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1. PLAN OF ACTIVITIES FOR THE INTRODUCTION OF THE E-LIGHT VEHICLE SHARING SYSTEM

1.1. Activities that can be implemented and the number of planned e-light vehicles

Electric vehicles (EVs) are becoming an increasingly important part of the global automotive market. The growth of these vehicle sales is being driven not only by the appeal of the vehicles, but also by consumer demand for vehicles that cost less to operate than traditional internal combustion engine (ICE) vehicles, government influence on the market, and a rebounding economic environment.

Considering the SEAP and the Local Action Plan, the following needs have been identified within Suceava Municipality:

- The need to reduce CO2 emissions(12% of CO2 emissions are generated by cars);
- The need to reduce dependence on non-renewable resources (cars generate 25% of the world oil consumption);
- The need to reduce ambient noise (in 2011, in the municipality, the maximum allowable levels were exceeded in all locations where APM (Environment Protection Agency) had placed equipment to monitor the quality of environment);
- The need to change the mentality of current or future owners of standard cars, in view of partial and gradual replacement of conventional vehicles with other types of engines, namely electric ones as well as alternative transport modes, such as electric bikes;
- The need to contribute to environment protection.

Starting from the needs identified in the municipality, and taking into consideration the European, national and regional context, as well as the view on development of Suceava Municipality, namely the desire to become a „green” town, the Municipality aims to develop a pilot electro-mobility system.

Under the Swiss-Romanian Cooperation Programme, Ele.C.Tra’s supporting municipality - Suceava has secured funding for its Electric Vehicles for a Green Municipality programme.

A key aspect of their success can be attributed to the Local Action Plan developed under the EVUE project and the survey realized under Ele.C.Tra project which proved the City of Suceava's commitment to electro mobility.

The total investment will €2.5million and the project will run for 24 months, until 2017.

The project that is being implemented by Suceava Municipality: "ELECTROMOBILITY – ELECTRIC VEHICLES FOR A „GREEN” MUNICIPALITY" aims to implement a pilot electro-mobility system in Suceava, including:

- EV charging infrastructure, namely 28 charging points, out of which:
 - 14 standard charging points – the standard charging points will be primarily located where the electric vehicles procured by the municipality will be parked, at the headquarters of institutions they are assign to;
 - 14 fast charging points – with a charging duration of maximum 2 h (depending on the features of the electric vehicles); the network will be placed on the public domain of the municipality, in the most crowded urban areas;
- 15 electric vehicles procured in view of equipping the vehicle fleet of Suceava Municipality, out of which:
 - 11 electric cars;
 - 2 electric vans;
 - 1 utility vehicle - electric sweeper;
 - 1 utility vehicle - electric tanker;

- 56 specially-arranged parking spaces intended for electric vehicles, which will be placed next to the charging points.
- Infrastructure for charging and renting electric bikes (e-docking). The electric bikes charging infrastructure will be supplied by photovoltaic panels;
- 10 electric bikes which can be rented by inhabitants of Suceava Municipality and also by tourists in the area.

The implementation of the pilot electro-mobility system will contribute to:

