 314 technical and administrative staff, distributed throughout five higher education schools (School of Education and Social Sciences, School of Technology and Management, School of Fine Arts and Design, School of Tourism and Maritime Technology, School of Health Sciences), an Institute for Research, Development and Advanced Studies, a Distance Learning Unit, a Learning Unit for Technological Specialisation Courses and a Training Centre for Actives.

In total, 62 undergraduate degree courses are offered (day classes, night classes and distance learning), 40 Master's degree courses and 17 post-graduate courses, being their training offer characterized by a vast multidisciplinary, with courses in various areas of knowledge: Arts and Design; Entrepreneurial and Legal Sciences; Education and Communication; Engineering and Technology; Health; and Tourism.

In an effort to provide the best teaching and learning conditions to its students, IPL has invested in modern, well-equipped facilities. It also provides a range of support services of excellent quality at the level of basic social support (scholarships, canteens, restaurants, student halls of residence, medical services, camping and leisure sites), psychological and psycho-pedagogical support and furthermore, it also allows access to a variety of documentary and bibliographical resources (libraries, B-on – Digital Scientific Library).

ENERDURA was created in the end of 2000, resulting from an application to the European Community Programme SAVE II. ENERDURA intervenes in the Region of Alta Estremadura, which combines the six Municipalities of Batalha, Leiria, Marinha Grande, Ourém, Pombal and Porto de Mós. The Agency accounts now with twenty two institutes coming from different sectors, such as public, semi-public and private sector.

The Main objectives of ENERDURA are:

- To improve the energy efficiency in the city
- To improve the energy efficiency in local industry
- To advise consumer and retailers about energy saving and energy friendly products
- To reduce the atmosphere pollution
- To disseminate the use of local renewable energy resources (RES), mainly solar energy, wind and biomass
- Sustainable development: development of new activities and consequent creation of jobs, integration of energy efficiency and environmental concerns in the urban planning process
- To inform citizens and specially young students of the environmental, economic and strategic benefits of rational use of energy (RUE) and RES actions.

It is important to refer Enerdura participation in the “European Mobility Week”, events promoted by a local entity, where the Agency elaborated documents with some of the most important rules for the responsible use of the car, with the objective of getting the population’s information. The Agency is also participated in local fairs such as the “Christmas village for the children”, the “May’s fair” and other initiatives such as “Energy auditor ships in school buildings”, “The Christmas Trees gathering and valorisation campaign” and the “Energetic Matrix for the Alta Estremadura region” with the aim of making the demand characterization of energy in the region. Enerdura is currently developing a viability study for a net of gathering parks of Forestall Biomass to the region.

MUNICIPALITY OF LEIRIA

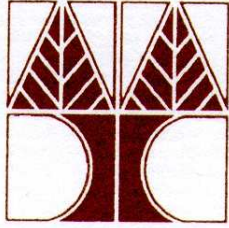
Largo da República
2414-006 Leiria - PORTUGAL
Phone +351.244.
Fax +351.244.
www.cm-leiria.pt



Município de Leiria
Câmara Municipal

Câmara Municipal de Leiria is the local government entity of a municipality with a total area of 565 Km² and 119847 habitants, situated at the Portuguese Atlantic littoral, between Lisbon and Porto. Due to the privilege situation, this region is an important industrial and tertiary centre, thus an important node in the Portuguese transportation network. In the field of Mobility and cooperation, the action of a City Council is determined according to the Portuguese Law n. ° 159/99, September 14th, in which the State gives attributions and competences to local government: It's the competence of City Council the planning, management and investment in local regular urban public transportation (n. ° 1 b), Art. 18th); It's a competence of City Council to participate in decentralized cooperation projects and actions, namely within the European Union (Art. 31st).

Within the structure of City Council of Leiria there is a Division of Environment (DASU) and a Department of Municipal Works (DOM). The DOM, which includes a Division of Road Infrastructures and Traffic, these recent years has gained some expertise in the field of sustainable urban transport, by accompanying several studies in mobility management, namely: Structuring and Optimization of Leiria's Transportation System: project with scientific and technical supervision of Universidade de Coimbra; Polis Strategic Plan (National Program for town's environmental re-qualification): project with technical supervision of Parque Expo (enterprise responsible for the World EXPO 98, in Lisbon) and the participation of Universidade Técnica de Lisboa; Geographical Information System for the Road Network of Leiria City: project with scientific and technical supervision of Escola Superior de Tecnologia e Gestão (ESTG); Urban Mobility and Public Transport in Leiria: project with scientific and technical supervision of a consultant enterprise and ESTG.



UCY - University of Cyprus
University House "Anastasios G. Leventis"
P.O. Box 20537, 1678 Nicosia - CYPRUS
Phone +357 22894000
E-mail: info@ucy.ac.cy
www.ucy.ac.cy

The University of Cyprus is the first and only University in Cyprus and it was established with the Law 2430/1989. The University aspires to establish itself as a research-oriented institution that combines research with teaching in order to promote knowledge and educate highly qualified specialists and professionals.

The significance of university research for society can be analyzed in terms of the following three components:

- The training of future researchers, who will contribute to the enhancement of local research capacity;
- the development of basic knowledge in all areas of learning, which can lead to achievements in applied research as well as social, economic, and technological development; and the participation in technological development and the transfer of knowledge, upon which all economic development is based.

During the period 2002-2004, 346 research projects were funded from external sources, primarily the European Union and the Cyprus Research Promotion Foundation. During the same period, the University funded from its internal budget another 69 projects. In addition, the members of academic staff had collaborations with 226 external partners.

STRATAGEM Ltd - Cyprian Agency for Energy

45 Kimonos Str., Suite 201

2006 Strovolos, Nicosia - CYPRUS

Phone +357 99304097

Fax +357 22446805

E-mail info@stratagem-ltd.com

www.stratagem-ltd.com



STRATAGEM Ltd. is a private consulting company founded in July 2004. The company is assisting SME's, larger private companies, Universities, Governmental and other institutions in various research and innovative projects. Currently, it has a staff of 4 persons, all with post graduate studies (2 with PhD).

Activities:

- Development of proposals for national and European research programs,
- Development of Feasibility Studies, Business and Strategic Plans,
- Business valuations and appraisals of enterprises and investment projects (Research, Technology, Innovation);
- Organisation of training programs in subjects such as business valuation, appraisal of investment projects, entrepreneurship, new product development, environmental management issues and strategic direction of companies.

Turnkey Management Services and Capital Raise Services to start-up companies.

Objectives:

- Dissemination of national and European programmes and plans with regard to energy efficiency and renewable energy sources;
- Consulting services delivery to private companies, government organizations and local authorities on grant application procedures, development of proposals, applications for investments and research proposals that take advantage of subsidies and economic incentives, with regard to rational use of energy, energy efficiency and renewable energy resources;
- Promotion and education on energy related subjects in government departments, private organizations (particularly SME's), consumers and citizens, aiming at the rational use of energy and the permanent improvement of energy efficiency.



MUNICIPALITY OF AGLANTZIA

8, Aikaterinis Kornaro Str. ,

2108 Aglantzia - CYPRUS

Phone +357 22462048

Fax +357 22332755

E-mail harris.tsangarides@aglantzia.org.cy

www.aglantzia.org.cy

Aglantzia Municipality is situated next to Nicosia. It has an area of 31 Km² and the population is estimated at 22,000 but with the recent relocation of the University of Cyprus to its new facilities in Aglantzia the population is expected to exceed 30,000. This is a big challenge for the Municipality in order for its services to adapt and the people to accept this change with the smoothest way.

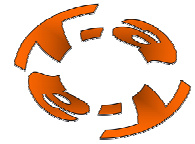
Aglantzia was nominated in Municipality after a referendum in May 1986. The Municipal Council is constituted by the Mayor and fourteen (14) elected Municipal Advisers. Aglantzia is Nicosia's most elevated suburb and is built either on hills or slopes. Its natural environment is unique since the largest park in the Nicosia area is in Aglantzia.

