

ADVICE NOTE ON PUBLIC TRANSPORT INTERCHANGE

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ADVICE NOTE ON PUBLIC TRANSPORT INTERCHANGE

1.0 Introduction

1.1 DTO Strategy

The DTO published its Transport Strategy for Greater Dublin for the period up to 2016 in “*A Platform for Change*” in September 2000. The Strategy seeks to transform the transportation system in the Greater Dublin Area by the introduction of extensive, high quality, fully accessible integrated networks for DART/Suburban Rail, Luas, METRO, Bus, Roads, Cycling and Walking. As a result the majority of the demand for travel will be catered for by Public Transport.

One of the principal components of the enhanced Public Transport element of the Strategy will be:

*“A package of measures designed to improve the integration and attractiveness of the public transport network, including...**quality interchange facilities.**”*

1.2 Public Transport Network

As a result of the enhanced network there will be numerous interchange points and public transport nodes where services converge allowing most journeys on the Network to be made with not more than one interchange. Such interchange will be properly planned to allow journeys by Public Transport to be “seamless”.

Mr Hans Rat, Secretary General of UITP (Union Internationale des Transports Publics) at a recent Interchange Conference in London (May, 2002) stated that

“...since a door-to-destination journey by public transport nowadays frequently consists of a succession of smaller trips, integration means removing all the discontinuities experienced by passengers when putting those smaller trips together into one journey.”

1.3 Current and Future Interchange Usage

As the Public Transport Network expands to cope with future demand, the introduction of Luas, METRO, enhanced DART/Suburban Rail Services and additional radial, orbital and local bus services the opportunity for interchange will inevitably increase dramatically.

Table 1.3.1 shown below clearly demonstrates the projected increase in interchange usage by changes in modal split from a base year of 1997 through to the DTO planning horizon of 2016 using am peak hour trip demand. Of particular significance is the projected increase in rail travel and the associated greater use of buses as feeders into the rail network. As

such, the role of interchange becomes an increasingly crucial element of the DTO Strategy.

Table 1.3.1: Modal Split for Peak hour Trip Demand

Mode	1997 Person Trips (000's)	Mode Share (%)	2016 Person Trips (000's)	Mode Share (%)
CAR	181	72	180	37
BUS	47	19	69	14
RAIL/ LUAS/ METRO	22	9	239	49
TOTAL	250	100	488	100
ALL PT	69	28	308	63

1.4 Opportunities

As a result of the rapidly changing profile of the Greater Dublin Area, those responsible for the design, implementation and enhancements of all locations where interchange takes place have opportunities to significantly enhance the attractiveness and quality of journeys by Public Transport to help ensure that the objectives of the DTO Strategy are fulfilled.

2.0 Background

2.1 What is interchange?

Interchange can be either the physical **action** of transferring between services or modes as part of the passenger's journey or it can be the physical **location** that provides access to the Public Transport system.

The Public Transport Network in the Greater Dublin Area, both today and as it evolves, offers a very large number of locations where the passenger can change services. Interchange should not therefore merely be thought of in terms of existing or future purpose built Bus/ Rail/ DART/ Luas/ METRO Stations/Interchanges but at all physical locations, however large or small, where the action of **accessing** the Public Transport network or **transferring** within it takes place.

2.2 Classification of Interchange

In general terms the scale and range of facilities at any one location should depend on the nature and volume of potential passenger throughput.

A useful exercise may be to classify interchanges on a strategic network basis to assist in the assessment of the range of facilities that are appropriate. A possible classification is as follows:

Class 1

Places where there is an opportunity to change between services or modes and where minimum facilities are adequate. This may be, for example, a pair of adjacent bus stops or a small suburban rail station with bus stops in the forecourt. This class includes individual bus stops where passengers join the Public Transport Network.

Class 2

Locations that have been designated for interchange with additional facilities. This could be a series of City Centre bus stops over a wider area or a Suburban Rail/ METRO station with Park & Ride and/ or bus interchange.

Class 3

Larger purpose built rail/ METRO or bus stations.

Class 4

Major multi modal interchanges.

Such classification may assist in the formulation of a blueprint of recommended minimum facilities for each class of interchange.

2.3 Why do people interchange?

People interchange either because there is no direct through service or route from origin to destination or they choose to change services or modes in order to take advantage of a more convenient or speedy or cost effective mode of travel for part of their journey.

Interchange therefore can be either an inconvenience imposed by the configuration of the Public Transport Network or an opportunity for passengers to take advantage of reduced travel times and/ or costs.

In either situation if the quality of the interchange experience is generally poor then as a consequence fewer passengers will choose to make journeys by Public Transport if they have a choice of alternative modes. It follows, therefore, that by improving the experience of interchange more journeys will be made by Public Transport and in particular at the expense of the private car.

3.0 **Penalties of Interchange**

3.1 **Elements of the Journey**

All passenger journeys no matter by which mode consist of 4 elements, namely:

Access time
Waiting time
In Vehicle time
Egress time

When using Public Transport, **access** time depends on the density of the network and the consequent location of stops/ stations.

Waiting time depends on the frequency and reliability of the service

In vehicle time depends on the degree of congestion, level of priority, allowable speeds and vehicle performance

Egress time as for access time depends on the density of the network and the location of stops/ stations in relation to the final destination.

3.2 **Additional Time/Costs of Interchange**

Wherever a passenger journey involves interchanging additional **waiting** time is involved. Examples of these are:

- a) The time it takes to walk between services.
- b) The time it takes to purchase/ validate tickets
- c) Any delays there are to the connecting service

There is also a potential additional time cost if through ticketing is not available.

