Electric Vehicles in Urban Europe (EVUE II)

Baseline

URBACT II Pilot Delivery Network

March 2014

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FOREWORD

The shift to emission free urban transport has progressed significantly over the last few years as the political and regulatory agenda has aligned with new developments in vehicle and battery technology. Although new vehicles such as the BMW i3 & i8, Tesla Model S or Nissan Leaf have received the accolades and media coverage, a considerable amount of effort has been expended at the national, regional and local level to provide a complementary framework that is supportive of electro-mobility.

The original Electric Vehicles in Urban Europe (EVUE) project commenced in 2009 so that leading European cities looking at e-mobility could learn from each other and ensure the transition to emission free urban transport could be as smooth as possible. While that project successfully concluded in 2013, a follow up project (EVUE II) has been funded by the URBACT programme to look in more detail at the issues being faced by cities implementing e-mobility strategies.

Across Europe there are significant variations in understanding, expertise, financial capacity and community willingness to move away from the internal combustion engine and these each create barriers to change. This baseline report reflects on some of the challenges being faced by EVUE II cities and proposes an approach to how cities can move past these issues.

It is envisaged that by the end of the EVUE II project, not only will further transnational learning and exchange have occurred, but concrete improvements to the implementation of e-mobility supporting actions will be realised.

The EVUE II project is one of three trial Pilot Delivery Networks that URBACT has funded and will provide learning which can be incorporated into the new URBACT III programme.

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March 2014

ACRONYMS

CNG	Compressed Natural Gas
CO2	Carbon Dioxide
EV	(pure) Electric Vehicle
FREVUE	Freight Vehicles in Urban Europe
GHG	Greenhouse Gases
HEV	Hybrid Electric Vehicle
IEA	International Energy Agency
ICE	Internal Combustion Engine
PHEV	Plug in Hybrid Vehicle
UITP	International association of Public Transport

1. INTRODUCTION – EVUE A VEHICLE FOR CHANGE?

1.1. Point of departure

General aspirations to continually advance development, especially economic development, have consistently and logically resulted in increased demand for transport. However society is increasingly aware of the pressures generated by intensification in this sector, not least the problems of balancing accessibility, congestion and provision of infrastructure and services. More importantly the negative external impacts of this trend are evident in both the real effects on health, well-being and general quality of life of the world`s population - and in the potential ongoing threat posed if mitigation measures are not rigorously applied. Transportation today can still be regarded as a dominant source of environmental pollution – operating at both the global (climate change) and regional/local dimension (air quality, noise).

In Europe greenhouse gas emissions from transport activity continue to rise, in contrast with other major sectors, while road transport alone (predominantly driven by the internal combustion engine) produces +/- 20% of the EU`s total carbon dioxide emissions. Some estimates suggest that "urban mobility accounts for 40% of all CO2 emission from road transport and up to 70% of other pollutants from transport" (particulates etc.)[1]. Cities by their very nature undoubtedly suffer most from a full range of negative transport related impacts (congestion, diminished air quality, high noise levels, more road accidents…), and their downstream consequences which ultimately and inevitably translate once again into economic cost.

It was within this climate that the EVUE project was set up, amid ever growing concern that existing patterns of mobility and "business as usual" transport options are not sustainable. The development and implementation of innovative transport solutions were not stepping up to the plate quickly enough to adequately support achievement of EU 2020 objectives and particularly the accompanying 20/20/20 climate/energy headline targets. In 2009 nine cities from across Europe committed to work together and focus on clearing a path to stimulate the take-up of electric vehicles as part of a drive towards an integrated and sustainable approach to urban mobility management. Network partners clearly recognized that e-mobility alone cannot solve all the challenges facing cities in transportation terms (take congestion for example), and that questions of upstream emissions, full life-cycle and well to wheel analysis remain central considerations. However the potential of electricity to reduce direct exhaust pipe emission, to deliver low carbon energy when supply is produced from essentially carbon neutral sources and to benefit from future smart grid solutions provided compelling motivation for network activity.

Now four years on, the URBACT programme and six of the original network partners have agreed to assess evolution and progress made, by examining the achievements of the city Local Action Plans. Through this 15 month pilot initiative, the intention is to draw valuable conclusions on the EVUE partner implementation process, to share information and experience, highlighting success factors and obstacles encountered - within the context of reporting important changes in attitude and practice in relation to the theme in recent years.

[1] EVUE Final Report – Business Models; Oscar Rodrigues, 2012

1.2. Where has EVUE travelled from?

In the first EVUE project period, activity centred around the establishment or strengthening of the e-mobility foundations upon which city partners could identify and promote key actions to encourage the uptake of electric vehicles. The distinction between establishment and strengthening is important here, reflecting the diversity of conditions in the different EU member states and cities represented. Oslo and Stockholm[2] for instance were already advanced in gaining acceptance for electric vehicles and at least engaged in integrating this component of individual mobility into the wider urban mobility package. In contrast Katowice and Suceava were keen to explore how to generate a momentum in what would be a relatively new orientation for the public authority. During the course of the transnational exchange EVUE partners picked out 4 critical issues to be addressed by the project – these topics pinpointed as both challenges and opportunity to advance initiatives aimed at achieving effective levels of electric vehicle operation:

1. **Business Models**
2. **Procurement**
3. **Infrastructure**
4. **Awareness**

These transversal themes were used to focus partner exchange and problem-solving, and to inform the process of developing relevant Action Plans designed to address specific local situations. This task, in each city, was then carried out in cooperation with a team of theme-concerned stakeholders, the URBACT local support group (ULSG). The resulting Local Action Plans can be categorised as follows:

- **Beja:** Municipal plan for electric mobility
- **Frankfurt:** Action plan to promote the use of electric vehicles in Frankfurt am Main
- **Katowice:** Plan to elaborate an electric mobility development strategy
- **Oslo:** Programme of public charging point installation
- **Suceava:** Local Action Plan for the promotion and implementation of the electric vehicles and charging infrastructure of Suceava
- **Westminster:** Programme to support city-wide e-mobility with focus on developing electric freight vehicles in urban logistics

1.3. Where is EVUE travelling to?

While many cities and stakeholders might be frustrated by the relatively slow progress in increasing the real numbers of electric vehicles on the ground, others are still not committed to the introduction of e-mobility as a viable urban transport solution. Nevertheless between 2009 and 2013 there have been some significant advances in terms of general perception, policy (public and private), regulation and practice in relation to

[2] Stockholm was partner city in EVUE and is a partner in FREVUE, but is not directly participating in the EVUE Pilot Delivery Network (the city remains an important e-mobility reference point)

development of e-mobility across the EU. There has been, for instance, a marked increase in the range of vehicle types and technological development on offer from the manufacturing and distribution sector – influenced by EU legislation on CO2 emission levels.

