



# Promoting soft mobility in the Mediterranean: towards more sustainable mobility systems

## Executive summary

*Policy Brief #01  
June 2021*

The development of soft mobility in the Mediterranean region requires the implementation of suitable interconnected policies at the EU, national, regional, and local level.

Building upon experience gained through the implementation of projects related to soft mobility in Albania, Croatia, Greece, Spain and Italy, the Urban Transports Community highlights the importance of soft mobility, showcases lessons learned through case studies and outlines policy measures for the promotion of soft mobility.

The policy brief puts forward policy recommendations for public authorities and stakeholders at the local, regional, national and EU level. At the local and regional level, we stress the need to foster collaboration among municipalities, adopt bottom-up design, involve local stakeholders, foster user, and non-user acceptability, consider infrastructure quality, encourage multimodality, assess, measure, and ensure enforcement and surveillance.

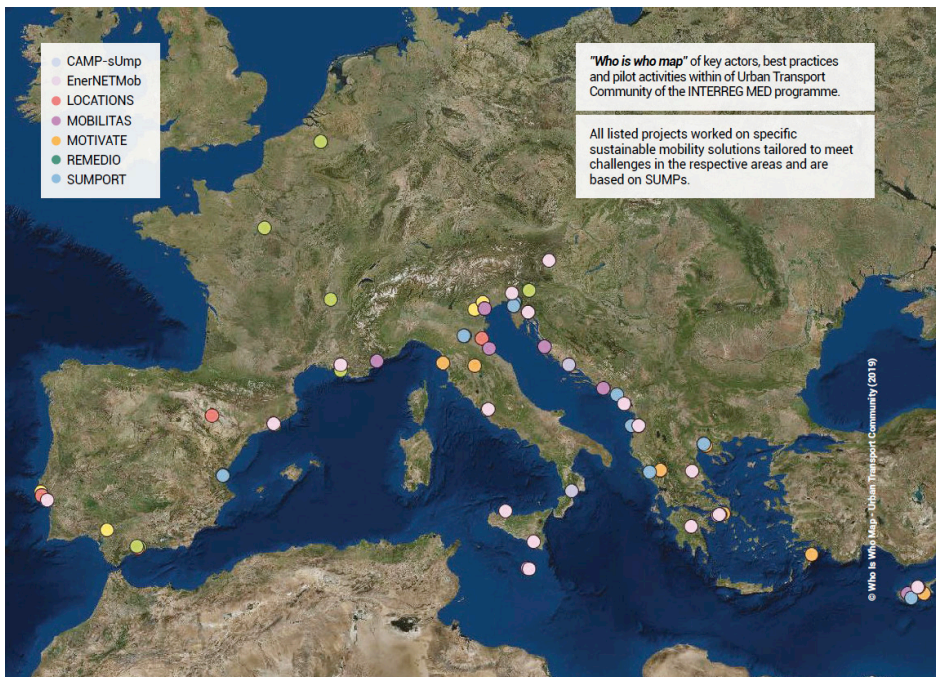
At the national and EU level, we highlight the need to regulate and provide technical specifications, coordinate, and facilitate the implementation of soft mobility schemes, provide financial support and train users and non-users and personnel.

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The Urban Transports  
Community



The Urban Transports Community (UTC) is an Interreg MED initiative co-funded by the European Regional Development Fund (ERDF) launched in November 2016 for a three-year period and renewed in October 2019 until June 2022.

It brings together seven territorial cooperation projects and almost 120 organisations active in twelve European-Mediterranean coastal areas.

## The Urban Transports Community

The Community promotes sustainable urban mobility planning in the Euro-Mediterranean region as an effective tool to reduce carbon emissions and improve the quality of life of the population and the environment.

The Urban Transports Community is featured by a project led by MedCities (Barcelona, Spain), in partnership with UNIMED Mediterranean Universities Union (Rome, Italy), Area Science Park (Trieste, Italy), CODATU (Lyon, France), CIVINET CY-EL (Cyprus-Greece), POLIS, Cities and Regions for transport innovation (Brussels, Belgium), and Durres Municipality (Durres, Albania).

The initiative covers a wide range of mobility-related topics such as:

- Data & ICT for smart traffic management
- Soft Mobility
- Shared Mobility
- Mobility Management in Tourist Destinations
- Urban Mobility Planning
- Electromobility

UTC has developed good practices covering these topics, given their relevance in the quest for achieving sustainable and zero-emission mobility in the Mediterranean. The first policy brief broadly focuses on the topic of Soft Mobility. It presents good practices arising from UTC modular projects and other significant examples developed within the Mediterranean Area, drawing from their experience and lessons learned, putting forward targeted policy recommendations for local, regional, national, and EU-level stakeholders.

