European Standards for Intermodal Traveller Information

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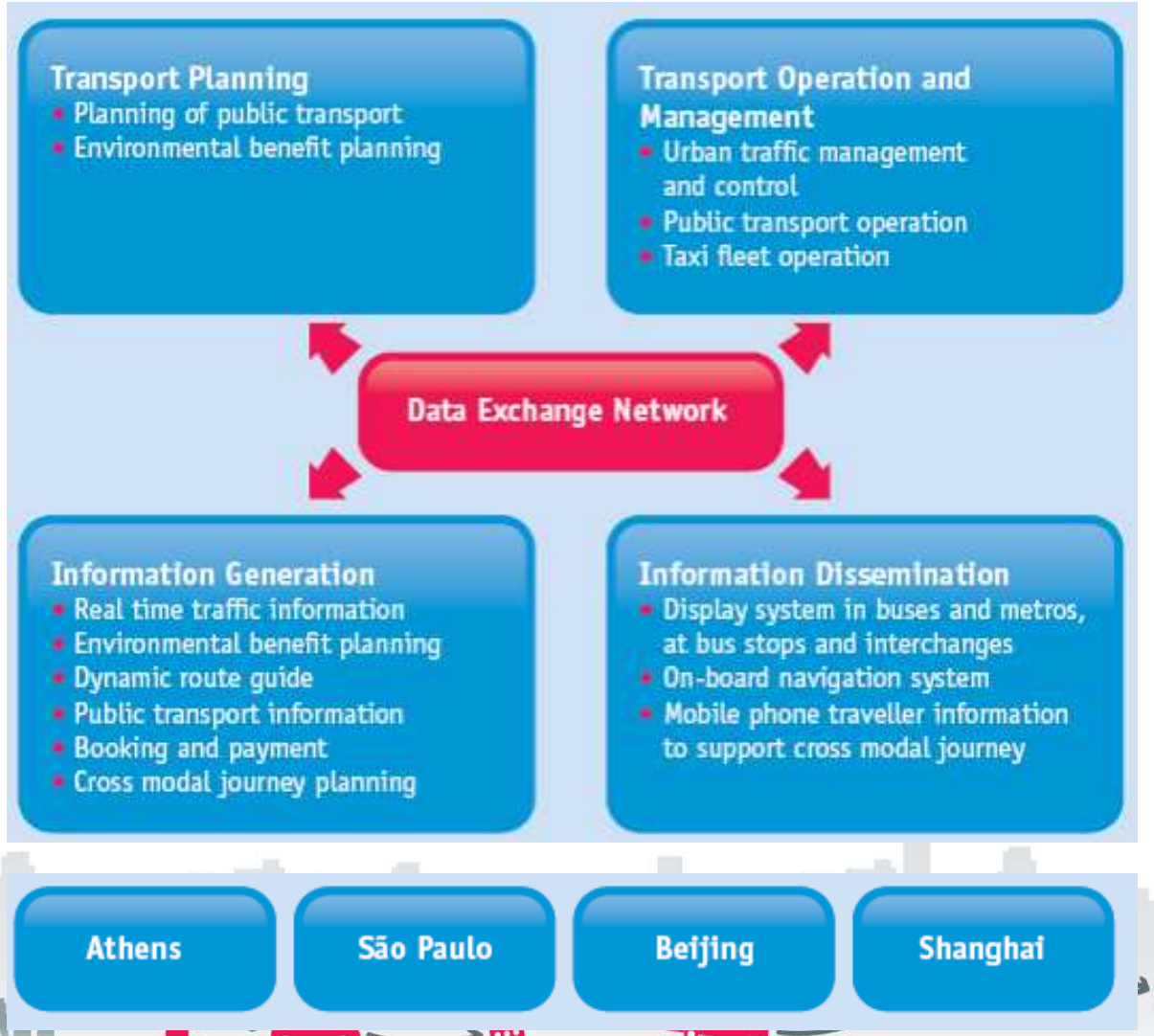
PTV AG
Orlando, October 17th 2011

