European Commission

Horizon 2020 demos for EV deployment



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Pilot City Forum
Guangzhou 15/11/2019

ELVITEN Strategic Objectives (1)

ELVITEN

- Develop replicable usage schemes of EL-Vs for owners, sharers and light goods deliverers based on the deployment of :
  - EL-Vs innovative parking and charge services
  - EL-Vs sharing services
  - Support ICT tools to facilitate the usage of EL-Vs (Fleet Monitoring application, Booking service, Management system for e-charging hubs) and to motivate **the usage** (Digital Coach app, Serious Game app, Incentives Management Smart Card).
  - Appropriate policies and incentives





- Organise long-term demonstrations of the ELVITEN usage schemes in 6 Cities






ELVITEN Strategic Objectives (2)

- Create a big data bank of real driving and usage data and users' experiences and opinions
- Derive guidelines towards EL-V manufacturers and Planning Authorities
- Develop business models for EL-V sharing, parking and charge services
- Demonstrate the transferability of the ELVITEN usage schemes in Follower Cities or areas
- Achieve a mind-shift among users, so that they become **e-Owners**, **e-Sharers** or **e-Deliverers**.

Demo 4 – Mountain Routes



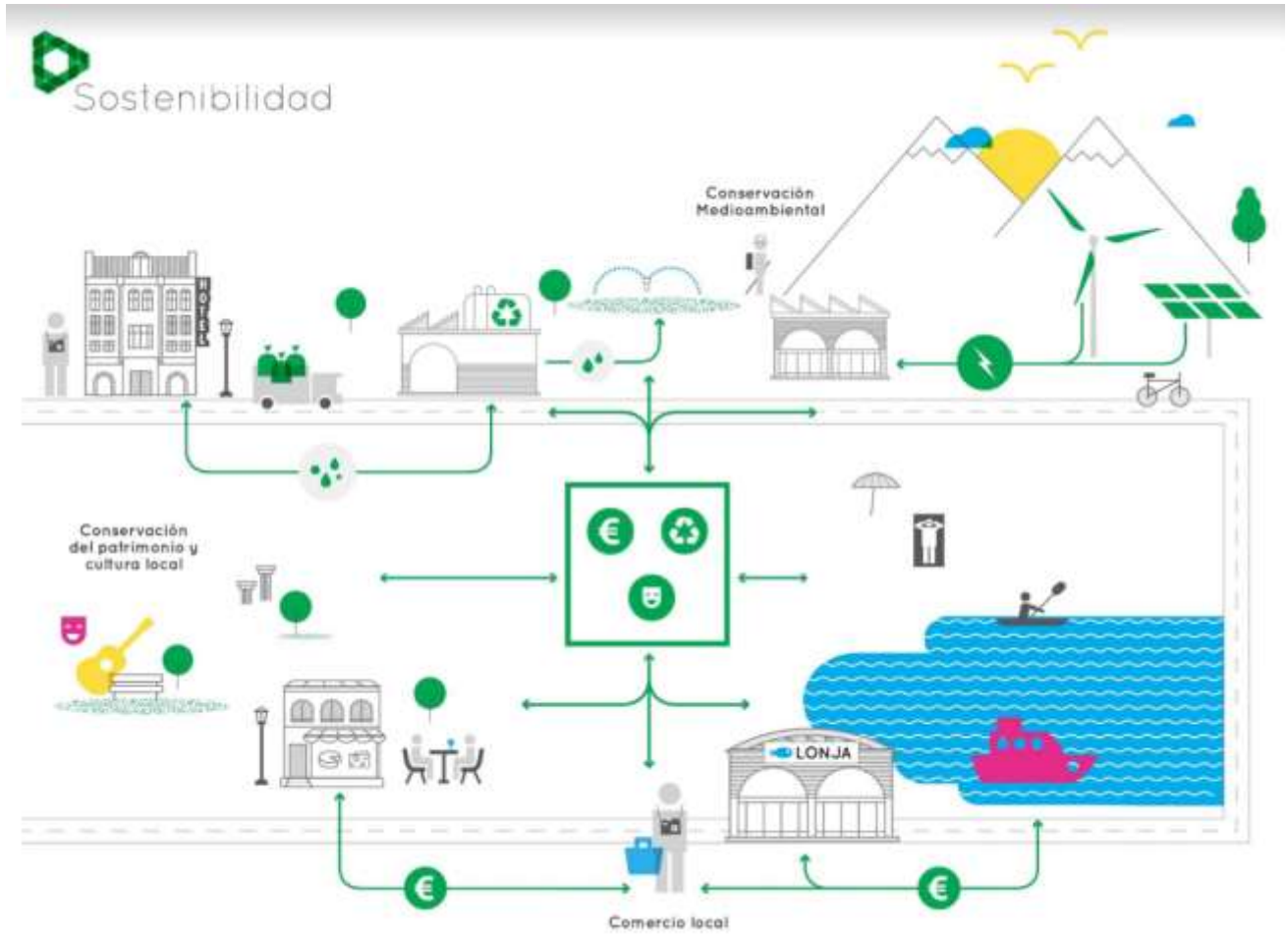


Demo 4 – Charging stations for e-bikes



Demo 4 - Joined Smart Tourist Destination Network

Smart Destination



SAMAY v1.0 Overall readiness for the First Iteration

Navigation App

- Targets:
  - Guide the tourist / municipal official by:
    - An optimum speed profile
    - Optimization of energy consumption
    - Create a gamification system
      - Rewards
      - Ranking



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SAMAY v1.0 Overall readiness for the First Iteration

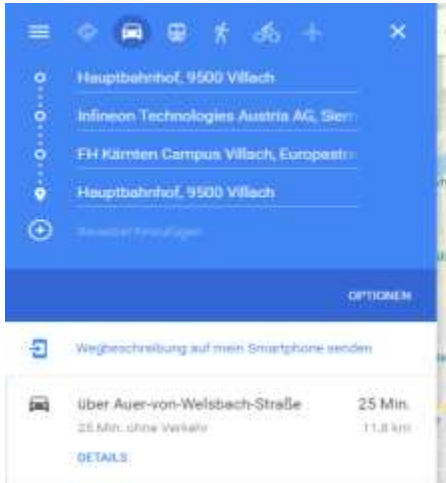
SAMAY (V1.0): Gamification approach

- Current finished route score (a)
- Ranking (b)
- Awards screen (c) (depending on how the driver follows the advice given by the application.)
- The statistics screen of all the routes made (d)

