

GUIDELINES FOR IMPLEMENTERS OF **Passenger Friendly Interchanges**



What is it about?

Characteristics

The big challenge of the 21st century's transport interchange is to provide solutions for smart and efficient interaction of the different passenger flows in interchanges. Passenger friendly interchanges:

- provide a great opportunity to use and be familiar with public transport (PT) modes for daily commuters, and for tourists as well as for first time users;
- are safe, well-lit, clean;
- offer accessible, up-to-date information (e.g. timetable, smart guidance) where and when required;
- are basically designed to provide an accessible ('easy to reach, easy to use') environment.

Local authorities should take into consideration that passenger friendly interchanges play a crucial role in supporting the growth of public transport usage, which makes their city more liveable – and this is a major objective of cities across Europe.

Key Benefits

The benefits of this concept are social and subjective rather than numeric. Passenger friendly interchanges are capable of:

- minimising overcrowding and congestion;
- helping the efficient use of space;
- optimising the design and location of key facilities;
- increasing passenger satisfaction;
- increasing public transport modal share.



Waiting room, Birkenhead bus station, Merseyside, UK
Photo: Alan Murray Rust

Birkenhead Bus Station (Merseyside, UK)

The Birkenhead bus station is one in a programme of new infrastructure developments built and managed by Merseytravel, the Merseyside Passenger Transport Executive. It was built in anticipation of significant increased usage of the Birkenhead shopping and leisure centre with new developments, including a multiplex cinema and a leisure park.

The Merseyside Police Crime Reduction Officer identified good visibility as a key feature in making passengers feel safe when using the bus station and deterring potential criminal activity.

The bus station was designed to enhance the passenger's experience and perceptions of personal security. There are clear sightlines with much of the station's structure made from large panels of clear, toughened glass.

Is this something for us?

A well-designed passenger friendly interchange should bring certain benefits, like functionality, increased safety, higher capacity, increased passenger satisfaction, attractiveness to people, even if they are not attracted to use it for a trip. Specific features include:

- user-friendly ticketing systems;
- advanced traveller information systems;
- broad functionality supported design.

Check list	
City size	Not relevant. Can be implemented in a small station as well as for large interchanges.
Costs	The information system and design might bring a higher cost than a conventional interchange. Efficient space use and rental of shop space can save money or generate income. See next page for details
Implementation time	Short term (<3 years)
Stakeholders involved	<ul style="list-style-type: none">• Interchange owner/manager;• Local authority;• Public transport operators;• City planning.
Undesirable secondary effects	Try to keep the original functions of the interchange and avoid becoming too “commercial” and crowded by shops, restaurants and other leisure facilities.

“Madrid's transport experience is that if the interchanges are more passenger friendly, public transport will be used more. A lack of quality results in the abandonment of public transport by people who are free to choose private transport”.

Javier Aldecoa Martínez-Conde
Subdirector de Intermodalidad, y
Concesiones de Obras Públicas
Consortio Regional de Transportes de Madrid

“Passenger interchanges have long been identified by most people as cold, dangerous, dirty and unfriendly places. It is time to build/transform public transport interchanges to higher standards, to become friendly, safe and clean places, in order to make the everyday life of city people easier and facilitate visitors as well. Our lives in the cities have become way too complicated and passenger friendly interchanges can significantly improve the quality of life in cities. Let’s take the good examples around the world and transfer them everywhere if possible”.

Yanni Papapanagiotou,
Managing Director
SYSTEMA – Systems Planning and
Management Consultants S.A,
Greece



Well-designed and positioned information panels at the railway station of Sint-Niklaas, Belgium
Photo: TTB

Benefits & Costs

Benefits

A well-designed passenger friendly interchange should bring certain benefits, like functionality, increased safety, higher capacity, increased passenger satisfaction, and attractiveness to people, even if they don't plan to use it for a trip. Efficient space use and rental of shop space can save money or generate income. This innovative concept tries to improve the public transport experience of current users by providing better facilities and shorter travel times (generalised travel cost savings) and to make public transport usage more attractive by removing/reducing barriers during the trip. Besides **safety** and **security**, accessible (up-to-date, well-positioned) **information** is also crucial.

Costs

Costs, cost effectiveness, or cost benefit ratio are crucial during the preparation phase. The good news is that the cost of a passenger friendly interchange is very flexible, depending on the measures included in the project. Renovation of lighting or information systems brings benefits, but costs less than total reconstruction works. Compared to a conventional interchange, the information system and design might increase costs.

In December 2008, a new bus and rail interchange was opened in Nelson, using the existing train station.

The new interchange facility cost £4.5 million and included enhancements such as bicycle stands, taxi & car drop-off facilities, electronic information displays, a direct link to the train station - including a passenger lift - and an enclosed passenger concourse with 10 bus platforms.



