



Dublin Transportation

Roxane Li
Carmen Lo
Adam deLiefde
Maura MacDonald

PRESENTATION OVERVIEW

- Dublin Transportation History
- Current State
- Modes of Transportation
- Current Initiatives
- Where We Stand



DUBLIN IN IRELAND



DUBLIN

- Capital City of the Republic of Ireland
 - Population: 1.1 million
 - Population of the Republic of Ireland 4.6 million
- Greater Dublin Area
 - Encompasses Dublin City and six counties
 - Densely populated and heavily trafficked
 - 3.8 million tourists visited Dublin in 2009



DUBLIN CITY AND GREATER DUBLIN AREA



HISTORY OF TRANSPORTATION IN DUBLIN

- Ireland's first railway opened in 1834
 - Dublin and Kingston Railway 6 miles
 - Now a part of the DART commuter rail system
- Bus services originated in 1872 as horse trams
 - Trams electrified by 1900
 - Bus services were created to reach areas not covered by trams
 - CIE was created in 1945 to combine bus and rail services
 - By 1950 all tram lines were replaced by buses



DUBLIN TRANSPORT TODAY

- High levels of traffic congestion in the city center and the surrounding area
- National Transport Authority
 - Responsible for the development of an integrated transport system within the Greater Dublin Area
 - Principle functions
 - Strategic planning for transport
 - Develop an integrated, accessible public transport network
 - Promoting public transport, cycling and walking over private
 - Provision of light rail, metro and heavy rail
 - Effective management of traffic and transport demand



INTERRUPTIONS DUE TO WEATHER

Due to the weather conditions, snow, only about 60 out of the 172 bus routes are operating normally.



[Home](#) | [News Centre](#) | [Your Journey](#) | [Fares and Tickets](#) | [Tourist Information](#) | [Network Direct](#) | [About Us](#) | [Contact Us](#)

Weather Disruptions

Sunday, December 05, 2010

Updated 17:01

Dublin Bus wishes to advise customers that due to adverse weather conditions the following diversions and curtailments listed below are in place.

Taking account of the weather forecast for tonight for severe frost and freezing fog, **last buses will operate at 9pm tonight** both from the city centre and the suburbs.


Dublin Bus will be making every effort possible to operate a full service tomorrow morning, Monday 6th December however it is possible that the situation will remain the same tomorrow morning and that the diversions and curtailments listed below will remain in place. This website will be updated after road conditions are assessed, we advise customers to check this website tomorrow morning for service updates.

Route	Diversion
1	Terminating at Sean Moore Rd
2	Unable to serve Sandymount Village, St. John's Church, Sydney Parade or Belfield. Operating via Coast Road, Merrion Gates to Blackrock
3	Unable to serve Larkhill, terminating at Whitehall Church. Unable to serve Sandymount Village, St. John's Church, Sydney Parade or Belfield. Operating via Coast Road, Merrion Gates to Blackrock
4	Serving Blackrock Village outbound only, via Frascatti Rd Inbound. Terminating at Stradbroke Rd.
5	Operating as normal
7	Unable to serve Loughlinstown, terminating in Cherrywood. Serving Blackrock Village outbound only, via Frascatti Rd Inbound
7a	Unable to serve Mackintosh Park or Blackrock Village, terminating on Rochestown Ave. Serving Blackrock Village outbound only, via Frascatti Rd Inbound

Note: This real time information is updated as of December 5th, 2010

INTERRUPTIONS DUE TO WEATHER

LUAS lines are also restricted due to current weather conditions.



Luas & 7up Christmas on Ice... |

News Centre

News

Travel Updates



Routes and Times

Tickets and Fares

Customer Care

Luas and You

More Information

HOME | NEWS CENTRE | TRAVEL UPDATES

Travel Updates

Sunday December 5th 2010

Site Update - 16:00 hrs

16:00 hrs - Red Line is operating a full service in both directions between **The Point Stop** and **Tallaght Stop**.
Luas **Connolly** stop remains closed.

16:00 hrs - Green Line is operating a full service in both directions between **St Stephens Green** and **Brides Glen**.

- Passengers are strongly advised to check www.transport.ie, www.luas.ie, Freephone Luas Customer Care **1800 300 604** and listen to local and national media for service updates including AA roadwatch.

Luas Customer Care Opening Hours:

- Saturday 4th December: 8am - 6pm

Note: This real time information is updated as of December 5th, 2010

BUS NETWORKS – DUBLIN BUS

- Main public transport provider since 1987
- Extending as far as Balbriggan, Newcastle and Dunboyne
- **1,050** buses runs **172** lines servicing **150 million** passengers each year
- Transporting 70% of all public transport commuters at peak time
- Other bus services: Radial, Cross City, Orbital, DART Feeder, Airport Services, Xpresso, Nitelink, Railink, Schoolink and Sightseeing tours.



