

MOTIVATE

Promoting citizens' active involvement in the development of Sustainable Travel Plans in Med Cities with Seasonal Demand

Pilot activities management and coordination plan

Document Control Record

MOTIVATE TYPE/No/Title	Doc.	D3.1.1/ / Pilot activities management and coordination plan
WP		WP3: Testing
Date/Version		29/03/2017 / v.1.0
Diffusion Level		Consortium (confidential)
Document Responsible		HIT/CERTH
Contributors		ALL

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1. Introduction

1.1 The idea of MOTIVATE project

The concept of Sustainable Urban Mobility Plans has been officially set out by the European Commission in 2013 with the Urban Mobility Package, COM(2013) 913, “Together towards competitive and resource-efficient urban mobility” and although different aspects of urban mobility management and plans development have been studied in depth by many European projects and initiatives (e.g. ELTISplus, CIVITAS MODERN, CIVITAS ELAN, CIVITAS MIMOSA, Poly-SUMP, CH4LLENGE, ADVANCE), SUMP’s adoption rate in European and especially MED cities is notable low.

The thorough study of the widely known “Planning cycle for a sustainable urban mobility plan”, as presented in the most recent document for SUMP, the Guidelines “Developing and implementing a Sustainable Urban Mobility Plan” (result of an expert consultation process organised within the service contract of ELTISplus for the European Commission), concluded in the identification of potential ambiguities that hinder the implementation of the plans and triggered the idea of MOTIVATE project development. The project focuses on one of these aspects requiring further deepening, this of **the active involvement of citizens in the development and implementation of SUMP**s.

More specifically, the project aims to strengthen the knowledge of local authorities in newly emerged practices and tools that will facilitate and encourage the active **participatory approach** of SUMP’s development. For MOTIVATE Project, the key to transform travellers into **active users** and contributors of urban plans is MOTIVATE’s platform; a composition of web services offering the chance to travelers (both citizens and tourists) to become integral parts of policy making procedure while facilitating the daunting task of data collection and idea/views/opinions capturing which are prerequisites for developing a successful SUMP.

From the 32 related activities of SUMP’s cycle, the output of MOTIVATE project will facilitate and enhance the context of SUMP’s step No2.3, 3, 4, 5, 8, 9.3 and 10.2 as presented in Table 1.

Table 1: Core contribution of MOTIVATE’s outputs in SUMP’s activities

Operational skills (required for particular Activities)	Related Element/ Activity
Stakeholder and citizen involvement	Activity 2.4 Plan stakeholder and citizen involvement
	Step 4. Develop a common vision
	Activity 9.3 Create ownership of the plan
	Activity 10.2 Inform and engage citizens (measure implementation)
Development, monitoring and evaluation of indicators	Step 3. Analyse the mobility situation and develop scenarios
	Step 5. Set priorities and measurable targets
	Step 8. Build monitoring and evaluation into the plan
Data collection and analysis	Step 3. Analyse the mobility situation and develop options
	Step 8. Build monitoring and assessment into the plan
Modelling and scenario development	Activity 3.2 Develop scenarios
	Activity 2.3 Plan stakeholder and citizen involvement
Information and public relations, Marketing	Step 4. Develop a common vision and engage citizens
	Activity 9.3 Create ownership of the plan
	Activity 10.2 Inform and engage citizens (measure implementation)

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The MOTIVATE platform, embedding the services presented in the following figure into a game logic, will support part of the abovementioned activities.

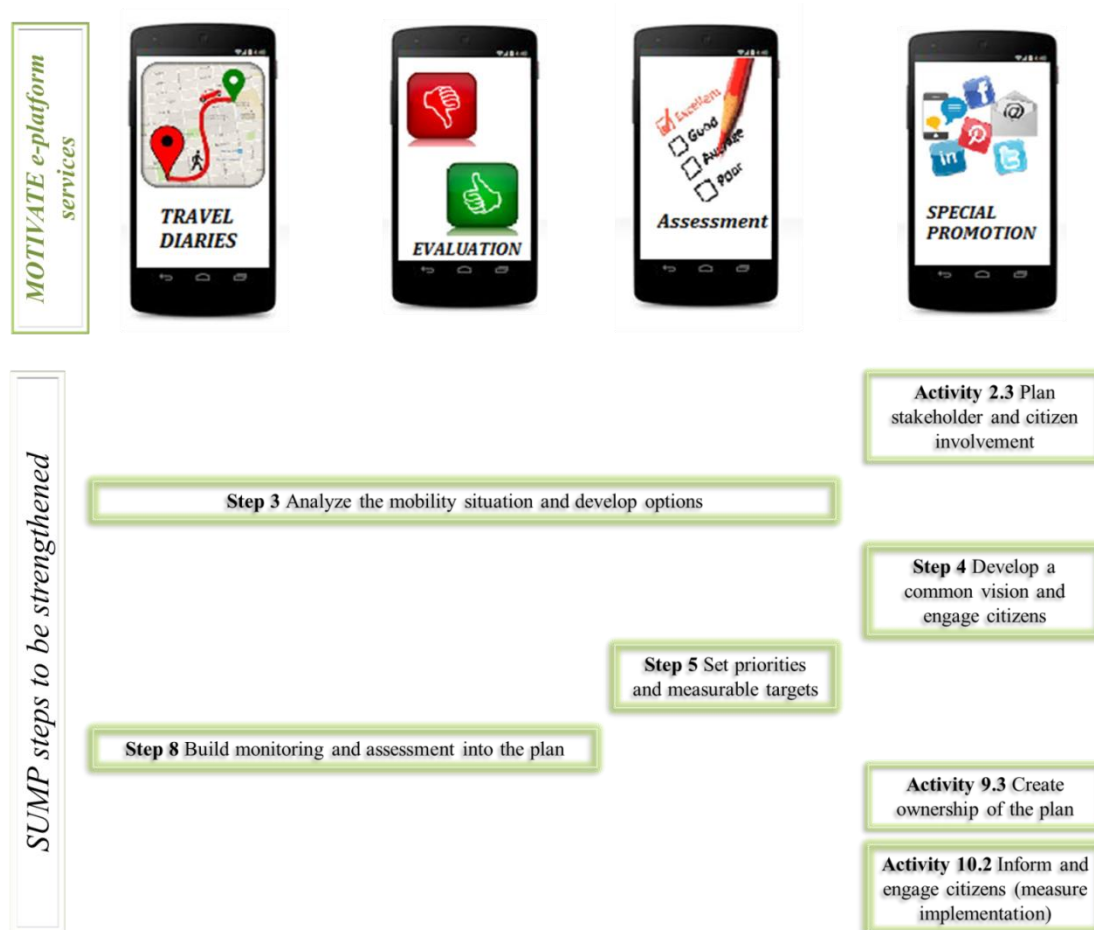


Figure 1: MOTIVATE Platform services and their contribution in SUMP development

The main objective of the project is to highlight the power of crowdsourcing and gamification techniques at citizens' engagement in the whole progress of SUMP development, creating in this way, a broad public ownership feeling of the urban planning while being simultaneously a valuable and highly cost-effective (for local authorities) data source for daily mobility patterns and operation in the cities.

The benefits and the opportunities of enabling ICT solutions for active citizens' participation will be presented to the local authorities through innovative training techniques; the project asks for the formulation of a network of local authorities in MED cities that being assisted by external expert groups will initiate discussions of the challenges related to sustainable planning via the use of social media and crowdsourcing techniques both in data collection and in actual implementation of measures proposed directly by the citizens. Thereafter, through experiential learning techniques, local authorities will realize those benefits; the pilot cities will test crowdsourcing and gamification tools and the evidence-based results will open the ground for the other cities to follow the paradigms.

1.2 The project study area

MOTIVATE partnership is built on strongly interconnected values and goals; the goal of entering in the new era of governing with citizens and the goal of setting sustainability in the top of travelers' concerns. Fueled by web and social media applications this participatory approach for mobility projects give community members a strong voice in city's decision-making processes while providing them the ground to decide for the share of budgetary allocations in future investments.

MOTIVATE's partnership to test the effectiveness of the abovementioned approach is composed of 6 pilot cities (one represented by its Public Transport Operator –**Tiemme SPA** – and one by its development agency) – one of them acting as leader (**ALMADA**), one consulting firm **MemEx**, one research institute in the field of transport **HIT/CERTH** and one energy agency **Aegean Energy & Environment Agency**.

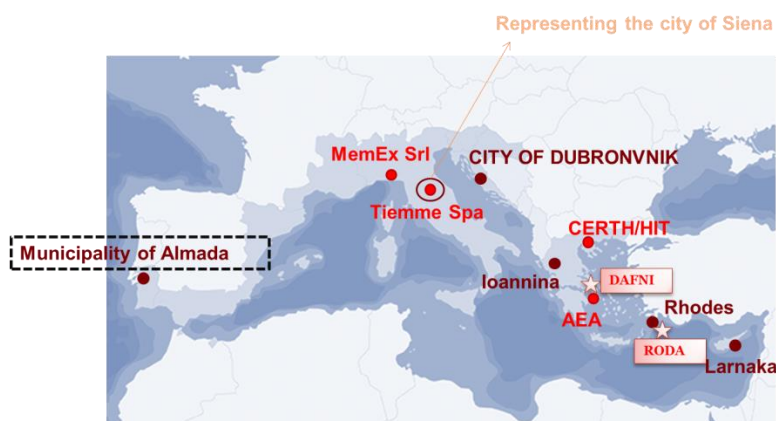


Figure 2: MOTIVATE partnership

Supporting bodies of MOTIVATE project, in the form of associated partners, are a municipal transport company that services the city of Rhodes **RODA** and the Network of Sustainable Greek Islands – **DAFNI**.

1.3 The “Testing” Work Package (WP3)

The objective of the Work Package 3 “**Testing**” is to test in practice the power of crowdsourcing techniques in data and information collection necessary for SUMP development. The WP is structured as follows:

- Starting from the current activity 3.1 “**Pilot activities management and Coordination**”, a realistic time plan, the means and resources that are needed for the pilot cases execution, the involved partners and third parties' role are described
- In activity 3.2 “**Pilot activities preparation**” one of the most crucial project's

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outputs will be developed, the MOTIVATE platform along with the completion of necessary preparatory actions for the core testing period in the cases of Rhodes and Ioannina

- The 6 pilots will take place in Activities 3.3-3.8 and finally
- **“Pilot activities evaluation”** will be conducted in Activity 3.9

As apparent, the innovation of the project, lying in the foundation of active communities strongly supported by the citizens, is supposed to take place in WP3.

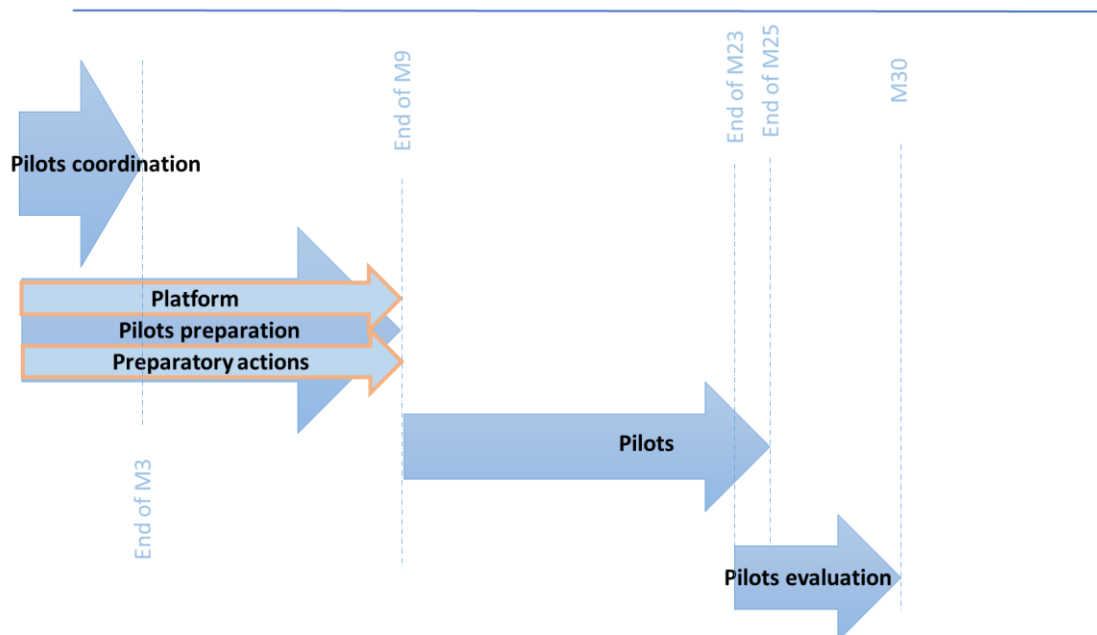


Figure 3: WP3 timeplan

The figure above briefly presents the activities and respective deadlines in WP3.