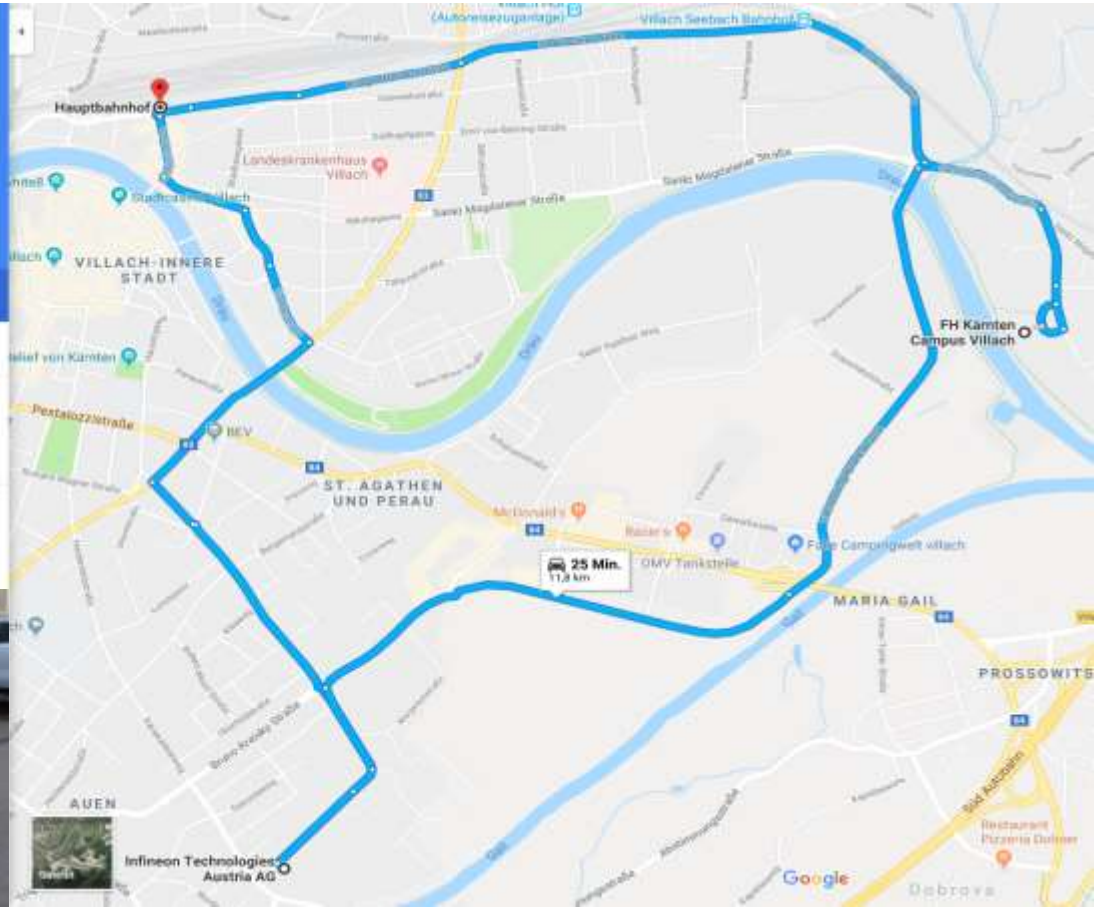


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three stations for two quadricycles