- **Reduced CO₂ emissions into the atmosphere** and reduced conventional fuel consumption, by procuring 15 zero-emission electric vehicles and replacing the current ones in the polluting and obsolete vehicle fleet of the Mayoralty
- **Supporting the use of green (electric) transport modes** in Suceava Municipality and increased trust of citizens in the reliability of the new EV technology:
 - **the electric transport is clean, silent and safe**, contributing thus to improving the quality of life for citizens in Suceava Municipality;
 - Electric vehicles meet the urban daily travel needs, which do not normally exceed 100 km/day;
 - Electric vehicles reach maximum speeds similar to classic vehicles, but they accelerate faster and very smoothly;
 - Ensuring easy access to using the EV charging infrastructure;
 - The charging equipment is safe, easy to install and easy to use;
 - **Low maintenance costs** due to construction simplicity, compared to classical vehicles;
 - **The operating costs are much lower than for conventional vehicles.**
- **Stimulating the use of electric vehicles**, by:
 - Setting up an infrastructure including 28 charging points in public places, out of which 14 standard charging points and 14 fast charging points;
 - Implementing a bike charging and renting system (e-docking) for 10 electric bikes;
 - Energy autonomy by implementing renewable energy sources to feed the electric bike charging system - 1 photovoltaic charging system for bikes;
 - Setting up 56 parking spaces for electric vehicles.
- **Changing the mentality** of current and future vehicle owners, in view of partial and gradual replacement of conventional vehicles by EV (electric vehicles) and alternative transport modes (electric bikes);
- **Providing a model of good practice** for other local, regional and national public institutions – no other municipality in Romania had adopted the EV technology;
- **Promoting a modern, sustainable, less polluting, energy efficient and cost-efficient transport;**
- Integrating the new electro-mobility system in ampler urban planning aspects and undertaking collateral investments in the public transport sector in Suceava metropolitan area (*Strategic projects 2014-2020 - "Implementing a new green public transport throughout the metropolitan area of Suceava and setting up a photovoltaic park to generate renewable energy"*).

Moreover, the project will contribute to meeting the following development directions set forth at European level and which Romania will align to:

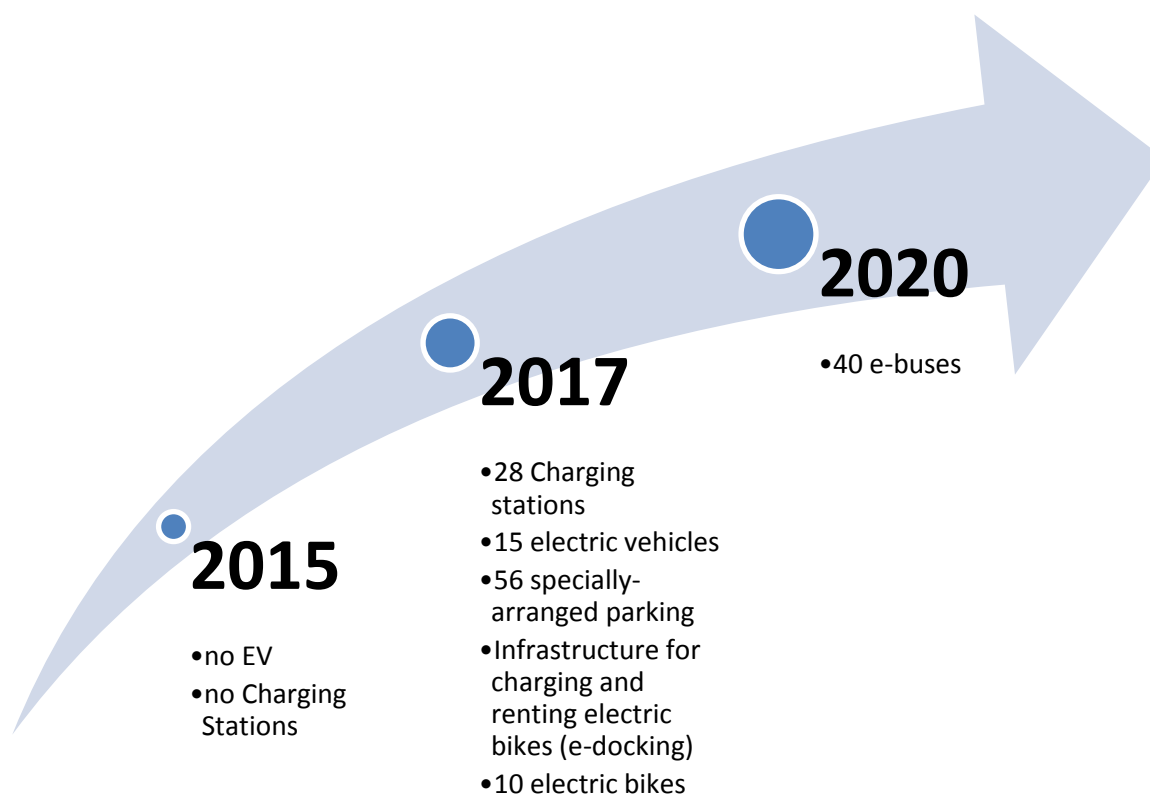
- **Sustainable development:** both by setting up a silent and clean pilot electro-mobility system and by paying attention to the needs of citizens, in the context of integrated development of the municipality;