1.4 Scope of 3.1 “Pilot activities management and coordination plan”

According to the Application Form (AF), the content of activity 3.1 on pilots’ management and coordination refers to:

“Initially, a common methodology for all the demonstration cases will be implemented. The description of every pilot will be formulated together with a realistic time plan, the means and resources that are needed for its execution will be described, the involved partners and third parties role will be specified as well as the methodology for data collection and analysis. The need for specific applications will be described and the monitoring procedure will be also defined. Additionally, the management and coordination structure with specific roles and responsibilities of all the implicated partners will be defined in order to ensure the proper organization and monitoring of the work.”

The current deliverable (3.1 “Pilot activities management and coordination plan”) aims to become a useful tool in the hand of MOTIVATE pilot cities so as to design and implement pilot activities able to prove tangible effects on citizens’ engagement during the various steps of a successful SUMP development. The management and coordination process described

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hereinafter is iterative; cities responsible partners initially redefine pilot content in line with what described in the AF, engage stakeholders, implement the pilot activities, evaluate the results, fix problems, and deploy an updated release of the pilot, repeating this process until a satisfying output derives.

1.5 Structure of the current report

The remainder of the deliverable is organized as follows. The second chapter provides an overview of the pilot cases as initially formulated and the targets set at the beginning of the project. This is necessary since the initial schedule will be the base for the monitoring of pilot implementation and a place where the cities can go back and check the progress, monitor failure or success and redefine the next steps if necessary. The subsequent chapter proposes the framework and processes for cities to monitor testing progress.

2. MOTIVATE cities understanding

In order to conclude to a coherent implementation plan, each city, in close cooperation with all relevant stakeholders and actors to be involved in the realization of the testing phase, have to come in an agreement (**DECLARATION**) regarding the actual content of pilots, the role of each involved party, the implementation steps to be followed and the expected outcomes of those activities so as to have a base line for monitoring progress. The general idea of the testing in each city is described in the AF and also in the Working Plan (**D1.2.1**). The current description is the summary of the main points highlighted in the abovementioned documents as well as the output of a structured questionnaire guiding the cities to better understand which is the feedback they want to take from the users of the MOTIVATE platform (the answered questionnaires can be found in ANNEX A).

The guided questionnaires aim at:

- identifying the data which have been collected/under collection for SUMP development/revision, their main features and the adopted procedures for collection;
- detailing the description of local mobility measures/initiatives MOTIVATE project will be related to:
 - Detailing the current status of implementation/operation of the local mobility measures/initiatives, their objectives/target groups, the involved users (number), etc.;
 - Detailing the scheduled timing and action/plan for implementation in case the local mobility measure/initiative need to be implemented/upgraded;
 - Detailing the activities sites are planning for measures design and clarifying the role of MOTIVATE in this broader analysis. In particular a question focuses on understanding if other (alternative or complimentary) mobility data collection tools will be used for users needs/evaluation collection despite the MOTIVATE crowdsourcing tool to be developed into the project.

The above input is crucial for a series of reasons; i) understanding their status as regards SUMP development, ii) understanding data collection needs and methods already used, iii) better recognizing which are the measures (+ KPIs) they want to evaluate and the reasons for which

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this evaluation is of added value for them, iv) realizing the direction towards which they need to target so as to improve daily mobility and v) mobilizing them to open a constant “dialogue” with travelers (both citizens and tourists).

The pilots at a glance are depicted in the following figure:

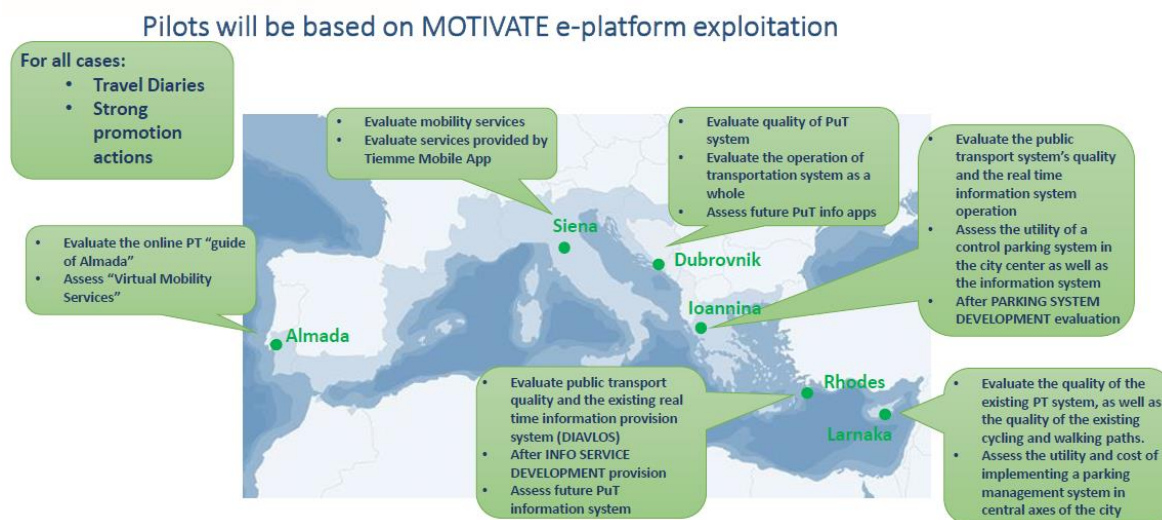


Figure 4: Testing in MOTIVATE cities

2.1 Almada; the city, the transport system and its needs

Almada is one of the 18 municipalities in the Lisbon Metropolitan Region. The Municipality of Almada is located on the south bank of the Tagus River across from Lisbon. With 174.030 residents living in 72 km², representing a population density of about 2.500 inhabitants/km² which more than doubles the population density of the Lisbon Metropolitan Area. The Municipality includes urban and also natural/rural protected areas of high environmental importance.

Almada local economy is primarily based on Tourism and Services. A strong effort is being made to foster the increasing of businesses linked to the “green economy”, based on the Local Development Strategy that integrates the concepts of Sustainability, Solidarity and Eco-Efficiency. The region has important natural resources, several green protected areas with relevant biodiversity, geological sites of recognized importance, significant terrestrial, estuarine and marine ecosystems, etc. Almada's Atlantic Ocean beachfront extends for approximately 13 km and is a popular summertime destination for Lisbon residents as well as foreign visitors, receiving more than 8 million visitors each year that increase the demand on tourism related services.

Almada’s long term commitment to sustainable energy objectives makes it one of the most prominent actors in climate change mitigation, among Portuguese municipalities. Almada was the first Portuguese municipality to develop a Local Strategy for Climate Change, acknowledging the need to reduce energy consumption and mitigate CO₂ emissions within the municipality. Under the Covenant of Mayors, signed in 2009, Almada pledged to reduce its

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greenhouse gas emissions in 22% by 2020, compared to the baseline value of 2006, corresponding to an overall reduction of 72 kton CO₂eq. It is within this objective that the Sustainable Energy Action Plan (SEAP) was developed, and is being successfully implemented to support the energy transition process to make Almada a low carbon city. More recently, and within the scope of the 2016 Paris Agreement, Almada committed itself to reduce its GHG emissions by 80% until 2050.

The mobility system of Almada has a very diverse range of options. In recent years a major change was undergone with the emergence of new modes of rail transport, new rules of circulation and parking, enhancement of public space and the increasing integration of soft modes (walking and bicycle). The introduction of the tram system in Almada in 2008 encompassed the transformation of the public space along the tram corridor, reallocating space to soft, or active transport modes – although not officially a SUMP, the introduction of the tram was preceded by the 1st generation Parking and Circulation Plan (published in 2002), whose objective was to diagnose problems and present proposals to increase the use of public transportation and soft modes (cycling and walking). Building the tram infrastructure allowed the creation of new pedestrian areas, namely the city centre, which was transformed into a mixed area with a speed limit of 20 km/h, with restrictions to car parking and circulation. Although part of this effort has since been revoked, there are still pedestrianized areas in Almada that constitute a good example of how sustainable mobility actually boosts the local economy.

Almada is currently developing its 2nd generation Mobility Plan, following the SUMP guidelines elaborated by the European Commission. The development of the Almada Mobility Plan has four main objectives: 1) Planning and developing a Multimodal Transport System; 2) Creating better infrastructures for Public Transport and Soft Modes; 3) Promoting the use of new and more efficient technologies/alternative fuels (including electric mobility); 4) Involving citizens in the decisions, informing and raising awareness.

As regards SUMP, the key goals are:

- Diversifying the transport offer;
- Achieving an adequate integration between transport modes;
- Improving accessibility;
- Reducing car use by boosting modal shift from private cars to PT and soft modes;
- Improving public space, creating safety and adequate conditions for pedestrians and cyclists;
- Promoting bike use for daily commuting (< 6 km);
- Enhancing the city logistics processes mainly related to "last mile" freight distribution;
- Enhancing the quality of life in Almada, mitigating CO₂ emissions and contributing to the EU burden sharing of the Kyoto Protocol.

The SUMP should identify a set of proposals and recommendations of solutions which give the mobility system of Almada the most appropriate responses to local needs, safeguarding the following key principles: energy efficiency, environmental and economic equity, universal access to mobility and accessibility to the multiple functions of the territory.

2.2 Rhodes; the city, the transport system and its needs

The island of Rhodes/ Greece is situated at the SE of the Aegean Sea. The island occupies an area of approximately 1,400 square kilometers and has an actual population of 115.490 people. Almost 50% of the population resides in the city of Rhodes in an area of 20,34 square kilometers, no more than 1,46% of the total area of the island. The municipality of Rhodes is the administrative authority of the island.

The city of Rhodes has a history of 2400 years. The different people who settled in the island left their mark in all aspects of the island's culture: art, language, architecture. The Medieval city of Rhodes, built by the Knights of St. John, is one of the best preserved Medieval Cities in Europe and it is a UNESCO World Heritage Site since 1988.

Rhodes is a popular international tourist destination. The economy of the island is tourist-oriented. Almost 75% of the active population is engaged in the tertiary sector and tourism. Rhodes's strategy is primarily based on the promotion of the sustainable development of the area. Therefore, the municipality is actively engaged in the HABITAT Agenda as well as Local Agenda 21. Furthermore the municipality became a signatory to the Covenant of Mayors in January 2010 making a commitment to achieve the EU target of 20% of reduction of CO2 emissions.

“RODA” is the municipal transport company that services the urban and suburban area of the city of Rhodes, as well as the interurban areas at the west side of the island. Daily an average of 3.900 kilometres is travelled during winter-time and around 5.400 during the summer. The company annually transports approximately 2.000.000 passengers.

Rhodes is historic city with a unique urban structure. The city centre and the medieval city are situated at the northern edge of the island. The entire major port infrastructure of the island is situated within the city's limits at the southeast waterfront area. There are only two road arteries with limited geometrical characteristics that connect the residential areas and the rest of the island to the city centre, resulting to major traffic congestion a while before approaching the city and a traffic confusion in the city and the city centre especially during the tourism season when the population of the island is at least doubled. Moreover Rhodes, as most medium sized Greek cities, has high percentage of car ownership and ineffective public transportation system.

While several traffic studies have been conducted for the city, the last one a few years ago, none of them has ever been fully implemented. Sustainable mobility measures are developed and implemented fragmentary in the city while there is not an overall SUMP. The fact that the legal framework in Greece doesn't guarantee the citizens participation in public policies, results to locals often being conservative to changes in the urban environment and defend, sometimes successfully, the status quo.

There is planning for sustainable mobility measures such as the creation of peripheral parking bays so as to approach the city centre by foot, bicycle, or mini bus and the construction of a

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cycling network. The peripheral highway of the city is under construction. Rhodes has currently installed a public bicycle sharing system and has invested on the construction of waterfront pedestrian roads in the city centre so as to facilitate pedestrians. A real time traffic information system (DIAVLOS) is also developed. The municipality of Rhodes has recently obtained funding up to 60.000€ from the Green Fund in order to develop a SUMP.

The SUMP of the city should deal with its unique urban structure and the seasonal variation of population, propose/develop strategies that promote sustainable mobility and motivate citizens to adopt new mobility patterns and measures.