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## Setting the scene context

Soft mobility includes modes of transport such as bicycles, e-bicycles, e-scooters, as well as walking. These modes are particularly suitable for urban contexts where most trip lengths are under 5 km, replacing more polluting alternatives currently in use. Following technology trends and their characteristics, soft mobility has the potential to contribute to reshaping urban mobility and transport towards a more sustainable development path, with respect to environmental protection, decarbonisation and passengers' health and well-being. Policy actions on soft mobility should be examined in the light of four dimensions: environment, road safety, infrastructure and health & COVID-19.

### #ENVIRONMENT

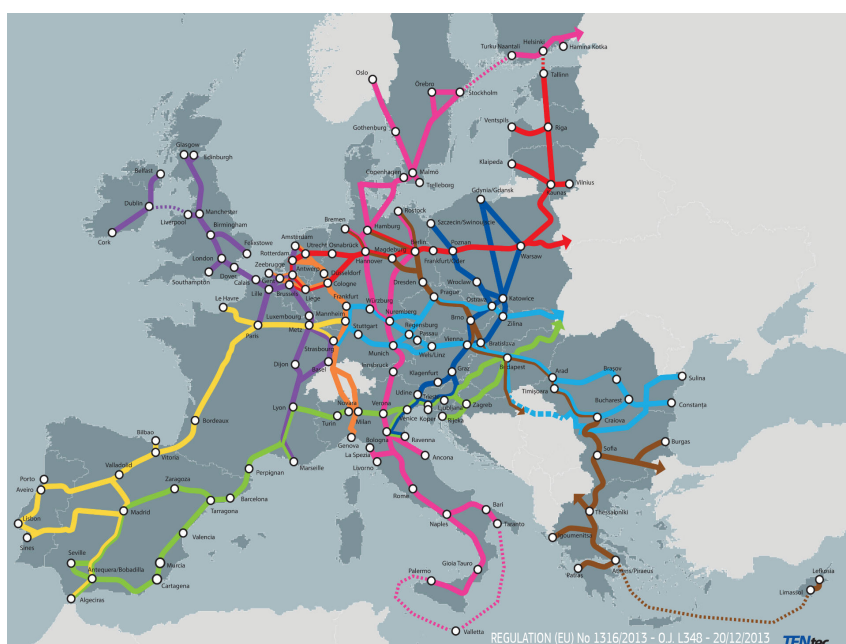
By 2050 two thirds (2/3) of the world's population will live in cities.

The high population density in urban centres and the related unsustainable practices entails burdening the atmosphere with pollutants and thus boosting the greenhouse effect. The organisation and management of urban mobility, in such a way that pollution, congestion and noise are avoided, and high standards of living are sustained, are of critical importance. To tackle climate change, to which greatly mobility contributes, the European Union is implementing the 'Green Deal' strategic policy framework, focusing on the transition to a low-carbon economy in all sectors and supporting the promotion of sustainable urban mobility.

The main objective is to reduce air pollution by 90% by 2050. To that end, by 2025, power stations for electric vehicles will be widely installed on European roads, most vehicles launched by 2030 will have zero or very low-emissions, public transport will be boosted

**Policy actions  
about soft  
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in the light of  
four dimensions:  
#Environment  
#Road Safety  
#Infrastructure  
#COVID-19**

**Figure n°1: the Trans-European Transport Network (TEN-T)**



Source: [https://ec.europa.eu/transport/themes/infrastructure/ten-t\\_en](https://ec.europa.eu/transport/themes/infrastructure/ten-t_en)

by automated means, and 100 European cities will become climate neutral. The next step is the target for 2050 where nearly all cars, vans, buses as well as new heavy-duty vehicles will be zero-emission, rail freight traffic will double, and high-speed rail traffic will triple. Further, the multimodal [Trans-European Transport Network \(TEN-T\)](#) will be equipped for sustainable and smart transport with high-speed connectivity.

