

Iarnród Éireann Strategy

2027



Foundations we are building on



4,915 train services run weekly



Almost **1 million** passengers carried weekly



629 carriages in our fleet



348,000 train-km weekly



over **4,000** employees

HOWTH

144 stations served countrywide



2,200 km in our network

Foreword by Jim Meade, Chief Executive

On behalf of Iarnród Éireann, I am pleased to present our Strategy 2027. This document, primarily prepared during 2019 in a world before COVID-19, sets out how our services will be transformed over the life of the National Development Plan 2018-2027 in response to changing customer needs including the key role Ireland's railway will play in helping to power the nation's economic and social development towards a sustainable, inclusive and prosperous future.

In finalising this document during the COVID-19 pandemic, we recognise that there is significantly-increased uncertainty with it likely to be some time before we have a full understanding of the impact on Ireland's requirements for public transport. That said, in a post-pandemic world, as with all economic recoveries, the needs of people for mobility and increasing preference for sustainable modes such as rail will manifest themselves. The Strategy presents a framework for rail development that, having considered three demand scenarios, can be suitably flexible in response to our new world requirements with the detail of interventions, their sequencing and timescales to be developed with all stakeholders as we prepare implementation plans. In the meantime, our priority is to focus on creating customer confidence in their safety when using rail, while planning to provide additional capacity as the growth in demand returns.

As Ireland's public service railway, Iarnród Éireann is ready and able to support recovery post COVID-19 while building for the longer term regional and national growth envisaged by Project Ireland 2040, leveraging our unique role in sustainably connecting people, communities, economies and businesses across the nation. While the Strategy is focused on NDP rail priorities, it has the flexibility to respond in an uncertain environment and the ambition to deliver further incremental benefits that accelerate the shift to sustainable transport over the coming years.

In 2019, more people travelled on rail than ever before, resulting in busier trains and stations on Europe's safest railway. We incrementally introduced new services and enhanced timetables in response to this growing demand. This builds on a recent past of successful delivery of significant infrastructure developments and

capacity increases, programmes that included four-tracking of the Hazelhatch & Celbridge to Parkwest & Cherry Orchard line, opening the M3 Parkway to Docklands route, re-opening the Phoenix Park Tunnel to facilitate Kildare Line services reaching key districts in the south of the city, opening commuter lines from Cork to Midleton and bringing passenger services back to the Western Rail Corridor, in total, a combined investment in sustainable mobility of over €2Bn, delivered on-time and to budget.

With rail likely to play an even greater role in a sustainable world, a new Strategy is required. Iarnród Éireann is committed to continuously evolving our services to maximise the role we play in meeting the transport needs of the country through targeted and well managed investment, enabling us to continue to deliver safe, attractive and sustainable services for all existing and future customers whilst ensuring value for money for our funding stakeholders.

We look forward to working closely with partners and stakeholders, across our passenger, freight and Rosslare Europort businesses, as we develop appropriate implementation plans and progress delivery of our Strategy 2027.



The Strategy forms the peak of a **"planning pyramid"** through the business, ensuring alignment of our departmental plans with the overall strategic direction.

Jim Meade
Chief Executive

Iarnród Éireann's Strategy 2027

Executive Summary

Ireland's rail network is an invaluable national asset, providing the backbone for an integrated public transport system for the nation. Iarnród Éireann, as the national railway provider, is ready and strengthened to play a key role supporting economic recovery post the COVID-19 pandemic and in delivering high capacity sustainable public transport solutions to cater for the increase in travel resulting from the anticipated population and employment growth nationally, in meeting the demanding targets for reductions in harmful emissions in Ireland's Climate Action Plan, and in delivering the National Transport Authority's transport strategy objectives.

Over recent decades Iarnród Éireann has successfully implemented major infrastructure and service enhancements that have modernised rail transport for an increasing number of customers and of wider benefit to Ireland. Major projects to include four-tracking on the Kildare line, service developments and new stations along core commuter corridors in Dublin and Cork, re-opening of the Western Rail Corridor between Ennis and Athenry have been added to with the more recent opening of the Phoenix Park Tunnel improving options for passengers from west of Dublin city. The purchase of new fleet, in particular for Intercity services, together with timetabling and network maintenance works has enabled increased service frequency and reliability across the network, while the ongoing roll-out of Iarnród Éireann's Station Accessibility Programme has made rail services more accessible for passengers. The Strategy will build on these successes to provide greater benefits to our customers to 2027 and beyond.

Iarnród Éireann's Strategy is fully-aligned with the National Development Plan 2018-2027 and the NTA's Greater Dublin Area Transport Strategy which have provision for DART+, formerly referred to as the DART Expansion Programme. While these target investment along commuter corridors in the Dublin area, the programme benefits are national and network-wide, giving increased capacity for more services through improved infrastructure and a fleet expansion of almost 50%. This will result in a greater choice of services for our customers making journeys by rail more flexible, comfortable and attractive.

This investment will support sustainable, compact growth, in line with Project Ireland 2040 objectives and help achieve climate action targets for Ireland while improving choices and experiences of the travelling public, connecting people and business with more places and easing urban congestion. The key deliverables of this ambitious strategy are:

Delivering safe and customer-focussed services in line with our values



Always Safe and Customers at the Heart of our Business are central to our values. Safety for customers, colleagues and third parties is our top priority, and we aim to build on our record as one of the safest railways in Europe. We will also work to meet and exceed customer and stakeholder expectations in delivering our services.

Supporting sustainable growth through increased capacity



From a record high of over 50 million journeys in 2019, we are committed to delivering improvements in capacity and performance across the full network and passenger services, striving to achieve the challenging goal of '75 by 25', that is 75 million passenger journeys by 2025.

'A strategy for growth, sustainability and transformation'

Playing a central role in Ireland's Climate Action Plan



We will make rail, the greenest mode of domestic travel, greener still. Electrification of our network, including an order for up to 600 new electric and battery powered carriages, will expand our services and result in almost 80% of journeys being potentially emission free. The development of new freight services will also help to reduce congestion and harmful emissions on Ireland's road network.

Supporting Compact Growth



A core priority under Project Ireland 2040 is the delivery of "compact growth", providing much-needed housing, jobs, amenities and services. Compact growth will support high quality public transport that will in turn increase the attractiveness, sustainability and viability of new development. The Strategy will ensure that the delivery of new rail capacity will be timed to complement planned compact growth initiatives around existing and new rail stations.

Strengthening regional connectivity



Iarnród Éireann provides reliable and sustainable connectivity between Dublin and the regional cities identified for priority development under Project Ireland 2040: Cork, Limerick, Galway and Waterford. Our network investment will unlock the potential for enhanced local services in each of these cities along with more frequent, faster Intercity and regional services. Exciting plans for land use at regional city stations will apply Transit Oriented Development principles while further establishing rail stations as sustainable transport hubs.

Embracing new technology



Digital technology is rapidly changing how we live and how we work. Iarnród Éireann is committed to rolling-out Digital Rail and Mobility as a Service (MaaS) technologies to improve safety, train service performance and customer communications, whilst improving asset productivity and managing the risks to our train services from asset obsolescence.

Creating sustainable mobility hubs throughout Ireland



Iarnród Éireann's goal for rail is to be the backbone of an integrated, sustainable and accessible public transport network servicing all Ireland's communities, with stations as a hub of multimodal mobility and the centre of community life. In particular, we are committed to continuous improvements in accessibility, with the objective of universal access for Passengers with Reduced Mobility.

Moving goods as well as people



Iarnród Éireann's ability to move freight sustainably will give rail a key role in tackling road congestion, enhancing regional connectivity and supporting economic growth whilst meeting climate change objectives. Development of our port facilities at Rosslare Europort will contribute to relieving pressure on Dublin Port while supporting national and regional growth strategies in a post Brexit context.

Working in partnership with stakeholders



The Strategy has benefited from widespread stakeholder participation in its development with continued stakeholder engagement to be a core element of its delivery. Iarnród Éireann is committed to working with all stakeholders, especially the National Transport Authority (NTA) and the Department of Transport Tourism and Sport (DTTAS), to ensure that rail transport contributes fully to economic and social progress throughout Ireland.

Driving efficiency and delivering value for money



Iarnród Éireann will continue to deliver value for money for the Irish people, including through carefully-targeted investment that builds on existing assets, increases capacity cost effectively and incrementally accruing while growing demand and allowing for adjustments over time in response to changing circumstances.

Responding to COVID-19

As the restrictions on travel associated with COVID-19 begin to be eased, it is clear that the way in which we travel, including our usage of public transport, will not be the same as it was before the outbreak. Until a vaccine is developed and widely administered, precautions against infection, including masks and social distancing are likely to remain necessary.

Although it is not yet possible to determine the full impact on transportation, COVID-19 is likely to have profound implications for the way we live and move about. In the short to medium term, impacts will include a reduction in the number of people in employment, migration to remote and home working and a switch towards more individual modes of transport. In this new environment, the immediate priority for Iarnród Éireann will be to rebuild customer confidence in our services and develop flexibility in longer-term rail development plans to allow us respond quickly to emerging threats and opportunities.

The measures already taken to create a safe environment for our customers, as detailed in the following sections, will be built on as the immediate priority for Strategy 2027 to further develop trust in rail services.



Cleanliness and Hygiene

- Cleaning and hygiene standards have been raised across fleet and station touch points to protect customers from risk of infection
- Surfaces are being treated with a durable Microbe shield as a supplementary protection from dangerous bacteria and pathogens
- Air conditioning systems are being monitored to ensure optimal air-renewal cycles
- Processes to facilitate cashless payment have been enhanced, with customers encouraged to use Leap card, electronic ticketing and online booking, while technologies to enable contact-free processing for ancillary services such as car parking and catering are being developed



Social Distancing

- Markings and signage have been applied on fleet and in stations to guide customers on keeping appropriate distances whilst effectively managing increased passenger flows
- More services and longer trains are being provided than would be justified by demand to protect customers by adding physical distance when on-board
- Customers are being encouraged to travel outside of morning and evening peaks where feasible



Applying Learnings

Learning from others, including international transport operators and similar industries across Ireland, is an important component of our approach, with the following processes being established:

- Participation in cross-public transport groups to create a consistency and coordinated approach
- Learning from wider industry to apply best and emerging practices
- Review of supply chain to ensure risk of service disruption is mitigated
- Engagement with international rail groups to share and leverage learnings
- Working with national associations of people with reduced mobility and special needs to ensure their specific requirements are incorporated into revised customer service arrangements
- Coordination with An Garda Síochána and our security partners to ensure Government guidelines are adhered to and a safe customer environment is maintained



Communications

- Informative and frequent customer messaging are being provided through all channels to keep customers apprised of current advice
- Customer perceptions of measures being taken to protect them are being surveyed regularly, with approach being modified in line with findings



Employees

Support is being provided to employees, recognising the risks associated with their roles especially those in frontline positions, with the following as key measures:



- Issue of Personal Protective Equipment to include hand sanitisers, alcohol gels and face masks
- Enhanced cleaning and sanitisation of frequently touched surfaces, such as driver cab controls and ticket office facilities, to protect against transmission
- Revising guidelines for frontline employee engagement with customers and reorganising work environments to reduce transmission risk
- Enhancement of communication systems, including a new employee engagement platform, to enable frequent and timely exchange of information amongst all colleagues
- Application of remote working protocols to ease pressure within office environments and offer flexible employee work options
- Supporting employees in managing their health, through our Medical Office, Employee Assistance Programme and Health and Wellbeing policies
- Engaging with our employees and Trade Unions to implement workforce policies that reduce the risk of contagion and ensure operating continuity as a vital public service

Innovation & Technology

It is likely that some people, especially those travelling shorter distances, will migrate to active transport modes, namely cycling, walking and e-scooters in particular. We will support our customers in such choices, in particular by enhancing interchange facilities at city stations to facilitate ease of transfer. Where feasible, additional provision will be made for shared bicycle options and facilities for safe bicycle storage for those wishing to combine rail with the use of such modes over a complete journey.



Innovative digital solutions are also being considered, with these to be applied where they can assist safe use of rail services, per the examples shown below:

- Mobile phone apps to inform customers of train occupancy levels pre-boarding
- Smart CCTV and public information systems to support crowd management
- Big Data and/or Artificial Intelligence usage in support of managing station/train occupancy and to enhance the feeling of security and safety
- Temperature screening at points of entry (while managing associated privacy concerns)
- Use of visual graphics (infographics, videos and pictograms) for ease of communication and avoidance of language barriers

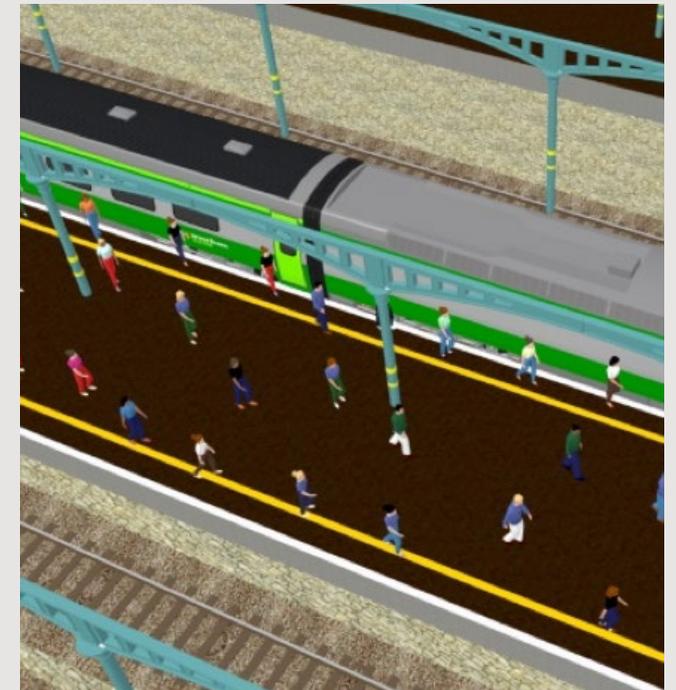
Our approach to this challenge, as outlined above, recognises that there are no perfect measures, with those we implement remaining under constant review for effectiveness, and to be updated when required as further insight on the virus becomes available and in accordance with evolving Government guidelines.

