



# City-HUB Project

[www.cityhub-project.eu](http://www.cityhub-project.eu)

**Newsletter N° 3** **February 2015**



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## Editorial

Dear reader,

Welcome to the 3<sup>rd</sup> issue of the City-HUB Newsletter, which concludes the fascinating voyage of the last 30 months, around the interchanges of the world. There are so many items to cover in this last issue, which we hope to keep you interested to its last line.

Firstly, you will read about the City-HUB Life Cycle Model, which establishes the guidance towards successful interchanges.

Also, you will get informed of various events City-HUB organized, or participated. During the last months, the project organized the 3<sup>rd</sup> City-HUB workshop in October 2014, in Thessaloniki and the City-HUB Conference in February 2015, in Lille. Both events were attended by important stakeholders, with whom we exchanged opinions, know-how and expertise in the domain, and retrieved interesting ideas about good practices in interchanges.

City-HUB partners visited 4 interchanges, and were guided by their managers to the secrets of their success. They also participated in other conferences, and fora dealing with sustainable urban mobility and intermodality.

We are happy to host interviews of selected stakeholders, about their opinions on successful interchanges.

Finally, we are very proud to announce that Taylor & Francis Group will publish the book CITY-HUBS: Sustainable and Efficient Interchange Stations, based on the City-HUB project, a must for the bookshelves.

Happy reading!

Prof. Andrés Monzón  
Project Coordinator

Prof. Eftihia Nathanail  
Dissemination Manager



# News: 3<sup>rd</sup> Period technical work and progress

## Road map to the City-HUB life-cycle model

The City-HUB model was developed to provide methodological guidelines based on the results of City-HUB project related to the integration of design and management of an interchange addressing at the same time travellers' desires. That is, to propose the roadmap for the **City-HUB life-cycle model**, which aims at providing guidelines that support stakeholders to develop successful interchanges. The model considers important issues related to transport demand and users, operation costs and urban land use and transport systems integration.

In addition, it defines the implementation process in different situations and scenarios across Europe using selected case studies based on new and improved urban interchanges. To that end, the City-HUB project, based its research activities on the deep knowledge of the state of the practice and through the consultation process with stakeholders and users' experiences and expectations, it developed the City-HUB life-cycle model.

Within the City-HUB project a consultation process was designed to understand key factors for efficient interchanges from the point of view of stakeholders and users. After a sound literature review, this process was based on operation and performance data collection from surveys. The figure below shows the process based on the analysis of 27 selected interchanges and stations. The lessons learnt from these case studies served as input to the remaining work of the project.

The semi-structured interviews to operators and managers in 16 surveyed case studies settled the basis for developing the analysis and proposals for the governance and services of interchanges. Then the attitudinal surveys in the 5 pilot case studies served to identify the key factors for travellers at interchanges. This includes also their perceived quality of existing services and the need for improvement. In summary, this process allowed us to define the City-HUB model that considers all the aspects for interchange deployment and management and also its integration with the local business and urban fabric. This model corresponds to the multiple faceted vision of stakeholders and users.

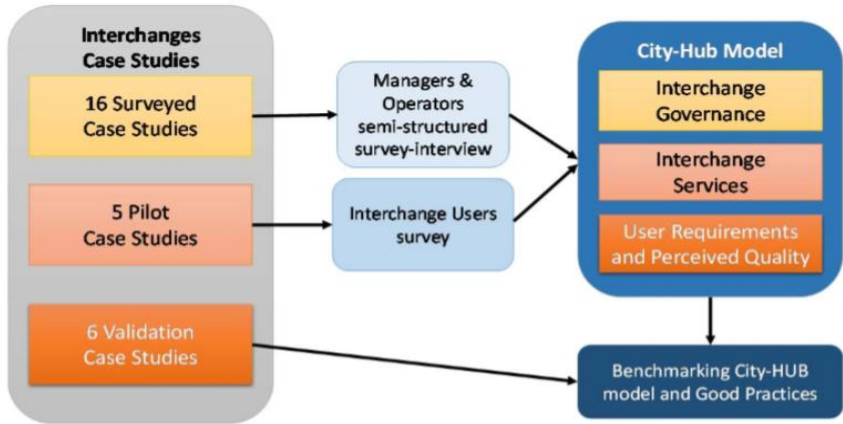


Figure 1: Road map to City-HUB life cycle model

## News: 3<sup>rd</sup> Period technical work and progress

### An overview of the City-HUB life-cycle model

The City-HUB life-cycle model consists of four stages. In the first stage, the needs and policy goals are set and the involved stakeholders are identified. The specific functions to be accomplished at the interchange are decided and the interchanged status is assessed and compared against the goals and the degree of need satisfaction.