### #ROAD SAFETY

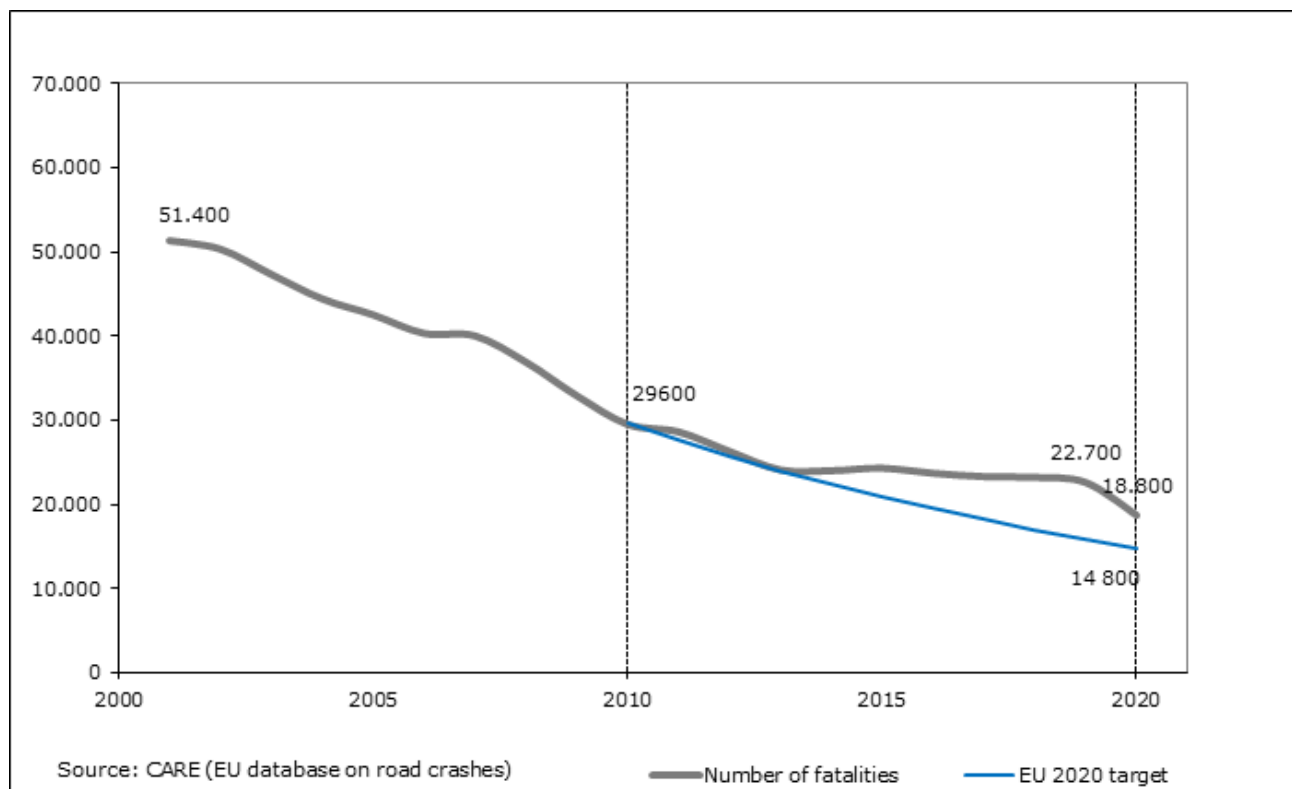
There has been significant progress in road safety in the EU since the number of deaths on Europe’s roads has fallen by 36% between 2010 and 2020. The [New Paradigm for Safe City Streets](#) launched by POLIS invites cities to invest in making walking and cycling safe. [Road safety has also been improved in the Mediterranean Region](#) as well, with the fatalities reduced in the same period by 54% in Greece, 44% in Croatia and Spain, 43% in Portugal, 42% in Italy and Slovenia, 36% in France, 20% in Cyprus and by 15% in Malta. Improvement may be attributed to enhanced infrastructure, changes in mobility culture, increased awareness about road safety, and promotion of safer modes of transport. Nonetheless, the number of road deaths per million inhabitants remain high in the Mediterranean region.

In 2020, 58 road deaths per million inhabitants in Croatia, 54 in Greece and Cyprus, 52 in Portugal, 45 in Slovenia, 40 in Italy, 39 in France, 29 in Spain, and 21 in Malta. It remains, therefore, crucial to maintain and increase efforts to improve road safety and explore innovative ways that could reduce fatalities.

Strengthening multi-modal mobility and encouraging the use of

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**Figure n°2: Downward trend in the number of road traffic fatalities in the EU**



Source: [https://ec.europa.eu/transport/modes/road/news/2021-04-20-road-safety-statistics-2020\\_en](https://ec.europa.eu/transport/modes/road/news/2021-04-20-road-safety-statistics-2020_en)

shared and collaborative mobility as well as the promotion of soft and active mobility could assist in improving road safety standards by reducing car dependency.