As a result, passengers will make a judgement on their mode of travel by taking into account the above time and cost factors in addition to other perceptions described below.

3.3 **Barriers to Interchange**

3.3.1 **Real and Perceived Barriers**

In addition to the above, passengers are likely to have additional real or perceived concerns and uncertainties about the interchange experience. These barriers can be described as physical and psychological.

Examples of these could include:

- a) If my first service is late will I miss my onward connection?

- b) How long will I have to wait until the next service?
- c) Will I get a seat on the next service?
- d) How will I know where to catch the onward service?
- e) How far will I have to walk?
- f) What facilities are there at the point of interchange?
- g) How safe will I be?

Whether these concerns are real or perceived will depend on personal experience but in any event there is likely to be an added time penalty to the journey where interchange is involved in order to compensate for these real or imaginary concerns.

3.3.2 Variations between users and non users

There are inevitably clear variations both between different categories of passengers and also with non users of Public Transport.

For example, frequent travellers including commuters will hold different views and perceptions than occasional or leisure travellers.

Passengers with any combination of luggage or shopping or children and buggies will hold different perceptions than single unencumbered travellers.

Likewise, there will be different views held by the elderly or mobility impaired.

Women, for example, will be more concerned with personal safety and security issues in their overall perception of interchange.

Non users of Public Transport will also hold differing views within their category but in general would be less likely to switch, for example from car to Public Transport, where interchange is involved and even less likely to do so if that interchange experience whether real or imaginary is unsatisfactory. **The design and operation of interchanges may therefore significantly influence these physical experiences and psychological reactions.**

4.0 Improving Interchange at a Network-Wide Level

4.1 Public Transport Network

The Public Transport Network should offer a comprehensive “anywhere to anywhere” service, regardless of mode and whether interchange is needed.

The network should provide high frequency, reliable, punctual, high capacity services with good connections between services.

The DTO has already defined the Strategic Public Transport Network in “*A Platform for Change*.” This crucially allows the function of individual interchanges to be established in terms of:

- a) the services to be connected
- b) the volume of passengers
- c) the balance of use between those using the interchange as a point of access (and egress) and those using the interchange to transfer between services

4.2 Fares & Ticketing Strategy

A network fares and ticketing strategy is an essential fundamental requirement to ensure that the interchange experience is “seamless”.

The DTO Strategy states that “*integrated fares and ticketing will be introduced ...that allows all public transport users to complete a full journey with only one ticketmaking most journeys involving interchange cheaper.*”

European research carried out between January 1998 and Summer 1999 by the GUIDE group in major cities including Amsterdam, Athens, Birmingham, London, Lyons, Manchester, Toulouse, Uppsala and Utrecht shows that the reduction or removal of other barriers to interchange have minimum benefit unless an integrated fares and ticketing strategy is also put in place.

4.3 Information Strategy

A network-wide information strategy should be formulated to cover **all modes of transport** using all aspects of the media as appropriate.

The Strategy should as a minimum cover the following aspects:

- Network wide and local system maps
- Real time passenger information systems for individual stations, bus and tram stops and appropriate shopping centres and other commercial developments
- Static timetable and fares/tickets information
- Central information facilities such as call centres or the internet

- Locally provided information at individual locations and interchanges
- Marketing and advertising to raise the profile of the Public Transport system

The DTO in conjunction with the Department of Transport has established a Committee to further the implementation of Real Time Passenger Information (RTPI) systems within the Greater Dublin Area and Consultants have been commissioned to formulate a Strategy for a multi mode Public Transport Information (PTI) system including Real Time Passenger Information (RTPI).

The establishment of such a Strategy on a network-wide basis for the Greater Dublin Area will be a fundamental element in establishing a consistent and high quality standard for all Public Transport.

4.4 Organisation and Management

Inevitably a number of different organisations contribute to the reality of the passenger experience at each interchange location, including public transport operators, infrastructure providers, government agencies, local authorities, commercial developers and property occupiers. The danger is that such a diverse group will have widely differing perceptions, visions, values and agendas and therefore organisational barriers to interchange are likely to be created.

In order to avoid these barriers it is necessary for a network-wide body to be responsible for interchange issues to ensure a uniform, co-ordinated approach and to provide the framework within which all the relevant organisations are able to work together at individual interchange locations.

An example of such a body is in Paris where a network level committee identifies key interchange locations and prioritises investment and associated improvements. This is supported by individual Site Committees specific to individual interchange locations who are responsible for drawing up and implementing an action plan for the interchange. Membership of the Site Committee includes transport operators, facility providers, local officials and private tenants.

A further example is in London where a project team within Transport for London (TfL) called Interchange Projects Support has been established to help co-ordinate and, if necessary, implement interchange work.

Such arrangements ensure that the Strategic elements of interchange activity within the network as a whole are matched with implementation skills and practical experience. The creation of such bodies ensures that the following activities are addressed:

- Establishment of Interchange standards on a network-wide basis

- Audits of existing facilities and the undertaking of passenger/user surveys to measure against set standards
- Review of infrastructure proposals to ensure that ease of interchange to create *the seamless journey* is a high priority at the design stage
- Use of network models to identify actual and potential patterns of interchange

The Proposed Strategic Land Use & Transportation Authority should undertake this role and standards can thus be set that will:

- **Determine what constitute suitable facilities for the various classes of interchange throughout the public transport network**
- **Help to raise and maintain passenger expectations of high quality**
- **Assist the process of continuous improvement**

5.0 Design and Layout

5.1 Location

Location of an interchange will be determined by some or all of the following criteria:

- Existing and proposed Public Transport network
- Land use development
- Traffic Management schemes including bus priority and pedestrianisation
- Local and catchment area traffic generators
- Potential commercial development of the interchange site where the choice of location is not critical to the effectiveness of the overall Public Transport Strategy
- Accommodation for park & ride, kiss & ride and taxi facilities
- Highway Proposals with particular regard to volumes of traffic.

