

Irish Academy of Engineering

DUBLIN – BELFAST ECONOMIC CORRIDOR

A EUROPEAN GROWTH HUB ON THE ISLAND



THE IRISH ACADEMY OF ENGINEERING

The Irish Academy of Engineering is an all-Ireland body, concerned with long-term issues where the engineering profession can make a unique contribution to economic, social and technological development.

Its members are Irish Engineers of distinction, drawn from a wide range of disciplines, and membership currently stands at 145.

Drawing on the experience and knowledge of its distinguished members, the Academy works to facilitate communication and dialogue on engineering-related matters. It regularly publishes reports and analyses, some jointly with other learned and professional bodies.

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DISCLAIMER

The members of the Taskforce and the Contributors participated in extensive discussions in the course of the series of meetings and submitted comments on a series of draft reports. Its content conveys the general tone and direction of the discussion, but its recommendations do not necessarily reflect a common position reached by all members of the Taskforce and the Contributors, nor do they necessarily represent views of the organisations to which the members belong.

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THE DUBLIN-BELFAST ECONOMIC
CORRIDOR HAS THE POTENTIAL TO
BECOME A EUROPEAN GROWTH HUB
OF TRANS-NATIONAL IMPORTANCE,
WITH A POPULATION OF FOUR MILLION
BY THE 2030s.





FOREWORD

This report is one of a suite of complementary reports by the Irish Academy of Engineering (IAE). Its purpose is to assist policy makers in both jurisdictions on the island with the ongoing development of spatial planning policy, and to inform and enhance decision-making on major infrastructure development over the coming decades¹. Spatial planning must include the provision of key infrastructure in order to achieve the level of economic development necessary to provide employment opportunities for a growing population across all regions of the island. The report has been prepared by an Academy working group, following research and discussions with senior executives from the public and private sectors in both Ireland and Northern Ireland.

The development of a Dublin Belfast Economic Corridor was first proposed by Sir George Quigley, Chairman of Ulster Bank at the annual conference of the Confederation of Irish Industry in 1992.

¹ The other reports are Sustainable Transportation for the Island of Ireland 2040; Policy Advisory - National Broadband Plan; The South-Western Economic Corridor linking Cork, Limerick and Galway, and Spatial Planning- Infrastructure Needs for the island of Ireland in 2040. These reports, when published, will be available on the Academy's website www.iae.ie, together with all previously published reports.

EXECUTIVE SUMMARY

INTRODUCTION

The combined economies on the island of Ireland comprise a very small percentage of world economic output. They compete in an international marketplace that is becoming ever more globalised, with increasing competition not only from our 27 EU partners, but also from the United States and the BRIC countries (Brazil, Russia, India and China).

While the living standards of people on this island are among the highest in the world, the challenge for government in both jurisdictions is to sustain the levels of social and economic development necessary to maintain this. The Irish Academy of Engineering believes that achieving this objective will require a focus on the connectivity of the eight main coastal city regions on the island: Belfast, Dublin, Waterford, Cork, Limerick, Galway, Sligo and Londonderry/Derry². In this report city regions are defined as encompassing a 60km radius of the respective city centres. These regions account for over 80% of the population of the island, which could have a population totalling to around eight million people by the 2030s.

This projected increase in population will require a significant ramping up of investment in infrastructure. This investment programme also requires immediate action as there will undoubtedly be long lead times in planning and implementation.

The Academy believes that the development of economic corridors connecting the island's regional cities is the best way to maximise economic growth. This, in turn, will benefit the more outlying regions in terms of spin-off employment, and by generating the taxation resources necessary for the social and economic development of more rural locations.

A Dublin-Belfast Economic Corridor, with a potential population of four million people by the 2030s, encompassing Fingal, Drogheda, Dundalk, Newry, Banbridge and Lisburn, as well as the two cities, has the potential to compete with larger city regions internationally and to attract foreign direct investment (FDI) which may not otherwise locate on the island, thus benefiting the island population as a whole.

OVERVIEW

- Over three million people live on the Dublin-Belfast Economic Corridor within a commuting hinterland of 60km. The corridor links the two largest cities on the island.
- Population growth on this corridor in the decade prior to the 2011 Census was similar to that in the rest of the island.
- The corridor will continue to be the main driver of economic and social development on the island in the period up to the 2030s.
- The Dublin-Belfast Economic Corridor has the potential to become a European growth hub of trans-national importance, with a population of four million by the 2030s.
- Foreign direct investment (FDI) firms will be more likely to locate in a densely populated corridor, and emerging technology companies increasingly seek to locate in cities where they can scale up, attracted by the availability of well-educated, talented staff.
- It is recommended that the public and local authorities along the Dublin-Belfast Economic Corridor work on a complementary basis to develop key infrastructure, including high-quality transport, energy, water, sewerage, waste and broadband services, as well as research facilities.

RECOMMENDATIONS

1. Establish an advisory body comprising the local authorities on the Dublin-Belfast Economic Corridor.
2. Plan the development of complementary infrastructure to improve connectivity.
3. Publish a regular Dublin-Belfast Economic Corridor Monitor.
4. Increase urban density.
5. Promote residential construction to meet the projected increase in population within the corridor.
6. Complete the Dublin-Belfast motorway, with spokes linking the hinterland with the urban centres along the route.
7. Effect a modal switch from car to public transport towards 20% car-usage in key urban centres.
8. Electrification of rail-line to aspire to achieve one-hour journey time between Dublin and Belfast.
9. Dublin Airport – build second runway and additional terminal capacity.
10. Investigate water supply to east coast from Shannon and Lough Neagh.
11. Complete North-South electricity connector to strengthen security of supply on the island.
12. Provide broadband to highest international standard.