Revenue Recovery

As travel restrictions are lifted and it is deemed safe to do so, our focus will move towards rebuilding demand for rail travel, with the following actions prioritised:



- Supporting Ireland's return to economic recovery
- Encouraging the use of rail by those taking vacations at home
- Discounted fares to encourage return to rail
- Targeted campaigns to encourage use of services where capacity exists
- Emphasis of messaging on cleanliness and hygiene measures to create customer confidence



Implications of COVID-19 for Strategy

The Strategy sets a high level direction for all parts of Iarnród Éireann to 2027 with the details for each component to be developed in the preparation of Implementation Plans. COVID-19 has been a stark reminder of the need to consider the unexpected in all planning and to retain the capacity to respond with flexibility over all time horizons to changing circumstances.

In recognition of the uncertainty in planning for transport requirements over the longer term, now added to by COVID-19, Strategy 2027 had been prepared using a scenario planning approach, where instead of focusing on a single projection, a selection of potentially plausible futures were considered. This process allowed for the testing of core proposals against alternative scenarios that may arise in an uncertain future, with flexibility to account for changing circumstances in the preparation of detailed Implementation Plans. These Implementation Plans are now being reviewed to take account of the potential impact of COVID-19 on the requirement and delivery of each proposed programme, while ensuring that the underlying strategic goals are maintained.

Although the future is now significantly more uncertain, we do know that economic recovery will come, bringing new growth in demand for sustainable transport solutions. We also know that customers in the future are likely to want more physical space when travelling on public transport with this necessitating increased levels of capacity aside from potential demand growth.

A key strategic concern for Iarnród Éireann pre COVID-19, was the inevitable time lag from planning interventions to their introduction to service, as demand was forecast to be well ahead of capacity over the early years of Strategy 2027. The likely short

and medium-term reduction in demand as a result of COVID-19 now provides an opportunity to build capacity ahead of future demand, while providing customers with an improved travelling environment while works are progressed.

A transformative strategy

The Strategy is a transformative public transport intervention, supporting the National Strategic Outcomes (NSOs) of Project Ireland 2040 and Climate Action Plan 2019 objectives, comprised of the following core components:



- DART+ to increase capacity of the rail network and services in the Greater Dublin Area
- Intercity service frequencies and journey time improvements
- Further steps to develop local rail services in each of the regional cities
- Development of commercial freight opportunities that have a natural fit with the rail mode
- Infrastructure enhancements at Rosslare Europort for improved United Kingdom and European connectivity

Decisive intervention as proposed by the Strategy will provide enhanced travel options for an increased number of people living within reasonable access of the rail network, enhancing their quality of life and contributing significantly to the creation of a sustainable Ireland.

Iarnród Éireann and its partners are progressing with redevelopment plans across the Greater Dublin Area and in each of Ireland's regional cities. This includes significant development proposals at Kent Station in Cork, Colbert Station in Limerick, Ceannt Station in Galway and the new North Quays development in Waterford. Combined with rail service improvements, these schemes will showcase Ireland's vision for sustainable living.

Priority Programme

Amongst the strategic interventions, DART+ represents the most significant development of the railways in Ireland during modern times. It will progressively upgrade infrastructure on all lines radiating from Dublin, creating commuter capacity while delivering benefits across the full network. Its components include electrifying lines, re-signalling, level crossing removal, other infrastructure works and purchase of new rolling stock, all to enable a step-change upgrade to GDA services with improved frequencies and connections for all regions. Whilst the full combined benefits are only realised once the programme is complete, incremental improvements will give significant customer and environmental benefits with the delivery of each component.

The programme priorities over the early years are to commence improvements on Maynooth/M3 Parkway and Kildare lines. Infrastructure enhancements on these corridors, together with new rolling stock, will enable capacity increases across all commuter corridors and release existing trains to improve service capacity and frequencies on Intercity routes. Furthermore, this will facilitate the delivery of housing that is supported by fast and reliable rail services including Strategic Developments Zones at Hansfield, Clonburris and Adamstown.



Iarnród Éireann Strategy

2027

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What is our business?

Iarnród Éireann is the rail transport company of Ireland, providing InterCity, Dublin Commuter (including DART), Cork commuter and regional passenger services, rail freight and Rosslare Europort. The company is a wholly owned subsidiary of the Córas Iompair Éireann (CIÉ) Group.

We have an ambitious "**75 by 25**" target to transport **75 million** passengers by **2025**

The core objective of the business is to provide safe and reliable transportation services.

In addition, Iarnród Éireann provides support to economic growth across Ireland, contributes fully to the environmental and social objectives of national and local government while complying with national and EU regulations and directives including safety, interoperability, market access and passenger rights.

In 2013, Iarnród Éireann re-organised its core functions into two separate divisions as an Infrastructure Manager (IM) and Railway Undertaking (RU), to give effect to European Union Directive 91/440. A further function, Capital Investments, has more recently been added for the delivery of all major capital programmes.

The Infrastructure Manager is responsible for establishing, managing and maintaining the railway infrastructure including traffic management, control command and signalling. Primary engagement with national government is through the Department of Transport, Tourism and Sport (DTTaS).

The Railway Undertaking provides services for the rail transport of passengers and freight. Primary engagement with national government is through a Public Service Contract with the National Transport Authority (NTA). A new 10-year Public Service Obligation agreement was implemented to apply from late 2019 with improved service performance outcomes for all customers.

Customers are at the heart of our business. Our mission is to **deliver transport services that continually meet our customer requirements** and help drive Ireland's economic development.



Iarnród Éireann organisation chart



Capital Investments

- City Centre Resignalling Project
- DART+
- National Train Control Centre
- National and Commuter Fleet Investments
- Train Protection Systems
- New Station proposals

Infrastructure Manager

- CCE: Civil Engineering
- SET: Signalling, Electrical & Telecommunications
- IMO: Infrastructure Manager Operations
- IM Support Services

Central Services

Rosslare Europort & Rail Freight

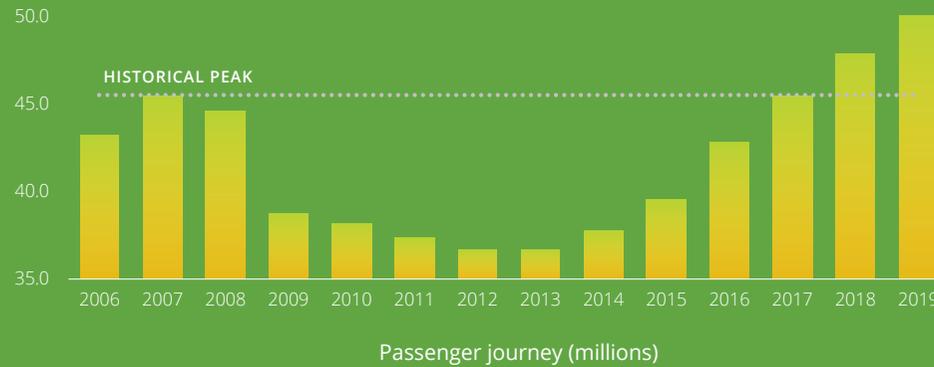
Railway Undertaking

- Passenger Services: South & West
- Passenger Services: North & East
- CME: Mechanical Engineering
- RU Support Services

Passenger services overview

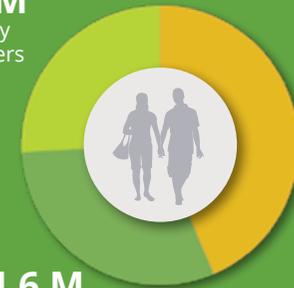
Passenger journey trends

In 2019, more people travelled on rail in Ireland than ever before. Demand for rail services has increased by 6% per annum in each of the last five years. With growth likely to return again after COVID-19, fleet and infrastructure investment is underway to provide capacity for more customers to travel.



Passengers by service groups

12.4 M
InterCity
passengers



20.9 M
DART
passengers

14.6 M
Commuter
passengers

The busiest trains

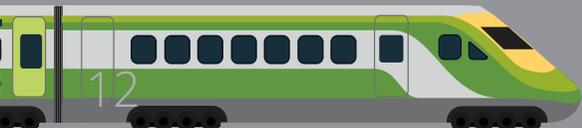
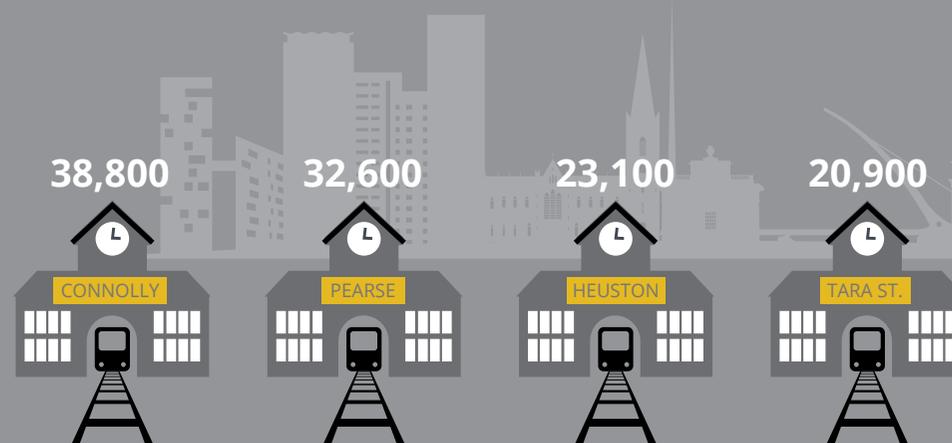
All of the top busiest trains are Dublin Commuter and DART trains.



Peak passenger numbers and station shown for each service.

The busiest stations

Connolly station is the busiest station in Ireland. Cork Kent is the only station outside of the GDA in the Top 10 busiest stations with 7,950 passengers a day. 37 stations on the network serve less than 200 passengers.



Rosslare handles 3.9% of total tonnage through Irish ports and is predominantly a RORO/ ROPAX operation. The three main ports, Dublin, Cork and Shannon Foynes handle **84%**.

13.7% of RORO tonnage in the ROI was handled by Rosslare in 2018. 29.8% of ROPAX passengers were serviced from Rosslare.

On average, there are **44 rail freight services per week**, 38 to/from Dublin, and 6 to the Waterford region.

Ensuring safety

At Iarnród Éireann, we are committed to providing a safe environment for our passengers, employees and members of the public using our network. Our core values of “Customers at the heart of our Business” and “Always Safe” underpin a transport service where customers feel safe and secure and employees work to continuously improve working and travelling environments.

Iarnród Éireann is working hard to maintain this positive safety record, with several schemes being progressed to ensure continued improvement in safety performance. The National Train Control Centre will introduce a fully integrated Traffic Management System (TMS) able to control all existing signalling on the rail network, eliminating a number of historical hazards. The Train Protection System will introduce Automatic Train Protection (ATP) across the complete network as compared to the DART section at present. Other initiatives include Global System for Mobile Communications - Railway (GSM-R), signalling upgrades and level crossing upgrades and eliminations.

Rosslare Europort

Rosslare Europort connects the South-East of Ireland with the United Kingdom and European markets currently providing Roll-on/Roll-off Passenger (RORO/ROPAX) services, primarily operated by Irish Ferries and Stena Line, accommodating freight and passenger vehicles along with foot passengers. The port offers the shortest transit times to South Wales and France from Ireland, allowing it to remain competitive against the larger facilities at Cork and Dublin. Rosslare is connected to Waterford and Cork by the N25 and onward to Dublin via the N11.

Freight services

The rail freight business moves 1% of inland transport tonnage in Ireland, currently providing services linking the rail-connected ports at Dublin and Waterford with inland rail hubs, primarily the intermodal terminal at Ballina.

The rail freight business has three main customers, with present services saving a combined total of over 40,000 road journeys a year between them. While the market potential of rail freight in Ireland may be limited by the size of the country, its island nature with most freight movements travelling a relatively short distance and a good quality motorway network meaning that road transport is very competitive for all flows, there are potential traffics suitable to rail that will be developed over the life of the Strategy.

Navigator Freight Logistics Services also forms part of Iarnród Éireann’s freight business, specialising in serving the automotive and associated industries.



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Why is a strategy needed?

The Strategy aims to build on the strengths of Ireland's rail system to create a modern, fit-for-purpose and sustainable transport asset that will deliver for customers and support Ireland's growing population and economy for decades to come. Its implementation will represent the most significant transformation of Ireland's rail services since the Victorian era.

The Strategy supports Project Ireland 2040, the Government's long-term overarching strategy for the social, economic and cultural development of the State. As a first step, the Government has developed a capital investment plan under the National Development Plan 2018-2027 to ensure that planned, compact and sustainable growth is delivered across the country in a balanced way. This includes the delivery of public transport infrastructure improvements, principally Metrolink, Bus Connects, DART+ and other heavy rail investments.

