

**transport21**  
progress in motion

# Transport 21

Fourth Annual Progress Report  
to the Government - 2009

# **Transport 21**

## **2009 Annual Progress Report**

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This is the fourth annual report to the Government of the Transport 21 Monitoring Group. Transport 21 is the Government's investment programme for the development of transport infrastructure for the period 2006 to 2015. It provides for investment in national roads, public transport and regional airports.

### 2009 Expenditure

Exchequer expenditure on Transport 21 for the year was just over €2.1 billion (€1.44 billion on the national roads programme and over €670 million on public transport projects). A total of €450 million in funding from public private partnerships was spent on national road projects.

Sector €m	Total Exchequer outturn	PPP spend (estimate)	Total Expenditure outturn
	€m	€m	€m
National Roads	1,443.4	450	1,893.4
Public Transport	673.7	-	673.7
Regional Airports	7.2	-	7.2
<b>Total</b>	<b>2,124.3</b>	<b>450</b>	<b>2,574.3</b>

### Overview of Progress on Projects

Eight national road projects were completed in 2009. Five of these were part of the major interurban motorway programme and at the end of 2009 75% of this motorway network was complete and open to traffic. Construction commenced on the N21 Castleisland Bypass and works continued on another nine national roads projects.

A number of public transport projects were completed during the year including the Cork commuter rail extension from Glounthaune to Middleton, the Kildare Rail Project and the Docklands Luas Extension in Dublin. Construction was also completed on Phase 1 of the Western Rail Corridor from Ennis to Athenry, with the opening of this line scheduled for end March 2010.

Construction continued on Phase 1 of the Navan Rail Line from Clonsilla to Pace, on the Dublin City Centre Resignalling Project and on the Cherrywood

and Citywest Luas Line extensions in the Greater Dublin Area. Planning work continued on many other projects including Metro North and the DART Underground Programme.

Substantial progress was made on the implementation of bus priority measures in Dublin and the regional cities, including the College Green Bus Corridor in the capital. Bus Éireann added over 90 new accessible buses to its fleet. Excellent progress continued to be made on improving the accessibility of public transport. Railway stations were upgraded on the Galway and Cork mainlines and the Dublin suburban networks. Eighty eight percent of buses, 72% of routes and 46% of bus stops on the Dublin Bus network are fully accessible, while all of the Bus Éireann city fleet and most of its bus stations are fully accessible.

Safety and security projects and runway upgrades continued at the regional airports, and a new terminal building was opened at Ireland West Knock Airport.

### Monitoring and Evaluation

The Transport 21 National Monitoring Group, mandated by Government to oversee the implementation of Transport 21, met on four occasions during 2009. During their meetings the Group reviewed expenditure and progress on Transport 21 projects. The Group also approved revised appraisal and post project review guidelines for transport projects.

The Transport 21 audit programme continued in 2009 with a total of six appraisal and physical implementation audits conducted throughout the year on six different Transport 21 projects. The results of the audits were broadly satisfactory.

The Transport 21 Programme Board, which has responsibility for managing the Transport 21 capital envelope, met on thirteen occasions in 2009 to discuss project progress and funding requirements. To take account of the changed economic climate, the Board reviewed the investment priorities for Transport 21 to 2015 and made recommendations for national road and public transport projects.

### Information and Communications

The implementation of the Transport 21 communications strategy continued throughout 2009, with particular emphasis on improving the Transport 21 website and promoting cooperation between the various implementing agencies on communications issues.

### Prospects for 2010

Over €1.7 billion in Exchequer funding has been allocated to Transport 21 for 2010. The table below sets out the sectoral breakdown of the funding and the PPP estimate for the year.

Sector €m	2010 Exchequer Provision	PPP Estimate	Total Estimated Expenditure Provision
	€m	€m	€m
National Roads	1,114	209	1,323
Public Transport	615	-	615
Regional Airports	4	-	4
<b>Total</b>	<b>1,733</b>	<b>209</b>	<b>1,942</b>

By the end of 2010 all of the major interurban motorway network will be complete, as will the M50 upgrade and the M3 Clonee – North of Kells. Work will continue on the N18 Gort - Crusheen and the N21 Castleisland Bypass. Procurement for PPPs on the Atlantic Road Corridor and N11 will be progressed.

The Western Rail Corridor will open on 29th March. The Navan Rail Line Phase 1 from Clonsilla to Pace and the Cherrywood Luas Line will also be completed in 2010. Planning work will continue on other key public transport projects including Metro North and the DART Underground Programme.





Expenditure in 2009 ↘



This is the fourth Transport 21 annual progress report to Government by the Transport 21 Monitoring Group. The Report details progress made throughout 2009 on the projects and programmes that make up the Transport 21 investment framework.

In addition it outlines expenditure for the year and provides an update on the monitoring, evaluation and communications activities that took place.

Finally, the report gives a short summary of the planned expenditure and project implementation for 2010.

The total Exchequer funding allocated for Transport 21 in 2009 following the Supplementary Budget in April was just over €2 billion. This included a carryover from 2008 of €77.5 million. It was also estimated at the beginning of the year that €67 million would come from private funding for toll-based PPP roads.

The table below gives a sectoral breakdown at the start of the year:

Sector €m	2009 Revised Exchequer Provision	2008 Carryover	PPP Estimate	Total Estimated Expenditure Provision
	€m	€m	€m	€m
National Roads	1,402	37	367	1,806.0
Public Transport	628	40.5	-	670.5
Regional Airports	10	-	-	10.0
<b>Total</b>	<b>2,040</b>	<b>77.5</b>	<b>367</b>	<b>2,486.5</b>

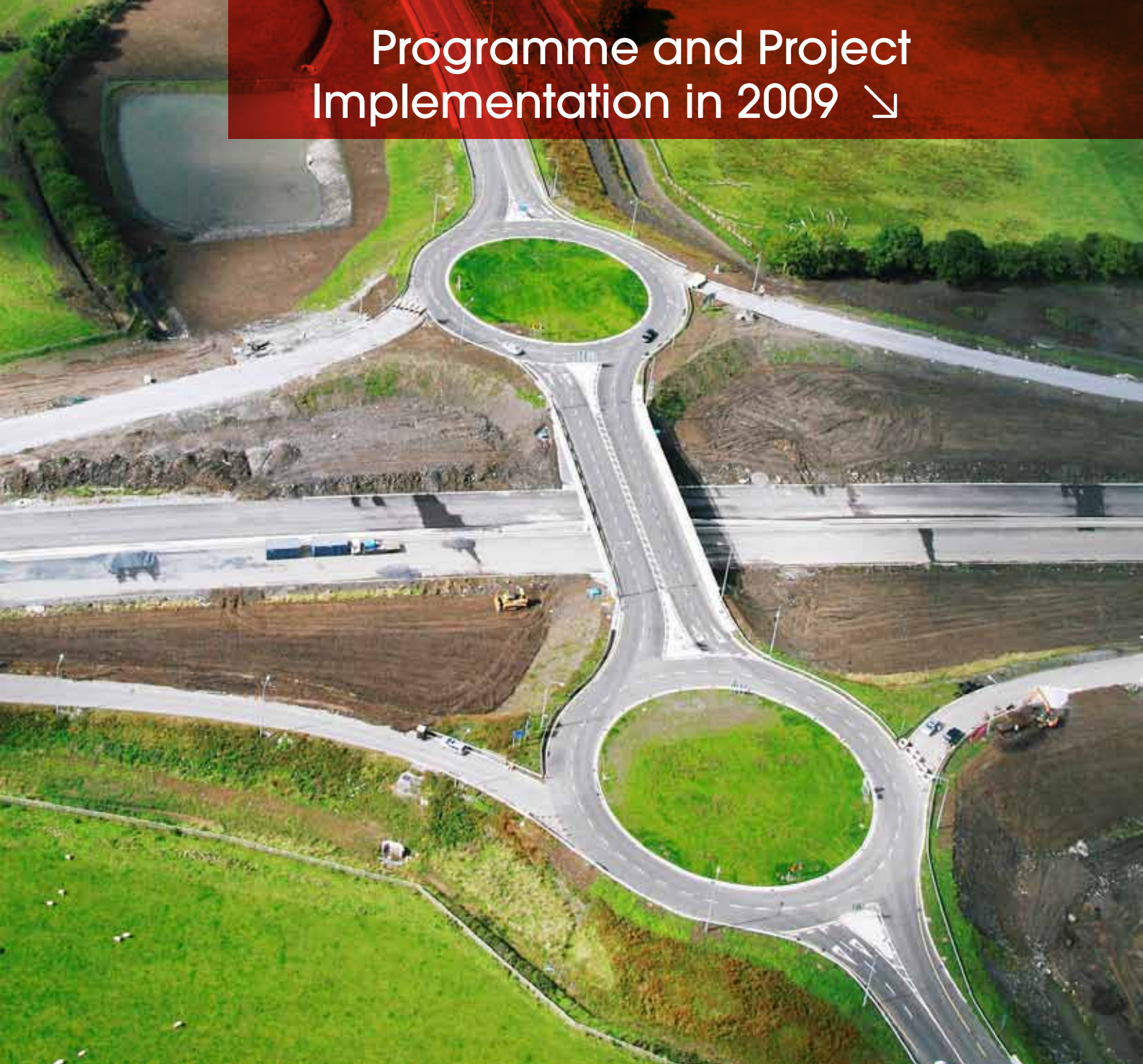
The table below provides a breakdown of the overall 2009 Transport 21 expenditure outturn:

Sector €m	Total Exchequer Outturn	PPP spend (estimate)	Total Expenditure Outturn
	€m	€m	€m
National Roads	1,443.4	450	1,893.4
Public Transport	673.7	-	673.7
Regional Airports	7.2	-	7.2
<b>Total</b>	<b>2,124.3</b>	<b>450</b>	<b>2,574.3</b>

The outturn was some €88 million greater than the original estimate for the year, with the Exchequer outturn on target and the estimated PPP spend ahead of target



# Programme and Project Implementation in 2009 ↘



## Public Transport

Significant progress has been made on public transport projects around the country since the start of Transport 21 in 2006. We now have one of the youngest intercity rail fleets in Europe and a state of the art rail maintenance depot at Portlaoise, new commuter rail services for Cork, several new commuter rail stations in the Greater Dublin Area, a new Luas extension to the Dublin Docklands and renewed and expanded bus fleets across the country. By end 2010, we will have rail services between Limerick and Galway, a new rail extension from Clonsilla to Pace in Meath and another new Luas extension to Cherrywood in South Dublin. These projects have transformed public transport in Ireland and have made a significant contribution towards the achievement of the original objectives of Transport 21 – improved accessibility, quality, sustainability, and increased capacity on the public transport network.

These projects have also made a contribution to Ireland's productive capacity. Public transport projects show a strong economic return, as the following examples demonstrate:

Project	Net Present Value	Benefit Cost Ratio	Internal Rate of Return
Luas Line to Citywest	€779m	5.11	29.7%
Luas Line to Cherrywood	€1,207m	3.33	13.2%
Luas Line to The Point	€10m	1.08	6.1%
33 Intercity railcars	€28.6m	1.85	12%
Cork – Middleton rail line	€215m	-	14.4%
Kildare Route	€425m	-	12.4%

Progress made on individual projects during 2009 is outlined below.

## Public Transport – Rail

### Cork Commuter Rail – Glounthaune to Middleton

Construction work on the line was completed during the summer and the official opening took place at Middleton station on 30th July. Scheduled services commenced on 4th August, with twenty-one trains operating daily between Cork and Middleton, and services running every thirty minutes at peak times from Mondays to Fridays.

### Western Rail Corridor – Phase 1

Phase 1 of this project consists of the reinstatement of the existing line from Ennis to Athenry, which facilitates the provision of services between Galway and Limerick. New stations have been built at Sixmilebridge, Gort, Ardrahan and Craughwell. Construction was completed on the line in December and the official opening will take place on 29th March 2010. A new station at Oranmore will be opened at a later stage.

### Kildare Rail Project

This project involved the quadrupling of a section of track on the Heuston – Kildare line between Cherry Orchard and Hazelhatch and other works such as signalling and station development. Four new stations have been built on the line: Hazelhatch & Celbridge, which opened in May 2009, and Adamstown, Parkwest/Cherry Orchard and Clondalkin/Fonthill. Four-tracking of the line allows for the separation of long distance and commuter services thereby improving speed and capacity for commuter, regional and intercity services. Construction on the line was completed in December 2009.

### **Intercity Rolling Stock**

Phase 1 of this project was completed in 2007 when 67 new Intercity locomotive rail carriages entered service on the Dublin – Cork route. This facilitated the commencement of hourly, clock-faced services on the route, with a significant capacity increase. Passenger response has been positive with a 12% increase in numbers in 2008 over 2006. A decline in passenger numbers took place across the rail network in 2009 as a direct result of the current economic difficulties.

Phase 2 was completed in 2009 and there are now 177 new Intercity railcars in service on the Sligo, Westport, Galway, Limerick, Kerry, Waterford, Gorey, Portlaoise, Athlone and Carlow routes. Services on the Sligo – Dublin rail route were increased from three per day in 2005 to eight per day in 2007 and passenger journeys grew by 19%, from 1.13 million in 2006 to 1.34 million in 2008.

Phase 3 of this project involves the acquisition of a further 51 Intercity railcars. This order was placed in December 2008 with Mitsui-Rotem. The railcars will be delivered and in service by 2012 and will operate on Dublin outer commuter routes.

### **Navan Rail Line – Phase 1**

Construction is well underway on the 7.5 kilometre double track rail line, which will branch off the Maynooth line at Clonsilla and terminate at the interchange with the M3 motorway at Pace. The first tracks were laid at Hansfield Station on 30th October. The station at Pace on the M3 will have a 1,200 space car park, the largest park and ride facility in the country. There will also be 300 park and ride spaces at Dunboyne. The line is scheduled to open in the latter half of 2010.

### **Dublin City Centre Resignalling Project**

This project will upgrade signalling to accommodate an additional 5 train paths per direction per hour (up from 12 at present to 17) in the critical City Centre area. Good progress continues to be made on the project. Construction/installation works commenced in early 2009 and the project is expected to be completed by 2012.

### **DART Underground**

The preliminary design of this project - which provides for a new railway line, largely in tunnel, to connect the existing Northern Rail Line to the rail lines running out from Heuston Station - has been completed. Work is currently underway on the design, geotechnical investigation and preparation of an environmental impact study including a detailed archaeological report. Iarnród Éireann expects to submit a railway order application to An Bord Pleanála during 2010 in respect of the project which is now being progressed as a Public Private Partnership.

### **Railway Safety Programme**

Over €1 billion has been invested in railway safety since 1999. This has mainly focused on track replacement and renewals, level crossing closures and upgrading, fencing, cutting & embankment stabilisation, coastal defence works, and upgrading integrity of structures.

The third Railway Safety Programme (2009-2013) commenced in 2009. The proposed programme provides for total expenditure of €513 million over 5 years, of which over €443 million is targeted at infrastructure investment and almost €70 million is aimed at continued enhancement of safety management systems, including human performance. A total of €107 million was spent during 2009. During the year Iarnród Éireann laid

26 miles of track, erected 58 miles of new fencing and carried out upgrading work on 13 bridges. Nine level crossings were closed and upgrading work was carried out on 147 crossings.

Repair work was also carried out on the Malahide Viaduct in North Dublin. The viaduct had been closed in August due to subsidence under the seabed which caused a section of the main Dublin to Belfast railway line to collapse. Repairs were completed and the viaduct reopened on 16th November 2009.