The Municipality gives particular impulse in the Cultural growth, the Protection and improvement of Environment and in the Social Policy. The Municipality employs 25 permanent clerical personnel and around 35 workers (permanent and extraordinary), that staff the following services that reside in the Municipal Palace:

- Secretarial;
- Technical Services;
- Economic Services;
- Services of Green and Environment;
- Services of Public Health;
- Cultural Services.



OUR EXPERIENCES



Italy



Portugal



Cyprus

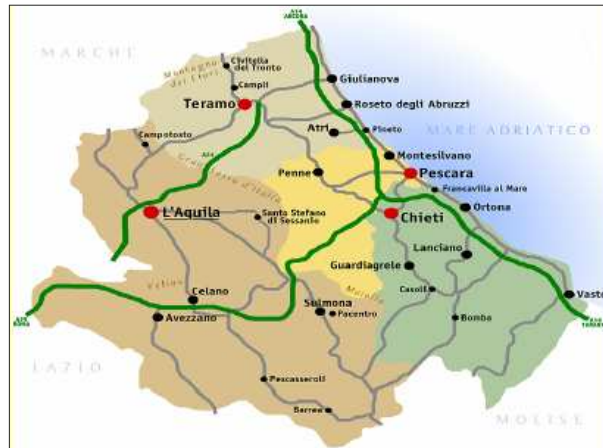


ITALY

Introduction

Italy represents one of the main European countries in which people move with own car. This behavior produces in the cities many problems such as air pollution, traffic congestion, accidents, lack of parking, stress. For this reason, the urban mobility constitutes a fundamental issue of the local development policy whose resolution requires a big and shared effort.

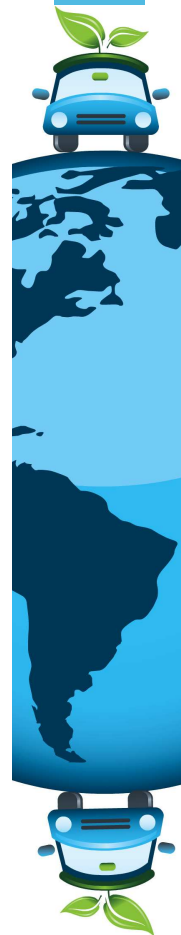
Usually the city centers host the major part of the main poles of public interest, such as hospitals, schools, universities, services companies, consequently a large flow of cars are everyday on the streets trying to reach these destinations with obvious environmental, energetic and safety problems for the whole city. It's necessary to increase the energetic-environmental awareness of people in order to change the travel behaviors and



to create a sustainable mobility system. Today many instruments exist that can allow to reach this scope: car-pooling, bike-sharing, more efficient public transports, park and ride areas. The T.a.T. project fits in this context, analyzing the structure of mobility in the university areas and individuating the best solutions to reduce the energetic-environmental impacts.



Figure 1. Pescara campus



The Italian case study regards the university “G. D’Annunzio” of Chieti-Pescara. The buildings of the university is divided in two main campus: the bigger is

workers move towards the university buildings, representing a critical point of mobility, with negative consequences above all for the urban area of Pescara



Figura 2. Chieti campus

situated in Chieti, out of the city center, the other one is located in the city center of Pescara. Every day thousands of people among which students, professors and university

(where the university is located in the city centre). Around this last issue that the major part of the project actions have been developed.

How to improve the mobility system, making it more sustainable?

The project has been developed following various phases that can be summarize as: draw-up of a mobility plan (Action 1 – Planning), implementation of a car-pooling

software and a bike sharing system (Action 2 – realization of new services), realization of promotional campaigns (Action 3 – communication and dissemination).

Mobility plan



The mobility plan realized for the “G. D’Annunzio” university was the result of a technical-economic feasibility analysis, regarding the evaluation of a set of interventions, planned on the base of a double approach:

- territorial compatibility – based on the analysis of the urban, infrastructural and environmental local background;
- “bottom-up” – based on the survey results regarding the home-university trips of the university population.

The survey realized in the first months of the project, during the WP2, allowed to understand the transport behaviors of students, professors and university workers (how university

people move?), the motivations towards the choices of mobility (reasons related to mobility choices) and their attitudes to change own behaviors towards more efficient solutions and cleaner mobility models (Am I disposed to change behaviors?). The results of the survey have been processed through the TREM software that allowed to individuate a set of indicators related to the energetic-environmental impact of the university mobility, with an estimation of the main polluting emissions of vehicles.

The most important results can be summarized in the following pictures:

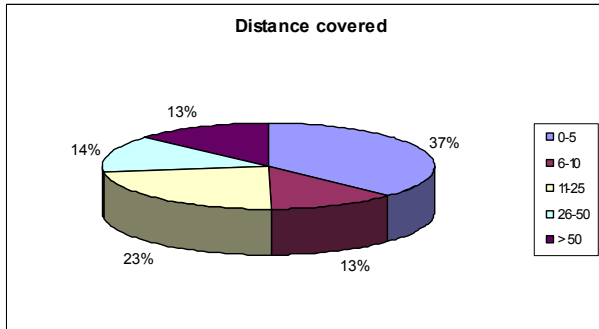


Figure 3. Distance covered in km in daily trip to university

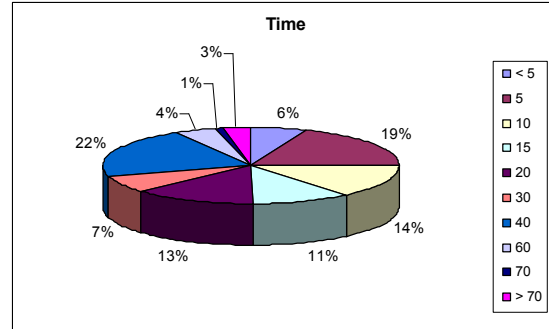


Figure 4. Time spent (in minute) for the daily trips

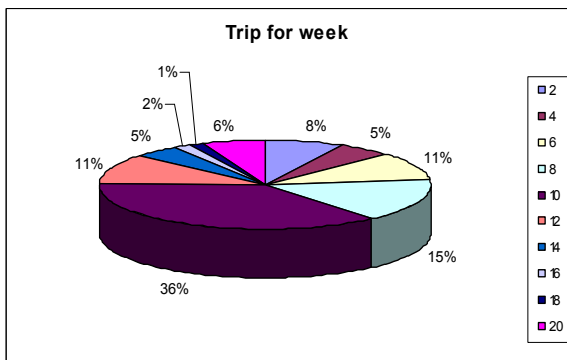


Figure 5. Average number of trips for week (one way)

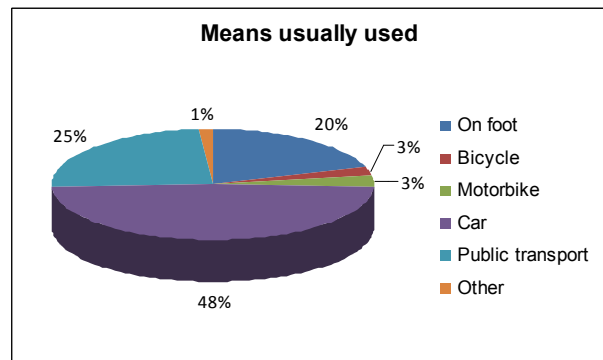


Figure 6. Means usually used

	CO (Kg)	CO ₂ (Kg)	NO _x (Kg)	PM (g)	SO ₂ (g)	VOC (Kg)	Fuel (Kg)
Total 1 trip	37,57	2351,82	12,83	294,89	350,73	3,48	751,77
Total 2 trips	75,14	4703,64	25,66	589,78	701,46	6,96	1503,54
Total per 1 week	314,84	21119,34	115,21	2648,11	3149,56	31,25	6750,89

Table 1. Energetic-environmental impact of the sample analyzed

These results showed that the major part of the people interviewed live around the university and go to the university every day, but above all the analysis highlighted the bad Italian attitude to travel by car and often alone. Many times the reasons of this behaviour are fruit of public transports inefficient and lack of alternatives, in other

cases the choice of the mean is only related to consolidated travel behaviours not motivated by real needs.

