Dal trasporto collettivo al concetto di “Mobility as a Service”: indicazioni dal progetto EU H2020 CIPTEC

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EU H2020 Project CIPTEC

- Definition of **new and innovative concepts and solutions to Urban Public Transport**
- **to improve the marketability and customer oriented approach**

**7 European countries**

**12 partners** grouped in four (4) main categories:
- **Universities** and research bodies
- **Tech transfer** consultancies and agencies
- **Public Transport bodies**
- **“Umbrella” organizations**: EMTA -European Metropolitan Transport Authorities, EFP- European Passengers Federation

- From **May 2015** until **April 2017**

**SOME OF THE ACTIVITIES ALREADY CARRIED OUT BY CIPTEC:**
- Analysis of **emerging trends affecting PT demand** (T1.1)
- Mapping of **different customers’ and potential users’ needs** (T1.2)
- Survey of candidate **innovations** in terms of end-users services, cooperation and business models in PT and other sectors
Mobility Challenges in Italy and Europe

THE WELL KNOWN:

- **70-80% commuter trips** are made by cars; 85%-90% have 1.2 **occupant** (in Italy, more than 650 cars x 1000 inhab.)
- Private car use **covering small distances**: 50% under 5 Km, 25% under 2 Km,
- **Pollution** over thresholds in many towns (Milan, Rome, … )
- **Congestion** situation is steady despite the “EV” and e-mobility policies, incentives and promotion

- **PT services** are oriented to **major axis of demand**
- **PT Operator/Authority** are facing a **limited resources** situation
- **Bus service represents around the 70%-80% of PT** in urban areas
- The **PT services is no relevant** in particular in small-medium urban areas

**mobility offer** is currently still affected, among the others by:

- **Fragmentation** in terms of ticketing, info, marketing, accessibility and cooperation
- **Ineffectiveness** in providing integrated solutions able to comply with the current challenges and the emerging needs and requirements
Urban Mobility Governance: Main Trends

- Sustainable Urban Mobility Planning - SUMP
- ITS and ICT infrastructures
- Qualification and diversification of PT services
- Emerging new mobility services: ridesharing schemes (bike/car sharing, vans sharing, car pooling, etc.)
- Urban logistics services (last mile distribution, UCC, etc.)
- Coordination/cooperation among the involved actors
- Integration of different modalities and service interoperability
- Data integration, info and booking services,..

In any case “Smart Mobility” is based on an efficient and extended (Flexible) Public Transport

One Approach or Model doesn’t fit all cities.....
Specially in the case of small and medium historic towns

• ACTION PLAN on Urban Mobility (2009)
• WHITE PAPER(2011)
• URBAN MOBILITY PACKAGE (2013)
• SUMP ACTION(2014)
The emerging mobility needs

THE NEW ONES:

- **Mobility demand varied** in time and in typology. **More erratic** and less systematic
- The “own car” priority among the youngers is decreasing
- The “**usability of the services**” concept is the driver of new lifestyle in Europe
- The internet and social media are pushing “**Virtual mobility**” and higher level of service accessibility options
- **Ride sharing schemes** are fast growing in terms of ICT platform and services on the network

OUTCOMES FROM SURVEYS TAKING PLACE IN A NUMBER OF EU PROJECTS:
- CIPTEC, MINDSET, ……
New Shared Mobility Options

ICT 2.0: pre-on trip **access, tailored** services, **real time** control, resources **coordination, cooperation/networking**

- **Free Floating** car-sharing schemes (Car2Go, DriveNow, Zipcar, Enjoy, Twist, E-vai etc.)
- Dynamic **ridesharing** services (BlaBlaCar, Flinc, UberPool, etc.)
- **Peer-to-peer transport** arrangement schemes (Uber, UberPop, Lyft)
- **New forms of “institutionalized hitchhiking”**

- Ride sharing services surely are **alternative to car** ownership !!
- Are seen as **“substitutive”** rather than complementary vs PT services (specially in small-medium urban areas)
- **Confirmed by the Role of car manufactures** (Daimler, BMW)

The ride sharing model is not new !! Refer DRT scheme
DRT applications are active since the 1996 !!!
The "ride-sharing" services are not new! What is new is the easiness and effective capability to realize the "shared" model thanks to ICT 2.0.

