

eCo-FEV final event report



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Revision and history chart

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1.0	2015-06-15	Version 1.0 created by EICT



Table of contents

1. Introduction	6
1.1. Executive summary	6
1.2. Event overview and objectives	6
1.2.1. Work performed 1.2.2. Outline of the event	6 7
2. Major components and results	10
2.1. Presentations	10
2.1.1. Public presentations 2.1.2. Technical Review	10 11
2.2. Exhibition	11
2.3. Demonstration	12
3. Promoting the final event and the eCo-FEV results	15
4. Conclusion	18
5. Annex	19
5.1. Keynote speech	19
5.2. Invitation	21



1. Introduction

1.1. Executive summary

This document reports on the eCo-FEV final event, which took place in Grenoble, France on May 22, 2015. It details the outline of the event and reports on major components and results.

The target groups of this document are the European Commission and the partners of eCo-FEV.

1.2. Event overview and objectives

1.2.1. Work performed

Nearly 50 representatives of industry and academia joined the final event of the European research project eCo-FEV that provided comprehensive results to leverage the mass market introduction of FEVs. In the morning, speeches and presentations during a conference informed about the eCo-FEV achievements. Starting by noon, driving demonstrations provided the opportunity to gain hands-on experience of the eCo-FEV systems. In parallel, the technical review was held during the afternoon hours. During the entire day the event was complemented by an exhibition which consisted of posters displaying the major results from all work packages. The combination of the location of the exhibition with the buffet offered networking opportunities that partners and visitors benefited from.

Following the overall objective to develop a cooperative architecture for FEVs and users, the eCo-FEV project presented the extensibility and flexibility of the eCo-FEV concept. Different implementation situations were considered, e.g. specific use case requirements as well as eCo-FEV architecture and specifications. For further development and integration, the final event fostered the projects' systems and



demonstrated the interaction of in-vehicle systems, infrastructure and backend technology. In addition, results of the technical evaluation and impact assessment were exposed. Finally, results of a business study helped to assess the opportunities and risks of the eCo-FEV approach concerning its economic viability and offered recommendations on the road to a successful market launch.

The distribution among the final event attendants represents the project structure. Together, OEMs, Suppliers and Research are the largest group. The strong representation of Road authorities is due to the fact that the event was hosted by Département de l'Isère as one of the eCo-FEV partners. The following figure illustrates the background of the final event participants:



1.2.2. Outline of the event

The event was hosted by the partner Département de l'Isère, the public administration authority of the Isère region. It took place at the Minatec Campus in Grenoble, France. This campus is a new urban campus area bringing





version 0.1

leading research and industry together. The exhibition and the presentations were held in this building.

The demonstration was carried out at a site named "Smart Park and Ride" located at the entry of Grenoble. Participants were brought from the Minatec Campus to the test site where they could experience co-modal trip planning by the eCo-FEV back end. A control centre was installed there in a tent and participants started a real trip from the park-and-ride by electric car to



demonstrate how the systems work (for more details see chapter 2.3).

Time	Торіс	Speaker
08:00 - 08:30	Registration & coffee	
08:30 - 08:35	Welcome	Massimiliano Lenardi, Hitachi
08:35 - 08:45	Keynote	Marie-Pierre Flechon, Département de l'Isère
08:45 - 09:00	Innovative achievements by eCo-FEV	Massimiliano Lenardi, Hitachi
09:00 - 09:30	Use cases, requirements & specifications	Witold Klaudel, Renault
09:30 - 10:00	Poster exhibition & coffee	
10:00 - 11:00	Development & integrationResults from testing & evaluation	Andrea Tomatis, Hitachi Bruno Dalla Chiara, POLITO

The agenda below provides an overview on the outline of the event:



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11:00 - 11:15	Exploitation perspectives		Sarah Metzner, EICT
11:15 - 16:00	Demonstrations, poster exhibition and lunch in parallel	14:00 - 16:00 Technical Review	Restricted participants
		14:00 - 14:15 Administration & Finance	Hrystian Stoyanov, EICT
		14:15 - 14:30 Dissemination	Sarah Metzner, EICT
		14:30 - 16:00 Q & As	All Technical Review participants
16:00	End of demonstrations and exhibition, and of the Technical Review		
	Get together		



2. Major components and results

2.1. Presentations

2.1.1. Conference presentations

The eCo-FEV Coordinator Massimiliano Lenardi, Hitachi, introduced the audience to the project results. He stressed that eCo-FEV established an electromobility platform mutualising and exploiting information from EVs and from independent EV-related infrastructures.



In the following keynote speech, Marie-Pierre Flechon, director of the mobility department of the county of Isère, emphasized on the importance of electric mobility services for the region and underlined the fruitful collaboration between local and European partners.

The presentations were continued by the coordinator speaking about innovative achievements by eCo-FEV. Amongst others, he pointed out that eCo-FEV designed a smart concept combining energy management and multimodal urban mobility planning. Furthermore, Witold Klaudel, Renault, presented use cases, requirements and specifications. Taking the facility booking use case as an example, he explained how eCo-FEV improves the booking management for fully electric vehicles.

Andrea Tomatis, Hitachi, summarized how eCo-FEV defined, developed and integrated the following subsystems: road side system, in-vehicle system and back end. He also outlined the integrated concept to effectively enable both internal and external interaction. This presentation was complemented by Bruno Dalla Chiara, Politecnico di Torino, who assessed the results from testing and evaluation. He stressed the findings from the charge while driving test on the Italian test site, Susa, as well as the



successful communication between charging stations, electric vehicles and infrastructure on the French test site, Grenoble.

One of the major objectives of eCo-FEV is taking FEVs one more step towards a mass market penetration. Consequently, Sarah Metzner, EICT, presented the exploitation and business perspectives. As a result of more than 20 stakeholder interviews and extensive desk research three business models were developed. Out of these three models a business case based on transaction cost was presented. Here, eCo-FEV technology would function as a broker between customers and service providers.

2.1.2. Technical Review

During the technical review presentations, Hristiyan Stoyanov, EICT, presented administrative and financial aspects of eCo-FEV. Major achievements:

- Project successfully finished with no major deviations
- Processes and tools set up for day-to-day project management proved to be efficient
- Quality of Deliverables: all peer reviewed and submitted

Moreover, Sarah Metzner, EICT, assessed the dissemination of eCo-FEV. Website developments and dissemination material were presented and dissemination activities were presented. For example, eCo-FEV strongly liaised with the clustering projects Mobincity and Mobility 2.0, gave 25 conference presentations, participated in 2 trade fairs and impacted with 10 conference papers in proceedings. As a major result, eCo-FEV succeeded to publish 4 journal publications in highly respected scientific journals.

2.2. Exhibition

One important component of the eCo-FEV final event was the poster exhibition at a separated presentation space. It was open the whole day and offered technology insights and results from all eCo-FEV work packages.



Overall 15 posters presented the following topics:

- Overview and project facts
- The test sites in France (Grenoble) and Italy (Susa)
- The demonstration story
- Use cases definition
- Architecture and specifications
- The in-vehicle systems
- The eCo-FEV back end: architecture and functionalities
- The impact assessment, tests & evaluation
- The eCo-FEV business study

All 13 partners contributed to the illustrations and poster content. The posters were professionally designed within the eCo-FEV corporate identity. Overview and project facts posters were also placed at the Minatec reception whereas the poster on the demonstration story was also placed in the demonstration tent to give an



overview of the demonstration to the participants.

2.3. Demonstration

The main objective of the event was to demonstrate the eCo-FEV technology under real conditions and on public domain. For that reason eCo-FEV presented its achievements on a demonstration ride. During the driving live demos which started at the "Smart Park and Ride", the participants witnessed how the technology works and gained experience on the cooperative electromobility platform.





