



Rail Freight 2040 Strategy

RAIL FREIGHT 2040 WILL



Provide rail connectivity to Ireland's **Tier 1 Ports** and enable improved utilisation of existing assets



Increase the **market share** of rail freight in line with other European countries



Support **regional balance** and provide freight options for large industrial producers



Support the objectives of **Project Ireland 2040, Regional Spatial and Economic Strategies, Climate Action Bill** and **The European Green Deal**



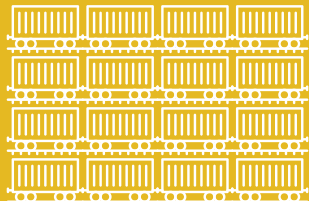
Provide a robust and resilient **network** of services to support businesses and economic growth



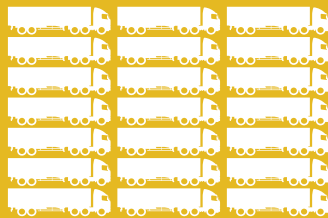
Reduce the impact of **congestion** in towns and cities across Ireland



Reduce CO2 emissions by over 25,000 tonnes per year



Provide over 100 new weekly rail freight services



Avoid 140k Heavy Goods Vehicle journeys per year



Support the creation of over 8,000 new jobs

STRATEGY INCLUDES



Investment to realise the **environmental benefits** of rail freight



Direct rail connections to industrial facilities

Modern intermodal and bulk wagons for improved performance and capacity



Connection of Ports at Foynes and the Port of Cork to the rail network and the development of infrastructure and services at other ports



A network of intermodal terminals offering logistic service options nationally

New **climate friendly** locomotive fleet



Competitive price offers that are attractive to new and existing customers



1 Foreword

On behalf of Iarnród Éireann, I am pleased to present our Rail Freight 2040 Strategy as an ambitious vision positioning rail at the centre of Ireland's freight transport system. It recognises the sustainable benefits that rail provides and invites all stakeholders to work collaboratively on its' implementation over the coming years as a contribution towards achieving Ireland's climate objectives and wider strategic national outcomes.



Jim Meade
Chief Executive

Project Ireland 2040, Climate Bill 2050, European Union's Sustainable and Smart Mobility Strategy and Regional Spatial and Economic Strategies are reflective of the intense focus of government and citizens on the climate agenda and need to decarbonise transport systems. Countries across Europe have recognised the contribution rail can make to developing sustainable freight transport and have been building their capacity accordingly. In the past Ireland also had a well developed rail freight system, with this falling into decline over recent decades as road alternatives were improved. As such, Rail Freight 2040 has been designed to support the objectives of European Union and national policies, learning from other countries, while also meeting the needs of current and future customers.

The national imperative to reduce the impact of transport systems on the environment is highlighted by objectives to deliver a 51% reduction in emissions by 2030 and to achieve net-Zero carbon by 2050. We are cognisant of this challenge and believe that Rail Freight has a unique opportunity to become a cornerstone of sustainable freight transportation in Ireland and contribute to the achievement of these targets.

Changes in consumption patterns brought about due to Covid-19 and the reliance of consumers on logistics providers illustrate the important role that efficient movement of goods have on peoples lives. Added to this are projections of an extra one million people living in Ireland by 2040, driving growth in demand for logistics and transport services even further. As such, there is a need to ensure that development is sustainable and balanced.

This new strategy highlights Iarnród Éireann's commitment to the improvement of freight services and our ambition to increase the role of rail to support the logistics and supply chain industries. As is the case in other countries the development of a sustainable rail freight offer requires collaboration across all stakeholder groups, particularly those setting policy, providing investment funding, transport users, logistics providers, ports and local authorities. Implementation will provide many opportunities for all stakeholders to work in innovative and collaborative ways towards building Ireland's future sustainable freight transport system.

We look forward to collaborating closely with all stakeholders across the freight and logistics industries as we progress implementation of this strategy.