Following these considerations, various technical solutions have been planned to build a sustainable mobility system, also considering the impact of each solution on the reduction of the energetic-



environmental impact on mobility. So the following hypothesis have been analyzed:

- implementation of a car-pooling system in order to reduce the number of vehicles circulating;
- implementation of a bike-sharing system to facilitate the use of this mean of transport in the city centre;
- realization of apposite park and ride areas, in order to decrease the cars flow within the city;
- improvement of the public transport, in order to make the services more

comfortable;

- substitution of the car park of the university population with new low emission cars;
- development of a e-learning platform to reduce the direct access to the university buildings.

The cost-benefits analysis of these actions underlined strong and weak points of each solution, describing the potential reduction of the polluting emissions and applying a sort of “priority value” in terms of benefits for the territory.

Car-pooling

Although today the carpooling represents a real alternative model of transport, already implemented in many regions of Europe, in the “G. D’Annunzio” university it was a newness.

Main aims related to the implementation of a car pooling system in the “Ud’A” have been the creation of a car poolers network, the reduction of the traffic

- Technical: Implementation of a home made software;
- Cultural: Will to be independent, many times travelling by car alone, not awareness of energetic and environmental costs of traditional mobility;
- External factors: lack of parking reserved areas and lanes for car



congestion, the overcoming of the cultural resistances to the implementation of alternative models of transport, the overtaking of the cultural barriers towards shared use of private vehicles and the growth of the awareness of target groups about the costs of travel, many times not understood.

The implementation of the car-pooling system was not easy as the barriers identified were different::

poolers, lack of any i n c e n t i v e mechanisms for people implementing strategies of sustainable mobility.

About the solutions found, a cooperation between an expert *web master* and A.L.E.S.A. allowed to ideate a car pooling logo and a web site and Ud’A collaborated providing data regarding the main travel itineraries of the university population. The result has been the realization of a simply but efficient car-pooling web site.

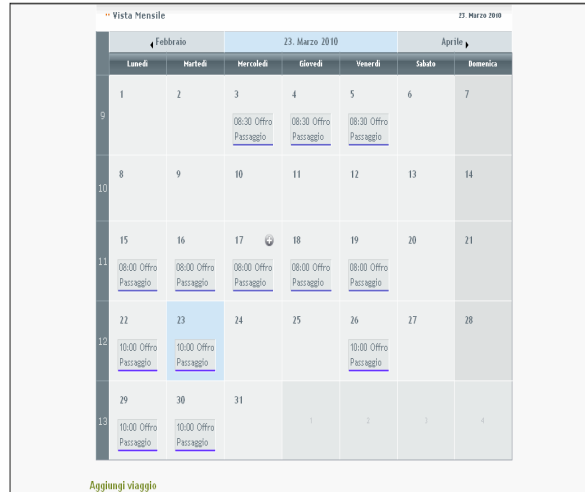


Figure 7 and 8: home page and trip calendar of the carpooling website

The carpooling system is available at the web address <http://carpooling.tat-project.eu>. In order to join it, it's necessary a preliminary registration following these steps:

- clicking on register on the menu bar;
- entering personal data (address, age, mail address, etc.);
- entering travel data (driver/passenger, trip home-university, etc.);
- accepting the regulation.

After the registration the user receives an email in which is asked to confirm the registration and, after the confirm, he has to insert username and password in the

opposite spaces. From this moment the user is qualified to use the service.

The user will have a own profile and he can add a request/offer of travel in the calendar section or he can look for a travel option fit for him. When the user find the best solution, he can contact the carpooler by mail or by phone to organize the travel.

The area covered by the car pooling system is undefined but it's possible to consider the system useful for all the users that move within a range of 100 km by Ud'A.



Poster 6m x 3m and flyer



Bike sharing

The bike sharing represents a valid alternative of transport within the cities, this is why in Italy the actions implemented in this field are numerous. The University “G. D’Annunzio” implemented in Pescara a test period of two months that obtained a big success among the university population. In fact the area of Pescara is perfect for bike sharing; absence of climbs and flat land everywhere makes the bicycle the right mean to move within the city and to improve the urban mobility.

- unavailability of covered parks for the bikes near the university building;
- absence of a strategic mobility plan of the area;
- lack of BS feasibility studies;
- lack of sensibility towards sustainable mobility solutions.

So, the main aims of the bike sharing test in the “G. D’Annunzio” University can be resumed as follow: overcome the cultural resistances to the implementation of alternative models of transport; growing



Nevertheless, the barriers to the bike use and to the development of a bike sharing service were many, both technical and administrative. In particular:

- long home-university distances (in some cases);
- absence of bike lanes;

the awareness of target groups towards bike use; make the bike use “fashion” and “cool”; demonstrate that for short distance the use of the bike is comfortable, practical and above all faster than car; convincing the local authority and the university authority that bike sharing is accepted by university population.





Figure 9: map of the area covered by the BS service



UNINBICI

The bike sharing system, called UNINBICI, has been implemented with the cooperation of a private renting company. It has been realized within the territory of the Ud'A in Pescara (the total area covered by the service was of about 5.5 km²) and it is been composed by two fleets of 20 bikes each.

The racks (8 racks able to host 5 bikes each) have been located near the entrance of the Economy and Architecture Faculties, in the fenced area of the university.

UNINBICI is a very simple system and the initiative is characterized by a high level of repeatability. It consists of the below elements:

- Bicycles;
- Racks – Stations;

Locking mechanism.

Bicycles: They are traditional means, not special bikes. They have only one speed in order to avoid technical problems and have an incorporated basket for bag carrying purposes.



Racks: Each rack is able to host at maximum 5 bikes, it has been used a typical inverted U shape installed on the ground.

Locking mechanisms: Each bike has been equipped with a mechanical locking mechanism so that the user can lock and unlock the bike wherever he stops. The keys have been assigned to two members of the university staff that have been at

disposal of the university population from Monday to Friday, from 9.00 to 18.00. A personal document (ID card, or driving license) was necessary to take the bike, the maximum renting time was of 3 hours per user per day.

The total area covered by the bike sharing service was of about 5.5 km². This is the area with the indication of the location of the bike sharing racks.

Promotional campaign

The success of each action implemented on the territory is related to a huge involvement of citizens, this is why communication and dissemination campaigns represented a fundamental element of the T.a.T. project and have been functional and transversal to all the work packages of the project. Posters, leaflets, seminars, journalistic articles and radio

mobility themes in the area of Chieti and Pescara, producing posters, leaflets and radio spots.

In order to increase the energetic-environmental awareness of target groups and to involve in a more active way the university population, Ud'A realized a Mobility Information Point (M.I.P.) in which students, professors and university workers



spots have been the most important tools used in the promotional activities, according to local availability of media. The Italian partners realized two promotional campaigns about sustainable

could obtain all the information about the alternative models of transport, included the car pooling and bike sharing services activated.



Figure 11: images related to the activity of the MIP

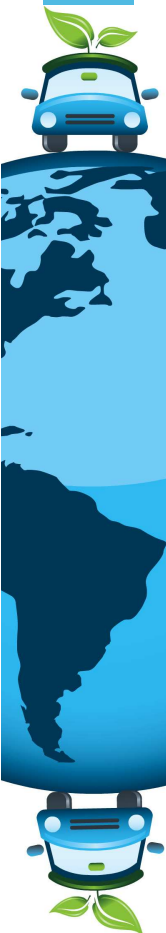
The start-up of the car pooling and bike sharing services has been accompanied by communication activity realized by A.L.E.S.A. and Ud'A that implemented different promotional actions: journalistic reports on the national TV channels, posters within the city of Pescara (6m x 3m), gadgets to be distributed to the university

population.

During the T.aT. project many seminars have been also organized. Private companies and technicians that work within sustainable mobility gave their precious contribution to promote the services implemented towards target groups.



Figure 12: gadgets and posters





PORTUGAL

Introduction

At a National level most of the daily travel is done using private vehicles. The private vehicle is also used as a status symbol and its use has become irrational from an economic, environmental and social view point. At this level the city of Leiria has as the rest of the country a high level of motorization. Measures to reverse, or minimize the extensive car use are not sufficient and therefore it is widely used in daily commute journeys. The promotion of environmentally friendly transport modes such as walking, cycling and public transportation were scarce when the T.aT. Project begun.

