EU COMMUNITY

INTELLIGENT ENERGY EUROPE

Promotion & Dissemination Projects

Electric **C**ity **Tra**nsport – Ele.C.Tra

D.4.1 Local analysis review Report for Florence

Project Co-funded by the Intelligent Energy Europe Programme of the European Union

01 July 2013 – 31 December 2015

Work Package 3	Model Executive Planning
Tasks:	4.1, 4.2
Scientific Coordinator:	GENOA
WP Coordinator:	BCNEcologia

Electric **C**ity **Tra**nsport – Ele.C.Tra.

Deliverable Title: Local analysis review Report

Partner Responsible: T BRIDGE (for Genoa);

Work Package 4: SERVICE EXECUTIVE PLANNING REPORT

Submission Due Date: 30th March 2014

Actual Submission Date: 12th June 2014

Dissemination level: Public

Abstract:
D.4.1 is the first deliverable of the contextualization phase (WP4), finalized to highlight a more in-depth analysis that will be carried out in order to choose and tune in all aspects suitable for every pilot context (Genoa, Florence and Barcelona). Thanks to D.4.1 it will be possible to create the basis for future implementation in non-pilot (and non-partner) cities.

D.4.1 contents will be completed, integrated and updated in D.4.4 "Operative plan of sustainable mobility model application", that will include the final aspects about each implementation test.

Co-funded by the Intelligent Energy Europe Programme of the European Union

Document Information Summary

Deliverable Number:	4.1
Deliverable Title:	Local analysis review Report
Editors:	Municipality of Florence
Work package no:	4
Work package leader:	BCNEcologia
Work package participants:	Genoa, TB, Firenze, BCNE
Main Target Audiences:	Partners, Commission/EACI services, Public bodies and media and multipliers networks
Version/Revision:	Version 3
Draft/Final:	Final
Keywords:	Contextualization, electric, scooters

Grant Agreement Number: IEE/12/041/SI2.644730 – Ele.C.Tra

Start Date: 01 July 2013

Duration: 30 months

Co-funded by the Intelligent Energy Europe Programme of the European Union

Document Approval

Approved by	Date
Steering Committee:	

Co-funded by the Intelligent Energy Europe Programme of the European Union

TABLE OF CONTENTS

1. INTRODUCTION 6

2. IDENTIFICATION OF PILOT CITY CHARACTERISTICS 9

2.1. E-CHARGING POINTS (SEE PREVIOUS MAP) 9
2.2. ELE.C.TRA. PARKING PLACES 15
2.3. PICK-UP AND DELIVERY POINTS 15
2.4. OTHER FACILITATIONS 16
2.5. PUBLIC TRANSPORT 18
2.6. OTHER RELEVANT POINTS: 22

3. STAKEHOLDERS INVOLVEMENT 23

4. AREA MOBILITY MANAGEMENT OFFICE 24

4.1. AREA MOBILITY: ACTIVITIES 24
4.2. OTHER ACTIVITIES 25

5. COORDINATION WITH INNOVATIVE ENERGY SYSTEMS 27

5.1. SEAP: THE SUSTAINABLE ENERGY ACTION PLAN 27
5.2. MOBILITY 29

Co-funded by the Intelligent Energy Europe Programme of the European Union

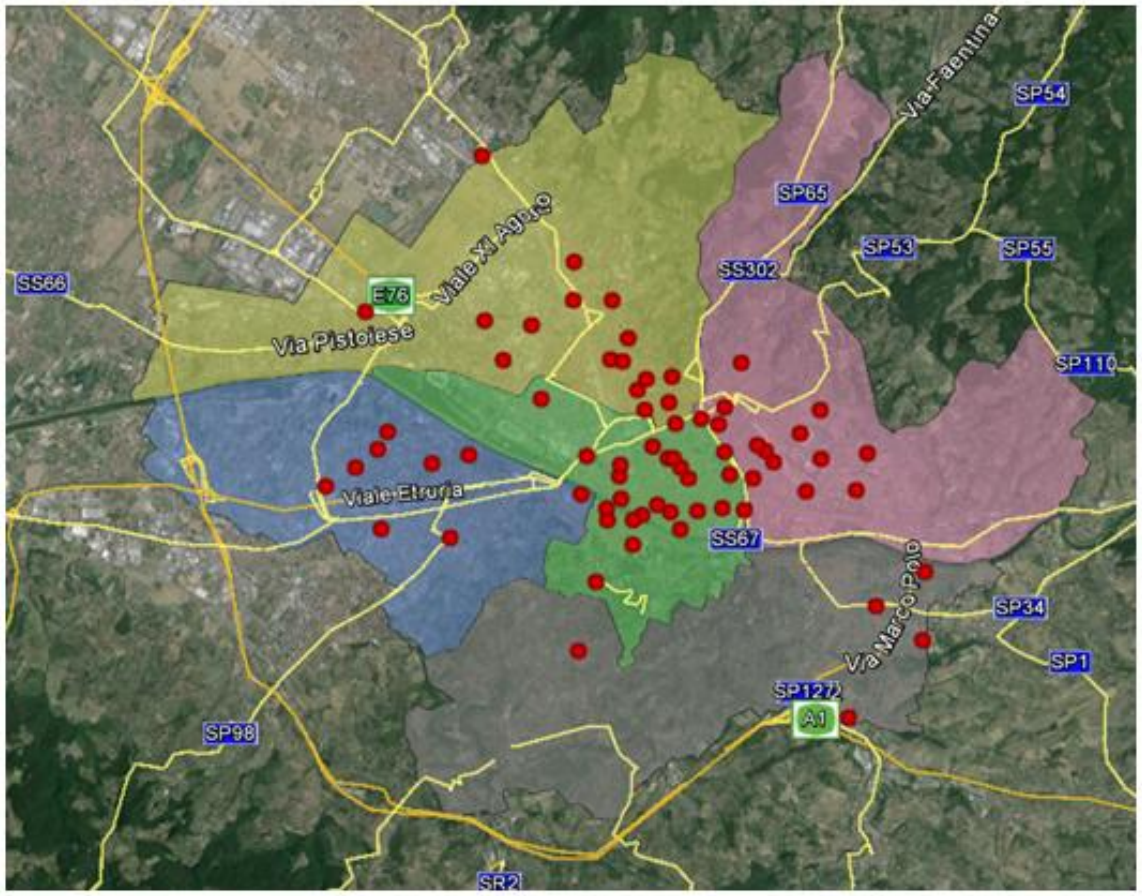
1. INTRODUCTION

The project is focused on the implementation of electric mopeds (2-4 wheels) and is aimed at interested people according to the different types of use:

1) Short Term Rental aimed at tourists, citizens, ecc. organized by companies that own a fleet of electric vehicles (mopeds 2-4 wheels) through agreements signed with the municipality of Florence for the facilities.
2) short/medium term rental through agreements signed between the management company of electric fleet and hotels, health care facilities, universities, shopping centers, available to provide parking spaces reserved in their private areas and with other electricity suppliers (charge points)
3) increasing of sale of electric mopeds (2-4 wheels) through agreements with producers/retailers of electric vehicles who can offer special discounts/incentives to potential buyers