- **Energy efficiency:** by reducing the fuel consumption as a result of procuring 15 electric vehicles for the vehicle fleet of Suceava Municipality and by setting up of a photovoltaic panels system to supply the electric bikes charging and renting system;
- **Environment protection:** by reducing CO₂ emissions and the level of ambient noise in Suceava Municipality.

Next target of the municipality is: 40 electric buses:

- The above project has secured 260.000 lei to realize the documentation for the next project: electric buses;
- The project will be submitted under ROP 2014 - 2020;
- It aims to change citizens' mentality regarding road traffic, in view of encouraging them to use green (electric) transport modes;
- It promotes a modern, sustainable, energy-efficient, less polluting and economical traffic.

To sum up, the 2020 target of Suceava Municipality is:



1.2. Key participants in the preparation and implementation of the sharing system

In order to implement the project as successfully as possible, it is essential to categorise stakeholders and define their roles in each phase of the project implementation. The most important stakeholders can be categorised into three groups:

- A. Business stakeholders (suppliers and distributors of electric vehicles, infrastructure and technology, equipment service, system operators, electricity suppliers, etc.)
- B. Demand stakeholders (large companies, schools, university facilities, tourist offices, hotels, shopping centers, etc.)
- C. Institutional stakeholders (local authorities, public bodies, associations, research institutes. etc.)

The interest of individual categories of stakeholders is wide and can be systematised with respect to each category:

- The interest of business stakeholders
 - promotion of products and services in a broad range of end users (efficient marketing)
 - penetrating new markets (geographically and in terms of new users)
 - easier placement of products and services on the market due to incentives that are expected in the programme
 - opportunity for innovative products and services taking into account user feedback
 - achieving financial profit
 - cooperation with local authorities and the possibility for new projects
- The interest of demand stakeholders
 - raising awareness of sustainable mobility and innovative means of transport
 - own promotion and promotion of services (hotels, shopping centres, ...)
 - improving accessibility and acquiring new customers and influx of tourists
 - possibility of combining and integrating own services (e.g. discounts in shopping centres)
 - strong promotion with regard to participation in an innovative mobility model
 - cooperation with local authorities and the possibility for new projects
- The interest of institutional stakeholders
 - increasing social responsibility
 - reduction in energy consumption and pollutant gas and substances emissions
 - increasing the quality of life of citizens
 - raising awareness of the problem of sustainable mobility development
 - improving the quality of offer for the influx of tourists
 - promotion of sustainable mobility and alternative technologies

The ELECTROMOBILITY project described above will have direct and indirect effects on several categories of Beneficiaries, identified according to how much they will benefit from the purchase of the electric vehicles and the setting up of the charging centres in Suceava Municipality.

Target group:	<ul style="list-style-type: none">▪ 1,247 employees of Suceava Municipality¹;
Direct beneficiaries:	<ul style="list-style-type: none">▪ Suceava Municipality, as applicant for the grant

¹ <http://www.primariasv.ro/portal/suceava/portal.nsf/AllByUNID/000091AE?OpenDocument>

Indirect beneficiaries:	<ul style="list-style-type: none"> ▪ 92.121 inhabitants² of Suceava Municipality which will benefit from the reduced CO2 emissions in the municipality; ▪ 8,318³ private companies active in Suceava Municipality which will have access to information on the advantages of EV using; ▪ The other public institutions in Suceava which can implement the model of good practice of Suceava Municipality; ▪ The other towns/ municipalities in Romania which can implement the model of good practice of Suceava Municipality.
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1.3. Promotional activities and education

Suceava Municipality has already budgeted promotional activities for introducing electric vehicles in Suceava and for their promotion.

