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Assessment of urban mobility needs, gaps and priorities in Mediterranean partner countries

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Abstract

Improving urban mobility and reaching the goal of sustainability is a key priority for the European Union. To this end, substantial efforts have been undertaken in several regions within the European context regarding the investigation and successful implementation of innovative and green urban mobility solutions. The knowledge and experience gained, at the local level, throughout the implementation process of such solutions is of utmost importance and significant added-value when considering their successful transferability in other cities/regions within Europe and beyond. Within the aforementioned context, this paper aims first to present a set of such innovative and green urban mobility solutions, as identified by leading experts within the framework of the EU-funded “SOLUTIONS” research project, and then assess the transferability potential of selected solutions in Mediterranean Partner Countries (MPCs). The identified solutions were clustered into four thematic areas namely public transport, transport infrastructure, city logistics and integrated planning/Sustainable Urban Mobility Plans. For each thematic cluster, existing urban mobility needs, gaps and priorities were assessed in three selected MPCs, enabling the identification of common priorities for the Mediterranean region as well as the selection and prioritization of promising urban mobility solutions fitting best the local context of Mediterranean cities thus presenting the largest potential towards meeting sustainability targets.

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1. Introduction

European cities are the home to approximately 70% of the EU population generating more than 80% of the Union's Gross Domestic Product (GDP). This increased level of urbanization has resulted into a number of urban mobility challenges, which European cities need to efficiently address. Urban mobility is still, to a great extent, reliable on the use of conventionally fuelled vehicles despite substantial efforts that have been undertaken for promoting the use of sustainable urban transport modes. Traffic congestion, from which several European cities are still heavily suffering, is estimated to cost approximately 80 billion € every year while 23% of all CO₂ emissions in urban areas are attributed to the transport sector. European cities need to undertake a series of actions for addressing the aforementioned challenges and meeting the sustainability targets that have been set by the EU. With the Urban Mobility Package, the European Commission aimed to support the aforementioned process by (a) sharing experiences, show-casing best practices and fostering cooperation, (b) providing targeted financial support, (c) focusing research and innovation on delivering solutions for addressing urban mobility challenges and (d) actively involving the Member States and enhancing international cooperation (European Commission, 2013).

Indeed, several cities and regions within the European context have undertaken substantial efforts for the investigation and successful implementation of innovative and green urban mobility solutions fitting best their existing needs and priorities. The Urban Mobility Observatory (ELTIS) provides an extended overview of such solutions describing the context within which each solution was implemented as well as the benefits that were derived after its implementation for the different type of stakeholders. The knowledge and experience gained at the local level, throughout the implementation process of selected urban mobility solutions, is of utmost importance and significant added value when considering their successful transferability in other cities/regions within Europe and beyond. The European experience, with several cities being well advanced following leading approaches towards sustainable transport, proves to be extremely helpful especially for countries that are rather less developed such as Mediterranean Partner Countries (MPCs).

The Mediterranean region which presents a quite diverse set of urban mobility characteristics, is mainly characterized of rapid rates of urbanization, the consequent proliferation of informal settlements leading to urban sprawl, failure of the public transport system to meet the growing demand, high fatality rates accounting for sustainable transport modes as well as increasing incomes and rates of car ownership in some parts of the region (UfM, 2011; ARLEM, 2013). However, the status of urban transport in the whole region cannot be summarized into a single broad trend for all countries. Urban mobility proves to be strongly influenced by a spectrum of economic, social and political factors highlighting the need for analyzing the conditions, trends and implications of sustainable urban mobility solutions in different Mediterranean countries (Houpin, 2010).

The aforementioned considerations form the background of this paper which aims first to present a set of innovative and green urban mobility solutions, as identified by leading experts within the framework of the EU-funded (FP7) "SOLUTIONS" research project, and then assess the transferability potential of selected solutions focusing on three MPCs i.e. Turkey, Israel and Morocco. The identified solutions were clustered into four thematic areas namely public transport, transport infrastructure, city logistics and integrated planning/Sustainable Urban Mobility Plans (SUMP). For each thematic cluster, existing urban mobility needs, gaps and priorities were assessed in each of the aforementioned countries, enabling the identification of common priorities for the whole Mediterranean region and facilitating the selection and prioritization of promising urban mobility solutions fitting best the local context of targeted Turkish, Israeli and Moroccan cities thus presenting the largest transferability potential and expected benefits.

