

# O.T3.4 & D.C.3.4 OUTPUT FACTSHEET

Output factsheet: Strategies and action plans

Version 1

Project index number and acronym	CE1100 LOW-CARB
Lead partner	PP1 - Leipzig Transport Company (LVB)
Output number and title	T3.4 Multipurpose charging infrastructure for multimodal PT e-services in Parma's FUA
Deliverable number and title	O.T3.4 & D.C.3.4 Output factsheets
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Summary description of the strategy/action plan (developed and/or implemented)

Parma is a medium-sized city that lays in the middle of the Pianura Padana, which is the most industrialized - and therefore polluted - area of Italy. The city is struggling with air pollution. The local administration is fighting this battle also by promoting public transport and reducing its impact over the environment to increase the quality of life for citizens.

For this reason, TEP has studied the chance to reduce the impact of public transport in Parma. Over the last years, the company has fostered the renewal of its fleet purchasing new trolleybuses, methane buses and low-emissions Euro 6 diesel buses. The trolleybuses represent the main investment of TEP in electromobility. However, this kind of vehicle is strongly linked to the overhead infrastructure. The new full-electric trolleybuses have a battery that allows only a limited autonomy outside the network. That is why TEP is evaluating the opportunity to commute an urban line served by diesel buses into a line served by electric buses. The action plan studies all the aspects to be considered when a transport operator decides to commute a line this way: which is the most suitable recharging system to allow the necessary autonomy? Which electric buses should we purchased? Which technology fits best our project? How much must we invest? And most of all: does it reduce air pollution?

### NUTS region(s) concerned by the strategy/action plan (relevant NUTS level)

NUTS 2 - Emilia-Romagna  
NUTS 3 - Parma (ITH52)

### Expected impact and benefits of the strategy/action plan for the concerned territories and target groups

The action plan has measured the differences of serving the line with diesel buses and with electric buses fueled by recharging stations at the terminal/depot in terms of polluting emissions.

The recharging system reduces the CO<sub>2</sub> emissions by 639,85 tons per year. In addition, the NO<sub>x</sub> emissions are cut by 3.986,57 kg per year, the PM emissions by 36,85 kg per year. There would also be further benefits such as the reduction of sound pollution. The terminal could become a new exchanging car park, providing recharging facilities also for private vehicles.

### Sustainability of the developed or implemented strategy/action plan and its transferability to other territories and stakeholders

From an economic point of view, the return on investment will require about 26 years, which is quite much. However, this result could be improved thanks to price reduction of batteries and to the possible improvement of their performance in the next few years. Moreover, usage of the charging points on several urban lines could increase the efficiency of the investment. The action plan has been thought for the electrification of the urban line n. 8 in Parma, considering the specific requirements of the Italian laws, but the project explains the steps to be done and the things that must be considered when a public transportation company decides to consider the idea of integrating an electric bus line recharged at the terminal in its network, and is, thus, replicable. The providers for the charging infrastructure and for buses sell products with similar characteristics throughout Europe. For this reason, the project could have the same features in each country, with some adaptation depending on the specific building laws.

## Lessons learned from the development/implementation process of the strategy/action plan and added value of transnational cooperation

The main lesson learned is that it's important to study the project step by step together with the Municipality (or with the local entity who can say the final word over it). They must be aware of all the parts of the project, of the criticism that may come from the citizens and from group of interests.

For this reason, it's also important to involve citizens, especially those living close to the terminal where the recharging station will be built, so that they can be aware of what will happen and what advantage they will benefit from. Citizens will be more willing to bear street works, noise, the loss of car parking space if they know they will benefit from a noiseless, non-polluting, electric bus line, with additional facilities also for private vehicles. The action plan could be successfully transferred to the city of Maribor through the follower programme. Thus, transnational cooperation led to direct replication of this pilot action plan.

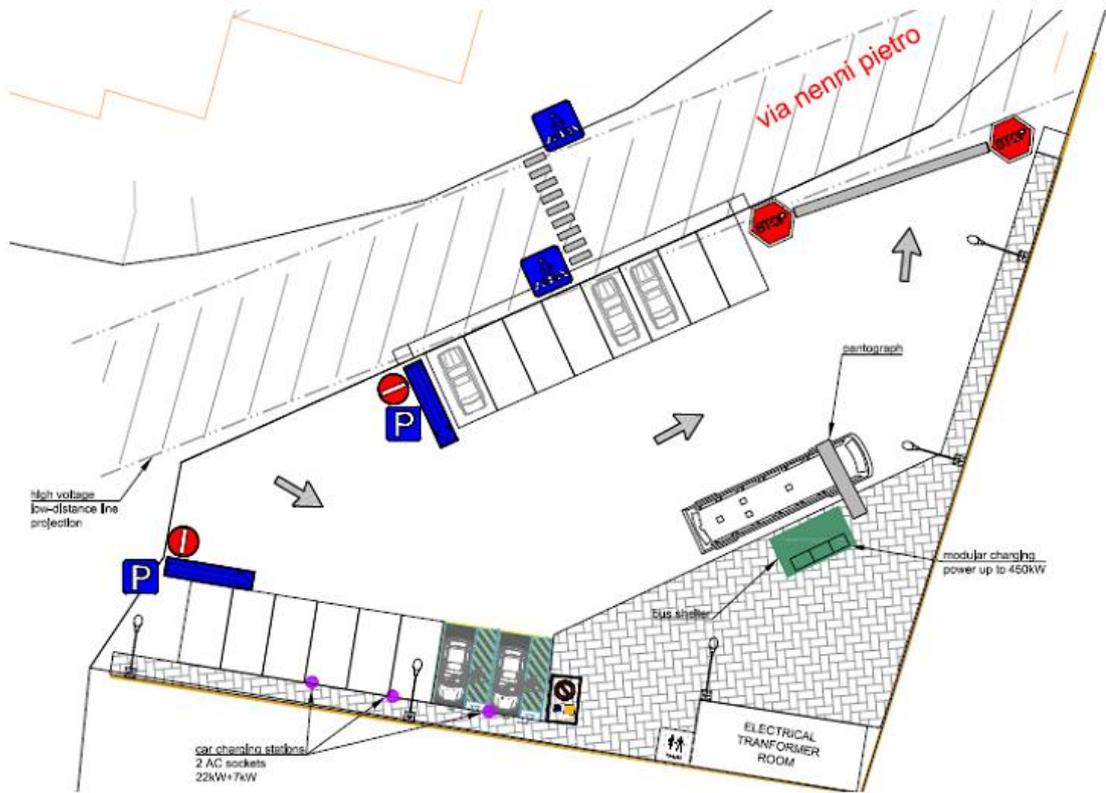
## References to relevant deliverables and web-links If applicable, pictures or images to be provided as annex

D.T3.6.2 TEP Pilot Action Plan has the following table of content (and can be accessed [here](#)):

### SUMMARY

Chapter 1: SUMP Analysis by the Municipality of Parma .....	2
Chapter 2: Identification of the new electrical line and transportation system program .....	4
Chapter 3: Technical Overview and Battery Charging .....	5
Chapter 4: Definition of the characteristics of the system .....	7
Chapter 5: Analysis of the energy consumption of the different scenarios.....	10
Chapter 6: Reorganization and design of the terminus .....	13
Chapter 7: Authorizations required for the new charging point .....	24
Chapter 8: Analysis of the system at the bus deposit for overnight recharge.....	26
Chapter 9: Economic analysis of costs / benefits.....	28
Chapter 10: Trolleybuses and Electric Buses .....	30

### NEW MOBILITY HUBS: layout of the terminal at Largo Nenni



**Cabin Layout**

