



MATCH-UP
Interreg Europe



Municipality of Funchal

Traffic and Mobility Division

Action Plan to improve policy instrument linked to SUMP to foster multimodality through cycling



DIVISÃO DE
MOBILIDADE E TRÂNSITO
DEPARTAMENTO DE ORDENAMENTO DO TERRITÓRIO



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Glossary of Terms

Acronym	Meaning
ACM	Madeira's Cycling Association
ARDITI	Regional Agency for Research, Technological Development and Innovation
AREAM	Regional Agency for Energy and Environment in Madeira
CMF	Municipality of Funchal
EDM	Europe Direct Madeira
H2020	Horizon 2020
HF	Horários do Funchal [urban public transport operator]
M14-20	Operational Programme Madeira 14-20
RAM	Autonomous Region of Madeira
SUMP	Sustainable Urban Mobility Plan

Part 1: Introduction

1.1 Project Partner

Project	MATCH-UP – The Role of Modal Interchange to Foster a Low-Carbon Urban Mobility
Partner organisation(s) involved	PP4 – Municipality of Funchal
Description	<p>The Municipality of Funchal is primarily responsible for handling mobility in Funchal. It has responsibilities upon traffic management as well as</p>  <p>accessibilities, although it does not have competences upon public transport except for managing dedicated stops and bus lanes. In order to boost multimodality, the Municipality developed a SUMP, a policy instrument that outlines the mobility strategy for a long-term period. The strategy includes an integrated approach geared at implementing several measures related to freight logistics, smart parking, energetic efficiency, cycling, electric mobility, public transport and pedestrian accessibility. The implementation ranges from setting up efficient policy measures to foster sustainability, creation of suitable infrastructures and development of awareness campaigns, among other actions.</p>
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Table 1.1: General information

1.2 Primary Policy Stakeholder

Name of stakeholder	Horários do Funchal (HF)
Type of stakeholder	Public Transport Operator
Description	<p>Horários do Funchal is an intra-urban public transport operator that operates within the boundaries of the Municipality of Funchal. The urban service transports about 18 millions of commuters per year through 61 routes with a fleet of 179 buses specifically tailored to overcome the heightened slopes. The interurban service, handled by a subsidiary company, on the other hand, transports about 1,2 millions of travellers per year with a fleet of 43 buses, through 15 routes bridging the city of Funchal with other centralities outside the Municipality. To meet the particular needs of the population, HF also operates in specific areas with dedicated services such as disabled people, clean urban centre line, touristic rental service and night service.</p> <p>HF is a private-public company that is under the jurisdiction of the Regional Government that is responsible for planning and designing the public transport in Funchal as well as its operation while the Municipality of Funchal is responsible for managing road infrastructures, bus lanes, bus shelters and deployment of traffic signs and road markings.</p>
Responsibilities/role within the development and implementation of the policy improvement	<ul style="list-style-type: none"> ✚ Cooperation in further engaging stakeholders and citizens in using non-pollutant vehicles. In addition, HF will support the development of the diagnostic stage for a better understanding of the public transport service infrastructures and services that can be bridged with cycling; ✚ Technical support in assessing the potential implementation of the public transport interface to facilitate the connection of cycling infrastructures with public transport;

	<ul style="list-style-type: none"> ✚ Fleet renewal towards electric mobility and technical adaptation to allow users to transport their bikes on the bus; ✚ Technical analysis of public transport stops that can benefit from the deployment of bike racks to foster multimodality; ✚ Cooperation in developing awareness campaigns, targeted at specific target groups, such as youngsters and students, in order to incentivize the use of bicycle.
<p>Does this organisation provide political support to the implementation of the policy improvement? If yes, how?</p>	<p>Although there are different management fields between both organisations, a synergy is possible in order to achieve wider results. Regarding the public transport, the Municipality of Funchal is responsible for handling accessibilities, such as enlargement of sidewalks and deployment of bus shelters, including urban refurbishment to increase comfort. In what regards public transport exploitation and operation, the operator is responsible for it. Given that the SUMP is targeted at improving public transport competitiveness that includes pedestrian accessibilities to bus stops and the creation of public transport terminal, the operator can provide valuable data regarding some of the actions outlined (bike racks, shelter renewal) namely demand by public transport stop, number of users, tickets sold, among other key indicators.</p>
<p>Website</p>	<p>www.horariosdofunchal.pt</p>

Table 1.2: Details of Primary Policy Stakeholder participating in policy improvement design and implementation

1.3 Other relevant stakeholders involved in development & implementation of policy improvement

Name of stakeholder	Regional Agency for Energy and Environment in Madeira (AREAM)
Type of stakeholder	Regional consultant for environment, sustainability and energetic efficiency
Description	<p>AREAM is a private non-profit making association, recognised as a public utility, its main purpose being the promotion of energy efficiency, use of renewable energy resources and protection of the environment, namely by supporting local and regional authorities, energy suppliers and end-users, as well as developing research activities, studies and projects in these areas.</p> <p>AREAM's activities comprise the following fields:</p> <ul style="list-style-type: none"> ✚ Regional and local planning on energy, environment, water resources and tourism; ✚ Implementation of the energy performance of buildings directive in Madeira; ✚ Energy efficiency in buildings, industries and transports; ✚ Renewable energy resources, namely, wind, solar, biomass, mini-hydro and waves; ✚ Waste management, concerning energy recovery, energy efficiency and environmental impact; ✚ Awareness raising campaigns on sustainable energy to tertiary, residential sectors and mobility transports; ✚ Support the Regional Government, Municipalities (among them the Municipality of Funchal) and other public and private entities on sustainable energy and environmental management; ✚ Inter-regional cooperation by participating in European projects and networks;

	<ul style="list-style-type: none"> ✚ Promotion of professional training on energy and environment.
Responsibilities/role within the development and implementation of the policy improvement	<ul style="list-style-type: none"> ✚ Supports the development of the strategies carried out within the SUMP in terms of monitoring and gathering data related to mobility. These includes survey and other data related to electric mobility. ✚ Setup of awareness sessions within the theme of sustainable mobility to foster the adoption of good practices.
Does this organisation provide political support to the implementation of the policy improvement? If yes, how?	AREAM is one of the regional key players responsible for assessing the applications that are submitted to the ERDF funding. The measures undertaken by the Municipality of Funchal related to promotion of soft modes (implementation of pedestrian-related measures and expansion of bike tracks) were funded by ERDF and had support from AREAM, considering their relevance to shift modal split towards non-pollutant transports. Besides, AREAM provides valuable statistical data and information related to regional guidelines to foster electric mobility and other actions geared at multimodality.
Website	https://www.arem.pt/

Table 1.3.1: Details of organisation n.2 participating in policy improvement design and implementation

Name of stakeholder	Regional Agency for Research, Technological Development, and Innovation (ARDITI)
Type of stakeholder	Regional consultant for ITS related measures
Description	ARDITI is the Regional Agency for Research, Technological Development and Innovation. It is a private non-profit association, founded by University of Madeira and the Regional Government of Madeira. ARDITI originated from former CITMA (Centre of Science and Technology of Madeira) association.

