



3164_V2

Águeda's Action Plan for Mobility: Actions Definition



MOVIMENTO INTELIGENTE

Índice

1. INTRODUCTION AND FRAMEWORK	5
1.1. Framework	5
1.2. Action 1: Mobility Agreement and Partnerships	6
1.2.1. Background	6
1.2.2. Actions.....	8
1.2.3. Partners Involved	8
1.2.4. Schedule	8
1.2.5. Costs	9
1.2.6. Funding Sources.....	9
1.2.7. Monitoring of Performance	9
1.3. Action 2: Contracting the public transport network in the municipal level.....	10
1.3.1. Background	10
1.3.2. Actions.....	10
1.3.3. Partners Involved	10
1.3.4. Schedule	11
1.3.5. Costs	11
1.3.6. Funding Sources.....	11
1.3.7. Supervision of Performance	12
1.4. Action 3: Sustainable Mobility Agenda	12
1.4.1. Background	12
1.4.2. Actions.....	12
1.4.3. Partners Involved	12
1.4.4. Schedule	12
1.4.5. Costs	13
1.4.6. Funding Sources.....	13
1.4.7. Supervision of Performance	13
1.5. Action 4: Mobility Management and Observation Platform.....	13
1.5.1. Background	13
1.5.2. Actions.....	14
1.5.3. Partners Involved	14
1.5.4. Schedule	14
1.5.5. Costs	14
1.5.6. Funding Sources.....	14
1.5.7. Supervision of Performance	14
1.6. Action 5: Promotion and Awareness	15
1.6.1. Background	15
1.6.2. Actions.....	16
1.6.3. Partners Involved	16
1.6.4. Schedule	16
1.6.5. Costs	16
1.6.6. Funding Sources.....	16
1.6.7. Supervision of Performance	17
1.7. Action 6: Consolidation of the road network	17
1.7.1. Background	17
1.7.2. Actions.....	17
1.7.3. Partners Involved	18
1.7.4. Schedule	18
1.7.5. Costs	18
1.7.6. Funding Sources.....	19
1.7.7. Supervision of Performance	19

1.8. Action 6: Logistics	19
1.8.1. Background	19
1.8.2. Actions.....	19
1.8.3. Partners Involved	20
1.8.4. Schedule	20
1.8.5. Costs	20
1.8.6. Funding Sources.....	20
1.8.7. Supervision of Performance	20
1.9. Action 6: Walking Network	20
1.9.1. Background	20
1.9.2. Actions.....	21
1.9.3. Partners Involved	22
1.9.4. Schedule	22
1.9.5. Costs	22
1.9.6. Funding Sources.....	22
1.9.7. Supervision of Performance	22
1.10. Action 7: Cycling Network	22
1.10.1. Background.....	22
1.10.2. Actions	23
1.10.3. Partners Involved	23
1.10.4. Schedule	23
1.10.5. Costs.....	24
1.10.6. Funding Sources	24
1.10.7. Supervision of Performance	24
1.11. Action 8: Attractive Public Transport Network	24
1.11.1. Background.....	24
1.11.2. Actions	25
1.11.3. Partners Involved	25
1.11.4. Schedule	25
1.11.5. Costs.....	26
1.11.6. Funding Sources	26
1.11.7. Supervision of Performance	26
1.12. Action 9: More rational use of Private Transport	26
1.12.1. Background.....	26
1.12.2. Actions	27
1.12.3. Partners Involved	27
1.12.4. Schedule	27
1.12.5. Costs.....	27
1.12.6. Funding Sources	28
1.12.7. Supervision of Performance	28

Page intentionally left blank.

1. Introduction and Framework

1.1. Framework

In the “Estratégia de Mobilidade Sustentável 2020 para Águeda” (EMSA 2020) project, developed for the Municipality of Águeda (CMA) by TIS, the action plan states the following: “By the end of the year 2016, a formal evaluation of the mobility strategy and its current state of development must occur.”.

Therefore, an update on its strategy, in accordance with CISMOB’s project (*Cooperative information platform for low carbon and sustainable mobility*), must be considered by CMA, leading to a swift evaluation of the actions’ degree of accomplishment, guaranteeing the deliverance of the project.

Broadly, EMSA 2020 aims for the “optimization of the transport system and resource efficiency, in agreement with the principles of and integrated, accessible, safe, inclusive and environmental friendly transport system”. The above-mentioned document focused on the passengers and freight transport component leading, through the cooperation between urban/regional mobility and its related areas (security, land-use planning, environment, health, economy and social inclusion), to a comprehensive point of view, declaring itself as a broad and inclusive baseline that is aligned with the development of Águeda’s Municipality competitiveness.

It was acknowledged that this strategy should promote, when the most efficient use of resources is being considered, the use of soft transport modes (walking and cycling), of two-wheeled electric vehicles and new collective transport services, as viable alternatives to the massive use of private transport.

In the scope of CISMOB’s project, CMA established the following priorities:

- Optimization of the walking and cycling network;
- Restructuring of the public transport network;
- Expanding the shared electric bicycle system to new places;
- Improve the accessibility to everyone;
- Promote the increase of the number of electric vehicles;
- Promote actions to change the behaviour towards sustainable mobility.