Nelson Interchange

Photo: Des Fildes, SBS Architects, Manchester

Users & Stakeholders

Users and target groups

The functions of passenger friendly interchanges have to meet the demand of the different travelling groups. To achieve this, the main target groups need to be clearly defined, namely:

- **daily commuters:** they want to travel smoothly, reliably and fast, which can be guaranteed by providing smart guidance, and short distances/ transfer times between transport modes;
- **tourists and first-time users:** they require safety, cleanliness, service staff, support for orientation and complementary services. To this end, understandable, accessible multi-language information, high quality infrastructure and guidance, restaurant, shopping and leisure facilities should be provided;
- **elderly and children:** they want to travel easily and safe. Therefore 'easy to reach, easy to use' design is crucial as well as avoiding level differences, and providing sufficient lighting. Service staff should be available.

Key stakeholders for implementation

Cities want to profile themselves as being modern, dynamic and responsible. This concept provides all of this, so the most relevant stakeholders - like the city council, local authority, transport authority, transport operator and urban developers - should have a high interest in being involved.

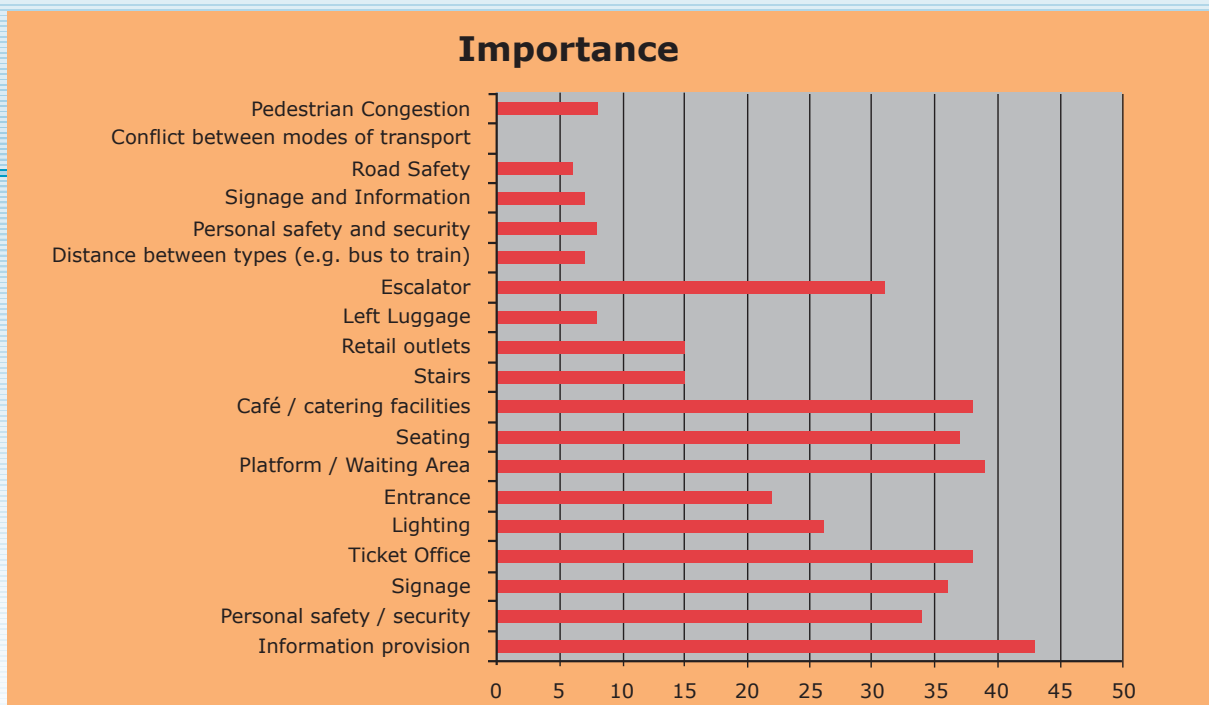
Local or public transport authority

These stakeholders have a very important role in the project team, because an interchange project highly depends on the attitude of the local authority. Some funding may also come from the local authority, so it has some competence in the planning process as well.

Transport operator

A developing interchange is a promotional opportunity for transport operators. Offering a higher level of service will result in an improved image. They can provide funding and participate in the planning process.

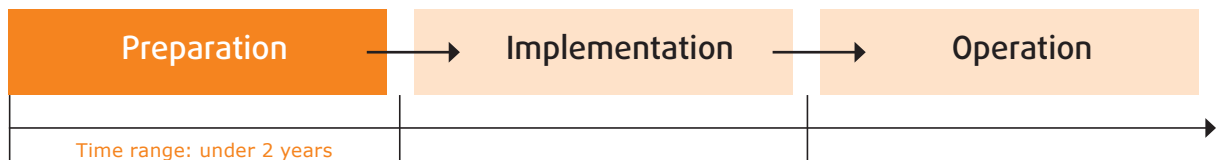
The list continues with **financial advisors**, **urban developers** (architects) and **private investors**



Graph from a passenger survey on factors of importance/facilities at Haymarket Station
Source: Haymarket Station Facilities Research Summary (2006)

From concept to reality

Preparation



Passenger friendly interchanges seek to provide better accessibility to public transport systems, and the measures within this concept can be applied widely in cities that want to improve their public transport system by focusing on interchange design.

