

Railhuc Newsletter

No. 02

Dear Reader,

We are happy to present you the second Railhuc newsletter with the status of the on-going project activities of the Central Europe Project „RAILHUC“. One of the main challenges the project focusses on is the development of transport models on the forecasting of future transport volumes and necessary investments. In this newsletter you will find three short descriptions of finalised transport models in Brno, Győr and Reggio Emilia as first outputs of the project. Enjoy reading!



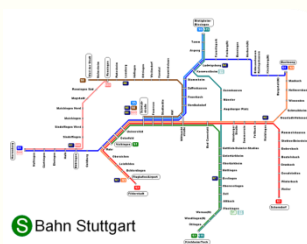
Railhuc Newflash

Site Visit Chemnitz (Germany) – The `Chemnitz Modell`

The site visit in Chemnitz allowed an overview about the `Chemnitz Modell`. The core of this new model is to connect the city with the agglomeration area and national trains by adding only a few supplementations to the existing network, connecting the railway and tram network, renewing the central station as main exchange platform as well as introducing new hybrid-railcars that are able to operate on both networks to make travelling faster, change-free and more convenient. The adjustment of timetables reduces waiting time at the Main Station. Since launching a pilot track in 2002 the volume on that track has increased by 600% to 1.5 Mio. passengers a year. The whole Network shall be finished by 2020.



Site Visit Stuttgart – integrated System and development of the S-Bahn



During the site visit, the integrated public transport system (VVS) - constituted of private companies and public bodies with 50 % each - was presented. Aiming the reduction of individual motorised trips, the companies within the VVS charge no longer by use of transport means but by travelling through fare zones with only one ticket. Schedules are now coordinated, ticket prices have dropped 13 %, the usage level at peak-traffic periods is high.

The S-Bahn was the second issue of the visit. The network covers most of the region, 90 % of the inhabitants have access. The S-Bahn shares the network with regional and interregional trains which eases travelling between the city and its agglomeration. Due to a constant increase in demand, night service started end of 2012. New track extensions are planned.

Elaboration of Good Practice Catalogue

One of the main goal of the Railhuc projects is to share experience and good practices of the partners. You can now find a catalogue of good practices comprising practices of partners in Central Europe as well as beyond the partnership. The practices focus on the topics public transport partnerships, integrated ticketing, infrastructure management, governance and finance models. You can find the catalogue under www.railhuc.eu.

Next public Railhuc meetings in Vienna and Brno

The next transnational meeting of Railhuc is taking place on 10-12 July. The agenda and invitation for the public activities will be sent soon.

Partner Section

Traffic Models – Transportation forecasting

Traffic models are an important instrument of transportation planning. They are used for transportation forecasting, which means to estimate the number of vehicles or people that will use a specific transportation facility in the future, based on a current state and fixed set of facts. Future developments, conditions and the resulting options of action shall be assessed. Until now, models have developed from aggregated to activity based models.

Development of traffic models and transportation forecasting

<u>Aggregated models</u>	<u>Disaggregated models</u>	<u>Activity-based models</u>
<ul style="list-style-type: none"> • Traffic = result of cell features • Orientation: trips/paths • Uni-/bi-modal • Focus on physical law 	<ul style="list-style-type: none"> • Focus on groups of persons • single path – oriented • Differentiation of purpose of the journey • Multi-modal • More behavior-oriented 	<ul style="list-style-type: none"> • Traffic = result of activities • Focus: chains of activities • Individual activity planning • Interpersonal Interaction (e.g. in households) • Consideration of constraints (society, space, time)

Source: Gertz, Gutsche, Rümenapp (2013)

Today, models are usually created by dividing the region under examination into cells and high differentiation within the groups of indicators. This reveals as well the boundaries for traffic models. They will never cover all uncertain indicators and especially never include changing conditions in the future, which makes them different to a simulation. The simulation represents a dynamic system and includes future developments. Therefore it means the operation of a model over time.

