



Minutes of Meeting

2nd EU Electromobility Stakeholder Forum (8th Green eMotion Stakeholder Forum)

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Presentations are available on the Green eMotion stakeholder sharepoint site. To get access, contact: norbert.vierheilig@siemens.com

Welcome and Opening

EU Electromobility Forum in the context of EU Electromobility Policies - Magda Kopczynska, DG Move

Three projects organising this forum shows that electromobility policies are working. We can't continue to rely on Imported oil, the costs signifies 1 billion per day. The levels of CO2 emissions in transport are improving through vehicle technology.

The EC have looked at more than one option for transportation.

The question up to now has been which comes first the infrastructure or the cars.

The Europe-wide availability of charge points is an absolute necessity however we also need EVs that are more affordable and for the perception to be out there that EV charge points are everywhere in Europe.

We also need to look at what other external elements can be used tolling, parking etc to incentivise electro mobility?

Other factors which are important are standardisation which are at the heart of GeM.

We see the forum as helping to bring together all elements of electromobility and it is also important for public councils. It is not just about replacing public infrastructure but also about reducing congestion etc

Important link

She talked about how it was important to remember that this forum was originally for people to share their ideas on electromobility.



Great many topics being covered here but even yet we have not covered all projects. Also talked about how electric vehicles are an important part of Horizon 2020 and stress that it was important to see how it may be possible to get involved.

Green eMotion project Introduction - Heike Barlag, Siemens

Looked at the big picture of electromobility. There is a need for electromobility to be connected and that leads to standardisation. Green eMotion is in the demonstration phase of the project and now out of this will come useful recommendations and knowledge. She then gave an overview of areas that GeM was involved in and the areas that they would be presenting on at the forum and the results that would be coming from these areas in GeM. Some of these were Standardisation, Business Models, Demonstrations, Roaming and Interoperability, Testing of EVs and measuring the real life performance of EVs, Data collection, Real life - how often people use the cars to charge etc. Analyse the sustainability of the results .

She then gave an overview of what was next for Green eMotion.

FREVUE project introduction - Matthew Noon, Cross River Partnership

Poor air quality is one of the biggest health risks on the planet. Why are you doing it? Saving peoples health

Why are we looking at freight? It is fundamental to the operation of our city. We want to promote cycling etc. but freight is still essential in cities. FREVUE has 8 location with a range of diverse partners

Progress to date. 40 vehicles in operation

Consolidation centre operation In Stockholm (Construction) which will then become residential another one is in Madrid where an old market has been refurbished and is being used.

It can work, it does work there are no major issues regarding range or charging etc.

Key challenges

Vehicles, limited supply of vehicles, cannot get trucks it has meant that companies like UPC having to refurbish their own.

Grid can't cope and then grid operators expect the company to pay for a grid upgrade

Overview of the next steps ion the project.

ZeEUS project introduction, Umberto Guida, UITP

We need sustainable urban mobility in cities. The total budget for the project is 22.5 million which is 13.5 EU funded. It started in November 2013. More people are thinking about moving towards electromobility and there is a lot of interest from the mobility sector. Large set of available technologies

Cleaner technology can increase the attractiveness of buses.

Gave an over view of the type of buses and technologies that were currently available.

Named some of the manufacturers that were available today as well as the types of buses being trialled and their power supply. Mixture of technology, hybrids etc. Next challenge is high capacity buses.

Guidelines and tools for pre commercial support. For example the regulatory framework necessary as well as standards and interaction with the power grid.

2nd Plenary Session: Views on electromobility

Session Moderator: Jos Streng, City of Rotterdam

Benefits of electromobility - Aleksander Lazarevic, DG Enterprise and industry

Thomas Edison: "I will make electricity so cheap that only the rich will burn candles"

Electric cars must become affordable for everyone

Challenges of the automobile industry – undergoing transformation, explore future growth in emerging markets instead. Emobility is promising – cost of running is comparatively low compared to gas.

They are very quiet, which enhances your experience of driving and allows time to think and enjoy the experience but people still feel too comfortable with internal combustion vehicles

There are environmental challenges of disposing of vehicle batteries after their life cycle.

Other challenges are infrastructure, range anxiety etc. Since 2010-2012 there has been a number of strategies to bring forward cleaner transport and name some of them.

Other actions from the EC, promotion of publicly available charge points, battery recycling, financial incentives. They have published the guidelines on incentives for EVs based on best practice.