### #INFRASTRUCTURE

Soft mobility requires the development of appropriate infrastructure to be attractive and to provide a safe road environment to all users. This is particularly important in the Mediterranean, where most cities have large historical centres with narrow streets, while the warmth in the summer requires shading and drinking opportunities along bike lanes. Besides, pedestrians and cyclists are more vulnerable than other road users as they are less protected and risk severe injuries in case an accident occurs.

Recognising this need, many European cities have made important investments in soft mobility infrastructure including bike paths and lanes, sidewalks and pedestrianised areas, traffic calming zones in dense urban areas, slow and open streets. Physical segregation and exclusive use of infrastructure provide the best level of safety and is needed in streets with higher vehicle speeds. However, mixed-use with other modes is, in some cases, inevitable and allows to assure continuity throughout the trip. Speeds need to be kept to lower limits.

Dedicated horizontal and vertical signage and night lighting are important elements to enhance cyclists' night visibility and reduce conspicuity risk. **Encouraging soft mobility is expected to contribute significantly to road safety in many ways.** First, car usage and mileage will be decreased and, as a result, the number of car crashes will fall. Second, speed reduction through [30km/h zones](#) and other traffic calming measures will lead to less severe crashes. The multimodality provided through digital solutions is vital in urban and suburban areas.

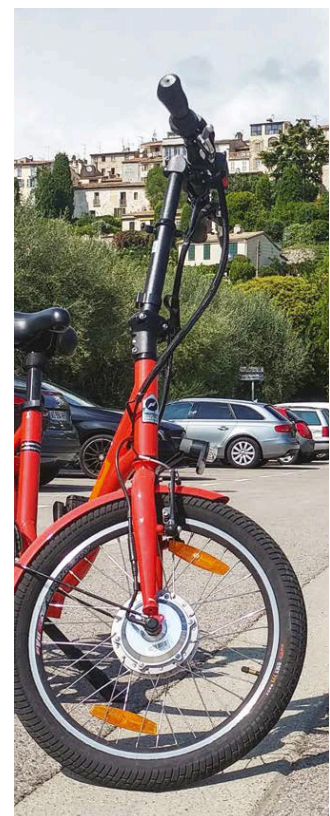
### #HEALTH & COVID-19

The transport and mobility sector has been hit hard by COVID-19, with a sharp decline in the number of trips made for public transport. The pandemic also created concerns about the hygiene of public transport, which play an important role in the urban networks. Average trip distances are significantly shorter as remote working is being generalised.

Some of the previous public transport passengers have substituted longer commuting by shorter trips around their home. **Walking and cycling are very prominent for shorter distance travelling and provide a good alternative to public transport** as a sustainable and individual mode of transport allowing for physical distancing. Some motorised public transport users chose to shift back to private cars. To prevent this from happening, it is important to ensure that policy-makers are aware of soft mobility's potential and the benefits it brings to the environment (e.g. reduced emissions and noise pollution, less congestion, promoting of active travel contributing to user well-being and improved health).

This is essential so that soft-mobility-friendly policies and regulations are drawn. Interventions in infrastructure and awareness campaigns need to be considered so that the post-pandemic urban mobility will make cities more efficient and less polluted, ensuring passenger safety and giving people more space.

***Soft mobility requires the development of appropriate infrastructure to be attractive and to provide a safe road environment to all users.***



## UTC's good practices for sustainable and resilient soft mobility

Several projects have been launched or capitalised in the framework of the Urban Transports Community (UTC) on soft mobility, covering a wide range of topics such as infrastructure upgrade and road safety, cycling culture promotion and bike-sharing.