Considering the complexity of the ELECTROMOBILITY project, namely the implementation of a pilot electro-mobility system in Suceava Municipality, the information and promotion campaign shall include the use of the following means **for the period 2015- 2017:**

- 5 temporary billboards;
- 5 permanent commemorative plaques;
- 50 equipment stickers;
- 50 EV stickers;
- 2 press releases;
- 1 webpage to be accessed on the home page of Suceava Mayoralty, which will be updated at all times during project implementation;
- 200 project promotion leaflets;
- 10,000 flyers promoting EV infrastructure;
- 1 street banner;
- 1 roll-up;
- 1 regional promotional event;
- 1 event informing and raising the awareness on electro-mobility.

The information and promotion campaign of the project is structured so as to address the following target groups:

- The general public – local population and tourists in the area– by using information and promotion means set in places of interest; distributing and displaying printed materials, online presentation of results achieved through project implementation;
- Media, by means of press releases and within the regional event, by means of organizing press conferences, online presentation of results achieved through project implementation;
- Public institutions in Suceava and North-East region through the organization of specific events, online presentation of results achieved following project implementation.

The need for an information and promotion campaign is given by the following:

- It is a pilot project:

² According to the census undertaken in 2011, the population of Suceava Municipality amounts to 92,121 inhabitants, <http://www.suceava.insse.ro/main.php?lang=fr&pageid=732/>

³ According SEAP.

- Provides a model of good practice for other local, regional and national institutions – no municipality in Romania has adopted the new EV technology;
- Enhances citizens' trust in the reliability of the new EV technology;
- Sets out to change the mentality of its citizens with regard to road traffic, in view of encouraging the use of green (electric) transport modes;
- Promotes a modern, sustainable, energy-efficient, less polluting and cost-efficient transport.
- The proposed project is innovative:
 - Takes innovative steps to reduce the negative impact of road traffic on the environment;
 - Disseminates key aspects, activities and results in order to provide models of success, examples of good practice;
 - Implements both constructive solutions and modern and innovative technologies, commonly used in the EU countries.

The promotion strategy aims to educate and influence the future behaviour in terms of electro-mobility, in order to raise the interest in using EV, electric scooters and bikes.

In view of supporting project sustainability, the Municipality envisioned a 2-year promotion campaign after project implementation. The campaign will be focused on certain target groups and areas. The actions proposed will include behavioral changes, thus generating an added value to project impact.

Campaign objectives:

- To change citizens' mentality with regard to road traffic and to encourage the use of green transport modes in view of reducing pollution and improving energy efficiency;
- To educate urban population and to influence their future behaviour in terms of electro-mobility, in view of raising the interest in using EV, electric scooters and bikes.

A differentiated strategy is set forth, which involves adapting the promotion campaign to the various public categories considered, namely the target groups. The target groups considered are as follows:

- youth – is one of the most important target groups, as their future behaviour related to electro-mobility can be easily influenced in a sustainable way, before they adapt to a automobile-oriented lifestyle;
- companies operating in Suceava Municipality which will have access to information on the advantages of using EV vehicles;
- other public institutions in Suceava which can implement the good practice model of the beneficiary;
- Romanian and foreign tourists visiting Suceava Municipality which will perceive the town as a modern one where the quiet environment and the pollution are according to European standards and will recommend its visiting.

The target areas of the town and the schools/ university/ institutions where the promotion activities will be carried out will be delineated; a special focus will be given to Arini downtown area, where the most important public institutions, companies and historical monuments are located.

The promotion strategy addressing potential beneficiaries of intelligent transport systems aims to influence the future behaviour related to electro-mobility, in order to increase the interest in using EV and electric bikes.

Promotion techniques used:

- a) Internet publicity (web page);
- b) Periodic publicity in local mass-media (newspapers, TV, radio) and the electronic environment (web banners);
- c) Public relations events – information and education campaigns in schools, the university, for the employees of local companies and public institutions.