	<p>The aim of ARDITI is to promote and support Research, Technological Development and Innovation within Autonomous Region of Madeira, namely by:</p> <ul style="list-style-type: none"> ✚ Making research and innovation a priority for Madeira by stimulating growth and creation of jobs, based on knowledge; ✚ Carrying and funding R&TD+I projects, scholarships for teachers and researchers, as well as advanced training in general; ✚ Supporting the regional government of Madeira in the definition and implementation of science and technology policies; ✚ Promotion and dissemination R&TD+I results and their adoption in the business, service and industrial sectors, finding and selecting funding sources to which 3rd parties may apply for funding of their R&TD+I activities and projects.
<p>Responsibilities/role within the development and implementation of the policy improvement</p>	<ul style="list-style-type: none"> ✚ Joint participation of awareness actions to boost receptiveness towards soft modes. ✚ Support in ITS tools, such as an APP, related to sustainable mobility to promote multimodality.
<p>Does this organisation provide political support to the implementation of the policy improvement? If yes, how?</p>	<p>ARDITI is mainly focused on developing projects related with technology and innovation. Their experience on mobility related solutions along with the partnerships with the Municipality of Funchal (that enabled, for instance, the development of automatic traffic counters as well as environmental monitoring stations) have proven to be relevant to achieve the SUMP's envisioned strategy for Funchal. Therefore, and indirectly, given the technological achievements, this stakeholder has facilitated the policy improvement.</p>
<p>Website</p>	<p>www.arditi.pt</p>

Table 1.3.2: Details of organisation n.3 participating in policy improvement design and implementation

Name of stakeholder	Madeira's Cycling Association (ACM)
Type of stakeholder	Regional Association
Description	Association responsible for organizing events related to cycling throughout the Autonomous Region in Madeira. It has been actively engaged with the Municipality of Funchal in carrying out several awareness activities in the city such as those during the European Mobility Week.
Responsibilities/role within the development and implementation of the policy improvement	<ul style="list-style-type: none"> Support in developing the cycling plan, namely through survey dissemination. Support in developing awareness actions to foster the use of cycling.
Does this organisation provide political support to the implementation of the policy improvement? If yes, how?	This stakeholder has contributed positively to promote the use of bicycle through the carrying of several activities (races, cycling tourism, awareness campaigns, etc.). It was also a key player in showcasing the importance of this mode of transport for the mobility strategy in Funchal, fostering a political support. In addition, this stakeholder also supported some of the activities in improving the cycling planning tool through the dissemination of surveys to assess the cycling potential in Funchal.
Website	https://www.acmadeira.pt/

Table 1.3.3: Details of organisation n.4 participating in policy improvement design and implementation

Name of stakeholder	Europe Direct Madeira (EDM)
Type of stakeholder	Official EC organisation
Description	EDM is an informative centre handled by the Europe Commission whose role is to bridge citizens and the Europe Commission. Its main goals are to provide citizens with information as well as to promote several awareness campaigns about various domains, including sustainable mobility.

<p>Responsibilities/role within the development and implementation of the policy improvement</p>	<ul style="list-style-type: none"> ✚ Support in carrying out awareness campaigns to foster the use of cycling. ✚ Support in producing awareness materials to promote the adoption of behavioural changes towards the use of non-pollutant vehicles.
<p>Does this organisation provide political support to the implementation of the policy improvement? If yes, how?</p>	<p>Considering that the organisation is tightly connected with the EC, EDM is able to provide political support in showcasing the importance of the strategic vision towards cycling as well as to identify possible funding sources to enable the implementation of some of the actions. Specifically, EDM is an important key player in supporting the achievement of one of the cornerstones of the SUMP and its policy improvement, which is related to developing awareness campaigns to promote the use of bicycle among commuters in short distances.</p>
<p>Website</p>	<p>https://europedirect.aigmadeira.com/</p>

Table 1.3.4: Details of organisation n.5 participating in policy improvement design and implementation

Part 2: Policy Context

2.1 General Information

The Action Plan aims to impact on:

- Investment for Growth and Jobs Programme.
- European Territorial Cooperation programme.
- Other regional development policy instrument.

Name of the policy instrument addressed:

SUMP – Sustainable Urban Mobility Plan – Measure 3 – Promotion towards cycling.

Further details on the policy context and the way the action plan should contribute to improve the policy instrument:

The SUMP for Funchal, regarding the promotion towards cycling, implies the development of actions to create bike racks and bike boxes to give priority to two wheelers in junctions managed by traffic lights. The SUMP also implies the development of bike schemes. Nevertheless, the SUMP does not acknowledge the importance of developing a specific planning tool to boost the use of bicycles such as a cycling plan that can evaluate the bike potential in Funchal. Therefore, the action plan intends to reinforce the SUMP to what regards the promotion of bicycle through a specific and insightful planning tool to support the managing authorities to implement a set of measures whilst facilitating the allocation of funding. The action plan, in particular, is tightly connected with structural funding's, such as the OP 14-20 (ERDF) in which it has already enabled the funding to carry on with civil works to improve cycling conditions in Funchal. Therefore, and according to the programme manual for Interreg Europe, the policy instrument fits the implementation of new projects (type 1) in which it has provided funding and potentially inspire other managing authorities to replicate these actions to be funded within structural funding.

