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High Speed Railway Hubs in European Medium-Sized Cities: The Case of the ENTER.HUB Network

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Abstract: This contribution relates to the ENTER.HUB project implemented between 2012 and 2015 in the framework of the European URBACT II programme⁵. ENTER.HUB involved twelve medium-sized cities fitting into Trans-European Transport Networks (TENT-T) corridors, realizing or forecasting a High Speed Railway (HSR) Hub and planning multimodal interfaces of regional relevance. The ENTER.HUB project questioned the role of HSR Hubs in integrated urban development and in economic, social and cultural regeneration. The cities participating to ENTER.HUB network had in common to be in the process of redefining their territorial mobility systems, expecting that a Hub infrastructure would reinforce their links to other national and European cities, narrow their citizens and enterprises to diverse regional and interregional activities, and strength their connectivity from local to European level. The major objective of this project was to help these medium-sized cities to become more competitive and improve their mobility systems in connection with the HSR Hub to come. The twelve cities composing the ENTER HUB network are: Reggio Emilia (Italy), Lead Partner; IMPEFE - Ciudad Real (Spain); Creil Agglomeration (France); Gdynia (Poland); Girona (Spain); Łódź (Poland); Lugano (Switzerland); Örebro Region (Sweden); Porto (Portugal); Preston (UK); Rostock (Germany); Ulm (Germany).

Keywords: Attractiveness, Competiveness, High Speed Railway, Hub, Medium-sized Cities, Public Space, Railway Stations, Urban Mobility.

1. MEDIUM-SIZED CITIES IN “HUB AND SPOKE” SYSTEMS

The “Hub and Spoke” concept represents the nodal and radial component of a complete urban transport network. It can be defined as the centre of diverse activities connected by multiple spokes to other locations and functionalities. The term of Hub was initially attached to multifunctional centres, especially large airports, concentrating different means of circulation including air, train and motorways, and therefore mostly dedicated to major metropolitan areas. Today, this concept applies also to High Speed Railway (HSR) stations, as the latter connect optimally long distance travellers (business, tourism) with local networks and equally provides a new focus point between multimode of circulation and diverse layers of activity. In fact, a same Hub infrastructure usually contains a major and several secondary Hubs. As they integrate a large amount of nodes and functions, Hubs are generally huge, monumental and space-consuming buildings, housing internalized places, and therefore preferably built in isolated locations [1].

Ten Trans-European Transport Network (TEN-T) corridors already connect or should soon connect most major EU metropolitan areas, especially national and regional capitals, in other words they tend to link together large cities where “Hub and Spoke” patterns already exist. This situation naturally “favours the large central cities they connect, especially their urban cores, and this may threaten the position of more peripheral cities” [2]. The impact of HSR can have integrative effects but can also fragment territories [3]. Indeed, HSR Hubs benefit in priority to major metropolitan areas and may disadvantage smaller urban agglomerations [4]. The economic windfall promised by HSR promoters is

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⁵ Documents concerning ENTER HUB Project including Final Report are available on the Project’s home page: www.urbact.eu/enterhub [Accessed June 8, 2015].

not uniformly distributed along a corridor, resulting in possible winners and losers [5]. In reality, HSR impact on urban areas depends more on the “pre-existent potential of an urban region” [6] whether this potential is economic, patrimonial, touristic or educational, than on the size of a city and its distance to a major HSR Hub. Most observers precise that HSR possibly facilitates existing growth but does not automatically create new growth [6].

Medium-sized cities reveal another ambiguous relationship to transportation systems in general and to HSR in particular. In a way, public transport increases, as well local as long distance, and concerns all levels of population: workers, students, elder people, tourists, *etc.* But at the same time, low-density sprawl keeps up a car culture that is usually anchored in the local way of life. This economic and social dilemma is reinforced by a still growing importance given to car infrastructures and a certain lack of efficiency of public transportation. On the other hand, HSR may also carry a feeling of isolation for citizens living in medium-sized cities, even if located at the edge of large metropolitan areas. Such situations increase the danger of a vast migration of residents, companies and services towards larger urban centres, developing the fear of transforming the smaller city into a dormitory town. Finally, from an urban point of view, HSR lines and stations are often considered as being a barrier between territories, districts and people. For all these different reasons, probably among others, HSR may be suffered as a worrying improvement in medium-sized cities [7].

2. TWO SCALES OF INTERACTIONS

Still, in many ways, HSR Hubs can also amplify local opportunities, facilitate exchange between different categories of population, extend urban comfort by breaking it out into the city, create identity through people’s experience, and recall memory of a local urban environment. Even if the impact of such opportunities is usually difficult to measure, it is possible to observe it at different scales through simple indicators of urban quality as improvement of local public space, image of the city and its services, development of economic, educational, cultural and social activities not only inside the city but also along the Hub’s spokes and the TEN-T corridor.