These guidelines match with the ones presented in PIMTRA and EMSA 2020, with “only” the update of the measures and proposals to be made, considering the projects and actions CMA aims to undertake.

Consequently, the development of the following tasks is essential for the methodology proposed:

- **Amend and update the Action Plan:** Based on the EMSA 2020 document and the elements made available by CMA the action plan will be updated and amended, respecting the template presented by CMA which follow the subsequent issues:
 - Contextualization of politics, bearing in mind the compliance of CISMOB’s assumptions and objectives;
 - Description of the considered actions, defining and describing its context of intervention, the stakeholders involved, the time schedule, costs and the funding sources considered;
- **Proposals for monitoring the performance:** in the present document we will seek to identify the most suitable environment and performance indicators to determine and spread the environmental gains arising from the municipalities actions, therefore improving the urban sustainability.

It is also intended by the CMA that the present surveillance proposal contributes to: i) prioritize the areas of intervention for sustainable urban development and equitable governance; ii) promote synergies and transfer of scientific and technical knowledge between the municipality, universities and the private sector, mainly in the areas of Information and Communication Technologies (TIC), transport systems and environmental evaluation. It should be noted that in this document no environmental or performance indicator were calculated.

Subsequently, the main proposals are presented, organized as actions for an easier inclusion of the necessary elements for the development of the CISMOB project.

1.2. Action 1: Mobility Agreement and Partnerships

1.2.1. Background

In PIMTRA and EMSA 2020 the development of a Mobility Agreement was proposed, through which a commitment with the main stakeholders should take place so that every party involved could contribute to the implementation of the specified mobility strategy.

Although no Mobility Agreement was formally developed, CMA has been promoting the connection with some major discussion partners to deploy the actions that contribute to the mobility strategy, thus developing a set of partnerships.

In the EMSA 2020, these partnerships were structured in six main axes of intervention: i) corporate mobility, ii) scholar mobility, iii) public and commercial services, iv) tourism sustainability, v) attractive collective transport network, vi) the “mover-me na minha freguesia” project.

The partnerships in the **Corporate Mobility** have been promoted to stimulate the momentum of Águeda’s bike industry, standing out the participation in the project Portugal *Bike Value* (portugalbikevalue.pt). The

objective of the municipality is to further strengthen these partnerships through the development of Corporate Mobility Plans, through which CMA and the administrators of business units may articulate the actions to be fulfilled in order to demote the use of private vehicle in the house-work movement.

The partnerships for the **Scholar Mobility** are in an embryonic phase, but it is already possible to mark the existence of certain awareness efforts from the students for the use of public transports and soft transport modes. The following can be highlighted: i) the use of train as the main transport mode in field trips; ii) the application of the security plan among the first graders; iii) gamification of mobility (application of the *Traffic Snake Game*, through the TRACE project).

There are no current partnerships with **commercial and public services** however, CMA has been trying to implement its mobility strategy in the access to these equipments, mainly with the growth of the shared bicycle network to these areas. The electric bicycle network (with 4 access points) assists Águeda's the commercial and services centre.

CMA and different partners have been present in the development of partnerships for the promotion of **sustainable tourism**. The following actions can be highlighted:

- extension of walking trails and BTT circuits, adding value to the nature and sport tourism;
- implementation of a historic train circuit in the Vouga line, every Saturday between July and September. This circuit begins in Aveiro and circulates to Macinhata do Vouga, allowing for the visit of the railway museum, the historical centre of the city and the experience of regional products. CMA coordinated the arrivals and departures from Águeda during the circuit in order to facilitate the *Umbrella Sky Project* tour. This project has been having such a tremendous success that CMA, CP and the tourist operator are considering the enlargement of the schedule to May and October and the introduction of a new circuit on Sundays.

The promotion of the **attractive collective transport network** has been implemented in different partnerships, mainly the coordination with public transport operators (CP, Transdev and Avia) promoting the adjustment of schedules and the sporadic increase in supply, so to enhance the quality of service provided to the population. This coordination also involves the IP as an infrastructure management, knowing that a project to relocate the stops of the Vouga line is being developed.

Lastly, the partnership on the **“Mover-me na minha freguesia”** project was accomplished with great success. Through it the municipality promoted the *active mobility* (hiking, running and cycling), offering a monitored broad exercise program in each parish, where the residents can select the discipline and schedule most convenient to them. The adherence to this initiative, that strengthens the wellbeing and health of the population, has been enormous.

1.2.2. Actions

In a broad sense, the development of partnerships assumes the development of the following steps: i) identification of possible partners; ii) diagnosis of the problems and areas of operation; iii) Creation of the action plans; iv) Agreement on the mechanisms to monitor and evaluate the results.

The CMA will continue its work to maintain the already deployed actions and to realize new ones with the new partners (i.e. enhance the accessibility through public transports to the main industrial sites; expand the number of services made by the historical train in the Vouga line; etc.), and widen its actions to implement the EMSA 2020.

The “Centro de InovAction e Tecnologia N. Mahalingam” (CITNM), ESTGA (Escola Superior de Tecnologia e Gestão de Águeda) and the administrators of schools and main health equipment’s are privileged partners, since the partnerships for the development of the Mobility Agreement for school and business centres have not yet been made.