2 Iarnród Éireann's Rail Freight 2040 Strategy

Executive Summary

European Union, Project Ireland 2040, the Climate Bill and Regional Spatial and Economic Strategies reflect the increasing focus of government and citizens on the need for sustainable development, regional balance and the decarbonisation of transport systems. Rail is inherently more energy efficient than road transport and the development of an expanded rail freight sector represents a real opportunity to reduce carbon emissions from transport while enabling sustainable growth. The Rail Freight 2040 Strategy has been developed in response to this challenge.

The rail freight network in Ireland is currently an underutilised asset. The development of an expanded rail freight network, additional services and facilities will support enhanced modal choice, supply chain resilience, economic development, regional balance and reduced carbon emissions.

Following extensive stakeholder consultation and analysis of potential demand for rail freight, Rail Freight 2040 has been developed to bring about a sustainable rail freight system for Ireland which supports national environmental policy while bringing wider societal and economic benefits.

The strategy will support national and European objectives and help enable compact growth, enhanced regional connectivity and sustainable mobility while also helping to achieve climate action targets.

Rail Freight 2040 includes 25 strategic initiatives with an estimated investment of €500 million over the next twenty years. These investments in conjunction with associated service developments and organisational change will transform rail freight infrastructure and enable Iarnród Éireann to better support businesses and modern supply chains.

With the implementation of this strategy, through the combined efforts of all stakeholders, rail will become an integral part of Ireland's freight transport system in support of national economic and sustainability objectives.

The strategy includes a plan to develop a network of intermodal freight facilities in collaboration with the freight and logistics industry, starting with strategic terminals in Limerick and Dublin, extending over time with smaller tactical terminals in Cork, Galway and Sligo. In addition, reconnecting the Ports of Foynes and Cork to the rail network while enhancing services at other Tier 1 Ports with targeted connection of some industrial sites and the modernisation of fleets, will deliver sustainable growth in volume.

The European Green Deal will transform the EU into a modern, resource-efficient and competitive economy which results in zero net emissions of greenhouse gases by 2050, and which decouples resource use from economic growth. The plan identifies the investments needed and financing tools available to reach carbon neutrality by 2050. These include the investment in environmentally-friendly technologies, providing supports to industry to innovate, and utilise cleaner, cheaper and healthier forms of transport.

Rail Freight 2040 Infrastructure Investments

Tactical Rail Freight Terminals (TRFTs)

TRFTs will be developed in Cork, Galway and Sligo to establish a cross county network of rail freight facilities. In collaboration with road operators these terminals will expand the reach of rail freight and provide sustainable intermodal freight options to businesses across the regions.

Port of Foynes

Reconnecting the port of Foynes to the rail network will drive growth in bulk and intermodal traffic and support opportunities with mining and off shore power generation in the region.



