ENGINEERS IRELAND

ACCELERATE INVESTMENT IN TRANSPORT INFRASTRUCTURE

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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 and is now in the top 20 most congested cities in the world.

Increase levels of investment

Levels of capital investment in Irish transport infrastructure declined from a peak of €3.5 billion in 2008 to just €1 billion in 2016. This drop in investment is severely impacting on the day-to-day lives of people as they navigate Ireland's roads, railways and ports. Forecasted population increases of up to one million people over the next 20 years will add further pressure.

Budget 2018 signalled increases in capital investment in transport to just over €2 billion by 2020. However, with the cost of maintaining existing road, rail and ports estimated at €1.6 billion, a substantial increase in investment is required to deliver new projects to cater for demographic pressures, climate obligations and growth.

This said, existing transport assets should be maintained, reused, recycled or repurposed before new infrastructure is built. For example, intelligent transport systems (ITS) and 'big data' can be used to optimise services and asset management. Meanwhile, technology and other systems can also reduce the need to travel.

Sustainability, connectivity and regional development

Ireland is far too dependent on the private car for travel, with damaging consequences for health, air quality and congestion. Despite the introduction of the Smarter Travel policy in 2009, even more people are now driving for all journey types (Table 1).

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 in line with the National Planning Framework and should guide future investment.

It is essential that Ireland has a fully interoperable transportation network, connected internationally through all strategic entry hubs, including airports and ports. As an island, the seamless connectivity of road and rail across the border with Northern Ireland is essential and should be maintained post-Brexit.

Connectivity and transport provision outside Dublin are necessary for effective regional development. The M20 Cork to Limerick motorway should be seen as a priority and would reduce journey times and congestion and improve road safety. Other priority roads projects are the N4, N5, N25/M8 junction, N22 and N28. Rural public transport provision should be improved, including by concentrating development in towns and villages.

Table 1. Mode of travel for all journey types (CSO)

Mode of travel	2009	2013	2016
Car driver	64%	69%	69%
Car passenger	9%	6%	5%
Bus	4%	4%	4%
Rail	1%	2%	1%
Walk	16%	15%	15%
Cycle	1%	1%	2%
Other	4%	3%	3%

Engineers Ireland Policy
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Further reading

Engineers Ireland (2017) State of Ireland 2017
DHPCLG (2017) National Planning Framework: Ireland 2040
DCCAE (2017) National Policy Framework: Alternative Fuels Infrastructure for Transport in Ireland
NTA (2016) Greater Dublin Area Transport Strategy 2016-2035
DTTAS (2009) Smarter Travel: A New Transport Policy for Ireland 2009-2020

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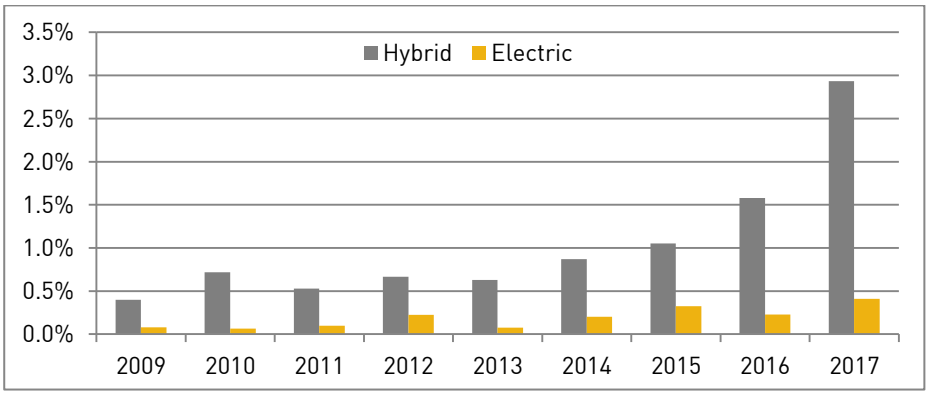

Figure 1. Hybrid and electric vehicles as a percentage of new cars registered (CSO)

Electric vehicles
There should be a concerted move towards electric vehicles (EVs); currently, just 664 electric vehicles were registered in 2017, 0.4% of total (Fig. 1). Consumers should be encouraged to switch to electric vehicles through financial and other incentives such as revised taxes and expanding superfast charging infrastructure. Research into battery range, innovative roads, autonomous vehicles and other technologies should continue.

Bus and active travel
Bus priority routes, core bus corridors and bus rapid transit routes should be developed as part of high-frequency bus networks in cities. This should involve reviewing and repurposing some road infrastructure for public transport and active travel. Safe and attractive walking and cycling routes, particularly near schools/colleges, are vital to fully realise the health benefits of these modes. Public and freight transport should also switch to sustainable energy sources, such as hybrid, electric, compressed natural gas (CNG) and liquid natural gas (LNG).

Rail
The development of an extensive metro and light rail network for the Greater Dublin Area will be a key element to tackling congestion, enhancing economic competitiveness and ensuring a sustainable, attractive city. Construction on Metro Link should commence in 2021 and open for passengers by 2027 (see box). Furthermore, plans should be put in place: to electrify the heavy rail network, for high-speed inter-city rail, for the DART Expansion Programme, to extend the Luas network and for suburban/light rail in other cities.

Metro Link is the central spine of an integrated rail network in Dublin with St. Stephen's Green, a key interchange point enabling transfer between Luas, metro and bus, and suburban rail. The DART Underground should be progressed to enhance this network.

The Metro has been designed to ultimately accommodate up to 20,000 passengers per direction per hour. Services will run every five minutes at peak when the system opens but this can be reduced to every two minutes as demand increases over time.

The service will provide significant journey time savings such as shortening the time from Swords to the city centre from an average of 50 minutes currently by bus to 25 minutes by metro.

All European cities with which Dublin competes have rail links to the airport. Metro North will be easily accessible from both Dublin Airport terminals, providing high quality public transport for passengers.