The project T.aT. - Students Today, Citizens Tomorrow, promotes the use of sustainable transport, in order to reduce the effects of pollution from the road transport on the

environment and human health. The education and awareness campaigns are very important in changing the current lifestyles and to promote a culture of sustainable mobility. Therefore, the project is specially dedicated to enhancing the public awareness of the young university students that will become future active members in society and will have an active role in citizenship values and also in promotion of environmentally friendly transport modes that are less energy demanding such as cycling and car-pooling.

In Portugal, the projects case study is the campus 2 of the Polytechnic Institute of Leiria which encompasses the Technology and Management School and the School of Health School.



Figure 1 – Location of then Campus2 of the Polytechnic Institute of Leiria



This university campus is characterized by a massive car use, which has severe impacts on the environment, economics and of public space management and quite

frequently, with high congestion levels. This important of traffic generator has about 5851 persons, including faculty, staff and students in daily and night courses.

Measures and solutions to increase sustainable mobility in the campus

Considering the current mobility situation in the campus and the economic and environmental costs that this generates there is a real need to reverse this situation through the implementation of various Mobility Management measures. The implementation of strategies that encourage sustainable mobility can lead to benefits not only to users of campuses 2, but also for the city's population since it reduces traffic, therefore contributing to a better environment and health condition. It also has economic benefits.

In general the solutions applied in the campus focus approaches that include the

components of infrastructure, education and awareness components with the following measures:

- Sustainable Mobility Plan;
- Implementation of a system of bike-sharing system (bike);
- Implementation of measures to encourage carpooling – GOTOCAMPUS software
- Promotional campaigns, such as for education campaigning (thematic workshops) and information and awareness campaigns (Mobility Information Point and thematic Events).

Mobility Plan



The Sustainable Mobility Plan applied to the case study starts by identifying the key transport issues in the campus. Afterwards it explores strategies, and implementation methodologies that can be applied to the Campus 2 stating also monitoring measures. It is expected that the Sustainable Mobility Plan will serve as a working tool for future targeted interventions that enhance mobility issues. The Sustainable Mobility Plan was organized according to the following topics:

- Thematic priorities: in order to evaluate in terms of cost-benefits effects the road map of the interventions;
- Partners expectations: the surveys realized during the development of the T.aT. project allowed to evaluate the expectations of key actors and target





groups and the most favourable solutions to be adopted;

- Involvement of key actors, promotion and dissemination: T.aT. experience clearly demonstrates that only through a deep involvement of key actors and through the realization of tailored communication campaigns sustainable mobility interventions will be successful;
- Identification of Action Plan issues;
- Theoretical framework for the development of mobility strategies;
- Intervention zone characterization;
- Review of the state of the art and previous studies documentation: sustainable mobility best practices gathered during T.aT. development will allow to define the fit solutions for the local situation and to compare the Portuguese situation with the other EU experiences;
- Mobility strategies for the Campus 2;
- Evaluation of environmental impacts - scenarios for reducing pollutants.

In resume, the proposals provide guidelines for the increase in the use of environmentally friendly transport modes and for the promotion of low energy intensive means. They also, encourage

carpooling, as a sustainable mobility measure, as well as the use of public transport and the rationalization of the parking access. In order to improve the sustainable mobility culture the plan has proposals to create a structure for mobility management dedicated to the implementation of curricular projects dedicated to sustainable mobility.

The Mobility Plan must first be taken as an instrument of support and encouragement to the IPL management and other agents involved so that they (collectively articulated) think and take part in the territorial and institutional development, guided by the principles of sustainable mobility.

For this plan to achieve success and fulfill its objectives it will be necessary to continue the work already developed by monitoring and evaluating various actions in place. Therefore, it is essential to create a "management entity" that is responsible for articulating the interests and mobility needs of the Campus 2 users. This "management entity" should be responsible by monitoring and implementation of initiatives outlined.

Car-pooling

Car Pooling is a word that represents the concept of "shared use of private cars". A citizen that uses car for daily trips probably is not aware of the fact that other citizens move everyday towards the same destination, along the same route. Car Pooling systems allow you to meet unknown people that have your same daily trips, you can contact them and use the same car. The result is that both the guiders (or more!) save money and fuel and the

environment receive benefits. The carpooling between people with similar schedules and routes is presented as a solution to reduce emissions and save economic resources by reducing the number of vehicles circulating. For these reasons, carpooling should be encouraged and enhanced with the support of communication tools and travel arrangements.

GOTOCAMPUS is the name of the online



software implemented to support the trip organization for the academic community, allowing users to find other campus colleagues (teachers, staff and students), view schedules, travel routes and pick through the profile someone to share the trips, considering the number of seats available in the car (either being a passenger or driver). Users may be anywhere in the country, they only must have a valid email address ensuring to be a member of the Campus 2 (student, teacher or staff).

The main difficulties in the development of GOTOCAMPUS service for the academic community were initially the following:

- Unknown concept. Internal resistance due to lack of knowledge of the benefits of carpooling practice.
- Absence of culture in sharing trips in the car.
- Lack of measures to control the access of cars to the Campus 2.

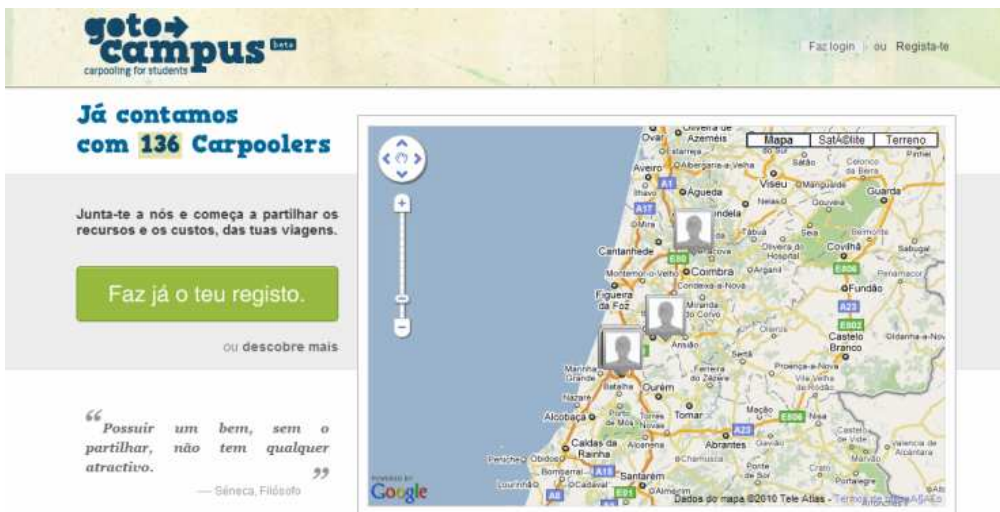


Figure 2 – Carpooling website layout

This web based software also allows users to establish contact via email to help them organize the trip. To access the software a registry is necessary and is only permitted

with an institutional email (ipleiria, estg or esslei). The software is available at: <http://gotocampus2.ipleiria.pt>.





Following a short description of the main steps to join the system:

- In GOTOCAMPUS is possible to know the users of the Campus 2, request or offer rides on trips to school, to work, on business or pleasure.
- The registration in the system is only allowed to members of the Campus 2: educational, non-teaching staff and students through the registration using an institutional e-mail: xxx@estg.ipleiria.pt, xxx@ipleiria.pt or xxx@esslei.ipleiria.pt after acceptance of the terms of use. The personal information is only available to registered members and requires permission by each user.
- The system does not allow viewing the users profile without prior registration and acceptance of the conditions of use.
- The system allows the match of information between the user and other potential carpoolers through its search engine using "residence location" or "username" and also with "possible schedules" for each user.
- After selecting the carpooler with a "desired profile" the system can send an e-mail message to request a ride, establishing the communication between users.