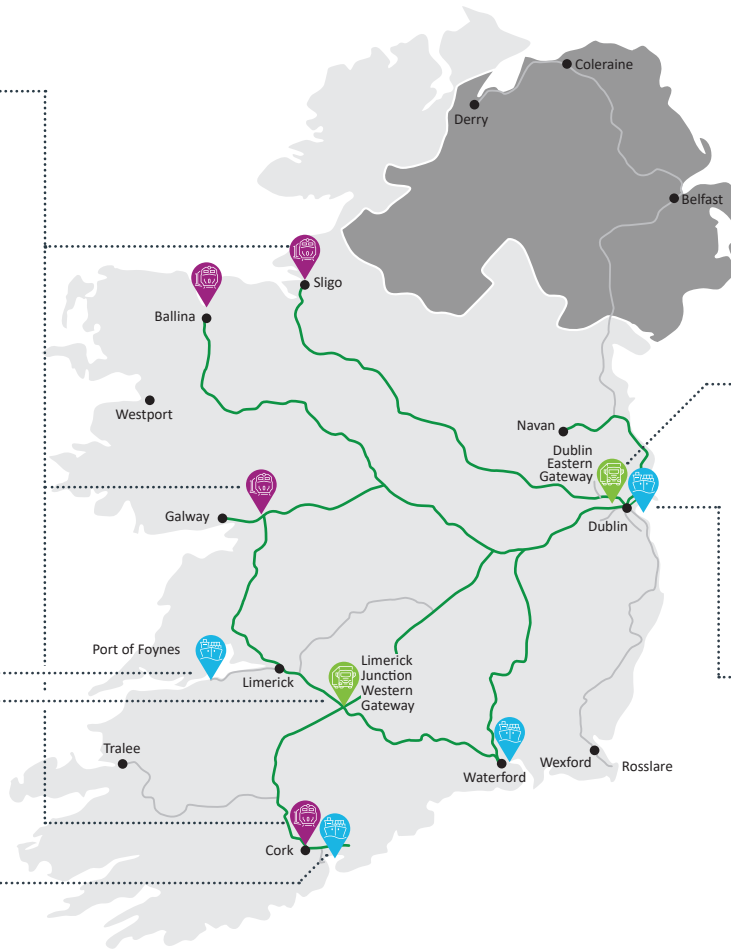
Limerick Junction Western Gateway

To capitalise on the high volumes of traffic between Dublin and the South West a Strategic Freight Terminal will be developed at Limerick Junction to facilitate intermodal traffic, a hub for distribution activity and support of businesses across the wider region.



Marino Port

Re-establishing the rail connection to Marino Point in the Port of Cork will allow for the movement of bulk commodities by rail to and from the Port.



Network Developments

To mitigate issues with congestion across the rail network, the interfacing of passenger and freight services and improve the efficiency of rail freight operations, a study will be undertaken to identify and develop new passing loops across the network.

Dublin Eastern Gateway

A Strategic Freight Terminal will be developed to the West of Dublin to facilitate intermodal traffic to and from the South West. The facility could be co-located with a dedicated construction materials terminal to support supplies to Dublin for this industry as it responds to housing and wider development demands over the coming decades.



Dublin Port

Operations at Dublin Port will be developed to optimise the integration of rail freight within the port and support it in responding to longer term capacity challenges.



Connection to Industrial Sites

Developing new connections to existing large scale industrial premises will increase the volume of bulk rail freight transported by rail and further reduce harmful emissions.



Rail Freight 2040 Strategy Outcomes

- 
Support Sustainable Development
- 
Improve Supply Chain
- 
Develop a Network of Intermodal Terminals
- 
Incorporate Stakeholder Input
- 
Develop a Modern Freight Fleet

3 Existing Rail Freight Business

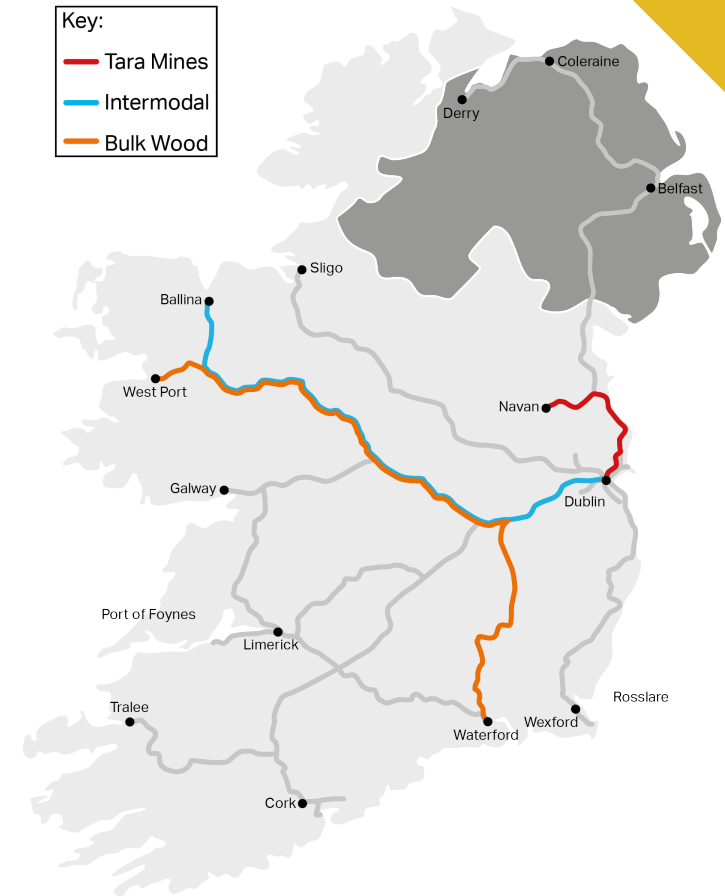
Iarnród Éireann's rail freight business is obliged to operate as a commercial entity, separate to the passenger business, without receipt of state subsidy, grant aid or incentives.

