Project Acronym	e-MOTICON
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SUMMARY

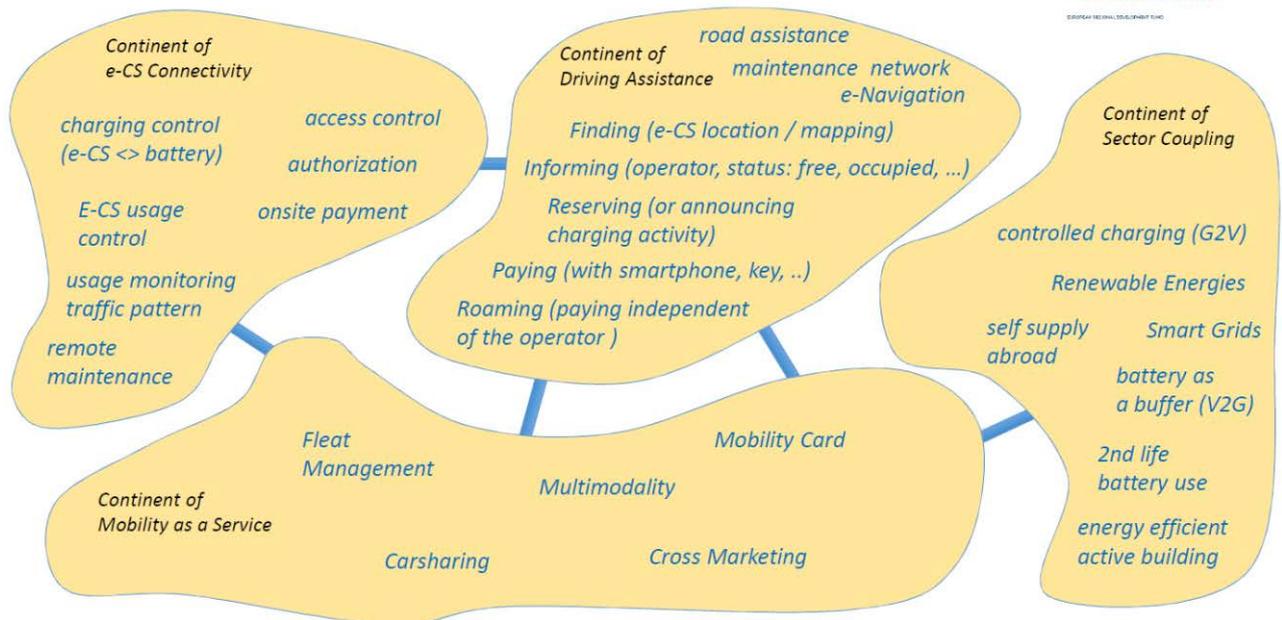During three public events, workshops for members of the public administration and investors were organised

1) Strasbourg

2) Tolmin

3) Bad Reichenhall

1 WORKSHOP AT PUBLIC EVENT AT THE PARTNER MEETING IN STRASBOURG (06.07.2017)

Connectivity is the fact of being connected to a (mostly) digital network (or the ability to connect).

Interoperability is a characteristic of a product or system, whose interfaces are completely understood, to work with other products or systems, present or future, in either implementation or access, without any restrictions.

For electric mobility, interoperability can be achieved on multiple levels or in multiple domains:

Technical:
- connectors and plugs
- authorization and payment
- access to e-CS information from distant (at least the latter is often called "connectivity")

Systemic (with multiple operators and providers)
- Finding (e-CS location / mapping)
- Informing (about status such as free, occupied, under maintenance, out of order, etc.)
- Reservation (for future charging activity)
- Payment (with cash, specific operator code etc.)
- Roaming (paying independent of the operator of a given e-CS)

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<u>Two workshop topics:</u>

i.   How to support multimodal and in general integration of E-CS planning with Spatial & mobility & Energy (REN linked) planning and promoting e-mobility as such (e-car marketing included) - (mod.by Guido Piccoli)

- o Continent of Mobility as a service: fleet management, car-sharing, multimodality, mobility card
- o Continent of sector coupling: controlled charging, battery as buffer,2nd life battery use

ii. Interoperability of E-CS: what the interest of PA (mod. by Ludwig Karg)

<u>Training workshop (i):</u> How to support multimodal and in general integration of E-CS planning with Spatial & mobility & Energy (REN linked) planning and promoting e-mobility as such (e-car marketing included) - (Moderator: Guido Piccoli)

- •   Continent of Mobility as a service: fleat management, car-sharing, multimodality, mobility card
- •   Continent of sector coupling: controlled charging, battery as buffer,2nd life battery use

<u>Regione Piemonte/IT</u>: e-Mobility influences several aspects of spatial planning. Problem = every department has very narrow point of view; tried to overcome this problem by establishing multisectoral council of technicians since 2 years. So decisions on e-mobility are taken all together. This could be a best practice as this is starting to work – good example is that he is here from the transport department together with his colleague from the environmental department → for the administration this is not simple. How can Reg.Piem/IT. influence by spatial planning e-mobility? Environmental department approves air quality plan; transport department approves transport plan; land use department approves land use plan → all plans aim at reaching the same goal. If they agree on the same plan; all can decide within their department what actions to set to reach that goal. = new method they try to implement

<u>RSE/IT</u>: agrees with Piemonte Region. What he saw by contact with Lombardia Region when developing e-mobility concept was how important the involvement is. Influence of PA related to e-mobility is very large: PA can make rules and force the market and can fund (PA has rules and money) – is that true?

