



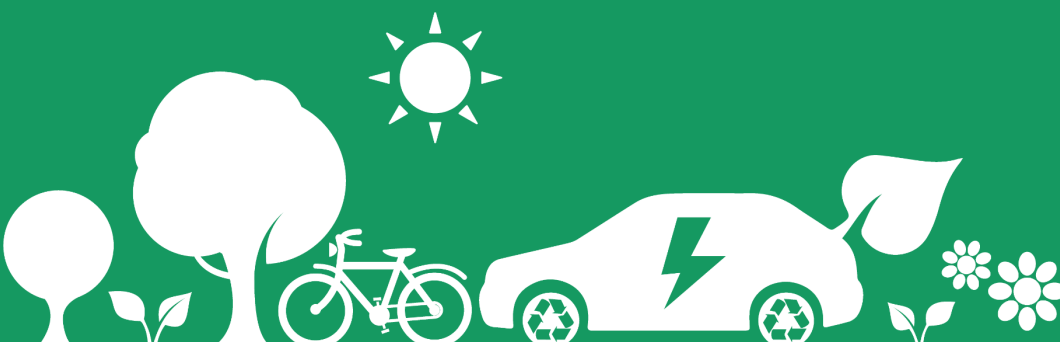
1st European Conference on Sustainable Mobility at Universities
Barcelona, 8-10 March 2017

Development of Sustainable Urban Mobility Plans in University Campuses in MED countries

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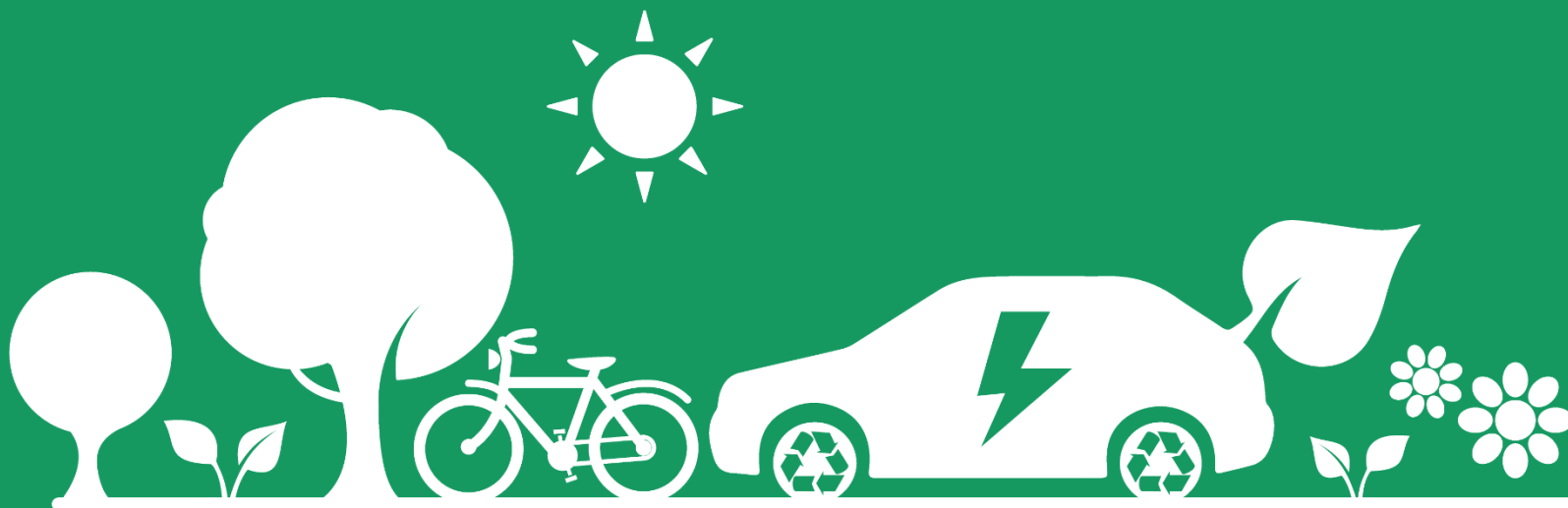


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Introduction

- **University Campus in MED Area**, with a territorial average extension of 430.000 m² and an average of 35.000 between students and employees, are historically related with their urban area since they are always close to city center than built in the suburbs
- As a result, each University Campus is similar to an **urban model** and in most cases could be used as a test area for mobility policies and tools
- In MED countries, contrarily to North Europe, there is a **lack** of use of **sustainable mobility modes** and intermodality for university students even in case of favorable conditions: temperate climate, orography, possible implementation of dedicated infrastructure



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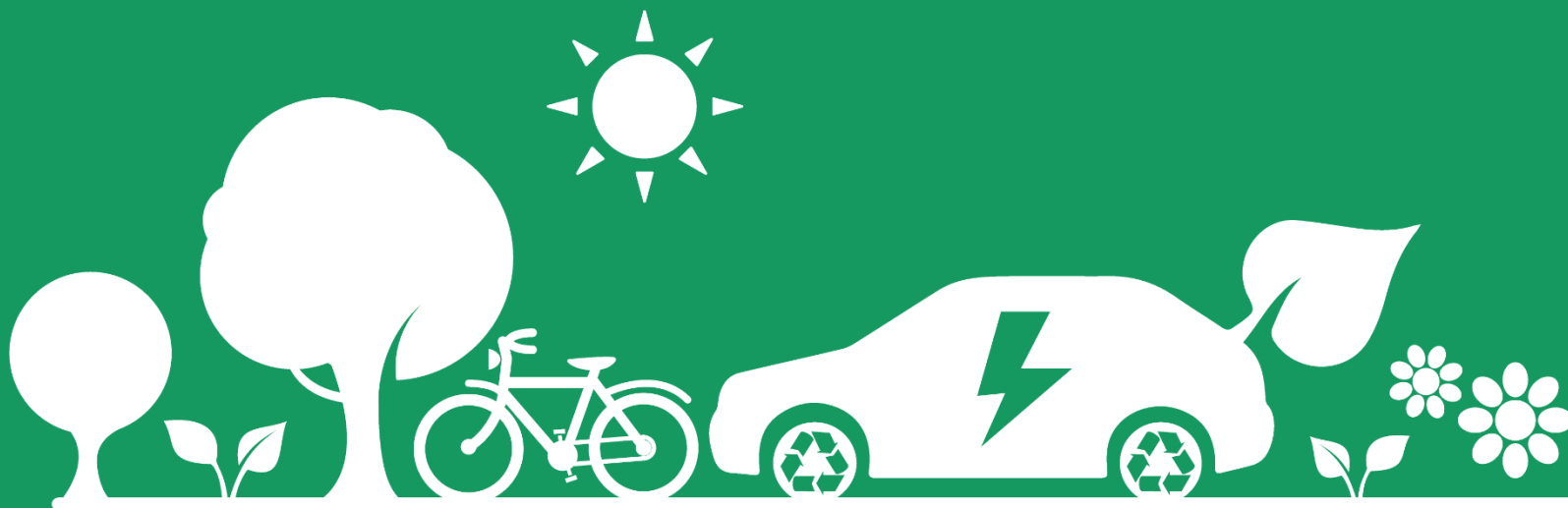
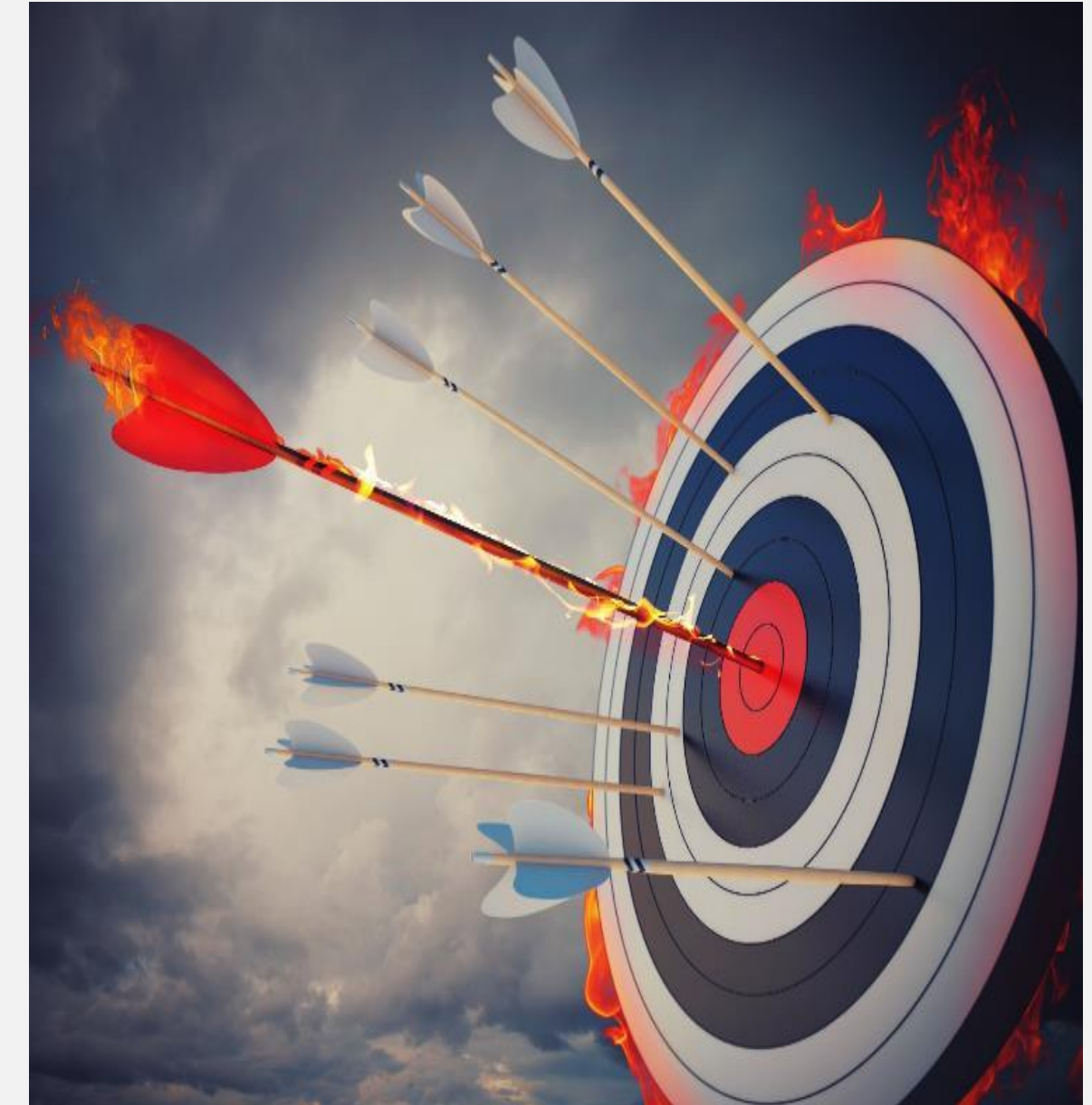
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Objective