Objectives:

- fulfil the desired benefits (like increased number of passengers, speeding of passenger flows, increased user satisfaction);
- maintain a socially and economically sustainable operation;
- boost local urban development;
- improve the image of public transport.

Key aspects at this stage

Political support is the most crucial factor in this stage of the project. This means there has to be strong political will as well as financial support, or at least commitment to the financial side of the project.

The infrastructure usually belongs to the local or regional authority, and in many cases to the transport operator (following European market regulation initiatives). Therefore, this kind of investment could be an initiative of the service providers or other stakeholders, but the final decisions should be made by the authority together with the transport operator (or the infrastructure manager).

Whether or not the infrastructure and public transport services are in different hands, they make decisions in strong cooperation and usually involve third parties to collect the possible added values to the project and provide solutions for the financing.

Institutional cooperation seems to be crucial. Different operators, business views and interests meet in the preparation phase, so the decision makers (usually the city council) have to work carefully, seeking the best solution for all parties involved (stakeholders).

Gathering knowledge from **best practice studies** is a key element for success.

Experience of experts implementing similar concepts, and lessons learned from the so called 'donor cities' are not only very useful, they can also enable resource savings (human and financial).

Creating political support

The political support depends on the expected effects of the measures. Not only within the interchange, but outside as well. A well-designed interchange attracts businesses (shops, cafés, restaurants, offices etc.) which may affect residents living in the surrounding area. Leaders and politicians should address such issues in advance. Sometimes there are effects (positive and negative) which cannot be foreseen.

Stakeholder network

Stakeholder needs should be considered carefully. An independent engineer should play the role of mediator. The objectives and roles must be clear, so the key barriers can be recognised at an early stage of the project.

Urban developers, e.g. an architect company, are suggested to be strongly involved, as they should be assigned to prepare the plans for the **local authority** (procurer).

There has to be strong **political will** and **funding mechanisms** need to be worked out well – this is in many cases the strongest constraint for implementation.

The **quality** and **facilities** available at interchanges need to be appropriate to the size of demand and the number and frequency of lines serving the interchange.

It is as important to avoid over-provision of facilities - which cannot be justified economically, resulting in eventual financial problems - as it is to avoid under-provision.

Care should be taken in ensuring that the facilities can be maintained properly over time, and it is very important that economic activity - retail activity in particular - is situated at or close to the interchange, or can be attracted to it.

This serves to increase both the use of facilities and of public transport, and it helps to provide funds for maintenance.

Ready for implementation? ✓

Political commitment

Public support

Funding mechanism

Financial resources

Tender for architects

Businesses interest

From concept to reality

Implementation



Planning of urban public transport developments should be robust in order to provide guarantees for implementation.

Exploration of funding opportunities through different sources is essential.

The story of implementation is about co-operation among actors of a different nature.

Implementation is not just about building an interchange, but about revitalising and upgrading it together with its surroundings.

"There are "windows of opportunities" which must be used; if not, the chance is over for a long time." **Dr. Leonhard Höfler, Head of Board of Supervision OÖ-Verkehrsverbund**

It's important to maintain political support since the activity of the NGOs, especially those which are representing the residents, usually becomes quite vigorous. The project team should be devoted to raising public awareness.

The preparation of a barrier-free ticketing system should be initiated if it does not exist yet.

It is important that the design and the business plan are well prepared and robust, with transparent calculation and presentations of the expected benefits of the investment.

It is highly recommended to make market surveys in the early phase of the implementation.

Key aspects at this stage

The main emphasis at this stage is on securing the financial resources and managing the costs and construction works, with special respect to time, local traffic management and the needs of local residents.

Private investor needs and funding should be finalised. If there is room for tendering the services, then this should be initiated.

If the preparation phase was too long ago and/or the plans with the probable infrastructure operator, public transport operators and delivery companies were not sufficiently refined, and then this should be done in this stage.

"The implementer should take into consideration that the implementation process (including construction works) may cause inconveniences for the public. So it is highly recommended to inform citizens about the works, and promote the benefits at the end of the day."

Stephan Wilhelm, Agentur BahnStadt



Birkenhead Interchange
Photo: MerseyTravel

Good positioning of the signs and reliable travel/passenger information within the interchange is of major importance.



