

**Project Acronym** e-MOTICON

**Project Title** e-MObility Transnational strategy for an Interoperable COmmunity and Networking in the Alpine Space

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## **SUMMARY**

The aim of the evaluation report is to give an overall picture of how the evaluation was carried out for the pilot activities, what the main challenges were, that had to be overcome, and how the final results could contribute to the set goals and vision.

It describes the evaluation process through the pilot implementation and how the involved partners and experts contributed to this process as well as the final conclusions, recommendations, performance, satisfaction with and success of the activities and results.

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## 1. SET-UP OF THE EVALUATION PROCESS

For the evaluation of the pilots a team of experts from within the partners and the observers, called e-MAB who would proactively carry out the evaluation was put together.

The appointed members were as follows:

<i>secretary:</i>		
RSE	Cristina Cavicchioli	ITA
<i>external members</i>		
Italian Ministry of Transport	Gian Piero di Muro	ITA
German Federal Ministry of Traffic and Infrastructure	Christian Schlosser	DE
Ministrstvo za infrastrukturo	Matjaž Vrčko, M.Sc	SLO
State Agency for Electric Mobility and Fuel Cell technology Baden-Württemberg e-mobil BW GmbH	Wolfgang Fischer	DE
Provincial Government of Carinthia	Gerald Miklin	AUT
Austrian Ministry of Traffic	Ernst Lung	AUT
<i>internal members</i>		
Laurent Cogerino	RAEE	FRA
Silvana di Matteo	Lombardy Region	ITA
Ludwig Karg	BAUM	DE
Blanka Odlazek	BSC	SLO
Wolfgang Hafner	Municipality of Klagenfurt	AUT

The members were invited to all project partner meetings, where the current status of the pilots was presented. Then they were asked for any contributions they may have on the development of the pilots.

The meetings took place on the following occasions:

- Partner Meeting in Strassbourg, 5. July 2017
- Partner Meeting in Bled, 22. January 2018
- Partner Meeting in Bad Reichenhall, 18. October 2018

Details on the pilot presentations and any comments, as well as the attendance of the e-MAB members including the attendance of substitutes can be found in the minutes (including presentations and signature lists) of these mentioned meetings. The responsibility for carrying out the meetings, collecting statements from e-MAB and the documentation was with the LP.

The members of the e-MAB were also invited to discuss and share any contributions on the e-Moticon web platform and informed and invited to share their views occasionally in between meetings via email.

Additionally the project partners themselves especially the leaders of the work packages and the pilot leaders but also all partners involved in the implementation contributed to the evaluation process through especially dedicated coordination meetings:

- WP coordination meeting in Munich, 13. April 2017
- WP coordination meeting in Brescia, 22. November 2017

Furthermore pilot internal coordination and adaption processes evaluating the day-to-day status of the implementation and circumstances took place throughout the whole implementation period which led to changes in the pilot implementation if needed.

## **2. DESCRIPTION OF THE KPI DEVELOPMENT**

One main element in the evaluation of the pilots was the definition of key performance indicators (KPI) to check whether the pilots reach the set goals and contribute to the tasks, they were designed for.

It was intended to have a definition on the KPIs from the e-MAB members early in the project. Still the process turned out to be more complicated than expected.

Thus a suggestion on a potential list of joint KPIs for all three pilot activities was made by the WP T3 leader as part of the roadmap and presented at the Strasbourg Meeting to ease the decision for the e-MAB members.

The list was as follows:

1. Number of upgrades to interoperable technical standards for existing E-CS
2. Number of new interoperable E-CS
3. Number of new non-interoperable E-CS
4. Number of planned E-CS
5. Number of funded E-CS
6. Increase in tracked charging processes at interoperable E-CS
7. Number of pro-active requests for support made to the people responsible for the pilot actions/named experts
8. Number of conversations / informed people via one-on-one meetings, group meetings, events

9. Number of cooperation talks attended and/or initiated
10. Number of site clicks on virtual points of access and information associated/relevant for the pilot actions
11. Number of positive feedback statements from reached stakeholders

It was stressed by the WP T3 leader during the meeting in Strasbourg that the e-MAB members have to check and improve the criteria of the monitoring indicators of the eMoticon pilots and the attendants agreed to this during the discussion. (see minutes Strasbourg meeting)

As no active contributions were received during the next weeks, the e-MAB was further supported in the definition of the KPIs by the WP T3 lead by starting a discussion on the internal web-platform, asking them to:

- vote for the KPIs you want to use
- state which KPIs to skip
- suggest different/new KPIs

Two e-MAB members contributed to the online discussion.