The rest of the paper is structured as follows: the identified urban mobility solutions are being briefly presented first for each of the four thematic clusters. The methodological approach that was followed for thematically assessing the existing urban mobility needs, gaps and priorities in Turkey, Israel and Morocco is outlined next. Based on the outcomes of the assessment, a series of conclusions were drawn, for each thematic cluster, which were then validated by key stakeholders participating in local workshops that were organized in Kocaeli, Tel Aviv and

Casablanca. The discussions undertaken in the workshops also facilitated the selection and prioritization of promising urban mobility solutions fitting best the local context of the cities participating in the workshops. All the findings from the workshops, which are being thematically presented in the last section of this paper, provided the basis for drawing, at the end of the paper, some more general conclusions with regard to common urban mobility priorities for the whole Mediterranean region with the objective to build a common understanding of the current condition of urban mobility in the region and highlight how current inefficiencies may be successfully addressed.

2. Urban mobility solutions

Within the framework of the EU-funded (FP7) “SOLUTIONS” research project, 58 innovative and green urban mobility solutions, with high transferability potential, were selected and analyzed by leading experts (SOLUTIONS, 2014a; Lah et al., 2015). The selected solutions were categorized into six thematic clusters but only four of them were considered for the Mediterranean region. More specifically, the thematic clusters of “network and mobility management” and “clean vehicles” were not taken into account due to the low transferability potential they present considering the urban mobility characteristics of the region. For the four thematic clusters under consideration i.e. public transport, transport infrastructure, city logistics and integrated planning/SUMPs, the selected solutions are being presented in Table 1. This clustering approach that was followed provided the basis for undertaking targeted knowledge exchange and capacity building actions aiming to facilitate the successful transfer of the selected solutions and respective technologies. It should be highlighted that great emphasis was placed on following a balanced approach of urban mobility measures in order to achieve a maximum sustainability impact. To this end, measures that manage and reduce demand (avoid), promote low-carbon transport modes (shift) and meet efficiency targets thus foster the use of alternative fuels (improve) were all taken into consideration (SUTP, 2011).

Table 1. Overview of selected solutions in the four thematic clusters considered for the Mediterranean region.

Public transport	Transport infrastructure	City logistics	Integrated planning/SUMPs
Bus Rapid Transit (BRT) systems <i>(Improve/shift)</i>	Dedicated bus lanes <i>(Improve)</i>	Urban deliveries with cargo-cycles <i>(Improve/avoid)</i>	General preparation of a SUMP <i>(Avoid/shift/improve)</i>
Trolley bus systems <i>(Shift/improve)</i>	Intermodal interchanges <i>(Improve)</i>	Low Emission Zones <i>(Avoid/improve)</i>	Vision building for future sustainable urban mobility <i>(Avoid/shift/improve)</i>
Metro systems <i>(Shift/improve)</i>	Infrastructure for pedestrians <i>(Improve/avoid)</i>	Forums, portals, labels and training programs <i>(Improve)</i>	Participation (involving stakeholders and engaging citizens) <i>(Avoid/shift/improve)</i>
Alternative fuelled public transport vehicles <i>(Improve)</i>	Non-motorized infrastructure <i>(Improve/avoid)</i>	Networks of pick-up points <i>(Avoid)</i>	Participatory budgeting in SUMP context <i>(Avoid/shift/improve)</i>
Electric and hybrid public transport vehicles <i>(Shift/improve)</i>	Innovative safe cycling infrastructure <i>(Improve/avoid)</i>	Vehicle and operation restrictions on time, weight and size <i>(Improve/avoid)</i>	SUMP audit schemes and quality management <i>(Avoid/shift/improve)</i>
ITS for public transport <i>(Improve)</i>	Cycle highways <i>(Improve/avoid)</i>	Urban Consolidation Centers <i>(Avoid/improve)</i>	Measure or measure-package selection strategies <i>(Avoid/shift/improve)</i>
Integrated fare systems <i>(Improve)</i>	Infrastructure for car and bike-sharing <i>(Improve/avoid)</i>	Municipal procurement reorganization <i>(Avoid/improve)</i>	Monitoring and evaluation of a SUMP <i>(Avoid/shift/improve)</i>
Integrated public transport network planning <i>(Improve)</i>	Pedestrianisation of city centres and streets <i>(Improve/avoid)</i>	Rail and waterways for urban freight deliveries <i>(Shift/avoid)</i>	Modeling and visualization tools in SUMP <i>(Avoid/shift/improve)</i>