So, to increase the interactions between partners, the Mobility Agreement, that can be summarized as the signing of a protocol in which the signers commit with the objectives laid by the municipality, the actions each one must take and the schedule implemented, must be made.

1.2.3. Partners Involved

In this action, the broadest number of partners must be involved, among which:

- the municipality itself;
- the bus public transport operators (nowadays, Transdev and AVIC) and rail public transport operators (CP), as well as IP, as an infrastructure management;
- the administrators of the main industries and business centres of Águeda (Órbta, Miralago, Avimota, FJBikes);
- the administrators of school establishments, mainly ESTAG and the obligatory school facilities with more than 500 students;
- the administrators of health units located in the municipality;
- tourist operators from the municipality;
- ...

1.2.4. Schedule

The actions abovementioned are continuous and of an incremental nature. Therefore, there is no beginning and ending schedule.

1.2.5. Costs

The costs associated with the implementation of this action are considerably flexible and depend on the degree of need of investment in physical infrastructures and/or the magnitude of engagement, by the human resources, in its completion. In the EMSA 2020, these costs were estimated around 470 thousand euros for a period of 7 years (reflecting an annual burden of 67 thousand euros, if we admit the completion of every initiative).

1.2.6. Funding Sources

For the development of the actions considered, the funding may have to be undertaken by the municipality itself or be distributed by the different players.

1.2.7. Monitoring of Performance

The following environmental and performance indicators are proposed:

Action	Environmental and performance indicators
Partnerships in the Business Mobility field	<ul style="list-style-type: none"> • Number of Business Mobility Plans implemented; • Nº of people that started using soft transport modes due to the action plans; • Kilometres made in private car reduced due to mode transfer.
Partnerships in the School Mobility Area	<ul style="list-style-type: none"> • Number of School Mobility Plans implemented; • Nº of students that started using soft transport modes due to the action plans; • Kilometres made in private car reduced due to mode transfer.
Attractive and Efficient Collective Transport Network	<ul style="list-style-type: none"> • Number of passengers transported by the bus network; • Number of students that use the train as school transport.
Electric Bikes Network	<ul style="list-style-type: none"> • Number of users of this network; • Kilometers made in trips that use this network.
“Mover-me na minha freguesia”	<ul style="list-style-type: none"> • Number of people that participate in this initiative

1.3. Action 2: Contracting the public transport network in the municipal level

1.3.1. Background

Until 2015, the planning of the public transport network was a responsibility of the transport operators, which were subject to the approval of the IMT every time they proposed a change to the network. With the 52/2015 law, the ability to “organize, explore, attribute, invest, finance and monitor the service of passenger public transport, determine the public service obligations and the price tariff” passed to the Municipality, the Intermunicipal Community and the Metropolitan Areas.

The regional authorities of Águeda are working to assume the competences of Transport Authority, which represents an important challenge for it entails that the municipality must take the lead in planning the road public transport network and alongside preparing the contracting process for the municipal network, which must be completed by the 3rd of December of 2019.

1.3.2. Actions

To take on the duties as Transport Authority, the CMA must develop the following actions:

- Plan the road public transport network it intends to take to the public call, which must be based on technical studies and safeguard the compliance of the public service obligations and its supply patterns (route, frequency, amplitude of service, etc.) and base price of the call;
- Development of legal and technical clauses for the public call;
- Contracting of the municipal public transport networks;
- Undertake the empowerment of its technical team, to be able to follow the contracting process and, subsequently, proceed to the monitoring of the contract.

Certain tasks described are already in development, but time frame available for its completion is diminished, since the contracting process must be completed until the end of December 2019.

1.3.3. Partners Involved

In this action, the responsibility falls upon the municipality or, if latter is intended, it can be assigned to CIRA. It is advisable that the whole process must be developed in coordination with CIRA, which is responsible for the planning of the intermunicipal networks.

In the study and planning phase, counting with the collaboration of the transport operators present in the municipality is a key factor. These operators are obliged to provide the information associated with the supply and demand, according to the article 22nd (Duty of Information and Communication) of the 52/2015 law.

In a preliminary phase, the CMA could appeal to external judicial and transport planning consulting services, to ensure it can develop every necessary task in the set time period.

1.3.4. Schedule

The contracting of the transport public network must be completed by the 3rd of December 2019.

1.3.5. Costs

In this phase it is not possible to give an estimate of the costs however, it is possible to catalogue some items associated with costs:

- Specialized judicial and transport planning consulting services to guarantee that every element for the public call is correctly made and in the shortest possible time period and that the Transport Mobility Authority and the Court of Auditors requirements are fulfilled.
- Give specialized training to the team responsible for the monitoring of the to be celebrated contract;
- Occasional necessary monetary compensations to the transport operators.

1.3.6. Funding Sources

The 52/2015 law states as funding sources, in its 11th article, the following:

- Revenues from the tariffs charged in the passenger public transport service, when it constitutes revenues for the transport authorities;
- Revenues from the selling of travel passes;
- Revenues from other activities, mainly parking;
- Revenues from taxes charged for the exercise of organizational, supervision, monitoring and service delivery duties related to the passenger public transport system in the municipal, intermunicipal and inter-regional scopes, and for the exercises destined to the maintenance and development of passenger public transport systems;
- Revenue from existing contributions, in accordance with applicable law;
- Revenue from co-participation in gains and positive externalities assigned to the transport system that benefit other sectors;
- Revenue from commercial and marketing exploration in passenger public transport services;
- Revenue from financial compensations for the right of exploitation of passenger public transport services;
- Other revenue resulting from the potential operation of intermediary services, namely sales channels and other services.