The CAMP-sUmp project **aims** to improve a sustainable urban planning instruments as SUMP (Sustainable Urban Mobility Planning) through innovative mobility strategy for students flows inside the MED University Campus and their interconnection and integration with the urban area

Objectives

- Increase awareness of decision makers about current mobility in university area and its interconnection with mobility planning
- Improve capacity of public administration on sustainable mobility planning in University Campus
- Improve the management of mobility of University and city in a unique integrated planning



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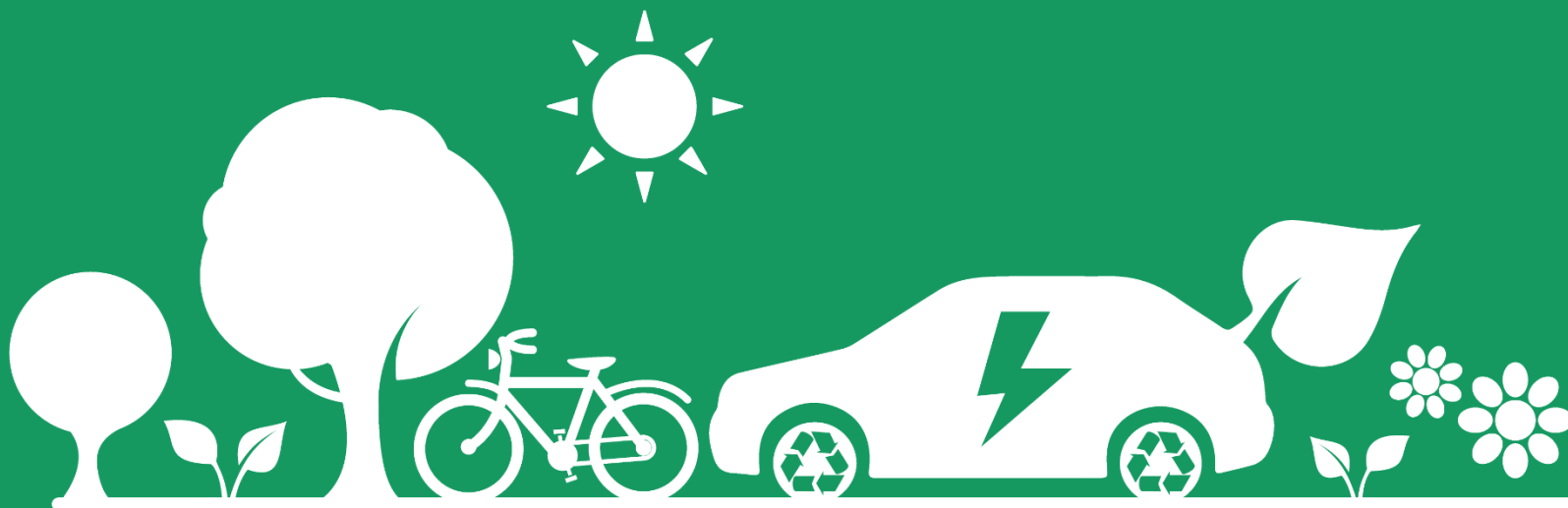
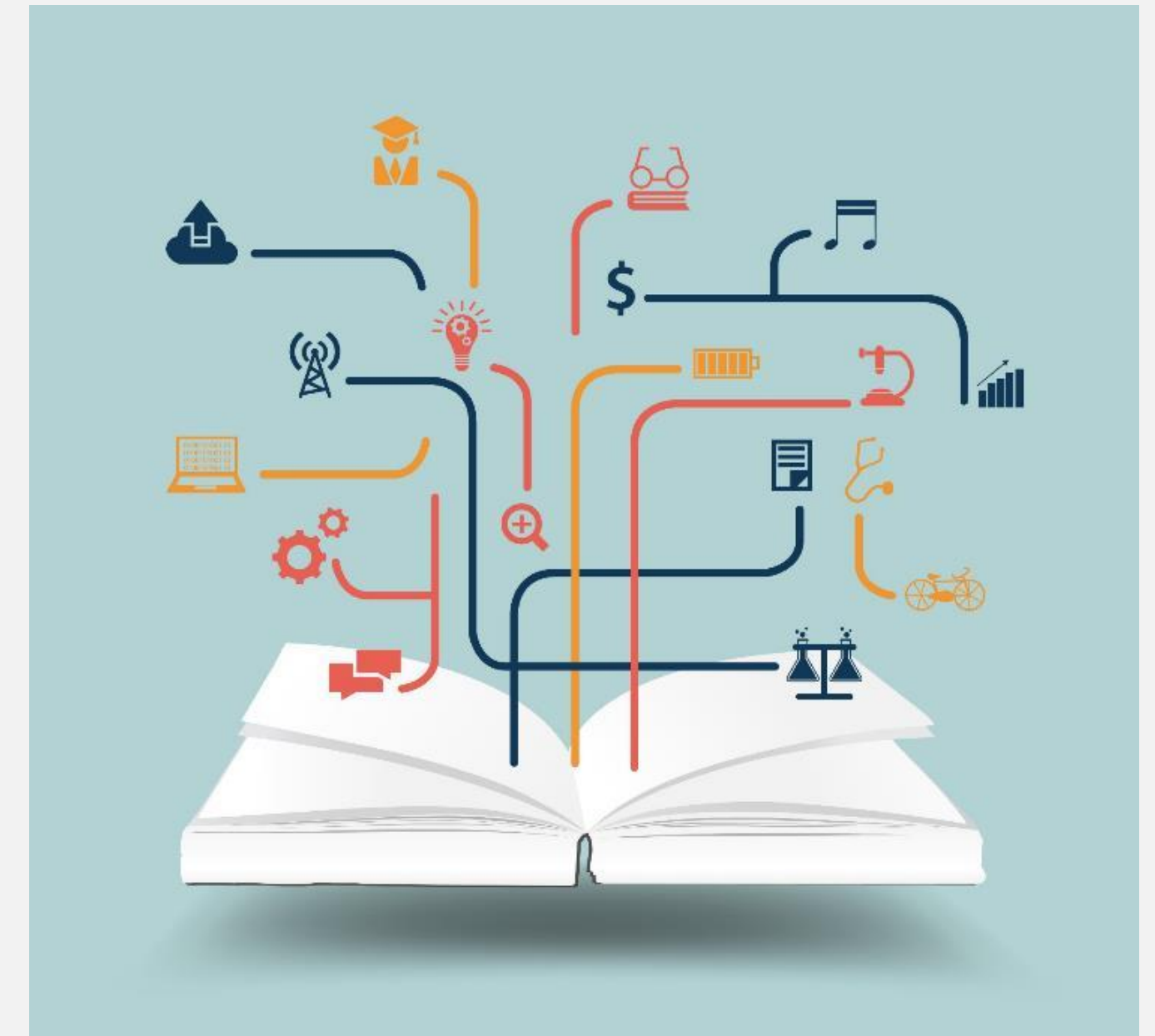


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Methodology

- Each project partner will analyze its framework site in order to obtain a defined **state of art of data, policies** and planning **instruments** with regard to mobility to/from/inside the Campus and its integration with urban mobility
- A transnational **action plan** for university sustainable mobility plan will be drawn and implemented including
 - a **road map** for decision makers
 - an **ICT model** for management and interaction