In the transition between the 2006-2013 and 2014-2020 programme periods it is a good time to step back and assess changes in the state of play and how this is reflected in the EVUE network and EVUE partner experience. In relation to the four main focus areas identified by the project the pilot exercise provides the opportunity to examine how challenges have evolved, which problems have been resolved or partially addressed and which challenges remain outstanding. This knowledge can in turn, once again, be applied to the primary objective of the pilot delivery network, namely to improve the implementation of Local Action Plans (LAPs), e-mobility initiatives at the EVUE partner level - but also as support for other cities involved in implementation or setting out plans to achieve operational e-mobility goals. The LAPs of EVUE partners tackled different issues within the same thematic framework, but with cities operating at different stages in the e-mobility development process and within a variety of geo-political contexts. Some cities have already revised their programmes for local action in response to results achieved, or understanding gained during the project period. As a consequence there is also a diversity in terms of timing schedules for implementation and in terms of delivering concrete action. The pilot project should (through a system of self/joint assessment) allow EVUE cities to:

- review where they are today in delivering their LAP;
- explain obstacles encountered and ongoing;
- present success factors and solutions and further explore transferability;
- programme new initiatives building on experience, and;
- develop a procedure to monitor performance.

This approach is intended to help partner cities to effectively complete existing programmes, and to extend the action planning process - but equally to inform and assist other cities interested in applying similar initiatives (methods and techniques).

A study commissioned by the UITP (International Association of Public Transport) has produced some interesting facts and figures

Transport activity accounts for approximately half of global oil consumption

It is estimated that one billion journeys are made every weekday in EU cities and modal split calculations show that:

55% of urban trips are still made by private motorised transport
30% by non-motorised (cycling, walking...)
15% by public transport

Urban transport in the EU will double (from 2005 base) by 2050

UITP Urban Transport Scenarios for 2025 – in collaboration with IEA (2011)

2. PIVOTAL THEMES / CHALLENGES ADDRESSED BY EVUE

2.1. Introduction

It is no coincidence that the EVUE project emerged at a point in time which future generations might consider to have been a tipping point in the e-mobility dynamic in Europe. Expectation was that eco-friendly vehicles were about to transform existing transportation patterns, but electric vehicles occupied a very marginal niche market. While cities like Stockholm, Oslo, Rotterdam and La Rochelle were pioneering trend breaking initiatives to encourage e-mobility such as electric car sharing, public transport solutions, providing fiscal or other incentive, mobilising specialist manufacturers and installation of charging infrastructure, mainstreaming the use of individual electric vehicles remained problematic in 2009, and is still far from a done deal. The real and perceived obstacles of: limitations in performance (in comparison with ICE vehicles); "range anxiety" and inconsistent charging point distribution; poor price-performance balance and uncertainty regarding the total cost of ownership (battery, spare parts, residual value; technological insecurity, and; even comfort), combined with the "prototype" threshold to deflate any notion of swift transition in market share.

However with the prospect of the adoption of the EU climate and energy package in June of 2009 and the setting out of 20/20/20 headline environmental targets, a series of pivotal changes were to reach the statute books. Where up until this point e-mobility had only featured marginally in EU legislation, EVUE was provided with a more solid base on which to build e-mobility strategies and instigate actions at the local level with realistic expectation of implementation. The network was able to use this new momentum to focus in on some of the key sticking points which were consistently limiting progress towards e-mobility as a vital component of the sustainable mobility mix.

Influential milestones of EU legislation driving e-mobility solutions

EU Climate and Energy Package 2009 (20/20/20 targets)

- Reduction in EU greenhouse gas emissions of at least 20% below 1990 levels
- 20% of EU energy consumption to come from renewable resources
- 20% reduction in primary energy use by improving energy efficiency

EU regulation setting carbon dioxide (CO2) emission performance standards for new passenger cars and light vans (Regulations (EC) No.443/2009 and No.510/2011) – towards Euro 6

- By 2015 car fleet average CO2 emission to be achieved =130 g/km – By 2020 95g CO2/km
- By 2017 van fleet average CO2 emission to be achieved = 175 g/km – By 2020 147g CO2/km

EU White Paper – Roadmap to a Single European Transport Area 2011

- "Halve the use of "conventionally-fuelled" cars in urban transport by 2030; phase them out in cities by 2050; achieve essentially CO2-free city logistics in major urban areas by 2030"

Regulation (EU) No 1301/2013 on the European Regional Development Fund

- Article 5: Investment priorities – "developing and improving environmentally friendly and low carbon transport systems"

Roadmap for Moving to a Low Carbon Economy in 2050 (Resource Efficient Europe)

- Reduction in GHG emissions of 40% by 2030 and 80% by 2050 – EU wide binding target for renewable energy of at least 27% by 2030

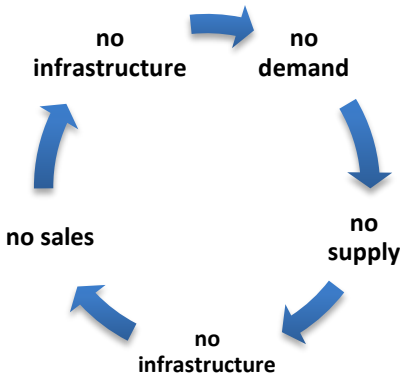
Clean Power for Transport Package – Directive on Alternative Fuel Infrastructure 2013/0012 (COD)

- Standards proposal for 2015: All charging stations for EV refuelling for road transport vehicles can be connected and are interoperable - minimum No. of charging points per member state (pro rata)

2.2. Business Models

One of the most critical challenges to increasing levels of e-mobility, identified by the EVUE project, was the absence of appropriate business models in this relatively new transportation segment. In the project`s final report six market barriers were identified:

- Technological constraints (range, charging time etc)
- Limited range of vehicle types
- High initial investment cost
- False expectations
- Lack of incentives
- Lack of information or questions of information reliability



Underlying the difficulties posed by these issues was the well recognised "chicken and egg" dilemma of no demand/no supply – no adequate supply/no demand – no infrastructure/no sales – no sales/no infrastructure. Furthermore while many local authorities were interested in catalysing a transition process, their capacity to exert real influence was limited. Generally there was no tradition of a governance structure which could unite the interests of public authorities, vehicle manufacturers, energy and service providers, transport operators and individual end-users. These impediments were also (and are still) compounded by the strong effect of local conditions in influencing market response.

The report showcases some innovative local interventions which have been instrumental in exemplifying workable solutions and informing change over the intervening years. Perhaps the Oslo experience represents one of the most comprehensive approaches in terms of understanding and applying a coherent business model; or at least creating a climate where the business models of key stakeholders could be supported by assurance of mutual benefits. The introduction of fixed term incentives, both fiscal and operational (combining national and local initiatives) and provision of public charging infrastructure have created new market conditions which were important in complementing stakeholder evolutions in production and service provision decisions. The city is still wrestling with the discussions of how to deliver additional (privately funded) charging points and bill users for its own network. It is also aware that as incentives are phased out, perhaps as early as 2015, this will have consequences for the business model and the dynamic will need to be closely followed.

