# Department of Transport

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**Research profile:**

- Evaluation, development and planning of public transport systems
- Transport and traffic modelling
- Legal and economic regulation of public transport
- Demand responsive transport systems
- Quality of public transport services
- Railway operation improvements
- Surveys on naval infrastructure
- Transport safety researches

**Applied Methods / Special tools:**

- VISUM software
- VISSIM software
- PC-Crash software package
- Viriato software package
- Open Track software package
- Traffic count data recording appliances with data processing software

**Services:**

- Surveying and evaluating the public transport system of cities, developing a concept adapted to the specific municipality
Planning, evaluation and development of public transport operational processes

Planning demand responsive transport systems

System approach planning, methodological development, modelling and optimisation of vehicle-turns and assigning personnel

Development of traffic control systems, researches towards establishing automated controlling

Quality management of transport service providers

Development of models and modelling methods required for evaluation of networks

Simulation modelling and effect analysis of traffic flows on railway and public road infrastructure

Preparing effect analyses on railway operation

Analysis and development of infrastructure-technology-timetable conformity

Traffic surveys, development of survey methods

Railway operation safety assessments

Surveys on naval infrastructure

Planning sea transport assignments

Evaluation and development of transport market regulation models, railway regionalisation

References:

Research projects:

1. CONNECT (Coordination of concepts for new collective transport)

Type: Applied research

Aim: To carry out research in reference to a new form of public transport

Tasks performed by the Department: Analysing the potential of the business module, preparing methodological and educational material

Duration: 2002-2004

Project partners: ATAF SpA., Mobility Authority, Florence Metropolitan Area (IT); ATF Angus Transport Forum (UK); BOKU Institute for Transport Studies, University of Bodenkultur (AT); D&O
Diepons and Okkema (NE); ETRA Investigación y Desarrollo, s.a. ES; ETTS European Transport and Telematics Systems Ltd (IE); ISDEFE Ingeniería de Sistemas para la Defensa de España s.a. (ES); LOC Logistik Centrum Väst AB (SE); LTCON LT Consultants Ltd (FI); MEMEX MemEx S.r.l. (IT); MSF Mobisoft Oy (FI); OGM Organisation Gestion Marketing s.a. (BE); POLIS Polis, (BE); RCAUEB Research Centre of the Athens University of Economics and Business (GR); ROSE Communications s.l. (ES); SOFTECO Softeco Sismat SpA (IT); TRG Transportation Research Group, University of Southampton (UK); TRITEL NV (BE); TUCtechnical University of Crete (GR); VO Versio Oy (FI); VTT Technical Research Centre of Finland (FI)

2. MASCARA

*Type:* Applied research

*Aim:* To evaluate DRT technologies, assisting in the realisation of new DRT services

*Tasks performed by the Department:* Planning of a DRT system for a domestic region, evaluation

*Duration:* 2005-2007

*Project partners:* Cork City Council (IE); FEUP University of Porto (POR); University of Ghent (BE); Tuusula Municipality (FIN); ATF Angus Transport Forum (UK); SITA Spa (IT); Korsisaari (FIN); ETTS European Transport and Telematics Systems Ltd (IE); MEMEX MemEx S.r.l. (IT); TRITEL NV (BE)

3. Research tender

*Type:* Applied research

*Aim:* To conduct a complex impact assessment on the development of public transport and to establish a methodological framework for the demonstration and evaluation of impacts

*Tasks performed by the Department:* the entire project

*Duration:* 2001

*Principals:* Ministry of Environment

*Contract research:*

1. Contract Research

*Type:* Industrial commissions
Aim: To develop local public transport

Tasks performed by the Department: Surveying the state of local public transport of more than 20 cities and preparing development plan (including Győr, Szombathely, Veszprém, Dunaújváros, Tatabánya, Eger etc.)

Duration: 1990-2009

Principals: Transport service providers and local governments

2. The prospects of urban public transport service development with a model adapted to Zalaegerszeg

Type: Applied research

Aim: To review the methods of forecasting travel demand towards public transport systems and to model and evaluate those systems

Tasks performed by the Department: the entire project

Duration: 2008

Principals: Zala Volán Zrt

3. Contract Research

Type: Applied research

Aim: Taking accident-related factors into account when evaluating the development of public transport

Tasks performed by the Department: Determining the scale of the risk of accidents in public transport

Duration: 2004

Principals: Ministry of Transport

4. Contract Research

Type: Applied research

Aim: To create an intelligent management system based on telematics for the local public transport of Győr

Tasks performed by the Department: the entire project
5. Contract Research

_Type:_ Applied research

_Aim:_ To develop models applicable to public transport services of regions with fragmented settlement structure, based on the example of Baranya county

_Tasks performed by the Department:_ Developing the service model

_Duration:_ 2008

_Principals:_ Ministry of Transport, Telecommunication and Energy

6. Contract Research

_Type:_ Applied research

_Aim:_ To revise and modernise the public transport of Mosonmagyaróvár and its sub-region using an innovative and holistic approach in order to improve economic efficiency and the level of service

_Tasks performed by the Department:_ the entire project

_Duration:_ 2007-2008

_Principals:_ Ministry of Economy and Transport, Local Government of Mosonmagyaróvár, Micro-regional association of Mosonmagyaróvár, Kisalföld Volán Zrt. (transport service provider)

7. Contract Research

_Type:_ Industrial commission

_Aim:_ To support the technical reconstruction of railway line No. 30 by carrying out traffic and railway operational survey

_Tasks performed by the Department:_ Conducting traffic/passenger count and performing technical and safety inspections

_Duration:_ 2008

_Principals:_ Ring Engineering Office
Keywords:

public transport, transport networks, transport-traffic modelling, railway operation, demand responsive transport systems