5.2 Land Use

Although it is accepted that each interchange will have unique characteristics that will in turn affect the ultimate design, the following general land use related issues should be taken into account:

- Where possible interchanges should be located at or within major destinations in their own right, eg town or district centres/shopping centres
- Interchange should be given a high priority in local land use planning
- Where possible secondary usages which help increase the numbers of people utilizing the interchange area should be located at the same site
- Interchanges should not be developed in isolation from their surroundings

- Interchanges should be architecturally designed to relate sympathetically to their surroundings while still maintaining their identity as a Public Transport Interchange
- Development and/ or redevelopment opportunities should be orientated in order to maximise density of activity near interchanges and thereby minimising walking distances for Public Transport users

5.3 Commercial Exploitation

In addition to the travel related facilities, which are discussed, later the availability of a range of additional facilities can help make the interchange a destination in its own right where time can be spent usefully other than when changing modes or services. These facilities can have a significant impact on reducing barriers to interchange.

Examples of such additional facilities are:

- Retail outlets
- Cash points
- Telephones
- Automatic Vending machines
- Refreshment/ bar facilities

As a further consequence the opening up of interchanges to non- travellers may improve security concerns by the presence of more people in the vicinity.

By taking this issue a stage further, it follows that there is the potential for commercial retail development to help fund new and redeveloped interchanges and every opportunity should be sought to maximise these opportunities.

6.0 Access to and Circulation Within Interchange

6.1 Pedestrian Access

The principal access mode for most interchanges will be walking, and in view of the fact that all passengers will be pedestrians for part of the interchange experience, it is vital that this aspect is given a high priority in the design and layout of interchanges.

The following are examples of the issues that need to be taken into account:

- Pedestrian access should be on a straight line basis, free from obstacles and unnecessary street furniture, clearly indicated and signed
- All areas accessed by pedestrians should have good quality non slip surfaces

- Designated walking routes linking Rail & METRO platforms with Bus/ Luas stops and vice versa should be clearly marked both on the footways and by directional signing
- Pedestrian routes between modes should be as short as possible, particularly if not under cover
- Pedestrian routes should not conflict with the movement of vehicles, but where there is conflict, safe, convenient and direct routes should be designated with measures to reduce vehicle speeds on the approach to pedestrian crossings where appropriate
- Where a gradient or vertical movement is involved ramps, escalators or lifts must be provided particularly where the ramps create excessive distances
- Bus stops at interchange points between bus services should be placed close together and, wherever possible, adjacent to pedestrian crossings
- Bus stops should be sited as close as possible to Rail Station entrances and Traffic Management arrangements should facilitate this

In addition to the above special consideration should be given to **mobility impaired and disabled persons** with regard to access to and movement within the interchange. The most common problem for these groups of passengers is where there are changes in levels. Step free access should be the minimum standard acceptable throughout.

It follows that the consideration of the needs of mobility impaired and disabled passengers in the design and layout of interchanges will also be of benefit to parents with young children in pushchairs and buggies and people with shopping and luggage.

6.2 Cycle Access & Facilities

Cycle links to Public Transport form a principal objective of the DTO Strategy for the cycling mode. The Strategy states that “*cycle parking facilities will be provided at appropriate park & ride sites, DART/ suburban rail stations, METRO stations, Luas stops and bus stops.*”

These measures should include the provision of safe, convenient and well signed routes to interchange points. Cycle routes within an interchange area should be segregated from buses, cars and taxis.

Adequate, convenient and secure cycle parking facilities should be provided with shelter.

Information on cycle facilities available at any interchange point should be widely promoted.

6.3 Buses

The method of operation for the setting down and picking up of passengers will vary depending on the level of service and the size, shape and nature of the interchange location.

Consideration will need to be given to the best method for the unloading and collection of passengers within the space available. Areas for buses to layover and wait will need to be taken into account and if this is not possible within the interchange, this area should be located so as to minimise unnecessary bus operation on the road network. There should be minimal conflict between vehicles and passengers, and conflict between arriving and departing buses should be avoided.

Another fundamental requirement is to consider the relationship of the interchange to the surrounding bus network. For example, all the bus routes that pass within reasonable walking distance of the interchange location offer the opportunity for transfer. A network decision will be to decide which services to specifically include and exclude from the more formal interchange location.

6.4 Taxis

Taxis form an important link in the transportation chain and their presence at interchange locations needs to be taken into consideration.

They are especially important at locations where there are arriving or departing passengers with luggage and therefore the taxi rank or facility should be located as close as possible to the points of departure/ arrival with the facilities well illuminated with good directional signing. The movements of taxis should not conflict with other vehicles or pedestrians.

The presence of taxis at an interchange location should be particularly welcomed at times of low activity especially at night and early hours of the morning in order to improve feelings of safety and security.

6.5 “Kiss & Ride

A “Kiss and Ride” facility is where space is made available at the interchange for dropping off or picking up public transport passengers by car. Design should ensure that the time allowed for this purpose is strictly limited. This is more relevant to passenger pick up than set down.

