e-SMART
1st Transnational Living Lab
Some requirements

Please make sure that:

• Your microphone is mute
• Your camera is off (band-width)
• You ask questions and make comments using the « chat » tool
Diversity
Agenda

• Project challenges
• 5 RLLs : main features
• “Towards a Smart Territory Data Platform”
• Some SHs present their own views on project issues
• Q&A time
Welcome by LP
Today’s meeting scope
Today’s meeting ...
The team: 15 Partners and 57 Observers

Italy

Lead partner - RSE Ricerca Sistema Energetico
• Piedmont Region - DIRECTION Environment and territory
• Veneto Strade SPA
• The smart city association Italy (TSCAI)

Slovenia
• BSC Kranj RDA of Gorenjska
• ACS Automotive cluster of Slovenia

France
• Cluster Pôle Véhicule du Futur
• Auvergne-Rhône-Alpes Energy Environnement Agency

Germany
• University of Applied Sciences Kempten
• Climate Alliance
• Italienische Handelskammer München-Stuttgart
• County of Munich

Austria
• City of Klagenfurt
• Codognotto Austria GmbH
• Stadtwerke Klagenfurt Corporation

23/09/2020
What we want to face: main challenges
Project Concept Framework

**Project scope**

Foster e-mobility in the fields of LML & LPT and support coupling with related energy planning.

**Project outputs**

- **Policies (Road Maps)**
  - Regulation and € in favor of Privates as per their needs and expectations

- **ICT (Toolkit)**

**Project instruments**

- **Public Admins**
  - Data, SW, Biz Models for Pas’ capacity building to E-MOB and energy planning

- **PPP**

- **Living Labs**

- **Survey**

- **Desk Analysis**

23/09/2020

1st e-SMART Transnational Living Lab
A open minded space where to collect the public and private sector needs to foster e-mobility in the LPT and LML sector and to test innovative model of cooperation

A tool to collect the public and private sector needs to foster e-mobility in the LPT and LML sector and to test innovative model of cooperation

A tool to collect and to share data among different actors

A tactical and operational ready-to use guide that supports public and private decision makers of AS to evaluate and decide which are the necessary measures to be adopted for planning and deployment of an adequate charging infrastructure and support the diffusion of electric LPT and LML.

is a practical instrument, in the framework of smart grid and territory, for PAs to define & assess energy impacts of ECS planning in the LPT and LML sectors in relation to energy grid extension and modification. It will consist of digital tools, guidelines and user’s manual.
Project Concept Framework

French Living Lab
German Living Lab
Italian Living Lab
Austrian Living Lab
Slovenian Living Lab

Transnational Living Lab
What is the next?

Let’s know something more about:

• how the e-mobility can foster a territory to become SMARTer
• The work in progress inside the 5 Regional LL before starting a transnational discussion!
5 Regional Living Labs

- Austria
- Italy
- France
- Slovenia
- Germany
Towards a Smart Territory Data Platform: From feasibility study, to Region-wide framework, to Pilot

Raffaele Gareri, Chief Digital Officer, City of Rome
Bas Boorsma – Professor of Practice, Urban innovation || The Smart City Association Italy (TSCAI)
Stakeholders’ time
Q&A time
Whom to contact?

For more information, please contact

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Klagenfurt is the Capital of the Province Carinthia
- ca. 100,000 inhabitants
- ca. 160,000 daily population
- ca. 120 km²

Vision → 90% reduction of GHG emissions by 2050

Focus
- How does e-mobility at LML and LPT level affect the electricity grid?
- Which activities must be undertaken to ensure that the network is up to the challenge?

Results and Outputs will be considered for further grid expansion planning in the City of Klagenfurt!
Local Public Transport (Concept)
Last Mile Logistic
Power demand landscape

BEV: cumulative battery capacity (in classes) | N=279

BEV: fastest charging time (only AC available) | N=134

BEV: fastest charging time (DC up to 80%) | N=95

Sept. 23, 2020
Summary

• Held 1. Austrian RLL Stakeholder Workshop on 18.6.2020; Topics:
  - E-Grid simulations on e-bus charging
  - Shareholders: prospects, plans, goals, use-cases
• Study on LML vehicles in the Austrian market, prospects, technical characteristics (power demand for charging)
• Study on LML-hubs in and around the City of Klagenfurt
• Study on LML infrastructure demand (ongoing)