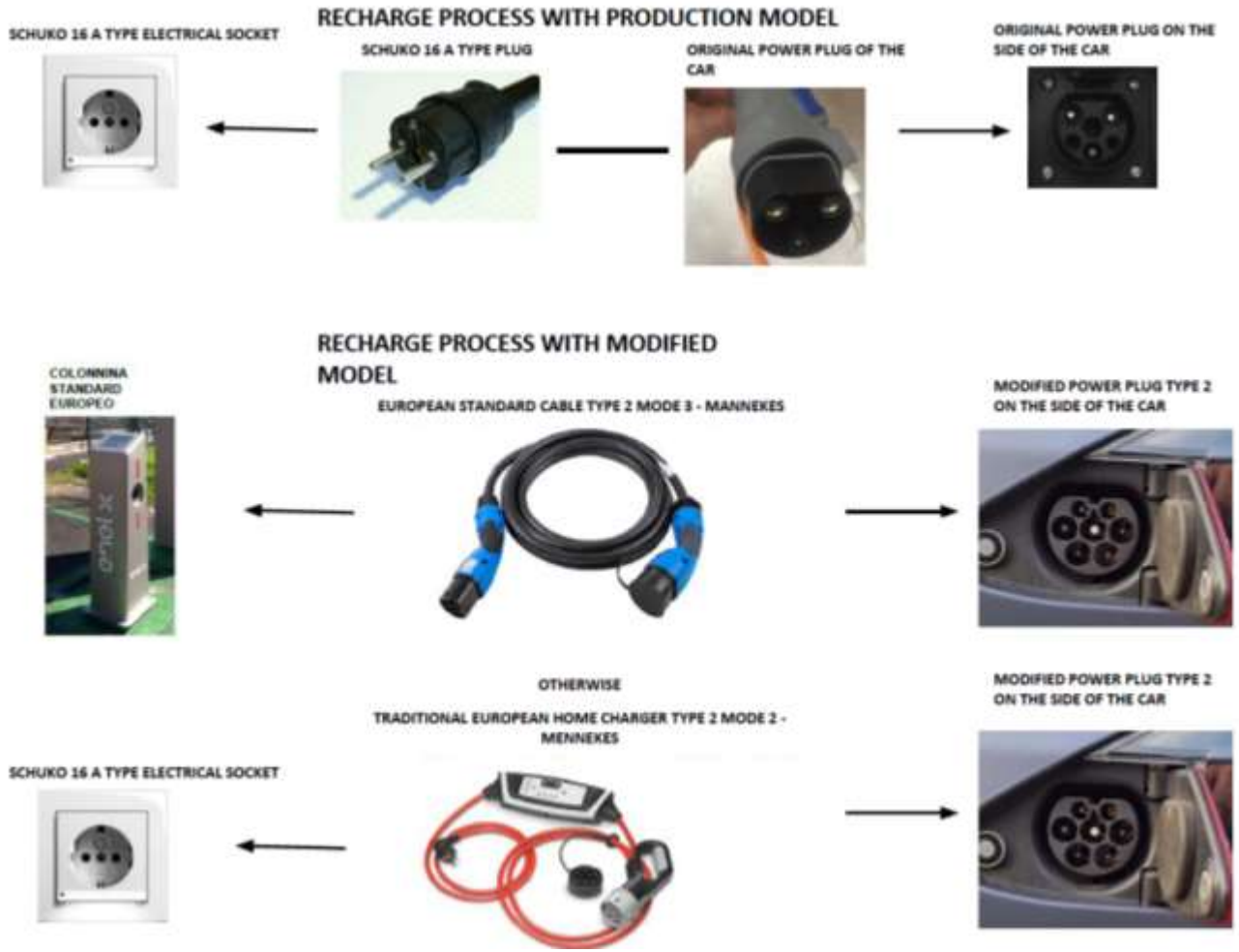








alteration from Schuko to lockable European standard as fundament for self-service renting of the quadricycles



keyless remote opening via app as fundament for self-service renting of the quadricycles