² See Map, Appendix 1

CHAPTER 1: OPPORTUNITY & CHALLENGE

Recent projections suggest that the population of the island could reach eight million in the 2030s, with up to seven million living in the eight main coastal city regions on the island: Belfast, Dublin, Waterford, Cork, Limerick, Galway, Sligo and Londonderry/Derry. It is expected that half of the island's population, or four million, will live within the Dublin-Belfast corridor, giving it the potential to be a European growth hub of significant trans-national scale. That would make it attractive for larger-scale inward investment projects that might not otherwise come to the island.

TABLE 1
DUBLIN-BELFAST ECONOMIC CORRIDOR POPULATION (MILLION)

	2001/2002	2011	% increase
Southern section	1.637	1.927	17.7%
Northern section	1.127	1.207	7.3%
Corridor total	2.764	3.136	13.5%
Island population	5.615	6.402	14.05%
Corridor % of Total	49.2	49.0	

The increase in population in this corridor between 2001/2002 and 2011 was broadly in line with the increases in the rest of the respective jurisdictions (see Appendix 2). Developments in agriculture, tourism, and broadband and, in Ireland, a strategy for regional FDI investment³, seem likely to ensure similar regional development across the wider island regions.

From 2002 to 2011 there was a marked difference in the average annual growth in population between the northern and southern sides of the Dublin-Belfast Economic Corridor. This reflected the significant difference in population increase between Ireland and Northern Ireland. The population in Northern Ireland rose by 7.5% over the 10 year period to 2011, whereas that in Ireland rose by 17.1% between 2002 and 2011. Much of the difference can be explained by inward migration patterns until 2007.

TABLE 2
ESTIMATED ANNUAL POPULATION GROWTH
(BASED ON CSO AND NIESR DATA)
CITY REGIONS 2002/2001 TO 2012
IN IRELAND & NORTHERN IRELAND (NI)

Dublin	1.8% pa
Galway	2.0% pa
Cork	1.7% pa
Limerick	1.2% pa
Waterford	1.2% pa
Sligo	1.2% pa
Remainder of state	1% pa
Belfast	0.7% pa
Derry	0.5% pa
Remainder of NI	0.5% pa

The elimination of customs barriers, and the improvement in motorway links, have been contributing to increased economic activity, and consequent growth in population on the corridor from 2002-2011 in Ireland and from 2001-2011 in Northern Ireland.

TABLE 3
DUBLIN-BELFAST URBAN CORRIDOR POPULATION CHANGE
2002-2011 FOR IRELAND; 2001-2011 FOR NORTHERN IRELAND

Dublin City	+6%
Fingal	+39%
Meath	+37%
Drogheda	+26%
Dundalk	+17%
Newry and Mourne LGD	+15%
Banbridge LGD	+17%
Lisburn LGD	+11%
Belfast LGD	+1%

CHAPTER 1: OPPORTUNITY & CHALLENGE

Previous studies on the development of the Dublin-Belfast Economic Corridor concentrated on inter-trading between firms located along the route. Today the emphasis has switched to developing the corridor as an attractive location for foreign direct investment (FDI), focused on global markets, and thereby increasing the rate of growth of the total island economy.

Cities are increasingly seen as the drivers of national competitiveness and of economic and social development. The trend towards greater urbanisation reflects the desire of industries to have access to a wide range of infrastructural services, and a well-educated and highly skilled labour market. Across the world, cities⁴ are focusing on improving their positions in the global league table.

The urbanisation trend, and the increasing densification of cities, are driven by a desire for higher living standards, proximity to employment opportunities, access to a wide range of services, better infrastructure, as well as educational, social and cultural needs.

The Dublin-Belfast Economic Corridor is the only region on the island having the scale and population density to become a significant European growth centre. It has a population of almost half the total population of the island, and has a population density five times greater than the rest of the island. This gives it the potential to compete with larger urban zones such as Hamburg, Manchester and Milan, which rank in the top ten urban zones in Europe. Other paired cities in Europe include Edinburgh-Glasgow, Munich-Wurtenburg, Manchester-Birmingham and Brussels-Liege.

The challenge is to create a conurbation which can match the competitiveness of these highly developed urban centres. With international competition for FDI increasing all the time, including competitive corporate taxation rates and potential changes in Britain's relationship with the rest of the European Union, it is essential to further strengthen the existing advantages of this corridor.

In its end-of-year report for 2014, IDA-Ireland stated that companies in the emerging technology sector preferred to locate in Dublin due to the necessity to scale up rapidly. Highly skilled people from abroad, who have skills in short supply, are attracted to live in cities, like Dublin and Belfast. The presence of facilities like universities and airports are further city magnets. So while IDA-Ireland and Invest NI will continue to pursue FDI projects for the other regions, the majority of larger FDI projects will gravitate towards the Dublin-Belfast Economic Corridor.

The further development of the Dublin-Belfast Economic Corridor will enable each urban centre along the corridor to benefit from enhanced economies of scale; increased economic growth and employment; more contiguous customers for indigenous industry; and more inward investment. But, to optimise its potential, it will also require better broadband, transport, energy, waste and water infrastructure; as well as enhanced education, research and health services.

While the evolution of this corridor is now well established, the challenge for the two jurisdictions on the island is to ensure the complementary provision of infrastructure which will support the corridor as a motor for growth that will, in turn, benefit the whole island. In addition, plans prepared by all local authorities along the route should take account of their contribution to connectivity within the corridor.

Outlying rural areas will also benefit from the growth of the Dublin-Belfast Corridor through the provision of services, IT support, outsourced manufacturing/sub-supply, increased numbers of tourists, and the availability of greater Exchequer resources arising from the increased business activity in the corridor.