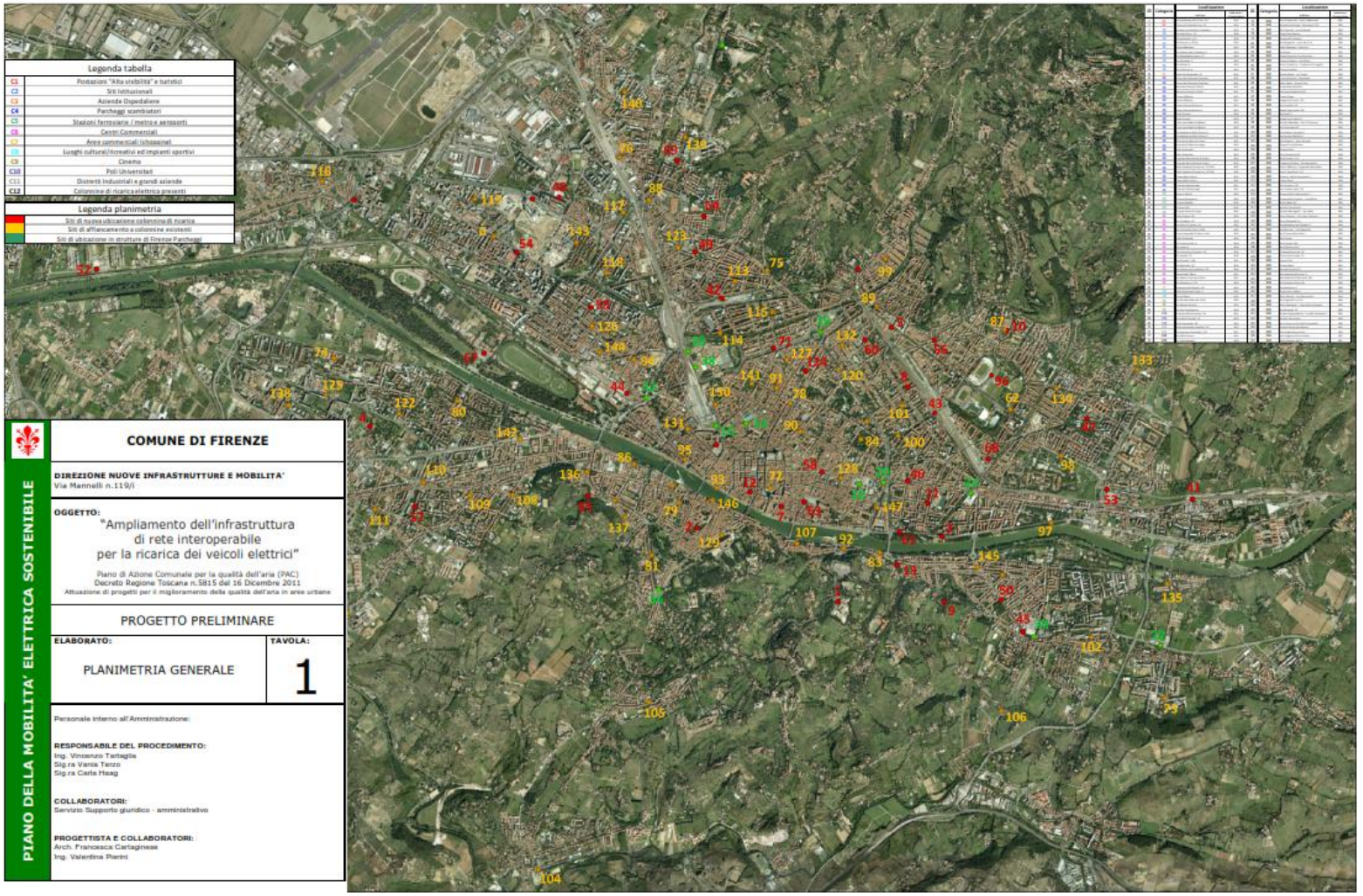
Co-funded by the Intelligent Energy Europe Programme of the European Union

Thematic map for districts



Electric charging points

Co-funded by the Intelligent Energy Europe Programme of the European Union



Co-funded by the Intelligent Energy Europe Programme of the European Union

2. IDENTIFICATION OF PILOT CITY CHARACTERISTICS

2.1. E-CHARGING POINTS (SEE PREVIOUS MAP)

in the current situation there are 126 public charging point is Florence already operating (109 charging points for scooters). The City of Florence, with regional co-financing DR.5815, has decided to expand the existing infrastructure of public charging stations with additional 147 stations with two sockets each for a total of 428 electric charging stalls. Therefore, the total supply in Florence will consist of 214 charging stations. It is expected, in 2014 to install 147 charging stations capable of powering two vehicles at the same time, thereby providing the city with 300 charging stations. Two charging point for electric vehicles powered by solar panels on the Mercato Sant'Ambrogio side street S.Verdiana and in Via Madonna della Tosse. In those charging points electric scooters are charged by solar energy. Near the charging station a display panel has been installed to provide operational information on the station status.

ID SITE	Category	Place	Address	District	Nr charging points for cars	Nr charging point for scooters
7	**C2**	Toscana Energia	Piazza Mentana	**Q.1**	1	2
12	**C2**	Assessorato Welfare, Politiche del Lavoro, Personale, Cooperazione internazionale	Via Pellicceria (Fronte Civici 42-46), pressi Piazza della Repubblica	**Q.1**	1	2
14	**C4**	Park S.Lorenzo/Mercato Centrale	Piazza del Mercato Centrale	**Q.1**	0	1
18	**C4**	Park Europa	Viale Europa	**Q.3**	0	1
19	**C4**	Park Alberti	P.zza Leon Battista Alberti (angolo Via Campofiore)	**Q.2**	0	1
60	**C12**	5	Via Tagliamento	**Q.3**	1	1
61	**C12**	6	Via Assisi	**Q.4**	1	1
62	**C12**	7	Viale V.Emanuele - villa Fabbricotti	**Q.5**	1	1

63	**C12**	8	Via dello Steccuto - Stazione FF.SS.	**Q.5**	1	1
65	**C12**	13	Piazza San Marco	**Q.1**	0	2
67	**C12**	79	Via Magnolie (angolo Viale dei Pini)	**Q.4**	1	1
72	**C12**	27	Via di Scandicci - Ospedale Torregalli	**Q.4**	1	1
76	**C12**	33	Viale Alessandro Volta (Piazza Cure)	**Q.2**	0	1
77	**C12**	34	Piazza Brunelleschi	**Q.1**	1	1
78	**C12**	36	Via Santa Reparata	**Q.1**	1	1
79	**C12**	39	Piazza Giuseppe Poggi	**Q.1**	0	1
80	**C12**	41	Lungarno Corsini, 10	**Q.1**	1	1
81	**C12**	43	Via Alessandro Scarlatti, 16	**Q.1**	0	1
82	**C12**	44	Borgo Ognissanti	**Q.1**	1	1
83	**C12**	47	Viale Pasquale Paoli, 2	**Q.2**	1	1
84	**C12**	48	Lungarno A. Moro, 2	**Q.2**	0	1
85	**C12**	49	Via del Mezzetta - Via C.F.Ferrucci	**Q.2**	1	1
86	**C12**	50	Via Giovanni Sercambi, 38	**Q.2**	1	1
87	**C12**	51	Via Nathan Cassuto, 7	**Q.2**	1	1
88	**C12**	52	Via Iacopo Nardi, 64	**Q.2**	1	1
89	**C12**	53	Via Andorra, 2	**Q.3**	1	1
90	**C12**	55	Piazza Gualfredotto da Milano, 3	**Q.3**	0	1
91	**C12**	56	Piazza Don Pietro Puliti	**Q.3**	0	1
92	**C12**	57	Via Gelsomino, 95	**Q.3**	1	1
93	**C12**	58	Via Benedetto Fortini, 171	**Q.3**	1	1
94	**C12**	60	Lungarno Santa Rosa - Via Anconella	**Q.4**	1	1
95	**C12**	61	Via di Soffiano, 56	**Q.4**	0	1
97	**C12**	64	Piazza Piero della Francesca, 1	**Q.4**	0	1
98	**C12**	65	Piazza Capio Dolci	**Q.4**	0	1