2.3 Siena; the city, the transport system and its needs

Siena, located in the Tuscany Region in central Italy, is one of the most relevant Italian mid-sized historical town with about 54.000 inhabitants, large yearly touristic flows (more than 5.000.000 tourists/year, with stay average of 3 days, mainly in the spring/summer season), more than 13.000 commuters/day (home-work, neighbourhood-city and shops mobility) and 17.000 university guests. In the overall Siena Province (250.000 inhabitants) there is a number of 160.000 cars with an average of 1,7 / family (which means 640 cars/1.000inhabitants). The city is characterized by a wide historical area (some of this is pedestrian), a network with narrow streets and relevant gradient and more than 750 shops in the inner city centre, administrative and bank offices, university structures, cultural and historical sites, etc . The historic centre of Siena has been declared by UNESCO a World Heritage Site. It is one of the nation's most visited tourist attractions. The tourist flow generate a strong pressure on the city mobility with a total number of nearly 30.000 touristic buses/year (with peaks of 280 buses/day) and 500.000 private cars per year.

Since the sixties, a large Pedestrian Area was realised, representing the first Blue Zone of Europe. In the historical center a RTZ (Restricted Traffic Zone) area with an extension of 1.74 sq.km was operated with a specific admission and access regulatory policy admitting different user categories (resident people, freights vehicles for the delivery service, tourists direct to the hotels).

The city is well infrastructured with different technological systems, including Integrated Parking Management, Touristic Bus Parking Management, Automated Access control to the RTZ with enter/exit portals, Smart Card for integrated payment (parking + public transport services), Traffic information based on (VMS) Variable Message Signals, on-line traffic and environment data collection infrastructures, etc. A mobile app (iOs and Android version) is available for all end users of PT providing information on PT services (such as stop points, departure times, routes, journey planning, ticket purchase, news, location-based access to information, QR code interaction at stops and download of timetables).

Public Transport Services in the urban and surrounding area of the city are operated by Tiemme, the public transport operator of the whole eastern-southern area of Tuscany (including Province of Arezzo, Siena, Grosseto and southern part of Livorno). In the urban context of Siena, TIEMME operates 14 lines. The number of buses that every day exit from depots for the urban service are around 60, the yearly Kms travelled are 4 Million and the

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number of yearly passengers are 10 ml. All bus stops in the city of Siena are equipped with infopanel providing real time information. Short vehicles are used for the operation of the city lines travelling in the narrowest street of the historic centre. A DRT service which relates to a part of the suburban area of the city is also operated only on working days.

The general transport policy is based upon the concept of sustainable mobility and is defined by the PUM (Plan for Urban Mobility) and by the PGU (Plan for Urban Traffic) which represent the short-medium term instruments for mobility planning, providing the general rules for mobility planning, viability measures, the organisation and development of public transport network. Currently a task force managing the Mobility Plan is active, and the SUMP is currently on the verge of being entrusted through public procurement.

Tourist mobility in Siena needs to be duly planned and managed and often suffers from efficiency problems due to the lack of specific data on O/D and tourists' needs which are rather difficult to be collected.

MOTIVATE crowdsourcing approach will allow the collection of a series of information (residents/tourists trips, preferences and opinions on the existing mobility and info mobility services) that will help to understand which improvements/changes on mobility services and on quantity and type of information provided by the infomobility app are needed according to users requirements and preferences. On the basis of this information a set of recommendations of the most appropriate solutions to local needs could be identified and be used as proposals for the future SUMP development. Furthermore, it can enhance the infomobility app with new functionalities, e.g. users feedback, which will result in a permanent improvement of the mobility planning.

2.4 Larnaca; the city, the transport system and its needs

Larnaca is a coastal city located in the south part of the island of Cyprus and is the third largest city of the country. It is the metropolitan Municipality of the area and it is adjoined by three other municipalities. It is inhabited by approximately 80,000 people while the metropolitan area is over 120,000. Larnaca hosts the main international airport of the country and the biggest marina while it has the second largest port which serves both commercial and passenger ships. A big part of Larnaca's 32.5 sq.km is covered by salt lakes which are Natura 2000 and RAMSAR sites due to their unique flora and fauna. Larnaca is one of the oldest cities in Europe having over 4000 years of continuous inhabitation. It is marked as the 9th oldest European city by Telegraph Newspaper.

The main economic activities in Larnaca are tourism and services. Its 11 km long coast in connection with the ideal climate which has sunshine in average 325 days per year create excellent conditions for holidays round the year.

The public transport system in Larnaca consist of only a Bus system serving both urban and rural areas. The system comprises relatively new fleet but its reliability is questionable as are the adequacy of its routes. The bus system contract is managed by the Central Government with no Municipal involvement. The Government is pursuing changes to the contract to

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modernize the fleet, digitize information and increase passenger satisfaction.

Larnaca's topography is very flat with minimal elevation fluctuations ranging from 0 to 20 meters. This fact makes the city ideal for pedestrians and cyclists. Over the last few years there is an abundance of cyclists around the city using their bicycles both for business and entertainment. Pedestrians also use the various pedestrian routes and nature trails mostly for entertainment purposes. The bicycle network in the city is not completed and at the moment it is only 15 km but more are under study, mainly adjoining vehicle lanes.

Larnaca is a leading city in Cyprus in promoting sustainability. It has been among the three finalists for the European Mobility Week award in 2011 while in 2012 and 2013 it has been in the shortlist for the same award. It also participates in the following energy programmes and schemes: Covenant of Mayors: 20-20-20 goals by 2020 (40% reduction of CO2 emissions as a result of a 20% increase in energy efficiency and a 20% share of renewable energy sources in the energy mix; Islepact: 20-20-20 goals, Sustainable Energy Action Plan (SEAP), organisation of Energy Days; MedEEA: rewards municipal integrated energy planning & activities with the aim to reach and go beyond the "20-20-20" EU energy objectives in the Mediterranean regions (Mediterranean Implementation of the European Energy Award). Larnaca participated in USUDS Project (ENPI CBCMED), a European funded programme that produced an Urban Sustainable Development Strategy. It is the first time that a city in Cyprus is participating in a similar programme, going through all the stages of pre-diagnosis, diagnosis and finally the USUDS.

Larnaca is currently in the process of having a consultant through tenders from the central Government for the production of SUMP.

2.5 Dubrovnik; the city, the transport system and its needs

City of Dubrovnik is located in the southernmost part of Croatia, on a narrow coastal belt with mountainous area in its surroundings. Its specific position is also emphasized by the fact that state border with Bosnia-Herzegovina administratively separates Dubrovnik region from its interior as well as from the rest of Croatia. Dubrovnik central or core city includes an urban area with more than 30.000 inhabitants. But local self-government of the same name spreads on the territory of 143.35 km² where (according to 2011. Census) 42.615 inhabitants live. Population density in Dubrovnik is 297 inhabitants per square kilometre. Dubrovnik is also the administrative and economic centre of "Dubrovnik-Neretva" County. The population of the city of Dubrovnik makes a total of 34.77% of the population of the County, which has 122.568 inhabitants. Local economy is based on tertiary sector, especially tourism and services. Entire tourism industry of Dubrovnik and its encompassing region is based on preserved natural environment sites and rich cultural heritage. Old Town of Dubrovnik itself is UNESCO protected heritage site, while there are also several other both naturally and culturally protected areas. Beaches on the Adriatic Sea are also popular summertime destination for both domestic and foreign visitors. Tourism sector and its related services are expanding each year, with record number of tourist arrivals recorded in 2016 (over 1 million visitors).

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Mobility system of Dubrovnik is based in large part on personal cars and buses as means of transport. Public transport system in the city of Dubrovnik relies exclusively upon bus and “Libertas” is the public company (owned by the City) responsible for its organisation and functioning (in both urban and suburban area). Taxi cars and vehicles in service of private tourist companies and agencies represent only other means of public transport. Deficit of parking spaces also represent a huge problem in the overall traffic and transport functioning. Historic core of Dubrovnik (Old town) represents a zone of limited traffic, where only delivery vehicles and vehicles with special permission can operate freely.

There are two transport terminals of regional and international importance. Port of Gruž is located in the area of central city and it is restructured during the last few years for exclusively for passenger transport acceptance (especially for cruising ships). “Čilipi” airport is located in suburban area of Dubrovnik (in the area of local self-government Konavle). Because of the relative seclusion of Dubrovnik and lack of necessary road infrastructure (there are no built highways leading to Dubrovnik), both of these terminals represent important hubs for tourists who have Dubrovnik as their desired destination.

Since 2012, City of Dubrovnik is actively involved in preparation of sustainable mobility projects. They are recognized as essential because of the unsatisfactory conditions prevailing in the local traffic system, high emissions of CO₂ and intensification of the traffic during the high season (because of the huge tourist arrivals). City of Dubrovnik was a coordinator in “Adria.move.it! – Support to sustainable forms of mobility in coastal towns” project and in 2015 it became the first Croatian city to adopt “Smart city” strategy. The specific goals of all current sustainable mobility projects are introduction of long term strategy for further development of the city traffic system, promotion of sustainability and multimodality in transport, adoption of new ICT tools through implementation of pilot action and capacity strengthening of local decision makers, relevant stakeholders and entire public for sustainable mobility. Electric buses, electric cars and electric scooters are all being researched in different projects and initiatives with possibility to introduce them through “Car-share” or “Car-pool” services.

“Energy efficiency programme for the urban mobility of the City of Dubrovnik” represents the most relevant document in the field of sustainable urban mobility for the city of Dubrovnik. Also first draft of SECAP (Sustainable Energy and Climate Action Plan) was introduced at the beginning of the year. Introduction of SUMP is one of the objectives of DURA and City of Dubrovnik and the new plan is to upgrade or restructure existing non-official plan (developed under “Adria.Move.IT! project but never officially introduced) and complement it with new ideas and techniques.

2.6 Ioannina; the city, the transport system and its needs

Ioannina, is the capital and largest city of Epirus, an administrative region in north-western Greece. Its population is 112,486, according to 2011 census. It is the capital of Ioannina regional unit and the region of Epirus. Ioannina is located 450 km (280 mi) northwest of Athens, 290 kilometres (180 miles) southwest of Thessaloniki and 80 km (50 miles) east of the port of Igoumenitsa in the Ionian Sea. Ioannina is served by Ioannina National Airport

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while the main road axis serving the city is Egnatia Odos highway, a road axis linking the west Greece (coast port of Igoumenitsa) with the Turkish border.

2.7 Comparative analysis of the cities

In order to evaluate the current performance as regards sustainable mobility planning and implementation in each pilot city, key attributes were selected;

- 1 & 2 refers to travellers/potential travellers (both citizens and tourists)
 - Population
 - Tourists per year
- 3-10 were selected so as to depict the current situation as regards mobility planning and daily operation of transport systems
 - SUMP status
 - Mobility related studies and initiatives
 - Urban Modes of Public Transport
 - Integrated ticket for the different modes of transport
 - Modal split
 - Integrated Transport Authority
 - Actions for promotion of alternative to private car use
 - Travel diaries officially collected
- 11-14 are related to public engagement in mobility planning, thus very strongly connected issues to MOTIVATE goals
 - Real Time Traffic Data
 - Current level of citizens' engagement in mobility planning
 - Mobility related platforms
 - Awareness raising campaigns / contact with the people – crowdsourcing approach penetration

Table 2: MOTIVATE cities mapping

		ALMADA	RHODES	SIENA	LARNACA	DUBROVNIC	IOANNINA
1	Population	174.030	50.636	55.000	80.000	42.615	112.486
2	Tourists per year (average)	8.000.000	2.000.000	5.000.000	3.000.000	1.000.000	500.000
3	SUMP status	No SUMP yet 2 nd Generation Mobility Plan (PUMA), based in the SUMP approach	Received funding	No official SUMP currently	in the final tendering process	No SUMP yet	Received funding
4	Mobility related studies and initiatives	<ul style="list-style-type: none"> 2015 Mobility Inquiry (telephone interviews to 3.300 residents) Local strategy for climate change Covenant of Mayors (2009) SEAP Parking and circulation plan (2002) 	<ul style="list-style-type: none"> Several fragmented mobility studies <p>HABITAT Agenda Local Agenda 21</p> <ul style="list-style-type: none"> Covenant of Mayors (2010) Study for a peripheral parking area 	<ul style="list-style-type: none"> last official document on Mobility Plan was produced more than 15 years ago in 2001 PUM (Plan for Urban Mobility) and by the PGTU (Plan for Urban Traffic) which represent the short-medium term instruments for mobility planning 	<ul style="list-style-type: none"> Buchanan 1993 City Centre Plan 2003 SMAP 2006 Covenant of Mayors Sustainable Energy Action Plan (SEAP) Participation in a series of projects supporting sustainable mobility 	<ul style="list-style-type: none"> Energy efficiency programme for the urban mobility of the city of Dubrovnik” in 2015 Mobility study” (2012.) “Sustainable mobility strategy of the City of Dubrovnik” (2008.) “Sustainable mobility local plan” (2013.). first draft of SECAP 	Urban Development Plans & various past mobility studies
5	Urban Modes of Public Transport	Tram, bus, boat	bus	bus	bus	bus	bus
6	Integrated ticket for the different modes of transport	NO	-	-	-	-	-
7	Modal split	47-36-17-5 (car-PuT-walking-others)	82-3-15 (car/moto-PuT-walking)	-	75-5-20 (car - PuT - walking)	Summer season (April-September): Walking 20%, Bus (PT) 38%, Car 28%, Motorcycle/scooter 14% Winter season: Walking 15%, Bus (PT) 35%, Car 45%, Motorcycle 5%	-
8	Integrated Transport Authority	NO	NO	NO	NO	NO	NO
9	Actions for promotion of alternative to private car use	<ul style="list-style-type: none"> operation of the city tram from 2008 Soft modes promotion 		<ul style="list-style-type: none"> The first blue zone in Europe (1960) RTZ historical center (Restricted Traffic 	<ul style="list-style-type: none"> cycling lanes in 6 major roads of the city (around 15 km) 		