Climate action

The Strategy responds to the role Ireland must play in addressing climate action challenges. Iarnród Éireann is proud of its achievements to date in this area, having exceeded EU 2020 Targets with a 35% improvement since 2005. There is still much to do, with transport accounting for 20% of Ireland's greenhouse gas emissions and a 2018 report by the Environmental Protection Agency on Air Quality identifying that air quality levels at monitoring sites in Ireland were below EU legal limits but above World Health Organisation (WHO) levels for several pollutants.

The Strategy fully-supports Ireland's Climate Action Plan and National Mitigation Plan to address these challenges, targeting low/near zero transport carbon emissions by 2050 based on the unique ability of electrified rail services to move large numbers of people quickly and safely.

A shift to more sustainable transport modes is paramount for Ireland to meet its transport carbon emissions targets. Existing statistics highlight the need for this shift, recognised by Project Ireland 2040 under its 'sustainable mobility' objective.

A key element of sustainable mobility is the electrification of transport systems. Further rail electrification offers increased rail network capacity, greater energy

efficiency, lower emissions and smoother passenger journeys at lower operating and life-cycle costs. Rail electrification systems power trains by electrical energy removing the need for on-board diesel engines. In Ireland, ESB and EirGrid jointly operate the grid supplying this energy. In 2018, they generated one third of electricity through renewable sources and this will increase significantly in the years to come.

The existing electrified network consists of the DART, running from Malahide/Howth - Connolly - Greystones electrified at 1500 V DC. The NDP's DART+ will see this network extended, allowing for a smooth and cost-efficient delivery of electrified services to Drogheda, Maynooth, M3 Parkway, Hazelhatch along with Greystones as currently. InterCity electrification could follow with a different technology, such as 25 kV AC, which requires fewer substations and is more energy-efficient over longer distances.

Iarnród Éireann is committed to working with the Office of Public Works and other stakeholders to protect rail infrastructure against the likely impacts of climate change. Mitigations against coastal erosion, extreme weather and flooding are being implemented to ensure rail connectivity is maintained.

Comparing transport emissions between rail and road



Iarnród Éireann at the core of Project Ireland 2040



Within Project Ireland 2040 there are National Strategic Outcomes (NSOs). These NSOs represent the overarching priorities which Project Ireland 2040 is designed to achieve. The fundamental mission and purpose of Project Ireland 2040 is to set out the new configuration for public capital investment over the next twenty years to secure the realisation of each of the NSOs. This improves the way public capital investment is planned and co-ordinated in a modern and growing society, leading to improved public services and quality of life. The Iarnród Éireann Strategy provides a significant supporting role to realising these NSOs.

Potential contribution of Rail Strategy to supporting NSO

NSO	Description of NSO	
1	Compact growth	✓✓✓✓✓
2	Enhanced regional accessibility	✓✓✓✓
3	Strengthened rural economies & communities	✓✓✓
4	Sustainable mobility	✓✓✓✓✓
5	A strong economy, supported by enterprise, innovation and skills	✓✓✓✓
6	High-quality international connectivity	✓✓✓✓✓
7	Enhanced amenity and heritage	✓✓✓
8	Transition to a low-carbon and climate resilient society	✓✓✓✓✓
9	Sustainable management of water and other environment resources	✓✓
10	Access to quality environmental, childcare, education and health services	✓✓✓✓

Key

- Very strong supporting role ✓✓✓✓✓
- Strong supporting role ✓✓✓✓
- Contributing supporting role ✓✓✓
- Minor supporting role ✓✓
- Limited supporting role ✓

How does Ireland compare today?



Safety

Ireland is ranked **1st in the EU** for least amount of fatalities per billion train km with **no passenger or worker fatalities** in the last decade.



Congestion

Irish drivers spend an average of **35.03 hours in road congestion annually**, compared to an EU Average of 30.15, ranking Ireland 8th worst for problems with congestion.



Modal share

In Ireland **3.1%** of passenger journeys are made by **heavy rail**. This compares to an EU Average of 7.9%, showing what is possible from sustained development of the rail mode.



Electrification

Ireland has electrified 2.75% of **its rail network**. This compares to an EU average of 53.71%, ranking Ireland last in the league table for countries with rail.



Ensuring value for money investment

Rail infrastructure improvements are long-term investments that benefit many generations. They require careful planning to ensure proper integration with land-use plans and other transport modes well into the future. A well-planned scheme delivers a return on investment and provides value for money for both users and wider community. All sources of funding available to help deliver these schemes will be considered, including the potential for development contributions where new development benefits significantly from investment in high capacity public transport corridors.

Iarnród Éireann recognises the importance of funding availability, having recently been through a period of financial challenge following Ireland's economic downturn. During this period, Iarnród Éireann continued to deliver infrastructure investment projects on time and within budget, whilst significantly reducing operating costs.

The Strategy ensures Iarnród Éireann continues to deliver value for money into the future, through further targeted cost-effective investment that build on existing assets and incrementally increases services to meet growing passenger demand. For services where passenger numbers are very low, Iarnród Éireann supports the NTA in identifying solutions to improve return on the rail investment.

Putting people at the heart of what we do

Iarnród Éireann recognises the need to work closely with our customers and partners to achieve the best outcomes. In developing the Strategy, we spoke with our stakeholders to understand what is important to them. A wide range of topics were discussed and very helpful feedback was received which was used to inform the Strategy.

We received a strong message that closer collaboration with our public and private sector stakeholders will be key to delivering successful strategy outcomes.



Sustainable development

Project Ireland 2040 envisages a population increase of one million people by 2040, with an additional 660,000 people expected to join the workforce. The plan aims to concentrate this growth in regional urban centres to encourage sustainable development. Implementation is supported through Regional Spatial and Economic Strategies by each of the three Regional Assemblies for their respective areas as guides for all associated actions to 2031/32. These support sustainable regional development and have been taken into consideration in the preparation of this rail strategy.

This pattern of development forms part of a global trend of growth being concentrated in urban areas supported by investment in public transport infrastructure, primarily high-density light- and heavy-rail systems. This approach to development is known as Transit Oriented Development (TOD). The fundamental principle of TOD is to concentrate higher levels of development within the direct catchment of high-capacity public transport. The benefits of TOD include:

- Achieves sustainable land use planning that includes mixed development with multiple uses and transport options influencing the nature of development
- Counteracts the negative impacts of urban sprawl with the resulting car dependency that leads to congestion and harmful environmental impacts
- Achieves higher levels of demand and improved viability of high quality public transport services, providing a greater return on the investment in public transport infrastructure
- Takes a holistic view of building communities centred around high quality public transport nodes, such as a rail and bus interchange
- Creates attractive urban realms, with housing, employment, services, retail, education and recreational facilities, within easily walkable distances of the station and each other

In Ireland, development planning is structured on a medium or large-scale basis through a Local Area Plan (LAP) or Strategic Development Zone (SDZ). The purpose of this approach is to achieve a balance of development, providing a community with the combined benefits of shared amenity and services.

Strategic Development Zones

Strategic Development Zones (SDZs) are designated planning areas used to quickly deliver new development in areas considered to be of strategic national economic and social importance. There are seven areas designated as SDZs across Dublin, four of which are centred around existing rail stations at Adamstown, Clonburris, Hansfield and Dublin Docklands. There are two SDZs centred around rail outside of the GDA, at Waterford North Quays and at Monard in Cork where a new station is proposed.

Local Area Plans

Local Area Plans (LAPs) have been developed across the Dublin area, with significant levels of housing planned around existing or future rail stations. These include:

- Kellystown, Hansfield, Barnhill, Ashtown/Pelletstown and Phoenix Park Racecourse on the Maynooth and M3 Parkway lines
- Clonburris, Adamstown and Park West/Cherry Orchard on the Kildare Line
- Clongriffin/Belmayne, Portmarnock South, Baldoyle Stapolin and Donabate on the Northern Line
- Woodbrook/Shanganagh on the Southern DART Line

Extensive development has already taken place at Clongriffin/Belmayne LAP. This is recognised in the use of Clongriffin Station by passengers with patronage increasing from 674 to 1,576 between 2012 and 2018, an uplift of 230%.

Similarly, rail-based LAPs in Cork include Middleton, Carrigtwohill, Cobh, Glounthaune, Little Island, Tivoli, and Cork Docklands. These LAPs, in addition to others nationwide, will deliver thousands of new homes with convenient access to rail services.

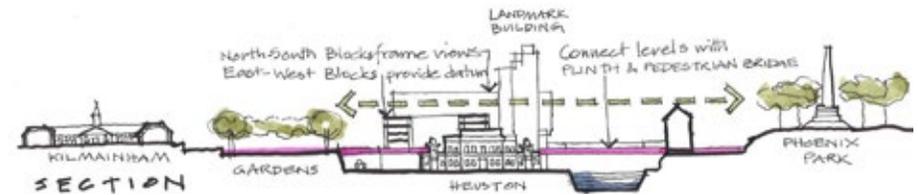


CONNOLLY STATION MIXED-USE DEVELOPMENT

A substantial development, of residential, retail, a hotel, new areas of public realm, cycle facilities and enhanced station connectivity is proposed at Connolly station with phased delivery during the life of the Strategy

Transit Oriented Development

Iarnród Éireann and Córas Iompair Éireann understand the importance of Transit Oriented Development (TOD) in achieving sustainable land usage and encouraging sustainable travel habits. Together, working with other stakeholders, they are progressing TODs on lands at Heuston (see sketch below) and Connolly stations in Dublin, as well as at regional city stations in Cork, Limerick, Galway and Waterford, while exploring other opportunities nationwide. There is great potential for new development along rail corridors and Iarnród Éireann is supportive of schemes that encourage the shift to sustainable transport through use of its services.



Sustainable Development Goals

Iarnród Éireann is committed to contributing to the achievement of the United Nations Sustainable Development Goals (SDGs) and together with the CIE Group of Companies has developed a Sustainability Strategy that coordinates actions that assist in addressing national economic, social and environmental challenges.



Sustainable development



MONARD
5,000 proposed



ADAMSTOWN
1,800 built / 8,900 proposed



CLONBURRIS
8,500 proposed



WATERFORD NORTH QUAYS
300 proposed



HANSFIELD
1,000 built / 3,000 proposed



DUBLIN DOCKLANDS
1,000 built

26,700 housing units accommodating over **70,000** people are planned within these SDZs

66%+ housing within SDZ will be served by the rail network



3 | What is our vision?

The Strategy looks to Iarnród Éireann's future and is founded on the company's Mission, Vision, Values and Objectives. Key elements include:

Our customers

Customers are at the heart of our business with delivery on their requirements central to the success of the Strategy. Our goal is to deliver attractive services that provide safe, secure, reliable rail transport, are consistently customer focussed, easy to use, easy to buy, offering a quality and value for money experience, making rail the preferred option for the travelling public.

Our stakeholders

In preparing the Strategy, we have engaged a broad range of stakeholders to make sure their needs have informed the outcome. The future vision embraces working in close partnerships and alliances with all stakeholders in a collaborative approach that seeks to implement all components of the Strategy while delivering value for taxpayers and all rail users.

Our team

Delivery of the Strategy is achieved by our people working together as one team including Iarnród Éireann employees, Trade Unions, contracting partners and management, supported by its Board and underpinned by:

- engagement based on co-creation and collaboration
- efficient resource deployment and development of our people
- systems and processes that optimise service delivery
- an organisation culture based on strong corporate values
- opportunities for employees to grow and develop within the business



Delivering the vision

The core vision is structured around building a better future together by improving Iarnród Éireann's services in response to customer demands. To achieve this, the approach adopted in preparing the Strategy is underpinned by the desire to:

- enhance customer experiences by understanding and meeting their needs
- provide sustainable transport solutions that contribute towards tackling climate action challenges and can be incrementally delivered in line with demand and funding availability
- efficiently utilise the very valuable rail asset to support future economic growth and balanced regional development
- align investment to safety, passenger demand growth, accessibility, sustainability and value for money objectives
- carefully target investment in line with the National Development Plan to support sustainable development and environmental objectives
- deliver modern and effective railway infrastructure operating services on which customers feel safe and secure



4

What challenges do we face?

A fundamental step in the development of the Strategy is to explore the challenges faced by Ireland and how Iarnród Éireann, along with its supporting stakeholders, can best meet them.

The Strategy is being finalised in the context of COVID-19 with uncertain implications for short to medium term economic performance and rail demand. However, economic growth will return again resulting in increased transport demand with pressure on Ireland's transport networks and the environment. In parallel, people are likely to have increasing preference for use of sustainable transport modes such as rail. These considerations will underline the need for

substantive development of the rail mode as Ireland seeks to address the challenges it faces over the coming years. The success of the Strategy will in large part depend on how well Iarnród Éireann meets the needs of a growing number of passengers in a sustainable way whilst delivering value for money through targeted investment.

Unless we address the challenges outlined, the consequences will be:

Growing congestion on road networks especially in and around our cities



Inadequate levels of infrastructure and service to meet the needs of the growing population and economy



Lost potential to develop rail as a high capacity transport solution in support of compact development along key corridors





Impacts on the delivery of sustainable transport and negative implications for climate change action



Deteriorating infrastructure and increasing maintenance backlog



Increasing safety requirements resulting in slower services or reduction in activity



Meet the increased capacity requirements of a sustainable economy

Continue to play a vital role in supporting economic growth and regional development for a growing population under Project Ireland 2040 and each of the Regional Spatial and Economic Strategies.