<u>Regione Piemonte/IT</u>: some rules can only be applied by majors, not by regional authorities, so municipalities need to contribute as well (e.g. if region fixes the goal to reduce emissions, it is up to the majors to set the actions to reduce the emissions – e.g. road restrictions)

<u>City of Klagenfurt/AT</u>: PA is not very flexible, takes time until they cooperate! Important to also involve politicians and public because in the end it is the politicians who decide – and the politicians decide that what is popular among the public. In Klagenfurt, they did awareness rising campaigns for better air quality and at the end in the urban development plan (legally binding, investor has to finance it) it says that environmental aspects like e.g. that good access to urban transport has to be guaranteed when building new houses/shopping centres/… traffic regulation on the contrary are not so popular, as major who introduces them might not be re-elected. Other measure is the parking lot directive: formerly it said that for every apartment constructed 1.2 or 1.4 parking spaces needed to be provided. Now it is possible to reduce the number of parking spaces when installing an e-car-sharing lot (1 e-car-sharing + investor needs to take care that there is a public transport station equals minus, 8 parking lots)

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WFG/DE: city = when new zones (housing, businesses) awarded to an investor, then there can be an additional requirement to set up new E-CS, rural areas: more difficult,

BAUM/DE: examples from areas around cities where there are a lot of commuters where there are already many P&R for commuters – so PAs should plan how to integrate this in multimodality (e.g. by multimodal spots) or in energy planning (e.g. by parking and charging) – the crucial role of PA s could be e.g. by special funding for infrastructure – here it is important to set focus points

P&R is a relevant topic, according to Lars it is not a crucial role for PA but for investors, for Patrick it is a crucial role for PA s, further, in Munich not everyone agrees that P&A is a good thing (pro/contra discussion ongoing)

PRC/SLO: first of all, they have to promote e-mobility in their region. In their urban mobility plan e-mobility is not mentioned. They need to promote it not only within the public administration but also among the people who will be the users (PRC thinks that costs is the important argument for the user). Currently people prefer their own (cheap) car which they can drive alone. Public transport does not exist. Talking with majors is very difficult (slowly, lot of talk), maybe in the bigger cities awareness for sustainability, her area is small and not polluted, so the interest is not so high. Rather mindset to invest in bicycle lanes than in E-CS in Slovenia.

Moderator: suggests showing to the people the avoided external costs and the savings of e.g. taxes due to better air quality

City of Klagenfurt/AT: Why is e-mobility not part of SUMPS in SI? In AT same problem, as it was seen as concurrence to public transport. Argument, why it was included was because not all people do have access to public transport. 2nd argument = ecological footprint for electricity. In Carinthia, almost 0 CO_2 emissions because most electricity from water. In Slovenia, this would have been difficult, as most electricity comes from nuclear power and coal power.

Moderator: Does not think this was the reason in SI, but rather that majors in SI did not have it on their agenda. Need to think for the strategy to be common applicable on the different states of "maturity" of the majors in the different partner countries.

City of Klagenfurt/AT: in Klagenfurt e-mobility is always part of sustainable mobility, not a separate focus

PVF/F:

1) people do not necessarily take the cheapest option, as perceived costs (esp. of cars) are much lower than the real costs.

2) For fiscal reasons in France: you can choose to have a tax rebate for commuting that has been defined by the state = official costs of a car per km = for tax reasons, so Bruno is confident that they are not overestimating the costs. So, people may think that the more they drive, the more tax rebate they get.

3) transport departments in cities become more mobility departments. E-mobility is on the crossroad of many types of departments. No department focusses on e-mobility.

4) There are many specialists inside the PA s, but often politicians only have the information level of the general public. More information also required so that politicians are better informed for making decisions. Many levels of public administrations, very difficult to find out who is doing what and who supports what (national level vs. regions vs. municipalities).

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5) Some regions in France try to aggregate information on bike sharing, public transport, …. on special platforms managed by the regions. In Bruno's opinion regions could easily integrate e-mobility on these platforms

6) avoid snowball effect – people very interested in e-cars and big hype

7) for public administration, much easier to promote e-mobility when there is a local economic interest, even if it is only a small one (even if it is only to support one small local company) because the main goal they want to reach is to create jobs on the territory

Moderator: would be good to know more about the overall costs of a car → public administration should inform people more about it.

Moderator: It is necessary to underline that the concept of "Region" referring to the Regional Action Plan is not precisely corresponding to the political region (e.g. a project region could be Northern Italy). We need to tackle in the regional action plans who has the responsibilities (political regions, departments, municipalities) and Region may also be an entire country (es. Slovenia) or area (North of Italy) when homogeneous in the interoperability perspective.