The ride sharing services should be considered part of FTS family.
PT services measures

“FTS services”

- Feeder services
- DRT services (low demand area/period, “etc.”)
- Services for specific citizen groups
- last mile services,
- Different “ride sharing” services

To be planned with the overall PT services

Conventional PT services

- PT network based on dedicated and priority corridors → approach BHLS-BRT
- Interoperability with other modalities and services (e-ticketing, user information ...)
- Management of the quantity/quality of the PT services acting on regularity, speed, reliability and comfort ...
Public Transport Main Intervention Axes

- BRT-PT Corridor
- Integration
- Interoperability
- Accessibility

CONTROL OF SERVICE RELIABILITY AND QUALITY

Within an adequate institutional framework and Public Transport service contract

Conferenza Finale Progetto Life+ PERHT, Treviso, 17 Marzo 2016
**AVM Key role in PT services**

Controlling and acting on regularity, reliability, headway, … service quality and performances

“Ancillary” to other systems specially for **e-Ticketing**
User Information and Traffic Light Priority

Relevant role in services integration and MaaS

Fundamental for service contract monitoring allowing performances collection and reporting
Some considerations:

- **e-Ticketing/Smart Card, AVM, and User information** systems are the base systems for any **MaaS** concept implementation.

- Usually, **in Europe**, these systems are set up and operated under responsibility of **PT Operator/Executive** or **Agency**.

- Many times these systems are **extended** (mainly **smart card**) to other services and rarely are planned with **“city approach”**.

- The role of **PT Operators** is **fundamental in MaaS** as the backbone in terms of data provider, system responsible and services provider.

- **MaaS “Alliance”** must **involve strongly the PT Operator/Agency**.
Mobility Governance and InfoMobility chain

Guarantee of: Reliability of each system
Data quality
Clear operation procedures

DATA INTEGRATION

Service provider

B2B interfaces (standard) for data accessibility

Data in standard format (Co-Cities)

Data interfaces and data standards

Local Data

Data at Regional/Urban Level

Data at Local Level

Journey Planner Multimodal Regional

MIIC

Time Table and real time info PT AVM

Parking Data

Traffic Data and other systems UTC

DATA from Other Services Car and Bike sharing,

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Approaching MaaS in Small and Medium Towns

**ITS component**
- The set of ITS systems should be based on a strong organization structure and efficient operation procedures
- Need of standard interfaces and system performances monitoring
- Necessary of data certification procedures and contract prescriptions/rules
- Clear responsibility for the clearing, services provision, open data
- Need a an ITS plan as part of the Sustainable Urban Mobility Plan

**Public Transport Component**
- Requalification of PT services integrated with FTS
- Integration of ride sharing services in FTS family: Which services, scale and support for specific area?
- FTS to be designed in large
- Coordination of different operators, services and resources

Towards the Flexible and Shared Mobility model
MaaS = ITS + FTS Agency
Flexible and Shared Mobility Agency

- Integration of data and platform
- Provision of integrated mobility offer
- Managing common payment tools and clearing procedures
- Real time information and user feedbacks management

Resources optimization for road services
- Support to Cooperation among different operators
- Integrated design and operation of Conventional PT service overall FTS and ride-sharing services in
- Data certification and Service validation

How to make possible the creation of alternative platform for managing ride sharing services ??
Some considerations on shared services and FTS

• Policy-makers should understand that “shared mobility services” are not the “solution” but must be considered part of FTS

• PTA should plan FTS as relevant part of PT services

• Recognize the FTS sector as component of intermodal Mobility offer

• PTA should use the “ride-sharing” approach in the FTS services design

• The FTS could be “large” in terms of scale, coverage, frequency respect the served area

• Policy Makers should define clear regulatory and financial schemes

• Policy-makers should consider FTS in their decisions on PT an Mobility policy specially in the SUMP

- Which regulation framework for the service provider?
- How to guarantee the quality in the service provision?
- Which role for the PPP approach and business model?
Conclusions

- MaaS is a “process” to be realised gradually depending on mobility objectives and the existing systems/services
- The risk is to use new acronym” to hid “unsolved ” challenges: organization, operation, service quality, commercial aspects, contract management and system reliability monitoring
- It is necessary an effective cooperation among the different Authorities/Operators responsible of the different systems
- Don’t forget the role of ICT/system providers! Not secondary!!
- Don’t forget to plan ITS in relation with SUMP
- Which dimensions for MaaS !! For the European SM Towns is not easy to implement MaaS.
- How to appoint specific systems in MaaS in terms KPI indicators?
- Which role for the PPP approach and business model?
Thanks for your attention!

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