Please note that Aircoach and Metro services are not included in this diagram.

Dublin Bus services



Finding your stop
As always, do stand back.
Once you have found your destination in the index overlaid you can locate the nearest city centre stops on the city centre map above and the relevant bus routes on the diagram to the left.

There is a separate bus stop index for the Dublin area. This index is available at the Dublin Bus Customer Service Centres and at the Dublin Bus website.

COMMUTER TRAIN – DART

- Dublin Area Rapid Transit (DART) came in to operation in 1984
- Suburban railway network run along the coastline of Dublin Bay
- Tracks spanning across **5.2 kilometers**
- Connect Malahide and Howth to Wicklow
- Continuous increasing demand
 - In 2000, increased passenger capacity by **12.5%**
 - In 2003, increased another **19.6%**

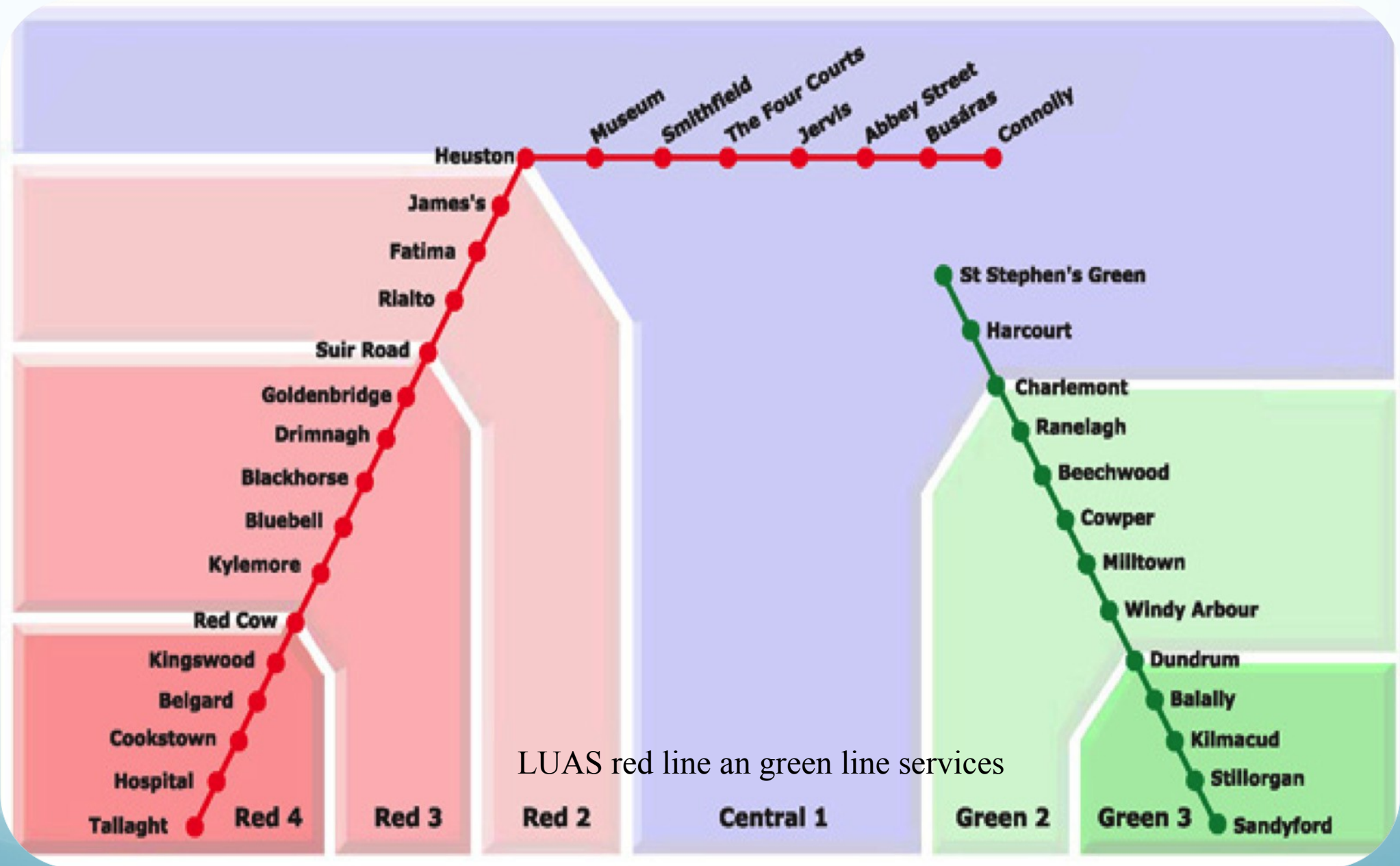




LIGHT RAIL - LUAS

- LUAS started servicing in 2004, with the investment of **728 million** euro
- Service Lines
 - Green line: St. Stephen's Green to Cherrywood
 - Red Line: The Point to central Tallaght
- **49** stations and **34** kilometers of track, carries **70,000** passengers on a daily basis
- Benefits:
 - Less air pollution, LUAS produces **5.48** times less **CO₂** than cars
 - Less noise
 - Less vibration from road traffic
 - Less traffic jam





LUAS red line an green line services



OTHER TRANSPORTATION NETWORKS

Private vehicles
63,976



Bicycles
6,143



Walkers
X<1.1 million citizens+3.8 million tourists



goireland 08

Boilegaug 08

CURRENT INITIATIVES



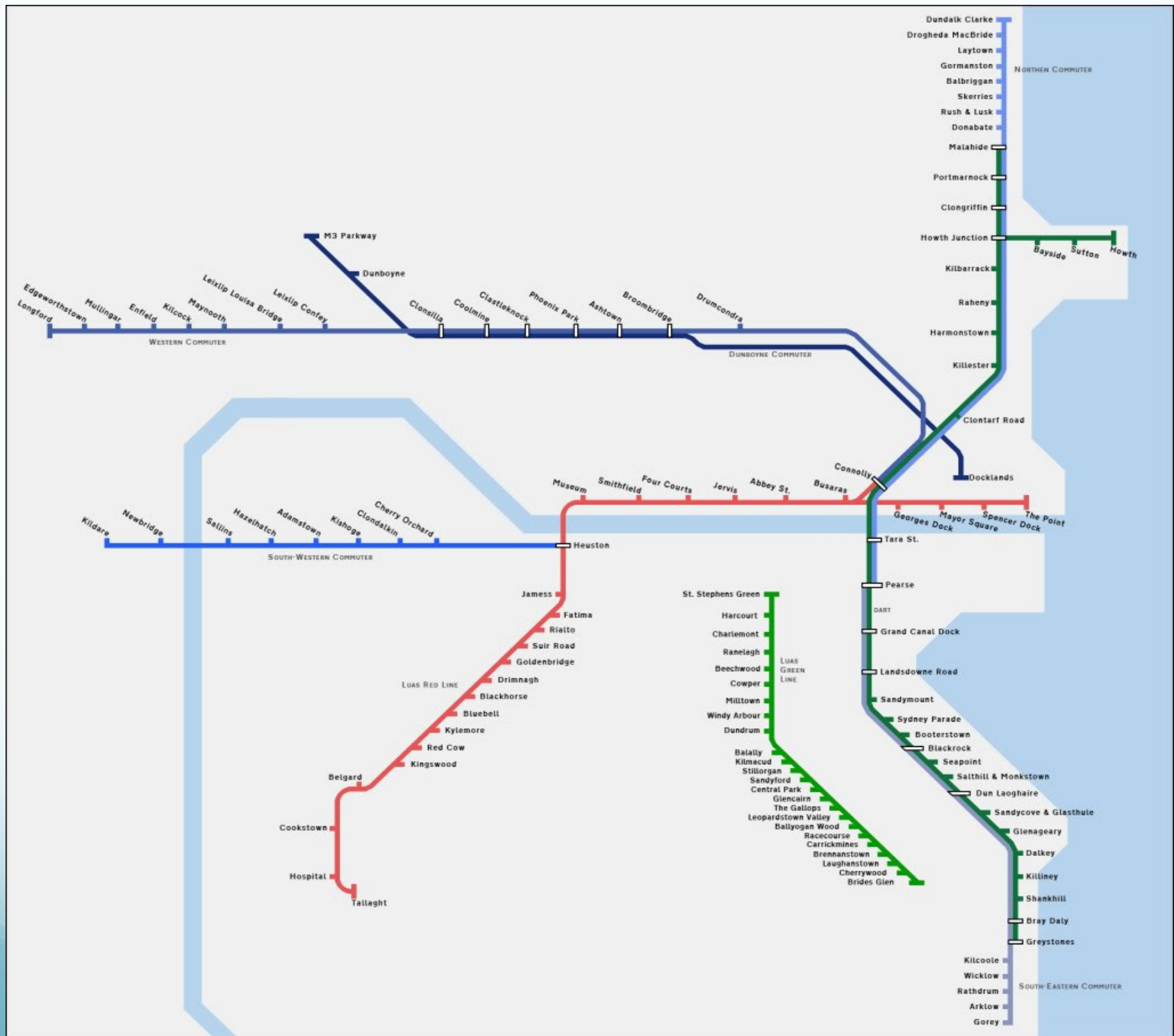
National Development Plan for the transporation system in Ireland over 2006-2015