Provide sufficient capacity with the appropriate services and connectivity in the right places and at the right time to meet transport demand growth and deliver the NTA's strategic transport planning objectives.

Increasing capacity will necessitate additional rail fleet and targeted infrastructure investment aligned with Project Ireland 2040 projections for population and employment.

COVID-19, Brexit or other externalities will impact on the economy affecting the need for investment and availability of funds. Timelines for delivery of new fleet and infrastructure are subject to multiple risks including planning, availability of funds and progression through approval processes.

CHALLENGE

ACTION

IMPLICATION

RISKS

Satisfy evolving customer needs

Maintain the attractiveness of rail services to varied customer segments and adapt to the changing needs of customers over time.

Embrace new technology and increasing passenger demands including accommodating an ageing population, changing trip patterns due to more flexible working practices, recognising new ways people access stations like bike hire schemes and e-scooters, supporting people to be less dependent on the private car.

Key factors in making rail services attractive to travellers include frequency, reliability, journey time, accessibility, security, cleanliness, comfort and hours of operation.

Competition from alternative transport modes, for example on InterCity services where car based trips can be made on relatively uncongested inter-urban motorways at reasonable journey times. Embracing technological advancements in line with customer expectations.



Address climate change

A growing economy will require a greater emphasis on green modes in order to meet national climate change targets.

Rail is the most environmentally sustainable form of motorised surface travel and has a key role to play. The delivery of rail services alongside Transit Oriented Development will be key to achieving improved sustainability.

While Iarnród Éireann has achieved a 35% improvement in emissions since 2005, further improvements are required for Ireland to meet its 'transport' Climate Action targets.

A lack of timely, co-ordinated development of rail services and land use will limit Ireland's ability to meet growing demand sustainably, leading to more commuting by car and consequential congestion within and around the main cities and towns. The negative impact on environmental change on the network such as coastal erosion and flooding also poses risks.

CHALLENGE

ACTION

IMPLICATION

RISKS

Efficient management of the Iarnród Éireann Network

The rail network is a very valuable national asset, which, to derive greatest benefit, requires efficient management of passenger and freight operations and adequate levels of rail infrastructure maintenance. Realising the benefits of new technology in the rail industry will offer many opportunities for improvement in standards and challenges to meet changing work practices.

Iarnród Éireann must continue to maintain high levels of safety while striving to achieve cost efficiencies in the management and delivery of infrastructure and train services.

An efficient rail network needs to be appropriately resourced and funded, at the right level, at the right time. Iarnród Éireann needs to embrace advancing technologies and develop practises in line with industry standards to maximise benefits for the Irish rail network.

New technologies bring benefits but also significant risks in planning for transition as older infrastructure and software becomes obsolete. The main risks to delivering and managing an efficient rail network are the management of costs, market conditions, availability of funding and appropriate staffing with the necessary skills to adapt to the evolving network.



5

Planning for the future

Iarnród Éireann operates in an environment that is changing at a rapid pace. Social, Environmental, Technological and Economical factors all contribute to the need for Iarnród Éireann to be adaptable to change. The Strategy uses scenario planning to develop a long-term plan for Iarnród Éireann that is flexible to a range of potential future outcomes, enabling the business to plan for likely eventualities and make the most of opportunities as they arise. This approach allows for effective planning and targeted investment when developing the railway for the future.

Iarnród Éireann needs to continue investing in the existing rail infrastructure to maintain current service levels and accommodate any future growth. This Steady State investment ensures the network is kept in adequate condition to provide quality levels of service, accessibility and connectivity for passengers. Funding is provided under IMMAC and PSO contracts in line with EU regulations. Reduced levels of investment during the economic downturn led to a backlog of maintenance and renewal works. Higher levels of funding are now being provided towards addressing this backlog to support key pieces of network infrastructure including the National Train Control Centre (NTCC) and the Train Protection System (TPS).

Existing infrastructure must be future proofed against the impacts of coastal erosion and flooding to ensure current and improved service levels are maintained. The south-eastern line from Dublin, running by the coastline, and a Limerick-Ennis section at Ballycar are notable examples requiring priority attention. Ongoing improvements such as level crossing removal, re-signalling and track renewals are being progressed to enhance safety, efficiency, reliability and resilience across the network.

Continuous improvements in accessibility and connectivity for its passengers are required to provide ongoing benefits for existing customers and to attract new ones. This involves working closely with stakeholders to complete the Station Accessibility Programme, improve integration between rail and other modes, facilitate new station development and roll-out of customer focused initiatives

including the introduction of on-board Customer Service Officers on all InterCity services. Shared mobility and passenger information programmes make journeys easier for customers and initiatives for Electric Vehicle charging and bicycle parking also enhance the customer experience. In addition, keeping pace with 'smart city' and 'Mobility as a Service' initiatives will further enhance our customers' experience.

Iarnród Éireann supports the NTA's transport strategies, which provide a framework for the planning and delivery of rail infrastructure and services in line with Project Ireland 2040 strategic objectives, for the Greater Dublin Area, Cork and Galway along with working with it and others in the development of similar strategies for Limerick-Shannon and Waterford. The NTA's 'Park and Ride Development Office' provides impetus to develop solutions that improve parking accessibility for passengers in collaboration with local authorities, Regional Assemblies and other key stakeholders.

A key focus in planning for the future is to continue delivering passenger rail services to the highest standard and in accordance with the NTA's Public Service Obligation agreement. Whilst some of the network is not proposed to undergo significant change within the timeframe of the Strategy, it is important to pursue opportunities for local improvements that address customer and stakeholder needs subject to approval by the relevant authority and value for money considerations.

Passenger demand

A range of potential demand scenarios were considered, before COVID-19, to inform a long-term rail development plan that will meet future requirements, including being flexible with the ability to respond to changing circumstances. The scenarios consist of varying assumptions of economic and population growth as well as differing impacts of competing transport modes. Three scenarios are considered; Low Growth, Central Growth and High Growth.

Low growth scenario

The Low Growth scenario is based on a negative impact on the economy in the short to medium term, such as an adverse impact from Brexit. This has a negative impact on the economy in the short to medium term. There is a knock-on impact on population growth with lower levels of net inward migration and a decreasing birth rate based on CSO regional forecasting. There is minimal investment in sustainable transport and carbon reducing initiatives, with private car orientated developments more likely.



Slow

- Economy grows at a slow pace
- Population grows at a slow rate
- Delivery of TODs and SDZs is at a slow pace
- Climate action initiatives are slow to take off

Combined network passenger numbers in millions



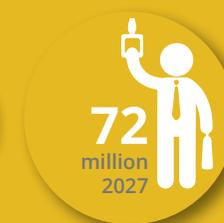
Central growth scenario

The Central Growth scenario sees population and employment grow in line with Project Ireland 2040 projections. Along rail corridors, 60% of the Project Ireland 2040 growth happens before 2027. There are sufficient levels of investment in sustainable transport to encourage the steady completion of Strategic Development Zones and Transit Oriented Developments reliant on rail for transport provision.



Steady

- Economy grows at a steady pace
- Population grows at a steady rate
- Delivery of TODs and SDZs is at a steady pace
- Current pace of climate actions



High growth scenario

The High Growth scenario sees population and employment grow in line with Project Ireland 2040 projections, but with growth concentrated on rail corridors, with 80% of Project Ireland 2040 growth before 2027. High levels of investment in sustainable transport result in a strong focus on completion of Strategic Development Zones and Transit Oriented Development reliant on rail for transport provision.



Fast

- Economy grows at a fast pace
- Population grows at a fast rate
- Delivery of TODs and SDZs is at a rapid pace
- Climate action initiatives implemented at accelerated pace
- Policy driven demand



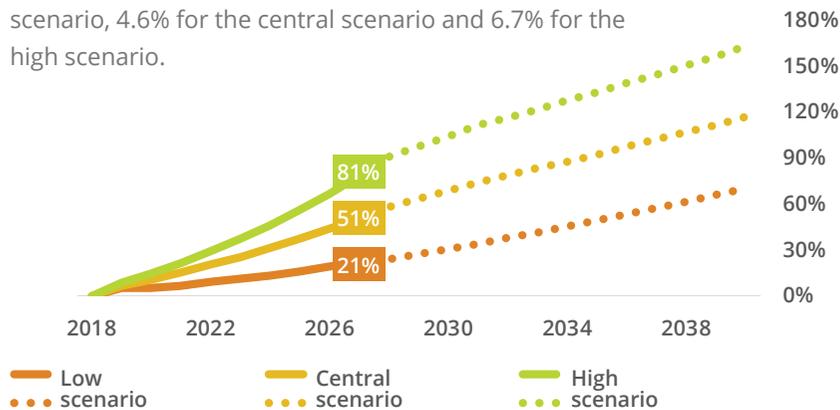
Demand forecasting

The Strategy uses demand modelling to develop forecast scenarios for growth in passenger numbers. It is based on a rail-specific modelling technique known as Passenger Demand Forecasting Handbook (PDFH), while also using modelling inputs from the NTA's multi-modal Regional Modelling System (RMS). This combined approach enables passenger demand to be forecasted on an annual basis by rail corridor, providing a forecast of the build-up in demand over time across the rail network. Key factors considered as part of the demand modelling include population and employment change, the impact of car fuel costs and relative journey times by car, bus and MetroLink.

The three demand scenarios show considerable divergence, mostly generated by variations in population and employment growth along rail corridors over the lifetime of the National Development Plan. This divergence reflects the influence rail stations have on high-capacity corridors in facilitating TOD development.

In 2027, the total growth in annual journeys for the low-growth scenario is 21%, compared to 51% in the central scenario and 81% for the high-growth scenario. The high-growth scenario broadly reflects Iarnród Éireann's '75 by 25' vision with just under 75 million passengers expected by 2025 in this scenario.

Combined annual growth rates up to 2027 are 2.1% for the low scenario, 4.6% for the central scenario and 6.7% for the high scenario.



Passenger growth in low, central and high scenario

This differs beyond 2027 up to 2040 with 2.7% growth in the low scenario, 2.9% for the central scenario and 3.0% for the high scenario. The central and high scenario growth levels taper off on the basis that much of the TOD development has already taken place by 2027.

While demand modelling is an effective way of forecasting future growth, it is important to recognise these forecasts do not consider all aspects influencing rail passenger growth and may be considered conservative. Other factors include:

- The low level of modal share for rail in Ireland at 3.1% relative to EU average of 7.9%. This indicates what is achievable with progressive rail development over successive years and a policy drive towards more sustainable modal choices.
- Current demand is likely to be significantly suppressed through capacity constraints in the Greater Dublin Area in particular and across the wider network with low service frequencies impacting on passenger numbers.



Passenger demand growth

6

Meeting the 2027 demand

To deliver the increase in rail network capacity required to support continued and sustainable economic growth, substantial investment in new rolling stock, improvement of track infrastructure, elimination of constraints, electrification of routes and enhancement of control systems is required.

The core of Iarnród Éireann's investment programme to 2027 focuses on unlocking historic bottlenecks on the lines into Dublin coupled with adding capacity and the electrification of key commuter corridors. This has the double benefit of supporting sustainable growth in the Dublin area whilst providing additional track and rolling stock capacity to support further growth in InterCity journeys.

A phased investment programme covering all Iarnród Éireann's operations is required, based on meeting both the growth forecasts for existing services and delivering additional capacity to support the government's wider economic and environmental objectives. A steady state level of infrastructure maintenance and renewal investment is also needed over a sustained period to ensure the network can support these proposals. The National Development Plan includes three programmes of investment to achieve this:

DART+ - Envisaged as part of the NTA's GDA Transport Strategy to provide fast, high frequency electrified services to Drogheda on the Northern Line, Celbridge/Hazelhatch on the Kildare Line, Maynooth and M3 Parkway on the Maynooth/Sligo Line, while continuing to provide DART services on the South-Eastern Line as far south as Greystones. It will provide enhanced interchange opportunities with bus, Luas and Metro networks through existing and new stations and includes provision for DART Underground in the future.

Infrastructure Manager Multi Annual Contract (IMMAC) - Heavy Rail Programme - A multi-annual investment programme to protect investment already made in our national railway system by funding maintenance and safety projects needed to maintain safety and services levels in railway operations. Ongoing Programme of investment consisting of numerous signalling, civils and on-board fleet renewal projects. This includes the Train Protection System project.

Heavy Rail Enhancement Programme - A Programme of investment consisting of numerous signalling, civils and on-board fleet renewal projects. This includes an ongoing programme of investment to upgrade certain stations, improve accessibility, track renewal, city centre re-signalling and other network development projects. This includes the City Centre re-signalling project.

Assessing the impact of growth

Growth in passenger demand will continue to put a strain on existing rail capacity during the early years of the Strategy. To understand this impact, scheduled train services are compared against forecast passenger demand. The National Heavy Rail Census 2018 and the passenger services timetable are used to provide the baseline for this comparison. From this baseline, the growth in passenger numbers is added to existing services to give increased passenger numbers, or loading. When passenger numbers increase above the trains operational capacity improvements are needed to accommodate growth with train lengthening or adding a new service being the available options. In some instances, the solution has flow-on effects, such as the cascading effect of new fleet, benefiting services elsewhere on the network. A programme of incremental capacity enhancements is established using this iterative approach, resulting in the development of a prioritised timeline of investment.

