



SIXTH FRAMEWORK PROGRAMME

The CityMobil City Application Manual

Professor Tony May
University of Leeds, and
Dr. Tom Voge
Transport & Mobility Leuven

Contents

- Introduction
- CAM Structure
- Key Contents
 - Likely Context
 - Strategic Options
 - Deployment Barriers
 - Patronage Estimator
 - Strategic Modelling
 - Business Model
- Summary
- The next steps

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
 - Download: www.tmleuven.be/CAM
 - Contact: isaak.yperman@tmleuven.be
 - Information: www.citymobil-project.eu