• Survey / Questionnaire (ongoing)
1st meeting

29th of May 2020 ...online
Italian RLL: numbers

Invitation… each PP his SHs

Preparation

Simple rules and a very brief agenda

80 participants
Italian RLL: Contents

More than 20 questions

...and when request 32 questionnaires
Overview of the French Regional Living Lab
• RLL workshop on June 18th
• Several interviews started and still on-going
• Regional stakeholders
  • Municipalities
  • Car sharing companies
  • Transport companies
  • Research institutes
  • OEMs
  • Energy
Local Public Transport (zoom AURA)

**Urban busses**
- 36 electric urban busses used in 8 municipalities
- 143 trolleys in 2 municipalities
- 1 autonomous shuttle under test

**First feedbacks**
- Expensive costs
- Reduced autonomy
- Appreciated by users (noiseless and clean)
- Operation issues on the older vehicles (connexion with charging point, battery, etc.)
- Need to know more about market offers

**Car sharing**
- 36 car-sharing stations with BEV or PHEV
- 67 BEV and PHEV

**First feedback**
- Difficulties for users to launch correctly the charging
- Lack of interoperability
- Costs, business model
Local Public Transport

• Connection with OEMs:

  ALSTOM APTIS  
  (Hangenbieten)

  LOHR – CRISTAL  
  (Duppigheim)
Still in its infancy due to a lack of adapted vehicles (size + autonomy), things are changing (up to 16 tons)

Mainly driven by legislation: Zero Emission Zones (Lyon, Grenoble, Strasbourg) => an urgent need of new developments

Charging needs mainly in depots

On-street charging needs difficult to assess
1st e-SMART Transnational Living Lab meeting
Wednesday, 23.9.2020

Dunja Podlesnik, project mng
PP06 – ACS Automotive cluster of Slovenia
Regional LL Slovenia

Already done:
- Kick off meeting
- PP web meetings
- Communication strategy and project web page/visualisation
- 2 regional LL meetings
- 2 slovene partners meetings
- 1 meeting with external expert regarding prepared questionaire
Regional LL Slovenia

Next steps:
- 3rd regional LL meeting
- Interview conduct with SH
- Deepening relationship with projects SH
- Inclusion of all Slovenian SH relevant for the project
Regional LL Slovenia

Expectations:

- Intense collaboration with PPs and SHs
- Formalisation of project results and positive outcomes
- Profound sharing of information relative for the project between PPs and SHs
German Regional Living Lab

PP15 – County of Munich
WHO WE ARE:

- County of Munich (Sarah Zaiss)
- University of Applied Science Kempten (Fabian Dolp)
- The Italian Chamber of Commerce (Martina Agosti, Guiseppe Curró)
- Climate Alliance (Marie Kleeschulte, Katrin Jurisch, Janina Emge)

→ Area of Competence: Local Public Administration, Trade Relations (GER-ITA), Communications, Climate Protection Projects, Processing of Mobility Data

+ Observers
+ Stakeholders
STAKEHOLDER & OBSERVER

Local Public Administration 66%

Research & Innovation 13%

Logistic 7%

Public Transport 6%

Energy & Smart City 5%

E-Mobility 3%
WHAT HAPPENED SO FAR?

• Kick-Off Event on 23rd of April 2020 (14 participants)
  ➢ Result: Division of stakeholders into a logistics and a public transport group (process still ongoing)
• Survey Planning Phase June & July 2020
  ➢ Inform Stakeholders about the upcoming Survey (data collection)
  ➢ Setting up dates for Online Meetings
• Survey: “Interviews” in August & September (ongoing)
Findings: Last Mile Logistic

We still know very little about concrete plans for the nationwide implementation of electric Last Mile Logistics. There are well-known manufacturers (MAN), large operators (DHL) and a particularly strong presence of the charging station manufacturers (EnBW), but in the cities and communities surveyed, little is planned and hardly anything has been implemented so far. Also the political focus is increasingly on the expansion of hydrogen power in freight logistics.

➢ We need more insights: drivers? Business cases? Use cases?
Findings: Local Public Transport

The public transport sector is registering increasing projects and their implementation. E-bus lines and analytic tools for implementation are particularly strongly promoted. Also smart city and mobility as a solution projects are existing or in the starting blocks. The cities and municipalities are focusing especially on the argument of CO₂ reduction and traffic relief. Deficits in funding opportunities for digitization companies and better opportunities for data exchange were mentioned.
NEXT STEPS

• Generating important topics & content for upcoming Living Labs
• Increase & optimize the Network
• Strengthening the exchange with related projects
CONTACT

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Towards a Smart Territory Data Platform: From feasibility study, to Region-wide framework, to Pilot