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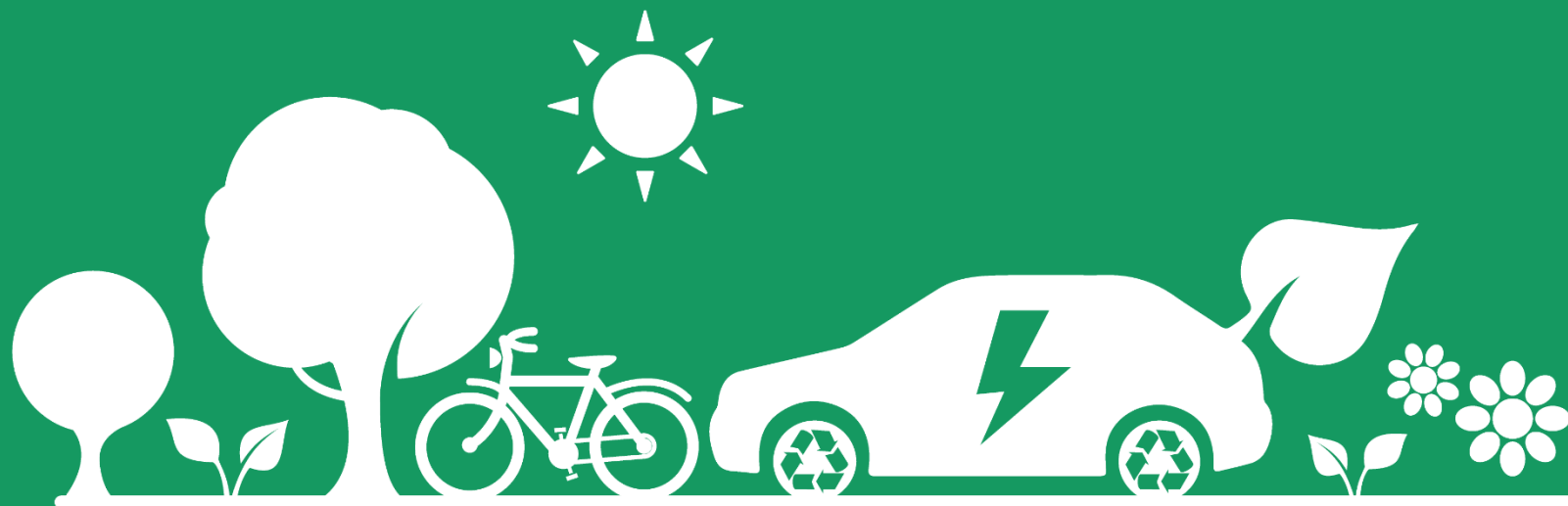
Partners / Duration

Partners

- Magna Graecia Foundation Catanzaro University - **Coordinator**
- National Technical University of Athens
- University of Split, Faculty of Civil Engineering, Architecture and Geodesy
- University of Valencia
- University of Malta
- Alma Mater Studiorum - University of Bologna

Duration

- Starting date: 1/11/2016
- Ending date: 30/4/2018



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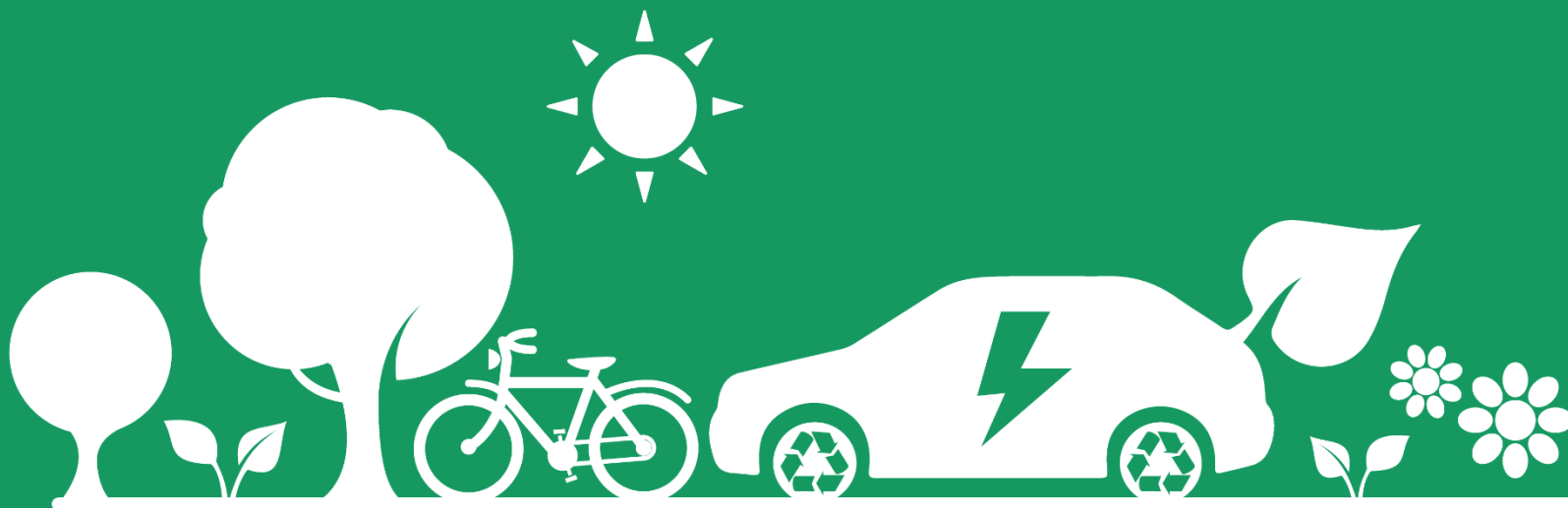
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Data collection

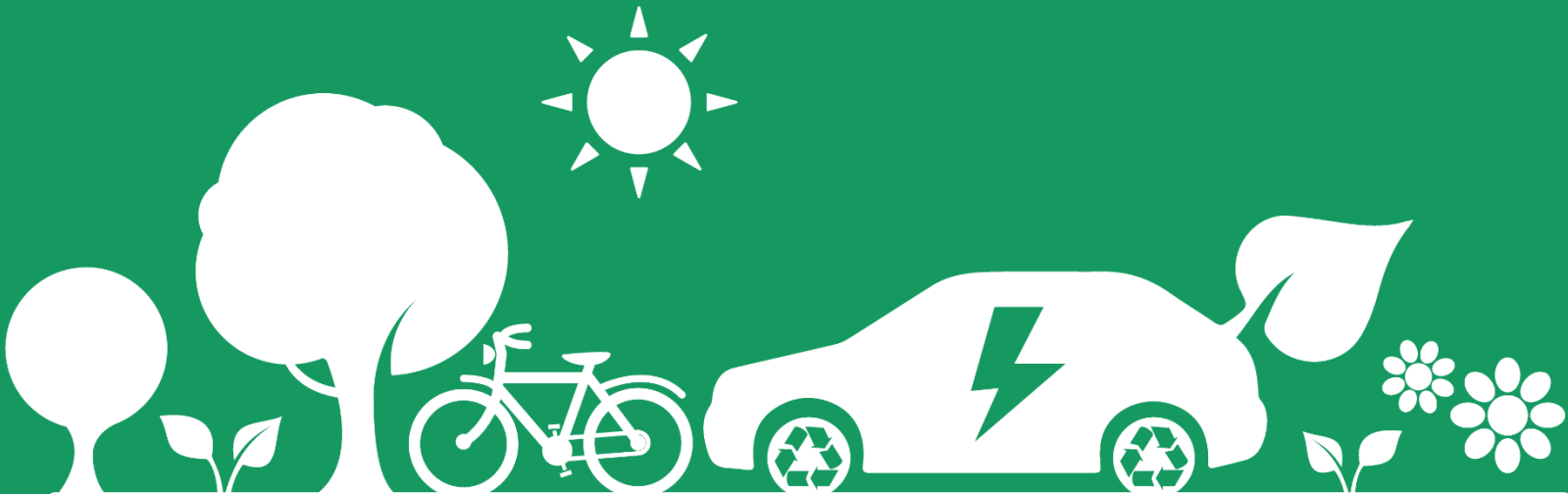
- Local and transnational **data, policies** and planning **instruments** for analysis on students mobility flows to/from and inside Campus and its integration with urban mobility
- **List of services** of students mobility related to urban services and policies
- **Questionnaires**
- **Interviews**



Data collection – Campus mobility situation

- Partners’ campus mobility data, policies and planning instruments to/from/inside the Campus, as well as the campus integration with urban mobility haven been collected regarding:
- Stakeholders
- Current mobility situation
- Mobility practices