Financing of public transport (<i>Improve/shift</i>)	Urban truck lanes (<i>Improve</i>)	SUMP framework conditions (<i>Avoid/shift/improve</i>)
Eco-driving for professional drivers (<i>Improve</i>)	Pricing schemes, taxes and tolls (<i>Improve</i>)	Capacity building and training schemes in SUMP (<i>Avoid/shift/improve</i>)
Bike sharing and public bicycles (<i>Shift/avoid</i>)		Engaging external support for SUMP development (<i>Avoid/shift/improve</i>)

3. Methodological approach

Once the thematic selection process and analysis of green and innovative urban mobility solutions was completed, a set of targeted activities were initiated in Turkey, Israel and Morocco focusing on (a) presenting experiences from the implementation of selected urban mobility solutions in the EU, including conditions for success and lessons learnt from failures, (b) discussing the framework conditions of different Mediterranean cities and identifying their urban mobility needs, gaps and priorities for each of the four thematic clusters, and (c) conducting a preliminary transferability assessment of the most promising urban mobility solutions indicating possible challenges to be met during their implementation and evaluating potential benefits to be derived, after their implementation, for different type of stakeholders.

In order to successfully undertake the aforementioned activities thus ensure that all objectives that were set will be fully met, a relevant methodology was developed consisting of the following steps (SOLUTIONS, 2014b):

- Development of a dedicated questionnaire, which was used as the basis for conducting personal interviews with local city officials in Turkey, Israel and Morocco. The aim of both the questionnaire and interviews was to identify and discuss in detail the existing urban mobility needs, gaps and priorities of different Mediterranean cities with regard to all four thematic clusters.
- Organization of three local workshops in Turkey (Kocaeli), Israel (Tel Aviv) and Morocco (Casablanca) during which (a) the main issues raised by the interviewees were further discussed and elaborated and (b) selected urban mobility solutions were presented, by leading experts of the four thematic clusters, enabling the identification and prioritization of the most promising solutions considering the local context of each Mediterranean city as well as the respective local, regional and national policy framework. At this point, it should be highlighted that different approaches were followed in each workshop for soliciting the participants' feedback. In Turkey, a round table format was used facilitating the participating city officials to analyze the strengths, weaknesses, opportunities and threats (SWOT) their city presents with regard to all four thematic clusters. A structured game approach was used in Israel providing the opportunity to participants to prioritize both the thematic clusters as well as the respective solutions included in each one of them. In Morocco, city officials presented the urban mobility characteristics of their city and targeted follow-up discussions were undertaken for addressing the issues they raised.
- Organization of a final Mediterranean event where the main outcomes from the three local workshops were presented and validated by the participants with the aim to come up with a set of common priorities for the whole Mediterranean region and build a common understanding of urban mobility in the region.

The findings from both the personal interviews and the three local workshops are being summarized within the following section per thematic cluster and country.

4. Urban mobility needs, gaps and priorities for Turkey, Israel and Morocco

Based on the feedback received from personal interviews that were conducted with selected city officials and more detailed follow-up discussions that took place within the context of the three local workshops, the urban mobility needs, gaps and priorities in Turkey, Israel and Morocco are being summarized below per thematic cluster (SOLUTIONS, 2015).