Raffaele Gareri, Chief Digital Officer, City of Rome
Bas Boorsma – Professor of Practice, Urban innovation || The Smart City Association Italy (TSCAI)
E-SMART: Conditions for success across Alpine Region

- The Acceptance of the wise insight that Government cannot do this Alone
- Framework that sets conditions for private sector vendors
- Interoperability (Business level, data level)
- Shared model of Data Exchange
“...but I’m really dealing with public transport. Busses. What does this have to do with me?”
“...but I’m really dealing with public transport. Busses. What does this have to do with me?”
INTEROPERABILITY:

- EV Charging Systems
- Payment systems
- Geo Data Systems
- User Interfaces
- Operating Systems
- MaaS Platforms
Example: Smart Flanders, Belgium

- 13 Municipalities across Flanders region collaborating in a smart region initiative

- Shared Framework(s) resulting in:
  - Reference Architectures
  - ‘Book’ of curated interoperable solutions
  - Open Data Platforms
  - Shared test-beds

- Clustered Approach, cities specializing on a domain or topic

- IMEC: Lead Orchestrator. IMEC is a Not-for-Profit Innovation outfit
INTEROPERABILITY

Framework of Conditions for RFIs, RFPs, PPPs

Agreed territory-wide framework, platform and technical means for the collection, analytics and (re)use of data
Framework for Interoperability
EXAMPLE

List of EV Charging Vendors
Compliant with e-SMART Framework on data, interoperability, standards

Non-Compliant
Framework for Interoperability

EXAMPLE

List of EV Vendors Compliant with e-SMART Framework on data, interoperability, standards

Advantage

Each municipality or jurisdiction can partner and procure independently, knowing that e-SMART framework compliant vendors will allow for a seamless, interoperable environment across the entire Alpine region.
INTEROPERABILITY

Framework of Conditions for RFIs, RFPs, PPPs

Agreed territory-wide framework, platform and technical means for the collection, analytics and (re)use of data
Digital Needs: Data, Platforms, Sensors
Digital Needs: Data, Platforms, Sensors (with different players involved)

Especially when building multi-modal, demand driven mobility systems, different systems, data and providers need to be able to come together in one digital environment.
e-SMART will require a data strategy and a data ‘platform’. But what data do we actually need with purpose in mind?
Data, Considerations

» **Open Data** (transparency, innovation)

» **Internal data flows and usage** (efficiency, better services, insights, inventory)

» **Use of External data** (new insights, innovation)

» **IoT** (use of digital infrastructure, sensors, optical sensors)
Converged Data, Relevant Across Domains

City projects

- Climate
- Safety
- Lighting
- Mobility
- Tourism
- Health & Hygiene

DATA

- People movement (origin – destination)
- Traffic flow/count
- Weather
- Events
- Consumer patterns
- Pollution
- People profiles

Private Sector

- Retail
- Transport
- Energy
- Entertainment
- Tourism
Use case of Data Platform in Rome:

Economic Development
Use case of Data Platform in Rome:

Rome mobility ecosystem

- ATAC
- Private Operators
- IT & Mobility Departments
- RSM

Mobility

Control Room
- City departments
- In-house companies
- Private Operators

Integration
- Unified eTicketing
- Sensors for parking
- Open Ticket Machines
What we propose...

Towards a Smart Territory Data Platform:
Feasibility study
Region-wide framework
Pilot
Benefits

**Government**
- Effective Procurement resulting in services, solutions and architectures that are interoperable
- Data driven policies
- Attracting private investment
- Higher quality, greener mobility for Alpine region

**Private Sector**
- Business Development
- Facilitate partnerships with public sector
- Enable and sustain local companies
- Scale!

**Territory Citizens**
- Better, greener, multi-modal mobility
- More (green and digital) services
- New job opportunities
- Enhanced quality of life
What is a Regional Data Platform?

» A unique and comprehensive source of services and information for main stakeholders of a region to facilitate development of green and digital, public and private services according to new business models

» A place where stakeholders, referring to different application domains, can join, share and build new attractive Services to citizens and companies

» An extremely powerful tool for planning social and economic development of the regional community
How different regions can share knowledge and costs?

- Developing a joint feasibility study which defines how to design and implement a data platform for all regions
- Defining a shared framework for the regional community able to sustain independent implementation in each region
- Implementing a real pilot for those regions interested to test the platform
Implementation process

- **FEASIBILITY STUDY**
  (DESCRIPTION)
- **COMMON FRAMEWORK**
  (DATA PLATFORM)
- **PROOF OF CONCEPT, PROOF OF VALUE**
  (DESCRIPTION)