2.2 Description of the Policy Context

The modal split in the Autonomous Region of Madeira is heavily dominated by the individual motorized transport. According to the latest census, more than half of the inhabitants are more in

favour of using their own vehicles than any other mean of transport. In order to shift modal split towards soft modes, the Municipality of Funchal developed a SUMP, which was a prerequisite to unlock funding from the Operational Programme Madeira 14-20 (ERDF). Of all the 10 municipalities in Madeira, Funchal was the first municipality to approve this policy instrument. It even enabled the Regional Government to develop a SUMP for the whole region of Madeira. So far, the SUMP-Funchal enabled the following funding from Operational Programme Madeira 14-20 (ERDF):

- ✚ SUMP, with a cofunding of 75.000,00 €;
- ✚ Revitalization of city core through the implementation of road restriction policies and increase of pedestrian conditions, with a cofunding of 908.582,40 €;
- ✚ Electric mobility with the purchase of 11 rechargeable stations, with a cofunding of 60.000,00 €.

In what concerns cycling, it should be noted that an application was also successfully submitted to ERDF in which 882.000,00 € was granted to expand the bike track and improve the conditions for walkability and cycling (25 km).

The diagram below displays the main policy axis within the SUMP and the management authority responsible for its development. The third axis, related to cycling promotion is the one that the Municipality intends to pursue and enhance within MATCH-UP policy tool improvement. It should be noted that within this axis, the SUMP outlined the following actions, which does not offer a relevant impact towards the promotion of cycling:

- ✚ Introduction of bike boxes near junctions that serves as a traffic calming measure to give priority to cyclists and two-wheeler users;
- ✚ Deployment of bike racks that are disjointed from a concerted planning strategy to foster the use of bicycle;
- ✚ Introduction of sharing scheme without providing in detail the necessary requirements and criteria to assess its feasibility in Funchal.

For these reasons, and considering that the aforementioned actions will not contribute to foster modal shift towards soft modes, the MATCH-UP project, through the policy tool improvement, will address some of the cycling issues in order to strengthen the cycling strategy in Funchal.

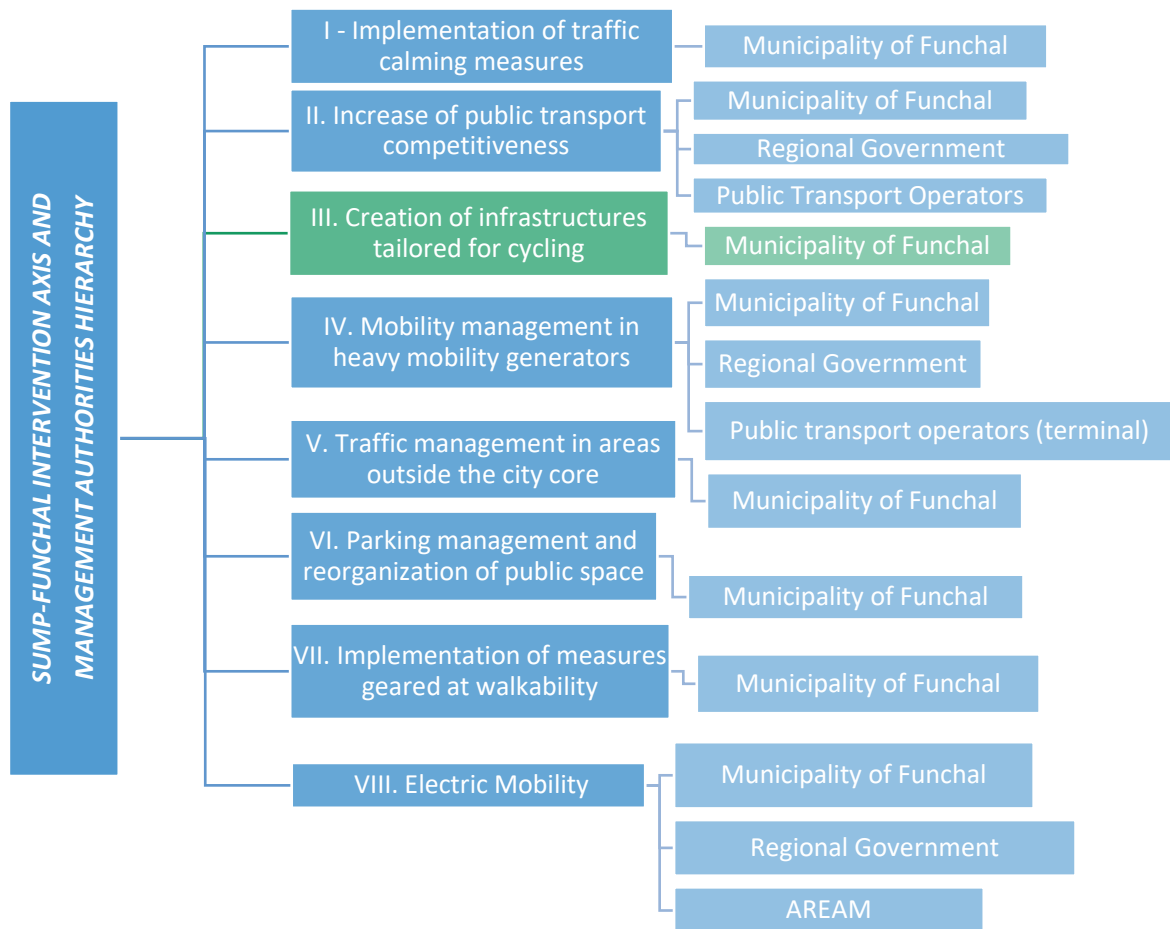


Table 2.2.1: SUMP-Funchal intervention axis and management authorities' hierarchy

The SUMP emphasizes that improving multimodality is an essential part of Funchal's mobility strategy. According to the modal split data gathered in Funchal, more than half of citizens uses the individual motorized transport (51%) whilst 27% uses the public transport. Only 22% prefers to walk, but only for short distances. As for the bike use, given the lack of bike lanes and heightened slopes in Funchal, its use is practically non-existent in Funchal. This geographical condition severely hampers the use of bicycle, especially in an altitude higher than 400 meters, in which the terrain is much steeper. These spatial constraints also greatly limits the urban sprawl, in which the majority of citizens and urban equipment are located below 400 meters.

As for accessibilities assessment for soft modes, the SUMP highlighted several issues within the pedestrian network that has a width inferior, in several cases, to 1,5 meters, which poses constraints to pedestrian mobility in Funchal. As for the bike accessibility, Funchal has only a dedicated bike lane located in the western area of Funchal a touristic zone that is separated from the traffic flow. As for the road network, it is mainly tailored for motorized individual transport.







According to traffic counts carried out in 2015, it was assessed that more than 50 thousand vehicles enters daily in Funchal. Most vehicles entering in Funchal are automobiles, whilst a small fraction is comprised of buses. There are 27 parking spots scattered throughout the city, that greatly encourages citizens to bring their vehicles to the city.