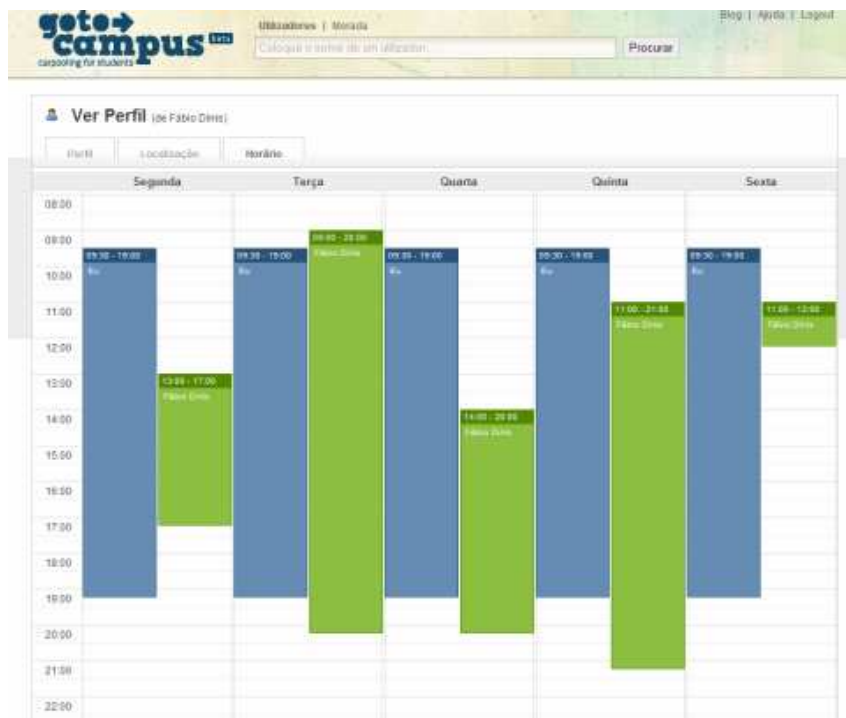


Figure 3 – Scheduling match in the Carpooling software

Bike-Sharing

Bike-sharing also represents a major tool to promote sustainable mobility in urban areas. In the city of Leiria, with the European project T.a.T. a

public bike-sharing system was implemented. It is managed the local City Council and is known as "Biclis" (Bicycle of the Lis city) and is now available at seven



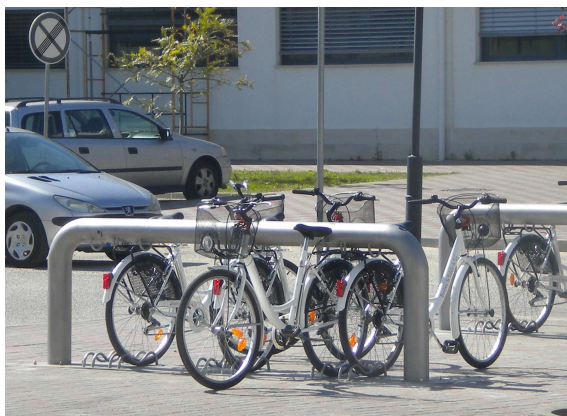
checkpoints (Figure 4).



Figure 4 – Biclis control stations location

The main goals were:

- Cover the city with an ecological and economic transportation service and at the same time promote the local culture, approaching the natural and social space to the citizens of Leiria;
- Ensure a free mobility support to the University Students in their daily movements - Students Today, Citizens Tomorrow;
- Promote an image of the city associated with the use of cycling, where education and citizenship are assumed as important elements and orientations of the local strategic agendas;
- Overcome the cultural resistance to the use of bicycles as practical, cheap, clean and young transportation mode;
- Demonstrate to the academic community, authorities and general population that the use of the bicycle is favorable (economy, health, environment, culture and society) and strengthens the local economy.





The implementation of the Biclis was conducted in two phases, hereunder a short description of both the phases:

Phase I Biclis – implemented from 16 September 2009

The Phase I implementation of the Biclis includes:

- ◆ Total of 50 bicycles;
- ◆ 5 checkpoints (1 - Parking Market St. Anne, 2 - Centre for Environmental Interpretation; 3 - Ludoteca; 4 - Parking Fonte Luminosa, 5 - Stadium - Port 2);
- ◆ mechanical access system with the following elements:
 - Bike: 25 bikes urban model (with 6 gears, basket, port books, chain protector, reflectors and lights) and 25 sports model bikes, for a practical use and pleasure. The

years can use the bicycles although users under 18 require parental consent.

- ◆ Free use.

Phase II Biclis – implemented from 30 March 2010

The Phase II implementation of the Biclis includes:

- ◆ The same 5 checkpoints resulting from Phase I of Biclis;
- ◆ Two more checkpoints with a total of 12 bikes available through an automatic system Student Residences Headquarters and Campus 2. This phase is characterized by:
 - Bikes: urban model (with 6 gears, basket, chain protector, reflectors and lights) with an RFID identification system that allow the



Figure 5 – Inauguration of the Biclis system - Phase I

bikes are equipped with lock and helmet. Children seats are also available by request.

- Parking: At each checkpoint there are bike parking places for up to 10 bicycles.
- Access: To access the bicycle the user must present his Biclis card (given freely when registering in the system). Bicycles may be used daily, and must return at the checkpoint after use.
- ◆ Possible users: resident population, tourists and academic community. In resume everybody with more than 12

user to lock and unlock the bike at the hub.

- Automatic Stations: 12 parking spaces available at each station allowing automatic locking and unlocking by the users 24 hours a day. The automatic system was developed and provided to the Municipality of Leiria and the Polytechnic Institute of Leiria by a local company called Smart Mobility Systems (www.smartmobilitysystems.com). Access to the bicycles is only



allowed after a registration where a user card is provided for use in the automatic system.

- ◆ Members: University population - teachers, staff and students of Campus 2.
- ◆ Free use.

Among the positive aspects resulting from

its implementation, there is the positive image associated with the city of Leiria, providing a totally free service, thus enhancing a brand image of the city of Leiria "environmentally friendly" and the integration of the different publics and in particular the university students.

Promotional Campaigns

The following campaigns were implemented:

- 9 Mobility Information Point (MIP) weeks with mainly travel information. Some of them coincided with other events such as: Days of Carpooling Days (I and II), European Mobility Week, Health Week, Earth Day, Health Day and Energy Day;
- 8 Educational Seminars dedicated to discussion of the following themes: sustainable mobility systems, bike-sharing, carpooling, climate change,

health, public transport and bio-fuels. These seminars had the participation of representatives of the public transport sector, municipalities, private companies and researchers with relevant scientific work on these issues;

- Information campaigns with educational materials (leaflets, posters and advertising panels) radio spots to publicize the T.aT. Project, Biclis. Some materials represented in the following figure.



Conclusions

The T.aT. project was, for the academic community of Leiria, a very important mark since it improved greatly the awareness to the need to adopt environmentally friendly transport modes. The city and the local

public were also greatly benefited since they now have has a free public bike sharing system. Therefore it is natural to say that the T.aT. project was a success having achieved very good results.

CYPRUS

Introduction

Cyprus has one of the biggest rates on the usage of private cars as a main mean of Transportation. This extending usage of the private cards creates severe problems regarding pollution of the air, traffic congestion, parking difficulties, etc. In this respect an urban mobility solution is urgently required which requires the contribution of all the key actors involved in the urban mobility planning. The sustainable development of cities and in extension of Universities depends on a combined set of actions should be aimed both at protecting the natural environment, economic prosperity, social cohesion and celebrating cultural identity. To this end one of the key requirements at all levels of government is to promote sustainable transport systems and adopting a new culture for urban mobility

criteria: environmental (energy efficiency, reduce air pollution and health security, rational use of natural capital), social (ensuring affordable, reliable time, secure and flexible movement in all groups) and economic (priorities in allocation, incentives etc.).

The T.aT. project intends on one side to identify, define and apply energy policy interventions to reduce the energy and environmental impacts related to the mobility in university areas and on the other side to contribute stimulating an energetic - environmental consciousness of the target groups, in order to increase the awareness of the effects derived from the use of traditional transport means and to orient the choices towards more efficient solutions and cleaner mobility models.