#### **Cork-Midleton Commuter Line**

The new Cork-Midleton line was officially opened by Minister for Transport, Noel Dempsey T.D. on 30th July 2009.

A total of 21 trains each way now operate daily between Cork and Midleton, with services running every 30 minutes at peak times, and every hour at off-peak times, Monday to Friday. Seventeen trains each way operate on Saturdays, and eight trains operate each way on Sundays.

Journey time between Midleton and Cork is just 23-24 minutes and all trains serve the new stations of Midleton and Carrigtwohill, as well as Glounthaune, Little Island and Kent Station Cork.

As well as offering a strong commuter service, the new Midleton timetable offers excellent connections to the Cork-Dublin Intercity service, maximising the benefit of this new infrastructure.

There is also the potential to expand services in the future to every 15 minutes, as demand increases.

Each service is operated by a two-carriage commuter railcar, with capacity for 320 passengers, including seating for 129 passengers. Platforms have been built to accommodate future expansion to four-carriage trains.

The €75 million investment in the Midleton line included:

- upgrading track on the previously disused Glounthaune to Midleton line, through provision of a single track with a passing loop at Carrigtwohill
- provision of a new signalling system
- construction of two new stations at Midleton and Carrigtwohill, including extensive car parking facilities (340 spaces and 180 spaces respectively), lifts and footbridges
- the replacement of a range of level crossings with bridges
- other infrastructure work including bridge, boundary and drainage works.



Carrraig Thuathail  
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## Public Transport – Buses

### Dublin Bus

In 2008 Transport 21 helped fund the purchase of 100 replacement buses. All of these buses had entered service by the first half of 2009 and were deployed on various routes around the city. The programme of replacement buses ensured that the average fleet age remained less than 7 years old resulting in improved reliability and service quality. There were also major benefits in terms of accessibility as the new buses were fitted with modern easy access boarding facilities and other benefits. The number of accessible buses in the fleet increased to 88%, opening up transport to more customers who have mobility difficulties. In 2009, a further 15 Dublin Bus routes were designated low floor wheelchair accessible. Seventy two percent of all Dublin bus routes are now accessible and about 46% of bus stops have accessible kerbing installed.

The replacement buses also bring benefits in terms of carbon emissions. All vehicles introduced into the fleet since 2007 employ Selective Catalytic Reduction (SCR) with modern buses now producing less than half the CO<sub>2</sub> emissions per passenger kilometre compared to a car.

In January 2009 Dublin Bus' first ever hybrid-electric bus entered service for a trial period of three years. The bus is the first of its kind in the Republic of Ireland. The trial is funded in part by Transport 21. The bus combines an electric motor with an internal combustion engine. The vehicle, which was designed by the Wright Group, has a range of advantages over traditional bus models including:

- reduced fuel consumption (34% less than traditional buses)

- a reduction in pollutant emissions by the following levels
  - Carbon Dioxide 31%
  - Hydrocarbon 76.5%
  - Carbon Monoxide 97.6%
  - Nitrous Oxides 12%
- an engine 50% less noisy than traditional bus engines
- regenerative braking, which uses the energy dissipated during braking to charge the bus battery.

### Bus Éireann

During 2009, Bus Éireann added over 90 new accessible vehicles to its fleet under Transport 21.

Thirty two accessible double deck coaches were introduced on commuter routes in Leinster in a €15m investment. These coaches can carry up to 78 passengers and have led to an increase in peak-time capacity on heavily used routes of up to 50 per cent.

Double deck commuter buses and single deck buses were also introduced on services in Cork city, and single deck and city buses were utilised for town services in Sligo and Dundalk.

New routes include the 100X Dublin-Dublin Airport-Drogheda-Newry route. There has also been a significant increase in the frequency of departures (every 30 minutes at peak hours) on the 133 Wicklow-Dublin service, which now also serves Dublin Airport.

All of the new vehicles operate to the latest European emissions standards and Bus Éireann's city fleet is now 100 per cent low-floor wheelchair accessible.



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### **Automatic Vehicle Location and Real Time Passenger Information**

Dublin Bus has begun trials of its Automatic Vehicle Location and Control (AVLC) system. The AVLC system will be the platform upon which Real Time Passenger Information (RTPI) can be introduced. The programme is part of an overall plan to ensure a greater predictability of service. As part of the AVLC installation process, each bus is equipped with an on-board computer that will interface with the existing bus radio system and transmit location data back to depots and other monitoring points. In addition to this, bus location data will be transmitted from the AVLC central computer system to Dublin City Council's traffic control centre. This will allow for greater bus prioritisation at signal controlled junctions.

The first bus route to trial the AVLC was route 123, which is a cross-city service from Marino to Walkinstown. Once successful on this route, AVLC will be rolled out to all other routes in the Summerhill Garage, and then on to all bus garages. The trial is being monitored in the newly centralised operations control in Broadstone Depot, which began operating on 29th November.

It is anticipated that AVLC will be fully operational by end 2010. At this point, it will be possible for Real Time Passenger Information to be fed to screens at bus stops informing customers when their bus is due. Dublin City Council is undertaking a project that will see the erection of display screens at bus stops across the city. This information will also be accessible through mobile phones and the internet.

Bus Éireann also advanced trials of its real-time passenger information system in 2009. The system will make the company's service even more convenient for passengers by enabling customers to access real-time arrival and departure information for all routes across its integrated network via the company's website, SMS and passenger displays at bus stations. The system is being trialled with the public through [www.buseireann.ie](http://www.buseireann.ie) and on display boards at stations across the country. The service is due to be formally launched in 2010. Bus Éireann is also participating in Real Time Passenger Information projects in Dublin and Cork that will see real-time information displayed at bus stops.

### **Bus Priority – Greater Dublin Area**

There are now sixteen Quality Bus Corridors in the Dublin area. During 2008, average bus journey times in the morning peak were less than the corresponding car average journey times in 12 out of the 16 QBCs, with greater than 10% variations in 8 of the QBCs. Bus journey times have also improved - fifteen minutes has been cut off the journey time for the Swords QBC.

### **College Green Bus Corridor**

The College Green QBC was launched on 27th July 2009, and operates Monday – Friday between 7.00 and 9.00 and between 16.00 and 19.00. During these times, only buses, taxis and bicycles are permitted to travel through College Green.

A comparison of the overall journey times on a number of key routes for the two weeks after the bus corridor was introduced compared with the same two weeks in 2008 gave the following results:

Route 77 Tallaght	saved 5 minutes
Route 49 Tallaght	saved 13 minutes
Route 25a Lucan	saved 6 minutes
Route 39 Blanchardstown	saved 12 minutes
Route 38 Blanchardstown	saved 13 minutes
Route 41 Swords	saved 10 minutes

The planned review of this QBC will take place in May 2010.

Bus priority work was also carried out during the year at the following locations, resulting in improved journey times for bus passengers:

- Usher's Island Bus Priority Scheme
- three sections of the Swords Road QBC between Parnell Square and Collins Avenue
- Coolock Lane – Oscar Traynor Road
- Malahide Road QBC – junction improvement works between Clare Hall and Connolly Station
- Mount Merrion Avenue Bus, between Rock Road and N11
- Sandyford Road
- Greenhills Road (Walkinstown Road section)
- Kill Lane between N11 and Baker's Corner, including on the Abbey Road approaching Baker's Corner
- N3 Inbound - east of Parslickstown Junction on the approach to Blanchardstown Village Roundabout
- St. Margaret's – Jamestown Road
- Kildare (rural bus stops).