4 In this report city regions are defined as encompassing a 60km radius of the respective city centres.

OVER THREE MILLION PEOPLE LIVE
ON THE DUBLIN-BELFAST ECONOMIC
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THE ISLAND.





CHAPTER 2: SERVICES & INFRASTRUCTURAL CHALLENGES

1. ATTRACTING FOREIGN DIRECT INVESTMENT

Half the total number of workers employed by foreign direct investment (FDI) companies in Ireland are based on the southern part of the Dublin-Belfast Economic Corridor. About the same percentage of FDI employment on the northern side of the Corridor is located in the Belfast city region. Emerging technology companies, which need to scale up rapidly, have a preference to locate in Dublin and Belfast, or in locations within the wider corridor with good transport connections.

Other factors that influence investment decisions include the availability of sufficient numbers of highly skilled workers, clustering with similar industries, and adequate building, water, energy and broadband infrastructure. It is also interesting to note that about two thirds of new FDI job creation arises from expansion by existing firms.

FDI and indigenous industries play a complementary role: FDI is attracted to the main city regions, is predominantly export-oriented, and sells only a small proportion of its output on the island, thus making a substantial contribution to economic and employment growth. It is also estimated that for every ten jobs created by FDI firms, up to seven additional jobs are created in the rest of the economy. Sub-supply activity can accelerate this trend. Many of the sourcing initiatives in the more traditional sectors (agri-food, consumer goods), and in the majority of services firms (IT, financial services) tend to be from local suppliers with short supply chains, but for larger and more complex products there is potential for all-island supply chains.

Indigenous manufacturing industries are more dispersed regionally and sell close to half their output on the island market. They tend to grow organically, are often based on agriculture, other natural resources and tourism, and are sub-suppliers to the growing market throughout the island arising, inter alia, from foreign direct investment⁵.

Taking the island market, it is noteworthy that manufacturing firms located in Northern Ireland sell a higher proportion of their output in Ireland (15% of external sales), than their counterparts sell in Northern Ireland (just 1.5% of total manufacturing exports.) However, goods exports from Ireland to Northern Ireland increased in value by an average of 4% pa from 2009 to 2014, while exports to Great Britain declined.

The trade connections along the corridor and cross-border remain most important for smaller firms. Two-thirds of the goods and services exported by Northern Ireland small firms go to Ireland, while one sixth of equivalent exports from Ireland go to Northern Ireland. This "inter trading" is not only important for small firms, but also for first-time exporters in Northern Ireland who are taking their first step in selling outside their own market. Almost three quarters of businesses take their first steps into exporting through the cross-border market, and 71% of these found that experience led them on to further export markets in Britain, the rest of the EU, and further afield⁶.

2. INCREASING POPULATION DENSITY IN URBAN CENTRES TO ENABLE MORE COST-EFFECTIVE DELIVERY OF SERVICES.

Population density in Dublin, the largest city on the corridor, is 4,400 persons per sq. km overall, and increases to 9,000 per sq. km in the inner city. The population density in Belfast is 3,400 persons per sq. km.

Substantial new housing developments within city/urban boundaries should be at higher than the current average density within cities. This will require a revision of planning policy and regulations to ensure high-quality European standards of design, and the provision of shared communal services and recreational areas. The resulting benefits will include delivery of public services at lower cost, easier access to employment and education opportunities, and a reduction in commuting times.

⁵ A forthcoming report from InterTrade Ireland, "Mapping the potential for all-island ecosystems", will identify some manufacturing and business services sectors on the Dublin-Belfast corridor.

⁶ Source : InterTrade Ireland.

CHAPTER 2: SERVICES & INFRASTRUCTURAL CHALLENGES

3. HOUSING & OFFICE STOCK

A shortage of supply of suitable residential, industrial and commercial buildings can constrain development and lead to uncompetitive operational costs. The housing stock in the cities and towns on the corridor should be increased to meet the needs of population growth, and to allow for the decreasing size of households. In Ireland, a recent report has suggested that the scale of population increase in the Greater Dublin areas comprising Dublin and the Mid-East regions could account for two-thirds of the total projected population growth in the state over the period to 2031⁷.

New estates should, where economically feasible, include the provision of district heating, public transport and broadband communications, as well as access to primary schools in the area. In Northern Ireland, the construction of 7,000 new homes is planned each year to meet demand, most of these along the east coast. This would represent a 1% gross increase in the housing stock without allowing for replacement demand.

The availability of adequate modern offices for internationally traded services could be a critical constraint on the continued development of the Dublin-Belfast Economic Corridor.

4. TRANSPORT SERVICES

While the increase in road traffic, as measured by annual average daily traffic (AADT) on the southern side of the corridor was 7% per annum from 1997 to 2007, there was no growth in traffic during the 2007-2013 period of recession. An exception was the M50 motorway around Dublin where traffic increased by 6% p.a. over the period, while traffic on the rest of the national network declined by about 1% p.a.

Reflecting the more recent economic recovery, there was a sharp increase in overall road traffic in 2014, with the national route approaches to Dublin showing increases of 3% to 5%. Road traffic growth in the period up to 2030 looks now set to again exceed the growth in GNP on both sides of the corridor, adding to the case for the completion of the motorway from Dublin to Belfast.

Public transport by bus and rail will be the priority modes of transport. A corridor population of four million will require a reduction in the car usage for people movements in the key urban areas from the current levels of about 70%. This will require the development of high density hubs for both employment and living, where the modal-share car usage is reduced to approximately 20% of people movements, and priority would be given to public transport, walking and cycling.