Figure 1. University of Cyprus

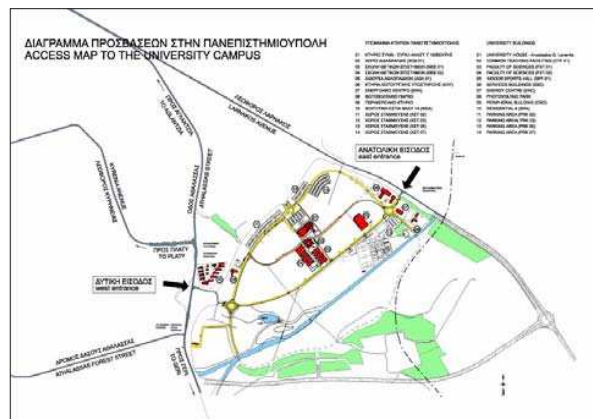


Figure 2. Access to the University Campus

Implementation of a more sustainable mobility plan

The project has been focusing on specific objectives that can be summarizing as: draw-up of mobility plan, imple-

mentation of a car-pooling software and a bike sharing system, realization of promotional campaigns.



Mobility plan

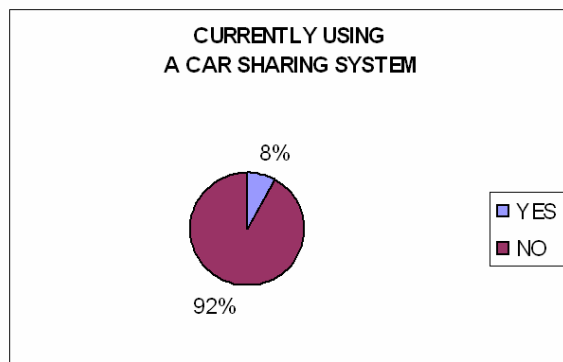
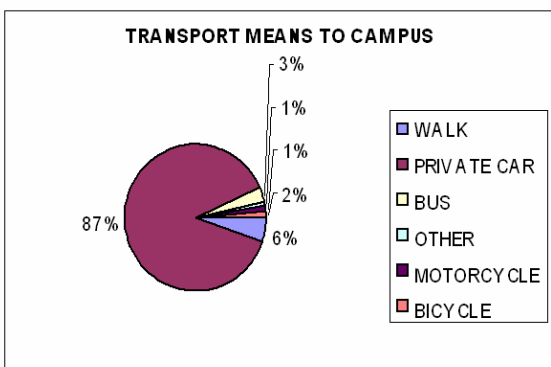
The mobility project for the University of Cyprus is a package of strategies to promote sustainable mobility and alternative forms of transport such as public transportation, bicycles, walking trips with a new approach to the use of private car (carpooling). The design of mobility it also contains many activities and information solutions.

This mobility project combines a number of targets, including reducing car traffic at the university, the development of public transport, reducing pollution and the redistribution of urban spaces.

Key Strategic Directions for Urban Mobility:

- E-learning and Secretarial Services online
- Uniform Land, Urban Transportation Planning and Traffic Management
- Reformation of Renewable Mobility
- Technologies and Measures for Environment
- Effect of bicycle use and increase in private passenger cars pollutant emissions - Results from software TREM

The T.aT. project intended to realize energy policy interventions to reduce the impacts of university mobility and stimulating students to orient the transport choices towards less energy intensive modes.



Results

	CO(Kg)	CO ₂ (Kg)	NO _x (Kg)	PM(g)	SO ₂ (g)	VOC(Kg)	Fuel(Kg)
ACADEMICS	353.149	13720.002	79.323	2.620	2.087	69.546	4497.027
ADMINISTRATIVE	573.155	23444.447	143.875	4.224	3.508	117.457	7584.906
STUDENTS	260.840	9730.257	52.969	1.783	1.488	51.384	3263.226
TOTAL	1187.144	46894.706	276.167	8.628	7.084	238.388	15345.158

Emission

- Car-Pooling Bike sharing Park and Ride
- Strengthening public transport and replacement of traditional media by low environmental impact
- Private car park renewal

Main aims were:

- Introducing measures for mobility management,
- Reduction of CO₂ emissions of 5% Mobility education towards students;



- Growing the awareness about sustainable mobility;
- Growing of the percentage of public transport use;
- Promote the University Mobility Manager;
- Induce the 5% of the students to buy a bicycle;
- Activate new patterns of partnership among target groups;
- Dissemination of best practices.

The most important results were:

- Sharing among partners of a model of mobility analysis and definition of shared indicators;
- Data collection on behaviours and transport modes Implementation of a university car pooling service Implementation of a university bike sharing Innovative university sustainable mobility plans;
- Realization of a process of education on sustainable mobility.

Car-pooling

In Cyprus the carpooling was organized nationwide due to the small size of the island. The main aims linked to the realization of the system were:

- Creating a network of car poolers;
- Reducing the traffic congestion;
- Overcoming the cultural resistances to the implementation of alternative models of transport;
- Overcoming the cultural barriers towards shared use of private vehicles;
- Growing the awareness of target groups about the costs of travel.

Cyprus L.A.C. worked in a very close cooperation in order to realize a simple and user friendly system able to meet the needs of the local university population.

The most important barriers to realize the work can be summarize in the following points:

Technical barriers:

- implementation of a “home made” software, not easy;
- lack of reserved parking area for car poolers that can motivate the use of the system;
- lack of reserved car-poolers road lanes;
- lack of any incentive mechanisms to the

shared use of the private car;

- lack of Google maps for Cyprus.

Cultural barriers:

- Most people over 18 own cars;
- Target groups want to be independent and prefer to travel by car alone;
- Target groups often are not aware of the real costs of travel.

The realization of the complete system lasted for about three months and involved a logo designer that was responsible of ideating and creating the logo of the car pooling; a web master that ideated and created the logo of car pooling and developed the web site; the University of Cyprus that provided the detailed specifications and functionality requirements in order to make the software efficient and user friendly; Stratagem that supported the web master giving the proper information to develop the system.

The carpooling system has been put available on : www.carpoolingcy.com and www.cycarpooling.com, and a link to the T.aT. web site has been realized. In order to join the system, it's necessary a preliminary registration briefly described as follows:



- clicking on register on the menu bar;
- entering personal data (address, age, mail address, etc.);
- entering travel data (driver/passenger, trip home-university, etc.);
- accepting the regulation.

After the registration, the user receives an email in which he is asked to confirm the will to join the system and, after this confirmation, he can insert user and password in the appropriate space. From this moment the user is registered to the car pooling system and it's able to search for travel partners. In particular, it can be flexible in its search; it can specify near points for origin and destination; it can specify near times for departure and return; it can specify keywords for specific requirements, place names, etc.; it can choose to send message to other users when viewing search results.

After the first months of running, some

important results have been found, in particular:

- The car pooling website was advertised on high profile websites;
- Almost 200 users registered within a month;
- Received useful feedback from users. Programmers took note;
- Considering opening up the search feature to non registered users to encourage more people to experiment;
- Google indexed the site immediately without submission. Testimony to the importance of carpooling.



Bike sharing

The initial idea was to implement a bike sharing systems of 50 bicycles and 3 stations. Two of the stations in the University of Nicosia (two campuses) and one in the municipality Aglantzia.

After the information campaigns of the T.aT. project the other Municipalities of the greater Nicosia liked the idea of having a similar bike sharing system. All the involved parties of T.aT. project and the

ther with the Municipalities and the University of Cyprus. Immediately a public tender with 1 million euro budget was announced and the first automated bike sharing system in Cyprus was contracted.

The Nicosia automated bike sharing system aims to:

- promote the bicycle as an alternative transportation and entertainment method as well as a tool for exercise and



Municipalities of greater Nicosia have promoted the idea of having a common BS to the Ministry of Transportation. The Ministry of Transportation adopted the project and co financed the project to-

keeping fit and healthy;

- Improve the role and the opportunities of bike sharing as a valuable instrument to foster clean and energy efficient sustainable modes of mobility in





urban areas;

- Make people to love bicycle and get more into their lives. In a country like Cyprus, where distances are short and the weather is fine, bicycle should be part of everyday life.

the bike. The rental stations should be able to provide on-line Information on the locations where bicycles are available so the user can from a station to be informed about the availability of bicycles in all others.