While capacity improvements are usually in response to increases in demand, Iarnród Éireann has positive experience of introducing capacity improvements to generate future demand. These influential policy decisions are made on the premise of sound business case assessments following extensive research. The Strategy focuses on Iarnród Éireann's main service groups, Greater Dublin Area, InterCity, Regional and Outer GDA commuter services.

DART+

For the purpose of this assessment, Greater Dublin Area (GDA) consists of services that will form part of the future DART+ network to align with the National Development Plan 2018-2027 and the NTA's Greater Dublin Area Transport Strategy objectives. These services have all experienced significant passenger growth over recent years with overcrowding increasingly experienced by customers on some peak services, especially on the Maynooth Line. Passenger growth is expected to continue with annual journeys increasing 21% in the low scenario, 58% in the central scenario and almost doubling at 95% in the high scenario by 2027. Outer GDA commuter services are assessed in a later section.

Service enhancements

Service enhancements are required across the GDA in response to demand, to encourage modal shift and to enable sustainable development. Iarnród Éireann recognises the need for immediate service improvements and is assessing options to provide additional services as quickly as possible in partnership with the NTA. The priority short-term investment being progressed is the purchase of additional Intercity type rail cars, with Government funding approved in late 2019, to enhance capacity on the busiest services.

Immediate progress on DART+ is required to meet the growing demand for service, giving fast, high-frequency and capacity electrified services along all rail corridors in the Greater Dublin Area. Project Ireland 2040 recognises that DART+ is fundamental to the delivery of a comprehensive public transport service for the GDA, combined with new stations and improved interchange with the bus, Luas and MetroLink along with provision for DART Underground in the future. The integration with Metrolink at Glasnevin Station and Tara Street Stations provides connectivity with Dublin airport and other key destinations along the Metrolink route.

The infrastructure works are complemented by the purchase of new rolling stock to enable improved service frequencies.

Package 1

The initial package includes the DART+ Maynooth line, City Centre Enhancement projects and purchase of new rolling stock. This increases capacity and performance on the Maynooth/M3 Parkway Lines, electrifies their infrastructure, alleviating existing overcrowding and providing capacity for new development. The investment also increases capacity on other Commuting, Regional and InterCity routes through the cascading of existing fleet and provides congestion relief in the city centre. Key elements of Package 1 include:

- Electrification and re-signalling of the Maynooth/M3 Parkway Line to Connolly/Docklands
- Infrastructural enhancement works at Connolly and Docklands stations
- Capacity improvement works at key city centre railway junctions
- Removal of level crossings along the Maynooth line and provision of necessary bridge relief infrastructure
- Addition of new fleet and a maintenance depot connected to the Maynooth Line
- Allow for integration with Metrolink at Glasnevin Station

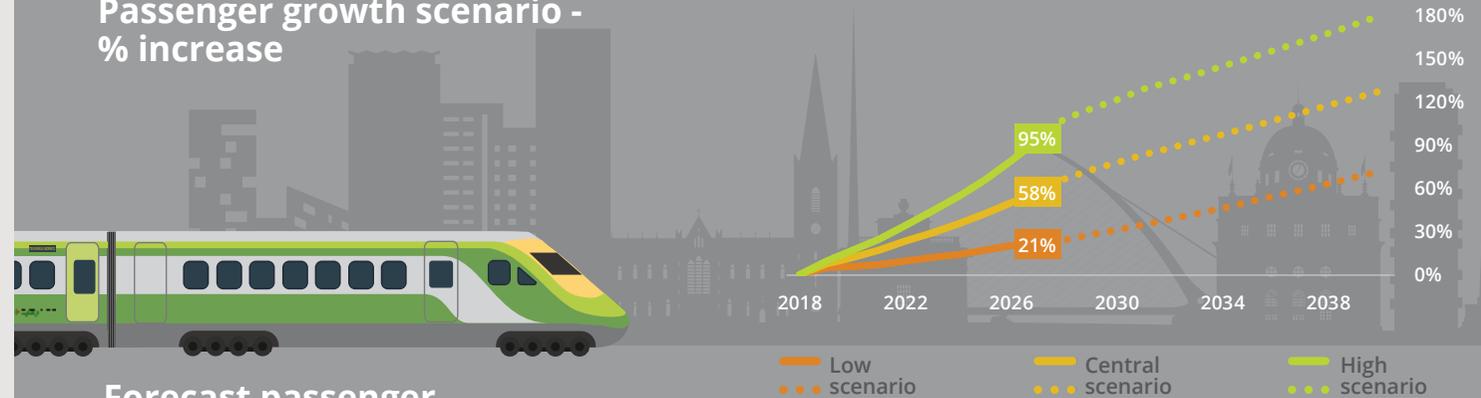
Package 2

The next package is the electrification of the Kildare Line between Hazelhatch and its intersection with the Maynooth Line, including four-tracking the line from Park West to Heuston station. This provides improved services for passengers on the Kildare Line and accommodates major developments planned along the corridor including Adamstown SDZ and Clonburris SDZ. The segregation of DART and InterCity services allowed by the four-track railway improves punctuality and reliability of all services using the corridor. Key elements of Package 2 include:

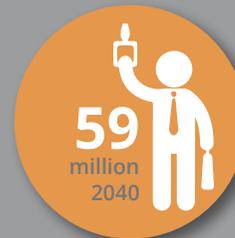
- Electrification and re-signalling of the Kildare Line from Hazelhatch to Heuston and through the Phoenix Park Tunnel to the west side of Glasnevin junction
- Completion of 4 tracking from Parkwest into Heuston Station, with realignment works to accommodate segregation of DART and InterCity
- Development of a new station west of Heuston, exact location to be determined by demand
- Passive provision for development of DART underground, to be completed later

DART+

Passenger growth scenario - % increase



Forecast passenger numbers in millions



Low Growth scenario



Central Growth scenario



High Growth scenario



Package 3

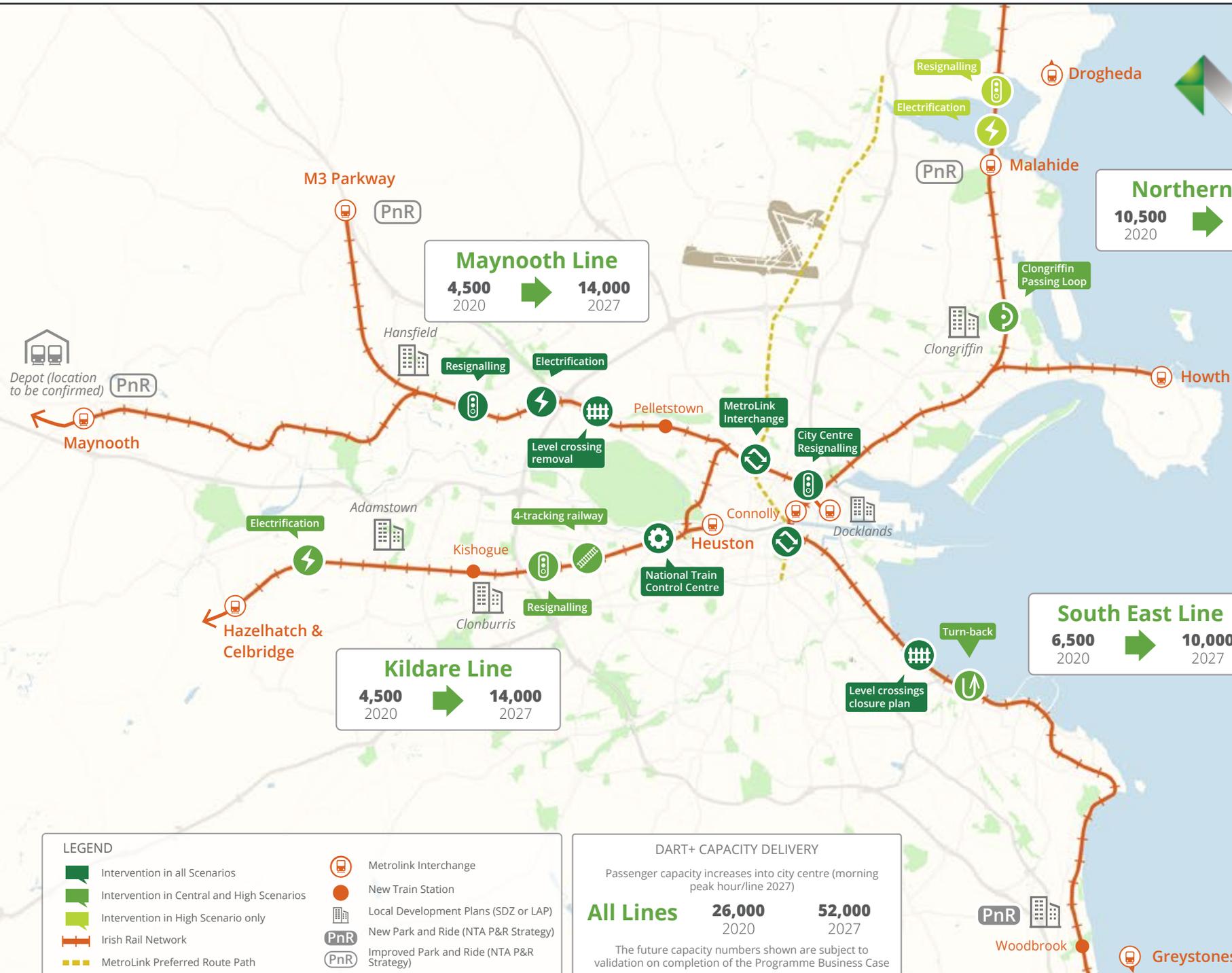
The remaining elements of DART+ form the third GDA package. This includes works to the Northern Line and Southern DART Line to improve capacity and reliability of services. Projects include:

- Electrification and Resignalling of Northern Line from Malahide to Drogheda
- Provision of additional capacity through Clongriffin Station passing loops and investigate the potential of adding tracks along sections of the Northern line
- Possible service frequency improvements for Greystones
- Drogheda Depot upgrade for electric fleet
- A new high capacity turn-back on the Southern DART Line to reduce contra-peak working
- Agree and implement a level crossing closure plan with the NTA and Local Authorities to support train service capacity increases
- Allow for integration with Metrolink at Tara Street Station

Programme delivery

Package 1 is proposed as the first phase of DART+ as it contains additional rolling stock, a new fleet Depot and City Centre enhancements which are all key to unlocking network capacity. It is feasible to deliver Packages 2 and 3 in tandem with Package 1, or alternatively they can be staggered independently to be completed at later dates in accordance with demand and funding availability.

Delivering DART+



Northern Line
 10,500 2020 → 14,000 2027

Maynooth Line
 4,500 2020 → 14,000 2027

Kildare Line
 4,500 2020 → 14,000 2027

South East Line
 6,500 2020 → 10,000 2027

DART+ CAPACITY DELIVERY
 Passenger capacity increases into city centre (morning peak hour/line 2027)

All Lines	26,000	52,000
	2020	2027

The future capacity numbers shown are subject to validation on completion of the Programme Business Case

LEGEND

- Intervention in all Scenarios
- Intervention in Central and High Scenarios
- Intervention in High Scenario only
- Irish Rail Network
- MetroLink Preferred Route Path
- MetroLink Interchange
- New Train Station
- Local Development Plans (SDZ or LAP)
- New Park and Ride (NTA P&R Strategy)
- Improved Park and Ride (NTA P&R Strategy)

InterCity services

Iarnród Éireann's InterCity network provides sustainable and reliable connectivity across Ireland, linking Dublin with Cork, Limerick, Galway, Waterford, Sligo, Westport, Tralee, Rosslare and Belfast in conjunction with Translink. These services form the backbone of a connected Ireland, playing a vital role in supporting the nation's strategic ambitions for balanced growth. The core Strategy sees improvements in the frequency, journey time and quality of services on all routes supporting compact balanced regional growth, providing greater accessibility to communities throughout Ireland and strengthening regional economies sustainably and cost-effectively.

Using demand forecasting the growth in passenger numbers for InterCity services is 19% in the low scenario, 32% in the central scenario and 40% in the high scenario by 2027. These projections are based off existing low service frequencies which suppress demand. Enhancing InterCity services as planned here will create the potential for greater passenger growth while enabling policy based drivers, such as regional balance, sustainable modal share shift and compact development in town and cities, to take effect as envisaged under Project Ireland 2040.

Service enhancements

Intercity service improvements include longer trains and additional services across all routes to increase capacity and offer an enhanced service frequency to passengers, enabled by redeployed fleet from DART+. This is complemented by a clock-face timetable for InterCity routes to deliver a service pattern where services depart at regular intervals.

The NDP's IMMAC - Heavy Rail Enhancement Programmes also deliver service enhancements through works that increase line speeds, remove level crossings, improve reliability, and add to passenger ride comfort. The programmes results in journey time and performance improvements across the network. Investigations, being led by the DTTaS, of options to achieve high and/or higher speed interurban services on key lines will be undertaken.

It is important to recognise that infrastructure work proposed as part of DART+ also has significant benefits

for Intercity services to include increased capacity along the core corridors in the Greater Dublin Area.