Complementarily, the Public Transport Service fund was created (stipulated in the 12th article), being distributed in the last two years among the municipalities that requested it, although corresponding to a symbolic budget.

1.3.7. Supervision of Performance

The following environmental and performance indicators are proposed:

Action	Environmental and performance indicators
Contracting of the road transport public networks	<ul style="list-style-type: none"> Nº of passengers transported in the municipal road transport public networks

1.4. Action 3: Sustainable Mobility Agenda

1.4.1. Background

One actions proposed in EMSA 2020 was the establishment of an agenda for the Sustainable Mobility which implied the creation of a website, similar to the existing one for the Agenda 21, where the information on Águeda’s mobility strategy and the disclosure of news on past events could be viewed.

The municipality made the strategic choice of merging this action into its own webpage, promoting an overview on the distinct initiatives being made in the sector. The results on the application of this action are positive and it is the intention of the municipality to keep feeding this page with new information.

1.4.2. Actions

The CMA will continue its work to maintain the already deployed actions, maintaining the website and keeping it up to date.

1.4.3. Partners Involved

In this action, the responsibility falls solely upon the municipality.

1.4.4. Schedule

The actions abovementioned are continuous in time and of an incremental nature. Therefore, there is no beginning and ending schedule.

1.4.5. Costs

The costs associated with the implementation of this action are continuous in time however, in the EMSA 2020, these costs were estimated around 7 thousand euros for a period of 7 years (reflecting an annual burden inferior to a thousand euros).

1.4.6. Funding Sources

In this action, the appeal for founding sources is not necessary since it only involves the municipalities technical team.

1.4.7. Supervision of Performance

The following environmental and performance indicators are proposed:

Action	Environmental and performance indicators
Agenda on Sustainable Mobility	<ul style="list-style-type: none"> Nº of visitors on this section of the webpage

1.5. Action 4: Mobility Management and Observation Platform

1.5.1. Background

On EMSA 2020 the creation of a SIG tool to support the everyday management and planning of the intervention on roads and other infrastructures was proposed.

CMA has been developing a management platform that already provides a set of relevant information, mainly on:

- bus stops that serve the municipality;
- free and payed parking spots;
- shared bike parks;

Furthermore, CMA developed both a trip planner and an *app* named “Walk in Águeda”, where the information above-mentioned can be found, providing the information on existing walking tracks both on an interactive and educational dimension through the appearance of relevant information (via *pop-ups*) while walking on the tracks.

Lastly, CMA also developed the tool for SIG analysis for the support of everyday management and planning of the interventions on roads and other infrastructures. It is fuelled by the information obtained through

traffic sensors owned by the municipality that make it possible to know the maintenance status of roads, traffic volumes and their layout, with the aim of aiding the municipality in fundamental decisions when it comes to planning roads and reroute vehicles.

1.5.2. Actions

The CMA will continue its work to maintain the already deployed actions ensuring the maintenance and update of the information on the platform and the SIG tool.

1.5.3. Partners Involved

In this action, the responsibility falls solely upon the municipality.

1.5.4. Schedule

The actions abovementioned are continuous in time and of an incremental nature. Therefore, there is no beginning and ending schedule.

1.5.5. Costs

The costs associated with the implementation of this action are continuous in time however, in the EMSA 2020, these costs where estimated around 30 thousand euros for a period of 7 years (reflecting an annual burden of 4.300 thousand euros).

1.5.6. Funding Sources

In the context of the Live Labs for Decarbonization (LVpD) new initiatives may be developed, such as collecting environmental indicators (emission of pollutants) or to assess the level of usage of the payed parking (both on the street or in parking lots). This initiative, although it may be used to solidify the type of information gathered, it only supports pilot actions.

The participation in European projects can help the CMA to carry out some of the cations related with the collection of relevant information to feed the mobility management platform.

1.5.7. Supervision of Performance

The following environmental and performance indicators are proposed:

Action	Environmental and performance indicators
--------	--

Mobility Management and Observation Platform	<ul style="list-style-type: none"> • “Walk in Águeda” app nº of users • Traffic volume of the main roads
--	--

1.6. Action 5: Promotion and Awareness

1.6.1. Background

The promotion and awareness for the use of soft and sustainable transport modes is matter of utter importance for Águeda’s mobility strategy. The EMSA 2020 considered four main action areas:

- Creation of prizes on Sustainable Mobility following the Águeda 2020;
- Actions to raise awareness;
- Promotion of walking and cycling modes;
- Actions on awareness and coaching on the rational use of Private Transports.

It is known that a prize to promote sustainable mobility has not yet been made, however, the municipality has already implemented an initiative, framed in the “Águeda 21”, where the projects that most contribute to the sustainability are awarded a prize. This logic, while evolving to include the different subjects, will also include sustainable mobility as one of the subjects to be considered .

