



**Innovative design and operation of new or upgraded
efficient urban transport interchanges [Theme: SST.2012.3.1-2.]**

City-HUB Project



City-HUB Fact Sheet N° 2:
The City-HUB pilot case studies:
An overview

Introduction

The City-HUB project, co-funded by the European Commission, aims to contribute to the design and operation of seamless, smart, clean and safe intermodal public transport systems, addressing, at the same time, how these interchanges should be designed in order to ensure that all types of users, i.e. the elderly, people with disabilities, etc. can adequately benefit from these interchanges. Within the project, an integrated business model will be developed and a comprehensive set of methodological guidelines will be proposed, addressing different aspects of an urban interchange. The integrated model will be validated through a set of European case studies and the methodological guidelines will be fully exploited through a European transferability exercise and dissemination initiatives to target groups throughout Europe (www.cityhub-project.eu).

The scope of this fact sheet is to present an overview of the five pilot case studies that have been selected and will be studied in order to identify best practices, barriers and areas of improvement related with Intelligent Transportation Systems (ITS) solutions, efficient design and planning, and integrated management.

The case studies play a key role in multimodal trips in their corresponding cities, covering a wide spectrum of interchange types and geographical distribution (Christiansen et al., 2013). The case studies are:

- Moncloa interchange, Madrid, Spain;
- Ilford railway station, Redbridge, London, United Kingdom;
- New railway station, Thessaloniki, Greece;
- Kamppi terminal, Helsinki, Finland; and
- Kőbánya-Kispest, Hungary.

Moncloa interchange (Hernández et al., 2013)

The Moncloa transport interchange station was built in 1995 and has been an impressive success, not only in itself, but also because of several other measures which were implemented at the same time, including the arrival of Metro line 6, making Moncloa the busiest Metro station on the network, and the opening of the bus and high occupancy vehicle only lane for the A-6 motorway. The interchange is located at an entrance point to Madrid in an area with many historic monuments and connects directly to Metro line 6, the Circular line that travels around the centre of the city and links to all of the key points on the Metro network. The station's location in the city's centre, in a zone of intense traffic during rush hour and a historic urban environment influenced both the construction, which was undertaken with extreme caution to minimise potential impacts, and the design and location of the exterior elements.

There are currently 56 interurban bus routes using the interchange, with over 4,000 journeys and over 287,000 passengers per day, and 310 journeys per hour between 8:00h and 10:00h. Apart from the 56 interurban bus lines, there are 3 urban bus lines, 2 metro lines (line 3 and line 6) and 1 long distance bus line and a total of 12 operators in Moncloa interchange station (9 for interurban bus, 1 for urban bus, 1 for long distance bus and 1 for metro). The urban bus routes serve 125,000 passengers per day, with 4,141 bus journeys. In 2010 the Metro had about 170,000 journeys per day and currently, Moncloa Metro station has the highest daily demand of all stations in Madrid.

The interchange has achieved excellent results in terms of increasing demand for public transport, reducing surface level bus journeys, and improving journey times for both users and the transport companies.

Ilford railway station (Harmer et al., 2013)

The station opened in 1839, with the main entrance on Cranbrook Rook being extensively rebuilt during the 1980s. A second (side) entrance on York Road is open only during peak hours. The station has five platforms, two for trains into London (towards Liverpool Street) and two out of London (towards Shenfield). The interchange is situated on the Great Eastern Main line and has regular local train services (from Essex) to Liverpool Street station in central London. More than 10 bus stops are located within walking distance of the station, with the town being a hub of the London Buses network, providing buses to central London and various suburbs.

The modes of transport available at the interchange are: main-line rail, bus, cycle (with cycle parking), pedestrian, private car with drop off, car parking and taxi. Most trains stopping at Ilford run between Shenfield and London Liverpool Street, with at least 6 trains per hour train in each direction. Train services are currently

within the Greater Anglia rail franchise, operated by Abellio Greater Anglia Ltd. Estimated station usage (rail only) shows passenger numbers of 6,721,486 in 2011/2012 (travelling from or to the station (entries & exits)) – an increase on the previous numbers of 6,286,174 in 2010/11 (figures derived from ticket sales data recorded in rail industry systems). An estimated 14,453 people interchanged at the station during the year (i.e. rail to rail). Most interchanges at Ilford will be local to local, with some being local to regional, for example for passengers who travel out to Southend.