Findings from the first stage feed in the second stage, which is oriented to obtain a clear vision of the interchange agreed among all stakeholders. Operators are considered as playing a key role in this process. A financial plan is being drafted. The initially set policies are being revisited and refined.

The third stage concerns the deployment of the interchange, and specific actions are defined. Here, the Interchange Management Plan is developed, which sets the specific roles and responsibilities of the stakeholders. Aspects related to the integration of the interchange with the city are also addressed.

The fourth and last stage realises the assessment and monitoring of the interchange performance. Actions related to obtaining feedback from users are being pursued. Impacts on the society, economy and transportation are being estimated. A business model is being developed, which incorporates all above findings.

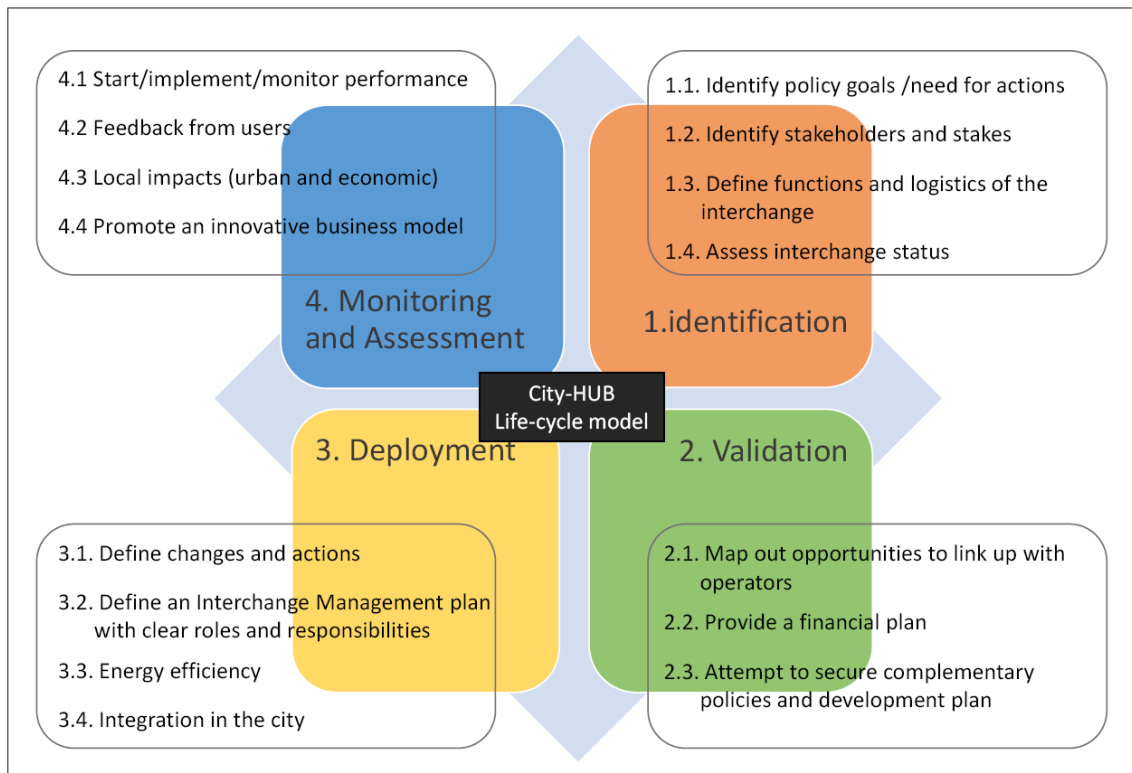


Figure 2: City-HUB life cycle model

## News: 3<sup>rd</sup> City-HUB Workshop

The 3<sup>rd</sup> City-HUB Stakeholder Workshop “Validating City-HUB model” was held at the premises of the Hellenic Institute of Transport/Centre for Research and Technology Hellas, in Thessaloniki, Greece on October 9, 2014 with 52 participants. Selected experts were invited to the Workshop to discuss with City-HUB partners crucial issues related to transfer services, management structure and integration of urban transport interchanges with the city. The objective of the 3<sup>rd</sup> Workshop was to retrieve stakeholder opinion on the appropriateness of the identified key factors of urban transport interchanges and validate the preliminary formulation of the City-HUB model through its application on the selected project case studies.

**Some of the main findings are presented below:**

### A. Regarding transport services

The key factors identified by City-HUB concern co-ordination of intermodal transport in terms of integrated time-tables, integrated travel information provision, and facilities and services offered at the interchange in combination with proper way-finding. However, not all of them apply equally to all users, and the passenger volume, trip attributes and terminal size determine the desired waiting conditions and respective design standards. Also, there is a gap in user, manager and operator perception as to the level of safety and security that a certain interchange design may offer. As regards in particular many railway stations, although they comprise transport interchanges, they are not considered as such and therefore their design does not take into account the above-defined key factors.

As it has been revealed that information plays a determinant’s role in an interchange, a standardized system at EU level should be deployed, and applications should exploit real time information provided to the operators, and consequently inform travellers.