It is also important to highlight the initiative brought to light with the TRACE project, which created the “Traffic Snake Game”, where virtual scores were given according to the kilometres made on soft transport modes with which prizes could be won.

The **Actions to raise awareness for the use of soft transport modes** where achieved with great success, featuring the creation of the “Águeda +B” event, the first bike lovers event in Portugal in 2016 that receive over 3.500 bike users in Águeda. Other initiatives were also accomplished, like the “Traffic Snake Game”, the organization of *pedipapers*, workshops and idea contests.

The **Program for the promotion of walking and cyclin networks** was also a success, being developed in two scenarious:

- making the trip planner available, which points out the location of the main building, commercial services, bus and train stops, walking and cycling trails, the best course to take and other information;
- making the information on the walking and cycling tracks available as a kmz file (it can be downloaded on the CMA webpage).

Last but not least, on the account of the actions for the awareness and coaching on the rational use of Private Transports, the first steps where already given. On this regard, the initiatives developed by the

LVpD can also be highlighted, giving way for the CMA wanting to acquire an emission reducer that can be attached to private vehicles, creating a more sustainable environment.

1.6.2. Actions

The CMA will continue its work to maintain the already deployed actions, on which the following can be highlighted:

- Revision of the “Águeda 21” prize and its fields, creating a prize for the field of mobility;
- The development of events and initiatives on the awareness for the soft and public transport modes, to contribute to the development of a conscious society;
- Enhancing the features present in the trip planner;
- The extension of the walking and cycling tracks and raising awareness for them;
- Creation of eco-driving and fuel saving coaching lessons, as well as other actions to raise awareness for the rational use of the private transport;
- Integrate the emission reduced in the municipality’s vehicles.

1.6.3. Partners Involved

In this action, the municipality and the broadest group of interested partners should be involved in the development and promotion of sustainable transport modes.

1.6.4. Schedule

The actions abovementioned are continuous in time and of an incremental nature. Therefore, there is no beginning and ending schedule

1.6.5. Costs

The costs associated with the implementation of this action are considerably flexible and depend on the degree of need of investment in physical infrastructures and/or the magnitude of engagement, by the human resources, in its completion. In the EMSA 2020, these costs where estimated around 531 thousand euros for a period of 7 years (reflecting an annual burden of 76 thousand euros, if we admit the completion of every initiative).

1.6.6. Funding Sources

The following are viable funding sources:

- National funding sources created to promote the awareness and promotion of the soft and sustainable transport modes. They can be created by either the Ministry of Environment, of Infrastructure and Planning or Education;
- The LVpD, in which CMA already included some of the EMSA 2020 initiatives;

- The funding framework of the “Plano Estratégico de Desenvolvimento Urbano” (PEDU).

1.6.7. Supervision of Performance

The following environmental and performance indicators are proposed:

Action	Environmental and performance indicators
Promotion and Awareness	<ul style="list-style-type: none"> • N° of promotion and awareness action on the use of soft and public transport modes • N° of users of the trip planner • Kilometres of walking and cycling tracks with physical signalling • N° of trainees in the eco-driving coaching lessons • Reduction of atmospheric pollutants driven by the redactors

1.7. Action 6: Consolidation of the road network

1.7.1. Background

The system of road-access ways was, for many years, one of the main components of the mobility system. Knowing that we are in a process of rethinking the importance given to this network considering economically and environmental sustainable principles, Águeda’s municipality need to perform some interventions and upgrades on the road network with, in certain cases, the aim to improve the road safety and promoting walking and cycling tracks.

1.7.2. Actions

In order to keep promoting this road network hierarchy, CMA must perform the following actions:

- Construct the Águeda’s inner ring road (VCI), leveraging the accessibility from the industrial area of Giesteira and the industrial park of Casarão to the structuring road network, diminishing the crossing traffic inside Águeda’s urban centre;
- Construct a new road junction in the IP1, in order to improve the accessibility of the municipalities of Águeda, Albergaria-a-Velho and Oliveira do Bairro;
- Construct a new connection between the IC2, alternative to the E.N. 333, leading to a decrease of the traffic in this road;
- Conversion of the E.N. 333 between Alto de Recardães and Curva do Miguel and the E.N. 1, between the E.N. 333 and Famel’s roundabout junction;
- Further develop the work on the Road Safety Plan, detecting the municipality’s black spots and deploying measures to reduce road accidents;

- Construct the new Carvalhal - A25 connection, upgrading the existing one, diminishing the crossing traffic inside Macinhata and Beco;
- Construct the new urban axis in Águeda de Cima, making it the main growth guiding line;
- Construct the connection between Aguieira, Arrancada and Mourisca and their main traffic generators, between E.N. 1 and E.N. 333;
- Construct an alternative between E.M. 610, the E.M. 605-1 and the alternative of Aguada de Cima, removing the traffic inside Belazaima do Chão;
- Construct the connection between the E.N. 1 and the centre of Trofa, raising the road capacity;
- Construct alternative roads to the most congested part of E.N. 1, connecting E.N. 230 and the conde Sucena hospital;
- Construct a highway between Aveiro and Águeda to enhance the bond between these two municipalities, reducing the traffic on the E.N. 230, E.N. 235 and E.N. 333;
- Creation of an alternative in Assequins;
- Creation of a Municipal Sign Plan to keep the heavy traffic off of urban areas;
- Promotion of rerouting plans through the promotion of optimal routes.