Currently, the Dublin City Council area of the city centre (between the Royal and Grand Canals) has a car usage rate of 35%. The four square km area bounded by Parnell Square, St Stephens Green, Christchurch and Merrion Square has a 26% car share for people travelling to and from work.

Bus service frequency, which is currently every half hour on the Belfast/Dublin Airport/ Dublin City route (public service on the hour, private service on the half hour), should be increased to every 15 minutes within ten years.

Comprehensive proposals for the upgrade of rail transport services in the Dublin area are contained in the Academy's response to the National Transport Authority consultation of February 2015. This envisages an extension, and eventual electrification, of the northern line from Dublin to the Airport and Belfast⁹.

Currently there are only eight through services per day between Dublin and Belfast, whereas commuter rail services between many paired cities in Europe comprise up to 40/50 services per day.

TABLE 4
BASIC SERVICE QUALITY INDICATORS FOR SELECTED CITY PAIR
RAIL CONNECTIONS

Route	Distance	Travel Time (minutes)	Average Speed	Frequency (daily)
Dublin -Belfast	190km	127	90km/h	8
Edinburgh -Glasgow	74km	50	89km/h	49
Manchester -Birmingham	140km	88	136km/h	49
Munich -Nuremberg	170km	75	136km/h	49
Brussels -Liege	97km	51	114km/h	60

Source: Edgar Morgenroth, Journal of Cross Border Studies in Ireland No. 6.

Increased investment in rolling stock, and ancillary services, has resulted in a higher frequency and sharp increase in commuter passenger traffic from Drogheda to Dublin (>30 trains per day), and from Portadown to Belfast (35 trains per day). However only eight trains per day link the central urban section of the corridor from Drogheda to Portadown. Passenger journeys on the Northern Ireland rail network have increased by over 6% pa from 2005 to 2014, the highest level since the 1960s.

7 National Statements of Housing Supply and Demand 2014 and Outlook 2015-17.

CHAPTER 2: SERVICES & INFRASTRUCTURAL CHALLENGES

A direct service frequency of at least hourly is desirable on the Dublin-Belfast line. This would have a major impact on commuter services into Dublin. However the Academy's response to the NTA consultation states that, in the longer term, 2035-2040, the adoption of 25KV AC on the DART underground interconnector in Dublin, and the electrification of the line from Dublin to Belfast, with a direct link to Heuston, would enable increased frequency to be achieved on the Dublin-Belfast route without compromising commuter service levels.

5. DEVELOPING DUBLIN AIRPORT AS A GLOBAL INTERNATIONAL HUB, WITH GREATER ROAD AND RAIL TRANSPORT LINKS TO BELFAST INTERNATIONAL AND BELFAST CITY AIRPORTS.

Dublin Airport is the sixth busiest European hub for transatlantic traffic to North America⁸ and traffic through the airport could double by 2030.

Ensuring connectivity to and from global growth centres is critical to Ireland's ability to attract foreign direct investment, and there is also the possibility to strengthen the position of Dublin Airport as a hub from Europe to North America, the Middle and Far East and Africa. Due to congestion in some competing international airports, a greater volume of transfer traffic to North America and the Middle East has been diverted through Dublin with the result that total airport traffic increased by 8% in 2014 to 22 million, and overall terminal capacity is estimated at 35 million.

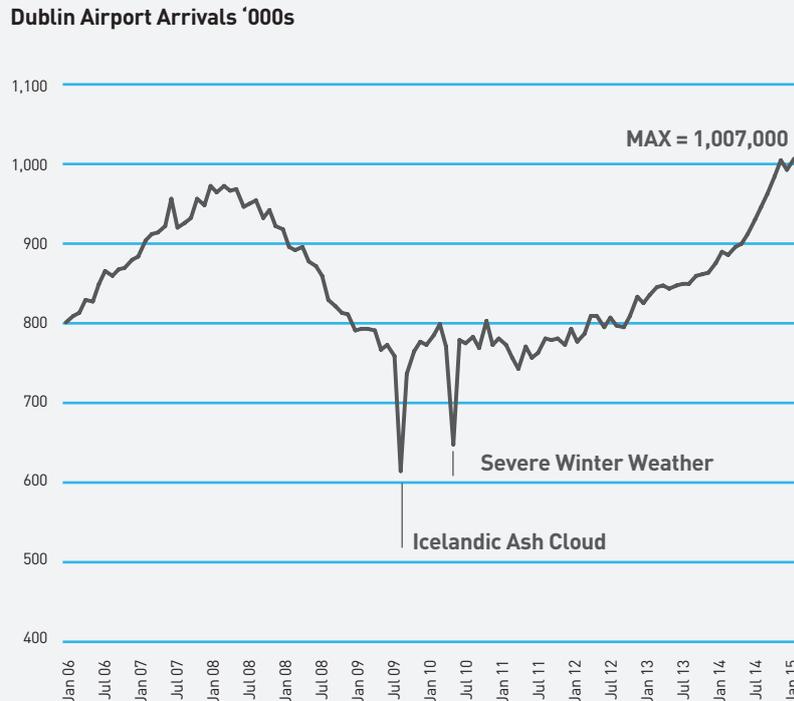
Planning permission for a second runway is in place and its construction is now urgent. This would ensure the viability of Dublin as a major air transport hub, and increase the attraction of the Dublin-Belfast Economic Corridor as a location for international investment. Planning and development must also include increasing terminal capacity at the airport to cope with the likely doubling of passenger throughput by 2030.