Oslo demonstrates clearly the real possibilities which can be exploited in European cities but at the same time confirms that not all bases have been covered. Many of the barriers identified have been significantly weakened not least by efforts made by the vehicle manufacturing sector. The range of vehicle types across EVs, PHEVs and HEVs has greatly increased. Battery technology has equally advanced in terms of driving range with most EVs claiming to operate for a distance approaching 150km with many companies developing their own range extenders. Similarly fast charging technology is a technological reality if not yet widely available as part of network infrastructure provision. Since 2009, there has been considerable advancement in the understanding and development of business models but still at the European scale the number of electric vehicles on our city streets remains comparatively low. Quite apart from the need to continue to tackle all the

barriers there are perhaps three key elements which present fundamental challenges for the effective operation of business models going forward:

- **Despite innovative marketing, leasing possibilities and decoupling of battery from purchase price, the high initial investment cost is very much perceived as an obstacle**
- **Standardisation of charging infrastructure and billing modalities and adequate levels of provision are crucial to breaking the chicken and egg cycle**
- **Unfavourable local conditions significantly limit the potential of business models to develop. In the simplest sense it is clear that vehicle producers do not prioritise cities where it is considered that there is no, or an immature, market.**

2.3. Procurement

Obviously the "business model" is an essential transversal factor and there has already been mention of the limited influence (and even experience) which local public authorities can exert to drive the take-up of electric vehicles. In a Europe dominated by economic recession, lack of models and high prices remain as major stumbling blocks. One way of cranking up the stimulation potential is for institutions and authorities, but also NGOs and corporate organisations, to lead by example. Bulk and joint procurement can here operate as an efficient tool to impose sustainable purchasing criteria, to diminish arguments for resistance and pilot transition towards alternative automotive solutions – particularly in situations where individual buyers represent relatively low-purchasing volumes. For public authorities this can be particularly interesting for fleet renewal (fire, police, refuse, public works etc.) and has undoubted advantages for the public transport and logistic sectors. EVUE partners were able to set out some of the advantages of introducing such systems of procurement which can also be applied to the question of provision of charging infrastructure, including:

- The ability to demonstrate demand to manufacturers
- The potential to support the introduction of new models
- To speed up technological advances
- To lower cost price
- To support arguments for infrastructure provision

Through the crisis period it has been difficult to justify increased expenditure which electric vehicles represent and then where demand for EVs is higher than supply the market is characteristically reluctant to lower prices. Nevertheless, there have been positive examples of successful fleet and infrastructure adaptation. Where such systems of procurement are successful, suppliers are better informed about interest for their products and about eventual incentives and infrastructure support which reduces risk levels. In EVUE alone the cities of Stockholm, Frankfurt, London and Oslo for example, have had positive experiences in this respect. The application of sustainable purchasing criteria has often been supported by legislation at national level and it is also true that the cooperation of national institutions or initiatives providing match-funding (Swedish Energy Company, UK Plugged in Places scheme) has generally been significant, even indispensable, in bridging the investment gap in this pioneering phase.

Procurement in itself is generally a well understood core business for city authorities but systems of bulk or joint procurement present new challenges of engaging with different

procedures and stakeholders. While progress has been evident in recent years, there are still factors which require ongoing attention.

- **Experience shows that bulk and joint procurement processes need to be well prepared, and many cities face a learning curve in this respect. Transfer of experience and support through exchange and learning is therefore an important facet to be continued in the new programming period**
- **It will be essential to keep up pressure to raise general awareness on environmental and operational benefits and indeed encourage organisations to take up positions of leading by example**
- **The questions of relatively limited appropriate vehicle types (although public transport and individual car supply has evolved significantly) and high cost analysis continue to operate as a brake on EV fleet take-up**

2.4. E-Mobility Infrastructure

The question of installation of infrastructure to support electric vehicles (broadly speaking availability of electric vehicle charging points) has been very much at the forefront of the "chicken and egg discussion" mentioned in relation to business models. The EVUE final report sharpens the focus in respect of charging provision – "investment in infrastructure will only be a success if vehicles are available and consumers will only purchase if supporting infrastructure is available". This situation was particularly acute when battery technology was less developed and range without recharging was more limited. So called "range anxiety" is still however a determining factor, a psychological barrier for many consumers especially as far as "pure" electric vehicles are concerned.

This element of the e-mobility formula was something which pre-occupied all EVUE partners, with for example both Beja and Oslo focussing their Local Action Plans on the question of providing new and additional charging infrastructure. Research suggests that the majority of EV owners rely on home charging, even in many cases using regular electric sockets. This confirms the initial marginal position of EVs in the mobility mix and the users profile, predominantly purchased as "city cars" or family second cars – a feature which is also gladly seized upon to frame the sales strategies of many vehicle suppliers. However with at least charging point technology and modalities broadly in place and developing relatively rapidly (safe connectors, variety of standard, high functionality and rapid charging units, range extender and regenerative braking systems, open and restricted access systems, grid load management and smart grid capabilities...) the situation is both dynamic and at the same time static. It is obvious that home charging is neither the most adapted or secure solution to accommodate any mass shift to electric vehicles especially in dense urban areas with limited dedicated parking, or in terms of serving high-use vehicles where need for distance and rapid charging facility becomes an essential issue. In most countries and cities the level of alternative charging points remains low (on street or parking facility public charging points, shopping centres, office parking...private provision), surely insufficient in terms of generating consumer confidence and stimulating mainstream EV demand.

While initial hesitation or reluctance to act as provider of charging facilities was probably primarily motivated by concern about return on investment, this was fairly rapidly compounded by the effect of uncertainty regarding questions of standards and advances in electric vehicle technology. The range and performance characteristics of vehicles like the Tesla Model S, but also other technical advances, raise relevant and urgent questions about the critical mass in respect of charging infrastructure. Conclusions in the EVUE final report also speculated for example "that the need for fast charging units in urban locations may prove to be quite limited". This also means that the infrastructure question is far from closed and that a number of issues require further clarification if not resolution.

- **There is a contradiction between the role of cities pioneering local solutions to drive e-mobility where much transport in Europe today is by definition international - and therefore standardisation (facilities, access and payment) in this market segment is a prime support mechanism.**
- **Technological innovation means that decisions on charging methods (both by consumers and providers) need to be seen within the context of this dynamic. There is a real need to analyse existing or potential demand in order to determine critical mass both in terms of provision levels to be foreseen but also in respect of determining incentive windows (period of offering free charging, for example).**
- **In view of optimising the use of renewable energy and maximising energy efficiency from traditional fuel sources on the upstream supply side, charging technology is an important component to exploit in grid load management and smart grid applications.**

2.5. Awareness Raising

In a sense the EVUE project in itself has been, and is very much about awareness raising – the exchange and learning platform as a thematic showcase informing partner city stakeholders, a chance to explore and separate myth from reality. Business and procurement models, decisions on charging infrastructure, take-up of electric vehicles can only be activated if there is an acceptance among stakeholders with both power and influence.

Electric vehicle technology is not a new phenomenon but has always been subsumed by the dominance of other developments which have shaped the automotive industry, notably the previously unchallengeable position of the internal combustion engine. The EVUE final report reminds us that the current "revival of electro-mobility is not driven by the automotive industry but by environmental and energy policies which support e-mobility as a form of sustainable mobility". This shows that awareness has a multi-faceted dimension, involving moving target groups who are capable of changing position over time and in response to circumstances (policy makers, vehicle manufacturers, consumers and end-users...). Overcoming ingrained habits, mindsets and prejudices is generally difficult but particularly so when it concerns individual mobility decisions; but "seeing the light" can be influenced by education, publicity and marketing but also by regulation and offering of incentives. In the 1990s and even into the beginning of this century, vehicle manufacturers were not overly convinced that change in vehicle propulsion mode was necessary or in their interests, although there were tentative moves introducing new vehicle types. It was only the development and introduction of EU legislation limiting exhaust-pipe emissions which ultimately provoked a fairly dramatic change in manufacturing, which has led to the variety of electric vehicles now on the market. However while supply is now beginning to meet consumer need this is not in itself immediately sufficient to radically change consumer behaviour.