One member added comments on which KPIs may be suitable for the pilot e-TRAIL, the other made more general comments.

The results from the inputs were as follows:

- KPI numbers 1, 2, 6, 8, 9, 10, 11 may be suitable for various pilot activities.
- KPI numbers 1, 2, 6, 8 may be suitable for e-TRAIL.
- A comment that the KPIs should fit to the strategy and guidelines which is difficult to make sure as long as these outputs are not completed.

As this online discussion did not lead to a final decision on the KPIs, the topic was brought up again at the meeting in Bled, where the decision was made that the pilot action leaders should be responsible for defining the KPIs for their pilot activities to come to a reasonable and final decision, as they are the experts for their topics.

The KPIs defined for the pilot e-HUB by the pilot action leader with contributions and feedback from the partners involved in the pilots were the following:

1. Number of instruments implemented for PA support in the field of e-mobility, E-CS
2. Number of documents, policies, planning instruments, guidelines (...) developed for e-mobility E-CS
3. Number of pro-active requests for support made to the people responsible for the pilot actions/named experts
4. Number of stakeholders involved into e-HUB (municipalities, regional authorities, investors, ...)

5. Number of projects/calls for install interoperable E-CS
6. Number of conversations / informed people via one-on-one meetings, group meetings, events
7. Number of cooperation talks attended and/or initiated
8. Number of site clicks on virtual points of access and information associated/relevant for the pilot actions
9. Number of positive feedback statements from reached stakeholders
10. Number of local seminars, meetings organized
11. Stakeholders satisfaction / benefits from e-HUB through interviews / questionnaires

### **3. EVALUATION DURING THE START-UP OF ACTIVITIES**

The most important evaluation task during the start-up of the pilot activities was the definition of tasks to be carried out with respect of the current state of e-mobility development and framework conditions in the involved countries and regions in mind.

To support this activity which resulted in outlining the planned pilot activities in the roadmap, an internal evaluation discussion with the pilot action leaders and 3 of the e-MAB members was held in Munich resulting in the following conclusions.

One first task given to the pilot action leaders was to check whether all the partners are located in the fitting pilot activities with the implementation ideas voiced at the drafting and start of the project. The check resulted in a confirmation overall.

The critical issues identified for the implementation of the e-HUB pilot activities and specifically the online information hub planned within this activity at the beginning were:

- Who are the people using the online e-HUB?
- What are the differences between e-HUB and other online platforms used in the project meaning the transnational community platform and the project website?
- How to make sure the virtual e-HUB representations are actually used by the people?

The general discussion showed that the website and the transnational community platform are to be aimed at a truly transnational audience, whereas the e-HUB online representations are aimed at the regional and local audiences, considering the local circumstances and are set as virtual information hub on e-mobility and charging for the long-time accompanying offline information provision via one-one contacts and events.

Thus it is important that the various virtual e-HUB representations but also for the offline contacts to consider the following points:

- Local language
- Fits to the web representation of the e-HUB organization
- Considers the role of the e-HUB organization and the target groups it can reach

- Considers the role and existence of other accepted information offers and providers and uses and connects to them accordingly
- People in the regions interested not only in local/regional exchange get information and examples from the international level and are made aware of the existence of the transnational community platform.

These findings were considered during the draft of the activities for the roadmap, defining the planned activities and the adjacent implementation of the e-HUB pilot activities.

Another evaluation task during the start-up was feedback from the e-MAB board on the general set-up of the pilots and the definition of KPIs after the roadmap was introduced in Strasbourg. The decision process on the KPIs was carried well into the implementation phase of the pilots as already described in chapter 2. Lots of statements of the e-MAB board voiced during the meeting in Strasbourg were on general project issues including the dissemination, strategy etc. but there were some comments and statements relevant for the pilots, which were kept at the backs of partners minds during the implementation, which can be summarized as follows:

- Knowledge on how to attract end-users and involve e-mobility producers is needed
- Potential risk that investments in charging infrastructure may be unbalanced compared to the number of e-vehicles
- PAs need to know what the investors' interests and industrial developments, including the meaning of interoperability, are to act accordingly
- The development of e-mobility is also related to other developments in the mobility sector → mobility as a service
- The state of the art in the different countries as well as current developments and the vision for the future need to be kept in mind to ensure a reasonable development of E-CS
- The role of the PAs as a planning and regulation authorities is to be kept in mind

#### **4. EVALUATION DURING THE IMPLEMENTATION OF ACTIVITIES**

During the implementation of the pilot activities the e-MAB members were provided with an interim status of the pilot activities and KPI development via email in November 2017 and in person at the meeting in Bled end of January 2018.