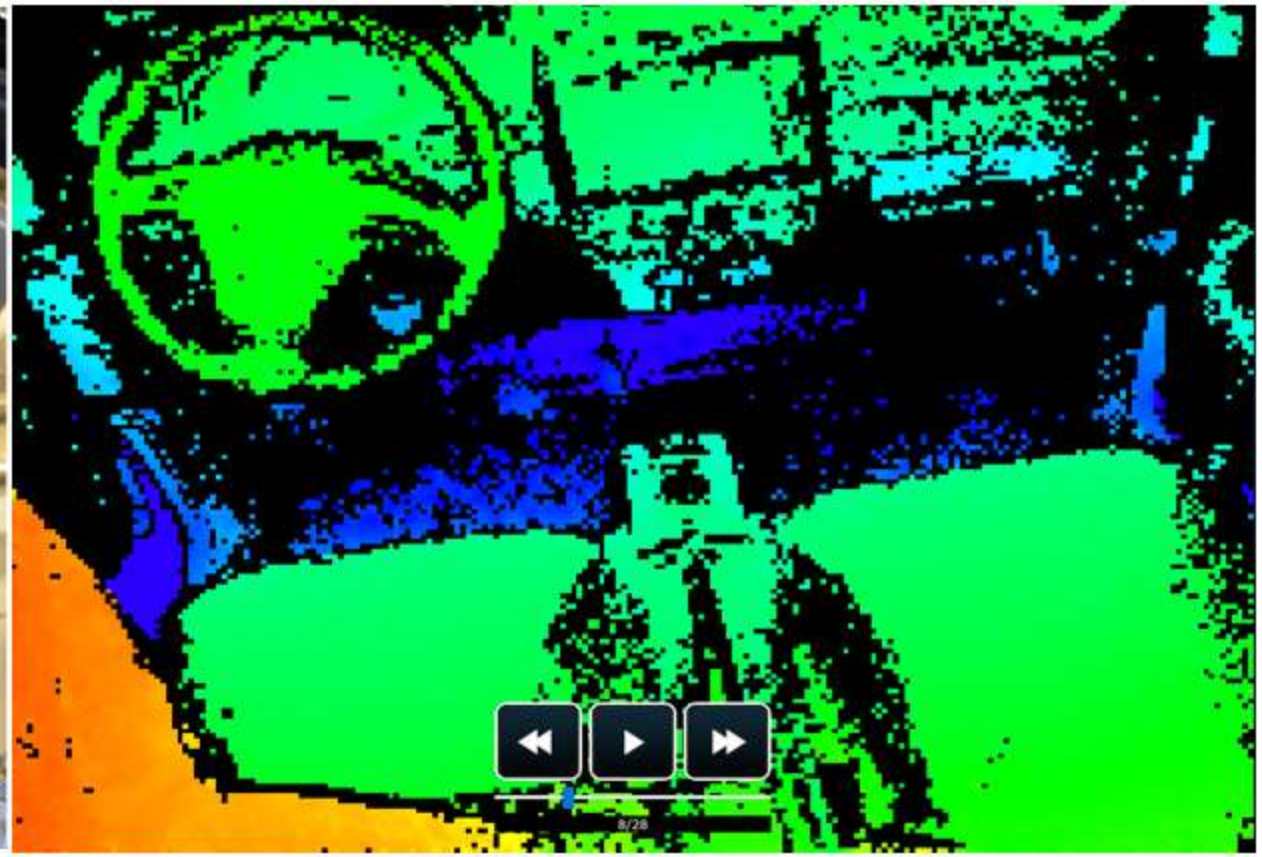


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