www.viajeo.eu

Viajeo activity spaces

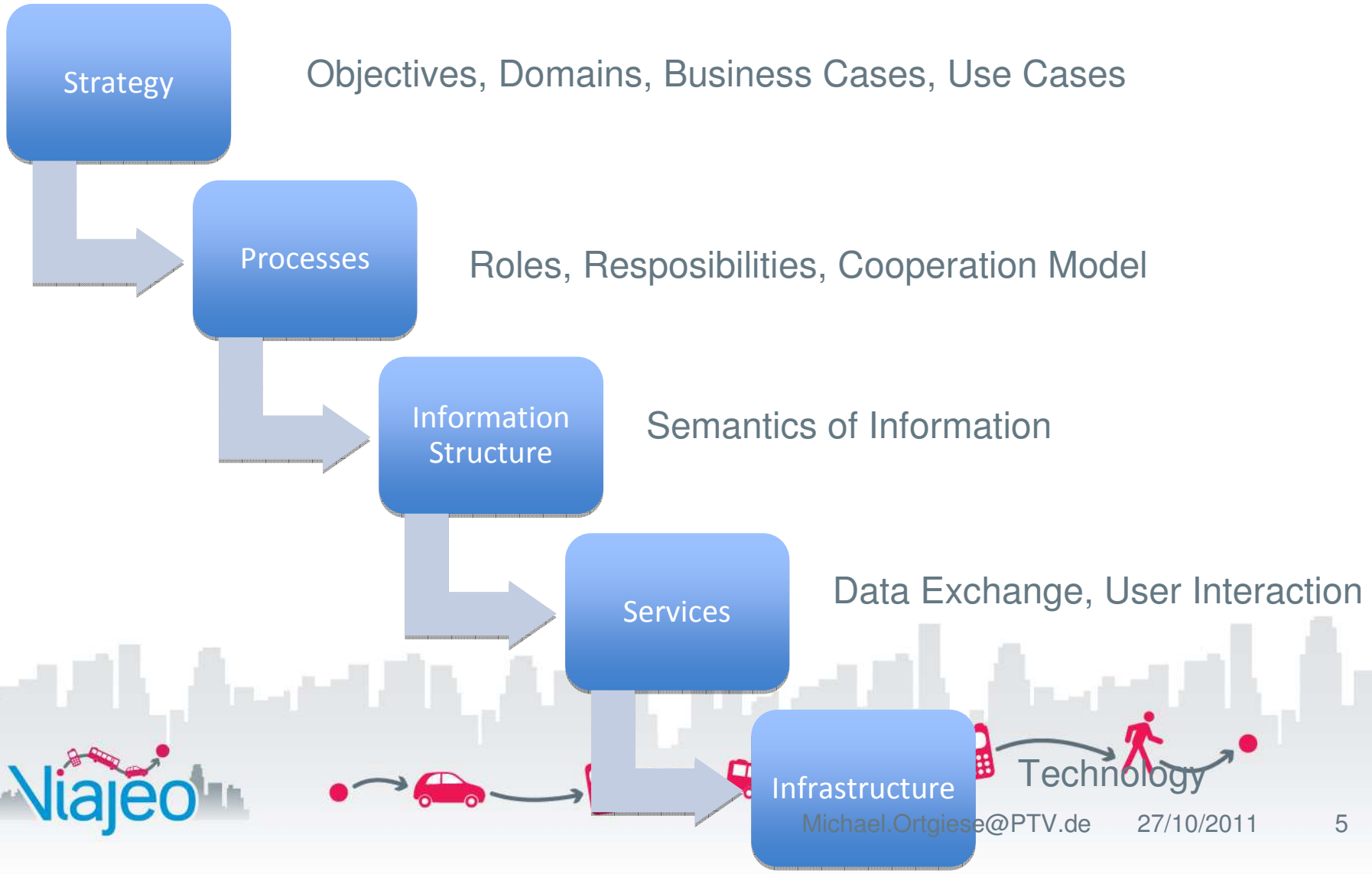


Viageo Consortium

Approach

- Well defined set of core processes
- Standardised interfaces to connect processes
- Publication via open interfaces; accessible by external parties
- Existing architectures in the sites
- “Open Platform” doesn’t mean “Open Source“

5 Steps To Create Services



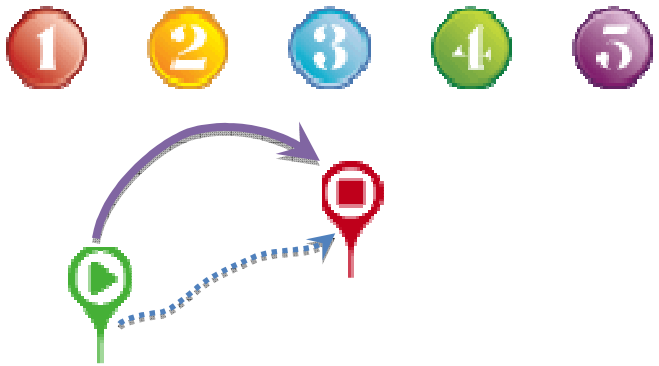
Step 1

Strategy

Objectives, Domains, Business Cases, Use Cases

Scope: traveller information services

Five development steps



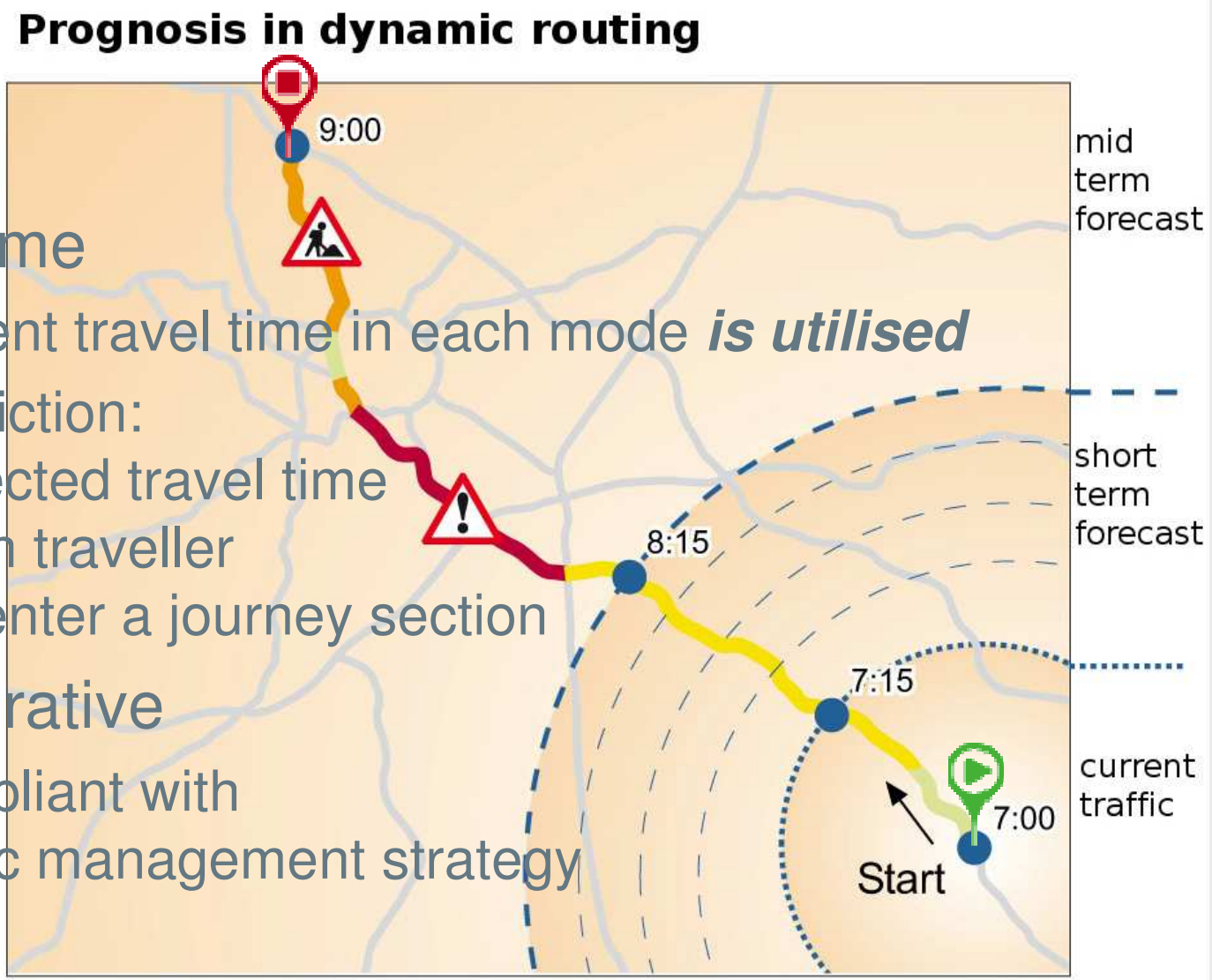
1. Best way from A to B
   - Fastest, shortest, …
2. Multi-modal
   - Allow to compare (car, PT, walk,…)