Prov. Brescia/IT: planning must take care of what is strategic for what. There is the individual and the common need and it is often difficult to bring the two together. Individual need related to e-cars are that it is cheaper than another car and that it does not make problems. Public administration must think about the opportunity e-mobility can offer in the daily life for the individual needs of people. Bringing together advantages of e-car with and Car sharing with the individual needs of the people (costs, simplicity)

Regione Lombardia/IT: Problem in Italy = no planning, each department makes their plan (land use plan, mobility plan, …). First Power of the Regions = Region has the power to make a law (politicians), but politicians in Lombardia do not care so much about e-mobility. Second power = region can make a plan (but difficult to "draw a future"), but plans of regions are less and less prescriptive but more general guidelines so municipalities can or cannot do what the plans say. Example: park law – very strong law and easy to implement (park or no park). But when it is very flexible nobody implements it. There is a national building law that says it is mandatory to build a E-CS per 2000m2, but it is unknown as there are no sanctions. Third power of regions = to give money – but then I need to know what I want.

Univ. Kempten/DE: usually district administration that deals with e-mobility (climate manager – their job is to reduce CO2). By integrating e-mobility in their fleet it is easy to reduce CO2, so first step for municipalities is to integrate e-cars in their fleet. As most people charge at home, PA s do not see it as their duty to provide E-CS. As there are however many tourists in the area, municipalities try to nevertheless provide some E-CS for tourists, but mainly in cooperation with POIs like restaurants, hotels. People living in the area more interested in shared mobility, e.g. by using the fleet of the municipalities during the evenings/weekends – shared mobility in combination with e-cars very popular.

Region Piemonte/IT: not only think about new jobs to create with e-mobility, but also about maintaining jobs. Training courses for new professionals on electric vehicles.

PRC/SLO: Think about the transition to other jobs!

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Training_workshop (ii): **Interoperability of E-CS: what the interest of PA** (mod. by Ludwig Karg)

INTEREST and OPTIONS of Public Administrations (PAs) in the Continent of E-CS CONNECTIVITY:
- Standards
- Low risk and vandalism
- access control:
    - o integration in parking system (also related to on site payment)
    - o better control of intown traffic
    - o need a "red button" to unplug before towing
    - o define requirements of operators
    - o think e-CS and parking together
- authorization:
- remote maintenance &control, charging control (E-CS/batt), controlled charging (smart grid):
    - o reduce costs
    - o high availability/service level
    - o high safety level
- usage monitoring of traffic patterns
    - o usage of monitoring e-vehicles (e.g. for planning)
    - o to meet goals for environmental and energy plans
    - o usage of monitoring ICV to understand if E-CS are in the right position (monitoring ICV)
- monitoring trends
- on site payment:
    - o collecting parking fee?

INTEREST and OPTIONS of PAs in the Continent of DRIVING ASSISTANCE:
- workshop/maintenance network
- road assistance (if already exist, nobody knows)
- e-navigation:
    - o traffic control
- finding (map):
    - o visible E-CS (2.40m)
    - o Planning and localization
- informing:
    - o attract visitors
    - o don't waste money w/ built E-CS
    - o increase attractive of e-mobility
    - o marketing for fossil free mobility
- reserving (or announcing approaching):
    - o Public: can block charges, cannot avoid ICEing
    - o Private: all possibilities
    - o High usage rate->>less iCEing
- Paying:
    - o Cost effective system
- Roaming:
    - o Do not exclude users

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OPTIONS (actually do) of PAs:
  o Planning and localization
  o Build own E-CS
  o Co-finance installation→requirements
  o On public space →put requirements
  o Italy: can influence on public space
  o Complete coverage w/ public E-CS
  o Italy & France: national rule requires "easy payment"

Motivation for PAs: see the users side. What they need, where and how.

Hints for PAs:
  − If E-CS is on private ground with public access, the use of E-CS has to respond to some criteria (E-CS with public access have to have standards).
  − If an investor builds on private ground E-CS with private use, PAs do not have the control or define rules.

Define in the e-MOTICON glossary: What is Public E-CS? (i.e refer to PNIRE definition)
In Austria, the district is in charge to harmonize and regulate also private E-CS.

PAs can pay for infrastructure to control the interoperability?
i.e in Italy it is not possible.

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2 WORKSHOP (WORLD CAFÉ) AT THE PUBLIC EVENT AT THE PARTNER MEETING IN TOLMIN (25.01.2017)

Timeframe:
- 13:00 – 15:00

Equipment:
- 2 rooms à 2 tables and 30-40 participants → 4 tables à 6-8 persons, including 1 table host
- Paper and cards to take notes

Method:
The world café method is very simple. People sit very comfortable at several discussion tables (6-8 people) per table and discuss together one topic. Every 20-30min, people change the table and join thus a new discussion. For each table, one table host is assigned who remains the whole duration of the world café at the table. All other participants switch all 20-30 min to a new table..

The task of the table host is
- To explain to the group on his/her table the topic that is discussed on the table
- To explain each time the participants on the table are switching, what the main arguments were that have been discussed by the previous group that was at the table
- To summarise at the end of the world café the arguments that were brought up on his/her table and presents them to the audience (very briefly – 5min maximum)
- To write after the project meeting a short summary on the main points of discussion / the main outcomes of the discussion at his / her table to be included in the minutes of the partner meeting

There is further an overall moderator who introduces the workshop-method to everyone, who coordinates the set-up of the working tables, gives the signal to switch tables and at the end coordinates the moderators of each table for the final summary.
The overall moderation will be done by Alpine Pearls (Margarethe), with support of City of Klagenfurt (Nicole Jantschgi) for the time keeping in the second room. The people switched the tables three times.