In addition, the number of cars in Funchal is increasing significantly, in which during the last 10 years, there was an increase of 8 thousand vehicles which contributes to aggravate traffic congestion and other constraints, such as pollutants emissions, noise and life-quality deterioration.

2.3 Description of the Policy Instrument selected for improvement

The SUMP is currently the main policy instrument that serves as a guideline for the Municipality of Funchal to what regards mobility.

The SUMP intends to improve mobility in Funchal through the implementation of a long-term strategic vision, tailored to the heightened slopes and landscapes, efficient for touristic and urban use and for emergency situations. The SUMP also intends to enable the application to national funding for measures related to mobility, considering that a SUMP was a prerequisite for local authorities to submit their applications. The SUMP led to the identification of several issues in Funchal in terms of mobility, including:

-  The touristic areas are not articulated, leading to several mobility issues in public space and mobility;
-  Inadequate conditions for pedestrian circulation outside the city core, due to the following:
 - Lack of sidewalks and/or narrow conditions for safe circulation;
 - Heightened slopes unfavourable for pedestrian mobility.
-  Persistent illegal parking in the city core, namely in sidewalks and dedicated areas for public transport;
-  Reduction of public transport and decrease of the number of passengers in the last 10 years (reduction of 2 million of passengers);
-  Dependence of individual motorized transport and low use of soft modes;
-  Road hierarchy is more tailored for individual motorized transport.

Considering the territorial diagnostic findings, it was pressing to outline a strategic plan throughout years that could encompass several mobility actions. The wide range of actions are related to electric mobility, school management, parking management, traffic-calming measures, public transport competitiveness, and bike promotion.



Image 2.3.1: SUMP-Funchal intervention axis

These actions are to be undertaken for a long-term period aim to achieve the following goals by 2023:

- ✚ Reduce modal split and individual motorized transport (automobile) for 50% on short distances and in the city centre, fostering multimodality, namely for pedestrian and bike.
- ✚ Increase the use of soft modes, namely 0,5% for bike use and 15% for walking.
- ✚ Reinforce connectivity for pedestrianized areas in at least 75% of roads within the city centre.
- ✚ Increase the PT offer for 30%.
- ✚ Increase energetic efficiency, promoting the use of electric vehicles and e-bikes to overcome the heightened slopes.

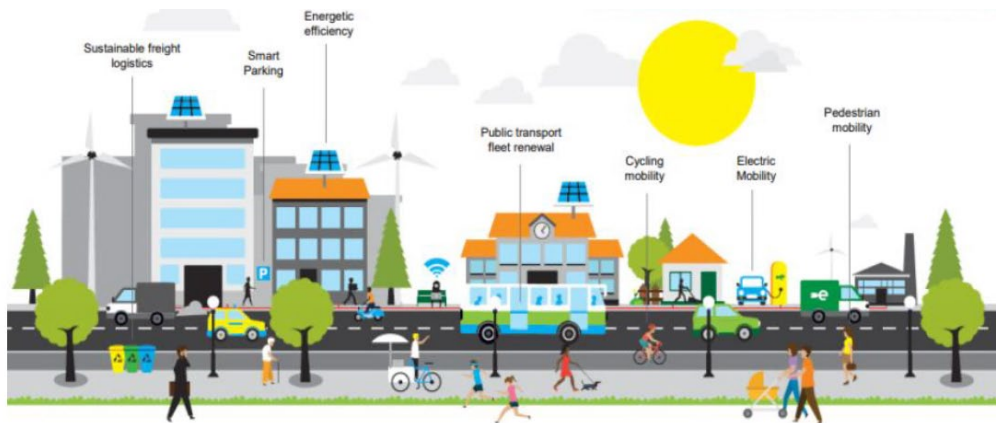


Image 2.3.1: SUMP-Funchal intervention axis

2.4 Description of the need(s) to be addressed through the policy improvement

As described above, cycling in Funchal practically does not exist. Therefore, in order to boost cycling, the SUMP outlined, within a set of measures (Measure 3 – Promotion towards cycling), a generic approach comprised of three actions namely the introduction of bike boxes in junctions managed by traffic lights (e.g. road markings that identify a safe area, for bikes and two wheelers, ahead of cars near junctions managed by traffic lights, and that provides for these type of vehicles a priority start), the deployment of bike racks and implementation of bike sharing schemes using electric mobility. However, the cycling strategy in the SUMP is underdeveloped, given that in order to promote this type of transport, it is necessary to reinforce the strategy with other goals to ensure a wider impact. Therefore, it was necessary to further outline a more concerted and integrated approach to reach better results.

Hence, and taking in consideration that the cycling strategy is underdeveloped within the SUMP and in order to improve the policy improvement and to actually promote cycling mobility, the development of a throughout cycling planning tool is important to properly evaluate and identify the driving factors that can facilitate the implementation of bike related measures. Within this tool the main goal is to promote low-carbon mobility through modal interchange solutions.

The importance of having these type of plans will be embedded in an updated version of the SUMP, on the section related to cycling strategy, which will highlight the importance of a cycling plan to accomplish the SUMP goals in relation to cycling.

The promotion of cycling envisioned within the SUMP implies a concerted strategy based on multimodality and a balanced use between all modes of transportation. Therefore, the development of a cycling plan will enhance the achievement of the goals envisioned by the SUMP as well as the following:

- ✚ Promotion of cycling and interconnection to other modes of transport.
- ✚ Expansion of bike network and optimization of routes.
- ✚ Improvement of energetic efficiency and reduction of greenhouse emissions.
- ✚ Enhancement of attractiveness for public areas.

In terms of activities, the cycling plan could ensure the development of the following new actions than what is foreseen in the SUMP:

- ✚ Definition of strategy for cycling mobility in Funchal, establishing specific metrics besides the ones outlined within the SUMP.
- ✚ Detailed assessment of cycling conditions, namely:
 - Analysis of spatial conditions, namely slopes and connection of road network, identifying favourable areas for cycling;
 - Analysis of circulation and traffic hierarchy according to flows;
 - Surveys to assess receptiveness regarding cycling.
- ✚ Cycling map potential.
- ✚ Intervention proposals, including parking management, road markings, traffic signs and budgetary to support.
- ✚ Development of normative guidelines to support mobility sharing services related to cycling.