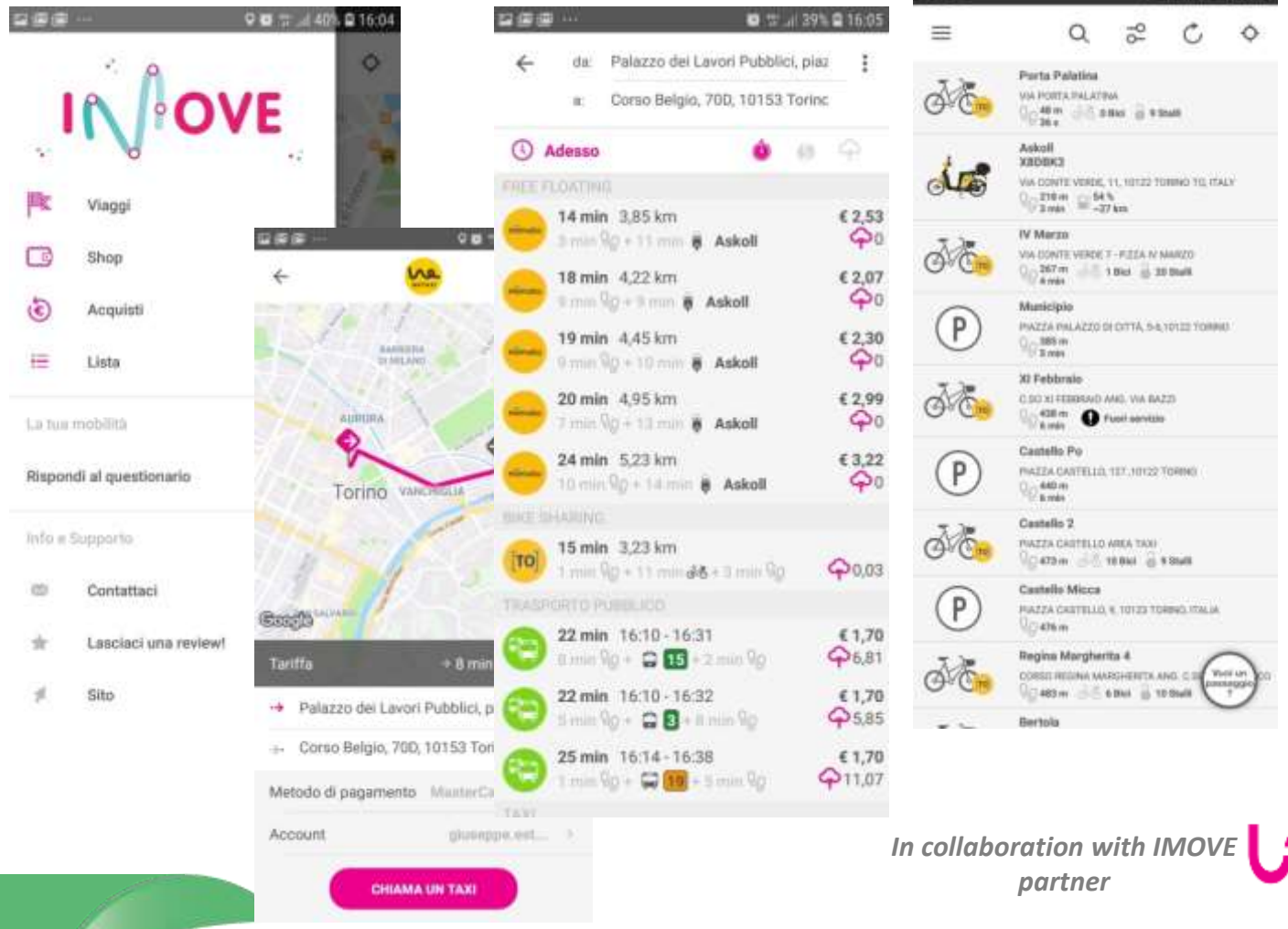