3. Intermodal
   - Optimise: when is it best to switch to another mode

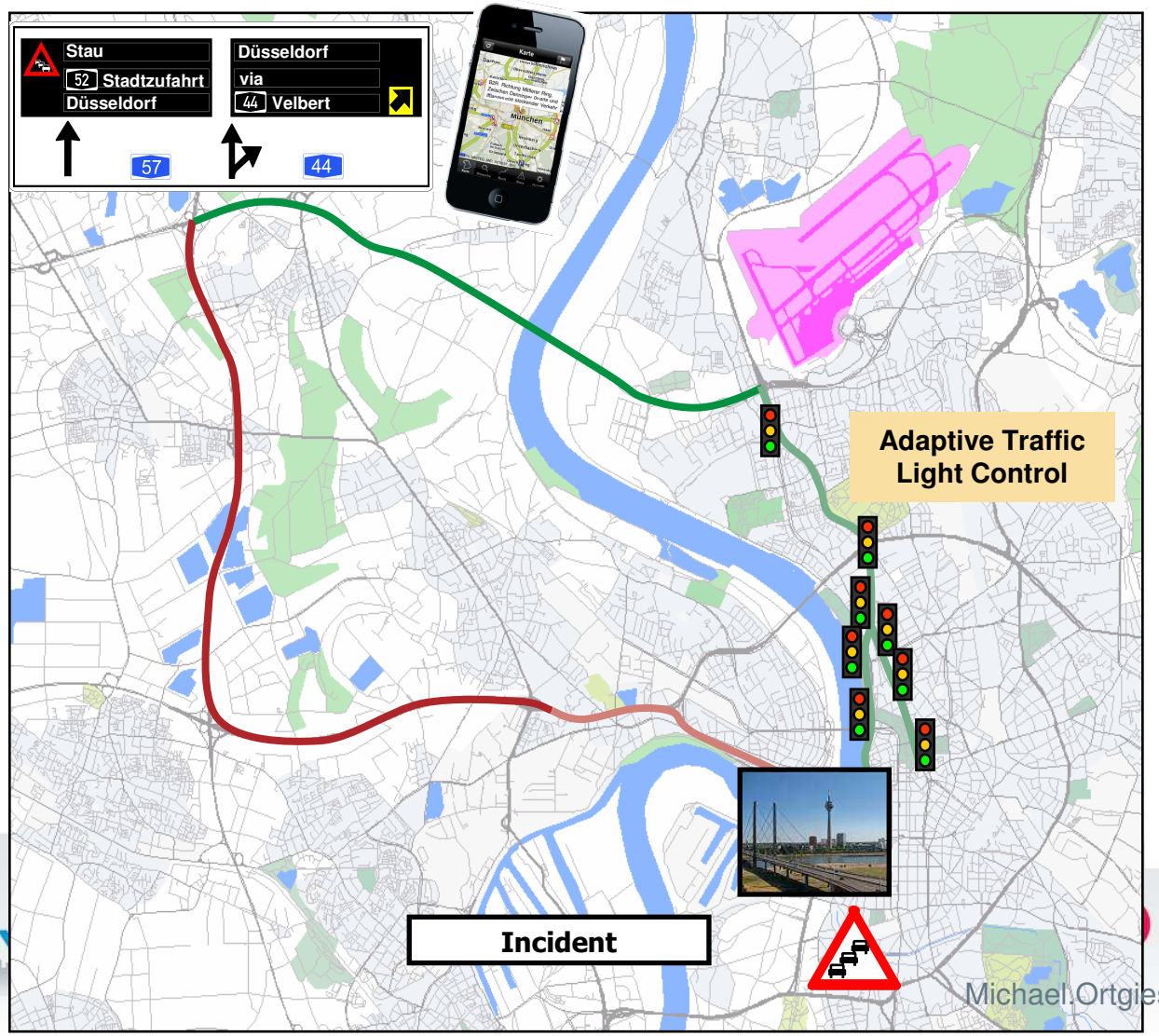
Scope: traveller information services

Five steps

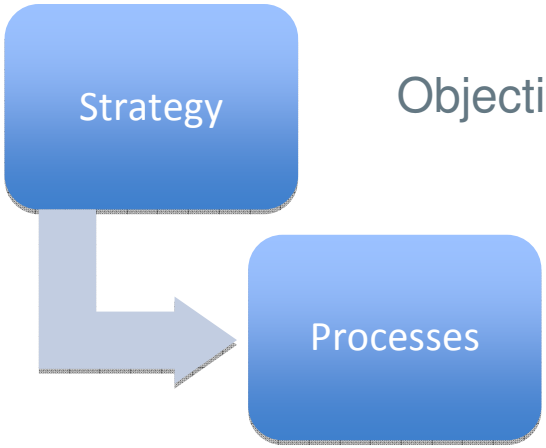
4. Real time
   - current travel time in each mode ***is utilised***
   - prediction:
     expected travel time
     when traveller
     will enter a journey section
5. Cooperative
   - compliant with
     traffic management strategy



Cooperative Traffic Management



Step 2



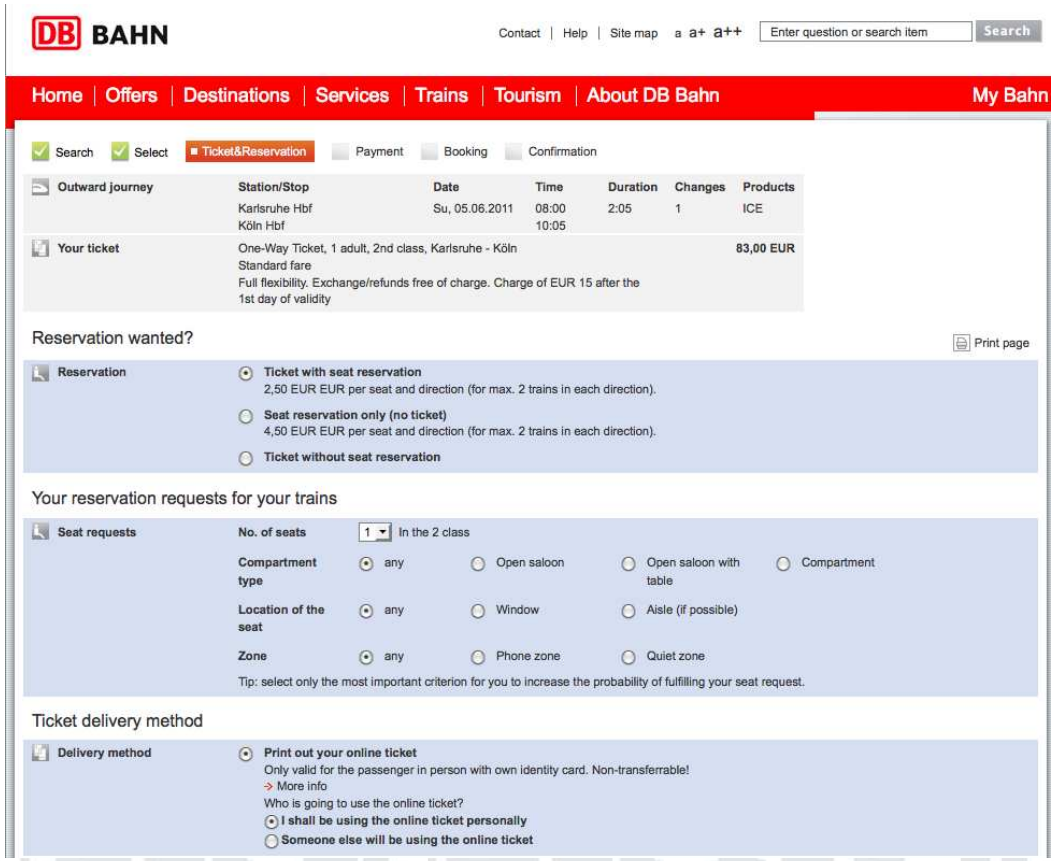