The following bus priority schemes are currently at construction stage:

- North Wall Quay /Memorial Road Phase 1
- Navan Road
- Clanbrassil Street – Bride Street – Section 1 Christchurch Place to Patrick Street
- Firhouse Phase 2 Ballycullen – Old Bridge Road
- Greenhills Road
- Howth Road / Sybil Hill Road junction
- Greenhills Road Junction
- Scholarstown Road Junction
- St. Stephen's Green
- South Quays
- Blanchardstown Road South
- Scholarstown Road / Orlagh Park junction

#### **Bus Priority Outside the Greater Dublin Area**

In Cork work was substantially advanced on the Ballincollig Green Route in 2009 (this major project is due to be completed in 2010), and on planning for a bus-based park and ride in the western environs of the city. In Limerick work was completed on Phase II of the Condell Road Green Route and on a section of Green Route on the Ennis Road close to Sarsfield Bridge, while a section of Green Route on Mulgrave Street was substantially completed during the year. In Galway work was completed on an outbound bus lane on the Dublin Road, while in Waterford work on constructing the first Green Route in the city (on the Dunmore Road) was substantially completed.

## Public Transport – Luas and Metro

### Docklands Luas Line

Construction of the Docklands Luas Line was completed and the line officially opened on 8th December 2009. This 1.5 kilometre track extends the Tallaght Connolly line (Red Line) from Connolly Station, through the Docklands to the O2 Arena and is forecast to carry up to 1.8 million passengers per annum.

### Cherrywood Luas Line Extension

Good progress was made in 2009 on construction of the Cherrywood Luas Line in South Dublin. This is a 7.5 kilometre extension of the Green Line, which currently runs from St. Stephen's Green to Sandyford. The project is expected to be completed in the latter half of 2010.

### Citywest Luas Line

Construction of the Citywest Luas Line began in January 2009 and is progressing well. Installation of the first section of trackworks began in September. Construction work on the project is due for completion in early 2011.

### Cross City Centre/Liffey Junction Luas Line

Planning work for the cross City Centre / Liffey Junction Luas Line will continue in 2010 and the RPA plans to make a railway order application to An Bord Pleanála during the year.

### Lucan Luas Line

Following the selection in October 2008 of the emerging preferred route corridor for Lucan Luas Line, the RPA progressed the next phase of public consultation in 2009. It decided that the line will be delivered in two phases (Lines F1 and F2). Line F1 will run from Newcastle Road in Lucan to Blackhorse Stop on the existing Tallaght Luas Line. Line F2 of the project, which will be the subject of a separate railway order application and EIS, will be

the section from the Tallaght Luas Line on James's Street via Thomas Street and Christchurch to Dame Street. In October 2009, the RPA published a notice inviting observations from interested parties on the environmental impact assessment process for the proposed Luas Line Phase F1. Further consultation with the public and key stakeholders on the detailed design including track alignments and location and layout of stops, park and ride, depot facilities and related structures will continue in 2010.

### Bray Luas Line

Planning work for the Luas Bray Line (Line B2) from Cherrywood was progressed based on the preferred route option already selected.

### Metro North

Initial tender documentation in respect of the Public Private Partnership for Metro North was received by the RPA from four pre-qualified consortia in February. In June the RPA shortlisted two consortia, Celtic Metro Group and Metro Express, to proceed to the final stage of the PPP procurement process. The final stage of procurement will take place after a Railway Order has been made by An Bord Pleanála.

The oral hearing of the application for a railway order commenced on 1st April 2009 and concluded in March 2010.

### Metro West

Work on the railway order application was progressed during the year. The RPA plans to make an application for a railway order during 2010.

### Luas Capacity Enhancement

Phase 1 of this project extended by ten metres the 26 original trams on the Red Line and provided an additional 40% passenger capacity.

Phase 2 of the Luas capacity enhancement programme was completed during the year. This phase involved the provision of eight new trams for the existing Red and Green Luas lines. The new trams became fully operational and available for passenger service at the end of September 2009 and facilitated an increase in capacity particularly during peak periods.

#### **Luas Docklands Extension**

The Minister for Transport, Mr. Noel Dempsey T.D., opened the new Luas Docklands extension on 8th December 2009. The opening event was held in the National College of Ireland (NCI) at the new Mayor Square /NCI Luas Stop.

The new line has stops at George's Dock, Mayor Square, Spencer Dock and The Point and was delivered within the agreed timeframe and within budget.

It is expected that the new 1.5 kilometre line will add 1.8 million passenger journeys to the Luas network in 2010. The cost of the Docklands extension was €90 million. Journey time from The Point to Tallaght is 52 minutes. Journey time from Busaras to The Point is 6.5 minutes. Trams will run from The Point to Tallaght every 6.5 minutes at peak times (7.00am-10.00am and 4.00pm -7.00pm) and every 8 minutes at all other times.

It is anticipated that 2 out of every 3 trams will be going directly from Tallaght to the Point.

#### **Public Transport – Accessibility**

Investment continued during 2009 in the upgrading of existing transport infrastructure to meet accessibility standards. Total investment in this area in 2009 was €16.3 million. The bulk of this funding went to Iarnród Éireann for continued investment in the upgrading of railway stations,

particularly on the Galway and Cork lines, and at Rush and Lusk, Laytown and Balbriggan in the Greater Dublin Area. There was also substantial funding for the installation of accessible kerbing at bus stops in Dublin. Further investment went to a variety of Bus Éireann and maritime projects.

As previously mentioned, by mid 2009, 88% of the Dublin Bus fleet was composed of low-floor, wheelchair accessible buses and 72% of Dublin Bus routes were accessible.

Forty five per cent of bus stops in the Greater Dublin Area have received accessibility upgrades and this work is ongoing. Bus stops continue to be upgraded in the provincial cities on routes that form part of Quality Bus Corridors /Green Routes.

During the year Bus Éireann introduced accessible coach services with wheelchair lifts on three intercity routes: Waterford/Cork, Galway/Athlone and Galway/Ballina. Further wheelchair accessible services will be made available on inter-city services in 2010. Three bus stops have been identified for accessibility upgrades to facilitate in-service trials with wheelchair accessible coaches on the Navan/Dublin Airport/Dublin City University route. Work has been completed at the Navan stop while the wheelchair waiting area at the Dublin Airport stop will be completed shortly.

By mid 2009, most of Bus Éireann's bus stations had improved accessibility standards, with the exception of those in Limerick and Galway (which form part of larger development proposals) and Rosslare. Work to facilitate the transfer of the existing bus station in Galway to a new site has begun. This in turn will facilitate work on the larger development proposal, the Galway Master Plan, which is due to include a new fully accessible bus station.

### Public Transport – Integrated Ticketing

An integrated ticketing system in the Greater Dublin Area (GDA) is being introduced on a phased basis, based on smartcard technology. Subject to successful in-house testing, the single smartcard will be rolled out initially in 2010 to a small number of Dublin Bus testers for live consumer testing of the Dublin Bus/Luas integrated annual ticket, and then to a small number of external customers.

Private bus operators are also participating in the scheme and it is anticipated that a number of these operators, along with Irish Rail DART and Commuter Rail services and Bus Éireann on a pilot basis, will join the scheme during 2011.

Irish Rail recently commenced a gradual roll-out of its interim smartcard scheme to the public, starting with a pilot scheme for a small number of customers. The interim scheme will migrate to the single smartcard scheme for Dublin Bus and Luas after its launch.

### National Roads

The primary function of the major interurban network of national roads is to allow people, goods and services to travel safely, predictably and efficiently throughout the country.

Progress on national roads projects under Transport 21 to date has been substantial and the time savings and improvements generated by specific projects can be clearly demonstrated. As each section of motorway is completed, the journey times for cars and commercial vehicles between Dublin and other cities and large population centres is reduced, journey time reliability (a major factor for commercial vehicles) is increased and significant numbers of vehicles are removed from bypassed towns thereby aiding the environment and quality of life in those towns.