Part 3: Stakeholders Involvement

In order to enhance the impacts envisioned by the SUMP to what regards cycling and in order to further develop a more efficient strategy, several sessions and meetings were carried out. This approach facilitated the establishment of more partnerships whilst showcasing the importance of cycling as an axis to foster multimodality.

3.1 Stakeholder Engagement for MATCH-UP Project

The stakeholders invited to participate in the events pointed below includes government departments, education institutes, local authorities, research institutions, environmental groups and civil society. It should be stressed that the policy tool improvement have contributed to achieve the following:




-  Establishment of a multidisciplinary teamwork with other internal divisions related to planning and regeneration to embed cycling guidelines in urban redesigning;
-  Regular meeting sessions to address cycling issues and the cycling plan strategy to be undertaken;
-  Integration of cycling strategic actions in micro centralities urban development and management.



Table 3.1: Stakeholder Engagement for MATCH-UP project

Part 4: Action & Timeframe

4.1 Action

Development of a cycling planning tool to improve the SUMP strategy regarding cycling





Relevance to the Project

In a city such as Funchal, in which the modal split shows that the majority of users are still dependant of the individual motorized vehicles, the Municipality of Funchal developed a SUMP to further assess the barriers and the driving factors that could enable the implementation of measures to boost multimodality. One of the main targets within the SUMP refers to the increase of cycling in Funchal. In order to achieve that, and after learning from other sites and Interreg experiences, it was important to develop a specific planning tool related to cycling promotion.

The cycling plan will encompass a specific strategy to boost cycling In Funchal through an analysis of accessibility conditions for bicycles in Funchal, a carrying of a spatial analysis highlighting the areas that can be improved, a set of regulation guidelines to manage mobility sharing services related to bicycles exploration, among other actions.

With this tool, the Municipality of Funchal is expected to carefully lay more efficient actions for a mid/long term period thus achieve and even surpass the goals outlined by the SUMP in terms of cycling.

Improving the SUMP through a cycling planning tool will be a reference for the Municipality of Funchal in terms of cycling strategy, contributing positively to achieve the following goals:

-  Availability of a planning framework at a medium-long term period focused on actions related to multimodality with a keen emphasis on cycling promotion and bike lane infrastructures enhancement;
-  Potential acquirement of technical skills in key areas related to planning and integration of actions to foster cycling;
-  Potential political engagement and commitment towards the inclusion of policies related to multimodality in the political agenda;
-  Potential unlocking of funding sources to enable the implementation of actions to improve cycling in Funchal.

Nature of the Action

The importance of the cycling strategy will be embedded in an updated version of the SUMP. The action will be comprised of a throughout revision of the section related to the cycling in order to accommodate a new set of guidelines related to the cycling plan which will improve the policy tool.

As a supplementary information, the cycling strategy comprises the following contents:

Analysis of cycling conditions

In order to determine the cycling conditions in the area under study, the following tasks will be carried out:

- Analysis of physical structural conditions, connectivity of the road network, identifying orographic levels favourable to “non-electric” cycling.
- Road network analysis, namely in terms of geometry, road layout and circulation conditions.
- Population density, land uses and main generators of pedestrian and cycling traffic.
- Other parameters considered relevant for the assessment of conditions:
 - Profile of bicycle users, with inquiries about cycling mobility to be designed and carried out, focusing on their potential and barriers. Surveys will also assess respondents' potential receptivity to the implementation of a shared bicycle system.
 - Constraints and relationship (interconnections) with other means of transport.

The analysis of these elements will converge towards the definition of a spatial analysis tool highlighting the cycling potential.

Elaboration of a cycling analysis

The spatial analysis will include the following:

- Roads with slopes considered unsuitable and adjusted for cycling, based on specific topographic levels.
- Conflict zones (junctions, uneven crossings, intersections, etc.).
- Other contents considered relevant to support the decision-making process.
- Previous study of the cycling network and types of intervention.

Following the identification of potentials and weaknesses, an assessment of the potential of the cycling network will be presented, including a set of the proposed solutions to the identified constraints:

- Preliminary definition of the standard profiles, namely the typologies (trivialized; cycle track; Cycle track) and dimensioning.
- Proposal for the potential cycling network based on the Cycle Potential Chart and respective hierarchy.
- Identification and treatment of critical points (intersections, conditioned profiles, excessive volumes, and discontinuities / barriers, etc.).
- Correspondence matrix of street layout typification, based on the analysis provided for and standard profiles.
- Identification, analysis and qualitative assessment of alternative routes, including an estimate of the population directly served by section.
- Proposal for the final cycling network.
- Standard details including typification of the intersections between modes, dimensioning of parking, specific horizontal and vertical signage, among others and their respective constructive details.
- Budget estimate by street and type of intervention.

Elaboration of the regulation for the attribution of license and system management for scooters and bicycles.

It should be noted that the policy improvement will also contribute to other actions, such as the expansion of the bike lane infrastructures. These public works will be implemented to both provide better accessibility conditions for cyclists and pedestrians through the enlargement of sidewalks and expansion of bike track.





Main steps	Deadline	Result
a) Draft and design of technical requirements for a cycling plan	06/2019	Completed
b) Launch and conclusion of procurement for external expertise to develop the cycling plan	12/2019	Completed
c) Survey to assess receptiveness towards cycling	06/2020	Pending

d) Analysis of cycling conditions	07/2020	Pending
e) Cycling potential spatial tool	07/2020	Pending
f) Definition of actions geared at improving cycling	07/2020	Pending
g) Definition of guidelines to manage mobility sharing services	08/2020	Pending
h) Completion of cycling plan and embedment of findings and additional specific actions in the SUMP	09/2021 – Date of actual policy improvement implemented	Pending
i) Public exhibition of cycling plan	09/2021	Pending
j) Awareness action to promote cycling	09/2021	Pending
k) Implementation of civil works to enhance the bike accessibility, carried out through a subcontracting launched by the Municipality of Funchal	09/2021	Pending

Stakeholders Involved

The stakeholders appointed will support the development of the cycling plan through disseminating the survey and spread out the envisioned awareness actions to promote cycling. The stakeholders are comprised of the main Public Transport Operator in the Municipality (Horários do Funchal), Regional Agency for Energy and Environment in Madeira (AREAM), Regional Agency for Research, Technological Development and Innovation (ARDITI), Madeira’s Cycling Association (ACM) and the Europe Direct Madeira (EDM).