Table 1: Brainstorming on University Campus Mobility Practices (policies/tools)																			
	Name	Description	Aim	Links to city mobility system	Strategic Framework (choose list- one or more)	Activities conducted	Indicators used	ICT or other tools involved	Estimated Cost	Financing	Date issued	Current status	Main Stakeholders	Most Affected Stakeholder	Problems faced	Solutions introduced	Success	Reasons for fail/success	
1	National Technical University of Athens	Carpooling	A car pooling system only for the members of the university campus, with predefined pick up locations	none	efficient car use, intermodality	framework design, methodology developed, initiate special cards and the rules, pilot study, implementation,	no indicator, no monitoring/evaluation system	Pick up cards	below 1000€ (only for the card system)	-	2011	ceased	all members of university	all members of university	lack of information and car poolers	none so far	low	lack of ICT solutions, monitoring system	
2	National Technical University of Athens	Traffic calming	Full road network coverage and full operational	none	Pedestrian mobility, cycling	Road network (16 km) Bicycles network (3.8 km) Pedestrian network (6,2km)	no indicator, no monitoring/evaluation system	na	-	-	2000	Developed	all members of university	all members of university	none so far	none so far	High	-	
3	University of Malta	Car Pooling	Car pooling service through Burnall mobile application for UM students	Transport Malta allows 3+ people in a vehicle to use bus lanes	Collaboration between univer	Allocating a small parking area of 50 spaces reserved for car pooling vehicles	number of trips, registrations and vehicles parked in	Mobile application for users	N/A	Burnall/KSU	2010	ongoing	UM, Burnall, KSU	Students	Low awareness of the Burnall mobile application	Reserved Parking, Freebies for registered members	Medium	Lack of monitoring by security officers and lack of information to students on how to make use	
4	University of Malta	Vjagg	A Shared Demand Responsive Transport Service – Research Project currently coordinated by the Institute	N/A	Pedestrian Mobility, Cycling	Promoting the mobile app during students activities	number of downloads and trips performed by users	mobile application	EUR26,000	Supported by Vodafone Malta Foundation	2015	ongoing	UM	Students, Staff	Low motivation for use	Publicity	Low	Increased publicity, and possibly introduce rewards for users	
5	University of Malta	Bicycle purchasing scheme	Bicycle purchasing scheme and other cycling related equipment to administrative technical and support	N/A	University management and	Promotion of initiative via emails and during UM activities	number of applications	N/A	N/A	UM	2012	ongoing	UM	Non-academic staff	N/A	N/A	no data	-	
6	University of Malta	Walking Campaign 2016	Walking Campaign aimed for all members of UM to encourage walking	To try and increase walking as a commuting method to and from UM	Collaboration with Ministry for Health to hand on leaflets on walking benefits and to deliver talks to UM staff	Issue call for Walking Ambassadors, Participating in students activities, survey walking infrastructure, trace staff and	Surveys, visual inspections	Mobile application Vjagg	N/A	ICCSD	2016	ongoing	UM	Students	Low participation to activities by students	Increase advertising, disseminating leaflets in students events	Medium	N/A still ongoing	
7	University of Malta	nextbike bike sharing	increase the diffusion and adoption of bike usage for low and medium distance trips	Integration with other localities who have the nextbike installed	Collaboration between univer	Allocating areas on UM campus for bicycle parking	Number of trips performed by bicycles	Mobile application	N/A	N/A	2010	ongoing	UM,nextbike, KSU	All members of staff and students	N/A	N/A	Low	N/A	
8	University of Valencia	WEB UVEG	The University of Valencia wants to include sustainability as a cornerstone of its strategy. To promote	Promote actions derived by mobility study	http://www.uv.es/web/sustainable-campus/en/commitment/	University management and governance, Networking among universities	Indicators of the Mobility and Sustainable												
9	University of Valencia	Mobility and transport Studies of the	Annually survey when students are making the registration to UVEG	Development of monitoring and assessment tools (indicators) of the introduction of sustainability in teaching	http://www.uv.es/web/sustainable-campus/en/commitment/	Data collection													
10	University of Valencia	Survey Mobility studies of the university	Request studies on the displacement of the university community and promote actions derived of the	Get data about community results and implement changes to reduce CO2 emissions. Development of monitoring	http://www.uv.es/web/sustainable-campus/en/commitment/	Awareness and participation	The set of improvement proposals is based on a threefold objective: a) To reduce car trips and increase the use of	Transport systems and services in each campus, potential											
11	University of Valencia	Web UVEG info	Provide tube, bus, train, bicycle options	Promote and increase sustainable options. Awareness of sustainable mobility, electronic survey registration	http://www.uv.es/web/sustainable-campus/en/commitment/	Public transport/ Cycling mobility													
12	University of Valencia	From UVEG Web, with Midea Valencia	Provide sustainable options to go to UVEG and links to public transports - Midea Valencia	Web page to know how to get to UVEG, informing the project - awareness of sustainable mobility	http://www.uv.es/web/sustainable-campus/en/commitment/	Public transport/ Cycling mobility		www.mibivalencia.es/ www.valencia.es/											
13	University of Valencia	UVEG Environment area. How to	Make mobility to UVEG more sustainable. Promoting sustainable awareness within UVEG community.	Development of a best sustainable practices manual aimed at the university community Environment and	http://www.uv.es/web/sustainable-campus/en/commitment/	Collaboration between universities and local stakeholders													
14	University of Valencia	EVOMOBILE	University of Valencia electromobility living lab. It has been designed for the promotion and use of electric	Propose a model of sustainable electric	http://www.uv.es/web/sustainable-campus/en/commitment/	Electric vehicles													
15	University of Valencia	SISTEM Chair	Chair of Innovation and Support the Efficient Management and Sustainability of Urban Mobility	Promote and improve sustainable Mobility	http://www.uv.es/web/sustainable-campus/en/commitment/	Intermodality						ceased/pending/ongoing					Low/medium/high		
16	University of Valencia	Agreement between the University of Valencia and City Council of Valencia	Agreements with City Council and Public Transport Companies (taxes, frequencies, etc.)	Establishing partnerships with public administrations and related entities to promote public transport, ecological	http://www.uv.es/web/sustainable-campus/en/commitment/	Collaboration between universities and local stakeholders													
17	University of Valencia	City Council of Valencia	Promoting and improving facilities and bicycle lanes. Request the City Hall to allow the circulation to the		http://www.uv.es/web/sustainable-campus/en/commitment/	Collaboration between universities and local stakeholders													
18	University of Valencia	Valencia Sharing	City council service to share a car to/from university		http://www.uv.es/web/sustainable-campus/en/commitment/	Efficient car use													
19	University of Valencia	Bicycle parking area security	Increase security and vigilance for bicycle parkings in the UVEG	UVEG Mobility studies conclusions. Provide security for the parking areas of bikes and electric bikes	http://www.uv.es/web/sustainable-campus/en/commitment/	Parking / Cycling mobility													
20	University of Valencia	Promoting sustainable awareness	Promoting sustainable awareness within UVEG community	WEB, social networks, info leaflets to inform and sensitize UVEG members	http://www.uv.es/web/sustainable-campus/en/commitment/	Awareness and participation													
21	University of Valencia	Promotion and improvement Tram	Reduce trip time to/from university by public transports and increase peak time frequencies	Shuttle bus services. To improve the competitiveness and attractiveness of the tram, the first and most important	http://www.uv.es/web/sustainable-campus/en/commitment/	Public transport	Initiate conversations with public transports authorities												
22	University of Valencia	Valencia stations	Management of stations and Valencia bikes at peak hours	Management bikes fleet and check in real time the available bikes or stations. Request additional Services of Valencia	http://www.uv.es/web/sustainable-campus/en/commitment/	Collaboration between universities and local stakeholders													
23	University of Valencia	Promote the use of bike and electric bike	Provide electric bikes and electric cars to PAS, PDI, security staff	Install canopies with photovoltaic panels and wind turbines, with capacity for 16 electric bicycles on campus. Provide	http://www.uv.es/web/sustainable-campus/en/commitment/	Cycling mobility/ Electric vehicles													
24	University of Valencia	Benefits	Benefits to sustainable mobility members (free parking, discounts in UVEG services)	Give parking preference to users who share their vehicles	http://www.uv.es/web/sustainable-campus/en/commitment/	Awareness and participation													
25	University of Valencia	App	Create an app to share car among UVEG users. Give parking preference to users who share their vehicles	Platform where users share real time info, can enter information - news dissemination portal and related issues	http://www.uv.es/web/sustainable-campus/en/commitment/	Efficient car use													
26	University of Valencia	External funding	Search external funding to make real sustainable mobility		http://www.uv.es/web/sustainable-campus/en/commitment/														
27	University of Valencia	Transport APP-S	Public bicycle system in Valencia: Midea and Valencia public bicycle system, Metro Valencia and CMT	Promote public transport. Health promotion while promote bicycle system, parking Valencia traffic	http://www.uv.es/web/sustainable-campus/en/commitment/	Public transport/ Cycling mobility													
28	University of Bologna	Discounted public transportation	More than 2000 annual ticket for train and local bus granted at low prices to university staff (students, professors,	Foster the adoption of public transportation from/to campus for medium-long distance	Agreement with the local transportation authority and the municipality to offer discounted tickets	Collaboration between universities and local stakeholder	Promotion of the pricing policy through academic channels, ticket vending machine inside the university building	Number of ticket sold	RFD card for public vehicle access and easy to recharge	€ 650.000 per year	University budget	not available (since years)	ongoing	Local authorities, university mobility manager, public	Students, professors, technical and administrative staff	Low awareness and reputation of the project	Targeted advertisement	Medium	Low reputation of public transportation between younger
29	University of Bologna	Car sharing	Discounted car sharing service for university staff offered for public transportation authority	Reduce the number of car from/to campus and inside the city center	Partnership with the local transportation authority to offer discounted rates for university staff	Collaboration between universities and local stakeholder. Parking. Efficient	Promotion of the discounted rate through academic channels and traditional marketing channels	Number of trip per year purchased by university staff	Low ICT solution to access the parked cars	Not available	University budget	not available (since years)	ongoing	Local authorities, university mobility manager, public	Students, professors, technical and administrative staff	Low ICT solutions to access the cars	Free parking and entrance in and to the city center	Low	Difficult access to the service, low reputation
30	University of Bologna	Alma bike	Increase the diffusion and adoption of bike usage for low and medium distance trip	Decrease the traffic congestion from/to the campus, reduce the average travel time, limit the environmental impact of	Integration with the brand new highway for bike around the city center	Collaboration between universities and local stakeholders. Cycling	Opening of a bike parking close to the railway station with related cultural activity call for the design and development of a	Not already defined	Several infrastructures (road, buildings)	Not available	University budget	2010	ongoing	Local authorities, university mobility manager, public	Students, professors, technical and administrative staff	Lack of a community for university bike users	Development of a new bike concept distinguished by the	not applicable	not applicable