80 projects funded since the crisis, the topics covered will help to move towards mass adoption of electromobility.

Words from the stakeholders: their perspective on electromobility and what needs be done to enhance adoption

Marianne Mølmen – Senior Executive Officer, Agency for Urban Environment - City of Oslo

What measures were taken to increase EV adoption in Oslo? National and city specific incentives.

High taxes on fossil fuel cars and no chargers on electric cars which makes them much cheaper. Free tolls, free parking, free use of the ferry, access to bus lanes are all incentive for EV drivers. They have more than 500 public charge points, They will have more than 500 EVs in the municipal fleet by 2015.

Petr Dolejsi – Mobility & Sustainable Transport Director, ACEA

He gave an overview of the vehicle industry and some of the key figures around it. ACEA sees development in the context of the EU strategy on clean and energy-efficient vehicles. Future transportation will need different modes and technologies e-mobility represents just a part of the sustainable transport of the future. Consumer acceptance must happen and this requires a joint effort by all stakeholders. He then gave an overview of some of the pillars which will be necessary

for successful e-mobility. They believe that electric vehicles need to improve on price, charging time and range for them to be more than a niche market. Industry disappointed with members states investment in infrastructure to date. He stressed that manufacturers are part of the solution and have already been doing their part.

Sr. Francisco Gonzalez-Balmas – Bus Technical Director, Transports Metropolitans de Barcelona [TMB]

He started by outlining the reasons for electromobility in Spain, EU clean air directives, Spanish air quality national plan and European Covenant of Mayors. Possible technologies were bio fuels, CNG, hydrogen, hybrids, battery electric buses, exhaust filters and eco driving. They installed exhaust filters on 425 of their diesel buses and managed to gain large NOx PM10 emissions reductions. To lower CO² emissions they needed other technologies such as electric buses. 1st step was hybrid and now moving towards other types of full electric buses. He then gave an overview of the types of buses available including opportunity charging for buses.

Stefan Baguette – Market Analysis Manager, Solaris

Stefan began by giving an overview of the Solaris – the number of employees, turnover and number of buses produced each year. He then went on to explain the types of buses which are electric at least some of the time and what percentage of the time they are electric. He then explained the energy efficiency of electric vehicles, hybrids and diesels showing that electric buses are much more efficient. He explains that the main obstacle is the range and that shorter trips of about 60km are ideal while longer journeys are possible. He also gave an overview of the modular design of a drive train and what components can be included including inductive charging. He stresses that the buses must be tailored for operating profiles. A brief overview of some of the countries that Solaris are operating electric buses in was also given.

Anya Bramich – Marketing Manager, Zero Carbon Futures (UK)

She gave an overview of the charge point network they have installed and the some of the promotions that they have implemented to increase EV awareness. Zero Carbon Futures for developing the charge point network, researching future technologies and supporting skills and development in the area. One promotion was for an electric avenue which gave all the houses on a street electric cars to trial. Their charge points have been used over 43,000 times. Surveys showed that 70% of EV drivers felt that rapid charging was very important and that is why they are currently working on the Rapid Charge Network project which will see a roll out of rapid chargers on major routes in the UK. She went on to explain that you could follow the charge point roll out on their website.

Workshops

Make it fit: standards for electromobility solutions

Hector Olabe - IRIZAR

Overview of types of plugs and considerations to be taken into account when planning for infrastructure,

Overview of partners including Skoda

Fast charging up to 500kw 5-6 minutes also Volvo 150 - 300 kws.

No standards on bus industry, every OEM doing its own development, need to look at what the customers want rather than own developments. Necessary to harmonise the existing systems. He stresses that there needs to be a round table amongst all the stakeholders.

He gave an overview of what the deliverables around standardisation will be in the ZeEUs projects.

Filippo Colzi - RSE

Graphic of the building blocks of GeM illustrated, It shows all the actors that are in play in the charging process.

Looked at many areas including cables, range left on the vehicle, manufacturers using different algorithms. They are also looking at safe installation standards in petrol stations as well as minimum and maximum charging limits to preserve the grid

Went through the many gaps in standards.

They will try and define a roadmap of how to fill these gaps that have been identified. How do you bring people together when they have different opinions? Should it be the EC? It is not just the EC it needs to be the industry coming together to agree. If there is uncertainty in business models and policy then it will be hard to get the standards in place. Different cultures have to be overcome to set the same standards internationally. Some other regions such as china may have a much more streamlined approach than the EU which is much more open and has many more stakeholders involved.