- Objective
 - Increase accessibility
 - Ensure sustainability
 - Expand capacity
 - Enhance quality

- Current Agenda
 - Implement a phased program of demand management measures
 - Introduce a smartcard integrated ticket
 - Enhance bus network
 - Extend the LUAS network
 - Develop Metro North and Metro West

TRANSPORT 21 METRO DESIGN

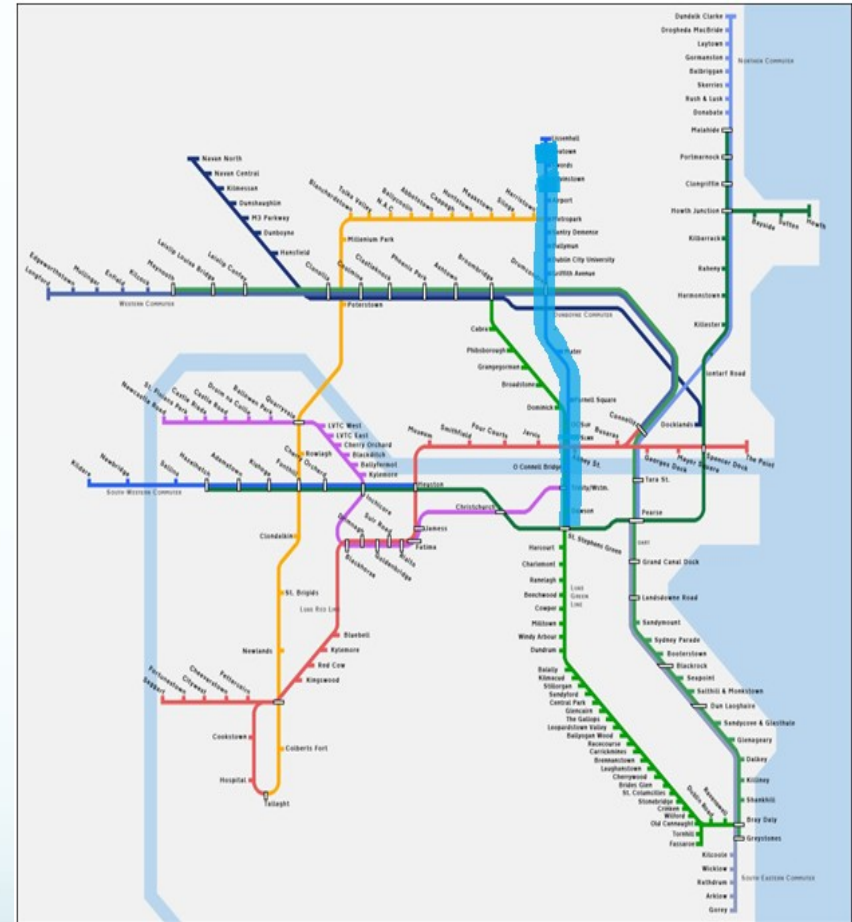
- Complement LUAS tram network and DART routes
- Metro lines will have exclusive track use along with interconnections at many locations
- Park-and-ride sites are planned to encourage the use of public transportation
- Metro's provide a direct connection to Dublin Airport
- Largest Prospective capital investment to date in Ireland (estimated to cost about 9 billion dollars)
- High density types allow for large volumes of passengers
- Cater for disabled access