### B. Regarding management structure and city integration

Key factors are the typology of interchange, construction, management and financing schemes and governance models. As interchanges is a complicated and demanding environment, a suitable design model should be considered, not in the sense of “one model fits all” but adjusted to the interchange’s particularities. Firstly, understanding of the involved stakes should be pursued, which will define whether and existing interchange should be upgraded or a new interchange should be developed. The surrounding transport system characteristics should also be considered, as they are very relevant for the success of the interchange. These will define the size of the interchange, as well as its integration level between all provided facilities and services. Then, precise roles have to be attributed for the conception, planning, construction, operation and management. For this reason, a typology of governance should be formulated. A dynamic business model should be incorporated, which supports the interchange operation throughout its life, to also cope for any possible conflicts arising between public and private activities in the allocation of the public grants.



Photos 1-2 : 3<sup>rd</sup> City-HUB Stakeholder Workshop

## News: 3<sup>rd</sup> City-HUB Workshop

### C. Validating the City-HUB model

Based on the above defined key factors, the model has to set the conditions for developing an interchange and it should be adapted to new or existing interchanges and to cases such as when introducing a new mode. A simple check list should be drafted for each different case. The main steps that the model has to incorporate are:

- First, define all the stakeholders involved;
- Then, identify their needs;
- In parallel, specify all points of their involvement in the design. E.g. have their needs been addressed? Include them before final stage;
- Formalize this involvement, if necessary;
- Include a physical design step and incorporate energy efficiency, safety/security and other aspects of the interchange;
- Adopt a monitoring/evaluation system to assess efficiency and effectiveness at various stages;
- Adjust some steps of the model especially for the development stage, with the aim not interrupting operation during that period; and
- Consider evaluation, mapping out opportunities and financial plan to be revisited as design becomes more precise.

Finally, some properties that the model should ensure are:

- The model should be flexible enough to provide for different stakeholders, facilitating at the same time to homogenize their views. It should take into account that some steps should be realized in parallel;
- After each step, the model should produce a clear output that sets and assigns responsibilities for the next steps. The counterbalance between efficiency and inclusiveness should be discussed; and
- The steps that are going to be harder to achieve should be identified (critical steps), so that to avoid obstacles and possible delays.



*Photos 3-4 : 3<sup>rd</sup> City-HUB Stakeholder Workshop*

**Full report and presentations at:**  
[www.cityhub-project.eu](http://www.cityhub-project.eu)

## News: 3<sup>rd</sup> City-HUB Workshop

A technical visit took place on the first day of the Workshop at the New Railway Station of Thessaloniki and at the MACEDONIA Intercity Bus Station of Thessaloniki.