The further development in the KPI discussion and solution to it, passing it to the pilot action responsables is already outlined in chapter 2. To the current state of the pilot implementation no comment or recommendation was given by the e-MAB members.

The partners involved in the pilot actions themselves though had to reevaluate their plans continuously during the implementation as they were confronted with new challenges, developments and findings, some of the which could be solved and some of them which could not be resolved and led to changes on the way.

In e-HUB the main challenges, which became apparent during the implementation, were as follows:

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- Actual usage of the virtual help-desks, which could be fostered through local meetings.
- Different responses and needs for virtual compared to direct (offline) support in different regions, which resulted in a diverse response by the partners to either put more efforts and focus on one or the other for a long-term sustainability, although in most cases both approaches were combined.
- As the virtual e-HUB representation had to be implemented in the existing structures of the partners' websites the look and amount of information provided had to be highly individualized. A one size fits all approach did not prove to be successful.
- As several partner's websites were actually under construction and foregoing a make-over during the implementation of the pilot, this provided the chance to include the concept in the new website structure from the start and thus give it sufficient room, but still this also resulted in increased efforts for coordination and time delays for putting the information online within this new environment

To work with this challenges and adapt to them, a good cooperation between involved actors and responsible stakeholders and providing multi-channel support to stakeholders were found to be crucial elements to the success of e-HUB activities.

## 5. FINAL EVALUATION

For the final evaluation next to the KPI table to be filled in, a set of questions was developed for the e-MAB members but also all involved partners and presented together with the initial goals from the roadmap and the pilot activities status report in Bad Reichenhall. On the one hand the questions were designed to consider the success of the pilot activities in terms of fulfilling the original vision defined within the project:

1. Do the results we achieved contribute to make our vision come true? Travel through the Alpine Space with eVs conveniently?
2. Did we succeed in executing our strategy to empower PAs and companies to initiate and implement measures?
3. Do our pilot actions as we carried them out help tackle challenges arising during the development of emobility?
4. Do the activities test and assess measures to enable stakeholders in building an interoperable E-CS network?
5. Did we analyse E-CS solutions, test ideas and create knowledge?

On the other hand the questions intended to collect personal impressions, experiences and satisfaction with the results:

6. Which results do you consider more significant ?
7. Are results aligned with your expectation ? Anything missing ?
8. Recommendations to ensure long term implementation of results ?
9. Do you believe recent developments in e-mobility sector impact current project and the use of the results of the pilots (relevancy? change in direction?) ?
10. KPIs reflecting project goals ? Progress on KPIs within expectation ?

11. Do the pilot results support the guidelines? Is it clear how they can do that?
12. General feedback ?

Due to a lack of time during the meetings, as well as to give additional time to think, people were asked to provide their answers via email.

The response rate was low probably due to a high workload of the people invited to answer in the weeks and months after the Bad Reichenhall meeting, still some answers came in painting the following picture:

Concerning fulfilling the vision of travelling through the Alps with E-CS conveniently (1) a formal yes would be too ambitious but the activities in the project clearly helped to get one step closer to this vision by fostering and contributing to the implementation of interoperable E-CS. As far as the success to empower PAs and companies (2) goes, it can be said that at the sphere of influence of partners and the project the partnership succeeded although it is an ongoing process. The knowledge and capacities of informed and involved stakeholders to deal with e-mobility could be improved significantly. The answer to the question whether the pilot actions helped tackle the challenges at hand (3) was a clear yes. As the pilots clearly contributed to raising awareness and knowledge concerning the roles of different stakeholders and giving them a boost in developing e-mobility and interoperable charging further. The activities could also help in testing and assessing measures (4) on different levels and do provide the according information in the final reports. The implemented activities and results created are beneficial for the diffusion of e-mobility and bringing interoperability one step further. Analyses of E-CS solutions, testing ideas and creating knowledge (5) was an essential part of the activities though it did not happen globally at this point of time but for the scales project partners could influence during their activities providing a basis and a contribution for a more global and transnational picture though.