There are still big issues to bridge, not least the fact that a petrol/diesel powered vehicle can travel for six-eight hours and be refuelled almost immediately. EVUE emphasised the need for politicians and citizens to change mindsets if there is to be a structural shift in the position of electric vehicles in the mobility mix. An EV Readiness Index was developed by EVUE partners to incorporate the views of local stakeholders within the local project sphere. While there is adequate factual knowledge available, the reasons for e-mobility (environmental, policy/legislation development) and balanced assessment of the benefits

(short and long term) need to be presented and accepted in order to counter misconceptions in relation to daily mobility needs (trip lengths) and vehicle performance for example. Therefore while considerable progress (with many cities leading on this) has been made in demonstrating and putting e-mobility on the agenda, there are still relatively few electric vehicles travelling our streets on a pan-European scale. It is therefore essential to keep awareness raising on the agenda and even intensify the pressure, in line with importance directed at "changing mindsets" emphasised in the URBACT work stream reflections.

- **Awareness raising is an ongoing priority which requires many techniques such as education, demonstration, publicity, marketing… to continue to make the case and convince still sceptical target groups (politicians and local authorities, service providers, general public and especially young people) – so that electric vehicles can be regarded "rather as a symbol for responsible decisions and sustainability" but also corporate and private "cool".**

3. PARTNER CITY LOCAL ACTIONS – PROGRESS AND PERSPECTIVE?

3.1. Introduction

The application of transnational exchange and learning to inform and drive implementation of concrete action at local partner level has been a fundamental pillar of the URBACT II programme. The programme actively mobilised cities to form local (stakeholder) support groups and use such a cooperative framework to develop/co-produce essential Local Action Plans in relation to the specific project/network themes. The intention was to transfer experience and methods, improve practice and support effective implementation of essential local projects. In the case of EVUE, the potential to broaden and exploit this critical mass was particularly important in a topic area (e-mobility) which presents relatively new and untested challenges and opportunities for EU cities and at city level. The extension of EVUE as a pilot delivery network presents a unique occasion to reflect on the impact of this process. A variable geometry of governance contexts, levels of resources and experience is logically translated into a diversity of local time scales and interpretations - some cities needing to use the URBACT project period to prepare a strategic framework within which action could be planned, some reaching the level of approving a concrete plan document and others indeed progressing to the stage of effective implementation. In order to maximise the sharing of experience, to identify and overcome difficulties encountered, to benefit from successful initiatives and further support EVUE partners (and other cities) moving forward, review and understanding of partner timeframes and progress can be an extremely valuable tool.

3.2. Beja

3.2.1. Local Action Plan Focus and Objectives

The city of Beja was able to benefit from a supportive policy framework at the National level within which to initiate its "Municipal Electric Mobility Plan". With a strong commitment to increase supply from renewable energy sources (today representing +/- 25% Eurostat 2012) Portugal had adopted a National Action Plan for Energy Efficiency – Portugal efficiency 2005 providing a legislative platform for the preparation of the Electric Mobility Programme 2009 "to create the Electric Mobility Programme in Portugal whose objective is to introduce and generate mass use of the electric vehicle". Beja was one of the 25 municipalities selected to join the pilot stage of this national strategy (mobi.E network). The pilot phase focussed strongly on establishing an effective nation-wide charging network and it is within this objective that the Beja LAP was developed to deliver 29 public slow charging points and 1 rapid charging point within the city by 2015.

3.2.2. Implementation Status

The EVUE project period was characterised by intensive Local Support Group activity to inform, consider and collaborate on the feasibility and locational aspects of the installation of 30 charging points. This first goal of local policy would then represent the Beja contribution to the National pilot initiative. This two-way bridge between the national and local level, works as a win-win situation providing the impulse for the municipality to take a first step in terms of delivering important infrastructure provision for local residents and businesses while at the same time ensuring validity (and standardisation of approach) of an effective national network. The result of the EVUE LAP was a detailed plan fixing the locations for charging point installation based on geographical, mobility parameters and negotiation with relevant stakeholders.

3.2.3. Ongoing Delivery Perspective – Outstanding/Additional Action Programme

From this point at the end of 2012 the tasks identified for the remaining projection period (national and local) are to secure funding and implement the installation of the 30 charging points in accordance with the planned distribution pattern. In conjunction the objective of the municipality is to evaluate and determine the additional steps to further support increased e-mobility in Beja, initiatives to be taken by the public authorities and initiatives to be supported by the city but delivered by other agencies, service providers or private investment.

3.3. Frankfurt am Main

3.3.1. Local Action Plan Focus

In respect of e-mobility, Frankfurt has been profiled as a forerunner (outside and within EVUE) and this position was confirmed during the EVUE period by the city authority decision to adopt the strategy paper "Electro-mobility in the year 2025 in Frankfurt am Main" in 2011. The city`s LAP "Action Plan for Promoting the Use of Electric Vehicles in Frankfurt am Main" was conceived as an instrument to support and contribute to the delivery of this strategy which identified 26 projects to be initiated and seven targets to be achieved by the year 2025. Using the introduction of a comprehensive network of charging facilities as springboard (public and private), the projected goals are:

- 2020 – E-mobility as accepted focus and straightforward component of day-to-day use of multi-modal mobility chains (e.g. through mobility card)
- E-mobility to be included in the overall city transport plan (2015-2025)
- 10% of automotive traffic in Frankfurt to be electrically powered by 2025
- Powerful, differentiated and extensive network of public and private charging stations in place
- In 2025 the share of low-emission and low-noise traffic within the "Anlagenring" (city ring road) will be over 50%
- Power required by EVs will be 100% produced by regenerative energy sources
- The "Frankfurt model" for EVs will have proved its worth and is being applied throughout Germany

The Local Action Plan and Local Support Group collaboration focussed particularly on supporting the following projects:

- Replacing the city car-pool for community services by Electric Vehicles
- Establishing pedelec-sharing (electric assisted bicycles) schemes
- Use of E-buses
- Establishing and implementing a city logistic concept on the basis of EVs
- Extending the use of EVs in car sharing models
- Implementing a mobility card in combination with eTicket RheinMain
- Creation of additional charging points in the public and semi-public domain
- Advancing study activity on the set-up of charging infrastructure
- Providing charging facilities in private business car parks
- Providing charging facilities in public P&R (park and ride) car parks
- Extending the solar power station network
- Facilitating e-mobility activity at Frankfurt Airport (Fraport AG)

3.3.2. Implementation Status

In July 2012 the number of publicly accessible charging points within the city boundary was +/- 60 - thirteen of these on-street or in public space and, ten in multi-storey car park facilities. The projected starting point for e-mobility action was a reality. However there was a growing realisation that what had been considered the most important stimulus factor in 2009 (the installation of adequate and sufficient charging stations – some 260 in the Frankfurt Region). Evaluation of charging point use raised the issue of revising the priority focus in terms of driving e-mobility futures. The challenge seemed to have evolved indicating that in fact awareness raising was the most pressing issue in terms of overcoming built in barriers to change. There is a realisation in the city authority that "the introduction of electric mobility is not a high financial investment in terms of delivering the required infrastructure, the challenge is not economic but rather social in nature". In September of 2012 it was calculated that about 220 electric vehicles were registered and operating in the city. So while the individual projects listed above are either advanced or in implementation, the orientation in the short to medium term is to continue and intensify the awareness raising activities (promotion, demonstration, marketing etc.)