The implemented bike sharing system will be automated and users need a Visa card or a university student ID. The system will consist of 29 stations, 339 bicycles a web page and a security and surveillance system. The total budget of the system is 1 million euro.

Bicycles:

They are designed to be ridden by a man or woman over 1.5 meter tall. They will be made of steel or aluminum, have three gears and permanent lights. They will also be adjustable without needing tools, and checked daily by technicians.

Stations:

Docking stations will be approximately one kilometer apart. Stations will accept visa card or Student ID card. They will be free for the first two hours, and cost a small fee for the rest of the day and if the bike is not returned the next day, they will be billed for the cost of

Web page:

The system and its functions should be described in detail in website which will be presented to the relevant map all rental stations and the availability of bicycles per station. The system should maintain statistics of traffic and bicycle rental stations.

Security and surveillance system:

Parking areas must have a deterrent, alarm and vandal prove system. Specific to each rental station will be installed two cameras in galvanized metal poles of 2,5 (m) so as to cover the camera position of the second. The cameras should be allowed to take during the day and at night on an image for clear identification of persons close to parking. The images will be stored for at least 72 hours prior to an electronic automatic replacement by a new download. All exposed equipment including CCTV cameras in should bear protection rating IP68.

Promotional campaign

An effective promotional campaign is essential for attracting new users to the public bicycle system and carpooling system, especially when the system is first being launched. The promotional campaign is geared towards citizens of Cyprus which are from 18 to 34 year olds, as this demographic segment is highly mobile and most likely to use the bicycle sharing system when it will be installed and the carpooling software. The main objective of the promotional activity

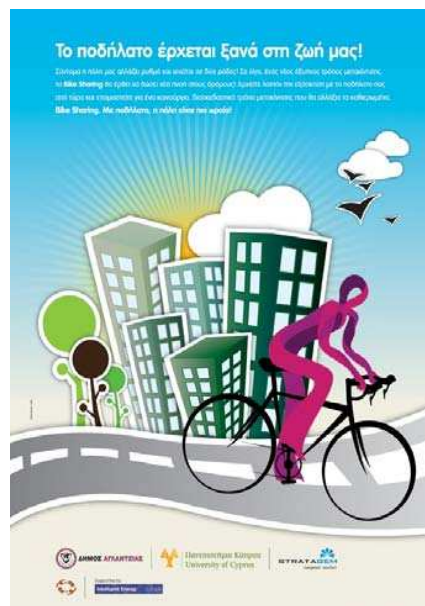


was to inform wide public of the upcoming bike sharing system. Our goals were to ‘tease’ the public and stimulate their need to use the automated bike sharing system. The central theme of the campaign is that the bicycle is coming again in our lives. This was the main slogan in the poster which was encouraging the citizens to practice their bicycle skills as a new, alternative and pleasant way of transportation is coming to town. Other promotional activity were dedicated to increase program awareness and encourage wide public to try carpooling. The theme of the car

pooling promotional campaign was “we can travel together”.

This sentence was used as the main slogan in the poster which was explaining in simple words how the wide public can use carpooling and how they can become members by entering the website of the carpooling in Cyprus.

Both the Bike Sharing and Car Pooling promotional campaigns included a series of actions and tools like: Seminars, setting



of M.I.P. - Mobility Information Point, Posters, Leaflets, Radio Spots on national Radio stations, Bus Stop Rackets, internal advertisements and Outdoor advertisements. Following, you can find a short description of the main actions undertaken within bike sharing and car pooling campaign.

Bike sharing Campaign

In order to support the promotional campaign it has been printed:

- 200 posters A3
- 500 flyers A5
- 800 table tends
- 300 bus station rackets



Cyprian L.A.C. carried out 2 outdoor promotional campaigns in the greater area of Nicosia, specifically the first campaign by having 7 outdoor advertisements in the greater area of Nicosia for the period between 27/03/2010-9/04/2010. The advertisement included bus station rackets publication of the posters and distribution of table tents and flyers; while the second campaign took place in the period between 10/04/2010-23/04/2010 by having 2 outdoor advertisements.

Additionally press advertisements and press publications in local and National newspapers and magazines have been realized:

- Aglantzia Newspaper (local) 3/3/2010
- City Free Press (National) 26/03/2010 and 2/4/2010
- Capuccino Magazine (National) 27/03/2010
- Down Town Magazine (National) 21/03/2010

Time out Magazine (National) 04/2010

All of the above promotional material was also available in the MIP of the University of Cyprus.

Car pooling Campaign

The objective of the promotional campaign was to increase the software awareness and encourage wide public to try carpooling. A variety of promotions were held in communities across Cyprus. In order to support the promotional

campaign it has been printed:

- A4 Posters: 500
- A3 Leaflets: 1000
- Bus Stop: 100 rackets
- Outdoor: 100 rackets

Some radio advertisements have been realized and promoted by radio stations, in particular:

- 2 radio stations – 16 spots
- 2 advertisement 14/3/2010 – 27/3/2010
- 2 advertisement 03/4/2010 – 10/4/2010

Cyprian L.A.C. organized the promotional activity in 2 outdoor promotional campaigns in the greater area of Nicosia & Limassol which are the two larger cities in Cyprus. Specifically they have carried out the first campaign by having 2 outdoor advertisements in the above areas for the period between 14/3/2010 – 27/3/2010. The advertisements included also bus station rackets, publication of the posters, and distribution of flyers. The second campaign took place in the period between 03/4/2010 – 10/4/2010 by having 2 outdoor advertisements. Additionally they have made a radio spot in order to support the carpooling promotional campaign: 16 radio spots in 2 national radio stations for the period between 14/3/2010 - 10/4/2010.

All of the above promotional material was also available in the MIP of the University of Cyprus.



EVALUATION AND RESULTS

Car pooling and bike sharing systems constitute the most important part of T.aT. activity and represent the key work packages of the T.aT. programme.

The following paragraph concerns the evaluation of the results reached in the areas of Chieti (Italy), Leiria (Portugal) and Aglantzia (Cyprus) in the realization of both the activities.

The analysis realized is centred on the comparison of the outputs achieved and on the evaluation of strong and weak points of each intervention in order to define replicable best practices.

Car Pooling

All the partners succeed in realizing a car pooling system in their territory, this is the first good result reached.

The initial idea of the project was to realize a unique software to be customized for each university, but, following many discussions among the partners, everybody agreed to realize three different softwares.

The reasons for this decision can be found in: different national legislation, different “idea of responsibility (or level of commitment)” of the promoting body, different managing systems to be implemented.

Common success elements of the three experiences can be individuated in:

- Realization of simple and very user friendly systems;
- Implementation of successful promotional campaigns;
- General will of the university population to change travel behaviours.

These elements are common to all the

situation and can be considered a good starting point for the realities that want to replicate the initiative.

As regards the weak points of the car pooling systems, it's possible to summarize the following elements:

- Lack of incentive mechanisms for the students or professors that join car pooling;
- Lack of control on vehicle access to parking on campus;
- Scarce availability of the target groups to renounce to personal comforts in favour of sustainable mobility.

All the partners found target groups attention towards the systems implemented, promotional campaigns succeed in the aim of creating a first car poolers network, but everybody found difficulties in motivating them through incentives mechanisms that are difficult to be implemented both by the local authority and by the university.

Stating the previous considerations, in order to have more impact on the territory, it's recommended the ideation of internal (within university – reserved parking areas or discounts on books, university taxes etc.) or external (within the territory around the university – reserved road lanes, discount in highway tolls etc..) incentive mechanisms to be launched with the car pooling system; the realization of simple softwares (user friendly, not complicated) and the implementation of a smart and complete promotional campaign.

Bike Sharing

Results of the bike sharing activity are quite different comparing the three situations, but in all the cases they can be



considered successful.