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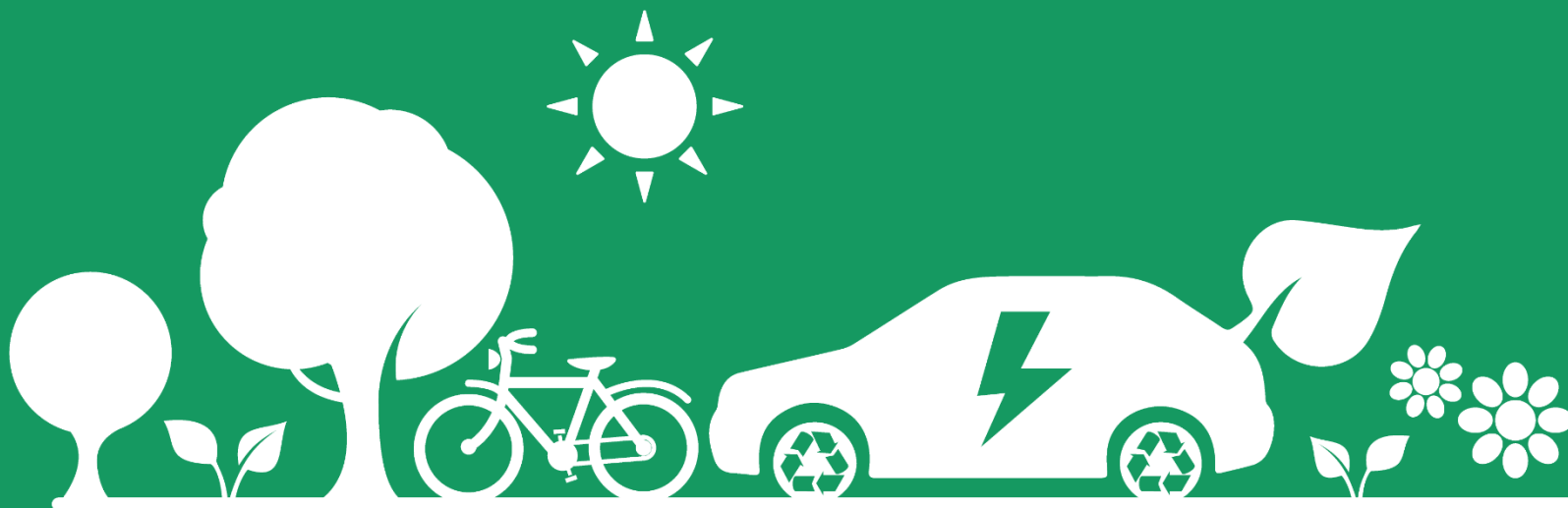
Data collection – Questionnaires

Structure

- Current mobility
- Desired mobility
- Mobility problems
- Proposed measures/policies/tools
- Participant information

Sample

- At least 100 participants per Campus
 - 10% Academic/Faculty
 - 20% Administrative staff
 - 50% Undergraduate students
 - 20% Postgraduate students



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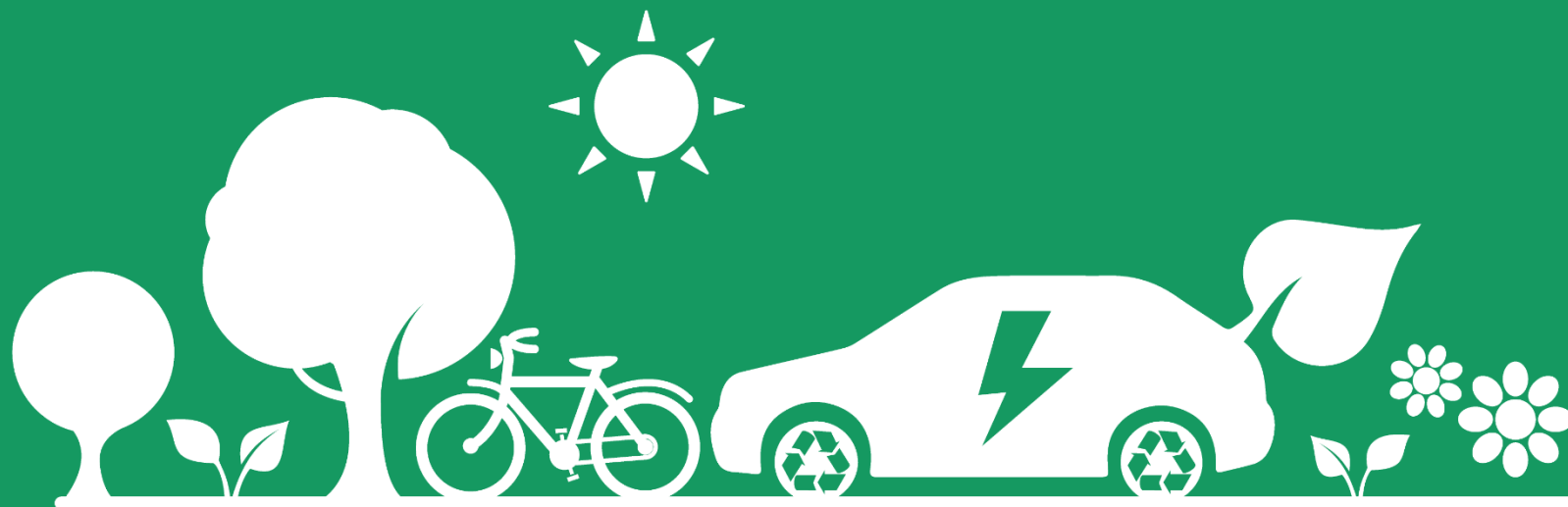
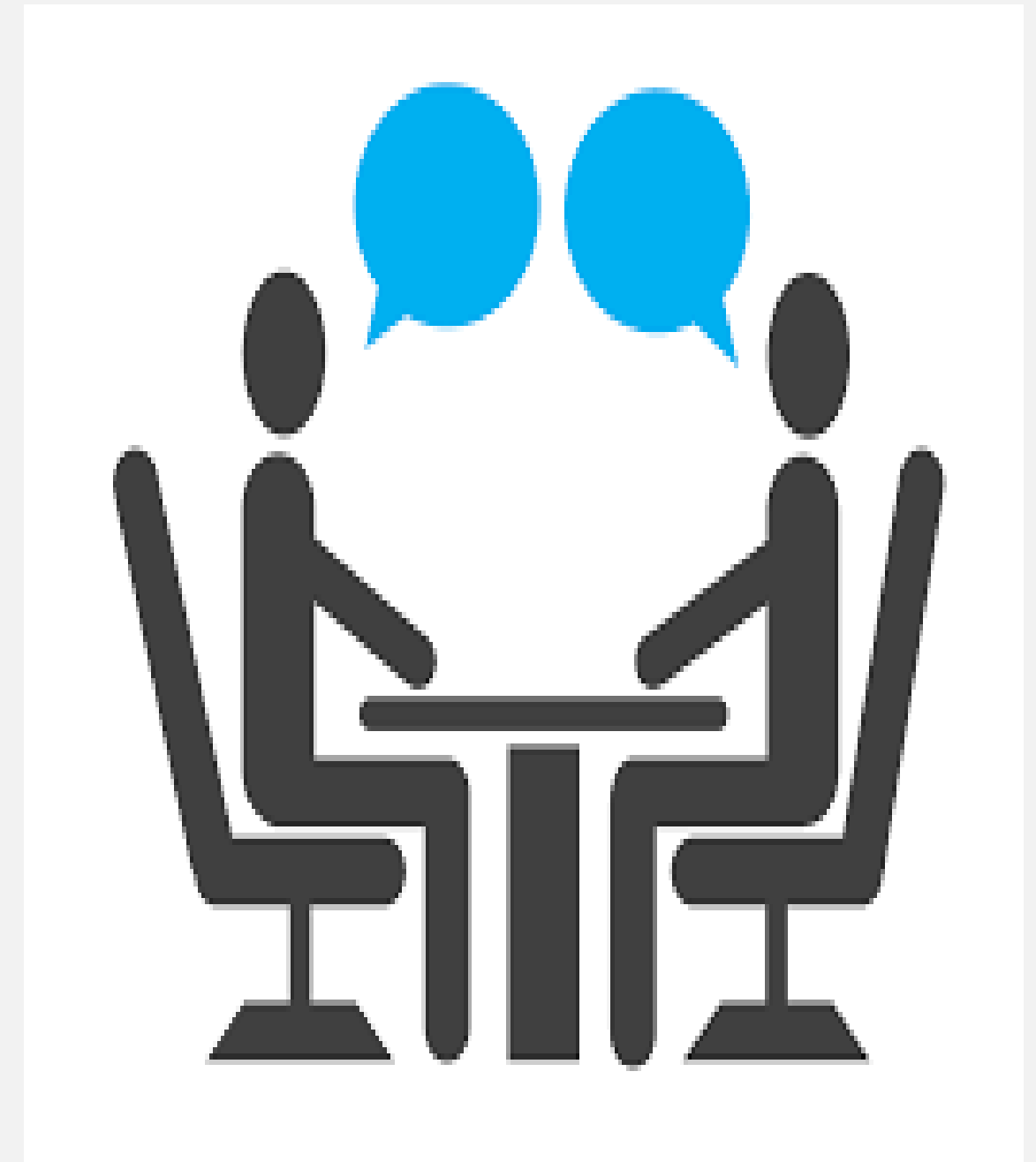
Data collection – Interviews

Structure

- Current mobility situation
- Needs, future plans and priorities
- Strengths, Weaknesses, Opportunities and Threats

Thematic Areas

- Parking management
- Soft modes Infrastructure
- Public transport
- Car related issues
- Road infrastructure
- Environment and energy
- Mobility management
- Freight Infrastructure and Management
- Information and communications technology (ICT) tools
- Sustainable Urban Mobility Plans (SUMP)



