

Submission to Iarnród Éireann Consolidated Strategy

For the attention of Dr Sinéad Canny, SYSTRA Ltd

7th May 2019

Highlights

- The railway network should be viewed as a valuable national asset
- Long-term planning and investment are needed in maintenance, capacity and connectivity
- MetroLink and DART Expansion should be delivered as promised in Project Ireland 2040
- The rail network should be electrified in line with the existing fleet age profile
- Move towards a network of high-speed high-frequency inter-city rail, incl. Dublin to Belfast

1. Introduction

Developing and maintaining a transport infrastructure that meets the requirements of Irish society and the economy is essential. The ability of people to travel from home to their place of work, education or recreational activity by their chosen mode of transport directly affects the health and well-being of our citizens as well as the economy.

Yet significant and increasing traffic congestion is evident in all urban areas in recent years, with lengthy delays and very unreliable journey times at peak hours. Dublin is a particularly congested urban area, one of the most congested cities in the world. Forecasted population increases will add pressure to the capacity of our transport networks.

Furthermore, Ireland is far too dependent on the private car for travel, with damaging consequences for health, air quality and congestion. Policy integration and joined-up investment decisions across planning, housing and transport are needed to generate more attractive alternatives to the private car. Land-use planning and sustainable transport should be integrated and should guide future investment.

2. Project Ireland 2040

Over the next 20 years, our population is expected to increase by one million people. In line with international trends, we must prepare for the majority of this population and jobs growth to be focused in urban centres. This will mean putting in place strategic systems of infrastructure to support sustainable, compact and smart growth.

In the shorter term, greenhouse gas emissions and emerging shortages of capacity in several sectors have the potential to hamper environmental, social and economic progress. As the economy grows and as the need for climate action becomes all the more pressing, the Irish State must continue to plan, invest in and deliver sustainable infrastructure and services which meet the needs of its citizens both now and in the long-term.

In general, Engineers Ireland believes that there needs to be a substantial increase in the allocation of capital investment in various forms of infrastructure to underpin economic growth, raise living standards more equitably and build a sustainable environment.

Last year, the National Development Plan 2018-2027 and National Planning Framework were published as part of Project Ireland 2040. Engineers Ireland is supportive of these plans, which represent a critically important framework for the sustainable development of Ireland over the next generation. We welcomed the 10-year pipeline of projects contained in the €116 billion National Development Plan, including sustainable transport projects such as Metro Link, DART Expansion and BusConnects.

3. Issues for the Consolidated Strategy

The railway network should be viewed as a valuable national asset with the ability to contribute to wider key policies including climate change, supply chain management to free up bottlenecks on roads, sustainable transport and land-use development.

Capacity and connectivity

Passenger levels are now returning to or exceeding the levels achieved at the height of the last economic boom in 2007. The current stock however will not be adequate to meet the anticipated demands of a growing economy. For example, there are capacity issues through Connolly station that will continue to limit the capacity and penetration of the Dublin commuter rail network in particular.

The connectivity of Dublin rail commuter services is poor including penetration to the city centre. The rail network is currently isolated from Dublin Airport. The development of an extensive metro and light rail network for the Greater Dublin Area should be a key element to tackling congestion, enhancing economic competitiveness and ensuring a sustainable, attractive city.

The rail network currently plays an important role in providing commuter access to Cork, Dublin and Galway and this will continue as commuters are encouraged to use public transport facilities. There should be targeted expansion of the heavy rail fleet capacity where commuter bottlenecks occur as well as right sizing the existing network bearing in mind passenger volumes, investment requirements and alternative transport.

We, like many others, are extremely concerned about the effect of Brexit on cross-border connectivity, particularly in the case of a 'hard Brexit'. We remain strongly supportive of an all-island approach to connectivity and growth and would like to see significantly improved connectivity

between Galway, Sligo, and Derry and between Dublin, Dundalk and Belfast. This should include high speed, high-frequency rail between Dublin and Belfast.

Investment and maintenance

There has been significant on-going under-investment in the infrastructure maintenance and renewal programme of the heavy rail network thereby requiring an over-reliance on reactive maintenance rather than prioritising a planned programme of essential renewals. This is impacting on journey times because of temporary speed restrictions for safety reasons and service reliability.

Investment in heavy rail has been severely curtailed in recent years and a proactive planned programme of essential renewals is required. Key to this is securing an adequately funded rolling five-year infrastructure manager multi-annual contract (IMMAC) to deliver a steady state infrastructure and providing adequate capital funding for critical safety control and communication systems such as automatic train protection, a system for mobile communications and a National Train Control Centre. The removal of key permanent speed restrictions throughout the network for more competitive journey times will increase the competitiveness of the railway line and attract passengers from cars, a key objective of the sustainable transport agenda.

Electrification

Ireland has a very low density of rail compared to other countries across Europe and most Irish rail travel is fuelled by diesel. In Sweden, which like Ireland has a relatively low population density, 74% of all rail routes are powered by electricity. While DART and Luas light rail services in Dublin are powered by electricity, Ireland has the lowest density of electrical railways in the EU with less than 20% of the network electrified which does not support the EU RES-T targets to reduce CO₂. Carbon emission targets will dictate the life span of the diesel locomotives.

Planning for the long-term electrification of the rail network in line with the existing fleet age profile should commence alongside delivery of the key items of the DART Expansion Programme, such as electrification, signalling and level crossing removal.

4. Priority projects

Our priorities for the rail network (in no particular order) are:

- Long-term investment in maintenance, capacity and connectivity
- Delivery of Metro Link
- Delivery of DART Expansion Programme
- Delivery of DART Underground
- Electrification of the heavy rail network
- Move towards a network of high-speed high-frequency inter-city rail, including Dublin to Belfast
- Collaboration with TII, NTA and others to achieve an integrated sustainable transport network

Further reading

- **The State of Ireland 2018**, an independent assessment of our infrastructural needs in water, wastewater, flood risk management, energy, transport, communications and waste. The report is available at: <http://engineersireland.ie/communications/state-of-ireland-2018.aspx>
- **Engineering 2019**, a barometer of the profession in Ireland, analyses trends in engineering employment, perspectives and education. The report is available at: <http://engineersireland.ie/communications/engineering-2019.aspx>

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Background to Engineers Ireland

With over 25,000 members, Engineers Ireland is the voice of the engineering profession in Ireland. Engineers Ireland was established in 1835 making us one of the oldest and largest professional bodies in the country. Members come from every discipline of engineering, and range from engineering students to fellows of the profession.

Our responsibility is to

- Promote knowledge of engineering
- Establish and maintain standards of professional engineering and engineering education
- Provide opportunities for Continuing Professional Development (CPD)
- Maintain standards of professional ethics and conduct
- Ensure that professional titles are granted to qualified candidates
- Act as the authoritative voice of the engineering profession in Ireland

Our Vision Statement

Engineers Ireland: a community of creative professionals delivering solutions for society.

Our Mission Statement

Engineers Ireland is an organisation that enables the engineering community to progress their professional development, make an impact on society and encourage and educate the future generations of engineers.