1.7.3. Partners Involved

In this action, the municipality and the broadest group of interested partners should be involved, of which:

- the municipality itself;
- the Infraestruturas de Portugal;
- the road operators;
- the road safety authorities.

1.7.4. Schedule

The last couple of years was defined by the substantial reduction of investment in the construction of road infrastructures and for this reason, it is not possible to establish a deadline for the construction of the infrastructures; however, if they are considered in the municipality's plans, they will eventually be built.

1.7.5. Costs

The costs associated with the implementation of this action are continuous in time however, in the EMSA 2020, these costs were estimated around 62.6 million euros for a period of 7 years (reflecting an annual burden of 9 million euros).

1.7.6. Funding Sources

At this point, the funding sources for the construction of infrastructures is limited, implying the investment must be made by the municipality itself and the IP.

1.7.7. Supervision of Performance

The following environmental and performance indicators are proposed:

Action	Environmental and performance indicators
Consolidation of the road network	<ul style="list-style-type: none"> • Kilometres constructed • N° of road accidents • N° of victims (deaths, severe and light injuries)

1.8. Action 6: Logistics

1.8.1. Background

Being a municipality with an industrial background, one of its main objectives is to develop more efficient logistic patterns that contribute both to raise the economic competitiveness of its companies and improve the quality of life for its population in the area with more commercial activity.

This guidance was specified in the EMSA 2020, considering two fields of intervention:

- Improvement of the company's logistic activity;
- Improvement of Águeda's logistic organization.

Neither intervention had great developments since EMSA 2020, being CMA's willingness to strengthen the intervention in these fields.

1.8.2. Actions

CMA intends to perform the following actions:

- Study solutions to improve the logistics activity in the city of Águeda, either through the development of a home delivery plan that reduces the need to use the private car to shop or a distribution system based on bicycles, improving the logistics process and the population's quality of life. The increase of loading and unloading parking spots and the enforcement of fixed time windows for loading and unloading inside the city are also viable measures.

- Exploring the possibility of the creation of a Logistics Municipal Centre of Operations that fosters the collaboration between different productive units in the municipality, further optimizing the process.

1.8.3. Partners Involved

The accomplishment of this action involves the CMA, the Business Association, the Commercial Association and the managers of the main hubs.

1.8.4. Schedule

The actions abovementioned are continuous in time and of an incremental nature. Therefore, there is no beginning and ending schedule.

1.8.5. Costs

It is impossible, in this phase, to estimate the costs to implement this action.

1.8.6. Funding Sources

The actions related to the Urban Logistics can be framed in the “Centro 2020” program, especially if they go attached with actions related to the requalification of public areas, walking and cycling tracks.

1.8.7. Supervision of Performance

The following environmental and performance indicators are proposed:

Action	Environmental and performance indicators
Urban Logistics	<ul style="list-style-type: none"> • N° of shops who joined the logistics plan • N° of users of the home delivery service
Corporate Logistics	<ul style="list-style-type: none"> • N° of companies who joined the logistics plan • N° of vehicle-kilometres saved with the logistics plan

1.9. Action 6: Walking Network

1.9.1. Background

The support for the walking mode is a key point in the EMSA 2020, where five related main drivers were pointed out:

- Enabling and structuring the walking network;
- Improve the accessibility to all;
- Promote automated connections between different parts of the city with distinct elevations;
- Development of a walking network for leisure;
- Establishment of measures to slow down traffic.

With respect to the **Enabling and Structuring of the Walking Network**, the municipality have been having the ability to intervene in public places inside the city, assuring high quality standards in the main access network. It is the municipality's intention to extend the same process to every rural parish and to the connection to the main industrial sites.

The **Improvement of the accessibility to all** is an element in development being key, not only for Águeda's working population, but also for tourists. The establishment of the Local Plan for Águeda's Accessibility, approved in 2013, has contributed for the conversion of public places into accessible areas.

The **Promotion of automated connections between different parts of the city with distinct elevations**, especially near city's public library and technical school, is almost completed, waiting only for the last technical authorization to start its work. An electrical bike park will be added to this elevator hub.

The **Development of a Walking Network for Leisure** is another action already concluded with great success. The action is based on the creation and servicing of the "N'Trilhos" project, a network of trails in Águeda, promoted by the municipality itself in partnership with both public and private entities, that already enjoys 50 kilometres of marked walking tracks.

Lastly, **Measures to Slow Down Traffic** have already been implemented, encouraging a more peaceful livelihood in the places they were deployed.

1.9.2. Actions

The CMA will continue its work to maintain the already deployed actions, and it will introduce new ones. On the already deployed actions, the following can be highlighted:

- Construction of new connections between the Av. 25 de Abril and Rua de Infancia 28;
- Regularly upkeep the walking network in the city of Águeda;
- Promote the mains walking networks in other urban settlements in the municipality, mainly in Fermentelos, Trofa/Valongo do Vouga and Barrô/Águada de Baixo;
- Further work on the establishment of the Accessibility Promotion Plan, especially in urban settlements traversed by main roads;
- Deployment of informational boards on the walking and BTT tracks.