In Northern Ireland, combined passenger traffic at Belfast International and Belfast City Airports was 6.2m passengers in 2014, and along with Dublin, these three airports account for over 80% of air traffic to and from the island

DUBLIN AIRPORT ARRIVALS RETURNING TO PEAK LEVELS

	Apr '15
Total Arrivals '000s	1006.8
YOY Change '000s Trips	+132
Total Departures '000s	984.2
YOY Change '000s Trips	+99.3

Passenger arrivals at Dublin Airport reached a 9 year high of almost 1,007,000 in April 2015. This represented a seasonally adjusted yoy increase of 15.1% and is a partial reflection of the attractiveness of a weakened Euro for tourists to Ireland. Strong inward passenger numbers at Dublin Airport is massively beneficial for many sectors of the economy, both in the Capital and nationwide.



Source: Dublin Economic Monitor, Issue 2, Summer 2015.

8 Mr. Stephen O'Reilly, Dublin Airport, speaking at Routes Americas Forum, Denver, February 2015.

CHAPTER 2: SERVICES & INFRASTRUCTURAL CHALLENGES

6. PORT DEVELOPMENTS

Demand on Dublin Port is likely to continue expanding in line with national output. An inland port serviced by rail would relieve congestion in the port area and free up land for commercial and residential development, as has been done in Gothenburg for example. In addition, a pipeline connection from Poolbeg to Dublin airport for jet fuel is recommended⁹.

Other ports on the corridor, including Larne, Belfast, Warrenpoint, Greenore and Dun Laoghaire all contribute significantly to the movement of people and goods off the island.

7. SHARED WATER NETWORK TO ENABLE BULK TRANSFER OF WATER

It is recommended that studies should be undertaken to investigate the feasibility and business case for connecting the planned River Shannon to Dublin water pipeline with a further pipeline from Lough Neagh to Dublin to improve security of water supply on the wider Dublin-Belfast Economic Corridor.

8. COMPETITIVE AND ADEQUATE ENERGY SUPPLY.

The development of an all-island energy strategy comprising complementary, high quality, and internationally-competitive energy infrastructure in each jurisdiction has been recommended by the Academy¹⁰.

9. BROADBAND SPEEDS AND CONNECTIVITY TO HIGHEST INTERNATIONAL STANDARDS.

Only 0.5% of broadband connections in Ireland are over fibre compared to about 6% in UK, and 69% in Japan, and 63% in South Korea where high population density makes fibre an attractive commercial option. It is vital that the broadband speeds and internet bandwidth available on the island are comparable with the highest international standards.

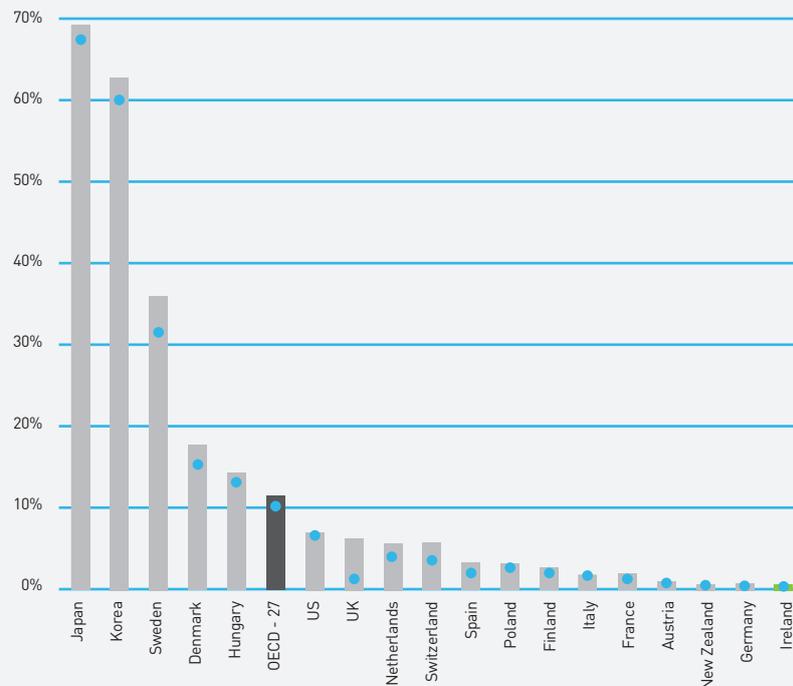
In its response of 16/10/2015 to the Department of Communications, Energy and National Resources Consultations on their National Broadband Intervention Strategy, the Irish Academy of Engineering recommended “stretched targets” of 1 Gbps to homes and 10 Gbps to businesses, where technically and economically possible.

FIBRE CONNECTIONS AS % OF TOTAL BROADBAND CONNECTIONS, JUNE 2013

Ireland ranks poorly in terms of fibre connections and significantly lags leading countries in terms of upgrading the local broadband access network to fibre. In Ireland only 0.5% of connections are over fibre connections compared to 69% in Japan and almost 63% in South Korea (where high population density make fibre a more attractive commercial option). Ireland remains significantly behind the OECD average (12.4%).

OECD-27 ranking: 25th (↓1)

Percentage of broadband connections



National Competitiveness Council Ireland's Competitiveness Scorecard 2014.

9 IAE GDA Transport Strategy submission, March 2015.

10 IAE Energy Advisory Policy: The Future of Oil & Gas (2013); Response to Green Paper on Energy (2014); Energy Bulletins 1 to 4 (2014/2015). These documents can be accessed on the Academy's website at www.iae.ie.

CHAPTER 2: SERVICES & INFRASTRUCTURAL CHALLENGES

Internet usage has increased by 50% per annum over the last decade reflecting Nielsen’s Law of Internet Bandwidth that users’ bandwidth grows by 50% per year. By 2022 the average user may require 500Mbps, and speeds of up to 1Gbps are already planned in some urban areas by telecoms providers in Ireland for business premises.