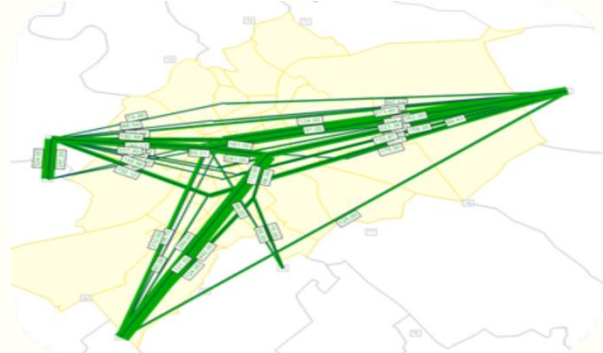


Modelling activity in Győr hub

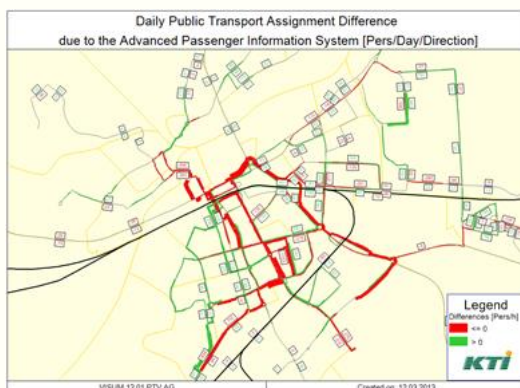
In case of Győr hub within the framework of Railhuc project, PP7 KTI has started its project activity the construction of transport model modelling Public Transport in the 4 following demand segments:

Intra-urban journeys (local bus); Interurban journeys by bus; Interurban journeys by train; and also Private Transport (car) was modelled. The input data for the modelling had different origins such as:

household surveys; questioning on vehicles; counted boarding and alighting values; cross-section values from available traffic surveys.



The headway-based assignment with choice model dependent on passenger information level model consist of a total 819 nodes & 1862 links, 44 internal & 13 external zones, 148 lines, 776 line routes, 2920 vehicle journeys & 2252 stops. The modelling activity was elaborated by using special modelling software, VISUM PTV. The internal zones are located within the administrative boundaries of the Municipality of Győr, while the outer zones located around the city in its suburban area and also in



proportionally bigger size in Győr's bigger catchment area including the bigger part Northern and Western Transdanubia Region. These characteristics permitted to model the existence and the impacts on passengers behaviour of the Advanced Passenger Information System and Advance Traffic Management System both in normal assignment (traffic conditions) and under traffic difficulties (delays, service cancels, etc.).

The analysis of the existing traffic flows was possible to validate with this modelling tool. However the main outcome of the modelling shows that passengers with more real-time information system (through stations, stop, on-board panels or smart-phones) were more likely to choose public transport services especially on those less frequented (but direct) routes where previously they were preferring other more frequent routes (with transfers) or private transport, because they did not have information about the services and they were afraid of waiting too much time. From the operators point of view this means greater efficiency of the full transport system with less crowded services on the trunk line and higher load factor on the peripheral routes.

Modelling in Brno hub

As a cornerstone of further activities of the RAILHUC project it has been necessary to carry out several quantitative and qualitative researches. Most of them have been connected to rail transport. There has been one extensive passenger counting research made in all regional trains.

For better evaluation of passenger flows we have counted also passengers in the interregional trains. The desk research covering the needs for information on the travel times and frequencies of the international EC (EuroCity) trains connecting Brno hub with Vienna, Bratislava, Ostrava (Poland) and Prague (Germany) has been carried out as well.

These surveys combined with the data on the bus transport fulfilled the needs for further project development, problems and bottlenecks location and proposing of possible changes and improvements.

In the field of individual transport integration we have made the deep desk and field research of train stations regarding to present state of the areas (parking spaces) and amount of parked cars. The results have clearly shown one of important bottlenecks of our integrated public transport system – no existing P&R facilities but big demand for P&R near the stations. We have also made a web based survey on this topic with more than 1000 respondents which has brought deeper view on the car users opinions on the P&R facilities.



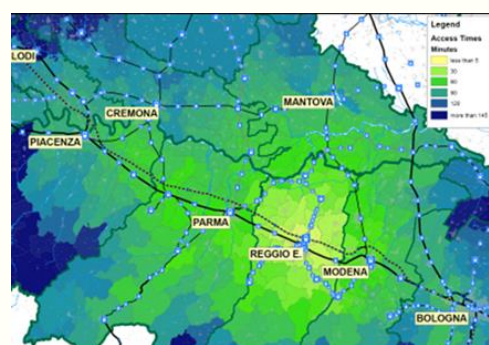
For better understanding of public transport quality evaluation and anticipation by passengers we have carried out a customer satisfaction research – face to face interviewing - on the sample of more than 1000 passengers in different places in the region.

Modelling activities on HS Mediopadana station

The transportation modelling activities are a core part of the RailHuC project, whose goal, in our specific local context, is to enhance the functionality of HS station of Reggio Emilia through its integration with the major railway corridors (TEN-t networks), with the local railway connections, and, more generally, with all public transport systems and with the private mobility.