The main promotional activities proposed to be carried out in the first 2 years of project operational period are as follows:

- Update of web page;
- Periodic publicity in the local mass media (newspapers, TV, radio) and in the electronic environment;
- Event to promote electro-mobility:
 - Information and education campaigns in schools and the university on the advantage of using intelligent transport system in view of reducing pollution and improving energy efficiency, as well as supporting the use of green (electric) transport modes;
 - Activities carried out on mobility days – in 16-22 September; Suceava will apply to be included on the list of towns celebrating **European Mobility day** within **Mobility Week**;
 - EV shows and drive-tests

This promotion campaign is the express responsibility of the Beneficiary, namely Suceava Municipality **The estimated budget for the promotion activities undertaken for 2 operational years** is set out in the table below:

(Sub) Activity	Unit	2018			2019			Total VAT excluded CHF	VAT CHF	Total VAT included CHF
		Amount	Unit price CHF	Total year 1	Amount	Unit price CHF	Total year 2			
A.1. Website update										
Updating the webpage	service	1	185.51	185.51	1	185.51	185.51	371.02	89.04	460.06
Total A.1.								371.02	89.04	460.06
A.2. Periodic promotion in local mass-media (newspaper, TV, radio) and electronic promotion										
Articles in mass-media (newspapers, TV, radio)	publication	3	432.86	1,298.57	3	432.86	1,298.57	2,597.14	623.31	3,220.45
Posting web banners	publication	3	123.67	371.02	3	123.67	371.02	742.04	178.09	920.13
Total A.2.								3,339.18	801.40	4,140.58
A.3. Events to promote electro-mobility										
information and education campaigns on electro-mobility in schools, the university	campaign	1	494.69	494.69	1	494.69	494.69	989.39	237.45	1,226.84
Activities undertaken on mobility days (information seminar, press conference, thematic contests, setting up information centres etc.)	event	1	1,236.73	1,236.73	1	1,236.73	1,236.73	2,473.46	593.63	3,067.10
EV shows and test-drives	event	1	123.67	123.67	1	123.67	123.67	247.35	59.36	306.71
Total A.3.								3,710.20	890.45	4,600.64
TOTAL								7,420.39	1,780.89	9,201.28

1.4. Timeline for the implementation of the e-light vehicle sharing system for vehicles

Suceava has no scooter sharing system at present due to the fact that the climate does not allow the scooters to be used all over the year. Suceava has a humid continental climate with warm summers and no dry season.

Moreover, there are no business owners of e-light vehicles in Suceava, but in order to encourage the owners to buy and use these kinds of vehicles, the following incentives could be implemented:

- a. **DIRECT INCENTIVES** - that have a direct monetary value to consumers, reducing payments electric vehicle owners would otherwise have been required to make.
- b. **INDIRECT INCENTIVES** - are those that do not have a direct monetary value to the consumer. Rather, these incentives save time and provide convenience, which are sometimes much valued by consumers. Indirect incentives include access in the city center, access in restricted areas and public charger availability.

Suceava municipality has started a project financed through URBACT III - *Freight TAILS: Tailored Approaches Implementing Lasting Solutions*.

Significant activity has gone into encouraging sustainable transport opportunities (walking, cycling, public transport) alongside measures to restrain private car use. However, freight and logistics have been generally only been dealt with in a fragmented way even though they are a significant component of overall traffic movements. This project will establish whether different approaches to the on-going problem of delivery and servicing activity in urban areas, are required for different areas within cities, to achieve on-going real improvements in greenhouse gas emissions and therefore air quality and traffic management. Action plans will be established to develop sustainable urban logistics approaches (micro/consolidation, SME co-ordination, retiming deliveries, efficient road space allocation), in specific urban areas (areas of high multi-tenanted office blocks, high street retail areas, areas dominated by single user (university campus or public sector administration), historic central areas). Business cases for different approaches, data on green house gas emissions and traffic improvements, and recommendations for implementation will be key elements of the Action Plan.

Barriers for application of Electra model in Suceava are:

- Weather;
- Street configuration is the area relief, respective Low Carpathians – highland;
- High cost of the vehicles compared to conventional ones;
- Actual lack of charging points;
- People are unfamiliar with electric vehicles, are uncertain about their costs and benefits, and have diverse needs that current electric vehicles might not meet.