The following table provides some examples of the journey time savings delivered by the completion of major inter-urban roads (MIUs):

Route	Travel time pre MIU (Minutes – typical)	Travel time post MIU
M50 – Border (91kms)	85+	50 - 55
M50 – Galway (194kms)	180+	100 - 105
M50 – Limerick (197kms)	180+	105 - 110
M50 – Cork (142kms)	200+	110 - 115
M50 – Waterford (116kms)	150+	85 - 90

National road projects are typically delivering economic returns of over twice the investment cost. An examination of the business cases for fifty national roads projects that have either been completed recently or are under construction indicates that the benefit cost ratio (BCR) can be categorised as follows:

Benefit Cost Ratio	Number of projects
Less than 1	3 (6%)
Between 1 and 2	19 (38%)
Between 2 and 3	13 (26%)
Above 3	15 (30%)

Great progress was made by the NRA and local authorities in 2009 in upgrading our national road network, particularly the five motorways which connect Dublin with Cork, Limerick, Galway, Waterford and the Border with Northern Ireland.

The benefits of this huge investment will only be fully appreciated when this network is complete at end 2010. However, with more and more sections of new motorway or high quality dual carriageway opening (almost 75% of the network was open to traffic at end 2009) the immediate safety benefits and time savings are already evident.

The first motorway, the M1 from Dublin to the Border with Northern Ireland, was completed in 2007. The second, the M6 from Dublin to Galway, was completed in December 2009. The remaining three, Dublin to Limerick, Cork and Waterford, are on target for completion by the end of 2010.

Route	Route Length (kms)	Open to Traffic (kms)	% Complete
M/N1 Dublin to Northern Ireland	91	91	100%
M/N4 & M/N6 Dublin to Galway	194	194	100%
M/N7 Dublin to Limerick	197	87	44%
M/N 7 & M8 Dublin to Cork	142	128	90%
M/N7 & M9 Dublin to Waterford	116	46.5	40%
<b>Total</b>	<b>740</b>	<b>546.5</b>	<b>75%</b>

Eight national road projects were completed in 2009:

Route	Scheme
N4	Leixlip/M50 Junction
M6	Galway to Ballinasloe
N6	Athlone to Ballinasloe
M8	Fermoy to Mitchelstown
M9	Kilcullen to Carlow
N25	Waterford City Bypass
N51	Navan Inner Relief Road
N52	Tullamore Bypass

Construction started on the N21 Castleisland Bypass during the year and work continued on the following projects:

Route	Scheme
M/N3	Clonee to North of Kells
N7	Limerick Tunnel
M7	Nenagh to Limerick
M7	Castletown to Nenagh
M7/M8	Portlaoise to Cullahill/ Castletown
M9	Waterford to Knocktopher
M9	Carlow to Knocktopher
N18	Crusheen to Gort
M50	Upgrade Phase 2

### Completion of M6 motorway

The M6 Galway to Ballinasloe motorway project was officially opened on 18th December, 4 months ahead of schedule and on budget. The 56 kilometre scheme runs from the outskirts of Galway city to Athenry to the existing M6 east of Ballinasloe. The towns of Ballinasloe, Aughrim, Killreekill, Loughrea, Craughwell, and Oranmore have all been bypassed by the new road.

The scheme reduces travel times from Galway to Ballinasloe by 25 minutes, improves traffic flow, reduces traffic congestion and increases road safety for drivers.

Most significantly, the completion of this project signals the completion of the entire M6 inter-urban route, which provides motorway standard road all the way from Dublin to Galway and brings us one step closer to the full completion of all 5 motorway standard inter-urban routes to be achieved by end 2010.

### Regional Airports

The rollout of projects at all of the regional airports continued in 2009. These projects include the construction of runway end safety areas and/or other runway upgrades, and safety and security measures such as fire fighting facilities and better controls on airside access.

#### Ireland West Knock Airport

On 16th October Minister Dempsey officially opened the new terminal at Ireland West Knock Airport. To date, under Transport 21, over €9.4 million has been spent at the airport, mainly on the terminal extension, an Instrument Landing System and a perimeter fence and road.

### Regional Development and Spatial Planning

Overall progress in implementing Transport 21 is having substantial positive impacts on regional development and national competitiveness and is supporting more sustainable and planned physical development.

The time savings on journeys and increased journey time reliability between the Gateways and Hub towns identified in the National Spatial Strategy are improving the attractiveness of these locations and surrounding areas for economic activity and investment. Connectivity to international access points at our ports and airports has also been improved.

The completion of projects such as the Kildare Route Project, the Cork Midleton rail line and the Western Rail Corridor (Phase 1) and the opening of various commuter stations on the rail network have created the infrastructural framework for sustainable and public transport oriented planning and development in those areas. This supports balanced regional development and facilitates the achievement of the Government's Smarter Travel objectives.

# Monitoring & Evaluation ↘



The projects and programmes being funded under Transport 21 are carefully monitored by the Department of Transport and the Transport 21 Monitoring Group to ensure that value for money is obtained and that the projects are appraised and implemented according to best practice and Government guidelines.

The following paragraphs outline developments in 2009.

### Transport 21 Monitoring Group

The Monitoring Group was established by the Government in 2006 to oversee the implementation of Transport 21. The Group comprised of officials from the Departments of Transport, Finance, the Taoiseach, Environment, Heritage and Local Government, and representatives from the National Development Finance Agency met on four occasions in 2009. At each meeting, progress on Transport 21 projects and programmes and expenditure was reviewed. The Group approved revised Guidelines on a Capital Appraisal Framework for Transport Projects and Programmes and a new Post Project Review Methodology for Transport Projects.

Representatives of An Bord Pleanála were invited to attend the Monitoring Group Meeting in October 2009. They gave a presentation to the Group on various aspects of the planning process including the objectives of the Strategic Infrastructure Act, the purpose of pre-application consultations and the importance of public participation in the planning process.

Other presentations were made to the Group during the year by the Railway Procurement Agency on progress on Luas and Metro projects and by Iarnród Éireann on progress on rail projects.

A review of financial procedures for Exchequer grant claims in the Transport 21 implementing agencies was carried out by Contract Audit Line (CAL). Their final report, issued to the Department on 20th May, found that financial procedures in the transport implementing agencies were robust and that they could be relied on to withstand independent financial scrutiny. Some recommendations to improve procedures in respect of the Railway Procurement Agency, the Dublin Transportation Office and the Regional Airports Division of the Department were made.

### Audit Programme

The Transport 21 audit programme, commenced in 2007, continued throughout 2009. Six independent audits were initiated and conducted during the year.

Audit Category	Project Title
Appraisal	Luas Line A1 (Belgard to Citywest)
Appraisal	Navan Line Clonsilla-Dunboyne
Appraisal	N18 Gort-Crusheen
Physical and Financial Progress	N3 Clonee-Kells
Physical and Financial Progress	N9 Carlow-Knocktopher
Physical and Financial Progress	N9 Kilcullen-Carlow

The auditors verified that the implementing agencies were continuing to appraise Transport 21 projects in accordance with the Department of Transport's Guidelines on a Capital Appraisal Framework for Transport Projects and Programmes and the Department of Finance's Guidelines for the Appraisal and Management of Capital Expenditure Proposals in the Public Sector. A number of recommendations for improvements to the appraisal process were made. Audits of financial and physical progress found that projects were generally being implemented in a satisfactory way. Only minor recommendations for amendments to the project implementation and management arrangements of selected projects were suggested and have, in the main, been accepted by the implementing agencies.

The audits carried out in 2009 relate to projects that have a total estimated capital cost of €1.931 billion.

### Common Appraisal Framework

The Department of Transport initiated a review of its Common Appraisal Framework in 2008. Goodbody Economic Consultants were engaged to assist with this review. The review took account of the experience of implementing agencies during their pilot use of the Guidelines and of the recommendations arising from various appraisal audits as outlined above. Changes were also made to the Guidelines to take account of the implications of transport emissions for project appraisal. The revised Guidelines were circulated to agencies for implementation in August 2009 and are posted on the Transport 21 and Department of Transport websites.