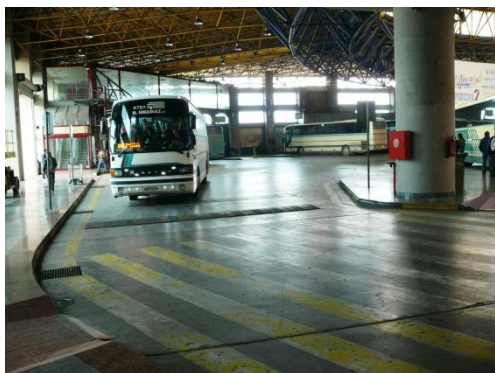
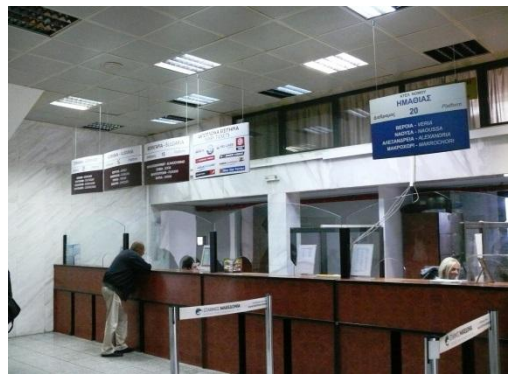
### Technical visit to the New Railway Station of Thessaloniki



Photos 6-11: New Railway Station of Thessaloniki

# News: 3<sup>rd</sup> City-HUB Workshop

## Technical visit to the MACEDONIA Intercity Bus Station of Thessaloniki



Photos 12-17: MACEDONIA Intercity Bus Station of Thessaloniki

## ***News: City-HUB presence at conferences and other events***

### **Transportation Research Board 94<sup>th</sup> Annual Meeting, January 2015, Washington, D.C., USA**

A paper was presented by Professor Eftihia Nathanail (CERTH) at the conference “Transportation Research Board 94<sup>th</sup> Annual Meeting”, which took place in Washington, D.C., USA on January 11-15, 2015. The paper was entitled “Defining common goals for future intermodal mobility”, and was written by Prof. Georgios Giannopoulos, Ms. Maria Tsami and Prof. Eftihia Nathanail.

### **International Conference on Reliability and Statistics in Transportation and Communication (RELSTAT’14), October 2014, Riga, Latvia**

A presentation was made by Ms. Maria Tsami (CERTH) at the International Conference on Reliability and Statistics in Transportation and Communication, which took place in Riga, Latvia on October 14-18, 2014. The paper was entitled “Evaluating travellers’ level of satisfaction at a Greek urban transportation hub”, and was written by Ms. Maria Tsami, Mr. Giannis Adamos and Prof. Eftihia Nathanail.

### **National Transport Days, October 2014, Siófok, Hungary**

Mr. Ádám Pusztai and Mr. Álmos Virág (KTI) presented the City-HUB project and guidelines for planning intermodal terminals by a new perspective of transport planning at the “National Transport Days” Conference, which took place in Siófok, Hungary on October 29, 2014.

### **Forum with local stakeholders, November 2014, Oslo, Norway**

TOI partners organized a forum in Oslo, Norway on September 2, 2014, and presented the City-HUB project to 15 local stakeholders (policy makers).



## News: City-HUB presence at conferences and other events

### CZECHBUS 2014, 3<sup>rd</sup> Central European Bus & Public Transport Fair, November 2014, Prague, Czech Republic

CDV partners organized a City-HUB Workshop during the CZECHBUS 2014 exhibition, which took place in Prague, Czech Republic on the 19<sup>th</sup> of November 2014. Both the City-HUB project and the Czech validation case study, the Prague terminus Dejvicka, were introduced to the audience, which constituted of more than 30 transport professionals and representatives of municipalities. The City-HUB coordinator, Prof. Andrés Monzón was also present at this Workshop.