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				Zone) • DRT			
10	Travel diaries officially collected	NO	NO	NO	NO	NO	NO
11	Real Time Traffic Data	NO	YES	YES	NO	NO	YES
12	Current level of citizens' engagement in mobility planning	LOW	LOW	MEDIUM	LOW	LOW	LOW
13	Mobility related platforms	a) Online PT Guide of Almada PuT information (info on - boat, elevator, tram, train, and bus - routes, timetables connections, schedules, tariffs) route planner b) TRANSPORLIS" Information system c) Virtual Mobility Center - to operate in 2018 (integrated passenger information service for PuT)	a) real time traffic information system (DIAVLOS) b) Cultural and Historical guide	• "TIEMME MOBILE" app stop points, departure times routes journey planning ticket purchase news - location-based access to information - QR code interaction at stops - download of timetables (pdf)	NO	a)LIBERTAS app timetables for buses b) SMART PARKING APP available free places Smart Bus - Available parking spaces for tourist buses (not yet implemented; scheduled for May) Smart Taxi - Available parking spaces for taxi drivers (not yet implemented; scheduled for May)	Integrated management platform and traffic monitoring
14	Awareness raising campaigns / contact with the people – crowdsourcing approach penetration	Active mobility consultancy (AMC) campaigns to begin in summer 2017	public on line consultation at www.rhodes.gr and municipal consultation committee	Every six months TIEMME carries out a customer satisfaction survey	Municipality web site and complaints office in the main Municipal building	Dubrovnik Eye - application for citizens and tourists whose purpose is to report municipal issues and problems related to utility system	

The careful reading of the table leads to the following findings/conclusions;

- MOTIVATE cities are all small (10.000-50.000 inhabitants) to medium (50.000-250.000 inhabitants) size MED cities. This means that from a planning perspective, these cities need to develop a more sound mechanism by which local needs and concerns can be more strongly represented in the policy and planning process that is undertaken at higher levels (EPTA project, D4.4). From the other side, citizens' engagement can be easier and more manageable, fact that could ideally facilitate the achievement of MOTIVATE objectives. Furthermore, as clearly depicted (2nd attribute), transport networks at MOTIVATE cities accept a strong pressure especially during the high tourist season. The latter makes the need for SUMP development more critical. Given the seasonality however, the SUMP to be developed in these cases have to place significant focus on the variations in seasonal demand.
- As regards SUMP status a categorization can be the following;



Figure 5: official SUMP status in MOTIVATE cities

All MOTIVATE cities regardless the official SUMP status, they have invested much in sustainable mobility planning the last years and they are in a good position to start also the development of an official SUMP. Furthermore, modal split in Almada, Siena and Dubrovnik shows that actions towards promoting alternative to private car modes are fruitful.

- Sociodemographic, touristic and general traffic data are regularly collected in all MOTIVATE cities, however, nowhere travel diaries are collected.
- Although steps has been done towards strengthening mobility planning, an integrated transport authority, most probably in the form of a decentralised agency commissioned by the regional or national government, does not exist in any of the cases.
- Real traffic data are provided to travellers in 3 out of the 6 MOTIVATE cities, namely Rhodes, Siena and Ioannina.
- All MOTIVATE cities need to focus on citizens' engagement in mobility planning; the current engagement level is low in the majority of cases. The engagement will result in

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mutual benefits for the city and for the traveller; the city has to offer advanced services to travellers and the traveller shall become integral part of a co-creational design, an active member to support policy making and get the feedback of a healthy environment. Dubrovnik Eye, an application for citizens and tourists whose purpose is to report municipal issues and problems related to utility system, seems to be a good example for starting the contact with citizens.

2.8 Remarks

With the current chapter, the first step of the pilot monitoring should have been achieved; namely the above analysis aimed at providing an insight in the pilot cases and achieve cities and needs understanding.

3. Checklist and indicators for monitoring testing progress

The monitoring process described in this chapter is intended to act as a tool to assist MOTIVATE cities to achieve their goals.

With respect to cities objectives and serving the main objective of MOTIVATE that is to transform travellers into active agents of change in mobility planning, the monitoring progress aims to:

- strengthen cities understanding in crowdsourcing opportunities by keeping a constant touch with testing results
- assist identifying areas where improvements or corrective action are needed and show the way for redefinition of urgent activities
- help cities identify/realize hard-to-reach citizens' groups (e.g. elderly, disabled, isolated residents) so as to involve them in policy making with alternative ways
- prove the effectiveness of the platform or potential points that need to be improved and problems to be addressed
- assure the well conduction of the testing phase

A monitoring flowchart to support cities to manage their pilots is the one illustrated below.

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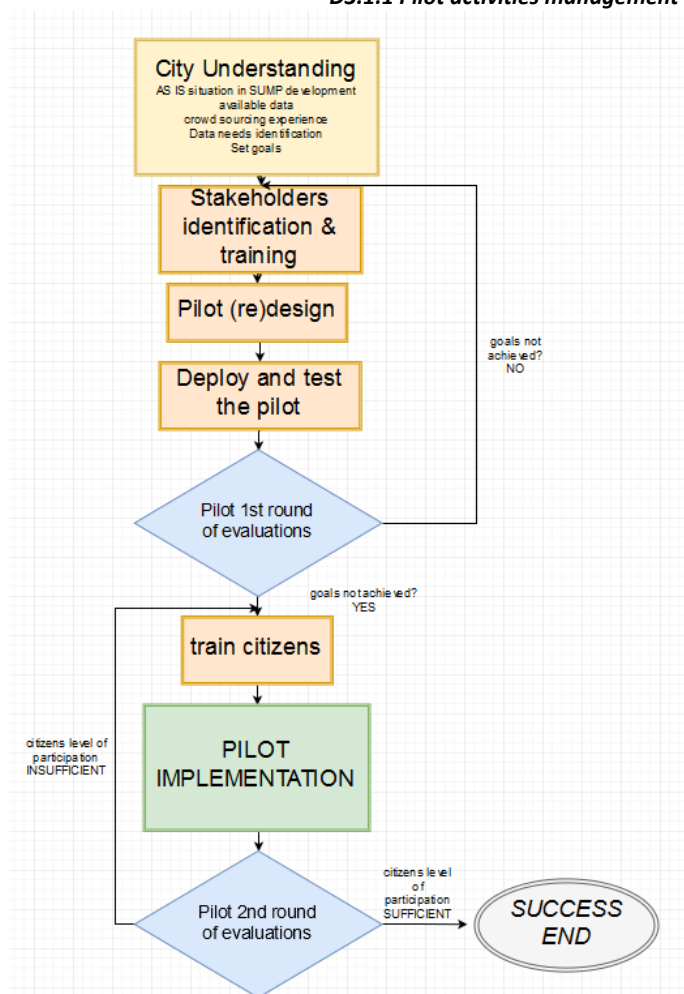


Figure 6: Monitoring flowchart

The monitoring progress and pilots management start almost in parallel to project's beginning (since the whole concept of the pilots and their contribution in city planning is an activity taking place from the very early steps of MOTIVATE) and ends with the end of the pilots phase.

The progress indicators guaranteeing the success of the pilots are common for all cities while the targets per indicator vary according to city's particularities and city's agendas.

According to pilots' philosophy as depicted from the AF, the indicators to monitor pilot development and strengthening are presented in the following table:

Table 3: Milestones for the achievement of MOTIVATE cities goals

	ATTRIBUTE	MILESTONES	INDICATOR	MONTHS	Comments on the attributes
1	Internal (city level) understanding of the project and platforms functionalities	KoM - motivate functionalities description	Level of understanding	M3	
		Communication plan	Level of understanding	M4	
		Platform's development	Level of	M10	

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		completion	understanding		
		Allocation of specific roles and responsibilities (internally e.g. IT staff, project manager, communication manager) – exploiting staff capabilities for assuring the well conduction of the testing	Roles allocation	M3	
2	Preparatory actions for the pilots (Ioannina & Rhodes)	Development of the systems as described in the AF	Completion of the development	M15	<i>Only in Ioannina & Rhodes</i>
3	Soft redesign of pilots according to real needs (needs regarding data collection and evaluation of mobility measures)	1 st local workshop	Enhancement of pilots' concept	M5	<i>optional</i>
4	Stakeholders engagement	preparatory actions for the 1 st workshop	Stakeholders identification & Communication channels mobilization	M1-M4	
		1 st local workshop	Level of stakeholders' engagement	M5	
		1 st living lab	Level of stakeholders' engagement	M6	
		2 nd living lab	Level of stakeholders' engagement	M18	
		3 rd living lab	Level of stakeholders' engagement	M25	
5	Provision of input for the platform	1 st living lab	Input provision	M6	
		2 nd living lab	Input provision	M18	
6	Platform promotion	1 st local workshop	Communication channels used	M5	
		After platform development and before the beginning of the testing period	Communication channels used	M10	
		During testing period	Users of the platform	M10-M25	
7	Data collection	During testing period	Quality of collected data	M10-M25	<i>If the quality is considered low, there could be a need to go back to the "soft redesign of pilot" or else to further and better promote the platform</i>

4. Managing pilots' monitoring procedure

Cities are asked to provide data on the implementation of the pilots, according to the flow chart (Figure 6) and milestones (Table 3), on a bimonthly basis so as to be guided for potential redesign of each phase / step in order to guarantee goals achievement. CERTH/HIT on close cooperation with the coordinator, Câmara Municipal de Almada, MemEx as being the responsible partner for pilot evaluation as well as with the communication manager, AEA, are responsible to provide specialised guidance to each pilot city when facing problems. More specifically:

- **CERTH/HIT**, being the developer of MOTIVATE platform, is responsible for assisting sites in understanding platform's concept and for the provision of the collected data to the pilot cities
- **MemEx**, being the responsible partner for pilots' evaluation and having defined the desired quality and quantity of data to be collected per site (activity 3.9 – “*Evaluation Requirements*”), will assist sites on understanding their progress level so as the sites can be able to carry out corrective action
- **AEA**, the responsible partner for communication, will assist sites regarding i) workshops and living labs successful planning and execution so as to capture the desired input from stakeholders, ii) stakeholders engagement techniques, iii) platform's promotion and in general with communication related activities

CERTH/HIT, **MemEx** and **AEA** will work on close cooperation with the lead partner, **Câmara Municipal de Almada** so as to maintain a common understanding of MOTIVATE project, follow a coherent approach on project's execution and serve MOTIVATE's objectives.

ANNEX A

GUIDED QUESTIONNAIRES FOR SITE DESCRIPTION

1. Almada

SUMP

1. Which is the development stage of SUMP in Almada ?

Almada is currently developing its 2nd Generation Mobility Plan (PUMA), based in the SUMP approach

2. Which data typology has been collected/is under collection/has planned to be collected (depending on the development stage) for SUMP definition/revision (demographic, economic, tourist flow, traffic, O/D matrix, other) ?

So far, based on the 2015 Mobility Inquiry to the residents of Almada, a comprehensive set of data was collected: socio-demographic and economic data, modal split, O/D matrix of residents, mobility patterns

3. For each data typology indicated in 2), detail the procedures/tool adopted for data collection and when data have been collected or are planned to be collected.

Data was collected in the 2015 Mobility Inquiry, consisting in a set of telephone interviews to 3.300 residents, representative of the population of Almada.

4. For each data typology indicated in 2), detail how data are stored and managed.

The information is stored and managed in the form of MS-Excel databases.