1.9.3. Partners Involved

In this action, the responsibility falls solely upon the municipality.

1.9.4. Schedule

Except for the accessibility enhancement, the other actions abovementioned are continuous in time and of an incremental nature. Therefore, there is no beginning and ending schedule.

1.9.5. Costs

The costs associated with the implementation of this action are continuous in time however, in the EMSA 2020, these costs were estimated around 1.5 million euros for a period of 7 years (reflecting an annual burden of 213 thousand euros).

1.9.6. Funding Sources

Some actions can be financed through the Centro 2020 framework program.

1.9.7. Supervision of Performance

The following environmental and performance indicators are proposed:

Action	Environmental and performance indicators
Promotion of the Walking Network	<ul style="list-style-type: none"> Nº of kilometres of the walking network improved, both in the city and in other urban parishes Nº of users of the elevator

1.10. Action 7: Cycling Network

1.10.1. Background

Being a municipality where the bicycle is a core feature and having been the first to implement a shared electrical bike system, Águeda shows a clear effort towards the use of the cycling mode of transport in its day-to-day trips.

In the present domain, the EMSA 2020 considers four main actions:

- Complete and expand the cycling and mixed-use network;
- Expansion of the leisure cycling network;
- Create bike support infrastructures;

- Expansion of the BeÁgueda network.

Bolstering the cycling network and the use of bicycle as a preferred mode of transport is still a work in progress.

1.10.2. Actions

CMA intends to keep expanding both the day-to-day and leisure cycling networks, promoting the link to the north industrial area (through a 13km route), the industrial area of Barrô and the remaining industrial sites identified in the PIMTRA.

The upgrade of the Valongo and Trofa connection to the north industrial area and the Aguada de Cima to Aguada de Baixo and Barrô is also being considered. In Águeda's PEDU the following activities are labelled as key for the promotion of the cycling network:

- Organization and certification of the E.N. 1 main axis with measures to slow down traffic and prioritize bikers and pedestrians;
- Improvement of Águeda's city urban transport hub through the installation of information systems that allow passengers to know the availability of public transports, bicycles and electric cars.

It is the CMA's intention to keep improving the BTT tracks and new ones are already being assessed, related to the municipality's ecological structure and the location of sport and leisure equipment's. To foster a faster deployment of the abovementioned actions, the creation of partnerships with local touristic agencies and associations is being considered.

The following actions can be highlighted:

- Introduction of parking spots near the main passenger generators;
- Making lockers available in public buildings;
- Provide regulated bicycle parking spot near multi-family dwellings and companies;
- The expansion of the BeÁgueda project to industrial areas near the city;
- The development of partnerships with touristic agencies to ease the access to the BeÁgueda network.

1.10.3. Partners Involved

The completion of this action must be undertaken by the municipality itself. However, it may rely with the participation of the main passenger generators, touristic agencies and also the bicycle industry itself.

1.10.4. Schedule

The actions abovementioned are continuous in time and of an incremental nature. Therefore, there is no beginning and ending schedule.

1.10.5. Costs

The costs associated with the implementation of this action are continuous in time however, in the EMSA 2020, these costs were estimated around 1.03 million euros for a period of 7 years (reflecting an annual burden of 147 thousand euros).

1.10.6. Funding Sources

Some actions can be financed through the Centro 2020 framework or through the LVpD.

1.10.7. Supervision of Performance

The following environmental and performance indicators are proposed:

Action	Environmental and performance indicators
Promotion of the cycling network	<ul style="list-style-type: none"> • Kilometres build in the cycling network • N° of new bicycle parking lots • N° of companies with lockers to assist the use of bicycles • N° of users in the cycling network

1.11. Action 8: Attractive Public Transport Network

1.11.1. Background

One of the means of intervention proposed as a priority in the EMSA 2020 regards the promotion of an attractive public transport network with the following premises:

- Promote de reorganization of the municipality’s public transports through the combination of rail and road transport modes and the incorporation of the dedicated transport services (school and business transport, ...) in the regular service, providing the municipality with a more efficient and attractive transport network;
- Creation of urban services in the city and its surroundings by increasing the supply;
- Establishment of a service of transportation on demand on the areas of lower urban density;
- Renovation of the Vouga line, with the introduction a new stop in the industrial area, and capacitate the main hubs (i.e. creation of Park & Ride parking);
- Development of an attractive public transport brand for the Aveiro region;
- Development of an attractive and integrated charging policy that promotes that fosters the use of public transport.

Some progresses were already made in this action either through the combined efforts of the municipality and the public transport operators to improve the supply or through the creation of the on-demand transport service (in partnership with Transdev), which guarantees a public transport supply to every isolated urban area. The project named “Vou a Águeda” is composed of 5 fixed circuits (1 per day of the week) with pre-defined schedules, done with mini-buses and serving the parishes of Valongo, Macinhata, Préstimo, Macieira de Alcoba, Belazaima, Agadão and Castanheira. These services have to be requested in advance by the passengers, optimizing the resources available.