Photos 18-19: CZECHBUS 2014 exhibition

## Future publications

The City-HUB consortium are preparing the book:

- Monzón, A., Di Ciommo, F., Nathanail, E., Palmer, D., Andersen, J., Poppeliers, R., Gabor, A., (eds.), 2015. CITY-HUBS: Sustainable and Efficient Interchange Stations, which will be published by the Taylor and Francis Group.

Two scientific papers are under review:

- Hernández, S. & Monzón, A., 2015. "Key factors for defining an efficient urban transport interchange: the users' perceptions". *Submitted for publication to Cities*.
- Hernández, S., Monzón, A. & De Oña, R., 2015. "Urban transport interchanges: Methodology for evaluating perceived quality". *Submitted for publication to Transportation Research Part A: Policy and Practice*.

## News: City-HUB Final Conference

The City-HUB Consortium organized its Final Conference “Urban Interchanges: how much integration we need?” in the premises of the French Institute of Science and Technology for Transport, Development and Networks (IFSTTAR) in Lille, France on 19 February 2015. The Conference was organized under two sessions “an Urban interchange concept” and “Guidelines for monitoring and assessment”, followed by a round table with the topic: “Recommendations for European interchanges: City-HUB Model”.

The project’s coordinator, Prof. Andrés Monzón from TRANSyT-UPM opened the Conference, welcomed the participants, and presented an overview of the City-HUB project, highlighting the scope of the Final Conference. Then, the regional director of IFSTTAR on the Lille Villeneuve d'Ascq site Mr Philippe Rigaud made a welcome speech and presented the IFSTTAR research policy. Following this, the Head of Mobility of the Barcelona Transport Authority Mr. Lluís Alegre gave a presentation about the needs, experiences and desires of the end-users of urban interchanges.

Prof. Andrés Monzón introduced and explained the process for the development of the City-HUB model from investigating, evaluating and understanding the mobility needs of passengers. The presentation of Prof. Eftihia Nathanail of CERTH followed, focusing on the guidelines for successful interchanges, while Mr. Peter Christiansen from TOI closed the 1<sup>st</sup> session of the Conference, presenting good practices for interchanges.

Prof. João António de Abreu e Silva of the Instituto Superior Técnico of Lisbon spoke about the economic and social impacts of urban interchanges. Then, Mr. Derek Palmer from TRL presented important changes and potential actions needed for successful interchanges, while Ms. Sara Hernandez from TRANSyT-UPM introduced crucial findings from the users’ viewpoint. Mr Ivo Cré, Deputy Director of the POLIS Network representing the European project NODES, presented initial results of the project highlighting the NODES toolbox for urban interchange development.



*Photo 20-21: City-HUB Final Conference*

## News: City-HUB Final Conference

*Dr. Imre Keserű from Vrije Universiteit Brussel moderated the discussion of the evening round table involving the key-note speakers, the NODES representative, the City-HUB stakeholders and the City-HUB partners. Ms. Heather Allen from TRL was the rapporteur of the round table.*



**Photo 22: Round table during the City-HUB Final Conference**

***The main points of this discussion are summarized to the following:***

- All participants agreed that a strong focus on the term “user” was revealed from the presentations and discussions made during the Conference. This seems to be in line with the current approach by the European Commission to promote user-based policy developments and the concept of smart cities.
- A second point was that as journeys become more complex and there is an increasing need for users to change a line or mode, the interchanges are not just a location where people change transport but they have become places “in their own right”. To this end, the guidance for the non-transport related aspects of the outputs of City-HUB model for developing a successful interchange were considered to be cutting edge and of practical use to city authorities and developers.
- An additional key point was the importance of considering the views and concerns of all stakeholders involved in the development of interchanges, including transport providers, owners/managers or developers of the interchange, as well as local businesses, representative groups (less able people, senior citizens), taxis and complementary modes. However, it was also recognized that there are specific areas of potential conflicts and tensions between the different stakeholder groups, and that often those people who are in charge of the interchange do not have the skills, training or knowledge of how to deal with this.
- Also, it was recognized that the use of interchange buildings is not static and it is of high importance to understand the best ways to incorporate adaptability and flexibility, which seem to be two crucial aspects for the success of interchanges in the future.
- Another point referring to the improvement of the interchanges was that more information is needed to be gathered in terms of: a) better understanding of the value time spent on journeys; b) improving the “whole journey experience” through the hierarchy of different nodes and interchange points of a journey; and c) working more on how best serve the local travelling public segmented by journey type, time and function of the journey, rather than only catering to one small segment such as the commuter.
- They key role of Intelligent Transport Systems (ITS) and applications (apps) in the improvement of the journey experience and the increase of the efficiency between the legs of the journey, was also identified. The use of ITS and applications, both in terms of information provision and way-finding, can increase the access to and from interchanges by more sustainable modes (i.e. public transport, walking, car and bike sharing).
- Lastly, the topic of security and how this can be enhanced with both technical and non-technical interventions was defined by the participants as of a future concern to be studied further. The connection of TEN-T networks linking major cities with the local transport networks was a second topic that should be studied in the near future.