Objectives, Domains, Business Cases, Use Cases

Roles, Resposibilities, Cooperation Model

The complexity of the task: many stakeholders

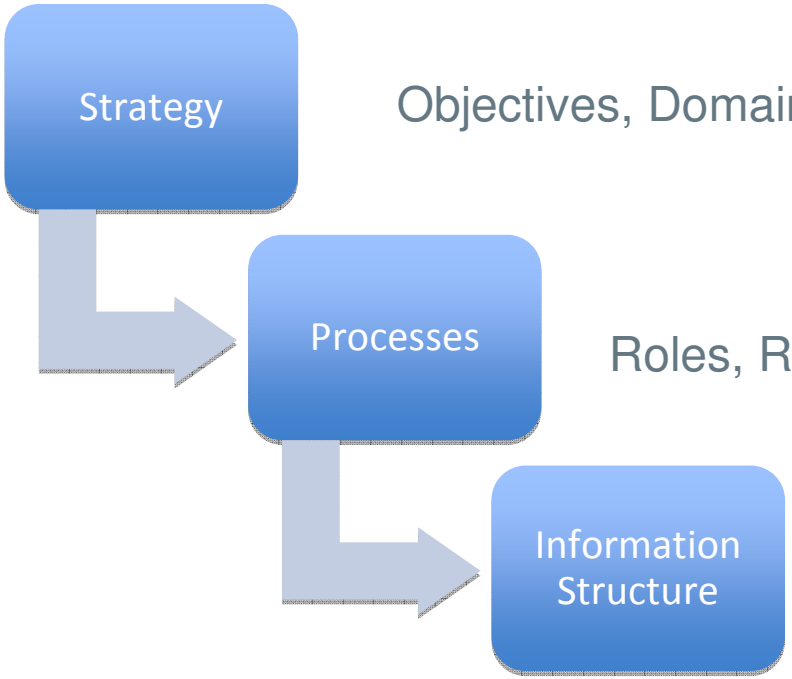
- different road operators
  - collecting own traffic data
  - some produce forecasts
  - know about roadwork and closures
- private information collection
  - FCD / FMD
- different public transport operators
  - own time tables
  - own dynamic vehicle positioning and dynamic guidance

Information and more ....