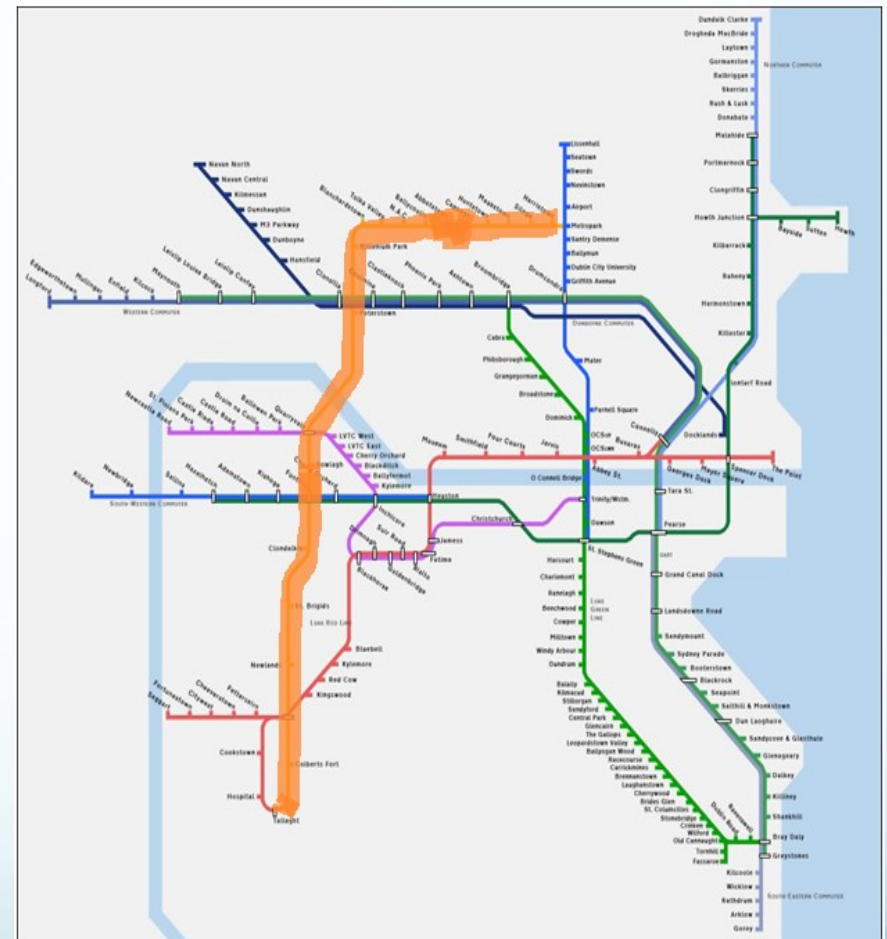
METRO NORTH

- Expected to be opened in 2012
- Capacity for 20,000 people per hour and 34 million per year
- Runs every 2 minutes in peak
- Current Stage: Permission to Build and Operate
- 14 initial stops starting at St. Stephen's Green and continues to Swords
- Total length of 16.5 km (10.25 miles)
- 20 minutes expected running time from start to Airport



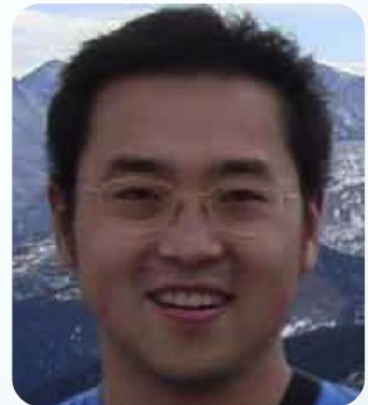
METRO WEST

- Expected to start running by 2014
- Capacity for 10,000 people per hour, about 20 million per year
- Runs every 4 minutes in peak
- Current Stage: Designing lines and stops
- 20 initial stops starting at Tallaght and ending at Metropark station
- Approximately 24 km (14.9 miles) long
- Estimated to be under an hour from beginning to end



ANALYSIS BEHIND THE METRO PROJECTS

- Early stages evaluated route options and the effect on areas within vicinity
- Work supported by Dublin Transport Office (DTO) with the use of SATURN models of optimal flow across the road traffic network
- Used in conjunction with key system equations of Nagurney and Qiang
- The measure of network performance/efficiency is based on summing the ratio of demand to equilibrium disutility for each O/D pair in the network, and then scaling this number
- Important Measure: ratio of difference between the efficiency measures for the network with and without a given component to the efficiency measures with all components included



COSTS

- **Project TRENEN**

- An optimized model that:
 - increase the usage the public transportation
 - minimize the societal cost.

- For Private Transportation Cost

- Parking cost
- Travel time
- Toll
- Fuel cost
- Vehicle maintenance cost (often overlooked)
- Taxes

- For Public Transportation Cost

- Waiting time
- Transportation fares



WHERE WE STAND?

- Short Term Suggestion
 - A third Dublin airport terminal connects with Metro West can relieve 20 million passengers per year
 - Government can encourage firms to subsidize employees to take public transportation
- Long Term Suggestions
 - Dublin can invest more on the underground transit system to decrease congestion of the roads due to severe weather conditions
 - Obsolete bus routes can be eliminated with the replacement of Metro transit services
- Benefits
 - Increase employment opportunities
 - Promotes Green Initiatives
 - Decrease city congestion issues
 - Decrease disutility