Technology Innovation for Cooperative Mobility Services: the *In-Time* Commonly Agreed Interface and *Co-Cities* Feedback Extension

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Technologies for cooperative mobility services

Multi-modal Real-time Travel & Traffic Information

- Reliability (up to date information about delays…)
- Comfort (short transit, improved waiting time…)

→ positive impacts on travel behaviour: **co-modality**

→ European openservice market development

→ **supporting policies**
  - EU Digital Agenda (single digital space)
  - Open Data initiatives (e.g. OGD)
  - IST Directive

RTTI on smartphones: a growing market
(Frost & Sullivan, 2011)

- 280,000 users in Europe (DE, FR, ES, IT, NL, UK)
- 2,2 millions by 2017
Supporting sustainable mobility example scenario

End User desired destination

RTTI service provider route planning (car, walk) on-trip navigation

Local Systems PT Journey Planning PT info (static, dynamic) Parking info (static, dynamic) Traffic events
In-Time EU pilot

www.in-time-project.eu

Application context

- Local RTTI contents/services by Local Authorities (Regional, city level)
  → base services
- Independent Travel/Traffic Information Service Providers (TISPs)
  → Value-added services
- An open service environment
  → e.g. Internet of Services ....

Current issues and barriers

- different local technologies
- different data formats
- different access services
- need for individual B2B interfacing
In-Time EU pilot

In-Time target view

- ensure **harmonised** access to data and services
  - use of **EU ITS standards**
  - bundling all transport info in one city

- enable **interoperability** of end-user applications (TISP services) wrt
  - local data/service resources
  - cross-site

- Piloting in 6 EU cities
  - Vienna, Munich, Florence, Bucharest, Olso, Brno
Cooperative RTTI services across EU
Enabling interoperability across sites, content/service sources and service providers (TISPs)
Enabling technologies
Open Data, harmonised B2B service interface

• In-Time Commonly Agreed B2B interface (CAI) for data/service access
  – multi- (co-)modal services
    → different mobility domains
  – no “fit-for-all” model
    → different EU ITS standards
  – a harmonised, multi-standard data model

• The In-Time Follower City Package
  – usable data model + service interface specifications
Pilot validation
end user TISP services in European sites

Local Journey Planners & Services

Munich services ▶ data

Vienna services ▶ data

Brno services ▶ data

Bucharest services ▶ data

Oslo services ▶ data

Florence services ▶ data

In-Time B2B CAI

Registry/Catalogue

Travel & Traffic Information Service Providers

www.corp.at
Pilot validation

end user TISP services in European sites
Cooperative mobility services adding users’ feedbacks in the service chain

Mobile web 2.0 services, mobile communities Apps, crowd sourcing: an emerging market?

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Waze mobile community
www.waze.com
Adding user feedback services

- Cooperative Mobility
  - information / validation of services
- End-user devices
  - In-vehicle
  - hand-held (i.e. PNDs, smartphones)
- Validated by Local Authorities
  - Feedback processing
- Evaluation of cooperative mobility services
  - impacts, options, ...
- Piloting in 6 EU sites
  - Vienna, Munich, Tuscany Region, Bilabo, Prague, Reading
  - roadmap for EU cities and regions
Co-Cities user feedbacks

user Apps + backoffice processing

End user Apps

City Authorities
backoffice systems
Conclusions

Smart Mobility for Smart Cities: a role for “smart” information delivery

- **Open Data** access initiatives → a key requirement
- **Multi-modal** integration → smart, sustainable travelling
- An **open market** for applications → business enablers
- **Citizens empowerment:**
  → *let them be an actor in the information / service provision chain !!!*
Thank you for attention !!!

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