5. Have been travel diaries info already collected in the site? If yes, please detail the info collected, when and how.

No. Only average trips from residents (origin, destination, motive, time, distance travelled, transport modes)

Online PT Guide

6. Describe the “Online PT Guide for Almada” and its interactions with the existing Intermodal Information System “TRANSPORLIS”. Which are its objectives, main services to end-users and target groups ?

It is a tool jointly developed by Almada City Council and Local Energy Management Agency of Almada, AGENEAL – first as a paper version, and afterwards as a webpage (which is currently not up to date). The “PT Guide of Almada” aims to promote the use of public transport in daily travel and reverse its decline in recent years. It provides useful information about the internal and external connections to Almada by boat, elevator, tram, train, and bus being quick and easy to consult. It provides information on the diversity of transportation alternatives within Almada and in neighbouring municipalities, organized by public transport

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mode and containing for each of them information about the service in the area, routes, connections, schedules, tariffs and conditions for the transportation of bicycles. Also exemplified are typical routes linking destinations and points of interest inside and outside the municipality of Almada. In the online version the timetables, as well as a route planner, are based and retrieve information from the “TRANSPORLIS” Information system.

7. **Please confirm that the “Online PT Guide for Almada” is already operated¹ and provide the number of current involved users (i.e. pageview) of the Guide.**

The website of the “Online PT Guide of Almada” is currently under revision and update

8. **Which kind of info are supposed to be collected in the evaluation of users acceptance of the “Online PT Guide for Almada”?**

Pageviews, feedback from users...

9. **Are other data collection campaigns (despite MOTIVATE) planned for the evaluation of users acceptance of the “Online PT Guide for Almada” ?**

No.

Virtual Mobility Center

10. **Describe the Virtual Mobility Center: which are its objectives, main services to end-users and target groups ?**

The Virtual Mobility Center will be based on the new legal framework regarding PT in Portugal, which constituted Municipalities as Local Transport Authorities, with added responsibilities, functions and powers in future procurement processes and public transport services management. This Virtual Mobility Center will be an integrated passenger information service, with interactive characteristics, evolving from the current system, based on real time, but static information, about transport services. The new information system, envisaged should be adaptive and progressively learn about the preferences of the user, to be able to provide the most interesting information about connections, problems, alerts, conflicts or other important information, preserving identity protection and confidentiality of the personal information.

11. **Which is the number of potential target users ?**

The whole population of Almada (about 174 000 people), plus all visitors that come by PT.

¹ If not operating, describe an implementation plan with milestones.

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12. **Which kind of info are supposed to be collected by MOTIVATE platform in the needs analysis of Virtual Mobility Center ?**

Travel patterns, PT modes used, passenger feedback regarding routes and timetables

13. **Provide a description of the activities planned for the design of Virtual Mobility Center. Provide a six-months actions plan related to any design activity will occur. Are other data collection campaigns (despite MOTIVATE) planned for the collection of needs/expectations of the users? Which will be the role of users needs collection campaign supported by MOTIVATE platform ? For example: validation/tuning of some predefined solutions, assessment of specific aspects (which one?), preliminary role in the design in order to identify most suitable options to be developed/tuned in a following phase, etc.**

The Virtual Mobility Center is a medium-term initiative, so in a six-months action plan no relevant activities will be developed. But the role of the MOTIVATE Platform users will be relevant for the design and information provided by this service by: validation/tuning of some PT and mobility solutions, feedback about the design, identification of the most suitable options to be developed

14. **Which is the scheduled timing for implementation of Virtual Mobility Center ? Is any problem/constraint identifiable at this early stage which could affect the implementation of Virtual Mobility Center and impact on MOTIVATE ?**

The Virtual Mobility Center is scheduled to be operating in 2018, anticipating the entry into force of the new legal framework regarding PT in Portugal, which constituted Municipalities as Local Transport Authorities.

15. **Which kind of info are supposed to be collected in the evaluation of users acceptance of the Virtual Mobility Center ?**

Pageviews, feedback from users...

16. **Are other data collection campaigns (despite MOTIVATE) planned for the evaluation of users acceptance of the Virtual Mobility Center ?**

No campaigns planned so far.

Active Mobility Consultancy campaign

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- 17. Describe the Active Mobility Consultancy campaign: which are its objectives and target groups ? Which will be the role of data collection campaign supported by MOTIVATE platform ?**

Active mobility consultancy (AMC) campaigns are a form of direct marketing in which citizens are directly approached in order to collect feedback about their experience of public transport use, or, if they do not use public transport, to inform them about the available travel options. In addition to customised information and personal contact, AMC campaigns include practical passenger trainings and public participation in planning. The AMC campaigns can also be an opportunity to collect first-hand information from passengers that can be integrated in the MOTIVATE platform, on the basis of which the public transport offer can be adjusted to passengers' requirements.

- 18. Which is the number of potential target users ?**

All residents in the implementation area of the pilot (about 13 000 people living in Costa da Caparica, where the beachfront of Almada is located) plus visitors during the high and low seasons.

- 19. Which kind of info are supposed to be collected by MOTIVATE platform in Active Mobility Consultancy campaign ?**

Travel patterns, PT modes used, passenger feedback regarding routes and timetables

- 20. Provide a description of the activities planned for the design of Active Mobility Consultancy campaign. Provide a six-months actions plan related to any design activity will occur. Are other data collection campaigns (despite MOTIVATE) planned for the collection of needs/expectations of the users? Which will be the role of users needs collection campaign supported by MOTIVATE platform ? For example: validation/tuning of some predefined solutions, assessment of specific aspects (which one?), preliminary role in the design in order to identify most suitable options to be developed/tuned in a following phase, etc.**

Almada's AMC is planned to begin right before the launch of the MOTIVATE platform and will act as a supporting initiative for its dissemination. We will invite residents to take part in the project and provide feedback regarding mobility and the PT system. Those who wish to take part will be able to do so by using the MOTIVATE app. The campaign will also include some "active" measure where organisers will meet commuters face to face. This will be an opportunity for the TST bus operator to learn more about existing and potential users and for citizens to learn more about local transport.

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21. **Which is the scheduled timing for implementation of Active Mobility Consultancy campaign? Provide a description of the activities planned for the implementation of Active Mobility Consultancy campaign and a six-months actions plan related to any design/implementation activity will occur. Is any problem/constraint identifiable at this early stage which could affect the implementation of Active Mobility Consultancy campaign and impact on MOTIVATE ?**

Almada's AMC is planned to begin in the summer of 2017, right before the launch of the MOTIVATE platform

2. Rhodes

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SUMP

1. Which is the development stage of SUMP in Rhodes?

The municipality of Rhodes has obtained funding up to 60.000€ from the Green Fund in order to develop a SUMP in Rhodes.

2. Which data typology has been collected/is under collection/has planned to be collected (depending on the development stage) for SUMP definition/revision (demographic, economic, tourist flow, traffic, O/D matrix, other) ?

Data collection and development of the SUMP will be assigned to external expertise.

3. For each data typology indicated in 2), detail the procedures/tool adopted for data collection and when data have been collected or are planned to be collected ?

4. For each data typology indicated in 2), detail how data are stored and managed.

5. Have been travel diaries info already collected in the site ? If yes, please detail the info collected, when and how.

Quality of Public Transport services

6. Which is the number of PT services: transport modes, number of lines, number of daily circulating fleet, daily km travelled, yearly passengers.

“RODA” is the municipal transport company that services the urban and suburban area of the city of Rhodes, as well as the interurban areas at the west side of the island. “RODA” is equipped with 32 buses_ 8 of them mini-buses_ and 2 tourist trains. Daily kilometres travelled, are about 3.900 during winter-time and around 5.400 during the summer. The company daily conveys 1.600 students to and out of school and annually transports approximately 2.000.000 passengers.

7. Has been already carried out an assessment/survey of possible weakness or improvements to PT services?

No

8. Which aspects related to quality of Public Transport services will be evaluated by MOTIVATE project?

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Public transport system quality and daily operation.

9. Which kind of info are supposed to be collected in the evaluation of quality of Public Transport services?

The information collected will have to relate to public transport system quality and daily operation. Opinions will be furthermore collected on the necessary aspects of the future PT information system (services, type of information, interface, etc).

10. Are other data collection campaigns (despite MOTIVATE) planned for the evaluation of quality of Public Transport services ?

No

PT Information system

11. Please provide a description of Information system? Which are the main objectives, end-users services and target users ?

The information system will provide real time information to locals and visitors. That would include, waiting time at the bus stop, route information, combining itineraries, tickets' price, company information etc.

12. Please confirm that the PT Information system is already operated².

*The municipality of Rhodes **has developed a real time traffic information system** (DIAVLOS) that was financed within the framework of the Cross Border Cooperation Programme "Greece-Cyprus 2007-2013" and includes,*

- *12 permanent traffic data recording stations (traffic volumes, travel speed) in central arteries of the municipality,*
- *2 variable message signs (VMS) installed on basic road arteries of the city, that provide information about current traffic conditions as well as road events,*
- *4 «smart» LED signs at bus stops, that currently provide static information*

Furthermore a traffic management system that provides real time information for the current traffic conditions is developed. The traffic data acquisition stations, send traffic data to an application. The data is processed using traffic models and relevant traffic information is sent

² If not operating, describe an implementation plan with milestones

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to VMS signs. The information is also available through,

- an info kiosk installed outside the municipality information desk at the New Market,
- The municipality's website at <http://diavlos.rhodes.gr:90>

The municipality **is not currently equipped with a real time Public Transport Information system but intends to develop it within the concept and content of MOTIVATE project.** That process will include,

- Supply, configuration and software installation for real time PT information using existing equipment in vehicles (buses)
- Connection of existing Smart Signs supplied by DIAVLOS to the PT information system.
- Development of a mobile application for updating drivers and passengers on the traffic conditions in the city of Rhodes through the existing DIAVLOS system and on real time PT information
- Development of an application for PT information via Smart Signs, with standardized interface for any signs
- Interfacing the real time PT information system to the existing Web Site of the DIAVLOS project so as to create a single Urban Mobility Center
- Integrate the MOTIVATE platform to the existing urban mobility platform developed by DIAVLOS project and to the mobile application.

13. Which is the number of current users of information system (i.e. pageview, number of access, registered users, downloads, please choose the best measuring unit)?

The municipality **is not currently equipped with a real time Public Transport Information system.**

14. Has been already carried out a pre-feasibility analysis of the improvements required by PuT Information system ?

Regarding the development of the real time traffic information system, the municipality in cooperation with RODA has identified primarily a set of standards.

Route display

- Management of departures
- Adding, or removing itineraries
- Altering parameters of an itinerary
- Comparing vehicles' actual to theoretical status, compliance to departures tables etc.

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Network display in table and digital map. At a minimum, the following information will be shown:

- Line number.
- Number of vehicles launched on the line
- Number of detected vehicles
- Direction of detected vehicles, etc.

Vehicle display in real time. For each vehicle will be at least be displayed,

- Its' number
- Routes' number.
- Scheduled departure time
- Location of vehicle and any deviation from scheduled route time.
- Time distance of vehicle from previous and next vehicle
- Instructions given to driver
- Marking abnormalities
- Graphical display of vehicles' track

Display of bus lines on digital map

- Route diagram in linear form
- Detection and direction of vehicles and identification of vehicle (windshield number and / or plate) on a specific route.
- Branches and multiple itineraries in a requested traffic direction, from a terminal to another, as well as secondary terminals.
- Calculation of arrival time of vehicles

15. Provide a description of the activities planned for the design of the improvement of PT Information system. Provide a six-months actions plan related to any design activity will occur. Are other data collection campaigns (despite MOTIVATE) planned for the collection of needs/expectations of the users related to PT Information system ? Which will be the role of users needs collection campaign supported by MOTIVATE platform ? For example: validation/tuning of some predefined solutions, assessment of specific aspects (which one?), preliminary role in the design in order to identify most suitable options to be developed/tuned in a following phase, etc.

The set of standards primarily identified will be improved after users identify their needs through MOTIVATE platform campaign. The municipal consultation committee will be the means to communicate the project. No other data collection campaigns are planned.

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16. Is any problem/constraint identifiable at this early stage which could affect the **development of the new PT Information system** and impact on MOTIVATE ?

No

17. Which kind of info are supposed to be collected in the evaluation of users acceptance of the **development of the new PT Information system** ?

Quality- accuracy of information etc

18. Are other data collection campaigns (despite MOTIVATE) planned for the evaluation of users acceptance of the **new PT Information system** ?

No

Assessment of mobility problems

19. Has been already carried out an assessment/survey of possible weakness or improvements to mobility ?

No

20. Which aspects related to mobility problems will be evaluated by MOTIVATE project ?

During the low season, the residents will provide their travel diaries (& patterns) through the MOTIVATE platform and will evaluate public transport (PT) quality and the existing real time information provision service (DIAVLOS). They will also provide their needs to feed the development of a PT information system.