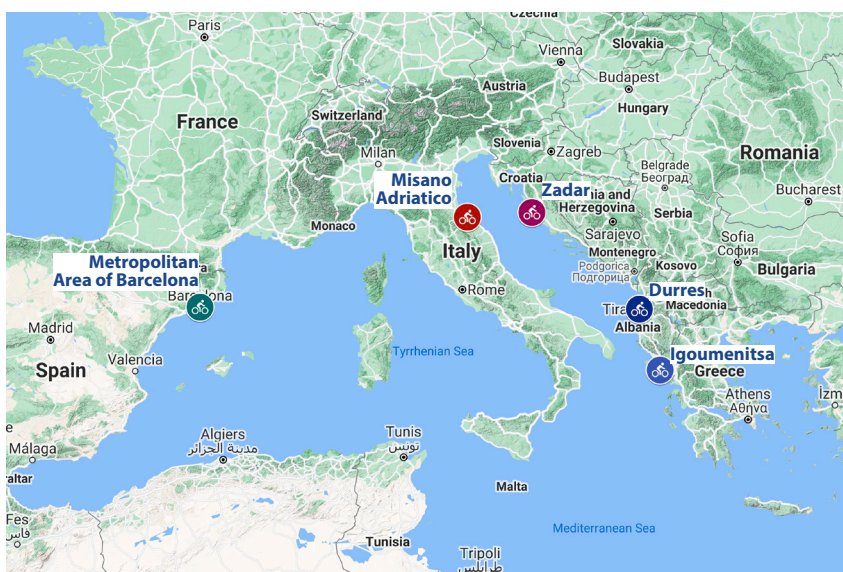
One of the initiatives of UTC is to capitalise and help transferring successful initiatives to new territories. The bike lane network in the Metropolitan Area of **Barcelona is an example of how to operate at the level of better infrastructure and road safety** to promote bike use, **how to coordinate among different levels of government** and involve of stakeholders, **how to assess performance and of the challenges of maintenance**. [BICIVIA](#) is the metropolitan cycling network that facilitates fast, safe, and direct bike mobility. Before BICIVIA, the 36 metropolitan municipalities did not have connected networks. Following a 6-month consultation, political consensus for the metropolitan cycling network was reached. The final plan connects 550 km of cycling network, linking urban centres and industrial and economic areas from the 36 different municipalities. So far, 44% of the BICIVIA network has been completed, with the remaining part scheduled to be complete by 2025.

A similar approach has been adopted at a smaller scale by the Albanian city of Durres, which also dealt with the extension of cycle paths, and their integration in the already existing bike lane networks. **The [case of Durres](#) showcases the importance of coordination among policy-makers**.

In addition to the expansion of the network of bike paths, **guidance (e.g. signposts) to improve user experience and proper monitoring of their use are also important**. The [Italian city of Misano](#) planned and implemented an intervention along with the existing bike lane network, which extends to its suburbs. The

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**Figure n°3: Urban Transports Community's most relevant case studies for soft mobility**



Source: Urban Transports Community own data and design by UNIMED

signposting indicates - by means of different symbols and colours - the cycle paths to reach the sea/waterfront, the urban/historical centre, the schools, or the bike paths surrounded by nature in the outskirts of the town. The new signposts were placed on wooden poles, with iron supports, to ensure visibility and help the users find their way. The new signposts are combined with the counter totems, equipped with luminous displays, positioned at the two access points of the waterfront bike lane, and integrated with multimodal hubs. The bike counters register the transit of cyclists, providing information on the quantifiable real use of the bike lanes.

**The promotion of cycling culture is also of critical importance in the Mediterranean Area.** In Zadar, Croatia a multifaceted approach was adopted to promote cycling culture, which includes the collection of mobility and air quality data, cycle road mapping and upgrading the existing smartphone App ([Zadar Bike Magic](#)). Cycling culture combined with political will is key for bike-sharing systems to succeed. A misused bike-sharing system in [Igoumenitsa, Greece](#) was refurbished as an initiative of the Urban Transports Community, with a special focus on these two aspects. The case of Igoumenitsa highlighted the significance of maintenance.

-  **Barcelona (Spain)**
-  **Durres (Albania)**
-  **Igoumenitsa (Greece)**
-  **Misano Adriatico (Italy)**
-  **Zadar (Croatia)**

**Figure n°4: Misano Adriatico (Italy) bike lane upgrade with signposts for different routes**



Source: "A Handbook on Sustainable Mobility in the MED Area" by the Mobilitas Project

# Policy recommendations at national and EU levels



## 1/ Regulate and provide technical specifications

### WHY

Even if in many cases regulations and technical recommendations are being developed by governments, there is still room for improvement in terms of:

/ **vehicle standardisation and eventual registration.** Based on the relevant experience from private cars, regulation on the technical characteristics of all micromobility modes would enhance vehicle safety. Further, some local or national registration (through plates or even user QR codes) would significantly contribute to user safety, usage regulations and enforcement. For example, obligatory regular vehicle maintenance would become possible.

/ **rights of access to infrastructure.** Even if some countries have specified the right of access to different types of infrastructure (bus lanes, mixed traffic lanes etc), there is room for enhancement and additional clarifications.

/ **parking rights and stations, sharing system parking and charging conditions.** The creation of sufficient and appropriate parking spaces for soft mobility modes is essential to encourage their use because they prevent thefts, protect from weather, allow to charge while parking etc.

/ **user training and accreditation.** In most countries, soft mobility is accessible to all citizens without any prerequisite. However, basic knowledge of traffic laws is necessary to move safely across cities. Evidence from countries (e.g. France) shows that school training can prove highly beneficial to safety. This need was also highlighted in the case of Zadar, Croatia.