Timeframe

-  Draft and design of technical requirements for a cycling plan: 06/2019
-  Definition of strategy for cycling mobility: 04/2020
-  Survey to assess receptiveness towards cycling: 06/2020
-  Analysis of cycling conditions: 07/2020

- 🚦 Definition of actions geared at improving cycling: 07/2020
- 🚦 Completion of cycling plan and delivery of the planning tool in which the actions will be applied for funding in order to be implemented: 09/2021 (date of actual policy improvement implemented)
- 🚦 Implementation of civil works to enhance the bike accessibility: 09/2021

Costs

The development of the cycling plan costed 75.000,00 € whilst the public works to improve cycling in Funchal costs 1,3 million.

Funding Sources

The budget used for developing the cycling plan was internal, although it is expected to apply for ERDF, through the operational programme Madeira 14-20 (ERDF). As for the public works to improve cycling, the budget was raised from ERDF.

Performance Indicators

1. Number of surveys completed to assess receptiveness regarding bike potential in Funchal. **Target: 300 inquiries, by 2020.**
2. Number of strategic actions outlined within the policy tool to improve cycling. **Target: 10 actions, by 2020.**
3. Number of technicians with an improved set of skills regarding cycling planning and multimodality. **Target: 3, by 2020.**
4. Number of actions related to cycling in the political agenda. **Target: 4, by 2020.**
5. Bike path extension. **Target: 2,5 km, by 2021.**
6. Increase in the number of soft modes (bikes) circulating in the intervention area. **Target: 5%, by 2021.**
7. Number of awareness actions carried on co-organized with stakeholders. **Target: 2, by 2021.**

4.2 Enablers and barriers of Action Plan development and implementation

Enablers		
	Description of enabler	Importance of enabler and potential impact on development and implementation of policy improvement
1	<i>Horários do Funchal</i> AREAM ARDITI	Continued support is crucial to the successful data gathering and analysis, and critical to the development and implementation of policy improvement. The data is related to the diagnostic stage and include survey gathering and assessment of accessibilities and the role that public transport can play in promoting cycling.
2	Europe Direct Madeira Madeira's Cycling Association	Plays a role in enhancing dissemination and boosting promotion of cycling through the jointly organization of awareness actions.

Table 4.2.1: Enablers affecting the development and implementation of the policy improvement

Barriers		
	Description of barrier	Importance of enabler and potential impact on development and implementation of policy improvement
1	Geographical conditions	Heightened slopes and narrow roads are a barrier for both promoting cycling and creating infrastructures, which may hamper the implementation stage.

Table 4.2.2: Barriers affecting the development and implementation of the policy improvement

4.3 Risks and mitigating actions

Risks and Mitigating Actions			
Title of risk	Description of risk	Level of probability (High, Medium, Low)	Description of mitigating action(s)
Data Risk	Lack of spatial data to support analysis (raster and vector GIS data)	Medium	CMF is currently drafting out the procurement to acquire updated aerial pictures. In addition, the Municipality of Funchal is also in the process of procuring external services in order to appoint staff to update the GIS database.
Political support	No political support	Low	EC guidelines and international pressure may force local authorities to commit themselves to acknowledge the importance of these strategic plans.

Table 4.3.1: Potential risks and mitigating actions

Part 5. Interregional learning that influenced Policy Improvement

The good practices, exchange of experiences and other learning sessions undertaken by Interreg Europe and Match-Up proved to be a vital point in developing the action plan and improve the policy instrument. The Match-Up project facilitate learning at an individual, organisational, stakeholder level.

Good Practices

Cycle and Ride Infrastructure associated with Luas Light Rail	
Project Partner involved	Southern Regional Assembly
GP owner	Transport Infrastructure Ireland
How this GP addresses the policy need(s)	Assessment of bike renting stations features, such as its location criteria, business model and technical aspects for infrastructures such as bike lanes. These features will be addressed in the cycling plan. This GP will support one of the main axis of the cycling plan that is related to the feasibility of launching bike schemes in Funchal and outline, in more detail, the requirements to avoid issues, that has been hampering an efficient mobility management in most European cities (persistent illegal parking outside authorized zones, safety issues, lack of control of mobility sharing services). This assessment is also a key factor that needs to be addressed within the revised version of the policy tool.

Table 5.1: Description of Good Practices n.1 used in policy improvement process

Green-Schools Travel Programme	
Project Partner involved	Southern Regional Assembly
GP owner	An Taisce EEU
How this GP addresses the policy need(s)	The rewarding system as well as the type of awareness campaigns carried on can be replicated to foster cycling in Funchal. Although the creation of cycling infrastructures is important, it should be supported by communication campaigns in order to ensure a wider receptiveness among users. These campaigns should be geared at several target groups, namely youngsters since they are more keen

	in adopting sustainable habits and encourage parents to shift their mobility patterns towards non pollutant vehicles.
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Table 5.2: Description of Good Practices n.2 used in policy improvement process

Modernization of the intermodal public transportation stations within the Growth Pole Timisoara	
Project Partner involved	Municipality of Timisoara
GP owner	
How this GP addresses the policy need(s)	Assessment of bike renting stations features, such as its location criteria, business model and technical aspects for infrastructures such as bike lanes. These features will be addressed in the cycling plan. As with the Cycle and Ride Infrastructure associated with Luas Light Rail, this GP also encompasses the connection of two modes of transport, namely bicycle and collective public transport. Similarly, the Municipality of Funchal also expects, through the action plan, to embed a strategic vision that aims to bridge bicycle and public transport. The example of Timisoara is particularly interesting given that the Municipality of Funchal intends to pursue a similar approach. Therefore, it is planned to assess a potential transferability of this business modal to Funchal.

Table 5.3: Description of Good Practices n.3 used in policy improvement process

MATCH-UP site visits and staff exchanges

MATCH-UP site visit and staff exchange in Timisoara	
Type of Event	Partner meeting
Location	Timisoara
When	05/2019
What Learning took Place	This study visit provided more in-depth information and specifications for the bike renting system and interconnection with public transport. The information obtained proved to be relevant in outlining the technical specs for the tendering process.

Table 5.4: Description of Interregional Learning Event n.1 used in policy improvement process

MATCH-UP site visit and staff exchange in Ireland	
Type of Event	Partner meeting
Location	Dublin
When	01/2020
What Learning took Place	This study visit provided the Municipality of Funchal with an understanding regarding the type of actions used to raise awareness among youngsters and the multimodality between soft modes. The example provided in St Clare School was inspiring given that youngsters are keen in persuading their parents in adopting behavioural changes towards the use of soft modes.