Careful consideration needs to be given to the importance of this facility and the space devoted to it relative to the needs of pedestrians, cyclists, taxis and passengers changing services and modes.

Kiss and Ride provision should not conflict with the movement of other vehicles, be segregated from pedestrian movements and be clearly designated.

6.6 Park & Ride

The DTO Strategy states that “ *there will be park & ride facilities for commuters at locations where the national road network meets the public transport network.... ensuring that cars accessing them do not unduly add to congestion.*”

At those sites where facilities already exist there are opportunities to make improvements in the facilities for passengers changing from car to Public Transport.

Where facilities are provided there should be no conflict with other vehicles or pedestrians. Security is clearly an important issue and consideration should be given to the introduction of CCTV in addition to or instead of on site staff depending on the size and location of the park and ride facility.

Pedestrian links from the car parking area should be well lit, with good directional signing and ideally they should be covered.

7.0 Passenger Information and Signage

The need to establish an Information Strategy on a Public Transport Network basis has already been discussed in 4.3. This Strategy will assist in the formulation of the level, quality and quantity of passenger information to be provided at each individual interchange location.

The requirements of two distinct types of passengers need to be accommodated:

- a) Passengers and potential passengers wishing to find out information about services and fares for whom the interchange is the place of enquiry
- b) Information to assist passengers to access the available Public Transport services within the interchange

Examples of the minimum levels of passenger information required at different classifications of interchange are shown below:

7.1 Individual bus/ Luas stop

Name of stop

Direction of Travel (Destination)

Alphabetical list of places served

Listing of services in time order (timetable) or where the service has a frequency of 10 minutes or less an indication of the frequency of the service, service number(s), final destination and operating Company
Line diagram or map of services at the stop preferably colour co-ordinated with local network map
Fares information
Telephone help line number and website address

7.2 Adjacent or nearby bus/ Luas stops

As above in a) plus the following:
Location map showing other stops/ available connections in the area, directions to the nearest public telephones, accessible public toilets, and other local features and key destinations

7.3 Bus/Rail/METRO Stations & Other Major Hubs

As above plus:
Public Transport Network map – this may be localised
Electronic information/ help points
Staffed information and sales facilities
Passenger Address System
At any or all of the above real time passenger information systems can greatly assist the passenger in being better informed about their journey on an up to date basis.

7.4 Signage

The signs that help passengers to, from and around an interchange are especially important to the effectiveness of a location as an interchange.

Standards should be set at the Network level to establish the basic components of signing in terms of logos, colour schemes, design and size.

The signing should encompass all modes of Public Transport, taxis, cycle facilities, directions to all facilities and should include all significant pedestrian movements to, from and between the Public Transport services and the surrounding area specifically including shopping centres and other appropriate commercial developments.

Signing should take into consideration the needs of visually and mobility impaired passengers.

At larger interchange locations strategically placed layout information diagrams can assist passengers in finding their way around large areas.

8.0 Safety & Security

Personal safety and security is, understandably, considered to be a major issue at all interchange locations.

Technical solutions such as CCTV and help points can assist in reducing feelings of insecurity but there is no substitute for the presence of staff who are able to combine a safety and security role with customer care and passenger information.

Design features can play a large part in reducing concerns over security by improving the lines of visibility, by ensuring areas are well lit and by creating a pleasant ambient environment. The requirement for regular cleaning, maintenance and general management in order to maintain and improve standards is equally important.

9.0 Other Interchange Facilities

9.1 Rail Station Features

The following features which could apply to both overground suburban rail and METRO Stations are considered to represent good practice:

- Each platform regularly used by passengers should have adequate shelter from the weather
- Covered shelters in addition to any enclosed waiting rooms provided should be sufficient to cater for the maximum future anticipated volume of passengers joining one train in the peak period
- Awnings should extend the entire platform length
- Steps, stairways, walkways, escalators and bridges connecting platforms should be covered

9.2 Passenger Facilities and Amenities

The range of facilities to be provided at an interchange will depend on a variety of factors including the modes of travel, projected demand for usage, the average time spent by passengers accessing or changing services, availability of land, cost of the provision and arrangements for funding.

It may be useful, however, to use the following checklist as a general guide for consideration:

- Adequate shelter and covered waiting areas with good visibility from within, all round weather protection and lighting. Entrances and exits to shelters should be wide enough to allow wheelchair and pushchair access

- Toilet/ washroom facilities including provision for the mobility impaired and facilities for baby changing
- Ticket sales outlets and automatic ticket machines
- Manned information point and/ or electronic/ telephone help points
- Passenger Address System
- Adequate, convenient and secure cycle parking provision
- Taxi Rank
- Luggage storage facilities and luggage trolleys
- Visible Clock
- Litter bins
- Public Telephones
- Concession areas for retail outlets eg news stands, florists,
- Refreshment arrangements, automatic vending machines
- Cash points
- Staff toilet, refreshment and messing facilities
- Fixed and variable comprehensive passenger information covering all modes of travel
- Interchange layout information
- Signage to external attractions
- Creation of a well lit and ambient environment

All of the above need to be supported by arrangements to adequately maintain and clean and manage the facilities to ensure that customer service receives the highest possible priority.

9.3 On Street Facilities

The range of facilities to be provided will vary depending on the number and type of stops (bus/ Luas) and the projected passenger usage.