/ **usage restrictions (speeding, alcohol impairment, phone usage etc).** Traffic laws do not cover all possible risky behaviours and enforcement is thus not possible. In some countries, phone usage is restricted but the blood alcohol concentration limit is not specified, and inappropriate speeding is not controlled by existing speed radars.

### HOW

/ Initial **cooperation with all stakeholders** but also establishment of long-term discussion instants through permanent working groups,

/ **Support research** collaboration and development through subsidies, grants and funding to promote research and innovation,

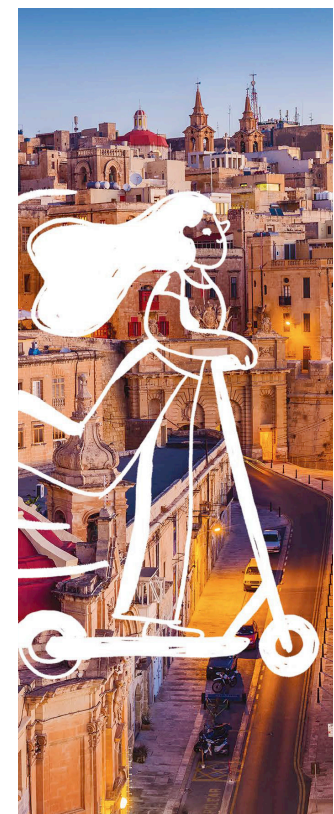
/ **Review** and expand current **legislation** and rules.

## 2/ Coordinate and facilitate

### WHY

The implementation of soft mobility schemes often requires **multilevel cooperation** from user associations and Local Authorities to Transportation Organising Authorities and Regional Authorities. This was the main barrier encountered in the City of Durres (Albania)

*The following policy recommendations derive from the experience of the UTC case studies on soft mobility that mainly concerned cycling, bike lane infrastructures and sharing schemes. They are purposed to encourage soft mobility modes and facilitate the development of soft mobility infrastructure to promote an alternative to car usage, supporting a healthier lifestyle, while reducing congestion, air pollution and noise.*





and in Barcelona (Spain), where cross-municipal cooperation and metropolitan government involvement was required.

#### HOW

- / Create fora of discussions, propose **co-creation** activities and workshops,
- / Encourage and establish **shared** (including monetarised) **benefits for stakeholders'** built-in agreements,
- / Build a **knowledge database** with toolkits, successful examples and technical specifications, data collected.

### 3/ Provide financial support

#### WHY

Soft mobility is often **mistakenly considered to be an extremely low-cost solution**. This leads to poor quality infrastructure and services with adverse effects in terms of attractivity and user safety.

#### HOW

- / Provide **financial incentives** not only for the **studies** (in part covered by SUMP: Sustainable Urban Mobility Plans), but also the **implementation** and, most importantly, the **maintenance** of soft mobility infrastructure. Maintenance costs are the most important issue encountered by Barcelona where the bike network is particularly extensive.
- / **Earmark soft mobility-related funding** in EU and national funding frameworks about mobility.
- / Provide **direct incentives to users**: e-vehicle acquisition, free access, and parking to regulated areas etc.
- / Foster and encourage innovative business plans with the **participation of private parties** to ensure sustainability (advertising agencies, etc).
- / **Combine various sources of funding**. The combination of funds from the EU, the Metropolitan Area of Barcelona and its Municipalities was key for the success of BICIVIA.

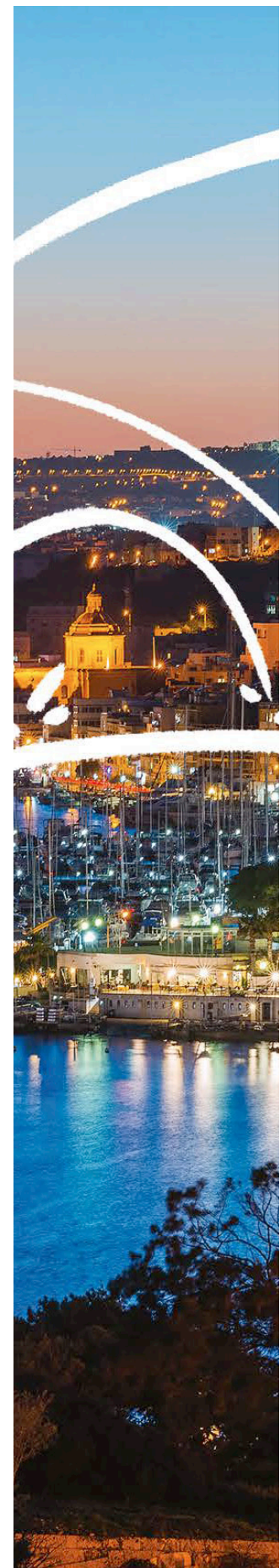
### 4/ Train users and non-users and personnel

#### WHY

It is a common **false belief that soft mobility modes do not require any skills or expertise**. This may lead to inappropriate and risky road behaviour as well as dangerous infrastructure design.

