The CityMobil
City Application Manual

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Introduction

• Background
  – CityMobil SP2 focuses on scenarios
  – How can automated transport systems
    • Fit into existing scenarios for urban transport?
    • Contribute to sustainable urban transport?
  – Supported by a set of guidelines/ tools
    • State-of-the-art report
    • Context scenarios
    • Application scenarios
    • City Application Manual
    • Predictive strategic models
    • Interpretative micro-simulation models
    • Business case model
    • Certification guidelines
    • Overcoming legal and administrative barriers
    • Guidelines for safety, security and privacy
Introduction

• CAM Objectives
  – To provide general guidance
  – Whether to use new technologies
  – How best to apply each technology
• A ‘toolbox’ approach for cities
  – Description of policy, tools, use
• Text is aimed at policy makers
  – References for detailed information
CAM Structure

- Likely Context
- Application Scenarios
- Strategic Options
- Implementation Barriers
- Patronage Estimator
- Strategic Modelling
- Business Case
- Multi-Criteria-Analysis
- City Applications
- Suitable Strategies
Likely Context

- Basis for Forecasting
  - Demographic variables
  - Economic variables
  - Societal variables
  - Sustainability and security
  - Complementary policies
Strategic Options

- Available Policy Instruments
  - Land use planning measures
  - Transport/ICT/traffic engineering
  - Transport pricing policies
  - Attitudinal/demand management
  - Car sharing
  - Walking and cycling strategies
  - High-quality public transport
  - Teleworking
  - Urban freight terminals/management
Deployment Barriers

- Main Categories
  - Social
  - Political
  - Financial
  - Legal
  - Operational
Deployment Barriers

- Specific Issues
  - City Environment
  - Local Businesses
  - Security Concerns
  - Misuse/ Terrorism
  - Privacy Issues
  - Employment Impact
  - Technology/ Reliability
Patronage Estimator

- **Objectives**
  - Rough predictions of use of the system
  - Using a GIS-based application
  - Based on socio-economic data in area

- **The patronage estimator will help**
  - Analyse/compare several schemes
  - Optimise the design of the service
    - Required number of vehicles
    - Management of the system
Patronage Estimator

- **Methodology**
  - Use of new mode estimated directly
    - Network characteristics
      - location of PT stations
      - network connections
    - Characteristics of local population
      - Population density
      - Employment rate
      - Local travel behaviour
      - Trip distribution characteristics
  - No demand estimation for other modes
  - Only zones at PT stations considered
Strategic Modelling

- Objectives
  - Assess contribution to urban transport policy objectives of each technology
    - If applied at a significant scale
    - In representative European cities
  - Ex ante evaluation of these technologies
  - To compare with ex post evaluation of
    - Cybercars in the new Rome exhibition centre
    - PRT in London Heathrow
    - High tech buses on Castellon, Spain
    - A series of smaller showcase applications
Strategic Modelling

- Methodology
  - Modelled in MARS
    - A strategic land use-transport interaction model
  - Compared five technologies
    - With and without supporting policies
  - 4 case study cities
  - 2005 base year
  - 30 year modelling period
Business Model

- Objectives
  - A quick and user-friendly tool
  - Allowing the comparison of options
  - Basis for an economic justification
  - For decision-makers and planners

- Business case for new system
  - Quantitative and qualitative analysis
  - Calculation of the Benefit-Cost-Ratio
  - Assessment of the Value-for-Money
Business Model

- Methodology
  - Spreadsheet model
  - Required information
    - Problems to be solved
    - Relevant policy objectives
    - Context of the scheme
    - Physical opportunities and constraints
    - Scheme and operational factors
    - Quantifiable/ non-quantifiable benefits
    - Intangible benefits and disbenefits
    - Capital cost and operating costs
Summary

• A series of tools for cities
  – Context and application scenarios
  – The passenger demand forecaster
  – Predictive models and city case studies
  – The business model
  – Guidance on overcoming barriers

• All summarised in the CityMobil CAM
The next steps

- Text aimed at policy makers
  - References for detailed information
- Applying contents to a city’s requirements
  - Using it as a ‘tool box’
- Full first version completed in 2009
- To be updated and finalised in the light of subsequent developments in the project
Further information

- To review the current version
- Or to provide comments for consideration in the final version

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