3.3.3. Ongoing Delivery Perspective – Outstanding/Additional Action Programme

The review of principal challenges in Frankfurt has switched the emphasis for the Pilot Delivery Network period to focus again on issues of awareness raising. It is also recognised that this is not only a feature to be addressed at the local level but at different levels of governance (also reflecting the ambition of the "Frankfurt" model as a prototype for the rest of Germany). Key areas of to be influenced in this respect include:

- Acceptance and action to approve a national implementation plan for charging infrastructure
- Research and development of business cases for the operation of charging stations
- Reducing the financial disadvantages of EV acquisition
- General raising of acceptance amongst the general public (consumers and end-users)
- Modifying German traffic legislation to favour e-mobility
- Clarifying residual value risk for used EVs an element which can hardly be assessed in current conditions

3.4. Katowice

3.4.1. Local Action Plan Focus

The starting point for the stimulation of e-mobility in Katowice was the goal of creating a sustainable transport system in the city. Involvement in the EVUE project was a conscious step to explore how the use of electric vehicles could be facilitated and contribute to environmentally responsible transportation - but beginning from a position where the city had little experience of e-mobility and where there was no physical presence of vehicles/infrastructure nor market interest. In this situation the first priority of the LAP was to elaborate an electric mobility strategy, to give e-mobility a place in the institutional policy structure and in the minds of key stakeholders – suppliers, service providers and end users, especially the local population.

The city together with its ULSG undertook a series of analyses (problems, needs, stakeholder motivation) in order to fix objectives for the support/introduction of an e-mobility sector. This exercise was used to define three key areas of action for the city within the LAP:

- Promotion of electric vehicles – spreading knowledge and information on electric and integrated mobility in schools/universities, among residents and economic entities. Setting a good example by introducing electric vehicles into the city fleet and introducing sustainability criteria in municipal vehicle procurement.
- Creation of charging infrastructure – provide access to public charging points based on need assessment, installation of pilot network, creation of parking spaces with charging points.
- Creation of a system of incentives to stimulate uptake of electric vehicles – application of national recommendations (National Report "Conditions for the implementation of an

integrated system of e-mobility in Poland") to develop legislation, regulation at the local level i.e. possibility for free parking for EVs.

3.4.2. Implementation Status

With a timeframe of 2012-2015, the Katowice LAP has been broadly successful in generating a forward momentum. A number of studies have been instigated (stakeholder analysis, feasibility) and promotional and demonstration events organised (school visits, public meetings, business fora, setting up e-mobility facebook...). The city has used the purchase of a Mitsubishi i-Miev to demonstrate the potential of electric vehicles and there is an association with the Silesian University of Technology to pilot the installation of charging infrastructure, with plans to prototype smart grid solution and establishment of the first EV charging points in car park of the Faculty of Engineering.

3.4.3. Ongoing Delivery Perspective – Outstanding/Additional Action Programme

In the remaining plan period it is previewed to continue and intensify the current promotional, stakeholder targeted information campaigns – there is still a broad threshold to be crossed in terms of convincing public, business representatives and even vehicle suppliers. The key focus over the coming months will be concentrated on implementing the installation of charging infrastructure and the preparation of a regulatory framework built on a combination of incentives and sustainability criteria – including for instance the provision of free parking spaces for electric vehicles.

3.5. Oslo

3.5.1. Local Action Plan Focus and Objectives

The Oslo LAP was based on extending the city's efforts to encourage and facilitate use of electric vehicles. Different promotional, incentive and infrastructure measures were already initiated before participation in the EVUE project and the LAP was on the drawing board in 2008. Oslo has been globally one of the most successful cities in changing driver purchasing decisions in favour of electric vehicles. Therefore within this background the LAP could be very concrete. The objective was to establish and operate additional public charging points across the city (400 extra by 2014) to bring the total number of available units to 900. The role of the ULSG was therefore to accompany the delivery process and ensure that all aspects of the implementation responded to the needs and capacities of stakeholders particularly end-users and utility/service providers. The opportunity to bring all relevant actors together meant that potential obstacles could be identified and addressed by building on a structure of cooperative problem solving.

3.5.2. Implementation Status

LAP implementation is expected to be completed by the end of 2014. Funding was approved from the city of Oslo budget and the procurement process was successfully completed in 2013. The contractor is expected to achieve the installation of 400 new units in 2014 (at this point in time in March 2014, x number of units have been put in place).

3.5.3. Ongoing Delivery Perspective – Outstanding/Additional Action Programme

Participation in the EVUE pilot delivery network allows the city and ULSG to follow the implementation through to its final conclusion – installation of 400 additional public charging units by 31/12/2014. The main performance indicator is relatively straightforward (number of units in place) and the focus during the pilot will be on tracking the number of charging points established, seeking to improve a cross-departmental integrated approach and establishing an on-line state of progress facility to inform the public and provide them with "right up to date" service availability. If such a public progress report is put in place then there will be consideration of building in a two month programming buffer so that end-users are not frustrated by unforeseen factors which might delay the implementation process (processing of electricity applications, establishment of metering systems etc.). The city has also identified priority issues to be addressed in the short term:

- How to deliver fast-charging facilities (which have not been included in provision processes to date)
- Need for a customer relations system to facilitate billing of customers for electricity use which is also inter-operable with potential fast charging operators
- Need for a communications strategy to clarify charging point operation and modalities

3.6. Suceava

3.6.1. Local Action Plan Focus and Objectives

The city of Suceava and its ULSG approached the preparation of the LAP to encourage e-mobility from a position of relative difficulty. Electric vehicles were simply not part of the mobility pattern in the city; there was virtually no consumer demand and no infrastructure in place. Within this context the LAP was developed initially as a strategic framework document designed to set out policy and identify a range of actions to be taken over the short, medium and longer term. The resulting document "Local Action Plan for the Promotion and Implementation of Electric Vehicles and Charging Infrastructure in Suceava" represents a comprehensive roadmap to guide intervention in a completely new policy area for the city. It makes a clear contribution to the translation of EU, but more importantly national transport, policies at the local level. Participation in the EVUE project was a valuable opportunity to examine alternative experiences and practices which could help build on the strong existing local planning capacities to turn their attention to developing approaches in this new sector.

The research and exchange carried out under the umbrella of EVUE was instrumental in putting the theme of e-mobility in the spotlight (politician, citizens, institutional and private stakeholders) - through communication and demonstration campaigns as well as presenting a package of concrete actions to be addressed over the coming years, including:

- Installation of charging networks (on-street and in parking facilities)
- Reservation of parking spaces and free parking policy for EVs
- Introduction of e-mobility in the public transport system (40 bus fleet)
- Purchase of EVs for municipality fleet (two vehicles)
- Adaptation of regulation on taxi`s to incentivise electric vehicle use in this market
- Stimulation of private companies to buy EVs
- Develop subsidy and tax incentive initiatives
- Introduce legislation favouring regulation for EV use
- Develop monitoring system to balance EV energy consumption and provision of renewable energy
- Promotion campaigns (youth education, demonstrations, media)

3.6.2. Implementation Status

The establishment of the Road Map document is an essential tool upon which to frame activity and therefore a significant result of the EVUE thematic network experience. However starting from a baseline with no systems in place and no financial resources set aside it was unrealistic to achieve hard concrete actions during the 3 year project period. It was however possible to lay the foundations and use the Local Support Group as a means of furthering the soft intervention (lower budget) initiatives - information and promotion campaigns for example. The raising of visibility on environmental and energy saving issues (link to the City Sustainable Energy Action Plan) coupled to the opportunity presented by shift to EV mobility did provide a platform for external funding allocation. In 2013 the Municipality secured a 3,112,490 Swiss Franc grant contract (80% co-financing from the Swiss Government) as part of the Swiss-Romanian Co-operation Programme.