#### HOW

- / Soft mobility modes' users: **offer theoretical and practical training** starting from an early age, certify the knowledge of traffic laws, provide incentives for participation in training programmes.
- / **Car users**: raise awareness through campaigns for safety,
- / Staff: facilitate **internal capacity building** through seminars and training programmes on soft mobility infrastructure design and operations.



## Policy recommendations at local and regional levels



### 1/ Foster collaboration among Municipalities

#### WHY

The **network effect** is a crucial success factor of any soft mobility scheme. Collaboration and coordination are necessary at the national but also at the local and regional levels. Neighbouring communities should join efforts to build a network as was done in the case of Barcelona.

#### HOW

- / Establish **common working** groups and Memoranda of Understanding among neighbouring communities,
- / Facilitate exchanges and provide financial incentives to **common projects**,
- / Ensure the **long-term continuity** of discussions and not only first-stage approval.

### 2/ Bottom-up design

#### WHY

User needs are not always integrated with the design. This results in inadequate and less attractive network and service supply. Besides, **post hoc corrective actions often prove more costly** and certainly time-consuming.

#### HOW

- / **Engage citizens at all stages of the projects** through participative workshops and living laboratories.
- / Ensure **better monitoring** and collection of data about bikes, integrate them in the mobility and traffic monitoring system of the city. The case of BICIVIA in the Metropolitan Area of Barcelona indicates that the availability of such measurements improves the understanding of the users' mobility patterns.

### 3/ Involve local stakeholders

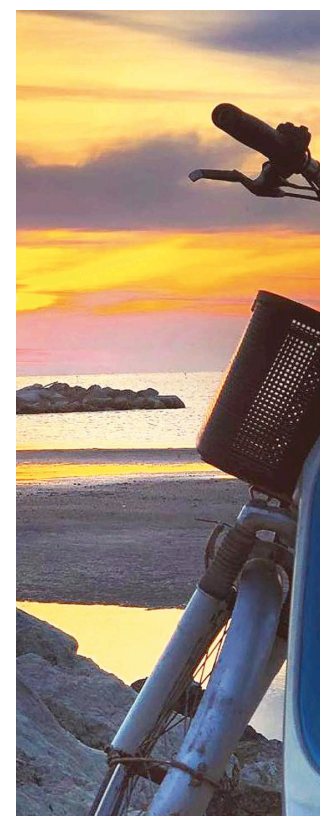
#### WHY

Their involvement can enhance the design and **reduce opposition to new schemes**. The involvement of the following stakeholders should be considered: chambers of commerce, professionals, public transport operators and authorities to ensure intermodality, travel planning app developers, technical services. Special attention should be made to include all tourism-related stakeholders as suggested by the Igoumenitsa case study in Greece.

#### HOW

- / Invite **stakeholders to participate in the design** procedure, as well as the operation of soft mobility schemes and infrastructure,
- / When dealing with other upcoming or future public works to be carried out, the bike lanes are considered, especially during the planning phase of those works. Problems in the scheduling of public works resulted in significant project delays in the case of Misano.

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## 4/ Foster user and non-user acceptability

### WHY

**User acceptability is a key success factor.** In Barcelona, for example, a targeted communication campaign was designed and implemented across the metropolitan area using posters to promote BICIVIA. In addition, useful information should be provided to users on the existing network. Upgrading the existing smartphone App (Zadar Bike Magic) was a success factor in the case of Zadar, Croatia.

However, the **acceptability by non-users is essential** as public opposition may raise political issues or even lead to risky driving behaviours. Public awareness campaigns should target car users, who should be made aware of the benefits of bike lanes for the whole community (public health, environment, viability of the city, equity, less congestion). If the message comes across clearly, car users would be more susceptible to accept the reallocation of road space and the eventual loss of on-road parking space. Other non-users include delivery services that may be constrained by the operations of bike lanes or cycle paths. Space reallocation measures should be done considering the needs of the urban logistics sector. The Mobilitas project (Zadar, Croatia) further suggests targeting children to positively influence the next generation of road users. Finally, in some cases it is necessary to explain the benefits of soft mobility to the city's technical service.