Silvio Weeren - IBM

Standards to be set before an investment in hardware in order to make sure that all the hardware and communications are compatible.

He then gave an overview of Emi3 and the members. There is already an existing relationship with EMA in the states. Agreements being worked on internationally not just within the membership. He gave an overview of the structure of the organisation and what its key beliefs, vision and goals are. He spoke about what they have achieved so far as well as a draft of the main architecture. He also explained that they were looking for more member and how to go about joining the group.

Powering E-Mobility – challenges and opportunities

Impact assessment on distribution networks – Thomas Wiedemann, RWE

He explains that there are two approaches to grid impact assessment on grids in Green eMotion. These are Impact Assessment on specific grids with the ITRES-Tool and assessing the impact assessment of the whole system approach. He then went on to give an overview of the ITRES tool and how it works. He also gave an overview of the whole system approach and concluded that Appropriate “smart charging” can reduce or even avoid reinforcement investments in Distribution networks.

Institute of Power Electronics and Electrical Drives (ISEA) - A. Müller-Hellmann, Prof. Dr.-Ing. RWTH Aachen University

First of all he gave an overview of the requirements expected from the buses such as no reduction of passenger capacity, realisation of big daily distances, light vehicles to reduce the demand for energy, and simple charging method during the operation and in the depot. The energy consumption was to be through a sub station. He also looked at the different means of powering the bus such as trolley bus, inductive charging etc. He also showed a bus that was already operational in Gothenburg and the charging process set up using a pantograph. He then went on to explain how this operated. He also talked about a number of other methods that were being trialed as part of ZeEUS.

He put the question to the audience: Should we use these infrastructures also for the installation of many charging stations for all urban passenger and freight transport systems? Thus, the infrastructures of the urban rail systems could become the “backbone of multimodal electric mobility in the city”

Sustainable Urban Logistics: Grid Capacity - Peter Harris, Director of Sustainability EMEA, UPS

He started by giving an overview of some of the transport solutions that they are looking at and the feasibility of them for a range of delivery distances. He then went on to talk about the UPS base in Camden and some of the vehicles that are using there. However a problem is that the electricity supply into the Camden building is insufficient to support any additional EVs. He then gave an overview of some of the alternatives upgrades that they looked at do in order to increase the amount of vehicles charging at that location. They decided the best option was to upgrade it to bring total capacity to 68 at that location. Lessons learned included that you may need to spend extra money upgrading infrastructure, it may be difficult to make it scalable and costs may be external to your business.

Powering E-Mobility, Challenges and Opportunities - Narcis Vidal, Endesa

Electric vehicles is not like another appliance. The cost of the electricity you use in your home is made up of a number of things, taxes, regulated costs and energy. There can be a significant impact on the cost of infrastructure needed if the demand is not controlled. He also went on to show the effect on electricity demand with a number of electric vehicles. In order to control the demand for

electricity demand it will be important to have smart charging. Not just for the DSO but it is also important for fleet management.

Environment and Health –e-mobilities raison d’être?

Environmental Impact of EV, EV Life Cycle Assessment - Luis de Prada, CIDAUT

Objective: *“Evaluate the environmental implications of a mass deployment of EVs at a community, regional and European level.”*

Focus has been put on Life Cycle Analysis (LCA) of EV, whereby environmental impact and primary energy demand analysis have been assessed. It goes further than well to wheel approach and included manufacturing of the vehicle and dismantling the vehicle at the end of its life cycle.

He then goes on to talk about some of the advantages of EVs such as less noise and zero tail pipe emissions. He explains the methodology used and the papers being analysed. .

He then went on to show some of the findings and conclusions so far.

Health effects of air pollution - Christian Schweizer, WHO

He gave an overview of where the health burden currently lies in Europe. He then talked about a report from the International Agency for Research on Cancer who talked about air pollution being a major contributor of cancer deaths. Considerable amount of new scientific information on health effects of PM, ozone and NO₂ available. He then went on to show a slide displaying the population exposure in the EU to pollution. Globally there are 3.7 million deaths each year from ambient air pollution. A graph displayed how symptoms such as coughing and wheezing increased the closer populations were to motorways.