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Framework analysis

SWOT and GAP analysis

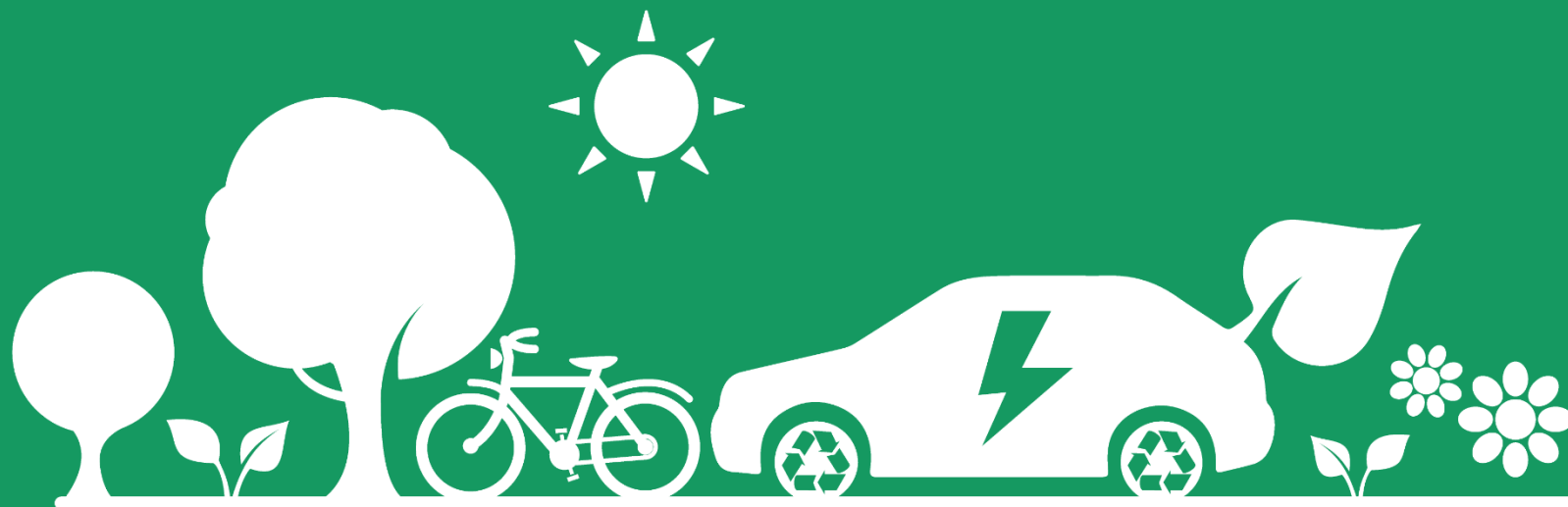
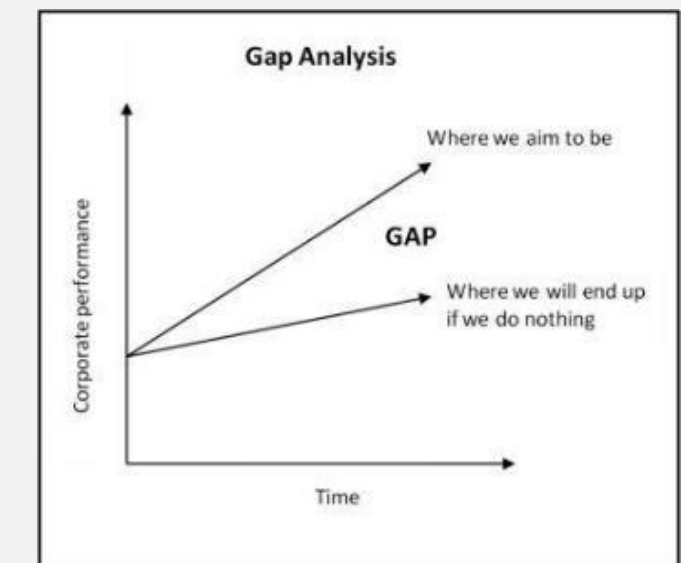
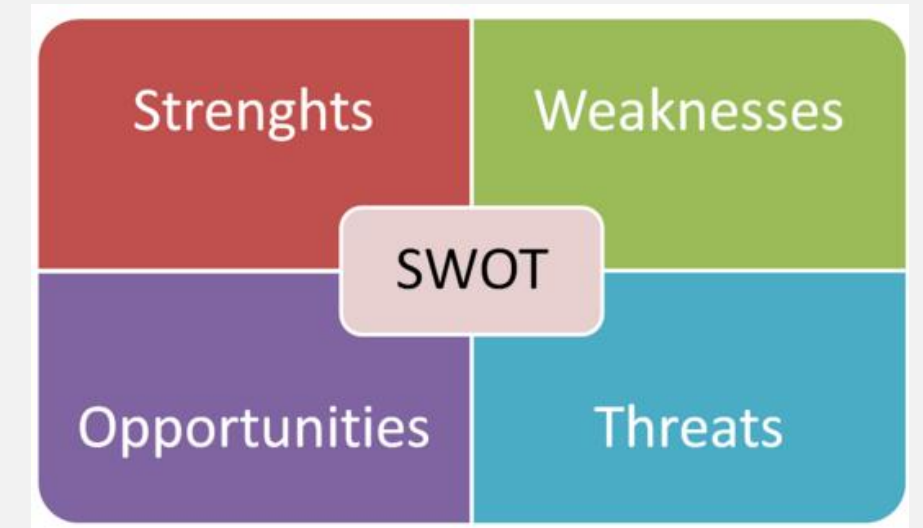
- Investigate campus locations, current transport modes (private or public), ICT services and mobility services

SWOT Analysis

- Analyze weakness & strengths of mobility current situation in campus and related urban area
- Identify opportunities & threats of sustainable mobility planning instruments (SUMP) applied to existing Campus mobility planning
- Analysis will include mobility needs and expectations with participatory approach, exploiting new technologies instruments (web, apps, university's online radio, etc.)

Gap Analysis

- Provide a list of effective sustainable mobility instruments and policies to be used for solution of critical congestion



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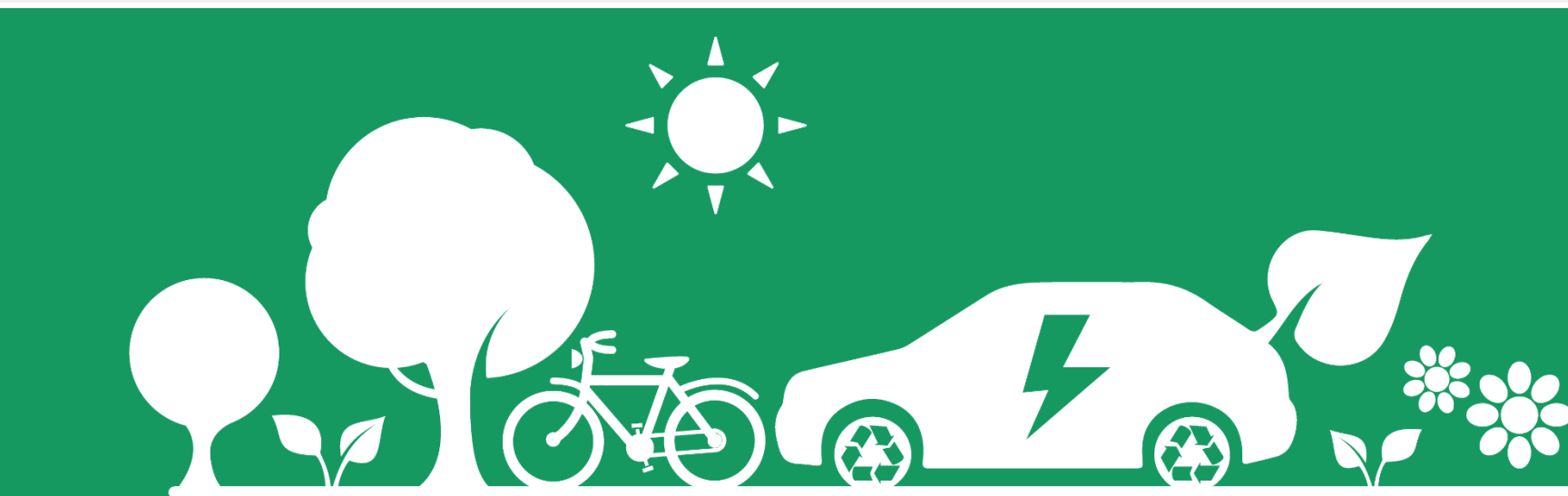
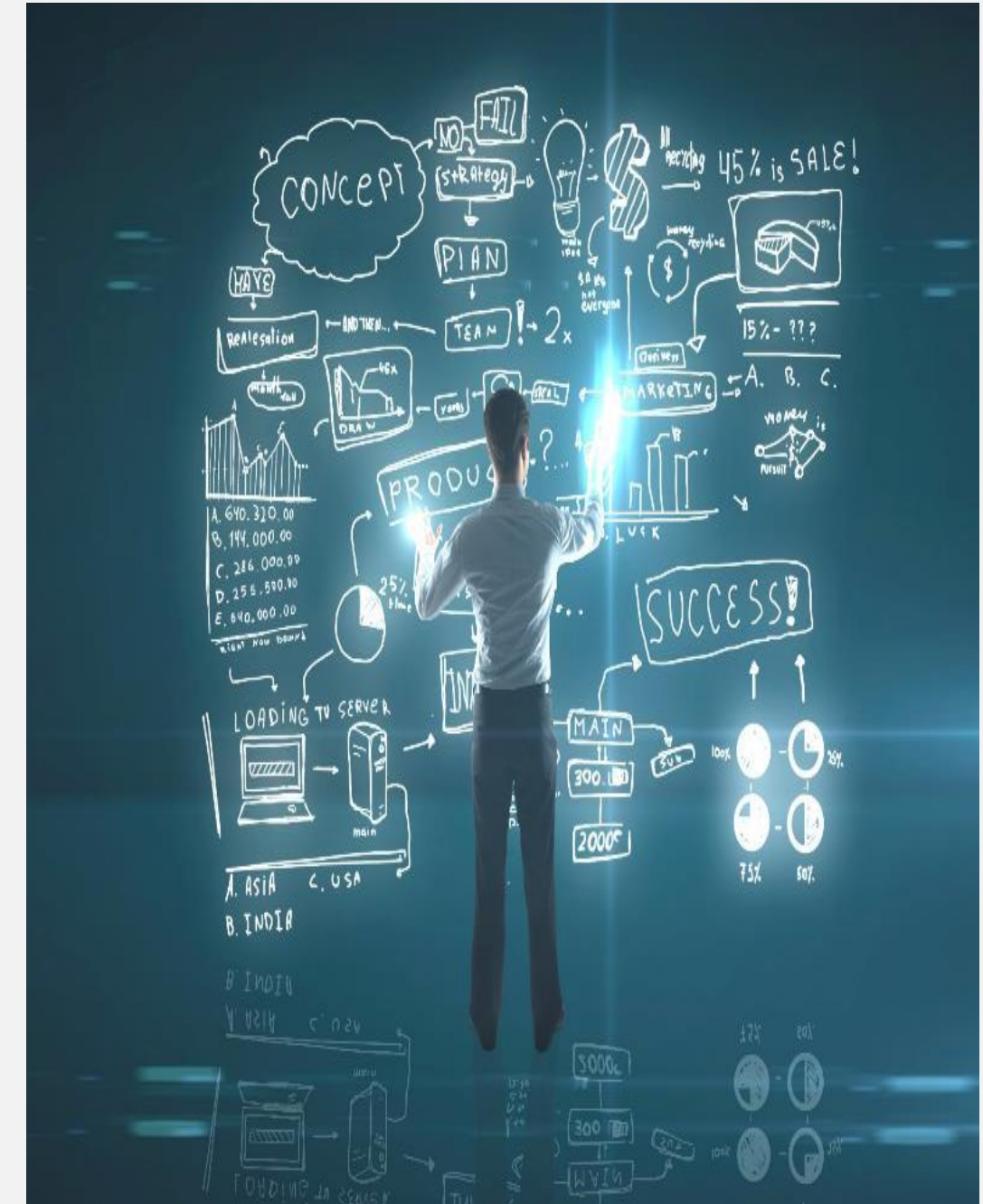
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Action Plan