We should also mention the creation of a new service in the historical train between Aveiro and Macinhata, which includes a visit to the Railway museum, promoting the public transport as an option and the sustainable tourism in the region.

1.11.2. Actions

CMA is in process of assuming the role of Transport Authority to secure the management of the municipal bus routes. Meanwhile, as mentioned above, it is working with the transport operators to improve the quality of supply in the frame of the public transport service contracting (mandatory until 2019).

In the context of the LVpD, CMA has the intention of creating a pilot project to develop an electrical vehicle urban circuit providing the internal connections in public transport.

Moreover, with the intent to enhance the Vouga line, CMA, the IP and CP will keep working in the improvement of its service between Águeda and Aveiro. For this purpose, some rural stops have already been deactivated (reducing the trip time), and with the intent to create new stops in the industrial areas, allowing for a better service.

In the process of contracting the public transport networks, it is CMA’s intention to work with CIRA in the development of an attractive and integrated charging policy and an attractive public transport brand for the Aveiro region.

1.11.3. Partners Involved

In this action, the municipality and the broadest group of interested partners should be involved, of which:

- the municipality itself;
- the intermunicipal community of the Aveiro region;
- the road operators (Transdev and Avia), the rail operators (CP), the IP and the management of the Vouga line.

1.11.4. Schedule

Until 2019, the contracting process for the public transport road network must be completed with an improvement being expected.

The requalification of the Vouga line is a mid-range project, since it is necessary to register this project in the investment schedule of the Vouga and CP infrastructures. Regardless, the success of the touristic train is a positive element that can accelerate the process of requalification of this corridor.

The remaining actions abovementioned are continuous in time and of an incremental nature. Therefore, there is no beginning and ending schedule.

1.11.5. Costs

The costs associated with the introduction of these actions can fluctuate depending on the level of depth of the changes to be made. In the present state of development, it is impossible to estimate the costs.

1.11.6. Funding Sources

For the implementation of the proposals of this action there are several sources of financing like the revenues of the Transport Financing Fund established in the Portaria n.º 359-A/2017 and that consider, among other things, the State budget appropriations in each year and the support from the Environmental Fund.

1.11.7. Other actions may be subject to funding from the framework of the 2020 Center or, as in the case of the urban bus line, use specific funding lines such as the LVpD fund.

The following environmental and performance indicators are proposed:

Action	Environmental and performance indicators
Attractive Public Transport Network	<ul style="list-style-type: none"> Nº of passengers carried in the public transport network Nº of passenger carried in the Vouga line

1.12. Action 9: More rational use of Private Transport

1.12.1. Background

When the ultimate objective is to prioritize mobility and sustainability, reducing the amount of private cars, turns into a major issue particularly when only 13% of its citizens lack a private vehicle and 81% of the total amount of trips in the municipality of Águeda is made in this mode of transport. 18% of these trips meet their end in less than 1 kilometre and 52% in less than 4, showing a great potential in switching from private to public transport mode.

However, the creation of an attractive public transport network is not sufficient to promote this mode transfer, making it necessary to intervene at the private vehicle level through the development of different incentive platforms such as raising the rate of occupancy of the vehicles or promoting different parking policies and the control of abusive parking.

1.12.2. Actions

CMA, in partnership with the companies and managers of the main passenger generator hubs, have the intention of creating *carpooling* and *carsharing* platforms, in an effort to raise the rate of occupancy of the vehicles and reduce the number of vehicles in circulation.

To promote a more rational use of the private transport, Águeda's PAES proposes the following measures:

- Bolster the progressive substitution of vehicles by more efficient ones, both in terms of consumption and emissions;
- Promote the optimization of the maintenance processes;
- Promote the creation of infrastructures for the use of bicycles;
- Enhance the fuelling network for the less pollutant cars, mainly biofuels, GPL, GNC and electric energy. It should be kept in mind that a *MobiE* fuelling station already exists.

A charged-parking network, backed by a free-parking network in the periphery, was already carried out by the municipality in the centre of the city. However, an increase of the inspection teams it is still necessary, both to control the paying parking and illegal parking. In the framework of the LVpD, a parking sensor pilot project will be developed, allowing the collection of information on the availability of the supply.

1.12.3. Partners Involved

CMA as the major role in this action, supported by business associations and managements of the main passenger generator hubs.

1.12.4. Schedule

The actions abovementioned are continuous in time and of an incremental nature. Therefore, there is no beginning and ending schedule.

1.12.5. Costs

The costs associated with the introduction of these actions can fluctuate depending on the number of vehicles, technological solutions and fuelling stations considered. In the present state of development, it is impossible to estimate the costs.

1.12.6. Funding Sources

In the scope of the LVpD, it is possible to frame some of the actions mentioned, even if they are of an experimental nature. The Environmental Fund may endorse not only the creation of electric fuel supply, but also the development of innovative actions in this field.

1.12.7. Supervision of Performance

The following environmental and performance indicators are proposed:

Action	Environmental and performance indicators
More Rational Use of the Private Vehicle	<ul style="list-style-type: none">• Electric or Hybrid vehicles belonging to Águeda's citizens• N° of times cars were charged in stations

The present document was subject to the internal quality control in accordance with the procedures mentioned in the *Quality Control Document (P2/05)* established in TIS.PT's Management System.