Topics

Table 1: Location of E-CS: What is the role of public administrations?

Suggestion for additional questions:
- What is their influence on the location of E-CS?
- Is there / should there be a difference between rural and urban areas
- What is their influence on placing the E-CS on a mapping tool / e-roaming platform / …? Do they experience any difficulties (competitors, fees, …)?
- Regulations (e.g. concerning interoperability)
- Funding
- Public tenders, ….

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Table 2: Even though the policy reference (EU Directive 2014/94/EU) establishes common standards for the infrastructure interoperability, different E-CS operators and persistent incompatibility among the networks are the main reasons why e-vehicles (EV) drivers feel they cannot use their EVs to the full potential and cross-border trips look sometimes impossible. In your opinion, which elements are necessary for interoperability?

Suggestions for additional questions:
- Which elements define for you interoperability (i.e. "on-site" direct payment or e-roaming with B2B agreements among service providers)?
- Which elements guarantee a first level of E-CS interoperability at local level?
- Which elements guarantee the complete E-CS interoperability at cross border and Alpine Space level (E-CS roaming)?, …

Table 3: E-CS are built by both – private companies and public administrations. Is there communication and coordination necessary between the activities of PAs and private companies?

Suggestions for additional questions
- What communication is necessary for the coordination between both parties?
- At which level is the communication necessary (national, regional, local)?
- Is more important to coordinate the vertical (form national to local) or horizontal communication (PAs/e-mobility stakeholders and investors; regional/regional; local)?, ….

Table 4: Alpine Space countries have different mapping tools and platforms that collect and describe the installed E-CS infrastructure. Some of these tools are not limited to the national level but also include information on E-CS in other countries (i.e. Hubject, ChargeMap, …). In your opinion, what should be the main elements of an integrated, supra-regional mapping tool?

Suggestions for additional questions:
- What are the main elements that are relevant for the users?
- What are the main elements that are relevant for the operators?
- In your opinion, is it better to have one national platform per country, managed by the national/regional authorities or is it better to have multiple tools managed by the free market?
- Do you know examples of successful e-roaming tools?, ….

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Summaries of the discussions at the tables, delivered by the table hosts

Table 1: Location of E-CS (*Table host: Kathrin Eisele (HKE))*

What is the role of PAs concerning the location of E-CS?

- The participants in the discussion agreed that PAs occupy a planning function and not an active function in providing E-CS.
- Regional actors should analyse the needs in their area, elaborate a strategy accordingly and set up rules.
- The cooperation on regional level is important, to ensure an even distribution of E-CS in the area and to establish common rules (e.g. the marking of parking spaces for E-CS)
- Regional actors should also make local PAs aware of the importance of the topic e-mobility.
- Municipalities are responsible for the implementation of rules made on regional/national level, contribute to the planning on regional level and elaborate strategies on a local level where applicable
    o Italy: task of municipalities to communicate rules that have been set up on a regional level
    o Slovenia: task of municipalities to communicate rules that have been set up on national level (no regional level available)
    o Austria: also set-up of rules on local level possible; Klagenfurt set up the rule to include sockets for E-CS in new buildings
- Municipalities have to make sure that the rules elaborated on regional/national level are also being applied.
- PAs don´t have to provide the necessary infrastructure themselves, but they should ensure a good basis for investors to set up E-CS and if needed offer consulting on funds.
- The planning of locations for E-CS should be part of the general urban planning/territorial management plans:
    o proper type of E-CS in cities and on traffic lines/roads connecting cities
    o Where should drivers park and for how long?
    o PAs want cars to stay out of cities -> location of E-CS can have influence on the behaviour of car owners (E-CS at P&R locations etc.)
    o cooperation with electricity providers: different pricing on different locations (inner-city, P&R, suburb etc.)
    o integration of E-CS at transportation hubs (especially in large cities)
- Rumor home charging: it is important to consider/analyse how many people really have the opportunity to charge at home, as it depends on the area and is not possible for everyone

What is their influence on the location of E-CS?

- How to make sure that the whole region is covered and E-CS are distributed properly?
- Funding of E-CS in certain locations may be a way to influence investors.
- E-CS operators in Italy have to pay taxes to the municipality if occupying public space; in Ljubljana there is also a yearly fee charged, in other Slovenian regions it is for free.
- In the view of the participants, private initiatives (Lidl, Mercator etc.) should not be regulated by PAs though.

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What difficulties do PAs experience?

- A challenge in Slovenia is that there is no regional level available, so a lot of planning has to take place on local level. That is an issue as a lot of municipalities are quite small and don´t have experts on e-mobility in their offices. Cooperation between municipalities is not always existing.
- PAs in general don´t always have experts on e-mobility in their offices, so it can be important to integrate external experts in the planning on where to locate E-CS (energy providers, traffic planers etc.)
- Another problem in Slovenia is that the fee for the connection to the grid is quite high, higher than the actual cost of the E-CS. A solution can be to install E-CS at locations where there already is a connection.
- PAs in Italy sometimes don´t recognize national rules and don´t apply them or there is no control of rules from their side, e.g. in case of the obligation to integrate plugs in buildings.
- It can be a challenge to make PAs aware that e-mobility is an issue they should take care of.