4.1. Cluster 1: public transport

The need to develop an efficient and well integrated public transport system, considering all different urban transport modes, was identified as a major priority for all Mediterranean cities in an effort to address the negative externalities resulting from the existing *poor level of integration*. The current *low performance* of the public transport system (e.g. run-down fleets, poor infrastructure, etc.) needs to be substantially enhanced as in many cases the services that are being offered are of *poor quality* (e.g. unreliable, inaccessible, increased passenger discomfort, etc.) failing to attract more passengers who heavily depend on cars for their daily urban trips. The prioritization of public transport modes and more specifically the introduction of urban modes moving on fixed guideways (e.g. BRT, LRT, etc.) seem to be preferred as potential remedies for *urban congestion* from which most Mediterranean cities are heavily suffering. Great focus was also placed on the wide promotion of sustainable transport modes, such as walking and cycling, with investments on relevant infrastructure being much needed in several cases for increasing their modal share and imposing a change in the people's urban mobility behavior. The need to efficiently couple all different urban mobility solutions, which are being considered for a city, with appropriate policies was also highlighted along with the provision of targeted incentives aiming to attract passengers into using more sustainable urban transport modes. A more detailed description of the specific characteristics and issues that were raised for the three targeted MPCs, for this thematic cluster, is being provided below.

Turkey

Turkish cities prove to be mainly *car-oriented* and not that well developed for non-motorized transport (e.g. not available infrastructure). *Urban sprawl* seems to be hindering the increased share of public transport thus causing a variety of safety and accessibility issues for the public transport system. City authorities have realized that in order to be able to cope with the increased level of *traffic congestion*, attributed mainly to *rapid population growth* and *urbanization*, appropriate resources should be allocated for achieving a reliable, efficient and green public transport system. This process can be greatly facilitated by introducing more specific and clear regulations, at a national level, providing better guidance to local authorities. Although several different public transport modes have been implemented in major metropolitan municipalities, with a good level of integration being achieved, non-metropolitan municipalities still *lack the technical capacity* with regard to relevant processes included in both the implementation and operation phases. The progress that has been achieved, within the last five years, in improving the performance of the public transport system should be further extended and knowledge exchange and capacity building initiatives, both at a national and European level, are expected to largely contribute into meeting this goal.

Among the solutions considered in the public transport cluster, Turkish cities prove to be well aware of **BRT systems** considering also the experience from the implementation of this solution in Istanbul. Several other Turkish cities are also currently investigating the transferability of this solution within their local context. Furthermore, significant investments have been made on **railway infrastructure projects** resulting in increasing the share of such systems (e.g. LRT, metro, tram, etc.) which serve today, in Istanbul, more than one million passengers per day. However, it should be noted that in many cases such construction projects prove *not to be in line with provincial transport master plans* imposing significant conflicts and threats between different transport modes especially if they are being operated by different administrations and/or private companies. The **integration of fare management** as well as the introduction of **smart card systems** proved also to be among the priorities of Turkish cities for this thematic cluster.

Israel

Israel's National Public Transport Authority is responsible for all aspects of public transport in the country, though it has delegated some responsibilities to local transport authorities. Despite their *limited role*, Israeli municipalities act as essential stakeholders in the implementation and operation of relevant services within their jurisdiction.

Over the past few years substantial efforts have been undertaken for the improvement of the urban public transport system in Israel. Several mass transit systems such as the new **BRT system** in Haifa (the "Metronit") and **LRT systems** in Tel Aviv and Jerusalem are currently in various stages of planning and implementation thus are being considered by other Israeli cities. The importance of **synchronization** of public transport modes in terms of **time, space** and **payment schemes** was also pointed out by the Israeli city officials as an emerging priority.

Prioritization of public transport vehicles at intersections is being expected to further support this goal. Furthermore, it is worth mentioning that a **single payment device** for all transport modes has already been implemented in several Israeli cities and efforts to further expand this scheme are currently being undertaken.