If we take in consideration the concrete outputs at the end of project activity, Portuguese experience is absolutely the “best practice”.

Setting a permanent fleet of 62 bikes distributed in 7 stations is a great result considering that it was reached in less than 24 months and without a budget already previewed.

Portuguese partners demonstrated that a solid cooperation among key actors has been the main success factor of the activity. T.aT. project allowed to build a shared process of development able to overcome all the technical and administrative barriers.

The only weak point can be considered the fact that the bikes used are common city bikes and not special means (intended as means realized expressly for Bike Sharing), so maintenance will probably be more intensive.

Cyprian partners took the occasion of the T.aT. project to go towards more ambitious aims and they succeed in it.

A fleet of 339 bikes distributed in 29 stations has been co financed by the National Ministry of Transportation, an European tender to realize the system has

been launched with a budget of 1.000.000 Euro and the system will be operating from October 2010.

Networking among municipalities and good capacity of involving national bodies in the project allowed the Cyprian partners to reach great and probably unexpected results.

Italian bike sharing activity had the lower impact on the territory as the system operated only for 2 months, as a sort of test period.

Local partners didn't succeed in overcoming economical barriers related to the implementation of the project and probably the Italian economical crisis didn't help them.

In any case, a smart and intensive promotional campaign stimulated the interest of the target groups towards bike sharing and good results have been obtained despite the short duration of the test period, in terms of: increase of the use of the bike among the students (13% of the surveyed students bought a new bike in the last 12 months) and a general change of mentality in target groups (23% of surveyed students declared to have modified their daily travel behaviours).



SUCCESS STORIES OF T.aT.

HOW TO IMPLEMENT A SUCCESSFUL PROJECT?

Success stories of the T.aT. project can be identified with the “Success Factors” individuated in each country, as the results obtained are strictly connected with local background situations and with the capacities of each local action committee. This is why the three success stories of the T.aT. can be associated to the three countries involved.

Following, a brief description of each story.

PORTUGAL

A strong relationship between mobility actors and local administration as a key of success for mobility projects.

The success of a mobility project is strictly connected with the availability on the territory of infrastructures, services, tools and softwares.

Often it's really difficult to promote strategies of sustainable mobility without the technological and infrastructural instruments.

Thanks to the T.aT. project, the municipality of Leiria, IPL university and the agency for energy ENERDURA, had the occasion to develop a close cooperation for 30 months that allowed to overcome the barriers related to the lack of technical background, lack of mobility plans, lack of infrastructures and above all lack of budget available and carried to the realization of an operative bike sharing system and an operative car pooling system.

BICLIS (bike sharing system) and GOTOCAMPUS (car pooling system) have been realized in less than 15 months, using

the territories of the university and of the municipality, the knowhow of IPL and ENERDURA and the budget of the local administration.

T.aT. project has been able to put the expectations and the exigencies of the target groups to the attention of the local administration and to realize very practical and useful mobility services saving time and money.

The Portuguese experience is a concrete demonstration that a strong relationship between mobility actors and local administration is a key of success for mobility projects.

CYPRUS

Networking and capacity building: essential elements to activate synergies on the territory and to overcome technical and economical barriers.

Cyprus island is characterized by a great use of the car for all the daily trips.

Results obtained from the students survey in work package two showed that more than 90 % of the university population uses the car for the home-university trips.

The necessity to modify this situation and the will to go towards sustainable mobility convinced the municipality of Aglantzia, the university of Cyprus and agency for energy STRATAGEM to join the T.aT. project.

Supplying innovative services and infrastructures and educate the target groups were considered the main issues of T.aT. activity, but Cyprian partners didn't want to realize just “demonstrative tools” or “prototype instruments” for restricted



territorial areas, they thought necessary to realize broad services to be used all over the island.

The necessity to realize a great bike sharing system and a great car pooling service pushed the Cyprian L.A.C. to activate partnership with 6 municipalities (more than Aglantzia) and after several meetings, they decided to constitute a network and to draft a technical/economical BS and CP proposal to link all the cities and to involve citizen of all the territories.

Cyprian L.A.C., in this way, was able to discuss the BS and CP proposal with the National Energy and Environment Minister that decided to finance the plan with 1 million Euro.

Cyprian L.A.C. in January 2010 launched an European tender to realize a bike sharing system with a fleet of more than 350 bikes allocated in 40 stations on the territories of 7 municipalities.

Cyprian experience clearly demonstrates that networking and capacity building sometimes bring to unexpected but successful results.

ITALY

The role of communication and dissemination activities in the implementation of mobility policies.

Statistics reveal that most of the everyday mobility choices are motivated by instinctive decisions not based upon real travel needs.

This is why changing mentality in target groups creating an energetic and environmental conscience means orienteering everyday travel decisions.

Italian L.A.C. worked in hard conditions as the territory of the university of Chieti and Pescara (Ud'A) is characterized by: absence of any infrastructural and

technological elements related to sustainable mobility, very long and complex bureaucratic procedure to start infrastructural interventions; absence of sustainable mobility plans; difficulty in gathering public funds for investments. This is why the Italian L.A.C. concentrated the efforts in realizing innovative and smart communication campaigns able to persuade the target groups to move in a more sustainable way.

Personalized T-shirts, Cd-folders, mouse pads, keyrings and parking disks have been designed and realized and then distributed to students and professors involved in the T.aT. activities: seminars, car pooling, bike sharing test, etc..

Target groups enjoyed very much the gadgets that begin to circulate constantly in the university buildings, this fact brought to the creation of reflection groups about sustainable mobility and brought many people to ask information and read the project reports.

In the province of Chieti, even if the bike sharing system has been available only for two months, it has been found an increase of the use of the bike among the students (13% of the surveyed students bought a new bike in the last 12 months), an increase of the use of the public services (1727 car km saved in the daily home-university trip) and a general change of mentality in target groups (23% of surveyed students declared to have modified their daily travel behaviours). Province of Chieti – *Communication for sustainable motion.*



CONCLUSIONS

The experience of the T.aT. project showed the difficulty in working within sustainable mobility themes for two main reasons:

- Travel behaviours belong to consolidated culture and mentality, it's difficult to act for modifying them;
- Mobility behaviours are strongly influenced by "external factors" like availability of infrastructures and availability of softwares and systems.

It's useless also to underline that none is disposal to renounce to comfort and personal satisfaction in favour of environmental protection and energy saving. So each solution of sustainable mobility should assure the same performance level of the traditional transport.

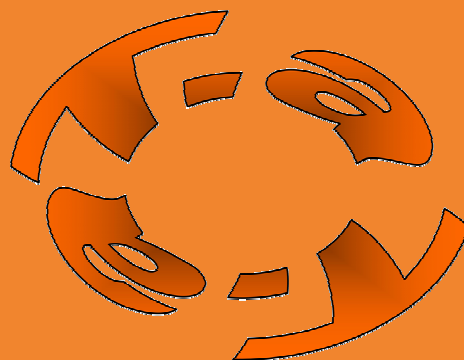
Following the conclusion of the T.aT. project, the main conclusions can be hereunder summarized:

- A strong cooperation among local key actors involved in sustainable mobility is a fundamental preliminary background condition to develop any sustainable mobility policy. It allows to speed up the administrative

procedures, to gather funds and to find shared technical solutions that find the acceptance of the target groups. Bottom-up approach assures the success of the initiative;

- Communication and dissemination activities are functional elements to the development of sustainable mobility policies. Only implementing smart, intelligent and attractive communication tools, you'll be able to stimulate the interest of the target groups, and results in terms of CO₂ reduction and fuel saved will be reached even in absence of infrastructures;
- Students are the citizen of tomorrow. This was the slogan at the beginning of the project and it also represents the basic idea of T.aT. project: educate the students today to have better citizen tomorrow. T.aT. project succeed in orienteering the travel behaviours of the university population and probably the students will be more conscious during their life of citizen as regards the mobility choices.





Provincia di Chieti



Agenzia Regionale Per Energia ed Alta Efficienza Energetica



Município de Leiria
Câmara Municipal



IPL
Instituto Português de
Inteligência Artificial
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management consulting