99	**C12**	66	Via Francesco Granacci, 30	**Q.4**	1	1
100	**C12**	67	Via Raffaello Lambruschini, 22-24	**Q.5**	1	1
101	**C12**	68	Piazza della Costituzione, 7	**Q.5**	1	1
102	**C12**	69	Piazza della Vittoria - via Ruffini	**Q.5**	1	1
103	**C12**	70	Via Pratese, 42	**Q.5**	1	1
104	**C12**	71	Via del Terzolle, 95	**Q.5**	0	1
105	**C12**	72	Via Giovanni dei Marignolli (fronte civico 5)	**Q.5**	0	1
106	**C12**	73	Via Lippi e Macia, 34	**Q.5**	1	1
107	**C12**	78	Viale Giacomo Matteotti, 1a	**Q.2**	1	1
108	**C12**	81	Via Madonna del Pagano, 1	**Q.4**	1	1
109	**C12**	82	Via Cesare Maccari	**Q.4**	1	1
110	**C12**	83	Via del Palazzo Bruciato, 5	**Q.5**	1	1
112	**C12**	86	Via Antonio Canova, 166	**Q.4**	1	1
113	**C12**	87	Via Galliano, 129	**Q.1**	1	1
116	**C12**	91	Piazza dei Pitti, 2	**Q.1**	1	1
						1
131	**C12**	6	Piazzale di Porta al Prato	**Q.5**	1	1
132	**C12**	117	Piazza Ravenna, 5	**Q.3**	0	1
133	**C12**	118	Lungarno Guicciardini, 7/r	**Q.1**	1	1
8	**C2**	Assessorato Politiche del Territorio	Via Andrea del Castagno, 3	**Q.2**	1	
10	**C2**	Assessorato all'Educazione	Via Aurelio Nicolodi, 2	**Q.2**	1	1
29	**C5**	Firenze Statuto	Piazza Ludovico Antonio Muratori (Viale Giovanni Lami, 2)	**Q.5**	1	
30	**C5**	Firenze C.M.	Via Mannelli	**Q.2**	1	
31	**C5**	Firenze Santa Maria Novella	Via Alemanni	**Q.1**	1	
35	**C6**	Unicoop Firenze Sc 1	Via Carlo Del Prete, 106/f	**Q.5**	1	
36	**C6**	Unicoop Firenze Soc Coop Di Consumo	Piazza Leopoldo Pietro, 6-red	**Q.5**	1	
41	**C6**	Esselunga Novoli	Via Novoli, 61	**Q.5**	1	
42	**C6**	Accademia dei Cherubini	Via degli Alfani (altezza Piazza delle Belle Arti) pressi civico 71	**Q.1**	1	

45	**C6**	Univeristà di Lettere e Geografia	Via San Gallo, 10	**Q.1**	1	
47	**C6**	Esselunga	Via Masaccio, 274	**Q.2**	1	
49	**C8**	Stadio Franchi	Viale Manfredo Fanti, 4	**Q.2**	1	
50	**C8**	Teatro Verdi	Via Verdi (angolo Via Ghibellina)	**Q.1**	1	
51	**C9**	Cinema Esterno Notte Poggetto	Via Michele Mercati 24/b	**Q.5**	1	
55	**C10**	Facoltà di Psicologia	Via della Torretta, 16	**Q.2**	1	
59	**C12**	1	Via delle Farine, 1 (angolo con Piazza della Signoria)	**Q.1**	1	2
66	**C12**	16	Piazza del Carmine	**Q.1**	1	1
68	**C12**	21	Viale F. Petrarca (angolo Piazza di P. Romana)	**Q.1**	1	1
71	**C12**	26	Piazza Massimo D'Azeglio	**Q.1**	1	1
73	**C12**	29	Piazza del Cestello	**Q.1**	1	1
114	**C12**	88	Via Bonifacio Lupi, 35	**Q.1**	1	2
118	**C12**	95	Via della Scala, 65	**Q.1**	1	1
119	**C12**	96	Via Leonardo da Vinci, 3	**Q.2**	1	1
121	**C12**	98	Via Eleonora Duse, 1b	**Q.2**	1	1
122	**C12**	99	Via Nanchino, 6	**Q.3**	1	1
125	**C12**	103	Via Luca Signorelli, 22	**Q.4**	1	1
126	**C12**	104	Via Bruno Borghi *(Viale Giovan Battista Morgagni)*	**Q.5**	1	1
127	**C12**	105	Via Luigi Morandi, 21	**Q.5**	1	1
128	**C12**	112	Piazza dell'Indipendenza (pressi Via della Fortezza)	**Q.1**	1	2
134	**C12**	11	Viale Giovine Italia	**Q.1**	1	1
135	**C5**	-	AEROPORTO (Peretola)	**Q.5**	1	
16	**C4**	Park Sant'Ambrogio	Piazza Ghiberti	**Q.1**	1	1
20	**C4**	Park Parterre	Via Madonna Della Tosse, 9	**Q.1**	1	1
					69	**78**
					147	

Among them:

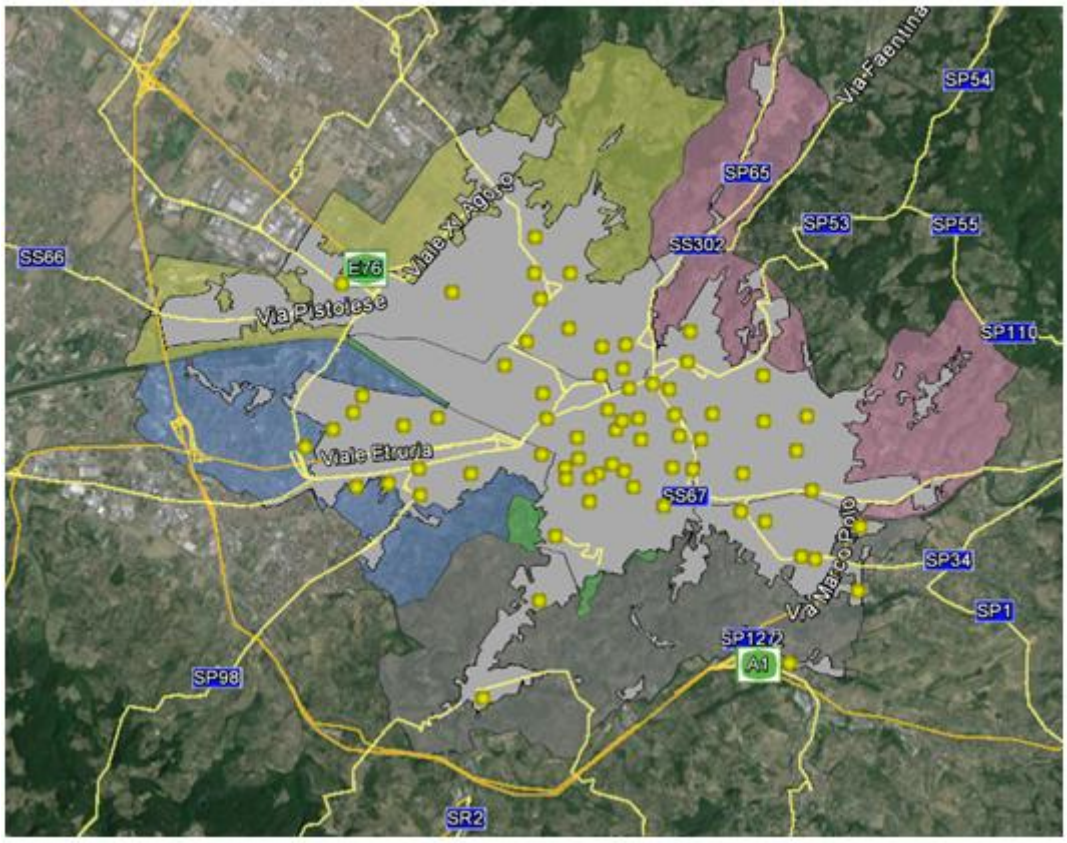
ID SITO	Categoria	Luogo	Indirizzo	Quartiere
63	**C12**	8 Stazione Rifredi	Via dello Steccuto - Stazione FF.SS.	**Q.5**
29	**C5**	Firenze Statuto	Piazza Ludovico Antonio Muratori (Viale Giovanni Lami, 2)	**Q.5**
30	**C5**	Firenze Stazione Campo di Marte	Via Mannelli	**Q.2**
31	**C5**	Firenze Santa Maria Novella	Via Alemanni	**Q.1**
35	**C6**	Unicoop Firenze Sc 1	Via Carlo Del Prete, 106/f	**Q.5**
36	**C6**	Unicoop Firenze Soc Coop Di Consumo	Piazza Leopoldo Pietro, 6-red	**Q.5**
41	**C6**	Esselunga Novoli	Via Novoli, 61	**Q.5**
42	**C6**	Accademia dei Cherubini	Via degli Alfani (altezza Piazza delle Belle Arti) pressi civico 71	**Q.1**
45	**C6**	Univeristà di Lettere e Geografia	Via San Gallo, 10	**Q.1**
47	**C6**	Esselunga	Via Masaccio, 274	**Q.2**
55	**C10**	Facoltà di Psicologia	Via della Torretta, 16	**Q.2**
126	**C12**	104Casa dello studente	Via Bruno Borghi *(Viale Giovan Battista Morgagni)*	**Q.5**
135	**C5**	Peretola-	AEROPORTO (Peretola)	**Q.5**