Israeli cities have also placed great focus on the promotion of sustainable transport modes (e.g. walking and cycling). Tel Aviv's **bike sharing system** proves to be a good example of a successful municipal initiative aiming to promote sustainable mobility. Several conditions proved to have contributed to the success of this initiative including a widespread network of cycle paths, the provision of a dense network of rental stations, the mild weather in Israel, Tel Aviv's topography, short journey distances and the general trend of the population towards health and fitness.

Along with the priorities of Israeli cities regarding public transport, a set of barriers for implementation was also defined referring mainly to *policy issues*. With the National Public Transport Authority being responsible for public transport operations in the whole country, the identified barriers focused mainly on some difficulties that are being experienced with regard to the division of responsibilities, the need for a more coherent national transport policy and the enhancement of the role and significance of local transport authorities. **Tax support** and **enforcement policies** were also identified as supporting preconditions for encouraging the transition from private cars to public transport.

Morocco

The public transport system in Morocco, which consists mainly of buses, trams, trains but also big (white) taxis (operating on certain routes) proves to be of *poor quality* mainly due to the significant *imbalance* between transport supply and demand as well as the *low level of education* of professional drivers. The increased number of taxis proves to be further supporting the aforementioned imbalance.

For the Casablanca region, which was more specifically addressed, public transport responsibilities fall under the scope of the local transport authority AODU. Based on the views of local city officials, the development of **appropriate public transport infrastructure** is the main priority for the region and is expected to enhance the accessibility of public transport for all citizens. **Prioritization of buses** was also considered as an efficient measure for enhancing the system's performance while the provision of targeted incentives is expected to contribute towards enhancing the attractiveness of the system along with a set of immediate actions that have been included in AODU's future plans: (a) access restrictions for big (white) taxis on certain roads, (b) spatial redistribution of urban trips and decreased routes for small (red) taxis, and (c) reduced travel time in big (white) taxis.

4.2. Cluster 2: transport infrastructure

Transport infrastructure in the Mediterranean region proves to be *lacking integrated planning*. The existing infrastructure seems *insufficient* for meeting the current transport demand with several inefficiencies ought to be addressed including *poor level-of-service*, *run down fleets* as well as *lack of intermodal interchanges*. The extension or construction of dedicated bus lanes, bridges, additional bus stops and parking areas were identified as major infrastructure projects for moving the transport system towards sustainability. In summary, a sustainable transport system that will be able to provide accessible public transport and bicycle and pedestrian routes is being envisioned for the Mediterranean region. A more detailed description of the specific characteristics and issues that were raised for the three targeted MPCs, for this thematic cluster, is being provided below.

Turkey

Transport infrastructure proved to be one of the most problematic areas for Turkish cities mainly due to (a) the *lack of planning* between infrastructure projects being driven by the central government and urban transformation processes, (b) the *lack of collaboration* on policy issues and technical support with the central government, which proves to be a prerequisite for adopting an intermodal approach and (c) the *lack of municipal funds* for supporting the construction of appropriate transport infrastructure projects. Based on the aforementioned considerations, this thematic cluster proves to present the biggest challenges for Turkish cities.

Although urban transformation policy, dated back to 1999 after the biggest earthquake in Turkey, aimed to address urban sprawl, it led to additional problems and insufficient transport infrastructure mainly due to *unplanned capacity increase* in neighborhoods as well as *unplanned urban migration*. Extensive road construction projects were initiated by the central government, from the 1980s to 2000, between intercity roads which are now parts of the

cities' centers. With these roads still being regulated by the central government, several *conflicts of interest* and *budget issues* occur when municipalities want to improve or implement different transport infrastructure solutions. Unfortunately, local authorities *do not follow any specific guidelines or standards*, coming from the central government, for improving the integration between different urban transport modes in an effort to increase capacity, improve passenger comfort and enhance the quality of service thus addressing safety and accessibility issues. Turkish cities agreed on the necessity to allocate specific funds for undertaking urban transport infrastructure projects and receiving the respective technical assistance that is required for supporting their implementation as well as for further promoting sustainable transport modes (**walking and cycling infrastructure**).