3.6.3. Ongoing Delivery Perspective – Outstanding/Additional Action Programme

The securing of funding via the Swiss Co-operation Programme (planned signing 2014) will allow the implementation of a number of actions to support e-mobility objectives in the city. Plans include:

- The purchase of 15 electric vehicles (12 vans and three road sweepers) for the municipal fleet
- Installation of 14 standard and 14 fast charging points at key locations in the city
- One photovoltaic charging unit for bicycles
- Installation of at least 28 parking spaces reserved for EVs
- Delivery of Feasibility Study and Technical Documentation to prepare the introduction of electric buses in the public transport system and the dossier to apply for ERDF funding.

The preparation and delivery of these initiatives will form the basis for the continuing Action Plan activity of Suceava during the pilot delivery network phase – using the exchange process to inform and optimise effective implementation.

3.7. Westminster

3.7.1. Local Action Plan Focus and Objectives

The London Local Action Plan was developed as a framework support structure to help drive e-mobility objectives in the city, underpinning initiatives to promote, stimulate, develop and implement integrated, sustainable strategies to facilitate the use of electric vehicles.

Initial phase objectives were:
- To encourage the uptake of EVs
- To increase the number of EVs in municipal fleets
- To mitigate the occurrence of modal shift from public transport/cycling/walking to electric vehicles in order to avoid additional road congestion
- To ensure that the private sector can capitalise on business opportunities associated with the shift to electric vehicles

As the EVUE project progressed and responsibilities for e-mobility support in London were spread over a number of organisations, the LAP became more concentrated on the specific delivery of electric vehicles in the logistic sector.

Objectives to support e-logistics were:
- To achieve successful demonstration of electric freight vehicle utility in daily operations
- To integrate electric freight vehicles into larger logistic supply chains and activities
- To promote logistic use of EVs based on renewable energy in urban areas

The LAP would also operate as an orientation initiative to prepare proposals for EU match-funding to ensure that the goals of the Local Support Group and introduction of electric vehicles in the logistics sector could be supported and implemented in the following programming period.

3.7.2. Implementation Status

The LAP as a framework initiative to encourage and support a whole range of e-mobility activities and actions in London has been broadly successful. As a platform bringing new knowledge (EV readiness index, solution and market analysis...) and practices it has had a fundamental role in raising awareness, identifying opportunities and influencing governance formations to deliver different pieces of the e-mobility puzzle. As a focus for debate on policy orientation and determination of priorities it highlighted the strong potential for intervention in the freight, logistics sector and prepared the ground to apply for EU funding to develop initiatives in this segment. Two projects FREVUE (focussing EVUE attention on e-freight solutions) and LAMILO (Last Mile Logistics) were successful in accessing funding via the 7th Framework Programme (Transport 2012-Move I) and INTERREG IVB respectively.

These extension projects have a timeframe and budget accordingly:

- LAMILO 2012-2015 8,000,000 €
- FREVUE 2013 – 2017 14,200,000 €

3.7.3. Ongoing Delivery Perspective – Outstanding/Additional Action Programme

EVUE URBACT methodology is being applied to drive the FREVUE project trialling e-freight solutions in eight European cities. The proposed outcomes for London in this exercise are:

- The demonstration of innovative charging approaches so that power networks do not constrain expansion of EV fleets
- The rolling out of further E-logistic vehicles – plan to introduce 19 new electric freight vehicles based on the funding package
- Implementation of charging point expansion at the depots of project partners
- Improved public policy in support of EV operations in the freight sector

The FREVUE exchange process will be used to continue giving visibility to the e-mobility momentum and contribute to awareness raising. At the same time the actions planned in London will form the laboratory for the EVUE pilot delivery network moving forward. In this way implementation practices can be tested and developed, and performance monitoring techniques applied.

4. DEEPENING THE THEMATIC UNDERSTANDING

4.1. Introduction

The four vital themes identified and confronted by EVUE partners, and described in Chapter 2, highlight the interactive and integrated nature of the e-mobility question. Current experience in relation to these issues also shows that there are still major difficulties to be overcome if electric vehicles are to revolutionise the individual motorised component of urban mobility patterns. The goal of the pilot network therefore is also to focus in on these issues, using the four initial themes to broaden the scope of attention and produce six advisory notes which should aim to clarify the challenges and provide problem-solving support. The following represents a short motivation for the selection of the six inter-related topics.

4.2. Regulation

Regulation is proving to be a potent force in creating a level-playing field for the adoption of e-mobility strategies and measures. The promotion of electric vehicles has had to box against the very powerful fossil fuel lobby in terms of making the economic argument but also in terms of manufacturer and consumer perception. Regulation contributes to both the carrot and stick approaches to stimulation, for instance determining environmental limits or legal standards while also setting policy frameworks within which incentive models can be constructed. The sector has suffered from poor clarity on direct issues in terms of regulation on electric vehicle types (EV/PHEV/Hybrid) or in relation to standardisation of infrastructure and technology for example. There is also a key role to be played in ensuring that indirect policy is adjusted to meet sustainability objectives establishing

effective rules and measures to manage congestion for example which respond to directives determining emission policy.

It is important then for partners and cities to keep improving understanding and capacity on this issue (identifying and applying currently successful and developing practice), particularly taking into account the cross-cutting influence on and inter-relationship with other critical factors: development of business models and procurement; best use of financial resources; technological advancement and R&D; environmental conditions; promotion and acceptance.

4.3. Technical constraints

Technology is moving very quickly in the e-mobility field, though still perhaps not as fast as many convinced stakeholders might wish. Staying abreast, even ahead of developments if possible, has crucial significance for policy and decision-making in the short-term but especially in view of the longer term perspective. With legislation setting a series of succeeding deadlines for- 2020, 2030 and 2050 it is essential to be able to plan ahead, but from a position of strength based on optimal and real information on what is technically possible. On the other hand it is equally important to apply technology coherently and consistently so that service providers, markets and consumers can derive maximum benefits from this developing mobility segment.

In this sense policy and practice will require to be both structured over time and adaptable and this represents a real challenge to city authorities. Charging point distribution and type is a more than topical case in point and one which has concentrated EVUE attention but there are other elements also requiring serious consideration i.e. the relationship between energy consumption and production from renewable sources and the exciting prospects presented by grid-mix solutions and smart-grid development.