New railway station of Thessaloniki (Nathanail et al., 2013)

The station, completed in 1961, replaced the old and much smaller passenger station which now accommodates the city's cargo rail, and, although there have not been any changes since the 1960s', the station remains the largest and busiest railway station built in Greece. The interchange is situated very close to the central business district, allowing the movement of travellers all around the city, and in addition to the provision of railway services, it also works as a terminal for the public bus services of the Thessaloniki Urban Transport Organisation (OASTH).

The transport modes covered include commuter rail, interurban rail, local buses, suburban buses, interurban buses, taxis, bicycle ways, park and ride, kiss and ride, and metro (under construction). The currently "under construction" metro station will likely be a catalyst for the reconstruction of the terminal and its surroundings, including, potentially, new underground parking, new walking and cycling access, etc. Focusing on buses, the average daily number of passengers travelling in the urban zone is approximately 137,971, while in the suburban zone it's approximately 22,630. In total 12 bus lines serve these travel needs. Regarding the railway, the average daily number of passengers arriving at/or departing from the station is approximately 6,000. Of these 4,500 use tickets issued by electronic systems and 1,500 use paper tickets.

Kamppi terminal (Kostiainen et al., 2013)

The preliminary plans for the Kamppi terminal, located in downtown Helsinki, were completed in 1995, with the project plan being ready in 1997. The town planning process (including the appeal period) was from 1998–2001. The construction of the Kamppi interchange and shopping centre started in August 2002. The interchange started operation in June 2005 and the shopping centre was opened in March 2006. Work on the roads and outside areas were finalized in the summer of 2006. The interchange itself is in a very central location in downtown Helsinki. The area of the interchange/shopping centre is approximately 4 hectares. In addition to the shopping centre there are also offices and flats in the same building complex.

Modes of transport at the interchange include local, regional, national and international buses (to St. Petersburg, Russia), metro, tram, bicycle, car and taxi. The average number of visitors to Kamppi on working days is approximately 100,000, of which 84,000 use public transportation. The total number of departing metro passengers from Kamppi in 2012 was 6,634,000. The average for all working days of the year was 21,700 (in 2011, the average was 21,600). The average number of bus passengers departing on working days from the local (western) terminal in Kamppi was 19,360 in October 2012.

Kőbánya-Kispest (Keserű et al., 2013)

The interchange at Kőbánya-Kispest was created as part of the construction of the southern section of Metro line M3, between 1978 and 1980. Thus, an interchange could be established between the metro and mainline railways (lines 100 and 142) at Kőbánya–Kispest which was until then just a minor railway station. The interchange included a bus terminal for local and regional buses, as well as the airport bus. The interchange divides two areas of the city that are very different in character. North of the railway tracks the area is a mixture of industrial sites, with a large number of abandoned factory buildings and a large, densely built high-rise housing estate (Újhegy) with prefabricated concrete buildings built in the 1970s. South of the terminal, there is another large housing estate (Kispesti lakótelep) and detached houses.

There are several possibilities for interchange between transport modes in the intermodal centre, including railway, metro, local and regional buses, as well as walking, cycling, and cars. Kőbánya-Kispest is the terminal of metro line M3, which is one of the backbones of public transport in Budapest, connecting the northeast and southeast of the city via the city centre. It has a nominal capacity of 28,200 passengers/hour/direction and carries approx. 630,000 passengers a day. The highest frequency is every 2.5 minutes during peak hours.

Kőbánya-Kispest is also a major railway station on railway lines No. 100 (suburban, regional, intercity and international services) and No. 142 (suburban services only). Although all types of connections are available, the interchange handles primarily local and suburban traffic. There is no accurate information available about the number of passengers at the terminal, although it is estimated that about 80,000 people use it daily, and it is estimated that at least 80% of all passengers using the terminal transfer between the metro and buses.

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