The transnational **Action Plan** for sumps will:

- take into consideration the differences between MED areas and capitalize partners' experience on sustainable urban mobility, planning instruments and exchange of good practices
- be based on the cooperation between universities and local authorities
- be In line with EU guidelines
- contribute to application of sustainable mobility planning instruments for the management of mobility flows at university campus level
- include technical, organizational solutions and tools
- include a monitoring system
- be transferable across EU countries and in MED area



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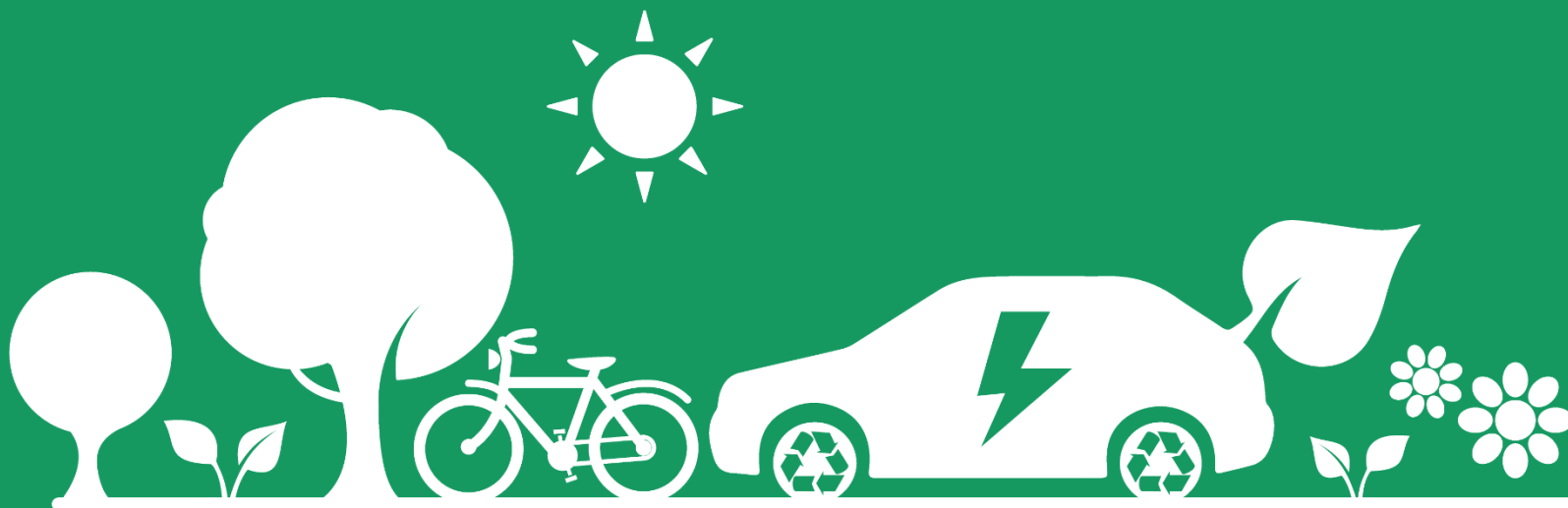
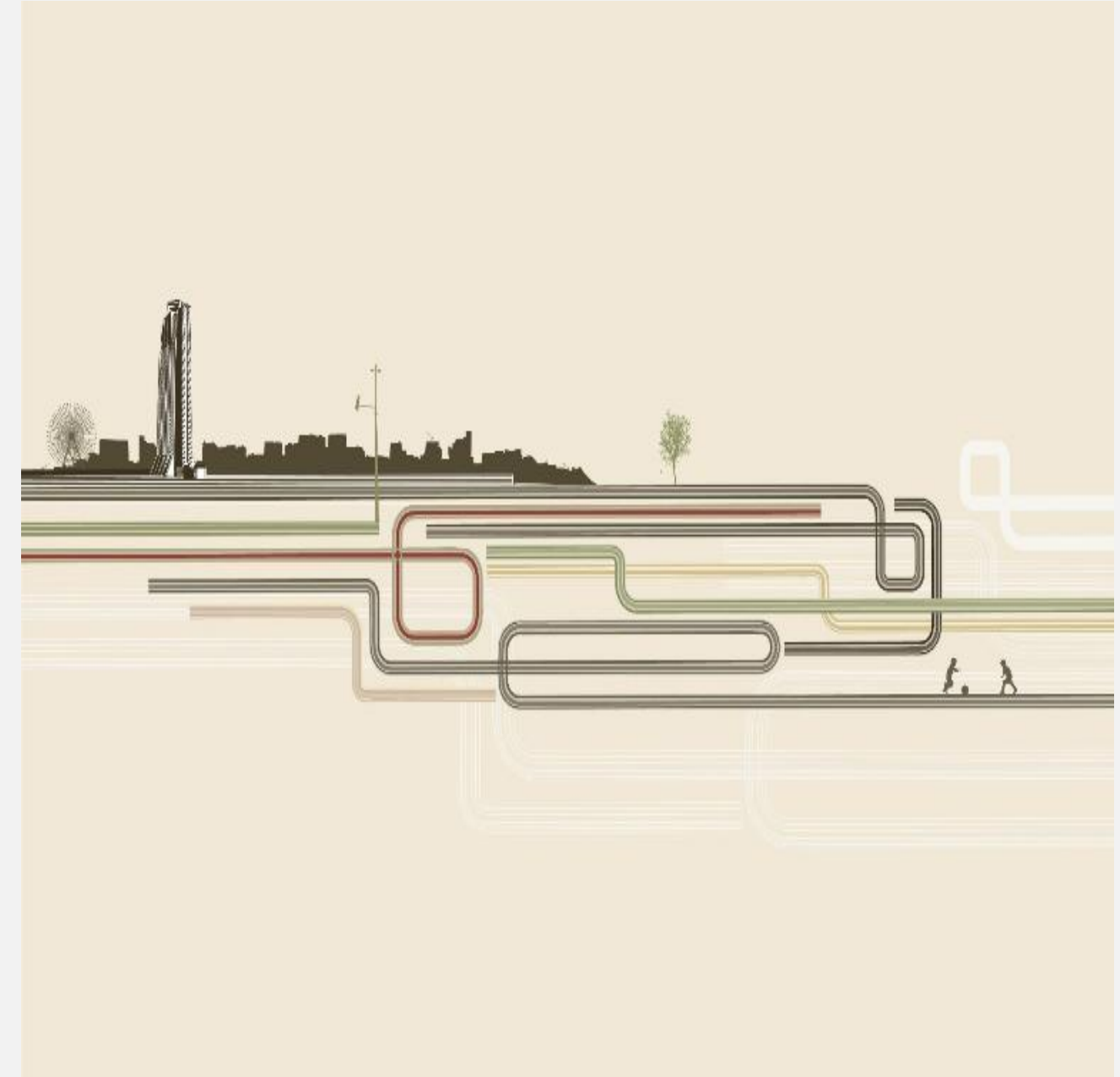