During the high season and after the development of the PT information system, residents and visitors will insert travel diaries and will evaluate the PT quality, the real time traffic information system and the newly developed PT Information System. Furthermore, crowdsourcing will be used to capture travelers' views on mobility problems and gamification techniques will motivate them to use Rhodes PT.

21. Which kind of info are supposed to be collected for the assessment of mobility problems?

22. Are other data collection campaigns (despite MOTIVATE) planned for the assessment of mobility problems.

Not currently, but will probably as soon as the SUMP is in process.

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Gamification

23. Will gamification be implemented through MOTIVATE Platform ?³

24. Which services/functionalities are planned for end-users ?

³ If not, provide an implementation plan with milestones

3. Siena

SUMP

1. Which is the development stage of SUMP in Siena ?

In Siena, currently a task-force managing the Mobility Plan is active, although the SUMP process has not started yet. The last official document on Mobility Plan was produced more than 15 years ago in 2001. The task-force is also working on the identification of some solutions for the urban freight distribution in the context of Sustainable Urban Logistics Plan. Therefore, some activities related to the data collection could be useful also for the SUMP process. In conclusion there is not an official SUMP but the Municipal offices are working in the SUMP direction

2. Which data typology has been collected/is under collection/has planned to be collected (depending on the development stage) for SUMP definition/revision (demographic, economic, tourist flow, traffic, O/D matrix, other) ?

In Siena Municipality there is a lot of available different type/class of data referring in particular to traffic and access counts, demographic data, economic data and data related to the commercial sector, vehicle data, % of mode split (trips for work, study, leisure, etc.). There is not an updated O/D matrix. Therefore at the date the task-force is working on the collection of the available data.

3. For each data typology indicated in 2), detail the procedures/tool adopted for data collection and when data have been collected or are planned to be collected ?

As stated above, a specific data collection has not been planned at this stage. The data indicated in 2) are present in the Municipality but managed under the responsibility of different Municipality departments.

4. Have been travel diaries info already collected in the site ? If yes, please detail the info collected, when and how.

NO.

Quality of Public Transport services

5. Which is the number of PT services: transport modes, number of lines, number of daily circulating fleet, daily km travelled, yearly passengers.

In the urban context of Siena, TIEMME operates 14 bus lines. The number of buses that every day exit from depots for the urban service are around 60, the yearly Kms travelled are 4 Million and the number of yearly passengers are 10 ml. In any case, TIEMME, Public

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Transport Operator of Southern Tuscany Region, operates the service not only in Siena and its province but also in Arezzo, Grosseto, Piombino towns and provinces covering an area of 13.000 KM2. In this context the overall figures of TIEMME are the following:

Veh. km year: 26.700.000, School Services: 2.700.000 , N° Vehicles: 750 Passengers/year: 40.000.000

6. Which aspects related to quality of Public Transport services will be evaluated by MOTIVATE project?

MOTIVATE, in TIEMME, will be based on the functionality extension and upgrading of the existing TIEMME MOBILE platform for obtaining two sets of information, regarding:

- i) needed improvements of mobility services based on residents and tourists requirements and needs;
- ii) needed improvements/changes on the quantity and type of information provided by TIEMME MOBILE APP and social networks, according to users preferences.

On the basis of these data, TIEMME could evaluate the possibility to tune some of its operated services (line route and timetable, bus stops info, etc.). Furthermore, crowdsourcing will be used to capture travelers' (residents and tourists) views on mobility problems and gamification techniques will motivate them to use PT.

7. Has been already carried out an assessment/survey of possible weakness or improvements to PT services ?

Every six months TIEMME carries out a customer satisfaction in the whole operated context (including Siena urban areas) providing an assessment of the operated services and the main answered problems.

8. Which kind of info are supposed to be collected in the evaluation of quality of Public Transport services ?

The six-months customer satisfaction campaign includes different questions that are each time differentiated on the basis of the specific objective to be attained. This method could be revised according to MOTIVATE objectives and stakeholders involvement strategy taking into account also the role of the TIEMME MOBILE with the new MOTIVATE functionalities like (assessment and questionnaire)

9. Are other data collection campaigns (despite MOTIVATE) planned for the evaluation of quality of Public Transport services ?

See answer to question 8)

10. Will improvements to Public Transport services' quality (coming from users feedbacks in phase 1) be implemented between phase 1 and phase 2 data collection ?⁴

The Public Transport services scheduling is different from the winter and summer period therefore the possible improvements could be focused more in the info provision than in variation to the operated services. The winter period therefore will be used for testing the new TIEMME MOBILE app and tuning the main functionalities.

PT Information APP "TIEMME Mobile"

11. Please provide a description of PT Information APP. Which are the main objectives, end-users services and target users ?

The main objective of the app is to provide to the end users transport information and services. The TIEMME Mobile app is optimised for both smartphone and tablet and is available on Android and iOS platforms.

All end users services are accessible from the main screen:

- stop points, departure times
- routes
- journey planning
- ticket purchase
- news
- location-based access to information
- QR code interaction at stops
- download of timetables (pdf)

End users are all the users of public transport services operated by TIEMME in the above indicated areas.

12. Please confirm that the PT Information APP is already operated⁵.

YES. TIEMME is in this period taking into account the objective and the methodologies of Motivate, and is involving a specific user group for evaluating the usability and functionalities of the existing TIEMME MOBILE app

13. Which is the number of current users of PT information APP (i.e. downloads, active users, please choose the best measuring unit)?

Active users on Android: 3.000; Active users on IoS: 5000

⁴ Is any problem/constraint identifiable at this early stage which could affect the implementation of improvement to PT and impact on MOTIVATE ?

⁵ If not operating, describe an implementation plan with milestones

The downloads are 10.000

14. Has been already carried out a pre-feasibility analysis of the improvements required by PT Information APP ?

TIEMME aims to enforce the current “TIEMME MOBILE” app with functionalities dedicated to:

- collecting data and preferences regarding the mobility and transport services and possible solutions for urban areas and villages served by TIEMME;
- assessment of the services provided by “TIEMME MOBILE” APP and collection of proposed solutions from users and operating staff involved in the service provision.

Currently TIEMME, beside the usability and functionalities indicated in the answer to question 13), is working on the analysis and feasibility of the overall restyling of the APP and on the increase of the number of functionalities (some of these derived by MOTIVATE platform like travel diary, assessment and evaluation, feedbacks). At this stage, as part of MOTIVATE activities, TIEMME is working on the specification of the MOBILE app functionalities and organization/operation impacts.

- Provide a description of the activities planned for the design of the improvement of PT Information APP. Provide a six-months actions plan related to any design activity will occur. Are other data collection campaigns (despite MOTIVATE) planned for the collection of needs/expectations of the users related to the improvement of PT Information APP ? Which will be the role of users needs collection campaign supported by MOTIVATE platform ? For example: validation/tuning of some predefined solutions, assessment of specific aspects (which one?), preliminary role in the design in order to identify most suitable options to be developed/tuned in a following phase, etc.

At this stage, TIEMME is working on two interrelated and connected main streams:

- a. support CERTH in the definition of the new functionalities and the data exchange flow between the MOTIVATE platform and TIEMME Mobile platform
- b. improvement and revamping of the TIEMME MOBILE app in terms of usability, graphics and functionalities more suitable to the citizens and tourists.

This process (b) has already begun since TIEMME organised specific user groups with University students in order to obtain their feedback on the usability and need to have extended functionalities. This restyling process is being performed in parallel with the activity a). Once the design of the new functionalities (travel diary,

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assessment and evaluation) and the modalities of data exchange flow between TIEMME Mobile app and MOTIVATE platform (travel diary data in particular) will be available, they will be integrated in the TIEMME MOBILE app feasibility.

Then the following activities will take place:

- lab testing and focus group with specific user set for testing the new version and following the methodology set by MOTIVATE for the involvement of the stakeholders and cities
- Upload of a beta version (which most probably will be ready for next November) on the market Android e iOS in order to make the app downloadable by the users
- Organisation of dedicated local workshop and/or living labs as indicated in the MOTIVATE project to present the new version
- Organisation of customer satisfaction campaign on the use of the MOBILE app

One of the first constraint is to have an easy and user-friendly app dedicated to public transport service without functions or services that can be found in other app.

17. Is any problem/constraint identifiable at this early stage which could affect the improvement of PT Information APP and impact on MOTIVATE ?

One of the main problem identified at this stage is related to the choice of the APP provider: TIEMME needs to decide whether to use the current APP provider also for the restyling or to appoint a new provider (clearly with procurement procedures). TIEMME IT department is currently analysing the most suitable approach for the appointment of the sw provider

18. Will improvements to PT Information APP (coming from users feedbacks in phase 1) be implemented between phase 1 and phase 2 data collection ?⁶

See answer to Q11

⁶ Is any problem/constraint identifiable at this early stage which could affect the improvement of Tiemme Mobile APP and impact on MOTIVATE ?

4. Larnaca

SUMP

1. Which is the development stage of SUMP in Larnaca?

Larnaca SUMP is in the final tendering process. The tender will be published in February awarded in May and completed in 18 months (end 2018). SUMP will cover the Greater City Area.

Previous Mobility Plans - Buchanan 1993

- City Centre Plan 2003
- SMAP 2006

2. Which data typology has been collected/is under collection/has planned to be collected (depending on the development stage) for SUMP definition/revision (demographic, economic, tourist flow, traffic, O/D matrix, other)?

All relevant data will be collected – demographic, economic, tourist flow, Traffic measurements,

Public Transport, Cycle Lanes, Pedestrian lanes, Parking requirements.

3. For each data typology indicated in 2), detail the procedures/tool adopted for data collection and when data have been collected or are planned to be collected ?

The procedures/tools for data collection will be decided by the successful consultant.

4. For each data typology indicated in 2), detail how data are stored and managed.

The data will be stored and managed by the Public Works Department. A new specialised sub-department will be formed with sole responsibility the SUMP.

5. Have been travel diaries info already collected in the site? If yes, please detail the info collected, when and how.

Travel diaries were collected from high school pupils in 2011 to ascertain ways of going to school.

Each pupil completed daily a form indicating the way he/she travel to and from school.

Quality of Public Transport services

6. Which is the number of PT services: transport modes, number of lines, number of daily circulating fleet, daily km travelled, yearly passengers.

The Public Transport is managed by the Central Government. The Public Transport consists of only Busses. There is Rural and Urban Service.

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Modal Split of 2005/06

Modal split	%	Displacements
Private transport	75	58.000
Public transport	5	3.500
On foot	20	16.000

Rural Services 4 lines
30 busses
1,256,476 km/year
21,736 passengers/year + 25% free

Urban Services 18 lines
45 busses
7020 km/day
700,000 passengers/year

7. **Has been already carried out an assessment/survey of possible weakness or improvements to PT services?**

The assessment is carried out by the PWD and is continuous.

8. **Which aspects related to quality of Public Transport services will be evaluated by MOTIVATE project?**

MOTIVATE will evaluate Reliability, Quality of fleet, Quality of infrastructure, Level of Service, Frequency.

9. **Which kind of info are supposed to be collected in the evaluation of quality of Public Transport services?**

Customer satisfaction surveys/questionnaires regarding the quality of busses, bus stops, punctuality and adequacy of service etc.

10. **Are other data collection campaigns (despite MOTIVATE) planned for the evaluation of quality of Public Transport services?**

Other campaigns, like phone surveys, are managed by the Central Government and are continuous.

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11. **Will improvements to Public Transport services' quality (coming from users feedbacks in phase 1) be implemented between phase 1 and phase 2 data collection ?⁷**

The feedback will be given the relevant authority for implementation.

Quality of cycling lanes and walking paths

12. **Please provide some data on cycling lanes and walking paths: number of lanes, length, signalizations, equipment for safety at cross-points, etc.**

We have cycling lanes in 6 major roads of the city totalling about 15 km. All lanes have horizontal and vertical signage. No special safety equipment for cross points.

13. **Is available an estimation of bikes circulating?**

No but it looks like there are more bikes around every day.

14. **Has been already carried out an assessment/survey of possible weakness or improvements to cycling lanes and walking paths?**

An assessment was carried out in 2014 by the Cycling Embassy of the Netherlands.

15. **Which aspects related to cycling lanes and walking paths will be evaluated by MOTIVATE project?**

MOTIVATE project will evaluate the adequacy of the network, its safety, condition of surface, signage ease of riding, geometric characteristics.