Stretch targets of 1Gbps for home use, and 10Gbps for business use, on the Dublin-Belfast Economic Corridor should be achieved at competitive prices, given that a delay of nanoseconds in the delivery of service can be a competitive disadvantage in certain sectors.

We also need to encourage more international long-haul fibre landings on the island as a priority. With an increasing proportion of the island’s export of services going via fibre connections, the development of megadata centres which can support more than 120Gbps of internet traffic are vital.

10. UNIVERSITIES

The availability of a cohort of well-educated people, to university graduate level, is a key attraction of the Dublin-Belfast Corridor. More than half of the Irish population aged 25-34 has a third level qualification, and while this compares well with the OECD average, South Korea achieves more than 65%. Universities have a significant impact on their surrounding regional economies, and can have a substantial impact on the internationalisation of the corridor, particularly when there is a significant proportion of foreign students.

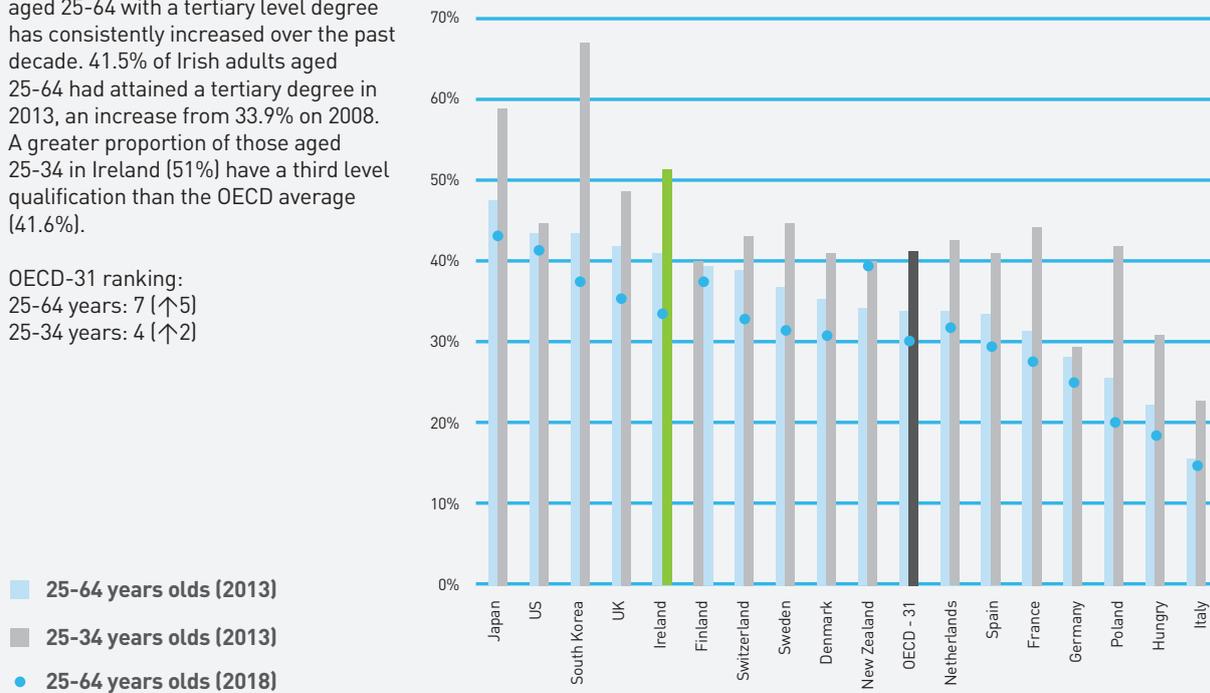
About 100,000 students attend the six university campuses located on the Dublin-Belfast Economic Corridor.

POPULATION 25-64 YEAR-OLDS WITH A TERTIARY EDUCATION DEGREE, 2013

The proportion of the Irish population aged 25-64 with a tertiary level degree has consistently increased over the past decade. 41.5% of Irish adults aged 25-64 had attained a tertiary degree in 2013, an increase from 33.9% on 2008. A greater proportion of those aged 25-34 in Ireland (51%) have a third level qualification than the OECD average (41.6%).

OECD-31 ranking:
25-64 years: 7 (↑5)
25-34 years: 4 (↑2)

Percentage with a tertiary degree



Source: OECD, National Competitiveness Council Ireland’s Competitiveness Scorecard 2015

CHAPTER 2:
SERVICES &
INFRASTRUCTURAL
CHALLENGES

TABLE 4

	Students	% International
University College Dublin	25,000	20%
Queens University Belfast	23,000	9%
Trinity College Dublin	17,000	16%
Dublin Institute of Technology	16,850	4%
Ulster University (Belfast Area)	15,000	25%
Dublin City University	12,500	22%
NUI Maynooth	10,000	2%

In 2011 international students comprised 6.5% of tertiary enrolments in Ireland (this is a wider definition than universities only), and the number of international students in Ireland increased by 9% in 2014.

The development of specialist post-graduate schools involving a number of universities on the island would facilitate economies of scale which would not otherwise be possible

11. RESEARCH CAPACITY

Universities are also primary contributors to the research capacity of the Dublin-Belfast Corridor. Research programmes in universities attract industrial investment to locate nearby, and encourage indigenous start-ups.

In 2012 Ireland had the highest percentage in the Euro Area of Maths, Science and Technology graduates at 22.7 per thousand population in the 20-29 age group, compared to about 19 in the UK. In 2011 there were eight researchers per 1,000 of population employed in Ireland, which was in line with the OECD average and similar to the figure for the UK (for Northern Ireland the figure was seven per 1,000).