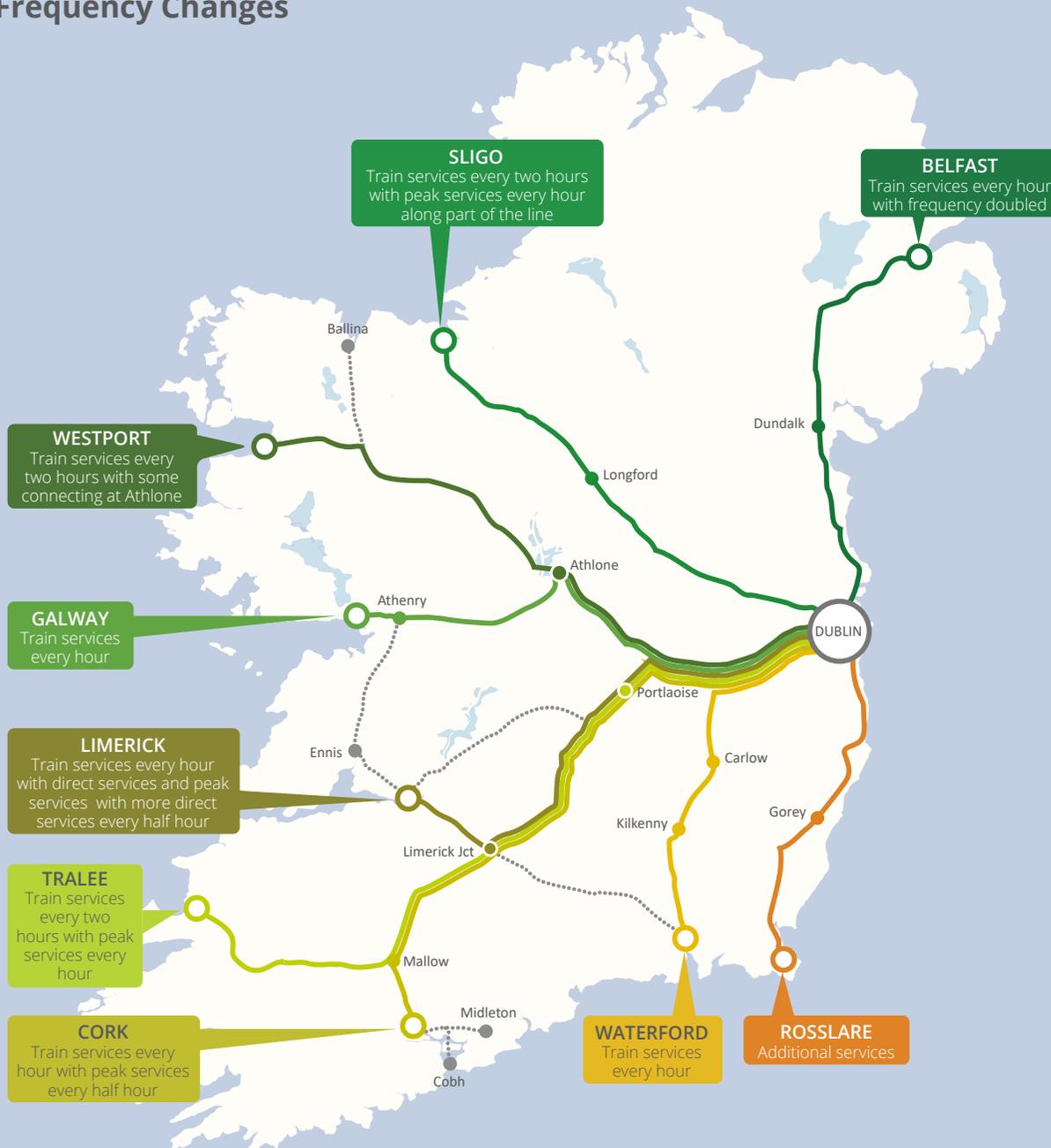
In particular, the Kildare Line 4 Tracking work under Package 2 will increase reliability and journey times for all Intercity services using this corridor. This will be achieved by separating Intercity services from commuter services (i.e. Intercity will continue non stop from Hazelhatch to Heuston at line speed without being impacted by the stopping commuter traffic).

Service enhancements for InterCity services include;

Dublin - Cork	Additional services to achieve 30-minute intervals at peak times. Renewal of all track on the Dublin/Cork line and removal of level crossings towards improving journey times.
Dublin - Belfast	100% increase in service to hourly all day with the possibility of procuring a new fleet being considered in conjunction with Translink and both the Governments of Northern Ireland and the Republic of Ireland
Dublin - Limerick	Addition of 30-minute intervals at peak times, with an increase in the number of direct services. Improved journey times resulting from renewed track on Cork mainline.
Dublin - Galway	60% increase in services to hourly all day with some improvement in journey times.
Dublin - Waterford	100% increase in services to hourly all day with some improvement in journey times.
Dublin - Westport	60% increase in services to two-hourly all day with some improvement in journey times.
Dublin - Sligo	Increase in services to two-hourly all day with hourly peak services along part of the line.
Dublin - Tralee	Increase in services to two-hourly all day with hourly peak services. Improved journey times resulting from renewed track on Cork mainline.
Dublin - Rosslare	Increase in services towards a two-hourly all day pattern.

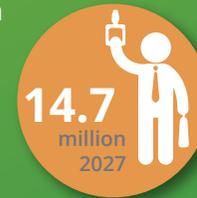
InterCity services

Frequency Changes

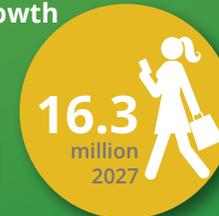


Forecast passenger numbers in millions

Low Growth scenario



Central Growth scenario



High Growth scenario



Passenger growth scenario - % increase



Regional city and outer Greater Dublin Area enhancements

Ireland has a number of routes linking regional cities, connecting with Intercity services at interchange stations and others providing long-distance commuter services from regional centres outside of the GDA. Service frequencies will be improved on these as demand grows and through the redeployment of fleet from DART+. Exciting opportunities for the potential development of existing rail networks to make a bigger contribution to sustainable transport needs for Cork and Limerick are emerging as part of the NTA process of developing Metropolitan Area Transport Strategies for the regional cities. These, along with enhancement possibilities at Galway and Waterford will be further explored with all stakeholders as rail development plans are prepared for each city, with initial implementation steps to be taken during the life of this Strategy.

Regional services

Regional services provide connectivity to the regional cities. They are important for regional balance, strengthening regional connectivity and enhancing commuting options. Improvements to such regional services are largely policy-based, as the demand uplift from increasing service frequency is lower than on other parts of the network. As part of Project Ireland 2040, the NTA are developing Metropolitan Area Transport Strategies for the four regional cities, Galway, Cork, Limerick Shannon (ongoing) and Waterford (ongoing). Iarnród Éireann is working proactively with the NTA, local government and stakeholders in the preparation of these studies to identify potential rail service improvements as part of these strategies.

Outer GDA commuter services

There are several long-distance commuter routes that connect growing regional centres such as Dundalk, Portlaoise, Mullingar, Athlone, Carlow, Longford and Gorey with direct services on some routes. Passengers on all routes benefit from the increased number of InterCity services, more regular departure patterns introduced by clock-face timetabling and infrastructure capacity added by DART+.

Cork commuter services

The Cork Commuter network is a double-track suburban rail system extending from Mallow in the north to Cobh in the south and Midleton to the east. Service enhancement proposals are aligned with CMATS which requires a detailed review of the suburban rail network to determine the preferred timeline for service improvements. Service frequency improvements and Cork station signalling works are currently expected by 2027 under NDP funding. The development of new stations for local commuting, provision of passing loops in support of higher frequencies, platform improvements and provision of through services from Cobh/Midleton to Mallow are key enhancements that could be prioritised should demand require and funding be allocated.



Regional city and outer Greater Dublin Area enhancements

Limerick

Colbert Station, Limerick, is at the centre of the City's ambition to pursue urban regeneration with C.I.É., the Land Development Agency, Limerick County Council and Health Services Executive working together to consider how large areas of adjacent land may be made available for compact urban development in support of housing, employment, amenities and services.



REGIONAL SERVICES

- Enhance commuting options to regional cities
- Encourage modal shift to train for sustainable travel
- Strengthen regional connections
- City stations to be developed as integrated transport hubs

Ballina services increased to connect with new Westport services

Local Galway/Oranmore/Athenry services

Limerick to Ennis services every hour with half hourly peaks, subject to LSMATS

Peak services to Mallow, Cobh and Midleton every 20 mins with half hourly services off peak



Cork

A substantial scheme of residential, office, hotel and retail is under development at the transport hub of Kent Station, Cork. A new station entrance with more direct pedestrian access to the city centre and cycle lane links to wider networks has been provided.



Galway

The priority developments are the enhancement of Ceannt station as a transport hub for Galway city and upgrade of rail infrastructure at Oranmore to facilitate the offer of local services along the line from Athenry.



Ceannt Station

Plans are advancing for a substantial mixed-use development on C.I.É. lands at Galway station with these to include new areas of public realm, residential amenities, cycle facilities and provision for future enhancement of the station transport hub.

Waterford

Priority is the relocation of the station to the northern quays as part of a major mixed-use development including creation of an integrated multi-modal transport hub with enhanced access to the city centre and as an enabler of public transport usage growth in Waterford and the South-East.



Waterford North Quays SDZ

A regeneration scheme key to the social and economic development in the South East, serving a future population of 83,000 and establishing a sustainable modern city quarter at the riverside location.

GDA COMMUTER

- Benefits from enhanced Intercity timetable and redeployment of rolling stock from DART+
- Services to Dundalk, Longford, Athlone, Portlaoise, Carlow and Gorey every 20mins in peak periods and half hourly off peak

Freight

Iarnród Éireann has three main commercial freight flows; zinc and lead concentrates from Tara Mines at Navan to Dublin Port, intermodal flows for Coca Cola / IWT from Ballina to Dublin Port and pulpwood from Coillte at Westport to Waterford Port for export. Freight by rail can make a significant contribution to climate action initiatives and tackling road congestion. New business opportunities will be created through proactive engagement with potential customers. This will involve developing an understanding of their requirements for freight transport which consider the strengths of the mode, further port linkages and the potential for collaboration with Government bodies, industry and logistics providers. Infrastructure developments required to facilitate new business opportunities will be advanced on a positive business case assessment in cooperation with the stakeholders involved.

A separate strategy for rail freight will be prepared recognising its specific requirements and providing all interested stakeholders with an opportunity to be involved in its development. This process will ensure that rail freight can be developed for the overall benefit of the Irish economy taking account of all associated cost and benefits to include those related to climate change. These developments may require third party funding similar to Dublin Port Company's investment in a 1.6km rail spur which has seen increased rail freight services and provided an opportunity for further increases through containerised freight, movement of bulk solids or energy products.

The Strategy will therefore focus on developing the existing business, providing capacity for growth and reviewing the charging structure to determine the potential for increasing business, thus delivering over all benefits to the Irish economy.

Rail freight provides an opportunity to drive economic growth while reducing emissions relative to road haulage. The Strategy looks to identify new commercial opportunities for freight, whilst ensuring that these are complementary to the objectives for passenger services.

Rosslare Europort

Rosslare is Ireland's second-busiest "roll-on, roll-off" (RORO / ROPAX) port for freight traffic, after Dublin. To maintain and grow market share in this competitive market, the Strategy includes a €25 million programme of investment in modernisation and expansion of facilities, delivering cost-efficiencies in operations through restructuring of activities and digitisation of processes through investment in new IT systems. Rosslare's geographical location as Ireland's closest port to mainland Europe means that it is well-placed to benefit from growth in freight traffic direct to European markets following potential Brexit-induced customs delays and costs at British ports, when its role as a strategically located alternative to the busy Dublin port is likely to become increasingly important to the Irish economy.

The infrastructure masterplan for the port includes the extension of the main RORO berth to allow bigger ships to dock, the creation of additional customs and storage facilities and the extension of hard standing for bulk goods, including the possible creation of an "offshore hub", importing and storing wind turbines for power generation.

These investments will support Iarnród Éireann's key business strategies for Rosslare of growing the existing business with current operators, obtaining a new shipping line for the Rosslare to Cherbourg routed exited by Irish Ferries, developing new post-Brexit services between Rosslare, the English Channel (Dunkirk, Zeebrugge etc.) and Spain, while exploring sector-based business opportunities, including wind energy and trade cars.

Rosslare Europort is operating in a changing maritime industry. There are numerous global and local trends that will have a significant impact on the operations at the port. The Strategy will encourage exploration of new growth opportunities to remain competitive and retain or grow market share.

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Delivering the Strategy

The Strategy forms the structure for the future development of Iarnród Éireann and sets the direction for all sectors of the business to follow as it is implemented through more detailed strategies and plans for individual projects. The Strategy is informed by national, regional and local policy, strategies and plans. Iarnród Éireann will use the Strategy, in co-operation with stakeholders, to contribute to the delivery and the success of Project Ireland 2040.

Crucially the Strategy aims to maintain and continuously improve services to customers whilst progressing the network changes and delivering capacity enhancements. The Strategy cannot be successfully delivered without continued excellence in safety standards, efficient and adequate resourcing, close working relationships with key stakeholders, while maintaining high levels of customer satisfaction. These are fundamental elements of the Strategy which will be supported by detailed plans that contain further environmental, commercial and technological considerations.

Overview of strategy implementation management

Effective management of the strategy implementation will be required to ensure that both steady-state rail services and capacity expansion projects deliver the required benefits in the agreed timescales whilst tight cost control measures are adopted. The implementation of the Strategy will be led by the senior management team in Iarnród Éireann, overseen by Iarnród Éireann's Strategy Advisory Group and its Board, under the direction of the Chief Executive Officer in accordance with the appropriate governance processes.