Table 2: Interoperability (*Table host: Filippo Colzi (RSE)*)

In all the three rounds the debate started with the table host giving a general definition of "interoperability" (The ability of two components to communicate and interact in order to provide a service or produce an action) and asking to the attendees which was the first issue coming to their mind linking this definition with e-mobility. In two cases the first answer was "tourists", while in the third case it was "plugs", also in parallel with still existing problems to travel with LPG vehicles.

Started from these answers, the debate evolved in order mainly to understand which could be the point of view of drivers, operators and Public Authorities with regards to access and payment to the charging infrastructure.

It was quite clear, in all the three rounds, that some issues about interoperability (like plugs and basic communication between the vehicle and the charging station) are being solved and that the most critical aspect now is to guarantee a simple and universal access to charging stations. To do that, two main solutions are proposed by market and regulation right now: the first one are the so-called "e-roaming platforms", connecting many operators, and the second one is to simply guarantee access/payment through "commonly used" payment systems and without the need of any contract. In all the three rounds, the participants strogly recommended the second solution, stating mainly that, for drivers, "the simplest, the best". During one round, the presence of e-mobility service providers led to a deeper debate on technical and economical characteristics of the two above mentioned solutions; it was made clear their preference for the second one also by a techno-economic point of view. In another round, the problem of an adequate "resource channeling" among European countries was highlighted, considering that all the most important and most "pushed" e-mobility platforms are managed by German companies.

The table host proposed in all the three rounds to address the topic considering also the operators needs and stating that the need of easy and open solutions could be an obstacle to create profitable business models, so limiting the interest of operators and the consequent infrastructure deployment. Attendees stated that interoperability is a priority and should not be put at risk by operators private interests. Smart operators can easily find a way to promote their business also without having contracts and personal data of the infrastrucure users.

As last aspect, the table host asked in all the three rounds if PAs should act in any way to promote interoperability or e-roaming platforms. It was quite agreed that as long as the citizens have a simple way to access to the charging stations, the "public service" is guaranteed and there is no need for PAs to introduce new rules or regulations.

It can be said that, despite coming from different countries and different areas of interest, all the attendees showed quite a clear idea on interoperability needs and a sort of "consensus" was built. The choice of the table host in managing the three sessions was to try to both have confirmations on some aspects, posing the same questions, and to produce an "increasing" debate using contents coming from previous sessions. Very interesting results came out, that will be a key part in the next work of WPT2 and that will be the basis for further discussion among the consortium (and not only).

Table 3: Communication between PAs and private investors (*Table host: Marco Capelletti (RSE))*

The working group produced conflicting results.

On the one hand there are those who argue that communication between the public and private sectors must be strengthened, especially in the bottom-up phase of policies, in order to better target policies for the private sector. On the other hand, there are those who say that this could be a form of "capturing the regulator" and that in this way the public is subordinated to the private sector. In both cases, expert figures are needed in the public administration able to read the reality of the private world, know how to seize the respective opportunities and be able to build policies that protect the public interest but efficacious because they are useful to the private sector.

According to some, in this historical phase, electric mobility is a market failure, since it is not attractive for energy providers and even for citizens, because of too high costs. Others argue that electric mobility is not a market failure but simply is not the subject of incentive policies (and therefore costs more for this reason).

In any case, the table shared the following points:
- the most effective territorial level in the communication and transmission of policies and actions on electric mobility is the intermediate level between the State and the Municipalities. This level does not exist, for example, in Slovenia, while in Italy it could be done by the Regions;
- electric mobility needs policies and actions at least at the inter-municipal level, preferably regional level;
- the regional level must deal with governance: directing bottom up, top down and horizontal processes (between public administrations, between these and the stakeholders); create guidelines and laws of principle.

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Table 4: Transnational Information Plattform / Data (*Table host: Bruno Grandjean (PVF)*)

Highlights :

There were different approaches among the participants :
- PA-centered approach
- market-centered approach : the private sector should be in charge

2 kinds of information :
- static information : useful for planning the trip in advance
- dynamic information : to be used during the trip – the most useful kind of information, but by far the most difficult to get

There are already many information platforms :
- it is difficult to choose in a specified situation when you are in a place you do not know (= when you do not know which platforms are the most relevant on this particular territory)
- few of them are really operating on a AS level, it may be interesting to contact them to discuss

All E-CS are not managed / financed by Public Authorities : private networks (especially supermarkets : IKEA, LIDL…) and individual shops are an important ressource, some of them being free of charge. Not always easy to impose data sharing on them.

A transnational platform is difficult to create on an official basis, because it should involve country-to-country discussions, which are often slow and complicated.

Not only official sources of data (national compulsory platforms) may be used, but also crowdsourcing by the users.

Ideas expressed

Reliability of data problematic : it is very important that the information about availability is updated in real-time

Need an open platform to check and make a reservation : 10 minutes reservation ? Or 15 minutes ?