### Post Project Review Guidelines

Also in 2008 the Department of Transport, assisted by Goodbody Economic Consultants, commenced work on drafting Guidance for transport implementing agencies on how to conduct post project reviews. Fully compliant with Department of Finance Guidelines, the Department's Post Project Review Methodology for Transport Projects sets out the background to post project reviews, outlines the proposed content of such reviews and indicates the data and information needed to carry out such reviews. This was circulated to agencies in August 2009 for further information.

### Programme Board

The Transport 21 Programme Board is comprised of senior officials in the Department of Transport with responsibility for oversight of the implementation of Transport 21 projects and programmes. The Board is responsible, among other matters, for

managing the Transport 21 capital envelope. It has the authority to prioritise projects within overall Government policy and to reallocate funding from one project to another in order to progress Transport 21 as efficiently as possible.

In 2009, the Board met on thirteen occasions. It discussed project progress and funding requirements.

Given the changed economic environment and difficulties with the public finances, the Programme Board reviewed Transport 21 strategic priorities to 2015.

The strategic priorities recommended by it for national roads were

- the completion of the five major inter-urban routes by 2010 and
- the progression of the Atlantic Road Corridor.

The priority recommended for public transport was the provision of additional capacity on the public transport network through

- the delivery of Metro North and the DART Underground Programme (including associated electrification, signalling and rolling stock investment)
- investment in the bus network, subject to the outcome of the cost and efficiency review and the availability of public service obligation funding.

Continued planning of the other major transport projects in Transport 21 was also identified as a priority in order that projects will be ready to move to implementation stage as soon as funding becomes available.

Overall Government transport investment priorities are set out in the Renewed Programme for Government.

### **Review of Monitoring Arrangements for Transport 21**

A review of the arrangements currently in place for monitoring the Transport 21 programme of investment took place in 2009. As a result of this review the Monitoring Group agreed to adopt the following changes to the arrangements:

- Transport 21 Monitoring Group to meet twice yearly in 2010
- Transport 21 Programme Board to meet seven times in 2010
- Refocus the Transport 21 audit programme on financial spot checking of capital grant claims from the Transport 21 implementing agencies.

Páirc an Iarthair  
Park West



Information & Communications ↘



The Department of Transport is committed to providing up to date and accurate information on Transport 21 projects and programmes to the general public and interested parties.

### Communications Strategy

In 2009 the Department of Transport continued the implementation of the Transport 21 communications strategy, the primary aim of which was to increase public awareness and understanding of Transport 21. The emphasis during 2009 was on improving the Transport 21 website as a communications tool and on increasing co-operation on communications between all implementing agencies.

### Communications Subgroup

The Subgroup continued to oversee the implementation of the Transport 21 communications strategy, aligning it with the strategies of each of the principal implementing agencies. The Group met 11 times during the year. The Group, which is chaired by the Department of Transport and is representative of the transport agencies, the NDP Communications Office and Dublin City Council, also provided a forum for sharing of resources and achieving an integrated presentation of Transport 21 to the general public and all interested parties.

### Transport 21 Publications

In March, the third Transport 21 Annual Progress Report was published. It was distributed to interested parties and placed in the Oireachtas Library and on the Transport 21 website.

Transport 21 newsletters were published in July and December. These provided updates on project completions and work in progress. The newsletters were distributed to interested parties and placed on the Transport 21 website.

Financial and economic information on a number of projects was published on the Transport 21 website during 2009.

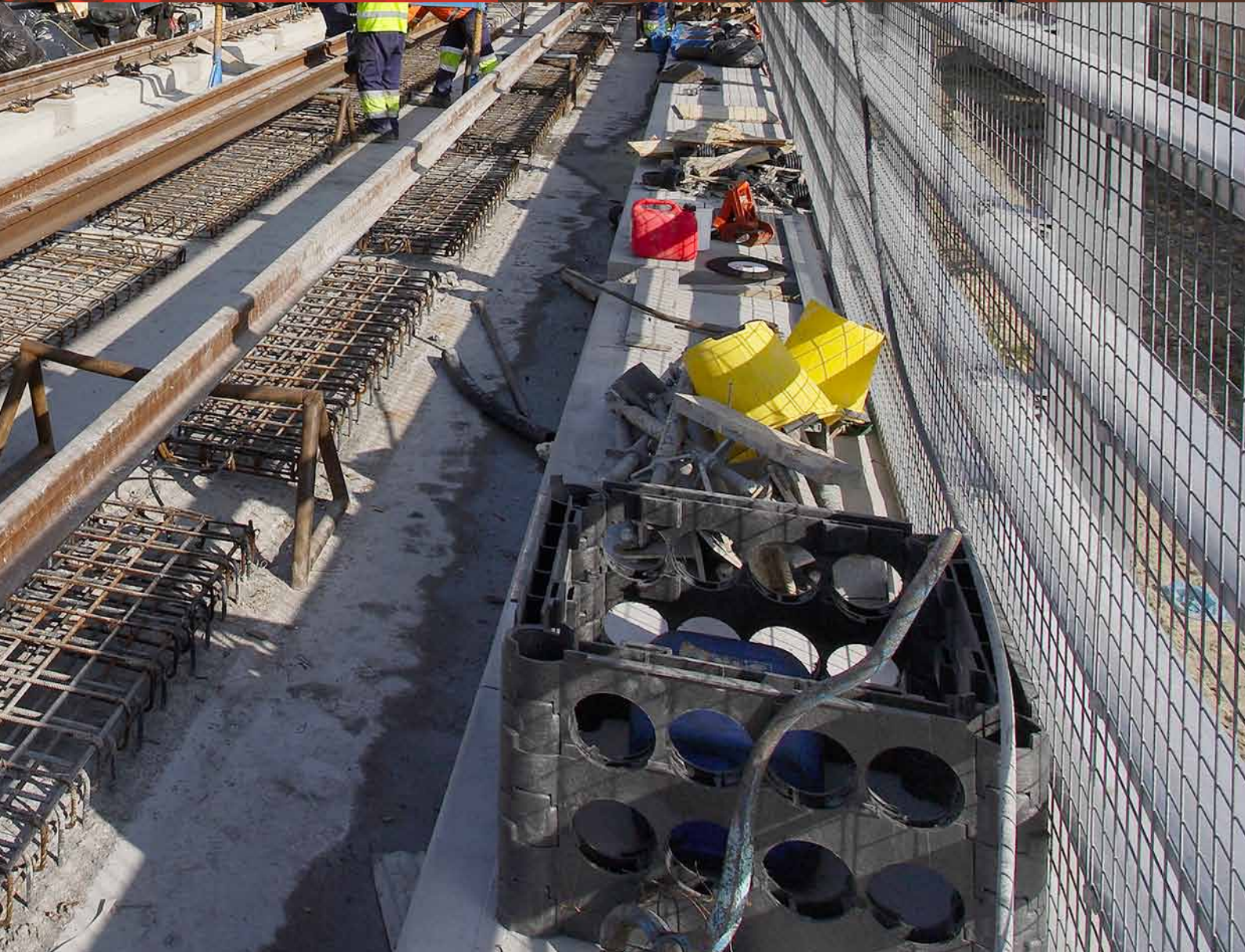
### Transport 21 Website

The website provides regular updates and information on Transport 21 projects and also provides relevant press material and an information archive, including replies to Parliamentary Questions and speeches related to Transport 21.

In 2009, there were over 118,000 hits and almost 78,800 unique visits to the Transport 21 website.



Prospects for 2010 ↘



### Allocations for 2010

The total expenditure provision for 2010 is almost €2 billion:

Sector €ms	2010 Exchequer Provision	PPP Estimate	Total Estimated
	€m	€n	€n
National Roads	1,114	209	1,323
Public Transport	615	-	615
Regional Airports	4	-	4
<b>Total</b>	<b>1,733</b>	<b>209</b>	<b>1,942</b>

### Roads

Approximately 75% of the major interurban motorway (MIU) and dual carriageway network was open to traffic by the end of 2009. Work is continuing on the remaining three MIUs, all of which are on target for completion by end 2010.