Israel

Dedicated bus lanes are being considered by Israeli city officials as one of the most effective solutions for prioritizing public transport and are thus being gradually implemented in many cities in Israel. **Dedicated cycle lanes** are also a developing trend in many Israeli cities following the experience in Tel Aviv which, as it was previously noted, was a pioneer in this field. Indeed, although the topography of Tel Aviv might have been regarded as a mandatory precondition for the construction of cycle lanes, such a network is also being planned in Haifa, a city that is built on a mountain.

An ongoing trend towards prioritizing pedestrians and cyclists is also being reflected in the planning and implementation phases of **shared space**, often at the expense of private vehicle lanes. Tel Aviv has implemented extended green routes in which substantial space has been dedicated to pedestrians and cyclists with priority also being given to them at intersections. The efficient integration of cycle paths within the existing transport network as well as the provision of frequent bicycle racks, along public transit routes, were identified as important preconditions for implementing bicycle services. Other Israeli cities, such as Herzelia and Ramat Gan, have also adopted plans to transform parts of their city centres into shared space. However, there is still *no clear consensus among public officials* on how this infrastructure can be best implemented considering safety aspects. The segregation between different transport modes and the most efficient way of marking different sections of any shared space are still under discussion. It is being expected that in the near future, these points will have to be addressed when considering the growing use of motorized bicycles, segways, etc.

Many cities acknowledge that consumers cannot rely on public transport for all parts of a single urban trip. To this end, **Park & Ride facilities**, located in the outskirts of a city, are being regarded as a key service for promoting the wider use of public transport within the urban network. Such facilities already exist in many Israeli cities or are currently in different stages of planning and implementation.

Barriers that can potentially hinder the implementation of solutions, such as the above, were found to be the limited land availability, road space, narrow streets and the density of residential areas. Local authorities need to take unpopular actions for promoting sustainable transport. It is worth mentioning that the strong correlation between this and the public transport cluster was pointed out by all Israeli city officials highlighting the need for a coherent policy facilitating the implementation of comprehensive and integrated solutions.

Morocco

Transport infrastructure in Morocco proves to be *underdeveloped* and unable to cope with the daily movements of people which they undertake within the framework of their professional activity. The development of public transport infrastructure is a top priority for Moroccan cities and technical support for the implementation of such projects is much needed. More specifically, the following infrastructure projects are to be introduced in an effort to better manage signaling and prioritization of public transport, improve road accessibility and equilibrate the axes through Mohammédia in favor of public transport: (a) **dedicated bus lanes**, (b) **intermodal interchanges** and (c) **infrastructure for pedestrians**.

4.3. Cluster 3: city logistics

This thematic cluster proved not to be so advanced in the Mediterranean region with relevant operations being either underdeveloped or not developed at all. However, the *strategic location* of many Mediterranean cities urges the development and efficient organization of urban logistics activities. Although different solutions were identified as priorities in each city, the need to efficiently connect major logistics centres with transport hubs (ports, airports,

rail terminals, etc.) was reported as a common priority. Furthermore, the efficient planning and implementation of freight villages, well-connected to the transport network as well as the exploitation of underutilized terminals were also highlighted as efficient measures for improving logistics and urban freight operations management. A more detailed description of the specific characteristics and issues that were raised for the three targeted MPCs, for this thematic cluster, is being provided below.

Turkey

Turkey is strategically located and can play an important role in the logistics sector. The annual turnover of logistics operations proves to be relatively high with the cities' role being quite significant. Urban freight operations, however, are being *managed by the central government* which often causes conflicts between city and central government officials with regard to urban traffic management and planning processes. Major Turkish port-cities prove not to be well-connected to the railway system with inland distribution operations being mainly undertaken via trucks. City officials demand better connection between ports and logistics villages/locations aiming to reduce the *logistics related traffic congestion* in their cities. Studies on **the potential of rail and waterborne transport** for city logistics, as an alternative to road transport, need to be undertaken while Turkish cities are also very interested to be informed regarding **new, green and low-carbon technologies** that can be efficiently adopted for urban goods distribution and storage. Furthermore, cities need to include urban logistics plans within their urban transport master plans considering however the national city logistics plan. Istanbul will act as a leading city in this field initiating its city logistics master plan in 2016.