ENTER HUB partners had in common to believe that the change they are facing by hosting a Hub can have a positive impact on local mobility, and that a connection to HSR may be beneficial to the attractiveness of their cities and the quality of life. They consider this change as an opportunity to reduce car dependency, to optimize and coordinate all modes of transportation towards a multimodal complex system connecting speed and slowness, to develop interaction between a wide diversity of uses, and to reach the expectations of different types of citizens and visitors. Facing such ambitious challenges, ENTER HUB partners share similar intentions: struggling to limit land use; seeking to enlarge economic, job and eventually touristic performances of their catchment areas; taking advantage of the wide range of opportunities Information and Communication Technologies (ICT) provide; bringing residential areas closer in distance and time to economic and cultural activities; and last but not least, planning so called “human scale” new districts and public spaces based upon the attractiveness of the expected Hub.

3. AN ATTEMPT TO DEFINE A HSR HUB FOR MEDIUM-SIZED CITIES

ENTER.HUB partners have gone through diverse aspects of the implementation of a HSR Hub, exchanging experiences at a transnational level and implementing independently Local Action Plans with local stakeholders. Identifying major issues of such an infrastructure in their cities, they have contributed to a common definition of a Hub for medium-sized cities. An urban HSR Hub is first an exchange node towards a multimodal network of private and public transportation. It also stresses diversely the relationship between mobility and the urban territory, being at the same time a gate to the city and a turbine for its re-development. Considering this concept in a medium-sized city, besides of being a major element of its territorial dynamics, a Hub is also a connector between the city and regional, national and international centres standing on the same TEN-T corridor. Therefore, a HSR Hub should be considered from two different points of view: at a global scale connecting the hosting city to most places in the country and in Europe; and at a local scale that narrows people, ideas and activities inside the whole city and its catchment area.

As such, a HSR Hub is at the heart of major challenges like: 1) building up a new identity; 2) favouring sustainable circulation of people, ideas and knowledge; 3) relying on users experience; 4) bringing together different types of population; 5) attracting people and economic activity; 6) producing value [8].

3.1. Building Up a New Identity

Medium-sized cities have generally a strong relationship to their heritage, whether it is architectural or urban, especially in their centre, but also natural and landscaped in their hinterland. In some cases, this heritage is valuable,

and extremely diversely related by mobility systems. Porto for example has a popular world heritage site and *Capanha* Railway Station takes intensely part in the upgrading effort of this value. Of course, the priority function of a HSR Hub is to regulate the flows of circulation and to link together all kinds of traffic. Still, one of its challenges is also to give place to pedestrians and other green modes. The result for visitors as well as for residents should be to get the feeling that a “Red Carpet” is being permanently rolled out for them. The concept of “Red Carpet” is an invitation to walk, bike or take public transportation, starting from an inviting place and running along the resources of the city and penetrating easily and pleasantly into its heart, highlighting its heritage, its culture and recalling its history [9].

3.2. Favouring Sustainable Circulation of People, Ideas and Knowledge

The use of HSR is in itself a sustainable way of travelling compared to planes, cars and buses. However if it is mostly sustainable to users, the real and optimal value of HSR for a medium-sized city is to be available for the inhabitants of a large and comprehensive catchment area. In this enlarged context, the issue of a Hub is paramount in order to facilitate polycentric city connections, inside this catchment area. The case of Reggio Emilia shows that the arrival of the High Speed Line is being a key occasion for a wide renewal of the regional public transport system, starting from the local railway line linking the new HSR Hub to the historical station. In return, the renewal of a transport system becomes an opportunity for a larger urban re-qualification. Designing a HSR Hub is not only conceiving a contemporary railway station. It should be a process of reconfiguration of a large accessible shared public space connecting the Hub with the city and giving priority to walking and biking activities as well as to public transportation. Implementing a Hub is a way to connect local and global, to relate speed and slowness, city centre and catchment area, smaller cities and metropolises, that is to bring together all kind of people, places and activities.

3.3. Relying on Users Experience

People need to express their experience and their demand for mobility, comfort, intensity, intimacy, and ultimately to reveal the sense they want to give to movement in their city. This essential but tacit knowledge is needed soon enough while starting the design of a Hub in order to reach a quality of life that will be perceived and not endured by the future users of the foreseen facility and the related public space. The city of Ulm offers a good illustration of such a process where exchanges and debates with users facilitate the understanding of new ways of practicing mobility, expectations, opportunities, priorities, leading to solutions that are well related to the territorial context and the local urban culture. The programming and the design of a HSR Hub is every stakeholder and user’s business. This statement needs a strong political and professional will to set up a participation system from the very beginning of the project and all along its progression, especially before any decision making. This process is the only way to secure ownership of the final implementation by all categories of users, citizens, tourists, service providers and business companies.