The above checklist should, in these circumstances, continue to be used as a general guide but as an absolute minimum the following should be provided:

- Information on the services available with line diagram/ map of bus/ Luas services and a map of the wider Public Transport network
- Location plan with direction signs to connecting services and local features
- Visible and well lit shelters with all round weather protection and Real Time Information displays

Where interchange takes place at on street sites improved shelters, pedestrian crossings and better boarding and alighting arrangements, including modifications to kerbs, can help to make transfer between services easier and thereby reduce the perceived waiting time.

10.0 Marketing, Promotion & Image

Intermodal Interchanges are the “showcases” of integrated Public Transport and, as such, the appearance, range of facilities available and general environment can influence an individual’s decision as to whether to use and/ or continue to use Public Transport.

Although each interchange will have its own unique characteristics it is the complete Public Transport option that requires active and co-ordinated marketing and promotion. All such marketing should encompass all modes of transport and as well as the interchanges themselves shopping centres and other appropriate commercial developments should become integrated elements of the transport system.

Even where no formal interchange structure exists the availability of all potential Rail/ METRO/ Luas/ Bus connections should be identified and actively promoted in order to reduce perceived barriers to interchange.

Active marketing and promotion of the Public Transport opportunities should become a fundamental part of the planning, development and selling process of all commercial and residential property with incentives and other marketing initiatives designed to ensure Public Transport is the preferred mode for travel. Such initiatives at the outset are more likely to be sustainable than retrospective action.

11.0 The Next Steps

11.1 Network Analysis and Appraisal

The DTO Strategy has already differentiated the Public Transport Network for the Greater Dublin Area between services wholly within the Metropolitan Area, services between the Metropolitan Area and the Hinterland Area and those services wholly within the Hinterland area.

Integrated Framework Plans for Land Use and Transportation are being developed for each of the Major Centres in the Metropolitan Area and for each identified development centre within the Hinterland Area. One of the key issues to be addressed in each study area will be to make detailed recommendations on the future development of Public Transport services including identification of the local Public Transport network serving strategic interchange locations.

The recommendations should take into account the following factors:

- Identify the key destinations eg City Centre, Town or District Centre, schools, colleges, hospitals, workplace destinations, shopping centres, sports and leisure centres etc and identify where they are served by direct services and where interchange is involved

- Identify and classify existing and potential interchange locations and analyse public transport services in the light of the DTO Strategy at each location
- Identify changes and improvements to the Public Transport network that would eliminate the need for interchange
- Utilise origin and destination survey material to determine whether services connect the places people wish to reach and analyse gaps in the network that may provide new opportunities for Public Transport
- Prioritise in terms of existing and projected passenger usage, locations where further analysis and appraisal is required

11.2 Interchange Location Appraisal & Audit

Having identified the location of interchanges as part of the Network Analysis and Appraisal, it is then necessary to examine in greater detail the current and potential provision for passengers. Such appraisal should cover the following:

- Infrastructure
- Information

It is recommended that the appraisal covers both the minimum and desired requirements at each interchange location.

(A suggested standard format is attached as Appendix A)

The completed appraisals should lead to identification of the specific recommendations and tasks that will be required to be carried out to improve and enhance each interchange location in keeping with the pre-determined standard set for the Greater Dublin Area.

This in turn will lead to a detailed programme of recommended improvements and new requirements that should be supported by robust costings on both a capital and ongoing revenue basis.

11.3 Consultation

Local circumstances will determine the range and number of stakeholders to be consulted. It is possible that some may well be potential partners in implementation and financial contribution.

They will generally include:

- Local Authorities
- Public Transport operators
- Developers, landowners and occupiers
- Public and Private sector Service and Infrastructure Agencies/ Providers
- Local Business Groups

- Transport user groups including cycling and mobility impaired representation
- National Roads Authority
- Railway Procurement Agency
- The Railway Safety Commission
- CIE Companies
- Departments of Transport, Environment & Local Government, Finance
- An Garda Siochana
- Dublin Transportation Office

11.4 Priorities, Implementation, Timescale and Monitoring

The detailed programme will need to be assessed in terms of what is most desirable to be achieved and what can be actually achieved within a specific timescale. It will need to comply with the overall objectives contained in the DTO Strategy.

In addition from a public relations perspective easily achievable short term improvements to interchange locations should be considered particularly where facilities for passengers are lacking or totally absent.

Any implementation should include an ongoing format for monitoring the effectiveness of each interchange location. Performance criteria could include:

- Volume of passengers using the interchange
- Periodic surveys of passenger perceptions on availability, maintenance and cleanliness of facilities and safety and security issues
- Operational criteria regarding the punctual arrival and departure of services

12.0 Summary

12.1 Key Recommendations

- **The ongoing implementation of the DTO Strategy for Integrated Transport for the Greater Dublin Area will result in a higher volume and higher percentage of passenger journeys by Public Transport involving interchange. In the longer term as more rail based elements of the Strategy are put into place and buses in many areas act as feeders, the role of the interchange becomes ever more crucial to the success of the Strategy.**
- **Interchanges can be classified to assist the formulation of a blueprint of recommended facilities at each classification of interchange.**
- **Measures should be put in place to encourage passengers to take advantage of the interchange to access more convenient and faster Public Transport options.**
- **The effective design and layout and the efficient operation of interchanges can significantly influence passengers' physical experience of and psychological reactions to the process of interchange and therefore reduce or remove barriers to interchange.**
- **The effective design of the Public Transport Network is the starting point for improving interchange on a network wide basis.**
- **A network wide integrated fares and ticketing strategy should be implemented to help achieve the “seamless” journey experience. This is one of the most fundamental requirements to the removal of barriers to interchange.**
- **A network wide Information Strategy to include the use of Real Time Passenger Information should be formulated covering all modes of transport.**
- **One body should have overall responsibility for the establishment and monitoring of standards for interchanges to ensure a consistent and co-ordinated approach.**
- **The design and layout of each interchange should have reference to and regard for the following:**
 - **Location**
 - **Land use**
 - **Commercial Exploitation Opportunities**