- Journey Planner = eCommerce Platform
- We have to link business models not only data sources
- Pre-Condition: Common understanding about the business of all stakeholders
- ITS = mix of public and private stakeholders / interests

Step 3



Objectives, Domains, Business Cases, Use Cases

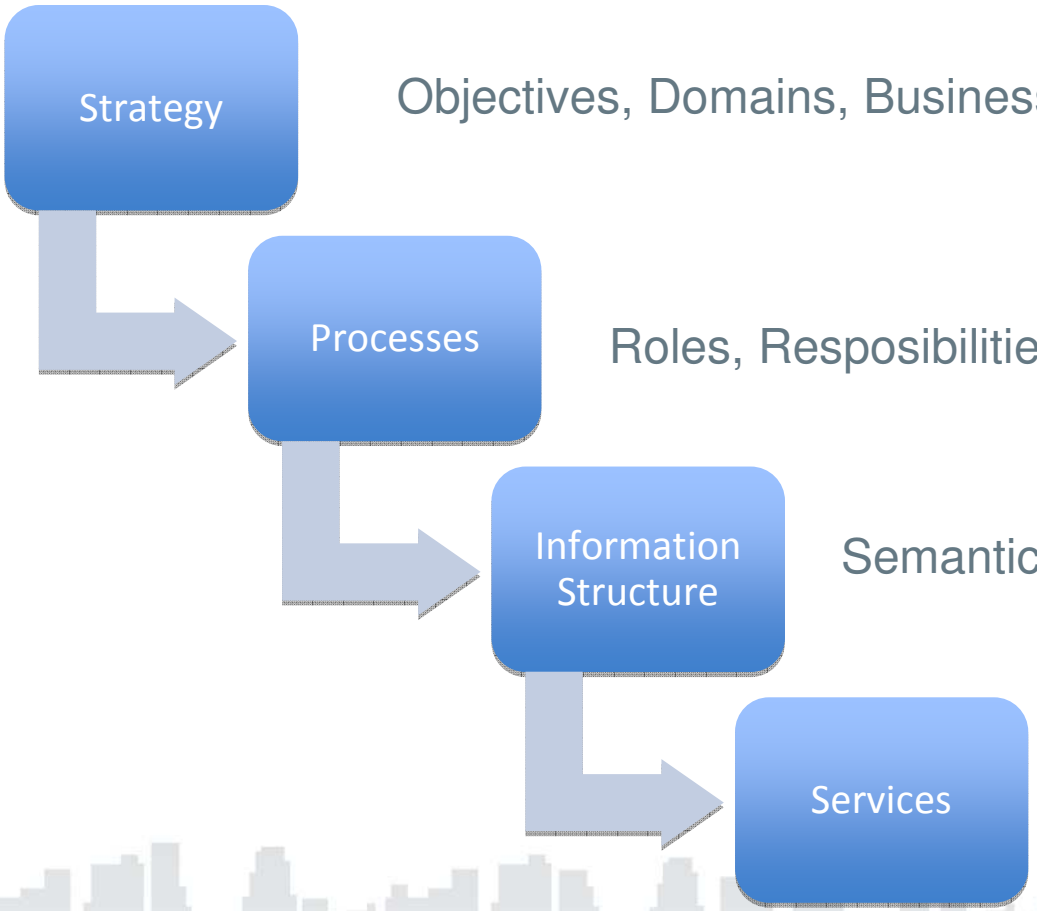
Roles, Resposibilities, Cooperation Model

Semantics of Information

Overview about Common Interfaces

Interface Name	Data Typically Transmitted
FCD	Vehicle ID, Time Stamp, Position, Speed
Roadside Traffic Count Data	Detector ID, Lane N°, Direction, Traffic Count (passenger cars), Traffic Count (lorries), Time Gap (between vehicles)
Roadside Environmental Data	Detector ID, Direction, Measurement CO2, Measurement NOx
Centre Road Traffic Data Interface	Traffic Events, Traffic Load per Segment
Static Public Transport Information	Timetables, Stop Positions
Dynamic Public Transport Information	Vehicle ID, Time Stamp, Delays (line,vehicle)
Traffic Information over TPEG	Traffic Messages, Traffic Load
Comodal Routes	Waypoints, Travel Time on Links, Traffic Mode