The following figure illustrates the eCo-FEV demonstration story:

The demonstration started at the parking "Smart Park and Ride" which also provided the charging stations for the demonstration vehicles. Moreover, the demonstration tent with the control centre was installed there. From the Park-and-Ride the electric vehicles started to a tourist site, Col de la Charmette, and back to Grenoble. The trip was affected by two traffic events:

- Traffic event 1: due to a natural event which closes the road between Proveysieux and Col de la Charmette, the eCo-FEV backend re-planned the trip: the EV turned around at Proveysieux to go to Grenoble.
- Traffic event 2: due to congestion, the back end computed the trip again and proposed a new multimodal route:
 - o travel to the Park-and-Ride
 - o park and charge the EV
 - travel back to Grenoble by express bus line which can take a dedicated shared lane to bypass congestion.



During the trip, the eCo-FEV backend informed about availability of a charging point and enabled booking. It further supplied dynamic bus timetables to secure the intermodal trip.



The control centre



Demonstration start



On the way to Col de la Charmette



EV charging



3. Promoting the final event and the eCo-FEV results

An invitation was prepared (see 5.2) and distributed by the coordinator.

Partners received standard presentation slides to promote the event while it was also announced via the eCo-FEV website. The website further provided a preview to the event and was updated with the results from the different work packages. For a simplified registration to the event, an online registration form was created.

A specific final event brochure was designed containing the agenda, results, the conference topics and speakers, and information on the demonstration.

A number of other materials have been produced with the branding of eCo-FEV:

- A conference kit was distributed to every participant. It consisted of a final event bag containing the eCo-FEV final event brochure, an eCo-FEV flyer, an eCo-FEV sticker, a notepad, a pen, and a USB key (all branded)
- For each visitor the project had prepared the posters from the exhibition as pdfdocument on the USB key. Consequently, all participants could easily take away the project results to follow-up and share the information
- The list of publications was distributed in the exhibition
- The demonstration cars were branded with eCo-FEV magnets
- Besides, numerous direction signs guided the visitor (including a banner "Welcome to the eCo-FEV final event" at the Minatec building and a roll up at the entrance)

A summary of the final event on the eCo-FEV will be published on the website. All public presentations that were held during the conference will be made available for download.



The final event brochure



Final event posters









eCo-FEV conference kit



eCo-FEV flyer



Welcome banner





eCo-FEV magnets



eCo-FEV rollup poster

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4. Conclusion

After 33 months of joint efforts, eCo-FEV successfully demonstrated the supply of ICT services to a real EV user under real conditions and on public domain. eCo-FEVs integration with different infrastructure systems proved full functionality and enabled to include battery autonomy, dynamic traffic information and different charging possibilities. Consequently, the eCo-FEV final event was a success. The visitors of the final event had the opportunity to discuss, network and deepen contacts within research and industry. The exhibition during the event offered an open space where discussions have been triggered.

There were some strong efforts in preparing and organising the final event. The organising committee held regular phone calls and bundled the many activities of all partners. A separate demonstration team planned, prepared and organised the driving demonstration.

Nevertheless, the driving demonstration remained the highlight of the event. All participants highly appreciated having the opportunity to experience the achievements first hand. This will foster further discussions and spread the eCo-FEV story around Europe.



5. Annex

5.1. Keynote speech

Speaker: Marie-Pierre Flechon, Director of Mobility Services, Département de l'Isère

Dear eCo-FEV partners, stakeholders and supporters,

The Département de l'Isère is pleased to host today the final event of the eCo-FEV European project in Grenoble. It is coordinated by Hitachi and overall includes 13 partners.

The Isère territory is rather diversified, including mountains, urban areas and more rural areas. As a result, the Département de l'Isère has to manage very different travel issues, but the people and other economic actors have the same significant expectations: to have easy access to transportation and to move safely with reasonable travel time while improving air quality.