### HOW

/ Overall **promotion of the benefits** of operations and usage for the local economy, local environment, public health, congestion, travel time, equity, and safety.

/ Customised **communication campaigns** targeting separately **users** and all types of **non-users** as described above,

/ Provide information on the network (digital included), **maps**.

/ Explain the utility and potential of soft mobility infrastructure to the **technical staff**.

## 5/ Consider infrastructure quality

### WHY

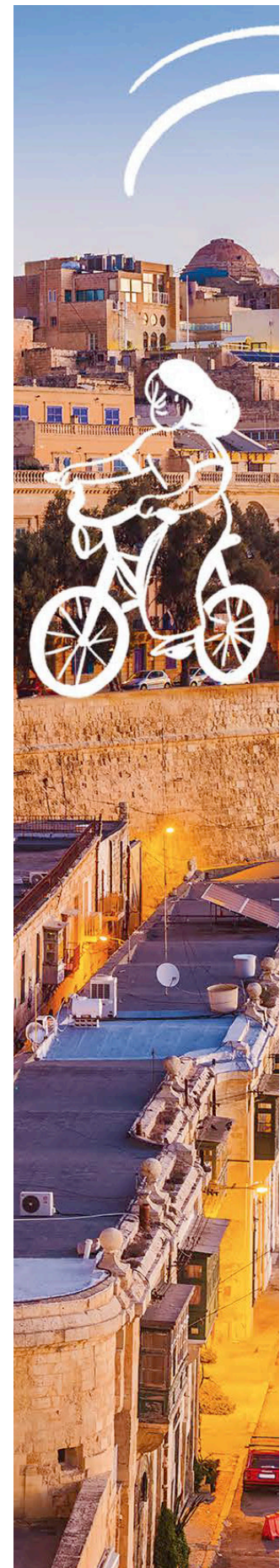
**Soft mobility infrastructure is not a low-cost intervention** limited to 'painting'. Infrastructure quality is essential for the attractiveness and safety of users. Evidence from Misano, Italy, suggests that signposts equipped with luminous display significantly enhance the user experience and safety level. In Igoumenitsa, Greece, the protection of bike shelters from adverse weather was found to be an important success factor.

Infrastructure ageing is a vital issue that should be planned for in advance as in the case of regular road networks. **Maintenance costs may be high** and are often not considered in the initial funding scheme as suggested by the case of BICIVIA (Barcelona, Spain).

### HOW

/ Separate as much as possible from car traffic by establishing **dedicated lanes** for circulation or cycle paths,

/ **Protect pedestrians** in areas where bikes and other micromobility vehicles have the right of access,



- / Consider **parking facilities**: parking shelters and charging docks (including protection from adverse weather),
- / Consider shadowed and **resting areas** along bike lanes and walking paths,
- / For pedestrian paths and areas, consider installing **street furniture** and plan for appropriate space arrangements, with attention for **families with children** (recreational areas, playgrounds, shadowed area), **elderly and people with disabilities**,
- / Clearly define priorities and **protect intersection** crossings using appropriate signage and traffic light adjustments,
- / Establish both **short and long-term funding tools**.

## 6/ Encourage multimodality

### WHY

To foster soft mobility modes and discourage car use, especially in the city centres. A **multimodal soft mobility hub** was proposed by the SUMP and was proven highly successful in the case of Misano, Italy.

### HOW

- / Design soft mobility hubs,
- / **Provide interconnections** to public transport (park and ride, or bike-sharing, or possibility to take aboard),
- / Create **bike-sharing docks at the outskirts of the city**.

## 7/ Assess and measure

### WHY

Soft mobility infrastructure has attracted attention since recent and relevant evidence is scarce but critical in terms of traffic counts, travel patterns, user behaviour. These data are essential to assess systems' operations and make informed decisions on future extensions and service adjustments. **Measurement and data collection equipment** are often neglected but it is possible as shown by the experience of bike counters in Misano (Italy) and Barcelona (Spain).

### HOW

- / **Install data collection** equipment and sensors,
- / **Gather data using ICT** technologies and combine them to data obtained from targeted travel surveys,
- / Plan **regular studies** and assessment of operations.

## 8/ Enforcement and surveillance

### WHY

To protect users and **discourage inappropriate driving or riding behaviours** (illegal parking, non-use of helmets etc). The enforcement costs are not to be ignored, and they require coordination with other budgets (e.g. police budgets).

### HOW

- / **Police presence** especially on the first days of operations,
- / Install **speed radars for bikes, cameras** for illegal use of bike lanes and unauthorised access to pedestrianised areas.

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