TRAIN STATIONS + AIRPORT

LARGE-SCALE RETAIL TRADE PLACES

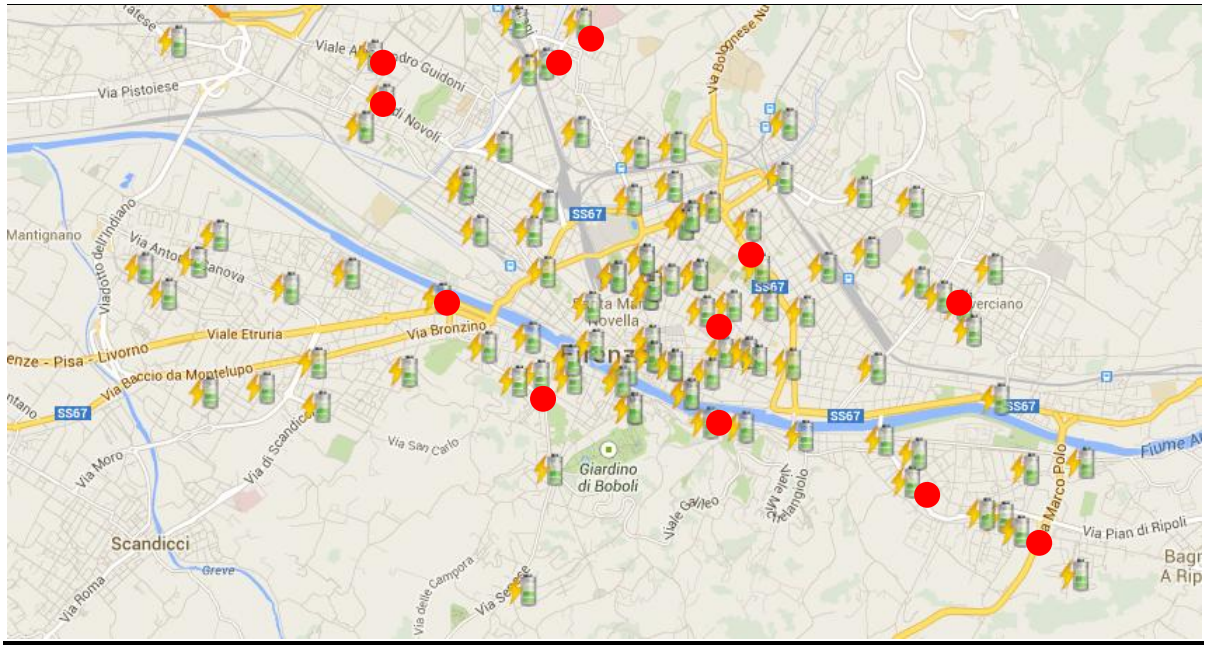
STUDENTS HUB

Thematic map for districts and towns centers - scooters charging stations



2.2. ELE.C.TRA. PARKING PLACES

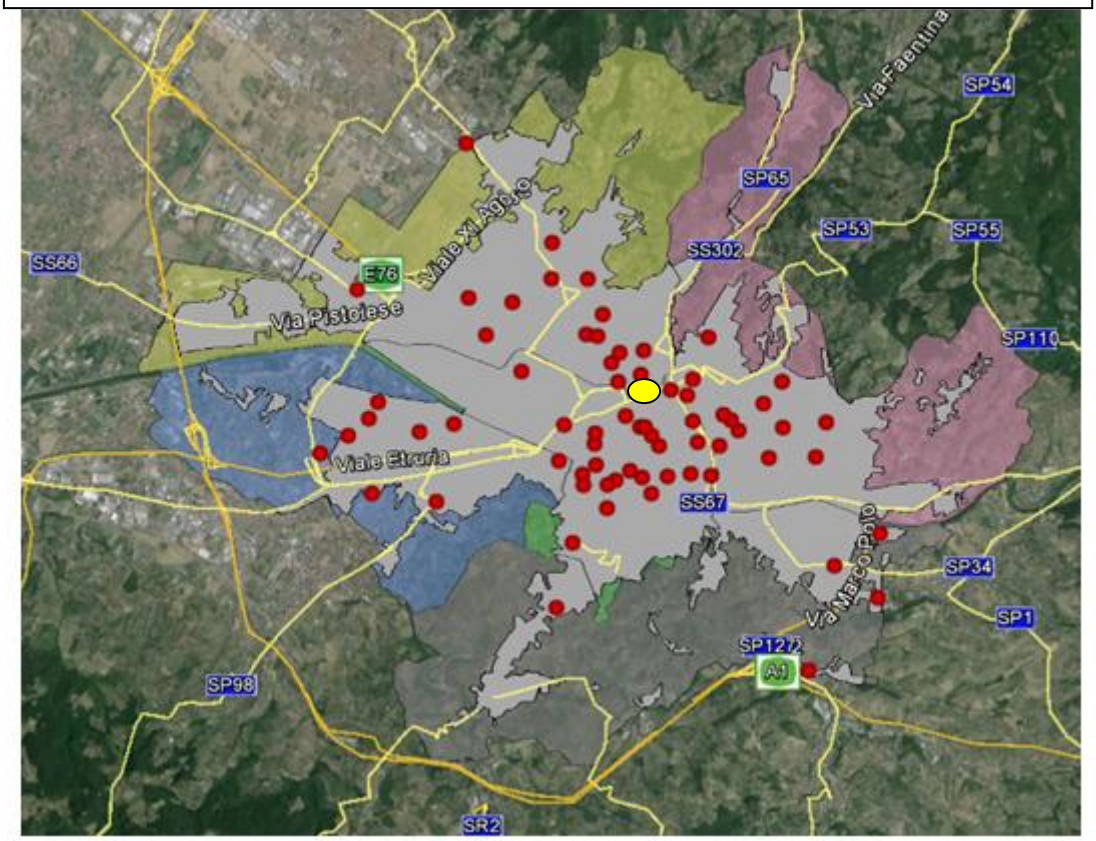
It can be assumed that charging points (red points in the map below) will have Ele.C.Tra brand.