- **Pedestrian Access to include provision for the mobility impaired & disabled**
 - **Cycling Access & facilities**
 - **Taxi Access & facilities**
 - **Bus Access & Operational requirements**
 - **Park & Ride & Kiss & Ride arrangements (where appropriate)**
- **Agreed minimum standards of passenger facilities and amenities should be a requirement for each interchange location.**
 - **The ongoing marketing and promotion of Public Transport opportunities should be a high priority and be a fundamental part of the planning, development and selling process of all commercial and residential development.**
 - **A network analysis and appraisal should be carried out to identify existing and potential interchange locations.**
 - **An appraisal and audit of specific interchange locations should be carried out to identify infrastructure and information requirements.**
 - **A detailed programme of recommended improvements and new requirements should be produced supported by robust costings.**
 - **Consultation should take place with appropriate stakeholders.**
 - **The detailed programme for implementation within specific timescales should be prioritised.**
 - **The effectiveness of each interchange location should be regularly monitored.**

References and Further Reading

- 1) The GUIDE (Group for Urban Interchange Development & Evaluation) Urban Transport Project – Identifying Good & Bad Practice in Passenger Transport Interchange (European Commission)
- 2) The PIRATE (Promoting Interchange Rationale, Accessibility & Transfer Efficiency) Urban Transport Project – User & Non-User Perceptions of Interchange (European Commission)
- 3) The Citizens' Network – Fulfilling the potential of Public Passenger Transport in Europe – (European Commission Green Paper 1996)
- 4) Transport Interchange Best Practice – Report to DETR (Colin Buchanan & Partners August 1998)
- 5) Personal Security on Public Transport: Guidelines for Operators (DETR 1998)
- 6) Secure Stations Scheme (DETR 1998)
- 7) Women & Public Transport: The Checklist (DETR 2000)
- 8) Public Transport Interchange – New Perspectives & a Blueprint for Change (Oscar Faber Report to DETR 2000)
- 9) Passenger Interchanges – A Practical Way of Achieving Passenger Transport Integration (The Institute of Logistics & Transport April 2000)
- 10) Joining up the Journey – Guidance on Improving Passenger Transport Interchange (The Institute of Logistics & Transport April 2000)
- 11) Quality Bus Infrastructure – A Manual & Guide (TAS Partnership June 2000)
- 12) Physical Integration – (Commission for Integrated Transport (CfIT) December 2000)
- 13) Intermodal Transport interchange for London – Best Practice Guidelines (January 2001)
- 14) Older People: Their Transport Needs & Requirements (DETR January 2001)
- 15) Interchange & Travel Choice (Scottish Executive Central Research Unit)
- 16) A Platform for Change (Dublin Transportation Office November 2001)

APPENDIX A

Interchange Appraisal and Audit

Checklist 1 - Infrastructure Appraisal											
Background Information											
Date of inspection											
Time of inspection											
Names of surveyor(s)											
Inspecting organisation											
City or town											
Local Authority Area											
Interchange Details											
Classification of interchange (please circle)					1	2	3	4			
Interchange name, or location											
Interchange Operator(s)/Owners											
Please state dominant operator(s)											
Please list all bus, rail, coach, park & ride, LRT or other operators present at the interchange											
Bus Stops/Stands					Classifications 1, 2, 3, 4						
Number / approx. length of stands											
Do the bus stops have the following?					Answers (Y/N)		Comments			Question number	
Bus boarders with raised kerbs										1	
Bus stop markings										2	
Bus stop clearway orders										3	
Flag										4	
Information displays										5	
Seating										6	
Litter bin										7	
Nearby public telephone										8	
Good quality pavement										9	
Unimpeded pedestrian access										10	
Adjacent pedestrian crossing										11	
Adjacent dropped kerbs										12	
Tactile paving										13	
Coloured tactile markings										14	
Street lighting										15	
Rank the quality of pedestrian links to prime destinations					5	4	3	2	1	0	16
Rank the overall quality of bus stop provision					5	4	3	2	1	0	17
Bus Shelters					Classifications 1, 2, 3, 4						
Number / size of shelters										18	
Do the bus shelters have the following?					Answers (Y/N)		Comments				
Seating										19	
All round visibility										20	
All round weather protection										21	
Illumination										22	
Information displays										23	

Info displays visible from within the shelter							24
Rank the overall quality of bus shelter provision	5	4	3	2	1	0	25
Comments and Action Points:							
Airports, Bus, Coach and Rail/METRO Stations:							Question number
Does the location have the following?	Answers (Y/N)		Comments				
Information display(s)						26	
Public address system						27	
Help point						28	
Nearby public telephone						29	
Platform/stand/gate numbering						30	
Seating						31	
Litter bin						32	
Good quality surface						33	
Unimpeded pedestrian access						34	
Access to all areas for people with disabilities						35	
Tactile paving behind the platform edge						36	
Coloured tactile markings behind the platform edge						37	
Covered waiting areas or shelters, with :							
All round visibility						38	
All round weather protection						39	
Illumination						40	
Information displays						41	
Information display visible from within						42	
Heating						43	
Rank the overall quality of waiting facilities	5	4	3	2	1	0	44
Comments and Action points:							
Additional Facilities	Classifications 2, 3 & 4 only						
Does the interchange have the following?	Answers (Y/N)		Comments				
Visible clock						45	
CCTV						46	
Nearby public toilet						47	
Nearby accessible public toilet						48	
Ticket purchasing facility						49	
Rank the overall quality of additional facilities	5	4	3	2	1	0	50
Comments and Action points:							