3.4. Bringing Together Different Types of Population

ENTER.HUB partners formulated following challenge: “There is a need for a connection between inner city and the ‘other side’ of the city”. Railways and stations often constitute a barrier that separates different parts of the city, and also different categories of citizens. In Örebro for example, the city centre is on one side of the station, but many people live on the other side, making it necessary to improve the connecting function of the future Hub. In these medium-sized cities, one of the major issues of a HSR Hub is to connect places and people and to reduce boundaries in favour of an integrated and open urban space. This issue should naturally be enhanced by the improvement of the city’s transportation network. But designing a HSR Hub is also a process of reconfiguration of a large accessible shared public space connecting the Hub to the city.

3.5. Considering a HSR Hub as a Public Space

A HSR Hub produces new services, some being linked to mobility but most of them being dedicated to business, retail, leisure and tourism. It attracts people, offers diverse activities and brings added value. Public as well as private services, inside and in its neighbourhood, imply large pedestrian areas giving to the Hub’s internal places the status of a public urban space, including safety, accessibility, cleanliness, *etc.* In Preston for example, “Fishergate - the main shopping street linking the train station and the bus station to the city - is in the process of being reconfigured to be a shared public space connecting the station with the city centre. This Hub is not a mere facility dedicated to mobility, its interior space becomes public and is widely open towards the city, its boundaries getting imprecise and fuzzy.

3.6. Producing Values

HSR Hubs are not only dedicated to travelling and to travel information. Additionally to usual travellers, more than 20% of people are supposed to spend time inside a railway station: shopping, meeting, stroll, laze about, lounge, or just passing through. Hubs also produce services inside and in the neighbourhood of the station. Some are linked to mobility but most of them are independent and mobility only brings them added value. In Rostock for example, the information office does not only help travellers, but also picks up data and makes an extensive use of it inside the large area of the Baltic Sea and Scandinavia.

In this sense, the design of a HSR Hub takes into account different scales of the urban and territorial planning. It should be a milestone along the TENT-T corridor that is connected to many other European cities, as well as to regional and metropolitan avenues. The main issue of Reggio Emilia is to put the Mediopadana Hub Station on the map and to establish new exchanges with other EU cities. These new links allow diverse attractive exchanges on long distances, whether these are economic, scientific, academic or cultural. The implanting of a HSR Hub transforms the inner city into a shared “city lounge” located inside and around the station, a high quality and connected public space that may attract local inhabitants, residents, business travellers and students.

CONCLUSION

Everywhere in Europe, the arrival of HSR impacts strongly the urban development of its hosting city and its catchment area. The longstanding railway station is transformed into a Hub and becomes the heart of this renewal. Large metropolitan areas have taken advantage of these recent establishments in the last decade. Medium-sized cities too are also having an opportunity to precise this concept and the conditions for its integration. With definitions such as being a “Red Carpet”, an “Urban Icon”, a “Place for People”, an “Urban Backbone”, a “Net of Services” and a “City Lounge”, ENTER HUB cities have been working over two years on this specificity, involving a large range of stakeholders in order to precise the conditions of implementation and integration of HSR Hubs. At the end of this project, taking advantage of their common and sharing experiences, ENTER.HUB partners are convinced that HSR Hubs increase considerably the accessibility of European medium-sized cities, modifying their geography by bringing them closer to large metropolitan areas along High speed corridors, and enlarging their catchment areas.

Still, in order to reach this specificity, a HSR Hub must keep in constant evolution during its life cycle, that is over the coming decades, as vehicles, their size, comfort, energy resources, accessibility and manoeuvrability will regularly transform the place dedicated to private and public mobility and lead to new services. ICT will also progress considerably, modifying the perception of information in a Hub, increasing the role of social networks and giving a larger place to knowledge. For all these reasons, a Hub needs to be flexible and adaptable. It must be able to evolve easily, be different day and night, during the week and on weekends, in summer and in winter, and above all be able to adapt over time to host new functions, new services, and new ways of life. It should therefore be designed in co-production with all stakeholders including end-users in order to respond to the constraints of present and anticipate possible future needs. As says the Catalan sociologist Manuel Castells: “the space of flows and timeless time are the material foundations of a new culture”.

CONFLICT OF INTEREST

The authors confirm that this article content has no conflict of interest.

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