In addition, work will continue on part of the western section of the Atlantic Road Corridor from Gort to Crusheen and on the N21 Castleisland Bypass during the year. Both of these projects are expected to be completed in 2011.

A total of nine major projects are due to be completed in 2010. These are:

Route	Project	Estimated Completion
M/N3	Clonee – North of Kells	Q2 / 2010
M7	Castletown – Nenagh	Q4 / 2010
M7	Nenagh – Limerick	Q2 / 2010
N7	Limerick Tunnel	Q3 / 2010
M7/M8	Portlaoise – Cullahill/ Castletown	Q2 / 2010
M9	Carlow – Knocktopher	Q4 / 2010
M9	Knocktopher – Waterford	Q1 / 2010*
M50	Upgrade Phase 2	Q4 / 2010
M1 & M4	Motorway Service Areas (Tranche 1)	Q4 / 2010

\*This project was officially opened on 22 March 2010.

The NRA is also preparing a new round of projects to be delivered by public private partnership, mainly on the Atlantic Road Corridor and the N11 route. These will progress through planning and contract procedures during 2010, with construction expected to commence in 2011.

### Public Transport - Rail

Among the highlights of 2010 for Irish Rail is the opening of the Western Rail Corridor Phase 1 on 29th March 2010. The Navan Line Phase 1 will be completed by end year. Irish Rail will submit a railway order application for the DART Underground to An Bórd Pleanála and will commence the PPP tender process. The implementation of the third Railway Safety Programme will continue.

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Work will also continue on the Dublin City Centre rail resignalling project, which is expected to be completed by 2012.

### **Public Transport – Luas/Metro**

The Cherrywood Luas Line is expected to be completed in the latter half of 2010. Work will continue on the Citywest Luas Line, which has a target construction completion date in early 2011.

The RPA will continue to progress the PPP procurement process for Metro North. If an enforceable railway order is in place in the second half of 2010 it is envisaged that enabling works (mainly the relocation of utilities and temporary removal of monuments) on the project will commence towards the end of the year.

Planning work for Metro West and the Cross City Centre to Liffey Junction Luas Line will continue. The RPA plans to make railway order applications to An Bord Pleanála in respect of these two projects during 2010.

In respect of the Lucan Luas Line, it has been decided that the line will be delivered in two phases and further consultation with the public and key stakeholders will continue.

Planning work for the Luas Bray Line will be progressed based on the preferred route option already selected.

### **Regional Airports**

The rollout of projects at the regional airports will continue in 2010. These projects include the construction of runway end safety areas and/or other runway upgrades, and safety and security measures such as fire fighting facilities and better controls on airside access.





Progress on Transport 21  
2006-2009 ↘



Substantial progress has been made in delivering Transport 21 since 2006. Ireland's national road network has been transformed and key public transport projects have improved the lives of commuters and travellers all around the country.

### Public Transport

Substantial progress has been made on Transport 21 public transport projects and programmes since 2006. Several new and improved rail lines have been completed, rolling stock on all of the major inter city rail routes has been renewed, 3 Luas extensions have commenced construction and one of these has completed, capacity has been extended on both existing Luas lines, and the bus fleets for Dublin Bus and Bus Eireann have been substantially modernised. Progress has also continued on various public transport programmes including railway safety, traffic management, bus priority and accessibility. Significant developments for the period 2006-2009 are detailed below.

### Heavy Rail

The Docklands railway station opened in March 2007, 2 years ahead of the indicative Transport 21 timetable, enabling the provision of 12 additional return services to Clonsilla each weekday.

The DART upgrade project was completed, permitting the operation of 8 car trains across the Dublin suburban rail network.

67 new Intercity locomotive rail carriages entered service on the Dublin – Cork route. This facilitated the commencement of hourly, clock-faced, services on the route.

177 new Intercity railcars were introduced on the Sligo, Westport, Galway, Limerick, Kerry, Waterford, Gorey, Portlaoise, Athlone and Carlow routes. Services on the Sligo – Dublin rail route were increased from three per day in 2005 to eight per day in 2007. An order for a further 51 Intercity railcars was placed in December 2008 with Mitsui-Rotem. The railcars will be delivered and in service by 2012 and will operate on Dublin outer commuter routes.

Construction work on the Cork Commuter Rail – Glounthaune to Midleton line was completed in 2009 with twenty-one trains now operating daily between Cork and Midleton, and services running every thirty minutes at peak times from Mondays to Fridays.

Phase 1 of the Western Rail Corridor from Ennis to Athenry was opened in March 2010 allowing the provision of rail services between Galway and Limerick. New stations have been built at Sixmilebridge, Gort, Ardrahan and Craughwell. A new station at Oranmore will be opened at a later stage.

The Kildare Rail Project was completed at end 2009 and involved the quadrupling of a section of track on the Heuston – Kildare line between Cherry Orchard and Hazelhatch and other works such as signalling and station development. Four-tracking of the line allows for the separation of long distance and commuter services thereby improving speed and capacity for commuter, regional and intercity services. Four new stations have also been built on the line: Hazelhatch & Celbridge, Adamstown, Parkwest/Cherry Orchard and Clondalkin/Fonthill.

Phase 1 of the Navan Rail Line, from Clonsilla to Pace, is currently under construction. The line, which consists of 7.5 kilometres of double track, is scheduled to open in the latter half of 2010. Three stations are being built on the line, at Hansfield, Dunboyne and Pace. The station at Pace, at the interchange with the M3 motorway, will have a 1,200 space park-and-ride facility, the largest in the country.

The Railway Safety Programme is being implemented in three 5-year tranches. The first 5-year programme ran from 1999 to 2003 and resulted in expenditure of €61 million, most of which was spent on infrastructure safety investment.

The second programme, which ran from 2004 to 2008, saw expenditure of €510 million and more emphasis on the safety management systems in Iarnród Éireann. The third programme began in 2009 and will run until 2013. It is proposed to spend a total of €513 million over the five years, with over €443 million to be spent on infrastructure investment and nearly €70 million on continued enhancement of Iarnród Éireann's safety management systems.

The DART Underground is a new railway line running through Dublin's city centre, mainly in tunnel, connecting the existing Northern Line with Heuston Station. Work is progressing on design, geotechnical investigation and preparation of an environmental impact study, including a detailed archaeological report. Iarnród Éireann hope to apply for a Railway Order in 2010 in respect of the project, which is being undertaken as a Public Private Partnership.

### Light Rail

The capacity of the Luas Tallaght to Connolly Line increased by 40% with the completion of the programme to extend trams on the route from thirty to forty metres. Eight new trams were provided for the existing Red and Green Luas lines in 2009 and this facilitated an increase in capacity particularly during peak periods.

Construction of the Docklands Luas Line was completed and the line officially opened in December 2009. This 1.5 kilometre track extends the Tallaght Connolly line (Red Line) from Connolly Station, through the Docklands to the O2 Arena and is forecast to carry up to 1.8 million passengers per annum.

Construction work began on the Cherrywood Luas Line in 2007. This 7.5 kilometre line, which will run from Sandyford to Cherrywood, is an extension of the existing Green Line. The project is due for completion in 2010.

Construction of the Citywest Luas Line began in January 2009 and is progressing well. Construction work on the project is due for completion in early 2011.

From a group of four pre-qualified consortia, the Railway Procurement Agency shortlisted two consortia, Celtic Metro Group and Metro Express, to proceed to the final stage of the PPP procurement process for Metro North. The final stage of procurement will take place after a Railway Order has been made by An Bord Pleandála. The oral hearing of the application for a railway order commenced in April 2009 and concluded in March 2010.