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Roadmap model for sustainable university mobility plans

- Elaboration and sharing of a **road map** for implementation of the action plan to ensure commitment of decision makers, consistency and social, economic and environmental sustainability
- The proposed road map model will:
 - describe **steps** and **tools**
 - ensure **commitment** for decision makers, consistency and viability of the action plan implementation in term of social, economic and environmental sustainability
 - **improve capacities** of public administration on sustainable mobility planning in university campus



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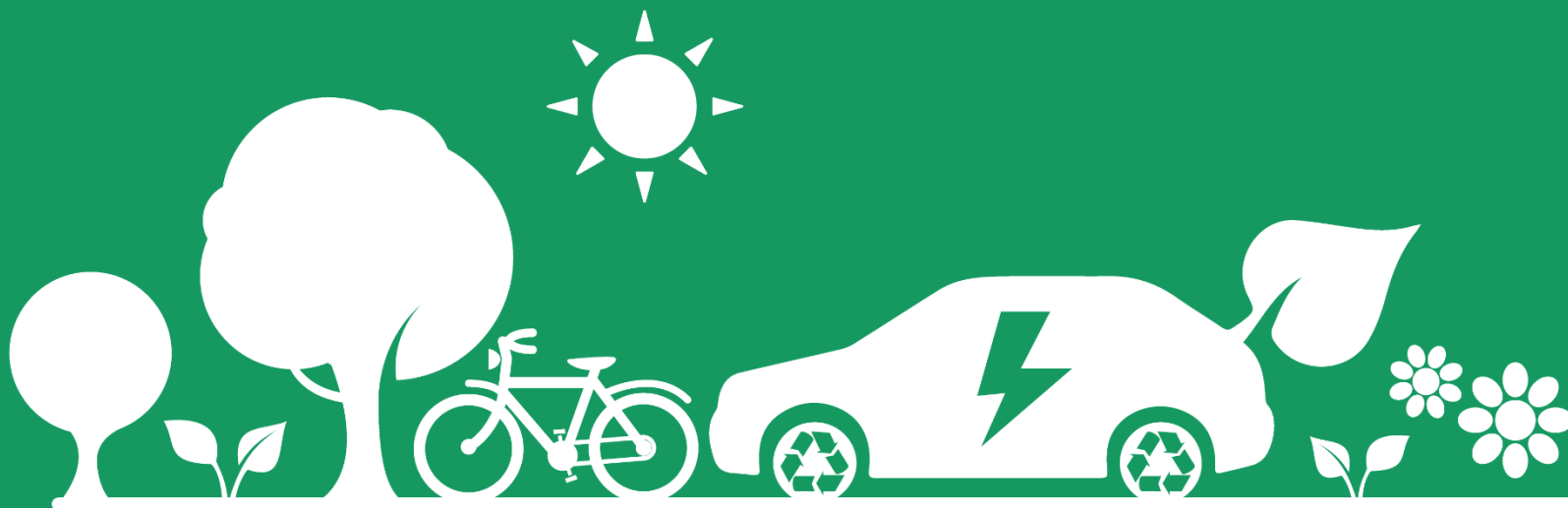


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ICT instrument model

- The ICT model will include a **mobility data-warehouse**, decision support system (DSS), with real-time interfacing to the external databases available, and will enable
 - synergy planning
 - management
 - monitoring
- Existing **ICT** for students mobility management will be mapped
- Analysis of technical requirements and of institutional settings for an integrated ICT **platform model** will be performed
- Obtain new **communication model** for university campus mobility, its management and monitoring



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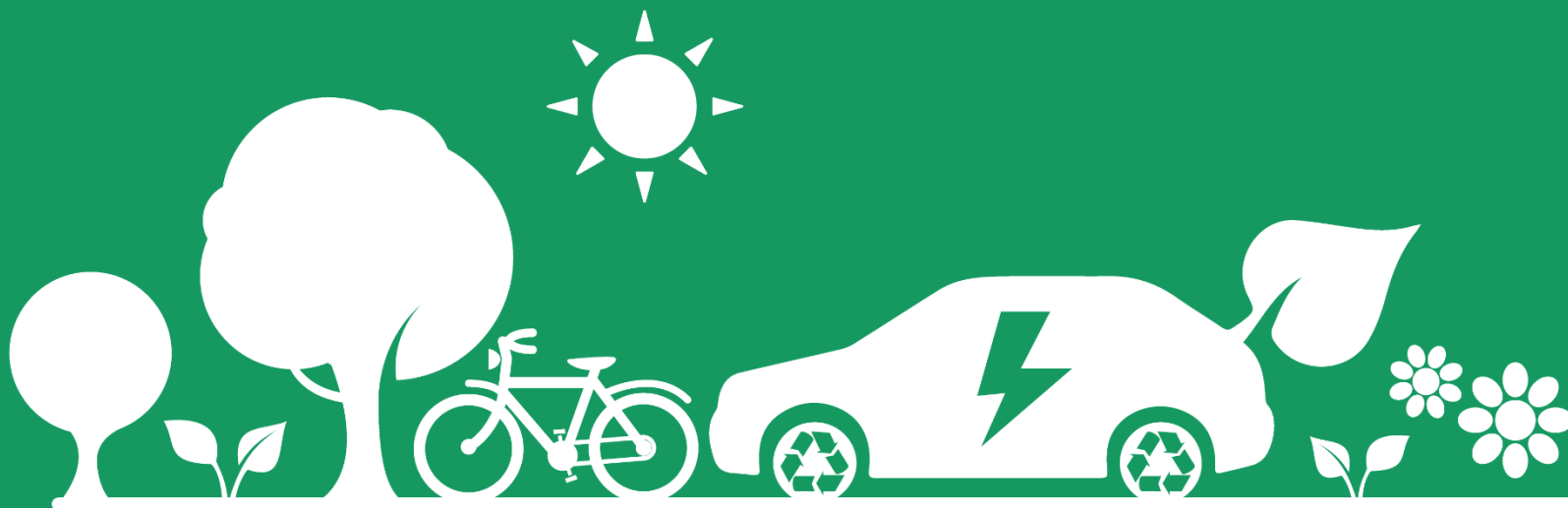


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Conclusions

- The project starts from the capitalization of each MED **partner experience** on students mobility flows and on SUMP's and measures
- The **innovative approach** will apply multi-criteria methods, evaluation of alternatives, ICT solutions (ITS and DSS System), transnational and local most effective policies and instruments of sustainable mobility
- These **solutions** will also reduce the congestion of urban city and will improve the quality of air and life in MED area
- CampSump project is a great **opportunity** for Campuses in MED countries to develop a new urban mobility plan



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Feedback

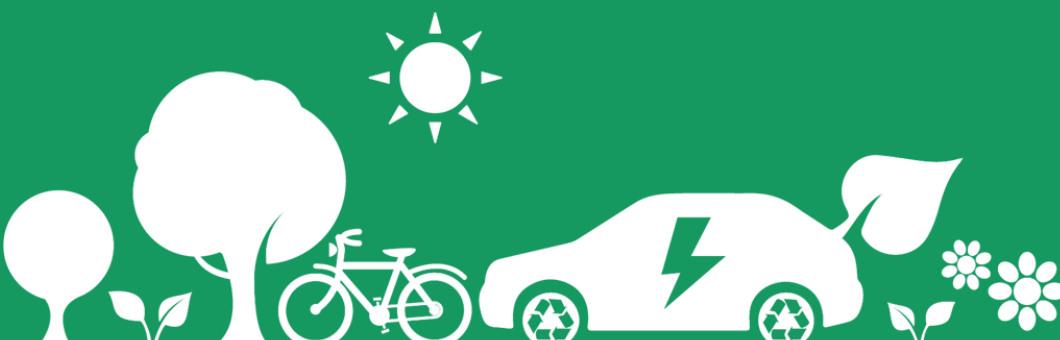
We would appreciate your interest in the project and feel free to ask us during the conference for any related question.

One of CAMP-sUmp activities is to mail our outputs to **24000 contacts**, so we have to start collecting email contacts.

If you are interested contact us:

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eva.campos@uv.es

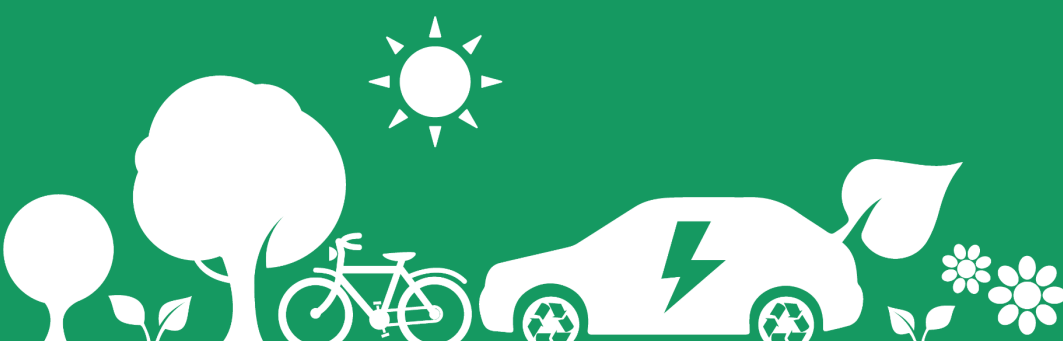




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Barcelona, 8-10 March 2017