2.3. PICK-UP AND DELIVERY POINTS

The final location, where e-vehicles will be available, will be planned after the drawing up of the agreements. We don't know yet what kind of service will be implemented - it is reasonable to think that at the premises of suppliers of scooter that will join the project there will be the opportunity to take the scooter.

Pick-up and delivery points



Speedy Florence (Viale Spartaco Lavagnini, 22/C)

2.4. OTHER FACILITATIONS

Incentives provided by the municipality. For the moment, there is only access to the LTZ

Florence has set itself at the vanguard in the electric mobility field, realising the vastest Italian charging network (now needing to be updated according to the new technical and normative standards and to be expanded), creating a transport network with electric buses in the old town centre, financing the purchase of electric vehicles and favouring their movement in the city: nowadays in Florence 5.000 electric vehicles are already circulating, above all two-wheels models.

Thanks to the 2003-2006 Municipal Action Plan (PAC) for the air quality renewal and the following 2007-2010 PAC, it's possible to note the first significant and progressive achievements.
Starting from this experience, the 2009-2014 the programme mandate of the Mayor of Florence establishes, among the city objectives, the European leadership in the electric mobility field as a priority.

By joining the Covenant of Mayors (by unanimous approval of City Council resolution no. 2010/C/0008), the City of Florence has joined in the fight and is working to reach the declared goal of reducing CO2 emissions in its own territory by at least 20% by the year 2020.

Florence detains the optimal dimension for the electrical mobility, taking into account the current average autonomy of an electric car. The whole metropolitan area, including more than 650.000 inhabitants, can be easily covered with the autonomy of the electric vehicles already in the market today, able to fulfil not only the strictly urban mobility, but also the larger metropolitan one.

Chronology of the major actions carried out by the Administration in the period 2009-2012

Other than these awareness-raising and communication actions, in July 2011 the Administration has defined a restricted-area access policy strongly in favour to the electric vehicles, establishing, as an example, that a non-resident can systematically access to the old town centre only with an electric vehicle.

In August 2011, after several months of dialogues, the City of Florence adopted some memorandum of understanding with the main players involved in this topic. A cooperation agreement has been signed with Enel, one with Nissan-Renault, another one with Arval, on the issue of the long-term rental, in addition to different collaborations started without any formal protocols (Piaggio, Mercedes Smart, NWG, Ducati Energia, Bosch, etc...).

In November 2011, the City of Florence, together with Firenze Parcheggi, presented the Masterplan of the Electric Mobility, a document defining a roadmap of systematic implementation of an electric mobility strategy: it's one of the first Italian cities to be provided this tool.

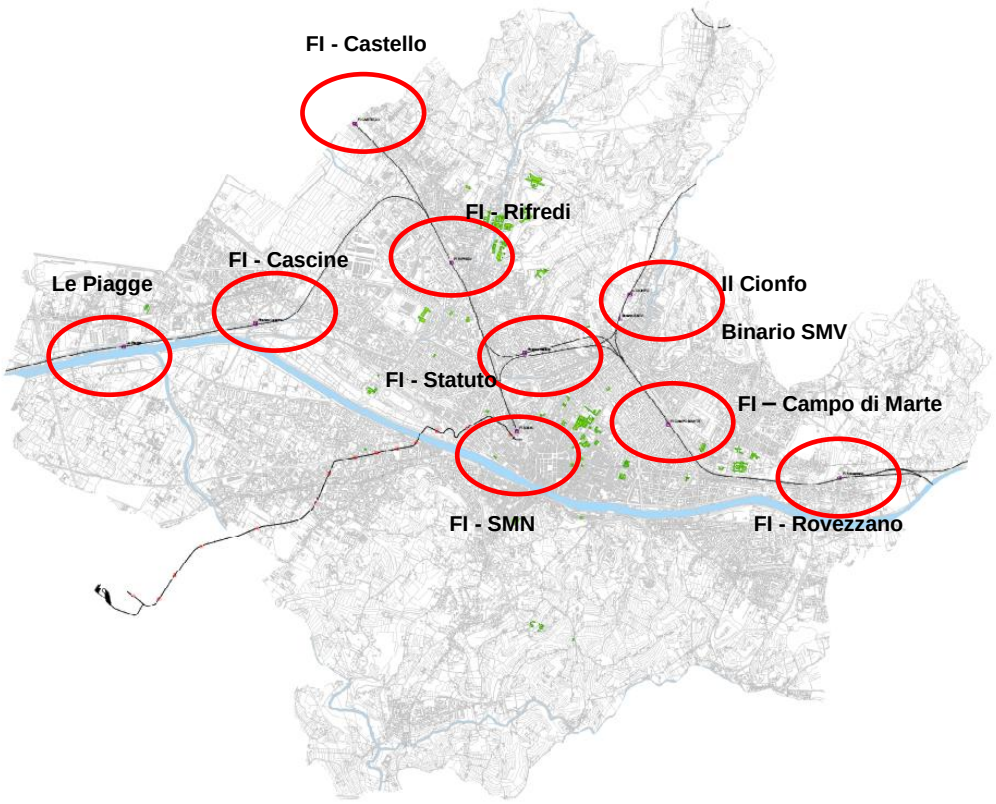
The electric mobility is the topic of several European projects on Interreg, Civitas, 7FP and Smart Cities programmes.

2.5. PUBLIC TRANSPORT

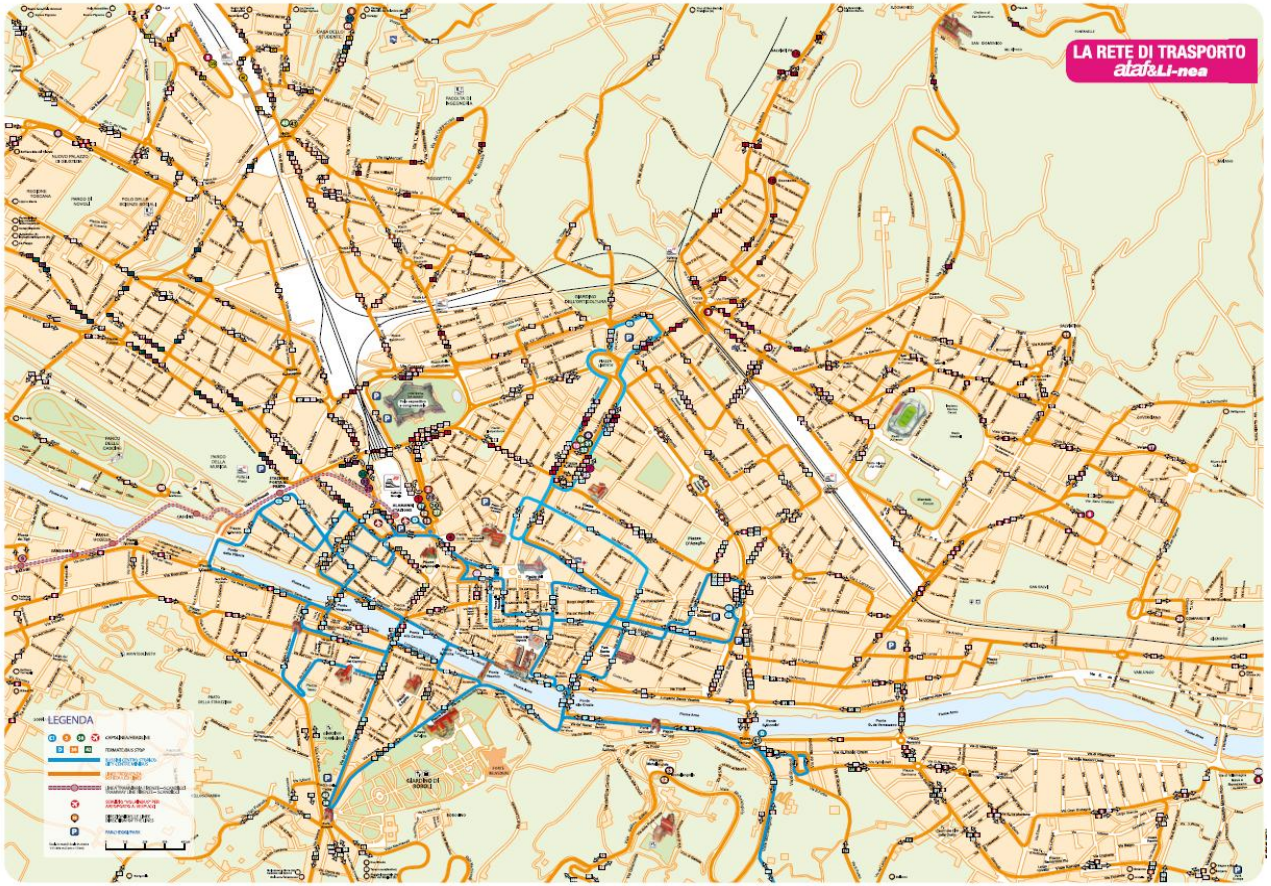
Florence is the most important attractor area for the whole Region. The city of Florence is also the heart of the conurbation Florence - Prato - Pistoia, which has more than 1.5 million inhabitants. The main railway stations are Firenze Santa Maria Novella, Firenze Campo di Marte, Firenze Rifredi. The airport Amerigo Vespucci is located in Peretola the north-western suburb of the city, near the highway and 7 km far from the city centre.