The specific aims of the modelling activities include the definition of an updated profile of rail and road flows, as well as of public transport services, in relation to the rail node of Reggio Emilia, and the building of traffic scenarios referred to the node itself.

Since the possible effects of the new station are expected to cover a wide area around Reggio Emilia, all the in-depth studies have been obtained extending the traffic model of the Emilia-Romagna region to the Southern portion of the Lombardia region (provinces of Pavia, Lodi, Cremona and Mantova).



Road access times to HS Mediopadana railway station

The methodology of this study is based on the multi-modal traffic model, developed in VISUM© format, which is actually under operation at the general Direction “Reti Infrastrutturali, Logistica e Sistemi di Mobilità” of the Emilia-Romagna region.

Thanks to RAILHUC project it was possible to update the traffic flows and services analysis extending the modelling process to the Southern portion of the Lombardia region using the new zoning

extension, the updated extended road and railway graph, and a new O/D matrix estimation for define the mobility demand.

The analysis of public transport flows has been achieved mainly on the basis of the specific traffic surveys, developed in Parma, Reggio Emilia and Bologna railway station. These surveys included the count of passengers boarding for long-range trains in the railway stations of Milano Centrale, Parma, Reggio Emilia and Bologna Centrale. In Parma, Reggio Emilia and Bologna, the passengers-count was accompanied by O/D interviews to a representative sample of passengers.

Then the local accessibility of the new HS Mediopadana station was assessed on the basis of the O/D assignment for the whole area including Emilia-Romagna and Southern Lombardia. Road traffic assignment results also in the time / generalised cost matrices referred to the whole simulation area, which is the basis to estimate road access times / costs to the new HS station and its direct competitor stations (Milano and Bologna Centrale).

EU NEWS

Negotiations on the future TEN-T policy

The negotiation on the future development of the European Networks on Transport recently passed the Transport Committee (TRAN) of the European Parliament. During the last meeting before Christmas, on 18/19 December 2012, the two draft reports on the TEN-T guidelines (Rapporteur: Ismael Ertug) and the Connecting Europe Facility (Rapporteur: Dominique Riquet) were presented and approved. The consolidated report was submitted to the plenum for the first reading. The adopted reports will be the mandatory for the trilogue negotiations with the European Commission and the Council. The TRAN Committee adopted the following amendments on the TEN-T Core Network (relevant for the RAILHUC project area):



the first reading. The adopted reports will be the mandatory for the trilogue negotiations with the European Commission and the Council. The TRAN Committee adopted the following amendments on the TEN-T Core Network (relevant for the RAILHUC project area):

- **train and road connection between Berlin and Szczecin**
- **Prague – Lovosice high-speed rail link**
- **port of Ustí nad Labem and Komarno**
- **ports of Cremona and Montova**
- **multimodal platform of Cervignano, Firenze and Verona**

And the following connections to the comprehensive network:

- **rail connection between Berlin - Küstrin-Kietz - Kostrzyn nad Odra - Gdańsk**
- **Berlin – Forst (Lausitz) – Wrocław rail connection to the comprehensive network**

- high speed rail link between Ustí nad Labem and Dresden
- modernisation of the Česká Kubice border station - Regensburg stretch

The committee adopted the amendments to stress the role of the corridor coordinators. They must ensure that an extensive public consultation takes place well in advance with all stakeholders and civil society. They propose measures to identify problems, if any, and propose ways of developing the corridor plan and implementing it in a balanced manner. Within the CEF the deputies backed the prolongation of the TEN-T corridor Berlin-Nuremberg as a priority axis. The consolidated report can be found under the following link: [TEN-T report](#).

Results on the future EU Budget on the transport issues:

On 8 February 2013, the EU heads of State and Government found an agreement on the future regulation in the council. The total budget now comprises 960 billion € (908 billion € as payment authorisation). This is a cut of 73 billion € in comparison to the Commission proposal from June 2011.

Thereof the cuts mainly concerned the heading 1a “Competitiveness for Growth and Employment” (mainly research and SME programmes) but also the proposed budget lines for infrastructure. The Connecting Europe Facility (CEF) was cut down from 40 billion € (+ 10 billion ring-fenced from the Cohesion Fund) to 29.3 billion € (incl. 10 billion from the Cohesion Fund). Within the CEF the budget lines dedicates 23.2 billion € for the implementation of the TEN-T network. Within the INTERREG Budget the transnational cooperation should have 6.6 billion €, which is more or less the same for the currently running period.

RAILHUC PARTNERSHIP

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