automatic inside detection using ToF camera of forgotten things and interior vandalism





Demo 1 – Achievements/Highlights



The City of Torino is testing the technology platform, accessed - for free - through a mobile app:

- **Route planner, booking and payment (and validation) for the following means of transport: local public transport, bike sharing, car sharing, taxi;**
- **Collection of anonymous and aggregated data on users, regarding use of the app, mobility choices made, kilometres travelled;**
- **Monthly corporate billing for costs for work to work mobility-job of employees, during the trial period.**

In collaboration with IMOVE partner

Demo 1 – Achievements/Highlights





Cross-country demonstration

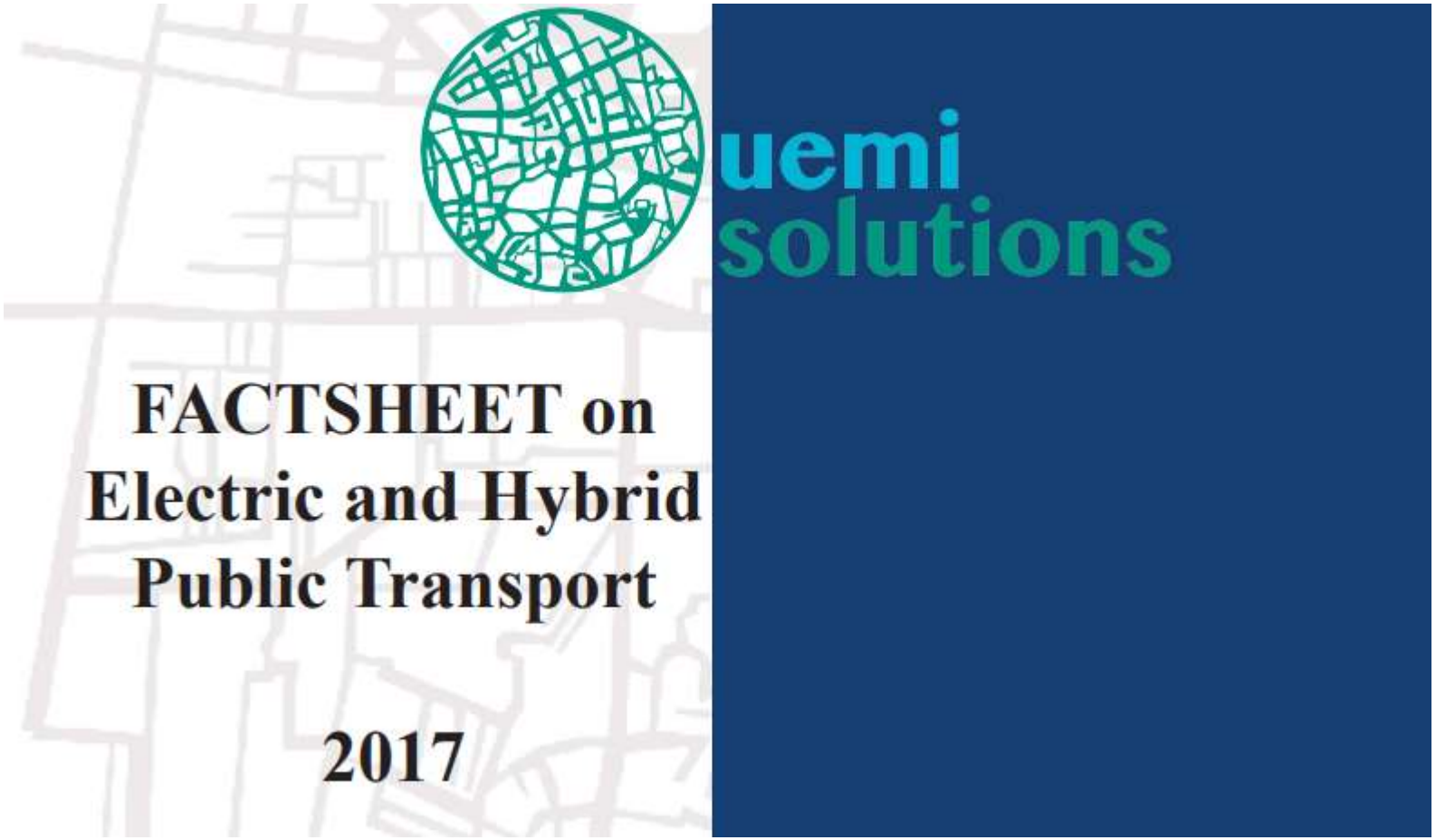
- Study usability, acceptance, experience of real users with the NeMo developments
  - ✓ Cross-provider / border authorisation and payment
  - ✓ Itinerary Planning



NeMo impacts

- **Improved attractiveness of EVs**
  - The majority of stakeholders and drivers in the NeMo validation activities were more satisfied with services in the NeMo Hyper-Network than with others in the market
- **Services interoperability and coordinated EV recharging**
  - NeMo enables the creation and provision of interoperable electromobility services creation, data availability in common format and secure data exchange among actors
  - Example NeMo services for coordinated recharging show promising results, for example the “MicroGridInfo” service saves around 8% of the total charge point energy costs
- **Contributions to standardisation**
  - The NeMo Common Information Models (CIM) is an open and living protocol that has been submitted to relevant working groups
  - External actors have actively cooperated with NeMo, i.e. Honda has joined as Associate Partner and participated in demonstrations, 7 Pan European Roaming Agreements were signed
- **Improvements in the cost-performance ratio of EV**
  - Increase of the EV theoretical range due to NeMo: during the final cross-country drive the mean distance travelled between charging points was 160 Km for interconnected charge points instead of 80 Km.

A history of cooperation with China: Solutions, Solutions+



InCo Flagship on Urban mobility and sustainable electrification in large urban areas in developing and emerging economies

1) *Develop tool boxes for advanced management strategies towards private and public electric mobility (management of vehicles, charging infrastructure, integration of operations);*

2) *Comparative demonstration activities and pilots in the field of electro mobility in cities in Europe, Asia, Africa and CELAC (min. 4 demonstrators) to strengthen cooperation; road public transport for both passenger and freight;*

3) *Implementation concepts to scale up the demonstration activities (sustainable planning, financing plans, replication in other cities)*

4) *Reference models of the mobility system for short and long term benefits contributing to EU policy goals (climate, competitiveness);*

Rethinking transport
Towards clean and inclusive mobility
27–30 April 2020



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