Israel

Among the four thematic clusters, this one proves to be the least advanced in Israel. However, the concern of city officials regarding the negative externalities of urban freight operations is growing and new solutions aiming to address those impacts are currently being introduced in some Israeli cities. These mainly include the promotion of **off-hour deliveries, parking lots for heavy vehicles** on the outskirts of the cities and **heavy vehicles restrictions** in certain parts of the urban road network. Others, such as (a) **low emission zones**, (b) **forums, portals and training programs**, (c) **Urban Consolidation Centres** and (d) **network of pick-up points**, were also identified as potential to be implemented in the near future. However, while some solutions may be promoted by cities, others, such as the network of pick-up points, are private initiatives. It was mutually agreed by all Israeli city officials that this cluster should be addressed in a more comprehensive manner considering new and innovative solutions.

Morocco

Although some initial actions (e.g. **vehicle restrictions** and **night deliveries**) have been undertaken in Morocco for improving urban freight operations, city logistics are still *not well organized or planned*. To this end, local authorities have an increased interest to improve the urban logistics system following a structured and integrated approach. However, due to the high priority that was given by city officials in the other three thematic clusters, no further considerations were provided for this one, apart from the fact that it was pointed out that most *logistic centres* in several Moroccan cities are *disorganized and unplanned* creating a variety of transport-related problems.

4.4. Cluster 4: integrated planning/Sustainable Urban Mobility Plans (SUMPs)

Being more diverse and encompassing various processes, this thematic cluster was identified as the most important one for the Mediterranean region, among the four that were taken into consideration. The efficient integration of transport modes in urban areas and major city centres was reported as the most important priority of all Mediterranean cities and SUMPs can play an important role towards meeting this goal. Other priorities that were commonly identified by several city officials include (a) the improvement of public space in order to balance the urban mobility needs of all users and encourage the use of sustainable transport modes, (b) the efficient cooperation between municipalities and local governments and (c) the establishment of appropriate policies, guidelines and evaluation criteria in order to plan, operate, manage and maintain the transport system in an efficient and effective way. A more detailed description of the specific characteristics and issues that were raised for the three targeted MPCs, for this thematic cluster, is being provided below.

Turkey

Turkey experiences *poor levels of integration* between different urban transport modes while most of the transport-related developments prove to be car-oriented. SUMP's are not mandatory for Turkish cities and as a result local authorities are *not very familiar with the concept*. However, metropolitan municipalities are obliged to conduct transportation master plans which can serve as a good basis for the development of SUMP's.

According to the EU pre-accession period, policy in Turkey is changing within both the central government and the local authorities. To this end, this thematic cluster proves to be a major priority for Turkish cities which need to build capacity and receive technical support on SUMP's in order to address important challenges such as the *lack of integrated public transport* and the *promotion of non-motorized transport* ensuring safe and accessible mobility for all Turkish citizens. A transit approach should be followed, for all actions to be adopted, in an effort to set up **a common vision among all relevant stakeholders**. Furthermore, Turkish cities need to start collecting reliable and sufficient data that should be analyzed in detail and assessed for future urban transport planning. It is worth mentioning that with support of some SOLUTIONS project partners, the city of Eskişehir will be the first city in Turkey to implement SUMP aspects in its master plan by 2016.

Israel

Officials, at both the local and national level, recognize the importance of following a holistic approach for the planning of the urban transport system. Although the SUMP concept is being promoted only in the city of Tel Aviv, some of its elements are also being identified in actions taken or foreseen by other public authorities (e.g. in Haifa – **long term master plan and strategic thinking**, in Tel Aviv-Yafo – **vision of sustainable mobility** as part of the municipal strategic plan and **evaluation criteria to monitor the progress** in implementation of the sustainable mobility vision). One other aspect that received great attention from the Israeli city officials was the **engagement of different stakeholders** and particularly the public, within the development process of urban transport plans. While there is evidence of such engagement in some cases, it does not yet appear to be *a common practice in Israel* and there are no methodological guidelines on how to pursue the involvement of stakeholders.