16. **Which kind of info are supposed to be collected in the evaluation of cycling lanes and walking paths?**

Surveys/questionnaires of cyclists and pedestrians on the condition of cycling and walking paths, safety of walking and cycling, and the adequacy of the existing networks

17. **Are other data collection campaigns (despite MOTIVATE) planned for the evaluation of cycling lanes and walking paths?**

None planned.

18. **Will improvements to cycling lanes and walking paths be implemented between phase 1 and phase 2 data collection?⁸**

⁷ Is any problem/constraint identifiable at this early stage which could affect the implementation of improvements to PT and impact on MOTIVATE ?

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The goal is to implement the improvements but it depends on required permits and budget.

Assessment of mobility and transport problems

19. Has been already carried out an assessment/survey of possible weakness or improvements to mobility?

The assessment of mobility is continuous both in local and central level.

20. Which aspects related to mobility problems will be evaluated by MOTIVATE project?

MOTIVATE will evaluate the quality of PuT, cycling and walking paths, parking requirements and parking management system, Mobility infrastructure.

21. Which kind of info are supposed to be collected for the assessment of mobility problems?

Information on end user satisfaction, traffic jams, delays, road safety, adequacy of infrastructure. Signage, adequacy and condition of parking places and information etc.

22. Are other data collection campaigns (despite MOTIVATE) planned for the assessment of mobility problems.

Campaigns in the framework of the new SUMP.

Gamification

23. Will gamification be implemented through MOTIVATE Platform?⁹

It will be a good idea.

24. Which services/functionalities are planned for end-users?

Public Transport, Cycling, Walking.

⁸ Is any problem/constraint identifiable at this early stage which could affect the implementation of improvements to cycling lanes and walk paths and impact on MOTIVATE ?

⁹ If not, provide an implementation plan with milestones

5. Dubrovnik

SUMP

1. Which is the development stage of SUMP in Dubrovnik ?

With coordination with Faculty of transport and traffic engineering (University of Zagreb) Dubrovnik has developed “Energy efficiency programme for the urban mobility of the city of Dubrovnik” in 2015. Other documentation introduced by the City of Dubrovnik and related to energy efficiency in urban mobility include: “Mobility study” (2012.), “Sustainable mobility strategy of the City of Dubrovnik” (2008.), “Sustainable mobility local plan” (2013.).

SUMP was developed under “Adria.move.it!” project but wasn’t officially approved. Also first draft of SECAP was introduced at the beginning of the year. Introduction of SUMP is one of the objectives of DURA and City of Dubrovnik and the new plan is to upgrade or restructure existing non-official plan and complement it with new ideas (“Smart City”).

2. Which data typology has been collected/is under collection/has planned to be collected (depending on the development stage) for SUMP definition/revision (demographic, economic, tourist flow, traffic, O/D matrix, other) ?

Collected data include: basic demographic data (e.g. number of residents according to the Population Censuses, population density), basic economic indicators (e.g. revenues by economic sector, GDP, GDP per capita...), modal split (%) per vehicle type, car density, average fuel consumption per day, spatial distribution of the daily traffic in Dubrovnik, CO2 emissions in the city traffic...

3. For each data typology indicated in 2), detail the procedures/tool adopted for data collection and when data have been collected or are planned to be collected?

Network research, poll/questionnaire, field work, data from existing (above mentioned) mobility studies and General Urbanistic Plan of the City of Dubrovnik

4. For each data typology indicated in 2), detail how data are stored and managed.

They are stored and managed within textual and graphic sections of existing documentation.

5. Have been travel diaries info already collected in the site? If yes, please detail the info collected, when and how.

Collection of data related to habits, expectations and experiences of tourists (as target group) were one of the surveys conducted towards introduction of documentation such

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as “Energy efficiency programme for the urban mobility of the city of Dubrovnik”

Quality of Public Transport services and its daily operation

6. Which is the number of PT services: transport modes, number of lines, number of daily circulating fleet, daily km travelled, yearly passengers.

Public transport system in the city of Dubrovnik relies exclusively upon bus. “Libertas” is the name of the public company (owned by the City) which is responsible for PT system in the city and its surroundings. There are 14 urban traffic lines (inside of administrative city area) and 18 additional suburban traffic lines. Other means for transport (regarding tourists) include taxi vehicles and travel agency private charter vehicles.

7. Which aspects related to quality of Public Transport services will be evaluated by MOTIVATE project?

Public transport system will be examined and analyzed so to gain insight into the strengths, weaknesses and potentials for improvement for PT but also overall urban transport of Dubrovnik. Local residents and tourists as main groups will be asked information regarded to intensity and pace of their daily participation in traffic and their comments, criticisms and suggestions (e.g. their frequency, commodity...). Sample question: What kind of transportation do you use? How often? How long distance? Have you experienced delays and traffic jams, and how often? How many types of transport you must change between starting point of your journey and your destination? What is the purpose of the trip? What is the destination? How would they like to improve the public transport service? How did you obtain information for PT in Dubrovnik (question for tourists)? Do you use a bike? How much do you use bicycle for recreation, and how much for example to go to work? Have you ever drove in e-buses and e-vehicles and would You use such type of vehicle over conventional types? The main idea is that beside PT other “mobile groups” will also be part of overall research, e.g. drivers of e-scooters (Dubrovnik e-scooter sharing system), passengers on cruising ships...

8. Which aspects related to quality of daily operation of Public Transport services will be evaluated by MOTIVATE project?

Aspects related to their frequency, commodity, overall functionality and contribution of sustainable means of transport.

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9. Has been already carried out an assessment/survey of possible weakness or improvements to PT services? And for its daily operation?

Within existing and above mentioned documentation research was conducted in which specific weaknesses were confirmed and improvements suggested with a goal of relieving the pressure of the overall traffic system and reducing CO2 emissions (e.g. implementation of charging system in parts of the city).

10. Which kind of info are supposed to be collected in the evaluation of quality of Public Transport services ? And for its daily operation?

Info related to the experiences and expectations of local residents and tourists (as target groups) based on their everyday participation in the traffic system of the city.

11. Are other data collection campaigns (despite MOTIVATE) planned for the evaluation of quality of Public Transport services and its daily operation ?

No.

Traffic Information System

12. Describe the Traffic Information System: which are its objectives, main services to end-users and target groups?

The final goal is to improve the level of efficiency in the functioning of the traffic of the City of Dubrovnik, to introduce IT as a tool in mobility planning and to relieve Old town and the contact zone from the intensified traffic pressure, especially during “high season”. End-users and target groups are local residents and tourists but also public transport service vehicles, delivery vehicles, tourist transport vehicles, motorcycles...

13. Please confirm that the Traffic Information System is already operated¹⁰.

The system is partially operational. Part of the designated actions is already implemented, while other activities are scheduled for the next period.

14. Which is the number of current users (i.e. page view, number of access, registered users, please choose the best measuring unit)?

There are 1500 active users regarding Libertas app and Smart parking app.

¹⁰ If not operating, describe an implementation plan with milestones

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15. Which kind of info are supposed to be collected by MOTIVATE platform relating to the evaluation of Traffic Information System?

The level of awareness of the "smart" services and applications as well as the active participation of subjects. Sample question: Are you familiar with application? Did you install it? What do you think about the effect of specific application? Do you find it usable?

16. Are other data collection campaigns (despite MOTIVATE) planned for the evaluation of Traffic Management System?

Recently implemented 116 cameras will be used in the future to monitor overall traffic and will be pushing to assess the overall system.

PT Information APP

17. Has been carried out already a pre-feasibility analysis of PT Information APP ?

Which are the main objectives, end-users services and target users ?

Yes, as part of the design of SECAP and "Energy efficiency programme for the urban mobility of the city of Dubrovnik" documents. Also "Analysis of the state of development of services" was completed and it was concluded that the traffic is underdeveloped segment in the life of the city and will receive priority in the "Smart city" project.

18. Provide a description of the activities planned for the design of PT Information APP.

Provide a six-months actions plan related to any design activity will occur. Are other data collection campaigns (despite MOTIVATE) planned for the collection of needs/expectations of the users related to the APP? Which will be the role of users needs collection campaign supported by MOTIVATE platform? For example: validation/tuning of some predefined solutions, assessment of specific aspects (which one?), preliminary role in the design in order to identify most suitable options to be developed/tuned in a following phase, etc.

Pilot action included introduction of "smart parking" (implementation of 123 "smart parking" recording sensors) on one of the parking sites outside of Old town. Digital panels were implemented on several bus stations and their purpose is giving general information but the aim is also to give traffic info also in the future. Libertas app (with timetable of PT buses) and Smart parking app (with available free places) were installed. 116 cameras were installed recently in Old town and important intersections to monitor traffic and reroute it from Old town and its contact zone with the aim to limit number of daily visitors in Old town to 8000. By April new applications will be

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installed and they will be designed for taxi and bus drivers (e.g. with data of free bus and taxi places at Pile which is where the entrance to the Old town is). Also “Libertas” timetable will be inserted to Googlemaps, while existing camera and parking sensors systems will be expanded.

19. Which is the scheduled timing for implementation of PT Information APP? Is any problem/constraint identifiable at this early stage which could affect the implementation of PT Information APP and impact on MOTIVATE?

No, next phase in “Smart city implementation” will be in April.

20. Which is the number of potential target users?

Can't evaluate properly. Include local residents (42.000 living in Dubrovnik urban area) and tourists.

21. Which kind of info are supposed to be collected in the evaluation of users acceptance of the PT Information APP ?

The level of awareness and acceptance of existing services, and assessment of their quality level concerning provision of real-time traffic data.

22. Are other data collection campaigns (despite MOTIVATE) planned for the evaluation of users acceptance of the PT Information APP ?

Evaluation is continuous process regarding “Smart City strategy” because active users all the time rate the application which they use. Number of active users and ratings of installed applications are relevant data concerning PT Information system.

Assessment of mobility problems

23. Which aspects related to mobility problems will be evaluated by MOTIVATE project ?

Since local residents and tourists will be actively participating in the data collection and management process, evaluation will be centered on problems and insufficiencies (related to frequency, commodity and overall functionality of the traffic system) which these two target groups are facing during their daily participation in the traffic system of the city.

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24. Has been already carried out an assessment/survey of possible weakness or improvements to mobility ?

Yes, several analyses and assessments were introduced within existing documentation related to urban mobility (e.g. “Energy efficiency programme for the urban mobility of the city of Dubrovnik”, “SECAP” draft...).

25. Which kind of info are supposed to be collected for the assessment of mobility problems?

Information focused on overall acceptability of the existing traffic system by MOTIVATE target groups (local residents, tourists) and contribution of sustainable means of transport in it.

26. Are other data collection campaigns (despite MOTIVATE) planned for the assessment of mobility problems.

“Libertas” public transport company is continually conducting data collection campaigns among local citizenry (as target group) with the goal of improving and developing their own level of service. Also such activities are one of the steps toward completion of the final version of SECAP document.

Gamification

27. Will gamification be implemented through MOTIVATE Platform ?¹¹

28. Which services/functionalities are planned for end-users ?

¹¹ If not, provide an implementation plan with milestones

6. Ioannina

SUMP

1. Which is the development stage of SUMP in Ioannina ?

For the municipality of Ioannina. The SUMP is ready to be procured. During the procurement process, the Municipality has defined the goals and the end-results expected from its completion.

The Municipality's SUMP is going to be funded under the Operational Program "Thessaly – Sterea Ellada - Epirus" in the framework of the Regional Operational Programmes 2014-2020 of National Strategic Reference Framework (NSRF or ESPA).

2. Which data typology has been collected/is under collection/has planned to be collected (depending on the development stage) for SUMP definition/revision (demographic, economic, tourist flow, traffic, O/D matrix, other) ?

The data that will be collected for the delivery of the Ioannina SUMP need to include the following:

- The capacity of the city's road and street network and how we use it
- Traffic data for the entire city
- Data on commercial traffic movement
- Data of public transport
- Data for taxi transport
- Data for the use of the city for pedestrians/athletes/leisure
- Data for parking capacity and needs
- Data for People with disabilities and mapping of the available infrastructure
- Mapping data for movements in the city
- Daily Trip Profile by Journey Purpose
- Mapping of the existing traffic roads and alternative routes in order to reduce traffic and use of private cars.
- Public transport data for all means of transport (buses etc)
- Travel diaries for visitors and tourists
- Vehicle ownership related to areas-neighborhoods density

3. For each data typology indicated in 2), detail the procedures/tool adopted for data collection and when data have been collected or are planned to be collected?

Existing methods for measuring the capacity of a road and street network will primarily focus on the capacity to move vehicles. The City of Ioannina and the Traffic Administration Department aims at developing an integrated methodology for measuring capacity in terms of

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people that can be applied for all modes of transport utilized.