He then went on to make conclusions on how pollution is effecting peoples health.

Communicating to Businesses - Danielle Cohen, Better Bankside

He first of all gave an overview of Bankside and the work they do. They are the third business improvement district in the UK. They are involved in areas such as corporate social responsibility, cleaning, safety, business club, travel planning and more in that area. They promote other means of transport such as walking, cycling and cycle freight.

Developing new business models for electromobility

Ruud Bouwman, Advanced Public Transport Systems BV

He first of all gave an overview of VDL Groep and what they do. They have 82 companies in 16 countries producing a variety of goods. They have a lot of experience already with different types of electric buses. Their strategy will be to look at modular buses for use in cities and harbours and they expect a lot of advances in the next 5 years. He then goes on to explain the types of buses that they are looking at such as hybrid range extender and makes comparisons between them.

Eduardo Zabala, Tecnia

Identify the BM most suited to facilitate large-scale EVs roll-out: social acceptance, commercial viability and system/environmental impact.

He shows the selection of Services to be included in business models as well as the main actors that need to be considered. He goes on to display a graphic of a business model which could be considered he shows how the price sensitivity for various elements of it may effect it. With the assumptions considered for that business model it would become profitable by 2017. But he puts it to the attendees whether this is plausible and can we assume that people will charge in public every day?

The future of transportation solution to meet complex distribution requirements - Jean-Luc Jarrin, Qualified Expert

He started by giving an overview of the work he has done in this field. Deret and Sephora are two large companies in France with a large distribution network to their stores. Both were looking to start an electric fleet to reduce noise and costs. They started using a truck called the Modec. Aftyer 6 months they managed to get other companies on board as well. There are many benefits to the truck such as image and noise but a minus was the capacity. To conclude he put forward that you need to design a full solution. Some of the considerations he mentioned were:

- A range of trucks sizes (small to large)
- A range of trucks technologies (electric, hybrid, gas, but also fuel new generation)
- A range of city and suburbs platforms (domntown, first city circle, second city circle)
- A range of city and suburbs platforms (frozen, security...)
- Managed by 4 PL logistics companies

Innovative Solutions workshop

Soft Open Point (SOP) from a utility perspective - Mark Daly

Introduction about ESB and Innovation

Showed exactly how an SOP works allowing grid to shift between areas when demand changes at different times of the day which will be beneficial for EV for instance in situations where demand shifts from office blocks during the day to adjacent residential areas in the evening.

Helps balance demand loads between high demand networks and low demand networks.

He then gave an overview of why EV penetration is not easily predictable and talked about the site where the demonstration will take place

Overview of partners in Green eMotion, ESB and Alstom who were involved in the demonstration and what the current phase of the project is.

Demonstrate interoperability theory and practice - Thomas Stiffel, Bosch

They want to demonstrate that every EV can charge at every charge spot in all other demo regions

They have looked at overall levels of interoperability – Organisational/contractual, IT layer and Physical Layer

He then showed a video with a charge taking place using an ESB card on a EDF charge point which demonstrated how interoperability works.

How GeM have done this? Interoperability what are the problems and issues which came up for partners. The difficulties getting everybody working on the same.

Phase 1: Showed some of the potential problems following a root cause analysis..

Phase 2: Exchange cards between the demonstration regions. He presented a matrix which showed the issues to prevent interoperability in the various demonstration regions.

He then went on to explain some of the lessons learned from all the activities.

He stressed that it is still a major issue which will take a big effort to solve the problems.

For example card readers should accept multiple card types

AC Load Management – Konstantine Engelbrecht, Siemens

He presented a slide which showed all the parties which that are involved with load management. They have demonstrated load management in Malaga and he went on to go give an overview of how it works. Four charge points were installed with two plugs and brought a number of electric cars together to begin real life tests. A real charging process. Overview of a number of charging sessions with different charging taking place. So what about DC load management? He showed how the charging process varied compared to an unmanaged charge.

New Functionalities in ENDESA e-parking scenario – Narcis Vidal, Endesa

Overview of the other partners involved in the demonstration. He then went on to show the various technologies being looked at the Endesa headquarters. He then gave an overview of the scenarios they were working with. They had 10 slow chargers 1 +/- 10Kw Vehicle to grid and one DC fast charger. He then went on to show some of the results that they found from the different scenarios tested. Some of the conclusions were that Smart energy management schemes must be implemented to optimize the EV charging processes and installations 2nd Life batteries and V2G offer flexibility.