The tramway Florence 1 is a tram that connects Florence to Scandicci and was conceived as the first node of a network of local public transport service to the whole metropolitan area, ie Florence and neighboring municipalities

Railway stations in Florence

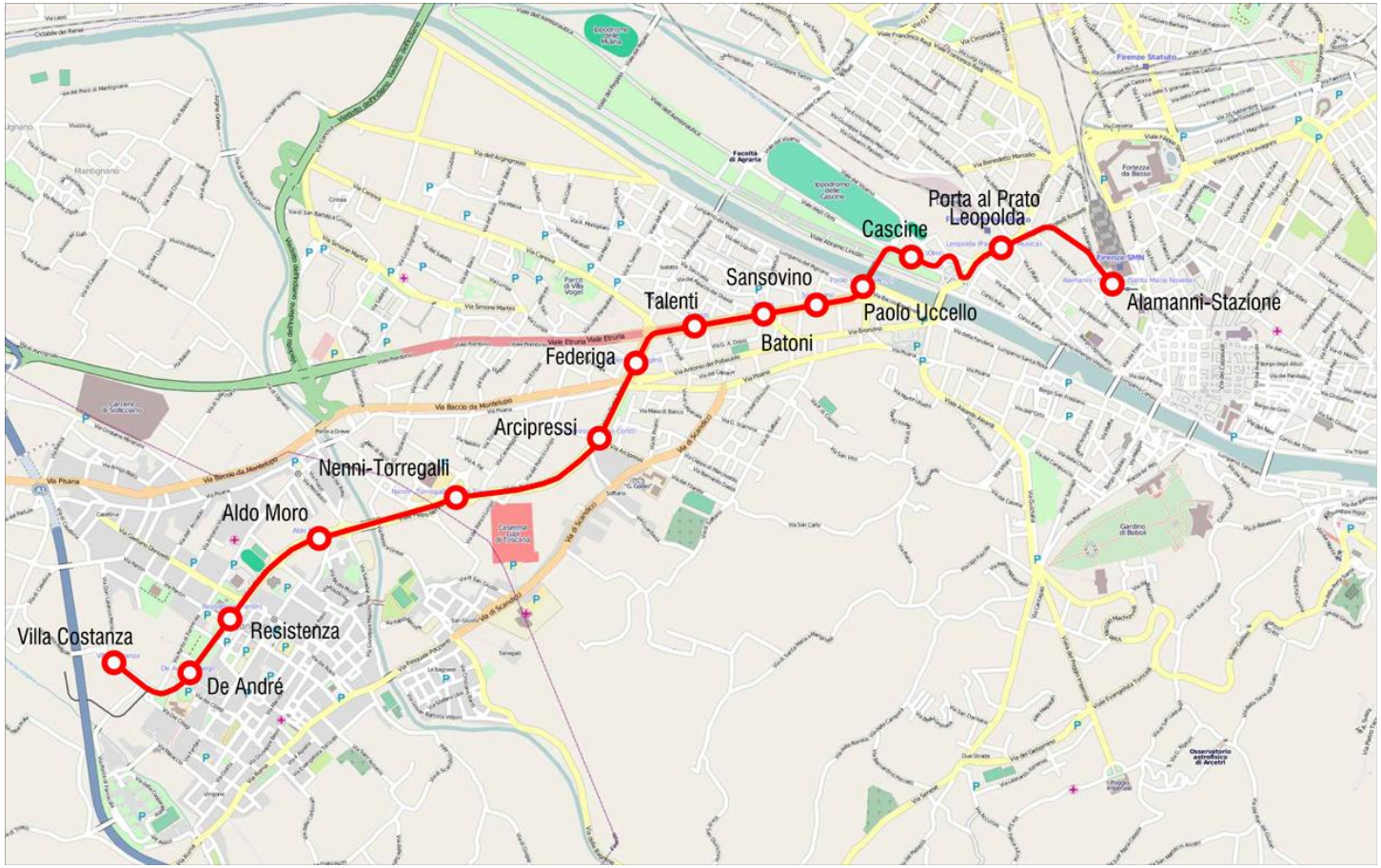


Co-funded by the Intelligent Energy Europe Programme of the European Union



Co-funded by the Intelligent Energy Europe Programme of the European Union

Tramway line T1 – Florence-Scandicci



Co-funded by the Intelligent Energy Europe Programme of the European Union

2.6. OTHER RELEVANT POINTS:

There are further many attractor places that could be interesting for Ele.C.Tra pilot project in Florence:

- the main hospitals and health centres (Careggi, Mayer, Torregalli)
- university hubs involvement, to focus on students (Scientific Hub Sesto, Fiorentino – Social Sciences Hub, Novoli)
- Hotels
- IKEA

3. STAKEHOLDERS INVOLVEMENT

The project Ele.C.Tra. involves several types of stakeholders in order to allow them to obtain benefits:

- ***business***, focusing on the e-vehicle and their components suppliers/distributors, ex. e-vehicle and technological suppliers, retailer and rental shop;
- ***infrastructure***, in terms of infrastructure, linked to e-vehicle use, manager involving attractor poles (malls, touristic point managers, etc), transport and other public service operators, charging points and energy suppliers;
- ***demand***, focusing on the user needs satisfaction, mainly involving firms, commuter associations, schools, universities, public offices, tourists operators, hotels and malls/shops involving their customers;
- ***institutional***, taking into account subject as local authorities, public bodies, associations, universities and research institutes, radio stations, etc.

Regarding Florence two companies that own fleets of electric 4 wheels vehicles, Speedy Florence and Florence Eco Rent, are interested in testing a rental service of their own e-vehicles (respectively 10 Twizy and 5 Birò) using a central parking area provided by the Municipality.
Among the retailers of electric scooters, Maurizio Rugi for Piaggio and Angelo Profeti for Selfaip are willing to set special conditions of sale for "Electra" customers.