A clear answer to which results were considered most significant (6) cannot really be given as this actually varies a lot, also depending on the needs of different regions which also led to an according engagement in one activity or the other in the first place. Thus a whole bundle of results can be offered to interested parties to pick from depending on their existing needs. The expectations (7) were met in many cases although due to the various challenges that had to be faced which also led to changes along the way not all expectations could be fulfilled. The main recommendation (8) from e-MAB is to ensure that the started activities and development are carried on, involving the right people and fitting current and future needs. The results of the project are considered to go along the current developments in the e-mobility sector (9), although in some regions the general development is ahead of the regional implementations which gives those regions time to learn and avoid mistakes. The produced results, the experience and knowledge gained through the pilot activities can be used for the guidelines (11) and contribute to sharing these insights, thus contributing to helping others in the implementation of E-CS and learn from the results. All in all the satisfaction with the results is high. (12)

Those direct insights came from members of the e-MAB. Most project partners though shared their insights relevant for the evaluation especially concerning recommendations and long-term implementation (11) and KPIs (13) through contributions in the final report and filling the KPI tables.

## e-HUB

For e-HUB the main conclusion can be that a pure virtual information hub did not prove successful and the offline exchange was needed in all cases and even appreciated more in some cases.

Recommendations and conclusions which can be derived from the experiences gathered by carrying out pilot activities in e-HUB are furthermore as follows:

- Public and private stakeholders should both be involved as both can provide complementary contributions to the diffusion of e-mobility and E-CS.
- Coordination and information exchange between authorities, stakeholders, information platforms as well as awareness raising campaigns and adjustments to regulations are essential to overcome lack of information, support the technological status-quo, ensure up-to-date information for citizens and thus foster diffusion of e-mobility.
- Local public authorities should join forces and work together, be it for applying for funding, joint procurement, planning, monitoring or information provision and support for citizens and companies to ensure efficiency, continuous development and infrastructure development for the public benefit.
- In terms of transnational travel and interoperability the tourism sector holds a special position as it is one main cause for cross-border movement of travellers. Thus providing public E-CS at touristic hotspots and travel routes as well as fostering the installation of semi-public and private E-CS at hotels and other tourist oriented companies is beneficial for the cause.
- In terms of building a sufficient E-CS network and support the diffusion of e-mobility also fostering semi-public and private E-CS at companies for commuters and fleets as well as large residential buildings for inhabitants helps increase the number of e-vehicles used for travel and helps decrease the need, number and costs for the complementing public E-CS network.

In terms of performance of the pilots, the results for the KPIs decided to monitor to measure the success and impact of the activities, can be seen in the adjacent table:

Indicator name	Target value	Baseline	Reached value
Number of instruments implemented for PA support in the field of e-mobility, E-CS	10	1	11
Number of documents, policies, planning instruments, guidelines (...) developed for e-mobility E-CS	4	0	4
Number of pro-active requests for support made to the people responsible for the pilot actions/named experts	30	0	31

Number of stakeholders involved into e-HUB (municipalities, regional authorities, investors, ...)	850	50	2086
Number of projects/calls for install interoperable E-CS	6	1	6
Number of conversations / informed people via one-on-one meetings, group meetings, events	310	0	424
Number of cooperation talks attended and/or initiated	20	0	19
Number of site clicks on virtual points of access and information associated/relevant for the pilot actions	300	185	2156
Number of positive feedback statements from reached stakeholders	90	0	123
Number of local seminars, meetings organized	33	2	37
Stakeholders satisfaction / benefits from e-HUB through interviews / questionnaires	50%	0	50%

Overall the performance is satisfactory and goals could be fulfilled. A large number of stakeholders and people in general could be reached and informed virtually and in direct contact. Additionally valuable insights for carrying on the activities as well as transferring results and knowledge to other regions could be gained through the pilot implementation, making the pilot activities carried out as part of e-HUB a success. The outlook for continuation of the information hubs established during the pilot activities is also very good, not only due to declarations of intend by the involved parties but also by clear evidence that they are accepted. For example in the case of Berchtesgadener Land Wirtschaftsservice GmbH even after the pilot implementation was concluded still requests for support and information were registered and provided as a now established part of the service portfolio of the organization.