Zero Emission Mobility - Olivier Paturet, Nissan

He gave a brief overview of FREVUE and three demonstration sites that they are using.

Distribution centre in Madrid and also a Distribution centre in Milan which is highly congested and thousands of deliveries are done each day. He explained how they intend to address the current inefficient process. Another demonstration site is Stockholm where they are carrying out a study on a smart goods delivery service. They are also looking at a construction consolidation centre in Stockholm. He then talked about the noise and health benefits that electric transport will bring as well as being used for energy storage.

ZeEUS Demonstrations - Umberto Guida, ZeEUS

He gave a brief overview of the ZeEUS project. He then talked about the complexity of the considerations to be taken around electric buses. Some of the demonstration criteria are that the vehicles are series or pre series, work in real life operation with passengers. There must be a range

of conditions that the buses operate it. He then gave an overview of the 8 demonstration regions will be trialling different types of buses in various conditions. The demonstration regions are:

Barcelona, Bonn , Cagliari, Glasgow, London Demo, Munster Demo, Plzen, Stockholm

Performance indicators and testing methodologies for EVs

ZeEUS - Zero Emission Urban bus System - Flavio Marangon, D'appolonia

He started by giving an overview of the ZeEUS project and partners. He then went on to look at some of the demonstration sites and what they are doing with electric buses in those sites. A set of key performance indicators were needed and he went through how they were to be drawn up and the key characteristics of it. As part of a KPI tree there will be a triple bottom line which consists of people profit and planet. He then went on to give an overview of how these will effect the KPIs that will result from the structure drawn up. He also spoke about how each unique demo site would have ,some of it's own indicators which do not apply to other demo sites. He then looked at where they currently are and future tasks.

EV Performance validation - Bart Benders, FKA

The objective is to validate the performance of EV technology in terms of durability, costs and safety aspects under real world driving conditions in different climatic zones. He spoke about the methodology used and then cars were tested on the road as well as dynamometer. They have found that the range of an electric car varies a lot according to weather and driving habits and that European certification test figures do not reflect real world driving. He then spoke about the type of on road driving they did to simulate real life driving patterns and the technology and methods they used to gather data from the cars. He then went on to give some conclusions they found, particularly the amount of variables which affected performance.

FREVUE – Central Assessment Framework (CAF) - Hans Quak, TNO

He started by giving an overview of the CAF for FREVUE as well as the objectives and tasks coming from the framework. Assessment is not an objective in itself, but enables us (the FREVUE project partners) to answer questions on the implementation of electric freight vehicles (EFVs) in city logistics. He then showed a chart with the objectives, the methods used to achieve the objectives and the data necessary. There are 4 areas they will look at:

Technical assessment of EVs in fleets - Main question is: What are the key technical performance characteristics of electric fleet vehicles in urban logistics? You need to look at the vehicles, charging infrastructure and telematics.

Economies for EVs in logistics - The main question: What are the conditions to get a feasible/successful EFVs business case?

Systemic transport and environmental impact of EVs - The main question: what are the impacts of EFVs to the transport system and environment at different EFV penetration levels and different logistic settings?

Attitudinal and social impacts of EVs and changes in behaviour - The main question: What are the attitudinal and perceptual impacts of the use of EVs in city logistics on different stakeholders?

Policy, procurement mechanisms and governance review - Main research question to be answered in this part is: what contextual conditions are favourable / unfavourable for EFV usage / uptake?

DAY 2

ZeEUS session:

Role of electric buses in multimodal public transport

Moderator: Elios Pascual – Strategic Advisor

ZeEUS - Zero Emission Urban Bus System - Umberto Guida, UITP

UITP together with the European public transport undertakings and bus manufacturers jointly produced an approach to “decarbonisation of transport” and GHG emission reduction. It was put forward that the best method would be a modal shift and that electric buses could offer major carbon reductions in public transport. He then went over the road map for innovative bus solutions. Some objectives for the project are guidelines and tools for pre commercial support, Core Demonstrations, observed/monitored demonstrations. The ZeEUS philosophy is to extend the fully electric solution to the core part of the bus network. He then went on to give an overview of the 8 core demonstration sites and ZeEUS electric-bus observatory. There are 40 partners involved in the project.