4.4. Political considerations

Across Europe we might describe political support for e-mobility as having been variable. The impact of the financial and economic crisis has surely not helped this situation, concentrating political priorities on the "essentials" of economic recovery. In e-mobility terms, as in any other sector, political sponsorship is crucial, it is in the political arena that orientations are fixed and ultimate decisions taken. E-mobility needs politicians at EU, national and local level to be on board, to make the link with urban development and integrated transport policies. Initiatives like the Covenant of Mayors and EU green capital cities suggest that there is a momentum building at least in terms of support for more environmental sustainability. The challenge is to increase this critical mass across the EU, but perhaps most importantly in Town Halls, and ensure that growing or changing conviction can result in real support for electric vehicle initiatives on the ground. Transfer of experience, communication of successful practice can play a significant role in achieving this goal and EVUE partners are well-placed to make the bridge between presentation of alternative solutions and the political decision making process.

4.5. Communication methods

EVUE - together with other initiatives at EU, national and local levels of course - has already played a part in putting the e-mobility solutions more firmly on the agenda. However the overriding conclusion must be that there is still poor understanding and

visibility of electric vehicles, and that they continue to occupy a marginal position in many mindsets. The reaction of EVUE partners has therefore been clear and consistent, championing the need to intensify campaigns to raise awareness, to promote the use of electric vehicles and adoption of e-mobility in general as a concrete contribution to a more sustainable future and to change often fixed perceptions.

How to effectively communicate, demonstrate and convince therefore remains an ongoing and immediate question, which requires clear understanding of methods, target groups and stakeholders, and ultimately acceptance thresholds.

4.6. Environmental issues

In a sense environmental sustainability is the principal driver of the move towards e-mobility. Climate change, impact of emissions (ambient and local pollution), final health costs, noise... provide the strongest argumentation for radical behaviour change. However what is becoming more and more a common understanding has not necessarily translated into major shift in behaviour patterns. Despite this many regard the environmental issue as the key to unlock our conservative inertia.

Within this context there are at least two major aspects to be addressed:

1. How can the environmental argument be more effectively used to catalyse take-up of electric vehicles?
2. What can be the real contribution of e-mobility to achieve structural improvement of environmental conditions, which conditions require to be in place?

4.7. Financial barriers

There are both economic consequences as well as opportunities to be taken into account in relation to the e-mobility balance sheet. Yet in what has been a sector handicapped by uncertainty, the age-old questions of who pays and who benefits are particularly relevant. This topic brings EVUE back to the commonly unresolved problem of the "business model".

The EVUE position is that reflection on this aspect needs to be continued and kept high on the agenda. The possibilities for private sector investment and to facilitate public sector benefit are significant, but will require new ways of integrating these two sectors –how to enable reasonable returns on investments .

Perhaps the clearest illustration of the hurdles to be crossed is the simple calculation still being made by consumers in respect of initial electric vehicle (battery, return on R&D cost) purchase cost, which suggests that EVs need to be yet more competitive in comparison with the pole position occupied by the internal combustion engine vehicle.

5. STRUCTURE OF PILOT NETWORK ACTIVITY

5.1. Transnational Activity to Support Local Delivery Processes

During the Pilot Project Kick-off meeting in Paris (January 2014), EVUE network partners concluded - on the basis of the documentation submitted in the application form and supplemented by the URBACT Guidelines on Measuring Impact - that there were 3 principal areas of activity to be addressed during the Pilot Delivery Network initiative

- **1. Progress Analysis of the implementation of partner Local Action Plans** – status, difficulties, successes, perspectives for the future.

Messages to be developed include: conclusions to help network partners improve delivery, knowledge base to help cities implement LAPs more successfully/effectively.

- **2. Analysis of evolving thematic context** – framework issues and determining influences.

Messages to be developed: advisory notes on key interaction/role of determining factors in terms of developing e-mobility – through learning by doing for partners, and formulation of advisory notes as reference , tips and warnings for wider city audience.

- **3. Measuring performance** – monitoring framework to assess progress and evaluate impact of implementation activity.

Messages to be developed: design evaluation framework, target setting – measurement indicators, monitoring system – test methodology for advancement of network partners processes and for wider city application.

These components then form the basis for exchange activity, particularly but not exclusively during the transnational events, and for the production of project final outputs.

5.1.1. Local Action Plan Peer Review

It is the intention to continue to use URBACT methodology to help city partners to improve, refine the delivery of key actions at the local level. This means continuing to draw maximum benefit from the exchange and learning opportunity, but also to take a more pro-active position - to join forces to help overcome obstacles in each partner city, to filter out bad practice and to attempt to optimise delivery processes. Local conditions will obviously be an important factor – limiting in some cases, benefiting in others – and this needs to be understood and taken into account from the outset.

Working method

Adoption of Peer Review Procedure

Step 1 - Focus on - city LAP/Project Plan: each city prepares a self-assessment of the implementation of their LAP in advance of the meeting: results in achieving objectives, obstacles encountered and success factors

Step 2 – Presentation of local situation with possibility for presentation from other cities with specific problem-solving experience.

Step 3 – Workshop session to assess limitations and peer working to support city advancement and draw lessons for others facing similar difficulties or opportunities

Step 4 – Follow-up – feedback from partner city after transnational meeting, link to advisory notes where relevant

5.1.2. Advisory Notes

The proposal to produce Advisory Notes is based on the recognition that although e-mobility is gaining ground and acceptance, apart from some unique exceptions, mainstream use of electric vehicles is still a long way off for most cities. Many of the challenges covered in the four original EVUE themes are just as problematic today. So the intention is to produce some applied feedback, to the EU and EU cities, from the EVUE experience with guidance on how to better deal with a slightly wider range of relevant thematic influences affecting policy and practice. Each city is responsible for taking charge of one of the six selected themes:

- **Beja – Political considerations**
- **Franfurt – Communication methods**
- **Katowice – Regulation**
- **Oslo – Financial barriers**
- **Suceava – Technical constraints**
- **London – Environmental issues**

Working method

Validation of a set of six thematic advisory notes – workshop sessions based on pre-event preparation and involvement of ULSGs in each city

Step 1 – Preparation of an "Issues Paper" by the responsible partner and circulation to all network partners in advance of the event

Step 2 – Partner cities to generate input for the workshop session prior to the event based on the following questions:

- ✓ What are the primary points for consideration linking the AN theme (i.e. environment) to advancement of e-mobility
- ✓ What challenges currently exist and which are most important
- ✓ What opportunities can be identified
- ✓ What experience (method or practice example) or ideas do you have to help overcoming challenges identified and/or exploit opportunities identified

Step 3 - Workshop session(s) transnational event: Partners working together to compile a matrix of ideas, suggestions, proposals... based on partner feedback and interaction in the workshop

Step 4 – Post event drawing together of desk work and partner input to edit advanced draft version of the Advisory Note

Step 5 – Final Reporting: Last editing of thematic Advisory Note taking into account additional or cross-cutting elements which might arise from ongoing exchange, interim evaluations, external evolutions or points raised in other transnational events

5.1.3. Evaluation framework or dashboard

"The main objective here is to identify, before the beginning of the delivery pilot and with the support of experts (Lead Expert, thematic pole manager, etc.) how to measure the results to be achieved, both at partner level (LAP delivery) and at network level, through exchange on implementation of LAPs".[3]

Working method – To be discussed and developed during the Stockholm meeting 24 March 2014

Step 1 – Design of evaluation and monitoring framework: Workshop Session(s) – Group reflection to establish network tool and framework structure for each city partner linked to LAP and specific local circumstances.