Table 5.5: Description of Interregional Learning Event n.2 used in policy improvement process

Interreg Europe Policy Learning events

Fostering Citizen-Focused Urban Mobility	
Type of Event	Thematic Workshop
Location	Brussels
When	11/2019
What Learning took Place	At this technical workshop, there was a discussion related to measures geared at promoting cycling and e-mobility. It also enabled the establishment of partnerships with Interreg partners in order to further optimize measures related to smart sensing.

Table 5.6: Description of Interreg Learning Event n.1 used in policy improvement process

Online Discussion on Traffic Calming Measures	
Type of Event	Webinar
When	03/2020
What Learning took Place	Discussion of solutions to reinforce road safety and boost soft modes. The examples shown by other cities proved to be interesting and it is intended that the Municipality follow on these measures, tailored for the city.

Table 5.7: Description of Interreg Learning Event n.2 used in policy improvement process

Impacts of transport electrification on the electricity grid	
Type of Event	Webinar
When	12/2019
What Learning took Place	Discussion regarding the impact of electric mobility upon the grid. The Municipality of Funchal participated and learned a lot from what other cities are doing to prevent expenses related to transport electrification. This was especially important given that in Funchal, and given the heightened slopes, electric bikes are required to overcome the spatial obstacles. Therefore, the Municipality of Funchal is currently assessing the possibility to also use specific rechargeable stations for bicycles near bike tracks.

Table 5.8: Description of Interreg Learning Event n.3 used in policy improvement process

Open Data for Smarter Cities	
Type of Event	Webinar
When	04/2020
What Learning took Place	The webinar explored examples of how making energy and mobility data public increased the efficiency of public services and foster innovation. This was important to see what other cities are doing and what kind of data is being collected to support decision-making process. The Municipality of Funchal learned a lot from this webinar considering that it is intended to pursue a similar ITS approach and to assess in a more efficient way the type of data that is important to be collected and how it can be used to tackle mobility issues.

Table 5.9: Description of Interreg Learning Event n.4 used in policy improvement process

Cycling Tourism	
Type of Event	Webinar
When	06/2020
What Learning took Place	This webinar proved to be relevant for the Municipality of Funchal given that the discussion addressed several strategies to further spread the use of bicycles. Also, the development of promotion tools was interesting and can be replicated by Funchal to foster the use of bicycles to other target groups, such as the cycling tourism map and guide.

Table 5.10: Description of Interreg Learning Event n.5 used in policy improvement process

Part 6: Action Plan Endorsements

The Municipality of Funchal and Horários do Funchal acknowledge the benefit of the MATCH-UP project and its contribution to improve the SUMP, through the identification of Good Practices and Interregional learning and the development of strategies towards the promotion of multimodality.

In addition, the Municipality of Funchal along with Horários do Funchal consider the potential import of good practices as a valuable input for further development of energy efficiency measures and reduction of CO² emissions in Funchal.

We hereby confirm our support for the import and implementation of good practices as well as the implementation of actions to improve multimodality and the promotion of soft modes, namely:

- Improvement of accessibility conditions to bus stops connected to public transport;
- Parking reform;
- Reduce the individual motorized transport to 50%;
- reinforce accessibility to bus stops dedicated to public transport.

Name & Function: Alejandro M. G. Gonçalves

President of the Horários do Funchal board

Date: 13/07/2020 **Signature:** 

The Municipality of Funchal and Cycling Association for Madeira [ACM] acknowledge the benefit of the MATCH-UP project and its contribution to improve the SUMP, through the identification of Good Practices and Interregional learning and the development of strategies towards the promotion of multimodality.

In addition, the Municipality of Funchal along with Cycling Association for Madeira [ACM] consider the potential import of good practices as a valuable input for further development of energy efficiency measures and reduction of CO² emissions in Funchal.

We hereby confirm our support for the import and implementation of good practices as well as the implementation of actions to improve multimodality and the promotion of soft modes.

Name & Function: Rui César Oliveira de Almeida

President of ACM – Madeira's Cycling Association

Date: 17.07.2020 **Signature:** 

The Municipality of Funchal and Europe Direct Madeira acknowledge the benefit of the MATCH-UP project and its contribution to improve the SUMP, through the identification of Good Practices and Interregional learning and the development of strategies towards the promotion of multimodality.

In addition, the Municipality of Funchal along with Europe Direct Madeira consider the potential import of good practices as a valuable input for further development of energy efficiency measures and reduction of CO² emissions in Funchal.

We hereby confirm our support for the import and implementation of good practices as well as the implementation of actions to improve multimodality and the promotion of soft modes.

Name & Function: Marco Teles

Coordinator for Europe Direct Madeira

Date: 17/07/2020

Signature:



The Municipality of Funchal and AREAM acknowledge the benefit of the MATCH-UP project and its contribution to improve the SUMP, through the identification of Good Practices and Interregional learning and the development of strategies towards the promotion of multimodality.

In addition, the Municipality of Funchal along with AREAM consider the potential import of good practices as a valuable input for further development of energy efficiency measures and reduction of CO² emissions in Funchal.

We hereby confirm our support for the import and implementation of good practices as well as the implementation of actions to improve multimodality and the promotion of soft modes.

Name & Function: Filipe Oliveira

Head of Administration Board of AREAM

Date: 07-07-2020 **Signature:**



The Municipality of Funchal and ARDITI (Madeira Regional Agency for Research, Technological Development and Innovation) acknowledge the benefit of the MATCH-UP project and its contribution to improve the SUMP, through the identification of Good Practices and Interregional learning and the development of strategies towards the promotion of multimodality.

In addition, the Municipality of Funchal along with ARDITI consider the potential import of good practices as a valuable input for further development of energy efficiency measures and reduction of CO² emissions in Funchal.

We hereby confirm our support for the import and implementation of good practices as well as the implementation of actions to improve multimodality and the promotion of soft modes.