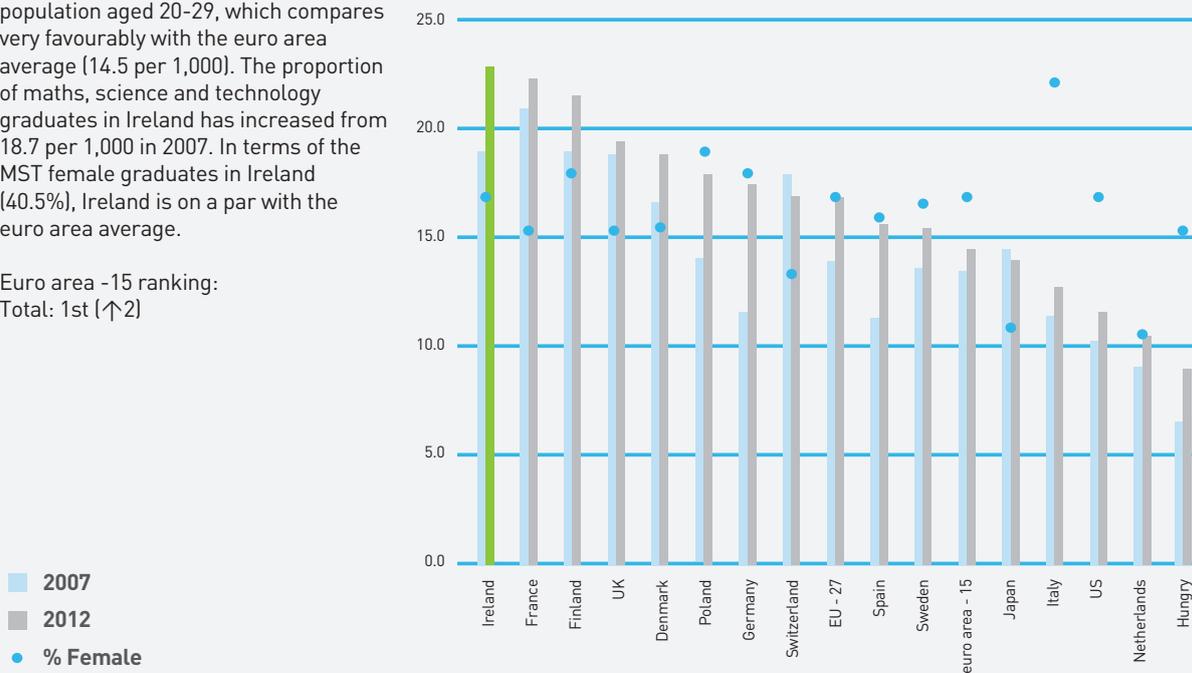
In 2012 there were 0.48 PhD graduates in Ireland per 1,000 of population in 15-64 age group, compared to 0.35 for Northern Ireland and 0.37 recorded for the Euro Area.

MATHS, SCIENCE & TECHNOLOGY GRADUATES (PER 1,000 POPULATION, AGED 20-29) 2012

Ireland has 22.7 maths, science and computing graduates per 1,000 of the population aged 20-29, which compares very favourably with the euro area average (14.5 per 1,000). The proportion of maths, science and technology graduates in Ireland has increased from 18.7 per 1,000 in 2007. In terms of the MST female graduates in Ireland (40.5%), Ireland is on a par with the euro area average.

Euro area -15 ranking:
Total: 1st (↑2)

Graduates in mathematics, science and technology per 1,000 inhabitants aged 20-29



National Competitiveness Council Ireland's Competitiveness Scorecard, 2014

CHAPTER 2: SERVICES & INFRASTRUCTURAL CHALLENGES

12. TOURISM: ENSURE ADEQUATE SUPPLY OF HOTEL BEDS TO MEET EXPECTED DEMAND.

A recent tourism publication ranked four sites located on the Dublin-Belfast Economic Corridor among the top 500 global "must see" tourism sites in the world. These are the Giants Causeway, Titanic Belfast, Bru na Boinne, and Trinity College Dublin¹¹.

There are approximately 73,000 hotel beds available on the corridor, with 62,000 in the southern part and 12,000 in the northern part. Dublin and Belfast are the dominant providers, accounting for 42,000 and 7,000 beds respectively. The density of hotel beds at 22 per 1,000 population is more than twice as great in the south, and compares to 10 per 1,000 in the north. Visitors from Ireland accounted for 28% of the hotel bed occupancy in Belfast.

13. DUBLIN-BELFAST ECONOMIC CORRIDOR COORDINATION: ESTABLISH AN ADVISORY BODY COMPRISING THE LOCAL AUTHORITIES ON THE CORRIDOR.

This advisory body would promote the development of the corridor and the respective Local Authorities would plan to take account of the connectivity requirements linking each Local Authority with adjacent areas on the corridor.