As a key actor in the mobility sector in charge of managing the interurban road network and the interurban public transport network, the Département de l'Isère is naturally mobilizing its efforts in favour of electric mobility.

The geographical diversity and the possible usages make the Isère territory an extraordinary laboratory for the development of electric vehicle use. Moreover, the high potential of its research institutions and of its local industries constitutes a real opportunity to develop the economic sector of electric mobility.

For these reasons, the Département de l'Isère decided to participate in the eCo-FEV project. With the support of the European Commission, experimentation with new advanced mobility services to fully electric vehicles has been undertaken.

The eCo-FEV project allowed:

• To experiment with new advanced mobility services, specifically dedicated to electric vehicle users, who will then be able to plan their travel with greater autonomy while maintaining a high level of safety. Depending on the level of vehicle autonomy



and the road traffic events, the driver can plan the travel accordingly. The driver will be able to identify and book charging points as well as using co-modality transport options. These facilities should help the user to choose electric vehicles as a means of transport.

• To mobilize the actors of a promising economic sector, first on a European scale (with the cooperation of 13 partners coordinated by the industry partner HITACHI) but also at the local level (during the pre-commercialisation phase Schneider Electric supplied the charging stations that have been specifically designed for road use).

The eCo-FEV project is an example of what can be achieved in the area of innovative mobility services thanks to the present (internet, 3G or 4G cellular communication) or future (G5 announcing the intelligent road) tools and to the industrial and academic expertise of the partners.

In the context of the Département de l'Isère, the experimentation aims at combining electric mobility and co-modality in order to improve mobility at the entry point to big city areas, which is a key issue for the economic attractiveness of our territory. Again, innovative monitoring tools (like PC itinisère managing the public transport network) and the interfacing thereof are essential to improve the safety and security of electric vehicle travel for the road user.

A positive and dynamic process is being initiated in Isère in terms of electric mobility. In the framework of the ADEME calls for expression of Interest, the Syndicat d'Electricité de l'Isère plans to deploy more than 300 charging stations on the Isère territory. The Département de l'Isère implemented the road traffic management centre Itinisère and the mobility agencies Itinisère+ in order to monitor the road networks and to better inform road users. Thanks to the capacity of innovation of industry and universities in the frame of eCo-FEV, all possibilities to interface the existing infrastructure to create new electric vehicle services have been explored.

More generally, the Département de l'Isère is implementing a proactive and innovative approach to improve the quality of public services to the user while driving economic development. This is possible thanks to the new market opportunities coming from the availability of technological expertise on a local level.



I wish you a really good day full of rich discussions and an excellent continuation of the collaboration between all partners.

Marie-Pierre Flechon, Département de l'Isère

5.2. Invitation

From: Lenardi, Massimiliano

Subject: Invitation: eCo-FEV project FINAL EVENT on May 22nd, 2015 in Grenoble (France)

Dear Mr/ Mrs.

As Coordinator of the eCo-FEV European project, let me cordially invite you to participate in the closing event of this research project on electric mobility.

The eCo-FEV Partners developed an open and flexible architecture taking FEVs one more step towards a mass market penetration. Demonstrations will provide the opportunity to gain hands-on experience of the eCo-FEV systems. Presentations will inform about the results. They are complemented by an exhibition, both offering room for questions and answers.

Agenda on May 22nd in Grenoble, France:

08:30 Welcome and registration

09:00 Presentations

Noon: Lunch and demonstrations

Afternoon: Technical Review (limited to project and EC representatives)

16:00 Afternoon reception

Please register for the event here:

https://www.eict.de/rsvp/register/a3c1fb8e-b821-11e4-a6b3-00163e6f1389



We kindly ask you to submit registrations by APRIL 30th at the latest.

To organize the afternoon reception, please indicate as well if you will participate.

Kindly let us anyway know by email as soon as you can if you cannot come.

Please find attached information on accommodations and directions. A detailed agenda will follow.

We are looking forward to welcome you in Grenoble.

Best regards,

Dr Massimiliano LENARDI