Additional Detail	Classifications 3 & 4 only						Question number
Rank quality of the following:	Answers						
Proximity to the nearest railway/bus station as appropriate	5	4	3	2	1	0	51
proximity to central business district	5	4	3	2	1	0	52
Proximity to major destinations, eg. Hospital, college, leisure centre etc.	5	4	3	2	1	0	53
Location to minimise route diversion	5	4	3	2	1	0	54
Additional Facilities	Classifications 3 & 4 only						
Rank the quality of the following:	Answers						
Cycle stands	5	4	3	2	1	0	55
Cycle lockers	5	4	3	2	1	0	56
Public telephones within the interchange	5	4	3	2	1	0	57
Enquiry office	5	4	3	2	1	0	58
Enquiry terminal	5	4	3	2	1	0	59
Ticket sales and booking office	5	4	3	2	1	0	60
Toilets within the interchange	5	4	3	2	1	0	61
Accessible toilets within the interchange	5	4	3	2	1	0	62
Waiting area/room	5	4	3	2	1	0	63
Baby changing facilities	5	4	3	2	1	0	64
Shops within the interchange	5	4	3	2	1	0	65
Buffet/catering	5	4	3	2	1	0	66
Public vending machines	5	4	3	2	1	0	67
Defined pedestrian routes - internal	5	4	3	2	1	0	68
Defined pedestrian routes - external	5	4	3	2	1	0	69
Cycle access	5	4	3	2	1	0	70
Taxi rank	5	4	3	2	1	0	71
Kiss and ride point	5	4	3	2	1	0	72
Coach pick up and set down point	5	4	3	2	1	0	73
Lighting	5	4	3	2	1	0	74
Décor	5	4	3	2	1	0	75
Circulatory	5	4	3	2	1	0	76
Seating provision	5	4	3	2	1	0	77
Use of community art	5	4	3	2	1	0	78
Ambience	5	4	3	2	1	0	79
Feeling of security	5	4	3	2	1	0	80
Cleanliness and state of repair	5	4	3	2	1	0	81
Comments and Action points:							

Facilities for Buses		Classifications 3 & 4 only						Question number
Rank the quality of the following:	Answers							
Provision of raised kerbs	5	4	3	2	1	0	82	
Wind and noise screening	5	4	3	2	1	0	83	
Segregation of vehicular and passenger movements	5	4	3	2	1	0	84	
Access by road (any priority measures?)	5	4	3	2	1	0	85	
Access for people with disabilities	5	4	3	2	1	0	86	
Comments and Action points:								
Accessibility		Classification 4 only						
Rank the quality of the following:	Answers							
Consistency of levels throughout the interchange	5	4	3	2	1	0	87	
Availability of passenger lifts	5	4	3	2	1	0	88	
Availability of escalators	5	4	3	2	1	0	89	
Availability of ramps	5	4	3	2	1	0	90	
Overall access for people with disabilities	5	4	3	2	1	0	91	
Rank the overall quality of infrastructure provision at the interchange	5	4	3	2	1	0	92	
Comments and Action points:								
Checklist 2 - Durable Information Appraisal								
Individual Bus Stop Signing								
Do the bus stops have the following information?	Answers (Y/N)		Comments					
Name of stop							93	
Direction of travel							94	
Direction signs to other bus stops or services							95	
Direction signs to major destinations, e.g. hospital, library, council offices, leisure centre, etc.							96	
Direction signs to the nearest public telephone							97	
Telephone enquiry service number							98	
Rank the overall quality of bus stop signing	5	4	3	2	1	0	99	
Comments and Action points:								

General Signing		Classifications 2, 3 & 4 only						Question number
Does the interchange use the following?	Answers (Y/N)	Comments						
Distinctive colour signs								100
Individual signing by number/letter for bus stops/platforms								101
If present, is there direction signing, to:								
Enquiry office								102
Enquiry terminal								103
Railway station(if appropriate)								104
Rank the overall quality of general signing	5	4	3	2	1	0		105
Comments and Action points:								
General Signing		Classifications 3 & 4 only						
Rank the quality of the following information-								
Visibility of branded signing for the interchange	5	4	3	2	1	0		106
Use of branded signing for the interchange	5	4	3	2	1	0		107
Use of distinctive colour signs, giving directions to all service and all modes	5	4	3	2	1	0		108
If facility is present, is there direction signing to								
Enquiry office								109
Enquiry terminal								110
Railway station (if appropriate)								111
Ticket sales/booking office								112
Self service information point(s)								113
Telephone								114
Toilets								115
Accessible toilets								116
Baby changing facilities								117
Waiting areas/rooms								118
Exit/entrance/access points								119
Shops								120
Buffet/catering								121
Pedestrian routes								122
Taxi rank								123
Cycle stands/lockers								124
Access to other modes								125
Rank the quality of directional within the interchange	5	4	3	2	1	0		126
Signing to Static Information Sources								
Rank the quality of the following information-								
Signing to central timetable displays	5	4	3	2	1	0		127