This methodology is suggested to follow the Poly-SUMP Methodology and include:

1. Collect transport, spatial, environmental, safety and economic policy documents and plans at provincial, regional and local level, as it is vital to have a solid understanding of existing visions of planning processes.
2. Identify stakeholders and competences
3. Drivers, barriers and opportunities Analysis
4. Data collection:
 - a. Population
 - b. Number and type of workplaces
 - c. Workers and their travel diaries
 - d. Trip distance in the city
 - e. Average trip distance within city
 - f. Trip distance between the city
 - g. Share of public transport trips on a working day (%)
 - h. Share of non-motorised trips on a working day (%)
 - i. Number of trips within and between the poles.
 - j. Travel diaries for visitors and tourists through targeted questionnaires

4. For each data typology indicated in 2), detail how data are stored and managed.

Through the SUMP the Municipality hopes to reach a set of clear and simple indicators that will provide the mobility profile and they will be used as policy tools.

Moreover, the Municipality hopes to create an integrated Transport Model with performance indicators, used as a policy and design tool through forecast assumptions and scenarios development.

5. Have been travel diaries info already collected in the site ? If yes, please detail the info collected, when and how.

No

Quality of Public Transport services and its daily operation

6. Which is the number of PT services: transport modes, number of lines, number of daily circulating fleet, daily km travelled, yearly passengers.

There is only one Urban and inter-urban transportation module and Operator. This is the Municipal Bus

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7. Has been already carried out an assessment/survey of possible weakness or improvements to PT services ? And for its daily operation ?

No

8. Which kind of info are supposed to be collected in the evaluation of quality of Public Transport services ? And for its daily operation ?

The MOTIVATE project will focus not only on PT but also on citizens and visitors transportation habits.

The aim of data collection is presented below:

During the low season, residents will declare travel diaries (& patterns) through MOTIVATE's application and will evaluate public transport system's quality and the real time information system operation. They will also assess the utility of control parking system in city center & of the respective information provision system (space availability, routing services etc). During the high season and after the controlled parking system development travellers will declare their travel diaries and will evaluate (i) PT, (ii) real time traffic information service quality and the parking system operation. Furthermore, crowdsourcing will be used to capture travellers' views on mobility problems and gamification techniques will motivate them to use PT

9. Are other data collection campaigns (despite MOTIVATE) planned for the evaluation of quality of Public Transport services and its daily operation ?

The data campaign that will be prepared during the development of the SUMP.

10. Will improvements to Public Transport services' quality (coming from users feedbacks in phase 1) be implemented between phase 1 and phase 2 data collection ?

The Municipality of Ioannina considers the MUNICIPAL URBAN BUS organization a strategic partner in mobility issues. Therefore, all the data will be collected in partnership with the organization. The next step will be its common use and evaluation for the improvement of public transport.

Traffic Information System

11. Describe the Traffic Information System: which are its objectives, main services to end-users and target groups ?

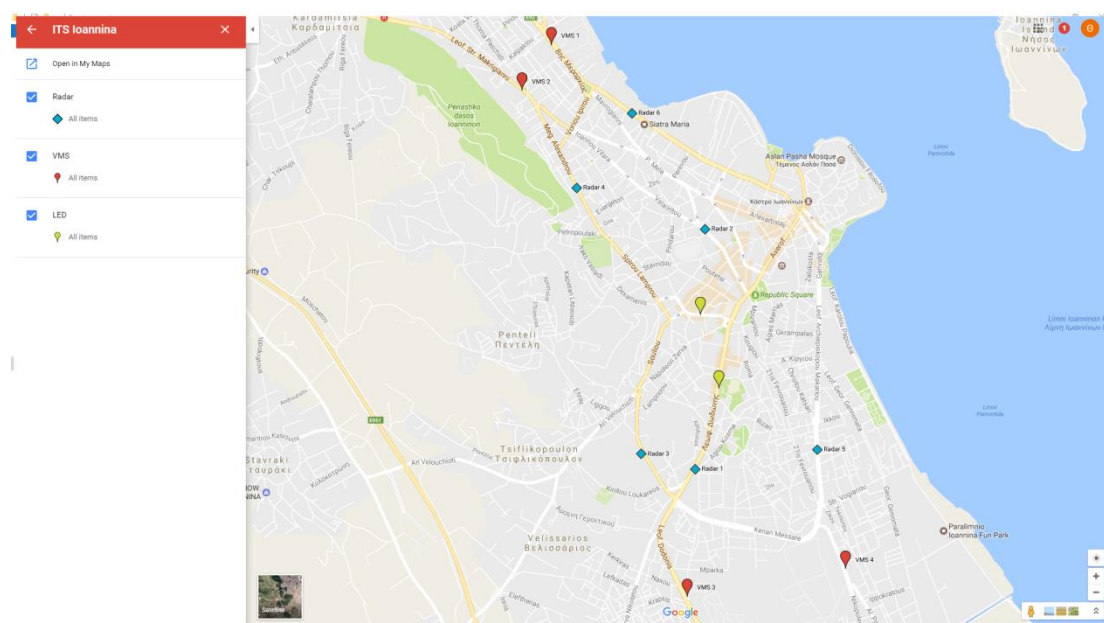
In the framework of the NSRF Operational Program entitled "Digital Plan" The Municipality of Ioannina is completing two very important projects in the direction of urban mobility management:

1. Innovative fuel saving system and optimization of waste collection routes of waste collecting trucks, in the municipality of Ioannina. The project's targets include:

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- a. Fleet management and monitoring with a focus on reducing the cost of operation and the best possible service to citizens ensuring the long-term operation of all of the installed equipment.
 - b. Fuel supply and consumption monitoring in real time.
 - c. Dynamic recording of the weight of waste during collection in order to optimize the waste management process of the municipality and reduce operating costs.
 - d. Daily, weekly and/or yearly amount of waste generated per geographical area.
 - e. Updated digital maps of location of municipal waste containers and collecting trucks.
2. Integrated management platform and traffic monitoring in order to inform citizens about traffic conditions through multiple communication channels ". The project aims to inform the public, in real time, in relation to the prevailing traffic conditions. The City will know the evolution of traffic and will intervene in appropriate cases (accident, projects, exceptional events, heavy traffic spots), while informing and updating the drivers through variable message signs, portal, mobile applications and SMS. Moreover, through the project's smart technology information and guidance will be provided for parking spaces in public places.

The Municipality of Ioannina, through the "*Integrated management platform and traffic monitoring in order to inform citizens about traffic conditions through multiple communication channels*" project is already collecting data through radar cameras related to traffic loads in 6 city spots as presented below.



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12. Please confirm that the Traffic Information System is already operated¹².

Yes it is operative and it can be accessed here:

<http://itransport.ioannina.gr/index.php/en/home/>

Or through the Municipality's website:

<http://www.ioannina.gr/p2/index.php>

13. Which is the number of current users (i.e. pageview, number of access, registered users, please choose the best measuring unit) ?

-

14. Has been already carried out an pre-feasibility analysis for improvements to Traffic Information System ?

No

15. Which kind of info are supposed to be collected by MOTIVATE platform relating to the evaluation of Traffic Information System ?

- Functionality
- Number-percentage of citizens and visitors benefited by its use
- Potential improvements to make it more attractive and user-friendly
- Potential development of mobile application
- Information and assistance with data management, evaluation and further use
- Inter- (and) Intra-Connection with the e-parking pilot application

16. Are other data collection campaigns (despite MOTIVATE) planned for the evaluation of of Traffic Management System ?

The data campaign that will be prepared during the development of the SUMP.

17. Will improvements to Traffic Management System (coming from users feedbacks in phase 1) be implemented between phase 1 and phase 2 data collection?¹³

Hopefully yes. Potential obstacle include:

1. Time constraints
2. Procurement processes and legal obstacles
3. Difficulties in data collection due to unwillingness of partners and citizens to participate

¹² If not operating, describe an implementation plan with milestones

¹³ If so, is any problem/constraint identifiable at this early stage which could affect the implementation of improvement to PT and impact on MOTIVATE ?

4. Funding opportunities

Control parking system and related information system

18. Has been carried out already a pre-feasibility analysis of control parking and information system? Which are the main objectives, end-users services and target users ?

No

19. Provide a description of the activities planned for the design of control parking system. Provide a six-months actions plan related to any design activity will occur. Are other data collection campaigns (despite MOTIVATE) planned for the collection of needs/expectations of the users related to the control parking system ? Which will be the role of users needs collection campaign supported by MOTIVATE platform ? For example: validation/tuning of some predefined solutions, assessment of specific aspects (which one?), preliminary role in the design in order to identify most suitable options to be developed/tuned in a following phase, etc.

The Intelligent Parking service will be a part of the Intelligent Transportation System (ITS). It will be focused to different parking facilities on the basis of new functions they provide. This service not only manages the internal operations of the existing municipal parking facilities, but it will also be designed for street parking management.

The services which the Intelligent Parking System should provide in the future will include:

- The equipment (road sensors, cameras, potential combination with smart lighting installations etc)
- The parking availability information system and parking reservation system should provide advanced navigation services.
- The mobile electric commerce system and a continuously working gate system should collect the toll charges electrically.
- An automated navigation system should assist in safe driving.
- An in-facility navigation system should provide the best possible traffic management.
- Provision of effective security for the safety of cars.
- Provision of strong functions for facilitating administrators and managers in management of the parking facility.

The steps towards the delivery of the pilot action include:

1. Feasibility study.
2. Indication of the spaces available for the smart application

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3. Research on the function of the solution:
 - a. Acceleration of end-user acceptance
 - b. Cooperation with municipal parking facilities.
 - c. Model of function for street- e-parking: short time parking availability controlled by the Municipality and/or “demand-responsive” pricing
 - d. Cooperation with municipal traffic police and police department
4. Best technical and economical solution
5. Procurement process
6. Installation
7. Pilot function
8. Integration with existing Intelligent Transport System

20. Which is the scheduled timing for implementation of control parking system ? Is any problem/constraint identifiable at this early stage which could affect the implementation of control parking system and impact on MOTIVATE ?

ACTION	MONTH								
	1	2	3	4	5	6	7	8	9
Feasibility study									
Research and Data collection									
Selection of appropriate technology									
Procurement process									
Installation									
Pilot function									
Integration with ITS									

21. Which is the number of potential target users ?

The feasibility study will provide the exact data

22. Which kind of info are supposed to be collected in the evaluation of users acceptance of the control parking system ?

- Demand data

D3.1.1 Pilot activities management and coordination plan

- Number of potential users and other “acceptance” related data (Gender, age, Experience, familiarity with smart applications, willingness to use and/or pay for the service etc)
- Location of the application (parking facilities or roadside parking spaces)
- Potential application methods: Mobile phones, Municipal cards-tickets etc
- Desired user interface

23. Are other data collection campaigns (despite MOTIVATE) planned for the evaluation of users acceptance of control parking system ?

The data collected during the development of the SUMP.

24. Are other data collection campaigns (despite MOTIVATE) planned for the evaluation of users acceptance of parking information system ?

The data campaign that will be prepared during the development of the SUMP.

Assessment of mobility problems

25. Which aspects related to mobility problems will be evaluated by MOTIVATE project?

- Public transportation
- Travel diaries (for citizens and visitors)
- Walking and Cycling improvement
- Transportation improvement for people with reduced mobility capacity or other disability issues
- Smart parking application
- Introduction of other innovative methods of facilitating transportation

26. Has been already carried out an assessment/survey of possible weakness or improvements to mobility ?

No

27. Which kind of info are supposed to be collected for the assessment of mobility problems ?

For the Municipality of Ioannina, the overall target of the MOTIVATE project is to:

1. Use crowdsourcing technologies and other smart tools in order to facilitate an effective preparation for the design and implementation of the SUMP, and more specifically:

D3.1.1 Pilot activities management and coordination plan

- a. To open a communication channel with citizens and gather all the necessary elements needed for sustainable mobility planning,
- b. To Interact and collect data from citizens and tourists.
- c. To evaluate the existing mobility system (public and private) and its quality
- d. To assess and test (through the pilot project) specific policies and mobility measures.

28. Are other data collection campaigns (despite MOTIVATE) planned for the assessment of mobility problems.

Several campaigns are designed throughout the SUMP delivery process that will be executed by special scientists.

Gamification

29. Will gamification be implemented through MOTIVATE Platform ?¹⁴

Yes

30. Which services/functionalities are planned for end-users ?

- Smart parking system
- Public transportation in total
- Walking and cycling improvement
- Transportation improvement for people with reduced mobility capacity or other disability issues

¹⁴ If not, provide an implementation plan with milestones. Is any problem/constraint identifiable at this early stage which could affect the improvement of Traffic Information system and impact on MOTIVATE ?