Name & Function: Lúcio Quintal

Project Manager at ARDITI

Date: 7/7/2020 **Signature:** _____ 

Annexes

Annex 1 – SURVEY TO ASSESS POTENTIAL RECEPTIVENESS FOR CYCLING IN FUNCHAL

1. Do you have a driving permit? *

Yes

No

2. Do you own a vehicle? *

Yes

No

3. Do you usually purchase a public transport ticket? *

Yes

No

4. Do you own a bicycle?

Yes, I have a conventional bicycle

Yes, I have an electrical bike

No

5. How many times do you use bicycle? *

A - Frequently (twice per week)

B - Occasionally (once per month)

C – Rarely but i’m thinking of riding it more (less than once per month)

D - Never, but i’m thinking of using it;

E – Never and i’m not thinking in using it;

Regular biker

6. To what purpose do you use the bicycle? *

Leisure

Exercise

As a mean of transport (work/school)

Other: _____

7. Why do you start using the bicycle?

8. Why do you use the bicycle?

It's a lot quicker to reach my destinations (home, work, school...)

It's cheaper to use

It allows me to be in shape

I feel healthier and in a nicer mood

It supresses stress

I can contribute for a better environment

Another: _____

9. What is the main criteria to outline your cycling route?

Distance (shorter route)

Less demanding (less demanding)

Safety (route with less traffic congestion)

10. Please point other reasons that can contribute to improve your cycling trip:

11. What reasons do you found difficult to use the bicycle:

Insecurity

Maintenance costs

Afraid that the bicycle is stolen

Riding my children to school

It is not possible to use buses to transport my bicycle

Long distance to school/home

Streets are not suitable

Pavement is not comfortable

Weather (too hot, rain)

My friends make fun

Other: _____

12. What would motivate you to use the bicycle?

More bike lanes

Possibility to use the bus to carry the bike

More bike racks

Reduction of traffic flow

Implementation of low-speed policies

Improvement of pavement quality

Other: _____

13. Gender

Female

Male

14. Age

16 to 20

21 to 30

31 to 40

41 to 50

51 to 60

> 60

15. Education

16. Do you have children with less than 10 years at home?

No

Yes, 1

Yes, 2

Yes, more than 2

17. Please estimate the distance for your place of work/school:

1 km

1 to 5 km

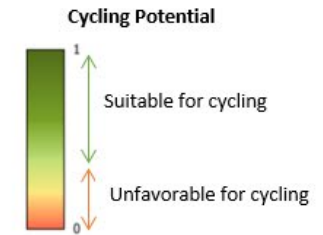
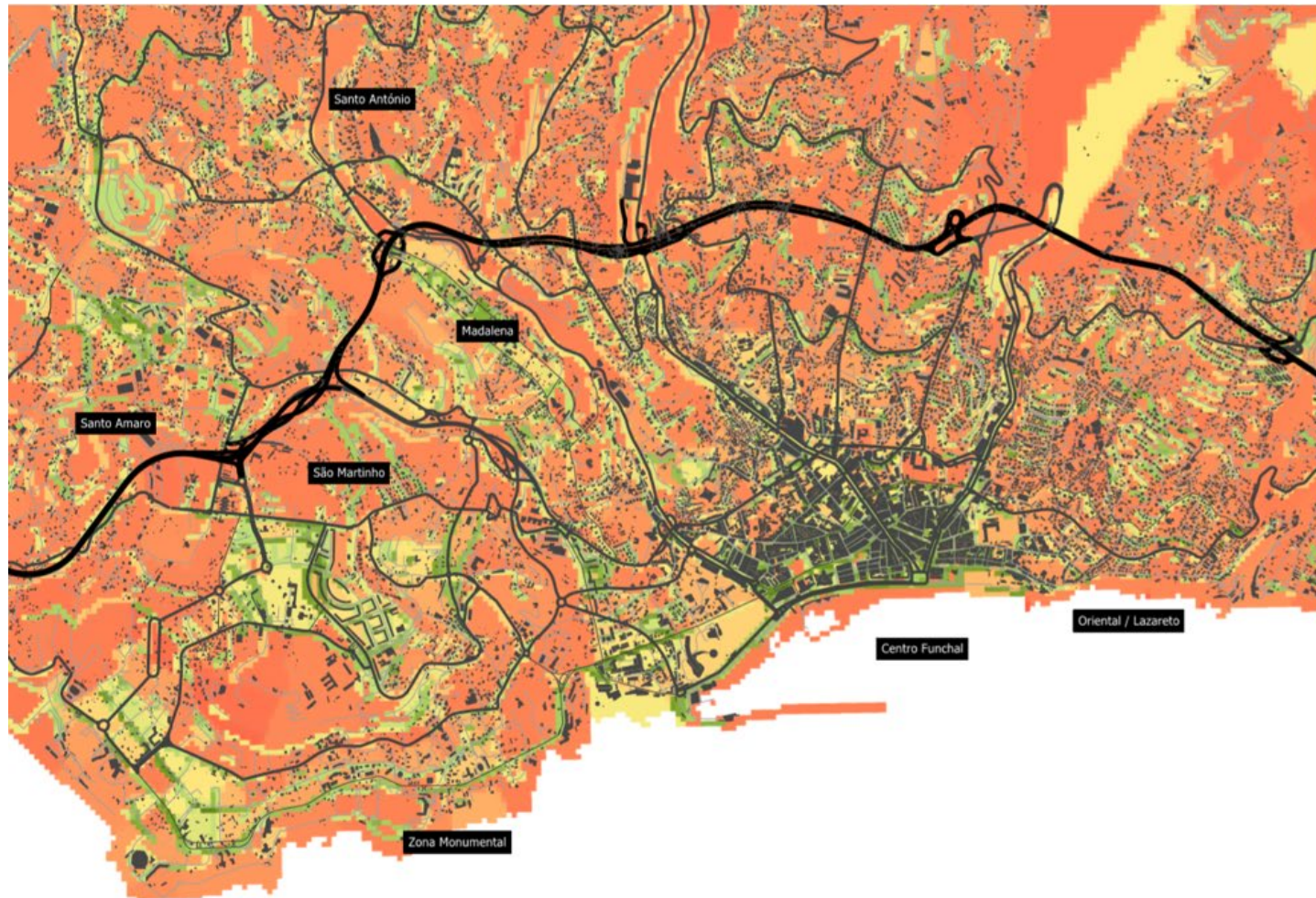
5 to 10 km

more than 10 km

I have no idea

18. Please indicate your postal code for both your house and work place/study

Annex 2 – Cycling Potential Mapping for the Municipality of Funchal



CYCLING PLAN IN FUNCHAL

Promotor



Equipa Projectista



Fase:

Estudo de Ciclabilidade

Designação / Título

Note: The “heat map” displays the areas in Funchal that are more suitable for bike use and to carry on actions related to cycling.