Step 4



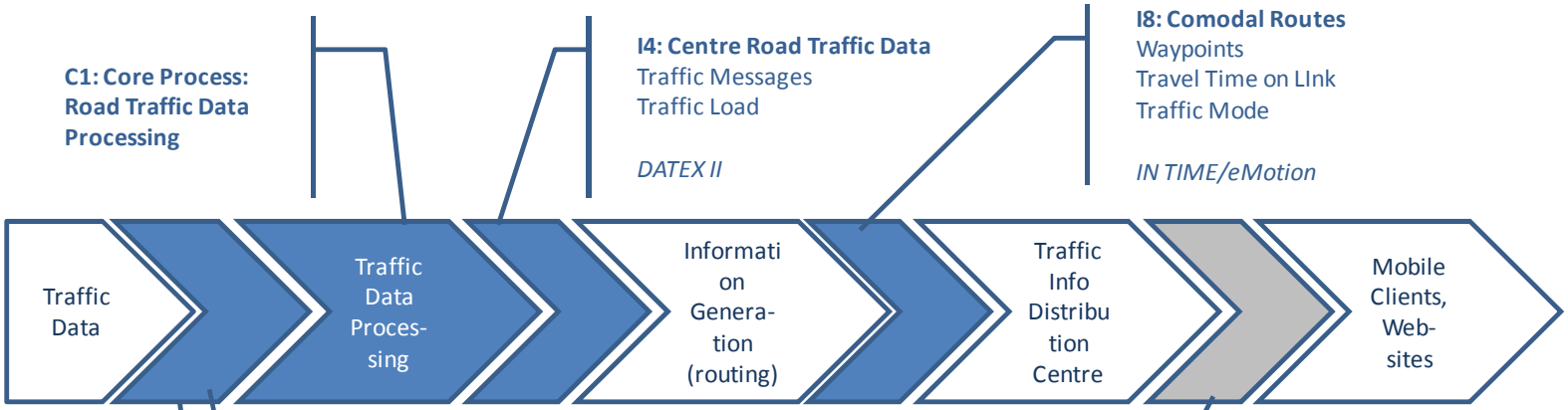
Objectives, Domains, Business Cases, Use Cases

Roles, Resposibilities, Cooperation Model

Semantics of Information

Data Exchange, User Interaction

Common Interfaces in Abstract Process Chain



I2: Roadside Traffic Data
Vehicle Count Data (passenger cars/lorries)
Speed
Detector ID
Lane N°
Driving Direction
Time Gap (between vehicles)

DATEX II

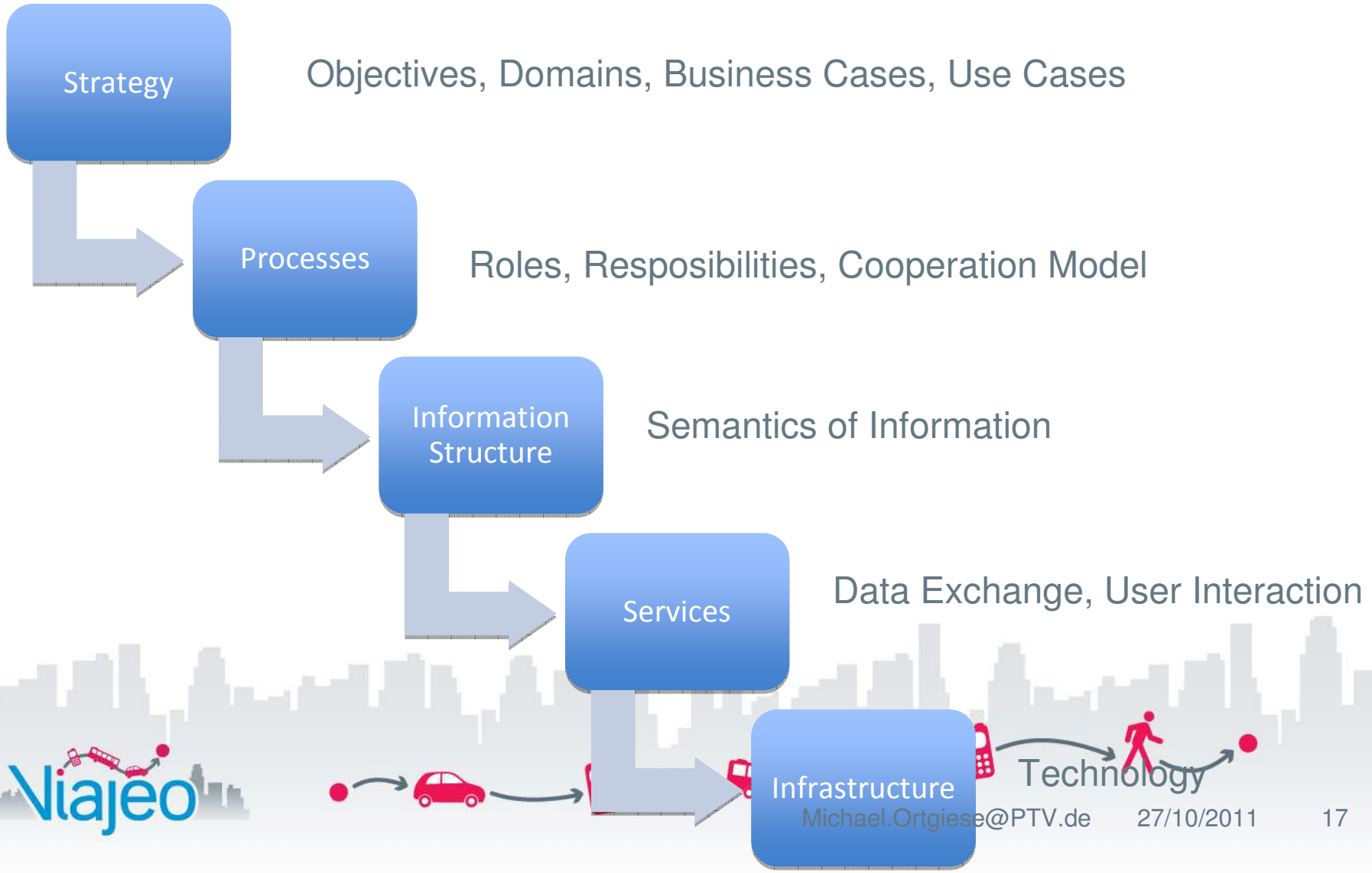
I7: Traffic Information over TPEG
Traffic Messages
Traffic Load
Routes