# News: City-HUB Final Conference

## Technical visit to Gare Lille Flandres and Gare Europe



Photos 23-28: Gare Lille Flandres and Gare Europe

## Interviews



with **Mr. Tom Granquist**  
Akershus County, Oslo, Norway

### ***In your opinion, what are the main challenges that an urban interchange should address?***

Firstly, one should investigate the function of the urban interchange today and in the future. The development of the interchange is different for an existing interchange compared to a complete new one. The planning regulations and planning procedure vary in the different EU countries, but the main challenge is to involve the different stakeholders at an early stage in the planning and building process.

A good involvement and participation here is very important both with regard to the shape/design and running operation/maintenance of the interchange. The stakeholders represent different interests, which must be identified and incorporated in the function of the interchange.

Secondly, the interchange plays an important role in the surrounding urban environment. The interchange could be in a broader planning context to be developed into an important “City hub” for both travellers and for adjacent offices / dwellings. This means a big contribution in creating an environment attractive and efficient interchange for both the public transport passengers and the surrounding business / inhabitants in the area.

### ***In your opinion, what are the main roadmap components towards Successful European Interchanges?***

In the planning of an interchange one should put great emphasis on how to minimize the transfer distance between the transport modes. This will as a consequence ease the requirements to a clear and lucid signposting both internally and for the streets surrounding the interchange. The signposting should not be only in the national language, but at least be in an other major EU language. Perhaps EU should introduce an easily understood signposting with “picture” signs to avoid language problems, etc.

The City-HUB project has identified many good practices for building and operating European interchanges. The experiences and the data from this work could be developed into a manual with guidelines depending upon which type of interchange one should improve/redevelop or build in the different urban environmental settings.

## Interviews



with **Dr. Georgios Spanos**

Organization of Urban Transportation of Thessaloniki, Greece

### ***In your opinion, what are the main challenges that an urban interchange should address?***

According to my opinion, the main challenges that an urban interchange should address are the following:

- Integrated information provision to passengers, including every single mode of transport that uses, either directly or indirectly, the interchange. In this way, the interchange can provide a seamless journey to the passenger, throughout different modes of transport.
- Integrated (electronic) ticketing to passengers using the interchange should also be provided.
- In an urban interchange, some players (e.g. bus operators) are privately owned, whereas some others belong to the public sector (e.g. Land owner, train infrastructure owner, etc.). A constructive private-public sector co-operation is necessary to provide for a better operational environment.

### ***In your opinion, what are the main roadmap components towards Successful European Interchanges?***

- Establish legal as well as operational framework for private-public sector co-operation.
- Create common specifications among all transport players involved, in at least two sectors: a) ticketing and b) information provision. An important step towards ticketing and information integration is the creation of open data structures.



with **Mr. Konstantinos Karagiannis**

Municipality of Volos, Greece

### ***In your opinion, what are the main challenges that an urban interchange should address?***

It is common sense that the development of the interchange is different for an existing interchange compared to a new one. In the case of a new interchange, the most serious problem is to convince people who represent different organizations (Municipality, Railway, Port, Bus, etc.) to sit in the same table, discuss and finally decide.

I believe that the Municipality has to play the first role, and invite the other stakeholders to develop an “umbrella” organization, so everybody can act to the same direction. This is the only way to make the dream come real, so citizens and visitors could enjoy all the benefits of a brand new urban interchange.