### Buses

#### Dublin Bus

In 2006 the Minister announced Exchequer funding for the purchase by Dublin Bus of 100 additional buses. All of these buses are now in service. In 2007, further funding was approved as a contribution towards the cost of 100 replacement buses for the Dublin Bus fleet, 50 of which were tri-axle buses which offer greater passenger carrying capacity. These 100 buses entered service during the second half of 2007 and early 2008. In 2008 funding was approved as a contribution towards a further 100 replacement buses. A number of these buses entered service in late 2008 and the remainder entered service in the first half of 2009.

In March 2008 funding was provided to Dublin Bus to meet the cost of the Automatic Vehicle Location System (AVLS) project, as well as expenditure on a new radio system, traffic light priority system (TLP) and the pilot of 'next stop' announcement system on 150 buses. Dublin Bus is currently proceeding with the introduction of an AVLS on board buses on a depot by depot basis. It is anticipated that AVLC will be fully operational by end 2010.

In January 2009 Dublin Bus' first ever hybrid-electric bus entered service for a trial period of three years.

### Bus Éireann

In 2006, the Minister for Transport announced funding for Bus Éireann to purchase 160 new buses (90 replacement and 70 additional) to enhance existing non-commercial services and provide additional city and commuter services throughout the country. In 2008, additional funding was approved for the purchase of an additional 79 replacement buses, bringing the total number of new buses to 239. All 239 new buses are now in service. The introduction of these new buses has enabled the expansion of existing services and the introduction of new routes.

New buses introduced into the Bus Éireann fleet under Transport 21 include low floor city buses, single deck commuter coaches and double deck commuter coaches. These enhancements mean that 100 per cent of Bus Éireann's city fleet is wheelchair accessible.

## Public Transport Programmes

### Bus Priority

Substantial progress has been made on the implementation of bus priority measures in Dublin and the regional cities.

There are now sixteen Quality Bus Corridors in the Greater Dublin area. During 2008, average bus journey times in the morning peak were less than the corresponding car average journey times in 12 out of the 16 QBCs, with greater than 10% variations in 8 of the QBCs. Bus journey times have also improved - fifteen minutes has been cut off the journey time for the Swords QBC. 2009 saw the introduction of the College Green Bus Corridor in the capital which has greatly improved bus journey times through the city at peak times and provided a more positive environment for cyclists and pedestrians.

Work on green routes in Cork, Limerick, Galway and Waterford has also been advanced.

### Accessibility

88 % of the Dublin Bus fleet is now composed of low floor wheelchair accessible buses, 72 % of all Dublin bus routes are now accessible and about 46% of bus stops have accessible kerbing installed. 100 per cent of Bus Éireann's city fleet is wheelchair accessible.

Aside from the accessibility improvements to Dublin Bus and Bus Éireann in the period, several railway stations on the Galway and Cork mainlines and the Dublin suburban networks were upgraded with modern accessible facilities. Accessibility standards have also been improved at many of Bus Éireann's bus stations.

## National Roads

The Major Inter Urban Network, providing motorway standard road from Dublin to Cork, Limerick, Galway, Waterford and the Border was 75% complete at end 2009.

The first motorway, the M1 from Dublin to the Border with Northern Ireland, was completed in 2007. The second, the M6 from Dublin to Galway, was

completed in December 2009. The remaining three, Dublin to Limerick, Dublin to Cork and Dublin to Waterford, are on target for completion by the end of 2010. The table below shows the progress made by end 2009 for each Major Inter Urban Route.

Route	Route Length (kms)	Open to Traffic (kms)	% Complete (kms)
M/N1 Dublin to N.I.	91	91	100%
M/N4 & M/N6 Dublin to Galway	194	194	100%
M/N7 Dublin to Limerick	197	87	44%
M/N 7 & M8 Dublin to Cork	142	128	90%
M/N7 & M9 Dublin to Waterford	116	46.5	40%
<b>Total</b>	<b>740</b>	<b>546.5</b>	<b>75%</b>

Substantial work has also taken place on the upgrade of the M50 motorway in Dublin. Phases 1 and 3 of the project were completed in 2008 including the opening of the major upgraded interchanges at the N4 and N7 (Red Cow) junctions. In August of that year, the toll-booths at the Westlink toll bridge were removed and barrier free tolling was successfully introduced. Work continues on phase 2 which comprises the widening of 24 kilometres from south of the M1/M50 Turnapin interchange to the N3 interchange and from south of the Ballymount interchange to the Sandyford interchange including the upgrade of interchanges along these sections. This will

be completed by end 2010. At that point, the capacity of the M50 will have increased by 50%.

40 individual road schemes have been completed since 2006. These include individual schemes on the Major Inter Urban network as well as other key projects such as the M3 motorway, the Dublin Port Tunnel, several town bypasses and sections of the Atlantic Road Corridor. Work continues on 10 more schemes.

### Completed Road Schemes

Route	Project
	<b>2006</b>
N2	Monaghan Town Bypass
N2	Ashbourne Bypass
N4	Edgeworthstown Relief Road
N7	Naas Road widening
N8	Rathcormac-Fermoy (PPP)
N8/N73	Mitchelstown Relief Road
N15	Ballyshannon-Bundoran Bypass
N21	Castleisland-Abbeyfeale
N25	Kinsalebeg
N25/N27	Kinsale Road Interchange
N30	Enniscorthy-Clonroche realignment
M50	Dublin Port Tunnel
N52	Mullingar Eastern Bypass
N55	Cavan Bypass

### Completed Road Schemes

Route	Project
	<b>2007</b>
N1	Dundalk to Border
N2	Castleblaney Bypass
N4	Dromod to Roosky
N5	Charlestown Bypass
N6	Tyrellspass to Kilbeggan
N11	Arklow to Gorey Bypass
N11	Enniskerry Junction Improvements
N18	Ennis Bypass
N52	Mullingar to Belvedere
N56	Mountaintop to Illistrin Phase 2
N77	Kilkenny Ring Road Extension

Route	Project
	<b>2008</b>
M6	Kilbeggan to Athlone
M8	Cashel to Mitchelstown
M8	Cullahill to Cashel
M9	Carlow Bypass
N11	Kilpedder to Delgany Junction
M50	Upgrade Phase 1
M50	Upgrade Phase 3

Route	Project
	<b>2009</b>
N4	Leixlip/M50 Junction
M6	Galway to Ballinasloe
N6	Athlone to Ballinasloe
M8	Fermoy to Mitchelstown
M9	Kilcullen to Carlow
N25	Waterford City Bypass
N51	Navan Inner Relief Road
N52	Tullamore Bypass

### Schemes in Construction

Route	Project
	<b>Work Continues</b>
M/N3	Clonee to North of Kells
N7	Limerick Tunnel
M7	Nenagh to Limerick
M7	Castletown to Nenagh
M7/M8	Portlaoise to Cullahill/Castletown
M9	Waterford to Knocktopher
M9	Carlow to Knocktopher
N18	Crusheen to Gort
M50	Upgrade Phase 2
N21	Castleisland Bypass

The N18 Gort to Crusheen and N21 Castleisland Bypass are expected to finish in 2011. All other projects currently in construction will complete in 2010.

### Regional Airports

Exchequer funding was approved by the Government in February 2007 for investment in infrastructure at Ireland West Airport Knock, Kerry Airport, Sligo Airport, Donegal Airport, Waterford South East Regional Airport and Galway Airport under the new Capital Expenditure Grant Scheme. This investment was to fund both safety/security projects and developmental projects at these airports. To date investment has been made in runway end safety areas and/or other runway upgrades; fire fighting facilities and better controls on airside access. The programme also funds the City of Derry Airport runway safety project under the co-funding arrangement agreed between the Irish and UK Governments.

In October 2009 Minister Dempsey officially opened the new terminal at Ireland West Knock Airport. Transport 21 funding was spent mainly on the terminal extension, an Instrument Landing System and a perimeter fence and road for the airport.

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