Innovative paradigms to support Mobility as a Service and TM2.0 ecosystems

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What is Mobility as a Service, aka "MaaS"

“Integration of various forms of transport services into a single mobility service accessible on demand”

• Users as the core of transport services
• A single application to offer tailored mobility solutions
• Integration of multiple transport modes into seamless sequences of trips
• One payment channel
• Provide a more convenient, sustainable and cheaper alternative to the private car use
TM2.0 platform

- An ERTICO innovation platform launched in 2014
- Now groups 40 members from all ITS sectors
- Focus on new solutions for advanced interactive traffic management
- Vision: enabling vehicle interaction with traffic management
TM2.0 Mission

The future of Traffic Management is to build upon deployment of connected vehicles and travellers to:

• Achieve **convergence** of mobility services and **Traffic Management**
• Create **synergies** between actions of the individual travellers with the collective mobility objectives
• Bridge the innovative developments in the vehicle and in the traffic management (new business)
From silos to eco-systems

- Traffic Management
- Navigation Service Providers
- Mobility Operators (public transport, sharing, para transit)
- Content & Application Providers
TM2.0: an enabler of MaaS

- From integrated to interactive: synergies between actions of individual travelers with collective mobility objectives
- Accurate network status forecasting
- Information sharing at all levels
- Towards road automation (e.g. TLA, Road Works Info, Special Vehicles Co-operative Priority Request)
Convergence of two TRENDS: TM2.0 & MaaS

MaaS is an enabler of TM2.0

TM2.0 uses MaaS as a tool for multimodal demand management ➔
FROM Road Traffic management and TM2.0
TO
Multi modal Management (TM2.1 Framework)

MaaS can use TM 2.0 (TM 2.1) to enable MaaS product ➔
Involve car as part of the product but promote modal shift &
Facilitate seamless usage of urban and interurban road
MaaS Stakeholders: from a basic view to TM2.0

- **City / Transport Authority**
- **Content/Application provider**
- **Payment provider**
- **Mobility Operator (car sharing, parking)**
- **Public Transport Operator**
- **Navigation & In-Vehicle service provider**
- **Traffic Manager**
- **MaaS Issuer**
- **TM2.0**
- **Public Transport Operator**
- **Mobility Operator (car sharing, parking)**
- **Payment provider**
- **Content/Application provider**
What is “MyCorridor” project

- EU project (H2020 programme) on Mobility as a Service in a multimodal European cross-border corridor
- Starting 1st of June 2017 to last 3 years
- Project size: 3.5 M€
- 17 partners across Europe from different sectors
MyCorridor: focus and Starting Point

- Drive the “vehicle world” towards MaaS
- Starting point is TM2.0 platform
- Extend TM2.0 by **integrating in a single platform** pan-European data sets
- Offer multimodal urban and interurban services: seamless, flexible, reliable, user-friendly, all-inclusive, cost-effective and environmentally sustainable.
My Corridor Approach

- My Corridor solution should cater for various scenarios of MaaS issuers types (Authority, Public sector mobility operator, Private sector mobility operator, Application service provider)
- My Corridor solution should support the main business scenario of a global MaaS aggregator interacting with a wide variety of local/regional/(other) global stakeholders and MaaS systems
- My Corridor platform should be an Open Tool to accommodate different and variant business and strategic objectives of the stakeholders (as well as relevant incentives towards the end users), such as:
  - Influence travel behaviour
  - Engage the traveller to participate in the User Community as a social responsible person
  - Increase system usage and profitability
- My Corridor platform’s tools to achieve these goals are:
  - Overall Business Rule Editor, which is based on previous agreements between MaaS aggregator and among all stakeholders
  - Loyalty functions
  - TM2.1 (a proof of concept to be executed in the project), a paradigm towards multi modal traffic management with the use of My Corridor
Evolution of TM2.0 in MyCorridor (TM2.1)

• Extend TM2.0 concept from drivers to all categories of travelers
• Combine individual traveller objectives together with network wide management strategies in a win-win scenario
• Travelers become entirely part of the data supply chain
• TM2.0 towards MaaS acts in each transport field
• Explore scenarios of TM2.0 at the boundaries of the vehicle world in all trip phases:
  – Pre-trip (trip planning, booking, purchase of mobility tokens)
  – On trip (routing information, C-ITS, e-mobility, parking information, multi-modal interfaces, car-sharing, park & ride)
  – Post-trip (analysis of travel patterns, analysis of eco-behaviour, incentive policies)
MyCorridor Use Cases

• **Basic TM2.0 business scenario:**
  Traffic data from TM Operators + navigation service providers = more post processed traffic data for TM measures

• **Interaction of TM2.0 with MaaS:**
  TM measures distributed by service providers through MaaS Platform

• **Enhanced Traffic Management scenario (TM2.1)**
  TM Operators and MaaS Operators manage travel demand (e.g. park and ride, car sharing)
cross-modal and interactive travel management

- Cooperation among Traffic Management (TM) operators and MaaS operators
- Common Interactive Transport Management measures provided by TM operators across different transport layers
- Transport demand managed in advance and multimodal way
A practical description of TM2.1 demonstration

• Exchange of traffic information between service providers and Traffic Manager (Basic TM2.0 scenario)
• The Traffic manager should provide a “recommendation event” to MyCorridor system; The recommendation event is triggered by a scenario based on real time or forecasted conditions/incidents, on a specific path, corridor or area, and should have a clear objective: Less cars on the network or less/no cars through specific path

• Pre trip scenario:
  – The driver requests trip planning by MyCorridor system. The user requires car related route
  – MyCorridor system associates the recommendation event to the requested trip of the individual user, and use method(s) to influence user behavior; The prime method is information: real time or forecasted traffic information as well as proposal for alternative modes of travel to be purchased by the user. Other methods: loyalty and/or financial incentives (besides information) regarding the proposed alternatives

• On trip scenario:
  – The system recognizes mode of transport being car. MyCorridor system associates the recommendation event to the actual trip of the individual user, and use method(s) to influence user behavior; There are two scenarios:
    – Virtual VMS: when the user’s car enters a pre-defined geo-fence then an in vehicle, pre-defined message is presented to the driver proposing re-routing if such an action has been proposed by the Traffic Management System
    – Park and ride message: when the user’s car enters a pre-defined geo-fence, AND if there is parking availability based on real time occupancy data then an in vehicle, pre-defined message is presented to the driver proposing nearby parking and public transport information from a designated park & ride lot spot.
Thank you for the attention!

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