Difficult to have opendata in Lombardy
Difficult to work on someone else's territory
Application is private sector – Original data is public

Maybe Google will pay E-CS owners to get the information

Need a guide for PA to suggest a role for them in terms of data collection : we cannot do more than suggest, only a guide

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Lots of mapping applications in Europe but do not share dynamic data : only static. Should collect dynamic data

Have to assess the existing private platforms that cover AS : is there a lack ?
At national level (EU directives) need to have a national registry
* from the top national report
* from the bottom motivate municipalities

Enable open data and let the market work : better than PA. Do not even invest the effort to do that (but open data is not easy for a PA). If there is interest somebody will do that

If there is a good business model you might charge for the data : what is the value ? Who is the owner of the data ? E-CS private or E-CS public ? The role of of PA is just to enable the existing data to be available

It exists in Milano a platform called E015 : difficult to collect the data from the different providers. Have to explain why it is a good idea to be in it. The platform collects info about tourisme : advertisement on the bills

The E-CS owners want to increase the utilization of their E-CS : it is in their interest to share information. Let everybody know that it is there. The best way to do so is a single point of entry.

Define a minimum requirement of data set ? Which are the consequences of the role we assign to PAs ? In the project we have a top-down approach. In Germany municipalities are independent : not possible to impose.

In Bavaria and Lombardy you are obliged to register in the platform if you want public funds for your E-CS

What kind of data the PA have to provide for free ? What mapping means ? Only position ? Type of sockets ? Provider ? Availability ? What kind of data should the PA provide ? There are different layers.

Lots of providers exist : the role of PA is to promote the topic and show what is going on in the region. Mapping across the region could be of interest : connect the maps ?

Real-time data. There exists in Italy an organization which has the data once a day but it is not allowed to give the data to anybody : need to change its role ? From a legal point of view it is not possible to share the information.

Traffic information : can be matched with charging sensors. It is a sensitive information to give real-time traffic information. What is real-time ? A few seconds (grid) or 15 minutes (user) ? What is the information : the E-CS is in use ? The parking spot is free ?

Users may be able to give back information but it is a double-sided communication

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Smartphones have a way of giving information. In Google maps there are all the restaurants and hotels : do not need to do anything, Google will do it. A unique application is too difficult.

There are too many platforms : some are more or less complete, some are not.
National platforms : complete ? (only public E-CS ? Supermarkets in national platforms ?)
Private platforms closed on 1 area ? (not all)

A solution has to be customized for a certain country ? Not so easy to have a common tool. The ministries are not so capable to work on a common tool : only each one on its territory

Only one energy provider in Slovenia operates a nation-wide platforms

The users should create their own platform = from the base (already exists : ChargeMap, Openchargemap)

Platforms are at the same time similar and not : different IT systems
Work at the E-CS operator level or at national level ?

Guarda Uno only has information on the web page of the system. No other transmission of information.
Difficult to choose the best platform. Sometimes need to register or pay a fee to access.

First write a plan for building E-CS
Google may be used for the first level of information, then create a link to the operating platform for immediate use. Better if national or local platform ?

The E-CS operators donot like that the customers can upload information into the platform (plugsurfing…) = want that their E-CS have the right information (which is supposed to be the info given by the operator, but sometimes not updated !)

You must plan your trip in advance = you adjust your trip accordingly. You may get information about plug type, access, payment, situation… in advance

In Slovenia 3 or 4 different portals with slight differences : some E-CS are in some platforms and not in some others. See on the platforms only E-CS within Slovenia and not those in Italy : need a wider vision.

3 WORKSHOP (PARALLEL SESSIONS) AT THE PUBLIC EVENT AT THE PARTNER MEETING IN BAD REICHENHALL (19.10.2018)

At the public event at the partner meeting in Bad Reichenhall, two parallel workshops sessions – one in English, one in German – were organised.

They started with very short presentations, that were meant to give some insights (I) and examples on the first step of introducing e-mobility – having a plan and general idea of the benefits and interests related to the establishment of charging infrastructure. Thereafter initiating a discussion (D) on what is really important to realize these plans.

English session: Fostering e-Mobility and interoperability

10.15 - 12.30	**Fostering e-Mobility and interoperability** English Workshop	Dr. Johann Schwenk, Bayern Innovativ
	Insights	
	e-Mobility and interoperability in Bavaria	Dr. Johann Schwenk, Bayern Innovativ
	Carinthia on its way from e-Mobility to multimodality – interoperability beyond e-mobility	Gerald Miklin, Land Kärnten
	Interoperability - Best practices from France	Bruno Grandjean, Pôle Véhicule du Futur
	e-Mobility and interoperability in Slovenia,	Matjaž Vrčko, Slovenian Ministry of Infrastructure
	e-Mobility in Italy at a glance	Rep. Piedmont Region
	Joint work group *Ways to foster e-Mobility and interoperability* *Harmonization across borders* *Joint approaches and integration into a sustainable mobility system*	Moderator: Dr. Johann Schwenk, Bayern Innovativ