The role of electric buses in multimodal public transport from a VDV perspective - Martin Schmitz, VDV

They are involved in more than 20 e-bus projects throughout Germany trialling a range of different types of buses and charging methods. They are looking at how infrastructure is integrated into public spaces as well as heating and cooling systems and many other areas around electric buses. They are preparing laws in Germany for electric cars but nothing for buses. He then went on to mention the EBUS award which is a prize for many years of successful commitment in the field of electric mobility in the bus sector and the closing dates for entries.

Benefits and opportunity's, ZeEus Stockholm - Ulf Gustafsson , Volvo

They will operate 8 hybrid electric buses on a 8.5 km route through Stockholm with a 6 minute opportunity charge at the end of the route. Some of the benefits it will offer are: Low CO2 emissions, Low energy consumption, Low noise emissions and Low total cost of ownership. As they have access to electricity with low CO2 emissions it means that the buses are expected to reduce the carbon dioxide emissions by 80 % compared with a diesel bus. The electric drive is in comparison with other means of propulsion very efficient. For a more silent bus, the cost saving for society more then 0,4 €/ bus Km. The electric bus will not offer all the solutions for city noise and pollution but it will make a difference.

The Role of Electric Buses in Multimodal Public Transport - Mike Weston , Transport for London

He started by giving an overview of the current pollutions figures in London. He then went on to talk about some of the points from the mayors vision for London such as a 60% reduction in CO2 emissions from 1990 levels by 2025, restricting central London to only those vehicles that have zero or near zero tailpipe emissions by 2020, all double deck buses operating in central London to be hybrid by 2020 under ULEZ proposals and all single deck buses to be 'zero tailpipe emission' (electric or hydrogen) by 2020 under ULEZ proposals.

There are currently no buses which can perfectly meet London's bus demands which are often in operation 20 hours a day. TFL have developed a package of work to assess the potential for further reducing emissions. They are looking at a range of technology and charging options for buses. They currently have 2 electric buses on trial on London. He then went on to give an overview of the work that they will be doing within ZeEUS.

Electricity as a solution for public transport - Gunnar Lorenz, DSO, EURELECTRIC

Eurelectric are committed to decarbonisation of electricity and the electrification of transport. They have created an EV task force with 30 stakeholder brought together. For the mass market adoption of electric vehicles he talks about a number of points that are necessary and also what smart charging means for the grid and energy demand. He then gave an overview of Green eMotion. As electricity is increasingly decarbonised, its application in the urban public sector will bring greater benefits. EURELECTRIC and RWTH Aachen have done a study on electric buses and he outlined some recommendations regarding conductive and battery swapping which came from it.

FREVUE session:

Electric Freight Vehicles for Urban Logistics

State of the art of the electric freight vehicles implementation in city logistics - Tariq van Rooijen, TNO

Their main objective is to provide feedback and lessons learnt from past and on-going initiatives to the FREVUE demonstrators, and to support the production of a Central Evaluation Framework. He then went on to give their approach for the state of the art study. He gave an overview of the companies that have been involved and then went on to look at the technical, economic, operational performance, environmental performance, Social and attitudinal impact and Policy and governance around freight vehicles. They have also looked

at the financial and on financial benefits that would help promote EVs as well as the financial and non-financial benefits that are restricting the take up of EVs.

Demonstrators - Lisa Hadden, Cross River Partnership

Lisa started by talking about the 8 cities that would be the demonstration sites for FREVUE.

Amsterdam/Rotterdam; All electric parcel distribution centre -Trialling large 18t and 12t vehicles - Consolidation activity in smaller retail market

Lisbon: Electric light goods vehicles for Municipal servicing & Postal services - Smart' on-street loading bays

London: Enhance consolidation centres through EV operation - Expand beneficiary pool from consolidation centres - Address energy grid constraints - Optimise existing EV logistics

Madrid: Consolidation centre servicing food/drink & post and retail clients - Light commercial through to heavy goods vehicles - Dynamic fleet management integrated with public parking/charging facilities

Milan: Implementation of freight consolidation centre - EFV linking depots to consolidation centre and end customer - Route and delivery regime optimised to reflect daily conditions

Oslo: Large potential market for EV logistics - Extreme climatic conditions - Evaluate vehicle range and effectiveness in logistic operations - Manage charging requirements in 24 hour operational environment

Stockholm: Royal Seaport Area, Consolidation centre during construction and when completed Zero/ Low Emission Vehicles - ICT integration - Policy & Regulation

So far the project has seen 29 vehicles delivered, 11 on the way and 39 – 43 to be procured.