### ***In your opinion, what are the main roadmap components towards Successful European Interchanges?***

- “Umbrella” organization;
- Short transfer distance;
- International signposting;
- Sufficient parking space; and
- Other top level amenities (i.e. banks, shops, restaurants, cinemas, coffe shops, etc.) around the interchange area.

## Interviews



with **Prof. João António de Abreu e Silva**  
Instituto Superior Técnico, Lisbon, Portugal

### ***In your opinion, what are the main challenges that an urban interchange should address?***

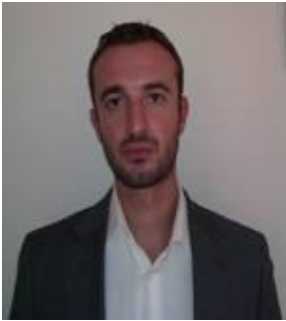
Although urban interchanges impact in / interact with several components in the transport/land use system, and these should be taken in consideration in its planning and designing, one should not lose sight of interchanges' main objective, which is to reduce the costs associated with transfers between different modes at the node and the global transportation costs.

These objectives should be pursued in an environment of technological change (e.g. new ticketing forms) and with stakeholders that tend to pursue different and sometimes opposing objectives. Also, it could be possible that interchanges might contribute to increase the quality of the transportation experience, by including activities, which increase their value as a node in a chain of segments that constitute a multimodal trip (e.g. specific commercial activities like convenience stores, supermarkets or other activities that present a value for travellers). Nevertheless, at the end, interchanges should be evaluated by its capacity to increase the attractiveness and contribute to the increase of market share of public transport.

### ***In your opinion, what are the main roadmap components towards Successful European Interchanges?***

I think that the answer to this question is related to the previous one. I would say that the main objective would be to plan, locate, design, manage and operate interchanges that in the end contribute to a higher market share of public transport. Although this objective should be pursued in more holistic approach, not losing sight of the possible co-benefits of interchanges (e.g. Impacts on the surrounding urban environment, the possibility of contributing to Transit Oriented Development Strategies) and secondary objectives. Thus, I would say that research should be directed to assess the impacts of different options in interchange planning, location, designing, management and operation on public transport patronage, thus contributing to more sustainable, equitable and livable cities.

# Interviews



with **Dr. Konstantinos Zarras**  
Municipality of Xanthi, Greece

***In your opinion, what are the main challenges that an urban interchange should address?***

In today's cities, which constitute complex spatial and socioeconomic entities, an urban interchange could (and should) be much more than a transport hub. Undoubtedly, the most important aim of an interchange is to perform its basic function of facilitating the passengers' transfer between different modes of transport services in a rapid, efficient, comfortable and safe way.

Nevertheless -as it is highlighted by the City-HUB project- beyond the improvement of the urban transport chain, the design of an interchange should be embedded in a framework of an integrated sustainable urban environment. This means that it should be oriented to tackling social challenges such as economic crises -by revitalizing deprived neighbourhoods that could contribute to the creation of a better economic environment for vulnerable social groups such as the unemployed- or social inclusion by facilitating accessibility for people with mobility problems. Moreover, an urban interchange should have a positive impact on environmental issues by promoting the use of renewable energy sources and reducing carbon emissions. The exploitation of advanced technologies for mobility can play a crucial role in achieving the above mentioned goals.

***In your opinion, what are the main roadmap components towards Successful European Interchanges?***

It is generally agreed that there is not a single plan that could serve as a model for urban transport interchange development for every European city. There is, however, a range of good practices and objectives –identified by the City-HUB project- which provides orientation and guidance for stakeholders who are dedicated to addressing the multidimensional challenges deriving from proper interchanges planning, operation and management. From a city planner's perspective, a Successful European Interchange development requires a close cooperation with stakeholders and it should aim at promoting efficient, safe and secure movements, increasing users' satisfaction, facilitating accessibility, providing sufficient information and in supporting at the same time sustainable, smart and green urban development.





# City-HUB Project

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**Newsletter Nº 3** **February 2015**

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