Regarding the infrastructure Enel is interested in meeting Speedy Florence and Florentine hoteliers to assess the possibility of installing charging stations (not free but under special conditions) to create a rental vehicles system (Twizy) for tourists.
Esselunga (a big supermarkets chain) is willing to cooperate with Municipality of Florence to install some charging points in supermarkets parking areas.

4. AREA MOBILITY MANAGEMENT OFFICE

The Area Mobility Management Office of Florence is the physical and virtual place with the following tasks to do during the whole implementation period:

- management and verification of incentives for users, with the support of the public body;
- management and monitoring of service implementation, having the role of the main "connector" between the offer, involving stakeholders, partners, etc, and the demand, paying attention to users' needs and issues;
- focus on the citizens' and tourists' needs, involving them directly thanks to the project website and social platforms monitoring or public events or other. In this way, it's possible to collect suggestions and improvements from users in order to improve the pilot service;
- focus on the project stakeholders, managing agreements and then monitoring the progress of implementation with the support of the Ele.C.Tra technical team leader;
- planning and carrying out of the dissemination and information campaigns, in order to raise citizens' and tourists' awareness of e-vehicle benefits and incentives.

In particular, Mrs Francesca Cartaginese is in charge of the implementation of the EleCTra Mobility Management actions.

For the Municipality of Florence the Mobility Management Office coincides with the organization chart of the project.

4.1. AREA MOBILITY: ACTIVITIES

The mobility manager has a mandate to optimize the systematic movement of employees. He has the objective of reducing the use of private cars using tools such as the house-work routes Plan with which alternative transport solutions with reduced environmental impact are encouraged (car pooling, car sharing, bike sharing, call transportation, shuttles, etc..).

The objectives are related to:
- the general reduction of vehicular traffic;
- energy saving;

- the contraction of air-polluting emissions and noise;
- the reduction of greenhouse gas emissions;
- reducing road congestion;
- the increase of road safety.

The Mobility Manager Office works to improve mobility throughout the territory under its jurisdiction, working with all departments responsible for traffic and transportation, and cooperates with local transport companies. It monitors the effects of the measures taken by individual business managers and coordinates the implementation of Municipality house-work routes Plan.

The establishment of the office mobility manager is one of the most important actions for sustainable mobility.

4.2. OTHER ACTIVITIES

To strengthen the exchange of information, the dissemination and the stakeholders' involvement will be done through specific actions, including:

- university hubs involvement - as already said- to focus on students, in accordance with the user target that use scooters very much. How can the Ele.C.Tra model involve them?
    - by specific dissemination campaigns to be held in universities, with particular attention to technological device use (website, the Ele.C.Tra. app, social network, etc, developed by the WP7 tasks);
    - promoting e-charging points by universities (columns, if present) like the main supporting infrastructure available;
- firms Mobility Management involvement, to optimize results in regard to workers' needs, through specific facilities and tools for e-scooter users (e.g. discount to buy/to hire an e-vehicle, reserved scooter places in the firm's park if present);
- info web-based platform carrying out and promotion, in order to ease e-scooter users and linked to the Ele.C.Tra. website. In this way, the platform represents the main virtual info-point to inform oneself and then to use e-scooters by citizens and tourists, and the main communication link between users and the Mobility Manager and other stakeholders, if possible;
- Participation in the event organized in October by IRPET (Regional Institute for the economic and territorial promotion) that will be an important moment to

discuss the innovation introduced by Ele.C.Tra. Project. The title of the meeting is "Strategies for growth: innovation, efficiency, sustainability in transport"

List of city manager involved

Ludovica Fiaschi	GE Nuovo Pignone	Rel. Ind.	348-7320080	ludovica1.fiaschi@ge.com
Stefano Capecchi	ATAF Firenze	Gest. Servizio	348-7309531	capecchi@ataf.fi.it
Marco Tordi	ENEL	Personale	329-8115158	marco.tordi@enel.com
Carlo Cella	Selex Elsag	SPP	335-7499302	carlo.cella@selex-es.com
Renata Ravasio	Meyer	Mob. Manager	335-7248106	r.ravasio@meyer.it
Marcello Carlà	Università	Mob. Manager	055-4572055	carla@fi.infn.it
Sara Cresci	Poste Italiane		055 4474645 - 377 1617524	crescis@posteitaliane.it
Mauro Manganelli	Poste Italiane		055 2736446 - 377 1617514	manganellim@posteitaliane.it
Beatrice Porta	Esselunga	Dir. Aff. Gen.	055-37901	beatrice.porta@esselunga.it
David De Lauzieres	Esselunga	Dir. Aff. Gen.	055-37901	segreteria-annimistrativa.fi@esselunga.it
Antonio Pasqua	Silfi	Coor. Prod. Resp.	055-588663	segreteria@silfi.it
Andrea Somigli	Telecom Italia		335-7509963	andrea.somigli@telecomitalia.it
Mario Antonio Macchia	AOU Careggi	Dip. Tecnico	348-3679924	macchiam@aou-careggi.toscana.it
Gianni Lucherelli	Telecom Italia	Engineering	331-6019040	gianni.lucherelli@telecomitalia.it
Manola Manini	Unicoop Firenze	R. Relazioni	335-7701343	manola.manini@unicoopfirenze.coop.it
Eleonora Petrocchi	Unicoop Firenze	R. Relazioni R.U.	055-47801	eleonora.petrocchi@unicoopfirenze.coop.it
Elena Cessori	Intesa San Paolo		02/87939292 (348-4084585)	elena.cessari@intesasanpaolo.com
Michela Marrucci	Monte dei Paschi di Siena		331-6293034	michela.marrucci@banca.mps.it
Chiara Giovannelli	RFI		3331682323	c.giovannelli@rfi.it

5. COORDINATION WITH INNOVATIVE ENERGY SYSTEMS

In Florence there are two charging point for electric vehicles powered by solar panels (one on the Mercato Sant'Ambrogio, the other one in Via Madonna della Tosse). Here electric scooters are charged by solar energy. Near the charging station a display panel has been installed to provide operational information on the station status. Electricity comes from solar energy with a saving of CO2. Total renewability of the primary energy source and absence of pollutant emissions during the entire production cycle. The columns allows the simultaneous charging of 4 e-scooters. Increasing the number of electric charging points powered by solar panels all over the city is a very important action to do for energy saving.

In 2009, 149 columns for the payment of parking powered by solar panels were installed in Florence.
There are two models: the one called STELIO of Parkeon Spa and SPAZIO of Solari company from Udine.
The advantages of this "energy solution" are a lot:

- Long autonomy (energy accumulator has to be changed every 5 years)
- Low costs of installation and maintenance (no road works are necessary - such as those for connection to a power supply)
- Reduction of environmental impacts
- No need to store batteries as well as dispose of them once they are exhausted

Those columns for the payment of parking consume little energy. A few hours of exposure to light is enough for charging device's battery and make it working even in case of bad weather conditions. The batteries used are rechargeable.
The columns are much more than a payment system. The services offered by the columns gets beyond the payment of parking.
With SPAZIO users can get advanced services as, for example, discounts for residents, special rates or free stops (identification with special cards). SPAZIO sells also public transport tickets.
All the infrastructure can be controlled remotely by accessing a web server, obtaining information about the system from the diagnostic and financial point of view.
Operation on parking columns can be programmed directly from the office: fares, tickets, messages and many other parameters can be configured and updated remotely with just a few clicks, without the need for physical access to the devices.