Delivering sustainable logistics - Peter Harris, UPS

He started by giving an overview of the UPS operations and how it works. He went on to explain how it could be a risk and an opportunity for things such as their brand, revenue and cost. Low emission vehicles help with access restriction zones around Europe and in London. London will be an ultra low emission zone by 2020. He then went on to look at the alternative technologies that they have looked at and what they thought were feasible for various parts of their delivery service. He showed some of the vehicles that they are currently using. He then went on to go through the positives and limitations to electric freight from their experiences.

Electric vehicles TNT express - Erik van Duin, TNT

They started in 2006 with 1 electric 7.5 tonne vehicle in their fleet and then went on to add a further 50 including 3.5 tonne. They have implemented a range of electric tricycles into their fleet and are still rolling them out. He went on to outline the key benefits that they have seen from using EVs. Some of the challenges are the availability of vehicles, range and the price.

Phase two cities - Dan Dura, Municipality of Suceava

He asked attendees to become a phase two city in the project and to attend meetings. Help by giving feedback and comments. He mentioned some of the cities which are already on board.

Green eMotion Session

Data collection on electromobility projects - Dr Panagiota Dilara, JRC

Overview of their role in JRC. Charge points, vehicles and users are monitored in electromobility projects. There is a need for key codes and identification numbers in order to make sure that data is structured and easy to understand. Data templates have been. She went on to give an overview of how often the data should be logged and what type. Presented a slide on the monitoring scheme and spoke about what they will be doing in the future.

Will get contribution from other projects and look to use this report to guide future projects. She would like people to get involved.

Cristina Corchero - IREC

The presentation was on the results from the data collected as part of the Green eMotion project. Overview of the location of cps, most charge points are in public on street locations however the ones most used are at home and work. 1.3 chargers per location no difference on the location

Charge start time - there is no difference with the demo regions, the results are the same across all of them. She also covered data on charge energy consumption, charge point usage, battery usage analysis, distances covered.

Key findings of Green eMotion customer surveys and behaviour analysis - Elisabetta Cherchi, Technical University of Denmark

Elisabetta gave an overview of the reasons behind the survey:
To better understand what affects the demand for EVs
To measure individual's attitudes and preferences for specific EV features
To compare the results of these analyses across different European nations (demo regions)
To have a tool (mathematical model) that allows testing the effect of different scenarios on the demand for EV. Demand model links the demand for EV to the supply and social aspects.
She gave an overview of some of the scenarios that needed to be looked at to see how they impacted on the EV industry. An overview was given on the methodology used for the surveys as well as the main comparisons made between demonstration regions. This led to some policy recommendations coming from the results so far.

Green eMotion EV & Electromobility Survey – 2014 Website Questionnaire - Ian Winning, Cork City Council

Looking for people to give feedback on what policies that are successful or hurdles that they have encountered in EV policy and roll out. If people contribute they will have access to the comparative data. Within the next couple of weeks you can expect to receive an invitation to participate in the

Green eMotion 2014 Survey. The submission of responses to the Questionnaire should be completed by mid-July 2014

How to ensure the sustainability of the project activities and achievements - Norbert Vierheilig, Siemens

An action plan for 2015 – 2020

Ensure interoperability of an open IT system for Europe-wide mobility

Overview of GeM topics and values and the work packages involved. He then went on to look at the possibilities for an open and interoperable marketplace in Europe. From Stakeholder feedback it seems the preference is for either multi marketplaces or one over-arching marketplace. He then went through a number of other proposals for findings from different areas within Green eMotion. Data collection, standardisation, hardware, infrastructure. Looked at what Horizon 2020 projects could continue some of the work being done in GeM. Norbert then put forward questions to the audience on what they thought and whether they knew of ways to bring this GeM work forward.

Round table: What is the status of electromobility in Europe today and what are the necessary next steps for wide scale adoption of EVs?

An engaging and interesting round table was held with plenty of questions from the audience the audience.

The participants were;

Moderator - Joeri de Ridder, AVERE

Heike Barlag, Green eMotion

Umberto Guida, ZeEUS

Matthew Noon, FREVUE

Hugues Van-Honacker, *DG MOVE*

EU Electromobility Stakeholder Forum ends