Iarnród Éireann will work in conjunction with DTTaS and the NTA to progress the implementation of the Strategy through a long-term capital investment programme. This will require cooperative working between the organisations to interrogate the business case for projects and secure funding for targeted investments linked to identified benefits. Independent oversight may be sought in

the delivery of complex projects to provide additional reassurance to funding stakeholders.

Throughout the Strategy implementation, Iarnród Éireann will continue to work with the NTA in meeting contractual obligations for the operation of publicly supported rail services and work with DTTaS in taking a pro-active approach to embed continual improvement for both fleet and infrastructure maintenance and operational performance.

Always safe

Both now and in the future, Iarnród Éireann is committed to safety throughout its operations by embedding an effective safety culture throughout the business.

Iarnród Éireann's safety culture will be enhanced through a continuous programme of safety process improvement involving:

- continuous safety awareness cascaded throughout the organisation through training interventions, enhanced hazard reporting and leaders at all levels "living the values"
- appropriate adoption of emerging best practice in safety management such as digital platforms
- Ongoing reviews of compliance with all relevant national and European legislation while emphasising the role of human factors in risk management
- Greater priority given to occupational health initiatives, aimed at minimising the impact on people's well-being from change during the expansion programme

To ensure that capacity and other enhancements are not delayed by safety or assurance issues, Iarnród Éireann will work closely with the Commission for Railway Regulation to develop the competencies and processes required to safely and efficiently accept into service the new infrastructure, signalling systems and rolling stock planned. This will include early engagement with the Regulator for all relevant schemes, and a fully resourced plan to meet submission deadlines throughout the life of each programme.



Approach to safety



Investing in network development

Iarnród Éireann will work closely with the NTA and DTTaS to develop long-term agreements to support steady state and expansion strategies, focusing on sustainable funding arrangements and cost-effective solutions. These agreements will set out the funding strategy to deliver ongoing rail developmental programmes. The potential for development contributions should be considered where investment in high capacity rail corridors benefits future land-development. European Union funding, under the TEN-T programme, for improvement works on the Core Network, defined as Cork – Dublin – Belfast, and the wider Comprehensive Network will be sought for applicable projects. The capital intensive programmes for which costs are being prepared, excluding maintenance and renewal of existing infrastructure and fleet maintenance, are:

- rollout of DART+ phase 1, as provided for in the NDP
- safety critical upgrades (NTCC and TPS)
- initial fleet expansion (Intercity Rail Carriages)
- dynamic passing loops and additional platforms on InterCity network
- station accessibility programme
- miscellaneous – new stations, station upgrades and facilities upgrades

Further investments during the life of the Strategy have the potential to enhance Ireland's response to climate change and promote and accelerated shift to rail as the most suitable public transport mode.

Improving Accessibility

The Strategy reinforces Iarnród Éireann's commitment to improving Accessibility to services. Building on the long-established policy that new or refurbished stations and trains prioritise the needs of mobility and sensory impaired passengers which has delivered accessibility improvements at 80 stations since the late 1990's, a costed programme to progressively deliver full compliance with the Persons of

Reduced Mobility (PRM) directive and the National Implementation Plan will be developed, working with local authorities and national government to optimise return on investment and maximise the percentage of travellers benefitting at each stage of the process.

This will be linked to a programme of selective investment in improved interface with other transport modes, focusing on sustainable modes such as bus, tram and cycle but also including expanded park and ride facilities, working with local authorities and commercial partners all over Ireland to progressively improve interchange at all stations in line, with PRM issues prioritised.

Smart use of technology

Iarnród Éireann will develop an Information Technology plan to support the Strategy, building on the significant investments already made in communications, asset management and train operations technology across its entire business. This will be designed to maximise the return on existing systems, optimise the benefits from new investments and embrace the potential from use of intelligent transport technologies. It will enable key goals of data-driven decision-making to boost safe and efficient risk-based management of the railway.

Adaptable to change

Iarnród Éireann will be flexible in its approach to the delivery of the Strategy. We will achieve this by:

- proactively managing risk to ensure successful delivery of the Strategy as circumstances change and new challenges arise
- developing a pipeline of 'shovel' ready schemes to enable the business respond positively to demands for service enhancements and environmental initiatives as funding is made available. This ensures enhancements and benefits can be delivered at a faster rate should a more favourable funding environment emerge over time
- initial fleet expansion of 41 Intercity railcar carriages
- responding quickly to changing customer behaviours and needs
- providing our people with new and innovative personal development opportunities in all areas of our business

Achieving high levels of customer satisfaction

- Successful delivery of the Strategy will achieve a continuous rise in standards of service and interaction across all customer touch points
- Invest in technology to ensure that customers can access information when required and via their channel of choice
- Maintain and improve the punctuality and reliability of all train services whilst delivering increased capacity with a modern, efficient, environmentally friendly fleet
- Providing a safe and secure customer environment with address of anti-social behaviour by continuing to work with An Garda Síochána, local community organisations, our Trade Unions and other stakeholders



Climate Action

Iarnród Éireann will continue to work in a manner that sustains the environment, while allowing us to provide a “best in class” transportation service to customers and stakeholders. This will be based on our ‘four-pillar’ approach of ‘Plan, Reduce, Minimise, Improve’ to improve sustainability across the business.

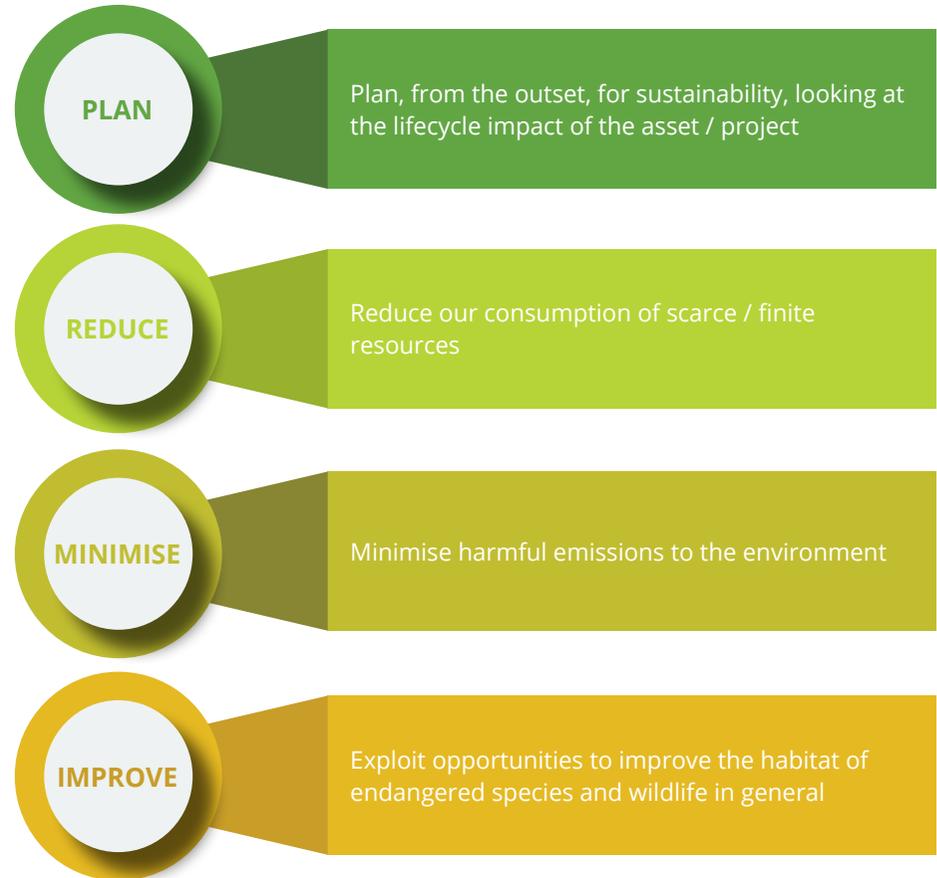
In 2019, The Department of Communication, Climate Action and Environment developed a Climate Action Plan outlining proposals to deal with climate change issues over the coming years. To align with this Plan, Iarnród Éireann will develop a Climate Action Mandate to ensure environmental considerations are at the core of its business.

Key aspects of the Climate Action Mandate will include:

- Targets for energy efficiency and reduction in greenhouse gases for the business including use of energy efficient technologies, alternative fuels and expansion of electrification
- Sustainable management of natural resources and waste
- Mitigation against climate impacts such as coastal erosion and flooding
- Vegetation management for Biodiversity including Special Areas of Conservation (SAC) and other designated sites such as Areas of Special Scientific Interest (ASSI), Areas of Outstanding Natural Beauty (AONB) and Nature Reserves
- Promotion of sustainable travel choices for our customers and employees

The right team for delivery

Iarnród Éireann’s ability to deliver for its customers and stakeholders is driven by the skills and dedication of its teams of people working together throughout Ireland. Over the timescale of the Strategy, the team must evolve to recruit additional employees to support the growing business and adapt to changing customer needs and technology advancements through reskilling and training. The opportunity to embed culture and behaviour change throughout the business should be an integral consideration for all investments in new systems and



processes, with up-front consideration of Human Factors issues for all new systems and processes.

Iarnród Éireann will work closely with our Trade Unions to secure multi-year agreements on pay and conditions. These will recognise the benefits to employees from commercial success based on improvements in customer care and productivity, whilst ensuring that Iarnród Éireann’s financial and service performance commitments are met.

Resourcing aligned to the needs of a well run organisation



Values and ethics actively promoted



Effective management



Engaged workforce



Continuous professional improvement



Adapting to change



Improving standards of service delivery



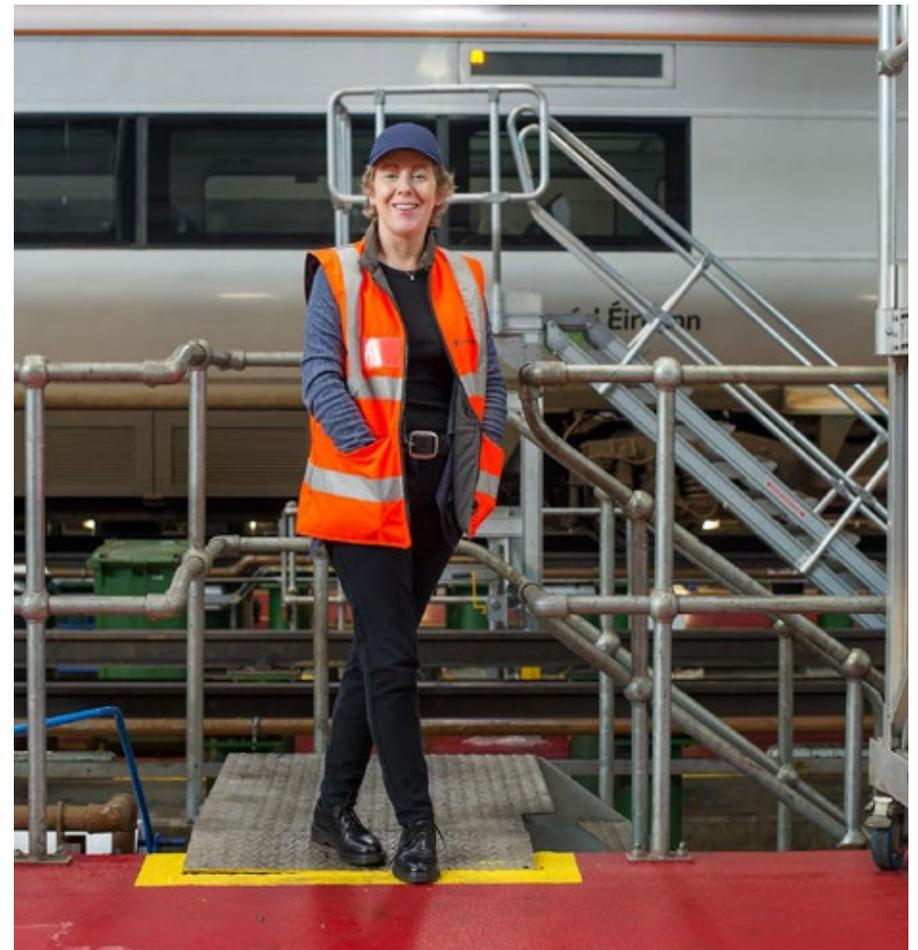
Celebrating success and excellence



Working as One Team for Ireland

Iarnród Éireann will seek to build on its successful working relationships with stakeholders to support the delivery of the Strategy. A Communication and Implementation Plan will be prepared to inform employees, stakeholders and the public of issues of interest regarding the delivery of the Strategy. The plan will also seek partnerships with stakeholders to address challenges that impact on delivery of the Strategy, but are not wholly within the gift of Iarnród Éireann to address, such as:

- working with the NTA and Local Authorities to improve integration with other transport modes to enhance station accessibility, particularly for sustainable modes of walking, cycling and bus while also including Park & Ride
- early engagement with stakeholders involved in the delivery approval of infrastructure schemes to ensure risks are managed and milestones are met e.g. electricity suppliers for rail electrification and the CRR for design approvals
- employees and customer communication systems, ensuring that customers' needs for information are met when required through their desired means, e.g. Real Time Passenger Information and wayfinding signage
- providing ticketing options and sales channels to improve convenience for passengers and efficiency in revenue collection
- implementing tailored segment marketing and sales activity while promoting modal shift to rail, particularly during off-peak periods and in contra-flow directions thereby optimising use of available capacity
- working with local organisations to allow surplus buildings to be used as hubs for social and community activities



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Strategy outcomes

The Strategy will deliver the improved rail network that Ireland needs with widespread beneficial outcomes, in line with Project Ireland 2040 National Strategic Outcomes. In doing so, the Strategy also contributes towards Ireland's meeting United Nation Sustainable Development Goals.