5.1. SEAP: THE SUSTAINABLE ENERGY ACTION PLAN

The City of Florence's Action Plan consists of 28 measures which make it possible to go beyond the goal of reducing carbon dioxide emissions by 20% through structured interventions in the following areas, which are among the most significant in terms of achieving this goal:
- transport – residential – tertiary - public
The actions have been selected in accordance with the priorities identified by the Municipal Administration and are characterized by their concreteness and actual feasibility of the interventions.
A significant proportion of the measures are already in progress; another set is included in the short-to-medium term schedule, while for some areas of intervention that could bring substantial benefits, quantifications have not been attributed, pending greater details regarding implementation (research and waste).

SEAP measures includes both direct interventions on public property, taken in order to provide an example of efficiency to emulate and communicate, and indirect measures using means available to the municipality which can achieve significant results on private consumption (such as buildings, mobility, education and communication).

MUNICIPAL BUILDING STOCK:
- systematized inventory (buildings, equipment/facilities, suppliers)
- monitoring of consumption (electricity, heating, water) and evaluation of energy efficiency by means of indicators
- evaluation of forms of contract and related potential for optimization
- technical audit (detailed evaluation of building shell and plant/equipment efficiency and proposed measures)
- evaluation of potential measures to be take in the event of maintenance and/or modernization (financing, EPC contracts)
- evaluation of potential for renewable energy sources
- training/information for administrators and users (caretakers, administrators, employees)
- participation in tender procedures (province, region, ministries, EU)

SERVICES:
- Public lighting: contracts, adequacy, consumption and potential measures
- Supply contracts and framework agreements
- High-consumption zones/buildings: potential cogeneration systems and district heating networks
- Efficiency of public waterworks (load management and energy consumption of pumps)
- Efficiency of water treatment processes (load management and energy consumption of pumps)
- Waste (% separated, efficiency of collection and processing)

LOCAL PLANNING AND DEVELOPMENT:
- Energy and emissions accounting
- Energy plan: setting objectives, potential and priority of measures
- Intervention schedule (short-to-medium term)
- Land-use planning (Municipal Urban Plan (PUC) and by-laws)
- Traffic plan
- Procurements and GPP
- Planning permission, Law no. 10 and building certification
- Advice for private citizens concerning building practices

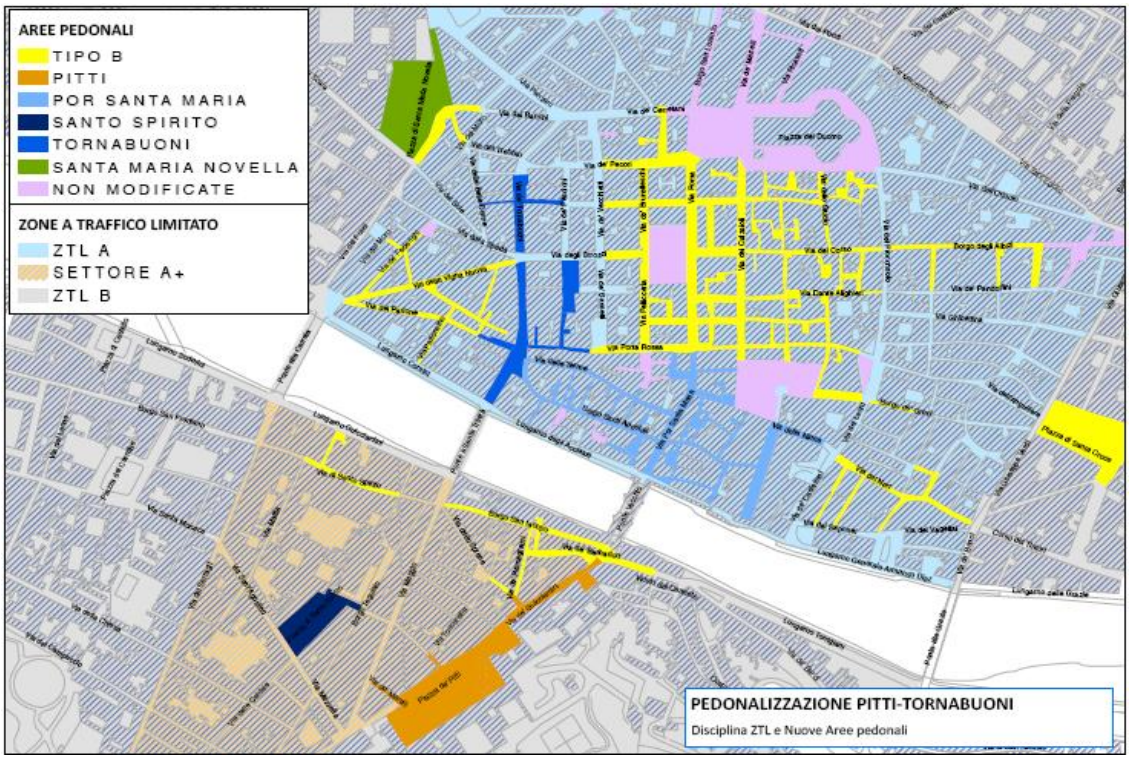
MOBILITY
- efficient public transport (modernization of fleet, extension of network, incentives)
- Local government vehicles (consumption, efficiency, purchasing)
- Analysis of main traffic axes and intense traffic zones
- Low-speed areas, restrictions on access
- Cycle traffic (cycle lanes, parking facilities, road safety)
- Pedestrian traffic (setting up of crossings, safety)
- Intermodal mobility
- Information (public transport and themed events)

COMMUNICATION AND COOPERATION:
- Information and surveys (perception of public commitment)
- Events, campaigns
- Funding programs, European projects and cooperation with other bodies
- Advice points

5.2. MOBILITY

The transport sector has the largest impact, with 0.88 Mt/year of CO2 emitted, 34.5% of the total. What is required is a substantial, integrated action which makes it possible – even in a difficult situation such as that of urban Florence, congested as it is by commuter and tourist flows – to achieve a significant reduction in the environmental impact of mobility in the context of the city.

In the light of the complexity of the sector and the major impact that transport has on both air quality and citizens' quality of life, the plan envisages a well-defined series of actions that involve both the framework program and the creation of important infrastructure for the city.



On the basis of the policies and recommendations of the Structural Plan, priority interventions have been identified, such as access to zones of the city (e.g. pedestrianisation, limited traffic zones, eco-road pricing policies), the planning of parking areas and charging systems (Parking Plan with the creation of park-and-ride car parks) in addition to directly and indirectly promoting the technological modernization of vehicles in circulation.

Connected with this overall action is the creation of an ever wider network of cycle paths/lanes and the possibility of setting up a bike sharing service that can integrate with available public transport and that is aimed not only at residents but also the millions of tourists that visit the city every year.

A significant contribution to improving the availability of public transport is represented by the construction of tram lines (line 1, already completed, lines 2 and 3 and extensions) with the capacity of attracting substantial mobility flows bound for the city centre; this intervention requires several support measures, including creating park-and-ride car parks, optimizing the strategy of integrated transport, and improving information accessibility (Wi-Fi and Web 2.0 on board).

City traffic, which will be partly eased by the abovementioned actions, will be subject to traffic-flow-easing measures through the creation of a modern traffic management centre capable of providing real-time information regarding critical traffic situations and alternatives, linked to the existing information portal accessible to the public (the web-based TO-GO portal and updatable message panels).

Both the municipal vehicle fleet and public transport will undergo technological modernization and it will be possible to trial the use of electric vehicles for private

mobility which, especially in certain central zones, will be able to help reduce the impact of emissions in terms of greenhouse gases (they will be powered by recharging stations supplying certified green energy) and the noise aspect.