Recommended : TPEG TEC

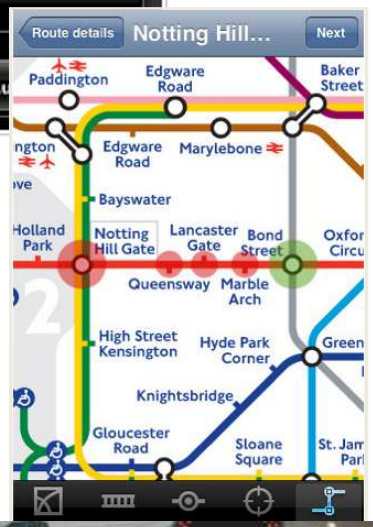
I1: FCD Interface
Vehicle ID
Time Stamp
Position
Speed

SIMONE

Step 5

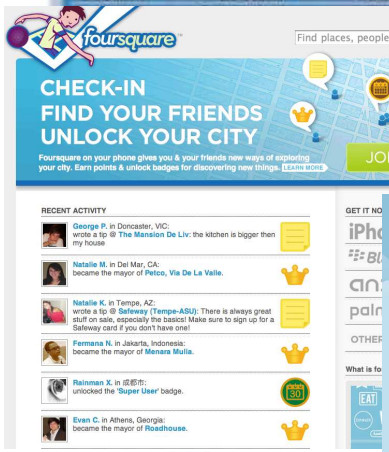

Strategy
Objectives, Domains, Business Cases, Use Cases
Processes
Roles, Resposibilities, Cooperation Model
Information Structure
Semantics of Information
Services
Data Exchange, User Interaction
Infrastructure
Technology

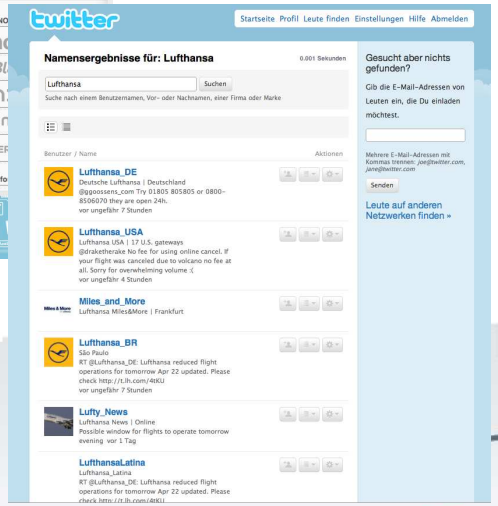
Technology – Nothing is fixed



- Today
  All services are implemented by existing technologies
- Tomorrow
  New technologies are allowing new services concepts
- We must be flexible
- We need migration concepts