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e-mobility and interoperability in Bavaria		
I	Questions: 1. Are there already real solutions for interoperability in European level or what is missing? 2. Do we have the right level of standardisation (charging, communication, plugs, vehicles) what is missing? 3. Are there solutions on local, regional, & national level and can we use them in terms of European level? 4. Are there challenges on local, regional & national level and how can we solve them for the use on European level? 5. What can be done on the political framework to enable to help strengthen future interoperability? 6.	Dr. Johann Schwenk, Bayern Innovativ
Carinthia on its way from e-mobility to multimodality – interoperability beyond e-mobility		
I	▪ Efficient mobility means integrate e-mobility in the overall mobility system such as public transport and reducing cars ▪ Role of the PA: guidelines and concepts, knows the mobility system, implementing infrastructure in the beginning than transfer it to private companies when the market is ready ▪ supporting every player: e-mobility is more than cars: bicycles, motorbikes etc. ▪ Develop a strong connection to the public transport system, e.g. E-CS at P+R ▪ Users need to adjust: evolution of the customer ▪ Electrification of the public transport system: not with batteries, but with In Motion charger and overhead system ▪ economic used drones/ passenger drones are predicted for the future: not only street mobility but all forms of mobility are important ▪	Gerald Miklin, Land Kärnten
Interoperability – Best practice from France		
I	▪ France: 30.000 publicly available e charging point, around 5 vehicles per charging point ▪ Every charging station should be registered and the information must be available, but only for publicly funded charging points it's a must, for private operators its optional ▪ In theory it works well but some information is not updated or relevant, there are some problems: up to date or real time information is important and is lacking currently	Bruno Grandjean, Pôle vehicule du futur

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e-mobility and interoperability in Slovenia		
I	▪ No interoperability among different providers: mostly free usage but different cards needed ▪ Number of electric vehicles is not growing as fast as desired, there are a lot of public charging stations, but the cars are still too expensive ▪ Slovenia is a small country, most daily trips could be done when users are charging at home, public e-cs is mostly not needed by those ▪ If users want to buy electric vehicles the waiting list is up to 7 months ▪ due to the diesel gate a lot of Slovenian are buying diesels from Germany, because Germans are partly buying new – non diesel – cars ▪ Car sharing in major cities ▪ National strategy on alternative fuels → maximum levels of CO2 for 2025/2030 ▪ Action Plan	Matjaž Vrčko, Slovenian Ministry of Infrastructure

E-mobility in Italy at a glance		
I	▪ Retrofitting diesel vehicles in electric vehicles ▪ Regional level: guidelines ▪ National level: interoperability as an obligation by law ▪ Interoperable of payment without a contract ▪ Information and service for citizens, tourists, users of electric vehicles ▪ Rise of awareness of costumers ▪ Public transport: electric busses: no standardization of charging	Rep. Piedmont Region
D	Tourists coming to Italy and Slovenia. Italy managed to implement credit card payment as ad-hoc payment. Slovenia has problems convincing the operators to do that as they argue it is too expensive. Italy established common criteria in the law. Regional guideline for interoperability in Piedmont published recently. Public tender managed by municipalities to insert e-cs with ad-hoc payment method	Blanka Odlacek

Joint work group		
D	▪ Are there already real solutions for interoperability in European level or what is missing? ▪ Do we have the right level of standardisation (charging, communication, plugs, vehicles) what is missing? ▪ Are there solutions on local, regional, & national level and can we use them in terms of European level? ▪ Are there challenges on local, regional & national level and how can we solve them for the use on European level? ▪ What can be done on the political framework to enable to help strengthen future interoperability?	Moderator: Dr. Johann Schwenk, Bayern Innovativ; Lars Holstein, Wirtschafts-förderung Berchtesgadener Land; All

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German session: e-Mobility and interoperability – concept to realisation

10.30 - 12.30	**e-Mobility and interoperability – concept to realization** German Workshop (discussion in German - whisper translation to English)	Ludwig Karg, B.A.U.M. Consult
	Insights	
5 min	e-Mobility concept Berchtesgadener Land – Traunstein	Manuel Münch, Landratsamt BGL
5 min	e-Mobility concept Ebersberg	Hans Gröbmayr, Landkreis Ebersberg
5 min	Business models for public authorities and enterprises	Prof. Sandra Krommes, Hochschule Rosenheim
	Joint work group *Theory to realization* *Regional concepts as part of a bigger strategy* *Potential cooperation*	Moderator: Ludwig Karg, B.A.U.M. Consult

e-mobility concept Berchtesgadener Land - Traunstein		
I	Manuel Münch presented the e-mobility concept Berchtesgadener Land – Traunstein which identified 4 key target groups, which have to be covered: companies (with large numbers of employees), residential areas (with multi-storey buildings), hotels and tourist destinations. Additionally it identified the approximate number and destinations of needed charging stations according to 3 different e-mobility growth and supply scenarios. Furthermore the concept includes plans to realize a joint back-end system for the region which can be joined by public authorities and companies. The idea behind it is to allow easy access and monitoring of the data provided by the chargings stations. So far the plans are that 2/3 of the charging stations are built by hotels and companies. Next to the public authorities also the electricity network providers need to join in for the enhancement of the grid. During the presentations already a question came up: Who wants to build and join the back-end system? → The regional authorities together with local authorities, but also companies are invited to join and expressed interest.	Manuel Münch, Landratsamt Berchtesgadener Land