Leipzig Hauptbahnhof
Photo: Klaus Reichsle

Creating political support

Devoting efforts to the marketing of the planned benefits and a close link to the stakeholders is a basic requirement that will help to accept the extra burdens caused by the implementation.

Strong political support makes the management of risks easier, especially those of a financial nature.

The gap between political announcements and reality should be minimised to keep the credibility and support of the users and investors.

Stakeholder network

The stakeholders involved in the preparation and implementation phase have a common core (e.g. local authority, local politicians and public transport operator). However, in this phase the ones who are responsible for financing hold the key stake, like financial advisors, investors and the local authority.

The outside influencers (like NGOs, tenants, press) should be participating at cooperation processes, to support and even control the implementation process. Press involvement starts at this stage, which may help ensure public acceptance.

If information for customers and staff (especially drivers) is not given in time or is not clear, this can generate more conflicts between these groups. In this sense, the new travel information technologies are an important improvement, but their impact is hardly measureable.

The strongest network effect will be achieved if well-designed interchanges are developed at all places where two or more lines cross each other, so that transfers will create a number of new travel opportunities.

Many of these points will be simple road junctions, so it is important that traffic engineering and management is strongly directed to take proper care of public transport users in the detailed design of urban streets and roads. Interchanges should be part of a bus stop hierarchy approach. Besides developing the necessary infrastructure, a **common tariff system** for all modes (urban bus, regional bus, local rail services) should also be part of the policy.

Chur (Switzerland)

The bus station for regional bus services is located above the train station and can be reached directly from every platform.

The yellow design elements support signposting because they are in the style of the yellow buses. In addition, local buses depart from just outside the train station.

The timetables of buses are coordinated with those of the trains.

From concept to reality

Operation



The nature of public transport makes it necessary for people to change transport modes throughout the journey. Passenger friendly interchanges minimise the burden of changing. Therefore, the operation phase should focus on passenger needs, considering the various user groups (like first time users, frequent travellers, virtual users and non-travelling users).

- the 'soft' side of the interchange (ticketing, information, coordination of services, institutional co-operation) is almost as important as good design (short walkways, etc.). In addition, safety, staff presence and tidiness are also essential;
- the main function of an interchange and its additional services should be evaluated according to the needs derived from surveys.

Key aspects at this stage

The operation phase is the most crucial one, since in this phase all design principles and implemented developments are evaluated as a whole by the passengers. However, some key issues should be stressed:

- providing integrated ticketing and information systems are key elements of a passenger friendly interchange. A good ticketing/tariff system can reduce transfer and management costs and generate more passengers;
- an easily understandable and open fare system can help to cope with the multilingual barriers. From a technological point of view, a well-developed IT based system makes the ticket selling easier, reduces the associated costs and helps to share revenues among operators;
- in many systems one or more operators will be involved – which are usually focusing too much on their own travel mode. There is an emerging need for tailored bilateral or multilateral agreements on intermodal co-operations;

Creating political support

In this phase, the local authority should focus on observation, monitoring and control.

Stakeholder network

The user group representatives, the tenants and operators keep high stakes in the full-scale operation. Stakeholder views should be collected and analysed to get feedback during the operation.

The multi-language environment is seen as a barrier. The social barrier factor (human and property safety) is also quite important.



Modern bus station in Chorley, Lancashire
Photo: Rick Wilson

Further information & contacts

Further information

PROCEED Project

www.proceedproject.net

LINK Forum

www.linkforum.eu

Contacts

Javier Aldecoa,

e-mail: javier.aldecoa@ctm-comadrid.com

Katrin Dziekan,

e-mail: katrin@infra.kth.se

Yanni Papapanagiotou,

e-mail: ipapa@systema.com.gr

Horst Reichert,

e-mail: horst.reichert@archiplan.de

Roberto de Tommasi,

e-mail: detommasi@synergo.ch

For more information on the project, contact the
NICHES+ Coordination at Polis,

e-mail: icre@polis-online.org

phone: +32 2 500 56 76

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The mission of NICHES+ is

to build on the success of the first NICHES project by stimulating a wide debate on innovative urban transport and mobility between relevant stakeholders from different sectors and disciplines across the EU and accession countries, in order to promote the most promising new urban transport concepts, initiatives and projects and transfer them from their current "niche" position to a mainstream urban transport application.

This publication is part of a series of 13 publications presenting the NICHES+ outcomes.

Picture on front page:

Birkenhead Interchange

Photo: MerseyTravel

Prepared for the European Commission by:



Author:

János Monigl, Zsolt Berki, András Székely
TRANSMAN Transport System Management Ltd.
10. Hercegrímás str. Budapest, 1051 Hungary

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NICHES+ team

Polis (coordinator), Rupprecht Consult, Newcastle University, University of Southampton, EUROCITIES, Transman

Further information on NICHES+

www.niches-transport.org
www.osmose-os.org