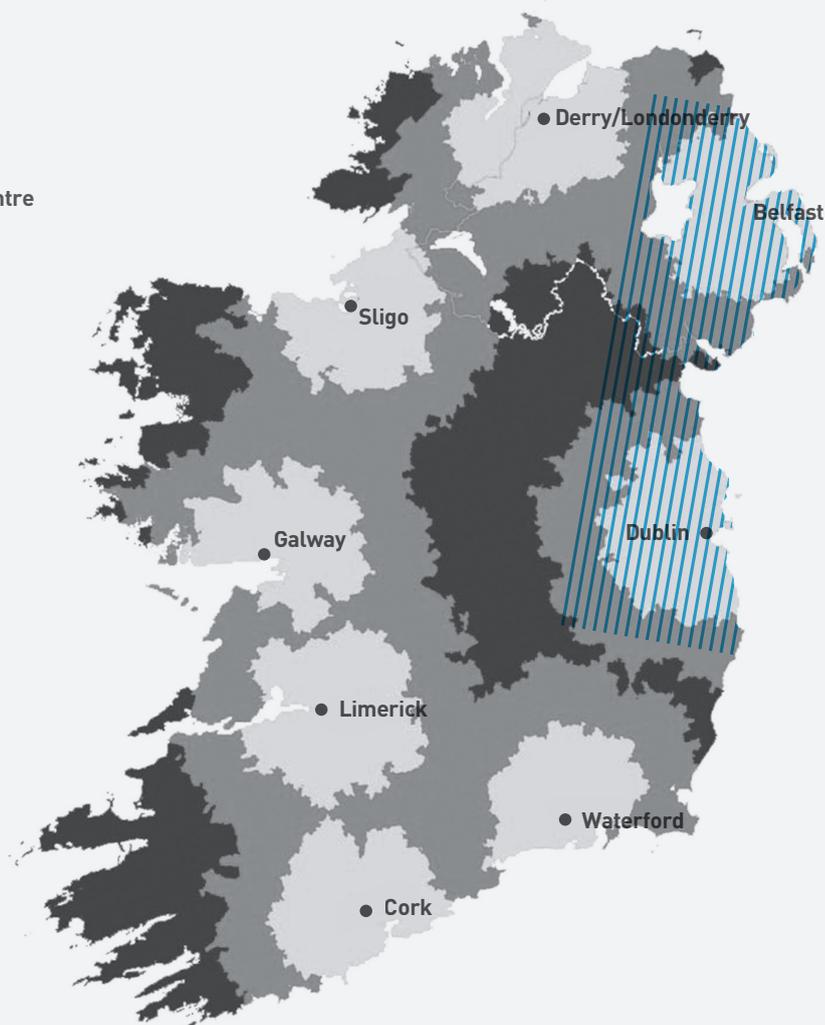
11 Lonely Planet Guidebook. August 2015.

APPENDIX 1

DISTANCE BY ROAD TO THE EIGHT MAIN COASTAL CITY REGIONS ON THE ISLAND

Distance to the nearest key centre

- 0 - 30 miles (0-48km)
- 31 - 50 miles (49-80km)
- over 51 miles (over 81km)



Source: Strategic Investment Board NI; Dublin-Belfast Economic Corridor added

APPENDIX 2

POPULATION DATA FOR THE DUBLIN-BELFAST ECONOMIC CORRIDOR, AND THE REMAINDER OF THE ISLAND.

The population on the corridor has increased broadly in line with that of each jurisdiction, and accounts for almost half the total population of the island. The primary advantage of developing complementary infrastructure in the two parts of the corridor will be to create a European Growth Hub of a scale that will attract foreign direct investment (FDI) that would not otherwise locate on the island. The population trend since 2000 indicates that the spread of population between the corridor and the rest of the island will continue as heretofore.

The population in the southern part of corridor between 2002 and 2011 increased broadly in line with that of the rest of Ireland

Increase in southern part of corridor	17.7%
Increase in remainder of Ireland	16.7%

The population in the northern part of the corridor between 2001 to 2011 increased slightly faster than in the remainder of Northern Ireland.

Increase in northern part of corridor	7.3%
Increase in remainder on Northern Ireland	6.0%

Taking a county-by-county, and a district-by-district look at population trends along the Dublin-Belfast Economic Corridor reveals the following picture:

POPULATION INCREASE 2002-2011, SOUTHERN SECTION; 2001-2012 NORTHERN SECTION (MILLIONS).

	2002	2011	% increase
Dublin county	1.122	1.273	13.3%
Kildare	0.164	0.210	28.0%
Meath	0.134	0.184	37.3%
Wicklow	0.115	0.137	19.1%
Louth	0.102	0.123	20.5%
Southern section	1.637	1.927	17.7%

	2001	2011	% increase
Belfast	0.277	0.281	1.4%
Lisburn	0.108	0.120	11.1%
Newry and Mourne	0.087	0.100	14.9%
Banbridge	0.041	0.048	17.1%
Antrim	0.048	0.053	10.4%
Ards	0.073	0.078	6.6%
Ballymena	0.059	0.064	9.2%
Castlereagh	0.066	0.067	1.5%
Carrickfergus	0.037	0.039	5.4%
Craigavon	0.081	0.093	15.3%
Down	0.063	0.070	9.2%
North Down	0.076	0.079	3.4%
Larne	0.031	0.032	3.2%
Newtownabbey	0.080	0.085	6.4%
Northern section	1.127	1.209	7.3%

Corridor total	2.764	3.136	13.5%
% island population	49.2%	49.0%	

Ireland (Republic)	3.917	4.588	17.1%
Ireland less corridor	2.280	2.661	16.7%
Northern Ireland	1.698	1.814	6.8%
NI less corridor	0.571	0.605	5.0%

Island population	5.615	6.402	14.05%
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CONSULTATION MEETINGS WERE HELD WITH:

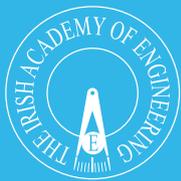
IBEC/CBI Joint Council
Belfast City Council
Lisburn City Council
Dublin City Council
Cooperation Ireland
Newry, Mourne and Down District Council
Armagh, Banbridge and Craigavon District Council
Industrial Development Agency

LIST OF ACRONYMS

FOI Foreign Direct Investment
IDA Industrial Development Agency
IT Information Technology
KVAC Kilovolt Alternating Current
IBEC Irish Business & Employers Federation
CBI Confederation of British Industry
LGD Local Government District (NI)
Gbps Gigabit per second

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