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E-mobility concept Ebersberg		
I	Hans Gröbmayr shortly described the region Ebersberg as not very touristic and with a large commuter flow to Munich. As an illustration how e-cars and conventional cars use ressources he told a short story which demonstrated that e-cars are much more efficient. The approach in Ebersberg differs from the one in Berchtesgadener Land in that way, that they start with a smaller number of charging stations. Starting with 10, slowly advancing step by step to 35. As studies show that most charging processes (80%) are taking place at home, where the cars are parked for extended periods of time, charging at home and at the employers is a very important part of the total charging infrastructure. He stated: "We are sure that companies are the starting point." Companies are places where cars are parked all day long and where so far little has been done in terms of sustainability. Establishing e-mobility in companies has its advantages e.g. employee retention. In the region are also rental flat buildings, which are not easy to tackle. There are plans to establish an e-mobility-pilot (Elektromobilitätlotse). The municipalities are willing to invest and the backend shall be approached together with Munich. One important thing would be considering e-mobility during the urban land-use planning. Comments from the audience: in Austria there is already a regulation that empty conduits need to be considered. In Klagenfurt there is a regulation that 10% of the parking spaces in buildings need to have conduits to enable charging in the parking space. In Lower Austria there is a regulation that there needs to be charging infrastructure foreseen for new buildings.	Hans Gröbmayr Landkreis Ebersberg
Business models for public authorities and enterprises		
I	Prof. Krommes stressed that there a strong changes in the mobility sector and that the customers is always in the focal point of the mobility ecosystem. Lots of players involved in the old system are afraid of losing contact to their customers due to the changes in the system. There is a fear to lose the customer interface and get a different position in the value added chain. The main question is what is the motive behind investments from companies such as Aldi, what is their business model. The motives can be various such as services for the public, customer loyalty, investment in the future etc. When investing in charging infrastructure it is important to ask oneself the right questions: What is my customer promise? What is the added value? Who is my target group? Aldi for example is interested in customer loyalty and especially loyalty of those customers with higher spending capacity as Aldi is going through a transformation from cheap to a more premium oriented market. An example in the USA shows that charging infrastructure can bring new customers with a higher spending capacity and that those customers stay actually longer and spend more money.	Prof. Sandra Krommes, Hochschule Rosenheim

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	Lidl another retailer invests in charging infrastructure in Austria targeting those customers living in multi-storey building without their own parking space and thus no charging infrastructure at home. Especially retailers benefit from the combination of big roof areas for PV and lots of parking spaces. Question from the audience: Is it okay to treat municipalities and public services as equal? Even though communal services are economic services, if they are owned by the municipality, a communal interest is behind it.	
General discussion		

I	How do we build the charging infrastructure of the future?
	  ▪ Needs to be a smart system
	  ▪ B2B thinking is a must – considering whether a brand must be visible
	  ▪ Necessity for ad-hoc payment and interoperability
	  ▪ Backend for the interconnection with a smart grid is important
	  ▪ Smart charging can be a topic but is of greater importance for the providers, customer only wants the system to work without any unnecessary hustle
	
	Smart grid and smart mobility – what to consider?
	  ▪ Grids today do not have the dimension and technical requirements for the future mobility, to ensure future mobility a smart component and interface will be necessary
	  ▪ Could be useful to consider the smart aspect when setting up a backend even though it is not established yet to ensure the system to be future-proof → necessity to think 15-20 years into the future → problem that such a thinking is not foreseen and supported by funding
	  ▪ Energy sector and public authorities should lobby for according changes in the legislation
	  ▪ In most cases though also the interface at the vehicles side is also missing
	
	What are tasks of the municipalities?
	  ▪ Using existing standards and forward-looking thinking when investments and regulations are made
	  ▪ Cover e-mobility in their own fleets and communal buildings (public, schools, residential..)
	
	What do the municipalities need?
	  ▪ Guidance and overview on existing providers
	  ▪ Planning security
	  ▪ Independent adviser without self-interest
	  ▪ Knowledge where charging stations are
	
	What is to be expected?
		Moderated by Ludwig Karg, B.A.U.M. Consult

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- In the middle of the next decade an exponential growth of e-cars is to be expected
- Fight for the best sites which has already started – it is expected that unprofitable sites are covered by the municipalities → potentially more sites can be considered profitable when car fleets are converted
- E-cars will communicate with the chargings stations

What has to be considered when choosing a back-end system?

- Ensure long-term support by the service provider
- Building one's own system is not worth it
- Needs a certain dimension/number of charging stations monitored

What potentials can be unlocked by e-mobility?

- Touristic municipalities believe it is raising attractiveness, but a joint message is still missing and also the knowledge which measures are really fruitful → e-mobility concepts can contribute to answer these open questions
- There may be a potential to make inner cities attractive again

Current developments?

- Car manufacturers request from their retailers/garages to install charging infrastructure → increasing visibility of e-mobility
- Car-sharing providers are partially sceptical towards e-mobility

General comments

- It is crucial whether companies can be convinced to invest, so the public authorities need to provide less public infrastructure
- Bureaucratic barriers need to be reduced
- More awareness raising for young people is needed

At the end of both sessions, all participants gathered for a final wrap-up.

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