Project Ireland 2040 National Strategic Outcomes		Directly Addressed	Supported	Strategy outcome
1	Compact Growth	✓	✓	Improved integration and access to Rail
4	Sustainable Mobility	✓		Safeguarding the rail network Capacity to meet transport demand
10	Access to Quality Childcare, Education & Health	✓	✓	Customer satisfaction Future proofing our business <i>Meet United Nation Sustainable Goals 8, 9 and 11</i>
5	A Strong Economy Supported by Enterprise, Innovation & Skills	✓	✓	
2	Enhanced Regional Accessibility	✓		Improved Regional Connectivity by Rail <i>Meet United Nation Sustainable Goal 11</i>
3	Strengthened Rural Economies & Communities		✓	
6	High Quality International Connectivity	✓		Delivery of connectivity through Rosslare Europort Hourly Enterprise services between Dublin and Belfast Opportunities for additional rail freight access to ports Support public transport connectivity to Dublin Airport through interchange with MetroLink <i>Meet United Nation Sustainable Goal 9</i>
7	Enhanced Amenity & Heritage		✓	Safeguarding the rail network
8	Transition to a Low Carbon and Climate Resilient Society	✓		Taking action against climate change <i>Meet United Nation Sustainable Goal 13</i>



Climate action plan

Taking action against climate change

% of Rail Passenger Journeys on Electric Powered Trains in 2027



Mitigate against climate impact



Prevent future flooding

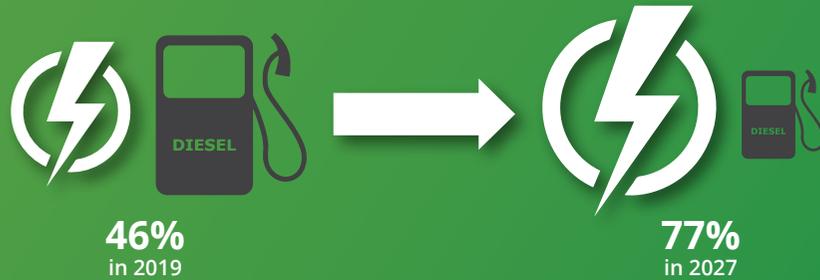


Protect against coastal erosion



Implementation of Iarnród Éireann's Climate Action Mandate

27 million annual passenger journeys switching from diesel to electric



De-carbonising the rail network



A plan for natural resources



Meet energy and environmental standards to improve management of waste, energy and water



Support bio-diversity



Use more fuel efficient technologies for 10% fuel saving

Minimise harmful emissions



Transition to hybrid trains on InterCity and Regional Services. Up to 25% fuel saving



Nearly Zero Energy Buildings



Encourage sustainable modal share

Strategy outcomes

Capacity to meet transport demand



GDA capacity - passengers in peak hour



Accessibility and Social Inclusion

- Full network station accessibility
- Elimination of notice periods where possible
- Introduction of innovative platform / train interface solutions for wheelchair access, especially on new fleets
- P&R Capacity at key locations throughout network
- Customer service operatives on all InterCity services
- Platform telecom systems including roll out of lift call system





Enhanced regional connectivity

Future proofing our business

Steady state Maintenance



Safety



Investing in our business



Working with and on behalf of our stakeholders and customers to make rail the first choice for travel



Modernising our services with smart technology



Rail Vision for Project Ireland 2040

Rail will play a vital role in Ireland meeting its long-term strategic objectives under Project Ireland 2040 and its Climate Action Plan. Beyond the current NDP, continued investment in the rail network is required to ensure these objectives are achieved. This will involve capacity improvements to meet future population and employment demand, strengthening of rail corridors to ensure sustainable regional accessibility, investment in services to encourage journeys by rail and initiatives to develop a low/near zero carbon emissions rail network.

Climate action

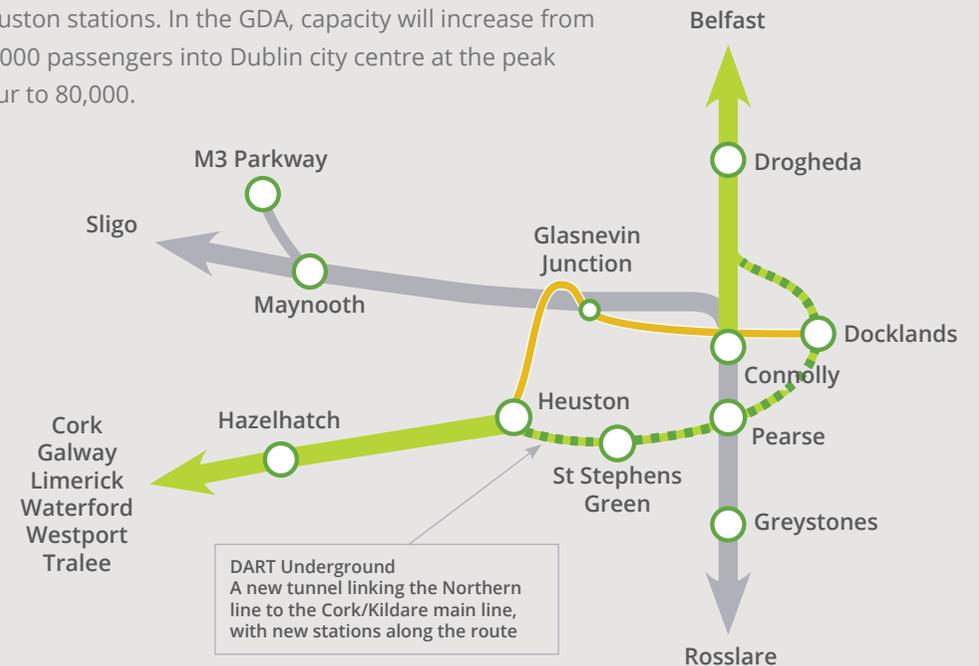
Ireland has set a target to develop a low/near zero carbon emission transport network by 2050. Rail has a unique role to play based on the unique ability of electrified rail services to move large numbers of people quickly and safely. InterCity electrification forms part of a long-term strategy to de-carbonise the heavy rail network and provide the benefits of significant journey time savings, improved reliability, enhanced passenger quality and lower operating costs. The first phase of InterCity electrification is anticipated to be the Drogheda - Belfast and Heuston - Cork routes which have the potential to form a high-quality InterCity spine. The second phase is expected to consist of Limerick, Galway and Waterford corridors. The long-term success of the Cork Commuter rail network will be ensured by the electrification of Cork commuter rail lines between Mallow, Cobh and Midleton. Electric/hybrid fleet will gradually be rolled-out to all rail services. The continued expansion of rail freight services will further reduce harmful emissions by replacing road haulage with a more energy efficient means of transporting goods.

Sustainable mobility

A shift to more sustainable transport modes is paramount for Ireland to meet its transport carbon emissions targets. High quality rail services have a positive influence on development patterns and modal choice while ongoing annual Steady-State fleet and infrastructure maintenance and renewal will ensure quality of service. A network of fully accessible stations and fleet, up-to-date customer interface systems and well integrated services will contribute to rail being the first choice for transport.

Enabling future growth and enhancing connectivity

The DART Underground project will be key to unlocking future passenger growth across the entire network, while greatly improving rail efficiency, accessibility and quality of service within the GDA. The project comprises a tunnel linking the Northern line to the Cork/Kildare main line, with new stations along the route. This tunnel will enable through running between the Northern and Kildare lines and ease congestion on the Maynooth and Southern DART lines using the existing Loop Line Bridge, relieving bottlenecks at Connolly and Heuston stations. In the GDA, capacity will increase from 52,000 passengers into Dublin city centre at the peak hour to 80,000.



This will enable considerable sustainable growth within an otherwise constrained city centre. InterCity services using Connolly and Heuston Stations will benefit from additional platform capacity, allowing for increased services. Project Ireland 2040 also envisages the potential for an InterCity link to Dublin Airport. These capacity enhancements will enable compact growth along rail corridors long into the future, with rail stations acting as residential and commercial hubs.

Hubs will be connected by high-capacity rail corridors with all InterCity and regional services benefitting from initiatives to improve journey times and increase service frequencies. Major enhancement works include:

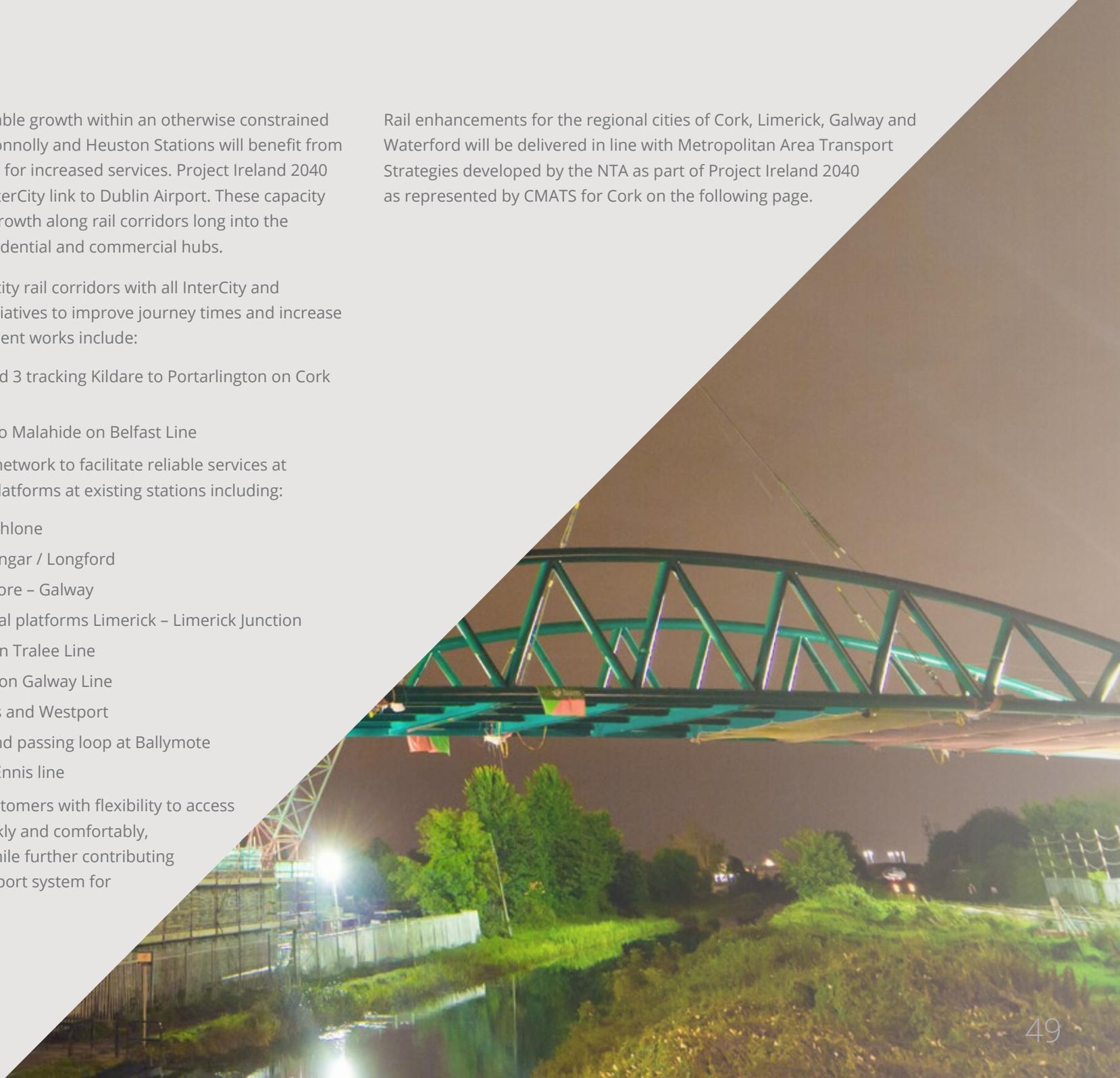
- 4 tracking Hazelhatch – Kildare and 3 tracking Kildare to Portarlinton on Cork Line
- 3 or 4 tracking north of Connolly to Malahide on Belfast Line

Double tracking sections of Intercity network to facilitate reliable services at increased frequencies, with second platforms at existing stations including:

- Double tracking Portarlinton – Athlone
- Double tracking Maynooth – Mullingar / Longford
- Double tracking Athenry – Oranmore – Galway
- Dynamic passing Loops / additional platforms Limerick – Limerick Junction
- Additional platform at Millstreet on Tralee Line
- Additional platform at Woodlawn on Galway Line
- Passing loop between Claremorris and Westport
- Reconfiguration of Sligo station and passing loop at Ballymote
- Passing loop at Sixmilebridge on Ennis line

These enhancements will provide customers with flexibility to access destinations across the network quickly and comfortably, reducing the need to travel by car, while further contributing to the creation of a sustainable transport system for Ireland.

Rail enhancements for the regional cities of Cork, Limerick, Galway and Waterford will be delivered in line with Metropolitan Area Transport Strategies developed by the NTA as part of Project Ireland 2040 as represented by CMATS for Cork on the following page.





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