INTIME: Intelligent and Efficient Travel Management for European Cities, an ICT PSP Pilot B project

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“Implementing the Digital Agenda. The CIP ICT Programme: achievements and perspectives”,
EC and the Presidency of the Italian Council of Ministers, Digital Public Administration & Innovation Dept.
Rome, 1st December 2010
• **In-Time**
  - ICT-PSP, Call 2008 (ICT-PSP.2008.2.2)
  - ICT for adaptive urban transport management infrastructure and services

→ **Intelligent Transport Systems** (ITS) for efficient travel and energy efficient transport

- Increased traffic in Europe’s cities has resulted in
  - chronic congestion (delays, pollution)
  - economic loss of nearly 100 billion Euros per year (1% of the EU's GDP)

- Urban traffic responsible for
  - 40% of CO₂ emissions and
  - 70% of emissions of other pollutants arising from road transport

Main policy objectives for transport and travel
- cleaner,
- more efficient, including energy efficiency
- safer and more secure

Frame Data

- **In-Time**: Intelligent and Efficient Travel Management for European Cities
- Pilot B (CIP-ICT PSP-2008-2)
- Project with 22 Partners, co-ordinated by AustriaTech
- Project budget: 4.58 Mio EURO, of which 2.29 Mio EURO funded by the EU
- Kick-off: 1st April 2009
- Project duration: 3 years
- Research background: FP6 eMOTION

www.in-time-project.eu

www.emotion-project.eu

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Partners

- Pilot Cities:
  - Vienna
  - Florence
  - Bucharest
  - Brno
  - Munich
  - Oslo

- Service Provider
  - Local traffic data
  - TISP

- Validation

- Dissemination

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ITS focus

Strategy to improve mobility

- **Multi-modal Travel and Traffic Information Services**
  - Reliability (up to date information about delays…)
  - Comfort (short transit, improved waiting time…)

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

→ **pan-European multimodal Real-Time Travel Information**
In-Time context

Travel Information Services
- a growing market
- some global players (e.g., Google, TomTom, ...)
- many local (national) solutions

Current issues
- different local technologies
- different data formats
- different services
- need for individual B2B interfacing

Transport End Users
Travel Information Service Providers
Content/service integrators
Local content/service providers

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In-Time view

Approach

- harmonised access to local data/services
  - standardised B2B interface between local data providers and TIPs
  - use of EU ITS standards
- bundling all transport info in one city
- easy-to-access service to real-time information
- data and service interoperability across sites

Commonly Agreed Standardised B2B Interface (CAI) (standards, contract, terms of use)
Service interoperability

- real time information
- planning
- booking
- etc. …

Commonly Agreed Standardised B2B Interface (CAI) (standards, contract, terms of use)

Travelling In-Time in European cities

Commonly Agreed Standardised B2B Interface (CAI) (standards, contract, terms of use)
In-Time End User services

Dynamic Multimodal Journey Planning

Mandatory Core Services
- static road traffic information
- dynamic road traffic information (higher road network)
- static parking info
- static public transport information
- walking information

Core Services
- dynamic road traffic information (secondary road network)
- dynamic PT info
- dynamic PT journey routing
- dynamic parking info
- enhanced walking planning
- dynamic cycling planning

Add-on Services
- dynamic freight traffic information
- dynamic POI info
- dynamic traffic event information
- dynamic weather information
- static and dynamic flight information

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Multimodal travel support: an example

End User desired destination

TISP route planning (car, walk) on-trip navigation

RDSS / Loc. Systems PT Journey Planning
PT info (static dynamic)
Parking info (static, dynamic)
Traffic events

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In-Time B2B interface:
underlying standards and enabling technologies

1. The **In-Time Data Model**
   - encoded in Unified Modeling Language (UML),
   - supports several EU ITS standards
     (e.g. DATEX 2, TPEG, IFOPT, SIRI, JourneyWeb, OpenLS, ISO 19000 and OGC standards, ....)
   - ISO 19100 Geographic Information Standards (OGC)

2. **Web Feature Services (WFS) / Data Access WS**
   - base services for access to In-Time content
   - existing service standards from OGC and OASIS.
   - service models encoded in **WSDL documents** describing the interfaces.

3. **Exchange format** (encoding) for In-Time data
   - defined by an **Application Schema** of Geography Markup Language (GML)

4. **XML Schema Descriptions** (XSDs)
   - concrete tool usable for implementation
The running Pilot

- 6 pilot sites
  - Brno, Bucharest, Florence, Munich, Oslo, Vienna
  - Local (public) content providers
  - 3 private TISPs + 1 global player (Teleatlas)

- Start of operations
  - November 2010
  - 250 test users in each site, open to public

- Anticipated benefits
  - co-modality: around 3%; as private users will be enabled to compare transport modes and make a choice.
  - improved customer acceptance of PT services.
  - higher mobility of people across different transport modes through the provision of accessible and reliable information services
  - reduction of road traffic congestion
  - use of open standards as enabler for RTTI services market

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Short term developments

- **The In-Time Forum**
  - potential *follower cities* to join In-Time
  - Launched in **May 2010**, Amsterdam (*Intertraffic 2010*)

- **Cooperative Cities initiative**
  - ICT PSP Call 4, 2010, Pilot B, due to start **January 2011**, coordinated by Austria Tech

  - 3 In-Time sites (Florence, Munich, Vienna) + Bilbao (ES), Prague (CZ), Reading (UK)

  - enhancing In-Time by **cooperative mobility** services
    - **Vehicle 2 Infrastructure** communications (*Floating Car Data*)
    - Research background: FP6 COOPERS IP
Thank you for your kind attention!

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