Future Challenges



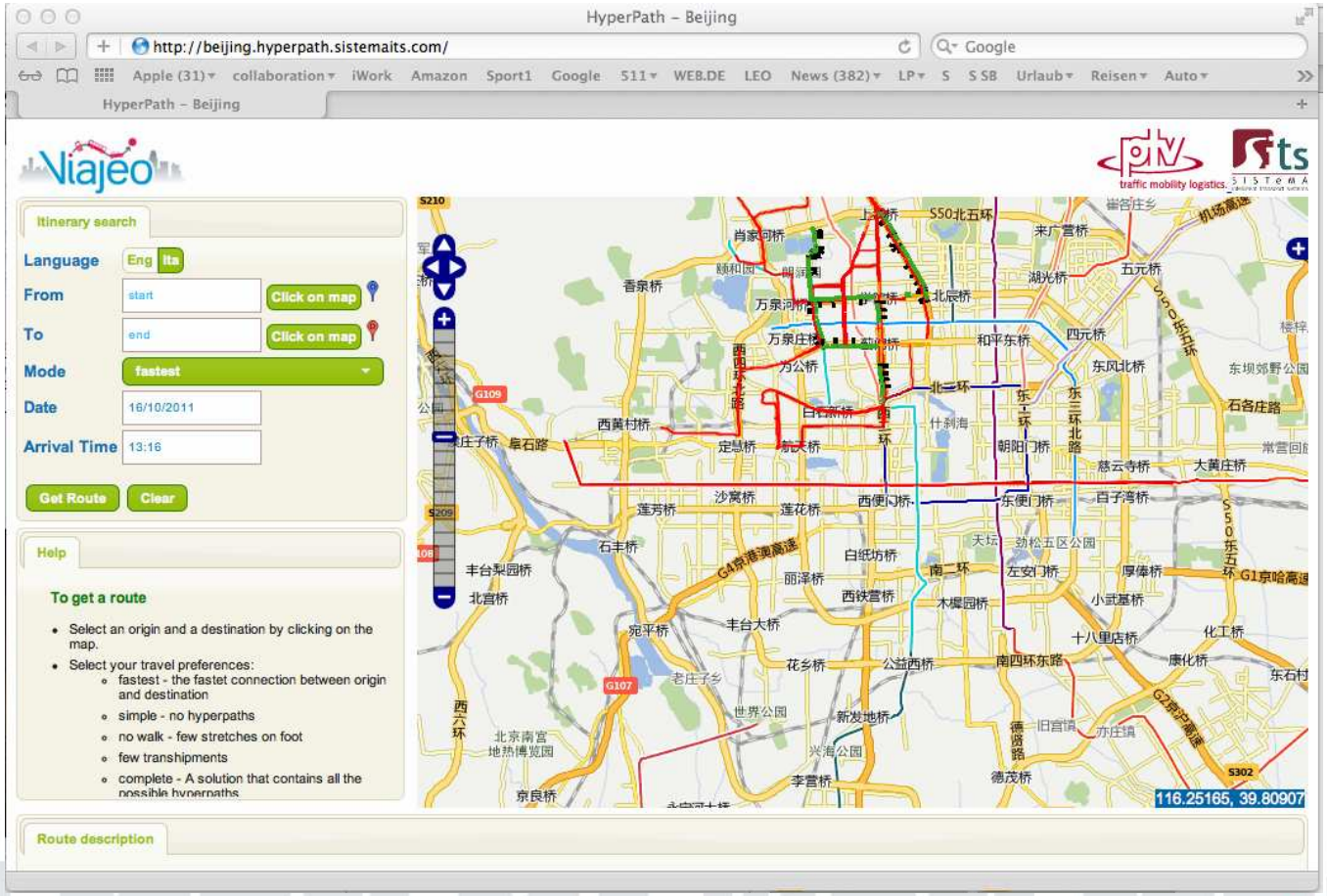


How to combine new and traditional services?

- Analysis of our footprints
- New services (e.g. Social Networks) open new opportunities

- Channels for information
- Source of traveller data

Multi Modal Journey Planner Beijing Desktop



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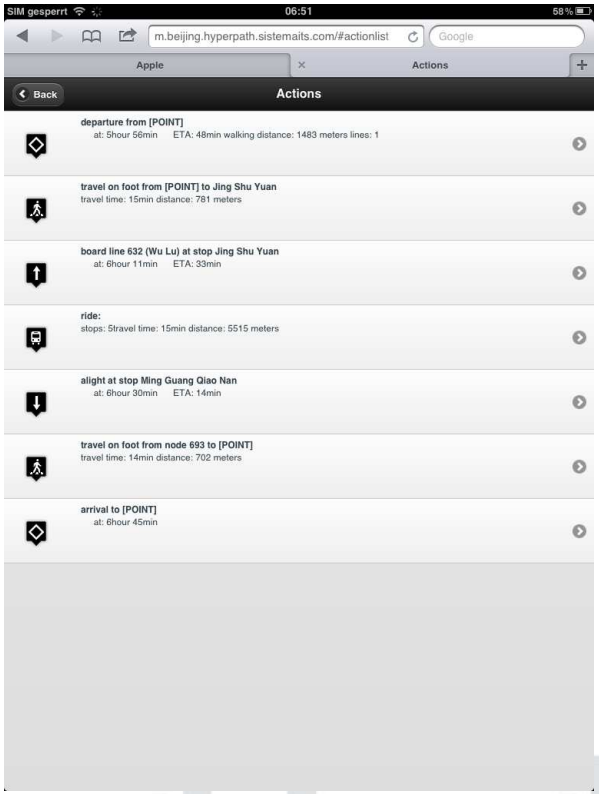
Multi Modal Journey Planner Beijing iPad



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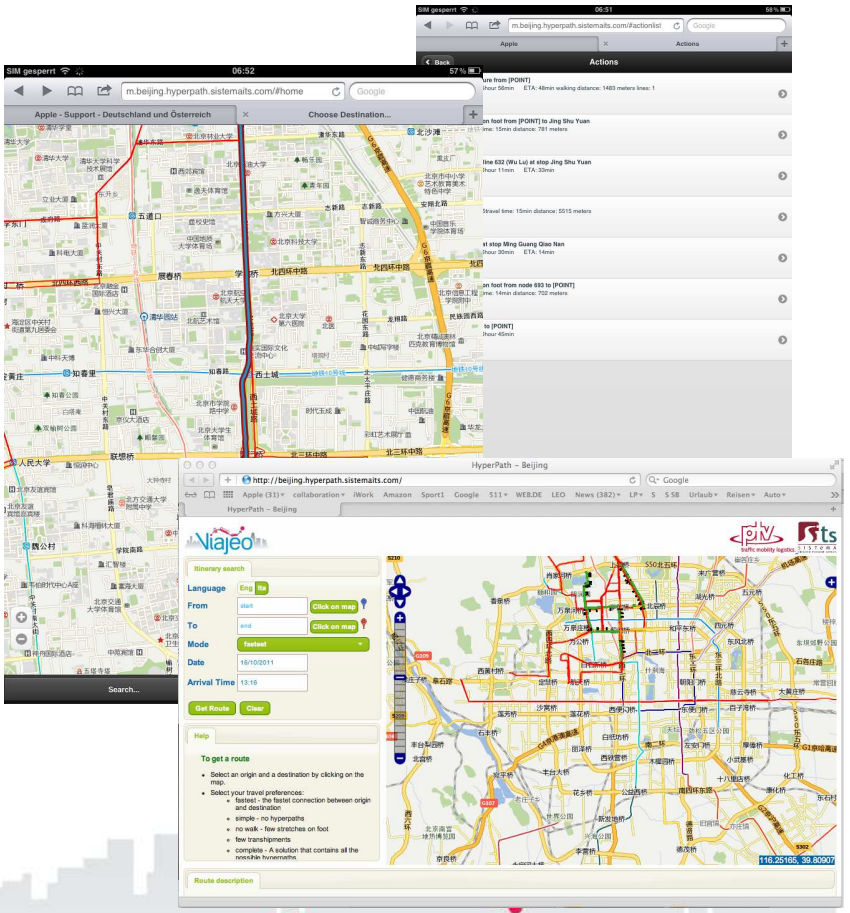
Multi Modal Journey Planner Beijing Innovation

European Standards

- Time Table
- Real Time Public Transport Data
- Floating Car Data

Intermodal Route Calculation

- One integrated network
- Calculation engine in working on the integrated and dynamic network
- *(Explanation: State of the art planners are combining two separate calculations for car and PT)*



Thank you!

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