Signing to central departure lists	5	4	3	2	1	0	128
Signing to main location plan	5	4	3	2	1	0	129
Mobility Signing							Question number
Rank the quality of the following information-							
Signing for the best option of movement for people with disabilities	5	4	3	2	1	0	130
Tactile information-							
Plates							
Walkways/accessible route	5	4	3	2	1	0	131
	5	4	3	2	1	0	132
Rank the overall quality of signing provision at the interchange	5	4	3	2	1	0	133
General Signing	Classification 4 only						
Signing to departure points/platforms, indicating principal destinations	5	4	3	2	1	0	134
Signing from departure points/platforms, to bus stops or rail services, indicating principal destinations	5	4	3	2	1	0	135
Signing from concourse or exit to bus stops	5	4	3	2	1	0	136
Signing from concourse or exit to rail platforms	5	4	3	2	1	0	137
Signing from concourse or exit to car park	5	4	3	2	1	0	138
Rank the overall quality of signing for interchange	5	4	3	2	1	0	139
Comments and Action points:							
Checklist 3 - Perishable Information Appraisal							
Timetable Information							
Rank the quality of the following information-							
Timetable displays	5	4	3	2	1	0	140
Large type displays	5	4	3	2	1	0	141
Displays at accessible levels	5	4	3	2	1	0	142
Departure list at individual departure points	5	4	3	2	1	0	143
Rank the overall quality of timetable information	5	4	3	2	1	0	144
Location Information							
Rank the quality of the following information-							
Location plan at each departure point	5	4	3	2	1	0	145
Alphabetical list of places served at each departure	5	4	3	2	1	0	146
Directions to location of other services (by destinations serviced)	5	4	3	2	1	0	147
Street Map	5	4	3	2	1	0	148
Rank the quality of location information	5	4	3	2	1	0	149
Service Information							
Rank the quality of the following information-							
Linear route map with timetable(s)	5	4	3	2	1	0	150

Network map	5	4	3	2	1	0	151
Network ticketing details	5	4	3	2	1	0	152
Fares information	5	4	3	2	1	0	153
Rank the overall quality of service information	5	4	3	2	1	0	154
Reference							Question number
Rank the quality of the following information-							
Reference to the nearest public telephone	5	4	3	2	1	0	155
Reference to the nearest information point	5	4	3	2	1	0	156
Reference of where to obtain hard copies of timetable,e.g from a nearby newsagent	5	4	3	2	1	0	157
Rank the quality of reference information	5	4	3	2	1	0	158
Electronic Information							
Rank the quality of the following information-							
Real time passenger information	5	4	3	2	1	0	159
Talking bus stops/departure points	5	4	3	2	1	0	160
Enquiry terminal	5	4	3	2	1	0	161
Information provided by other means, e.g. Help Shop	5	4	3	2	1	0	162
If yes, please state how.....							163
Rank the overall quality of electronic information	5	4	3	2	1	0	164
Quality Check							
Rank the quality of the following information-							
Overall accuracy of information	5	4	3	2	1	0	165
Legibility of information	5	4	3	2	1	0	166
Cleanliness of presentation	5	4	3	2	1	0	167
Rank the overall quality of information at the interchange	5	4	3	2	1	0	168
Comments and Action points:							
Interchange Information	Classifications 2, 3 & 4 only						
Rank the quality of the following information-							
Interchange layout diagrams	5	4	3	2	1	0	169
Provision of interchange layout diagrams at each departure point	5	4	3	2	1	0	170
Comments and Action points:							
Central Staffed Information Point	Classifications 3 & 4 only						
Rank the quality of the following information-							
Provision of a staffed information point	5	4	3	2	1	0	171

If provided, assess adequacy of daily and weekly opening time	5	4	3	2	1	0	172
AND rank the quality of provision	5	4	3	2	1	0	173
Comments and Action points: (Note opening times)							
Location Information	Classifications 3 & 4 only						Question number
Rank the quality of the following information-							
Information plan within local area context	5	4	3	2	1	0	174
Provision of internal interchange layout diagrams	5	4	3	2	1	0	175
Provision of stand/platform layout plan	5	4	3	2	1	0	176
Overall quality of location plan or guide	5	4	3	2	1	0	177
If present, are the following noted on the plan							
Enquiry office(s)							178
Ticket sales/booking office							179
Self service information point(s)							180
Help phone							181
Toilets							182
Accessible toilets							183
Baby changing facilities							184
Exit/entrance/access points							185
Shops							186
Buffet/catering facilities							187
Pedestrian routes							188
Taxi rank							189
Cycle stands/lockers							190
Access to other modes							191
Printed Information	Classifications 3 & 4 only						
Rank the quality of the following information-							
Prominence and visibility	5	4	3	2	1	0	192
Overall quality of information, including condition of provision	5	4	3	2	1	0	193
Other Information Mechanisms:							
Rank the quality of the following information-							
Passenger address system	5	4	3	2	1	0	194
Induction loop	5	4	3	2	1	0	195
Rank the overall quality of information at the interchange	5	4	3	2	1	0	196
Comments and Action points:							

INTERCHANGE LOCATION

Summary against Objectives

Ease of access by other modes	5	4	3	2	1	0
Directional signing	5	4	3	2	1	0
Information	5	4	3	2	1	0
Passenger facilities	5	4	3	2	1	0
Safety & security	5	4	3	2	1	0
Accessibility for older & disabled people	5	4	3	2	1	0
Availability of through ticketing	5	4	3	2	1	0

Main weaknesses identified

Recommended improvements

RATING SCALE

5	EXCELLENT
4	GOOD
3	ADEQUATE
2	SUB-STANDARD
1	POOR
0	NOT PRESENT