"Expected results are two-fold, as they relate to:
1) what partner cities expect to achieve through participation in the delivery network

[3] Text in italics is extracted from the URBACT II document "Guidelines on Measuring Impact for Pilot Delivery Networks" January 2014

2) *what the exchange at partnership level will bring in terms of lessons learnt on delivery of integrated urban action plans*

The evaluation framework needs to provide information on:

- *a consistent set of expected results and indicators against which to measure achievements after 12 months (building on information describing the current LAP delivery status and the baseline situations and expectations in the different partner cities, such as indicators, baseline figures on these indicators and targets to be achieved).*
- *the tools and process (such as a dashboard) that will be used for monitoring and evaluation at partner level and at network level (incl. who does what, timeline, etc., also building on information collected through the templates describing baseline situations)".*

CONCLUSION

In February of this year Porsche announced its return to compete in the historic Le Mans 24 hour race with the Porsche 919 Hybrid sports car. While motor sport may not be the most preferred benchmark against which to measure progress on e-mobility this is an important indication of real changes in attitude. Norway "the best pupil in the class" expects to reach a figure of 50,000 electric vehicle registrations perhaps even next year. So the conclusion on the one hand has to be that things are moving in the right direction.

Owing to budget constraints London revised its 2,500 target for charging point installation (2013) downwards to 1,300. Today studies show the figure to be 1,400 which may not be too disappointing, but equally it has been estimated that only 27% of this provision is effectively being used at this point in time due to inappropriate placement. Katowice has one solitary EV in the city vehicle fleet.

If e-mobility is to play its expected role in eliminating fossil fuel driven vehicles in urban areas, even by the proposed date of 2050, EVUE partners are better equipped than most to know that there is still much work to be done. Legislation at EU but also National level has been instrumental in moving psychological, behavioural and operational barriers. Even over the EVUE project period change is tangible, but delivery at the local level - to see electric vehicles as a normal part of the streetscape - is critical and requires continuing cooperation to create the optimal conditions within which effective actions can be implemented.

ANNEX 1 - TEMPLATE FOR THE DESCRIPTION OF THE BASELINE SITUATION IN PARTNER CITIES

BACKGROUND INFORMATION	
Pilot Delivery Network Title	*Give official title as used in URBACT application*
Partner City	*Name of partner city institution*
Member State	*Member State, region*
Geographic size	*Specify the population and size of the target areas, and the population of the municipality and functional urban area[4].*
Key Contact person	*Name and email of person in who has agreed to be a contact point for further information*
Keywords/Tags	*Up to five keywords to help search engines find the project*
1. DESCRIPTION OF LOCAL ACTION PLAN DEVELOPED WITHIN THE URBACT NETWORK	
Policy challenge	*What is the policy challenge/ problem addressed in the Local Action Plan?*
Main objectives and expected results	*What are the main objectives of the LAP? What are the expected results (change you expect to achieve through the implementation of the LAP)?*
Main Activities foreseen	*What are the main LAP activities?*
Funding/ resources	*Give details of the (proposed) LAP funding and resources. Include the name and identification number of the financing Operational programme(s) for the city if relevant).*
Managing Authority (MA – if relevant)	*What is the name of the MA? Briefly described on which administrative tier it operates – national, regional, city regional and whether it is based in a specific ministry*
Timeframe	*What is the planned timeline for the LAP (within the pilot network life cycle and beyond)? Possible start and end dates if relevant*
Stakeholders	*List the main stakeholders involved in the development of the LAP*
2. POLITICAL AND STRATEGIC CONTEXT	
2.1 National and regional framework	*Provide a description of the key elements of the regional national, EU context relevant to the LAP* *Include any relevant updates or changes since the end of the previous URBACT networks*
2.2 The planning context at city level	*Provide details of local and regional plans to which the transfer network relates*
3. LAP DELIVERY PROGRESS SINCE THE END OF THE URBACT NETWORK (Feb 2013)	
3.1 FUNDING/	*Has the partner been able to secure adequate funding*

[4] For FUA populations see http://www.mdrl.ro/espon_cd2/Project_Reports/Preparatory_studies_and_scientific_support_projects/1.4.3_final_report.pdf

RESOURCING	*/resources to deliver the action plan?* *If only certain parts of the action plan are being funded please explain which they are, and how/why that has come about.* *Give the sources of funds/ resources eg local, national, EU, private sector* *What are the perspectives for future funding/resources?*
3.2 GOVERNANCE: PARTNERSHIP, PARTICIPATION AND EMPOWERMENT	*At what level has stakeholder involvement been maintained? Has the LSG changed? How is it managed?*
	How is the integrated approach applied to all areas of delivery, eg recruitment, procurement, events, communications, monitoring? *Does the partner have new governance arrangements in place for integrated plans? Are there cross departmental teams/communications? Are there cross agency teams /communications?*
	Has political support been maintained? (e.g. Mayor or deputy mayor or director level official actively involved) *Comment on multi-level governance issues. EG Regulatory obligations/frameworks at city/regional/national/EU levels.*
3.3 MONITORING AND EVALUATION SYSTEM	*Describe the LAP monitoring system*
	What are the output indicators used for monitoring? What are the monitoring/measurement requirements of the funders? Is the partner using additional monitoring/measurement? *How is the partner measuring progress in an integrated approach? What indicators/mechanisms are being used? How is the partner capturing the added value of the integrated approach?*
3.4 CAPACITY	*What skills are needed for integrated delivery? Has the city been able to recruit and/or procure effectively?* *What are the training needs of city staff delivering integrated action plans? What are the training needs of stakeholders? How are these being addressed?*
3.5 COMMUNICATIONS	*How is LAP delivery progress communicated? To stakeholders, to politicians, to the public?* *At local level and beyond?*
3.6 CHALLENGES	*Describe the challenges encountered in moving into delivery phase of action plans, eg delay, political change, lack or withdrawal of funding, changes in economic/social condition, lack of personnel, skills, cooperation.* *Explain any steps taken so far to address these challenges, and any changes made to eh LAP as a result.*
3.7 DRIVERS	*Describe any particular drivers that have helped push progress in the LAP*
4 PERSPECTIVES AND	

EXPECTATIONS FOR THE DELIVERY NETWORK PHASE	
4.1 PARTNER EXPECTATIONS	*What does the partner aim to achieve by participating in the pilot delivery network?* *How will participation enhance delivery of the LAP?* *What specific learning needs do they hope to address?* *Describe any specific indicators/targets to measure progress* *Eg increase in funds for the LAP* *Improved staff skills in particular areas* *Creation of new governance mechanisms* *Increased participation of stakeholders* *Improved ability to lead a transnational project*
4.2 MEASURING ACHIEVEMENTS	*How will each partner measure achievements related to the network activities?* *What indicators will be used to measure progress? (Include baseline and target values).*
5. FURTHER INFORMATION	
Bibliography	*Write references and links for any relevant reports on this topic in this city (author, date, title, publisher)*

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URBACT II

URBACT is a European exchange and learning programme promoting sustainable urban development.

It enables cities to work together to develop solutions to major urban challenges, reaffirming the key role they play in facing increasingly complex societal challenges. It helps them to develop pragmatic solutions that are new and sustainable, and that integrate economic, social and environmental dimensions. It enables cities to share good practices and lessons learned with all professionals involved in urban policy

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