Challenges for application of Electra model in Suceava are:

- The level of investment needed for setting up charging facilities could be prohibitive and result in a slow response;
- The introduction of electric vehicles needs to be done at national scale to replace older cars;
- The price of electric vehicles and the need to buy new cars are serious impediments;
- Insufficient parking infrastructure available, resulting in congestion on road and pavements as they are used for parking.

Activities planned by the municipality of Suceava and set out in the *Local action plan for the promotion and implementation of the electric vehicles and the charging infrastructure in Suceava* are:

1. Promote the use of EVs by creating a charging infrastructure through the installation of charging points in public and private parking spaces
2. Adopt electric transport as part of the local public transport in 85% of the total capacity and measures to encourage the use of electrical means in public transport
3. Promote the use of EVs in public institutions by buying EVs within a demonstration pilot project developed by Suceava Municipality
4. Introduce electric transport in urban taxi service at 15% of the authorized transport means
5. Promote legislative action favourable for purchasing and using EV meant to stimulate electric transport among private transport companies
6. Ensure the existence of renewable energy sources in the public EV charging system and the presence of a balance between the electricity consumed by EVs and the renewable energy produced
7. Public information of citizens for environmental education purposes and use of EVs and alternative transport means (ex. roller skates, electric bicycles)
8. Prepare a concrete plan to create a specific operating system for EVs

Timeframe:

	2016	2017	2018	2019	2020
1. Promote the use of EVs by creating a charging infrastructure through the installation of charging points in public and private parking spaces					
2. Adopt electric transport as part of the local public transport in 85% of the total capacity and measures to encourage the use of electrical means in public transport					
3. Promote the use of EVs in public institutions by buying EVs within a demonstration pilot project developed by Suceava Municipality					
4. Introduce electric transport in urban taxi service at 15% of the authorized transport means					
5. Promote legislative action favourable for purchasing and using EV meant to stimulate electric transport among private transport companies					
6. Ensure the existence of renewable energy sources in the public EV charging system and the presence of a balance between the electricity consumed by EVs and the renewable energy produced					
7. Public information of citizens for environmental education purposes and use of EVs and alternative transport means (ex. roller skates, electric bicycles)					
8. Prepare a concrete plan to create a specific operating system for EVs					

1.5. Conclusion

The ongoing project ELECTROMOBILITY aims to implement a pilot electro-mobility system that will contribute to:

- **Reduced CO₂ emissions into the atmosphere with 12 tCO₂ yearly and reduced conventional fuel consumption with at least 25.000 liters**, by procuring 15 zero-emission electric vehicles and replacing the current ones in the polluting and obsolete vehicle fleet of the Mayoralty
- **Stimulating the use of electric vehicles**, by:
 - setting up an infrastructure including 28 charging centres in public places, out of which 14 standard charging centres (SCC) and 14 fast charging centres (FCC) considering all the criteria regarding the area of interest, the technical possibility to carry out the electric energy connection and to obtain property of land where the works are set to be undertaken;
 - implementing a bike charging and renting system (e-docking) for 10 electric bikes;
 - energy autonomy by implementing renewable energy sources to feed the electric bike charging system - **1 photovoltaic charging system for bikes**;
 - setting up 56 parking spaces for electric vehicles.
- **Changing the mentality of current and future vehicle owners**, in view of partial and gradual replacement of conventional vehicles by EV (electric vehicles) and alternative transport modes (electric bikes);
- **Supporting the use of green (electric) transport modes** in Suceava Municipality and increased trust of citizens in the reliability of the new EV technology;
- **Providing a model of good practice** for other local, regional and national public institutions – no other municipality in Romania had adopted the EV technology - no other municipality in Romania had adopted the EV technology;
- **Promoting a modern, sustainable, less polluting, energy efficient and cost-efficient transport.**

This project will set the foundation of electromobility in Suceava, by setting up the infrastructure and will continue with spreading electromobility throughout the population and stakeholders.