Morocco

Urban transport plans, called PDUs, have been implemented in some Moroccan cities including Casablanca. Those prove to be a good basis for integrated planning taking into consideration several issues and setting up relevant targets to be achieved. The **vision of local authorities** for the near future is being integrated in the new urban transport plans which are currently being developed according to SUMP guidelines. To this end, further **knowledge and support on European SUMP's** will provide real added-value to Moroccan local authorities.

5. Conclusions – common urban mobility priorities for the Mediterranean region

The key findings from the three local workshops were presented and further discussed within the context of a final MED event that took place on February 2015 in Istanbul, Turkey. The aim of the event was to draw and validate the main conclusions for each of the four thematic clusters and come up with a common understanding of the urban mobility needs, gaps and priorities for the Mediterranean region. Considering the different causes of urban mobility needs and gaps, in the three targeted MPCs, as highlighted in the previous section, the common priorities for the Mediterranean region are being reported within the following table (Table 2) for all four thematic clusters.

Table 2. Common urban mobility priorities for the Mediterranean region.

Public transport
<ul style="list-style-type: none"> • Develop an efficiently integrated public transport system considering all different transport modes • Improve the overall performance of the public transport system and enhance its attractiveness • Promote sustainable transport modes (walking and cycling) • Prioritize public transport and introduce integrated fare systems in order to ensure a good level of service • Favor the implementation of transport modes moving on fixed guideways (e.g. tram, metro) as they prove to be efficient remedies to urban congestion • Upgrade existing fleets which in many cases prove to be in poor condition • Couple the implementation of urban mobility measures for public transport with appropriate and more coherent policies, either at a national or local level, and provide incentives to passengers for using more efficient and sustainable transport modes

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- Ensure the efficient cooperation and local consensus (including the efficient division of responsibilities) among national and local authorities as well as private actors which will foster the effective implementation of public transport projects
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Transport infrastructure

- Address the lack of integrated planning and envision a sustainable transport system able to provide accessible public transport as well as bicycle and pedestrian routes
 - Develop adequate public transport infrastructure (e.g. dedicated bus lanes, bus stations, parking areas, etc.) to meet the existing transport demand in Mediterranean cities
 - Develop pedestrian zones and bike routes as well as shared spaces for further promoting walking and cycling
 - Enhance the technical capacity of local authorities so that infrastructure projects are more efficiently planned and implemented
 - Identify and allocate available funds and investments for expanding or improving transport infrastructure in order to meet the increasing transport demand and maintain acceptable transport conditions
 - Taking into consideration the strong relationship between this and the public transport cluster, develop a coherent policy to enable the implementation of comprehensive and integrated solutions
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City Logistics

- Despite not being so advanced in the Mediterranean region, attention should be placed in this cluster considering also the strategic location of several Mediterranean cities
 - Major logistic centres should be efficiently connected with transport hubs (e.g. ports, airports, rail terminals, etc.)
 - Logistic centres/freight villages should be carefully planned and implemented thus ensuring their efficient connection to the transport network. Underutilized terminals should be also taken into consideration and be further exploited
 - Reduce the dependency on road transport for inland distribution and investigate the potential of other transport modes (e.g. rail, maritime, etc.)
 - Consider innovative city logistics solutions that can easily transferred in the local context of Mediterranean cities (e.g. off-hour deliveries)
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Integrated planning/Sustainable Urban Mobility Plans (SUMPs)

- Follow a holistic approach to urban transport planning and therefore take into careful consideration the SUMP framework
 - Efficiently integrate transport modes in urban areas and major city centres
 - Improve public space, enhance collaboration between national and local authorities and establish policies, guidelines and evaluation criteria in order to efficiently plan, operate, manage and maintain the urban transport system
 - Align urban planning and development with local and regional investments for promoting sustainable transport
 - Engage all relevant stakeholders in the development process of SUMPs
 - Enhance the knowledge exchange and organize capacity building events for sharing the European experience on SUMPs with several Mediterranean countries
 - Provide technical support to local authorities on SUMPs so that they can build capacity and address all major challenges within their city
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