Currently Iarnród Éireann's freight business is based on three traffic flows:

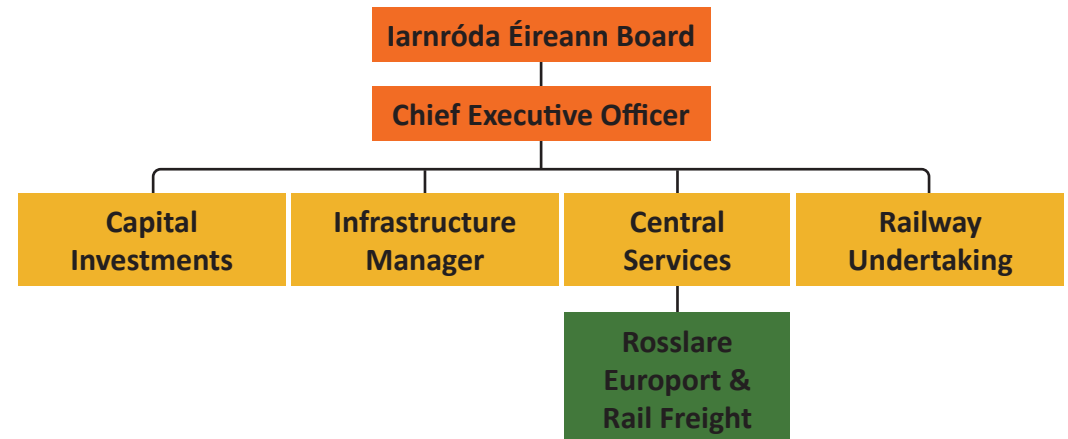
- Zinc and lead concentrates from Tara Mines to Dublin Port
- Intermodal trains from Ballina to Dublin Port
- Bulk wood from Ballina and Westport to Waterford

This narrow market is heavily dependent on the operations of a small number of valued customers, and therefore highly sensitive to market and economic trends. This is a position very different to some decades ago when most of Ireland's largest producers used rail freight services as an integral component of their distribution systems.

Historically rail held a more significant role in the movement of freight in Ireland. With the development of the motorway network and changes in the freight logistics sector, much of the rail freight business in Ireland became uncompetitive and was rationalised over recent decades at a time when environmental sustainability wasn't the imperative it has become.



A new service, on behalf of XPO Logistics, of twice weekly container train movements from Ballina to Waterford commenced in July 2021'



4 The need for a strategy

European and national objectives to reduce the impact of transport networks on the environment and transition to less impactful, low carbon modes of transporting freight underpins the development of the Rail Freight 2040 Strategy. A new approach to rail freight will ensure a long term sustainable future for the sector in Ireland.

The freight transport, distribution and logistics sector is of strategic and operational importance for businesses across all sectors of the economy. It was the fastest growing sector in 2018 (growing by 11%) and is an enabler of the success of other businesses of all sizes and sectors.

Project Ireland 2040 projects a population increase of 1 million to 5.7 million with an additional 660,000 people in employment by 2040. It also includes an ambitious construction plan to build 550,000 homes across the regions. This level of ambition and growth places significant new demand on transport systems, logistics services and existing infrastructure. This growth will need to be managed effectively across all regions, as failure to do so will result in increased levels of congestion, emissions and higher environmental costs.

Rail freight generates 76% less emissions (per tonne-km) than road haulage and as such there is an opportunity for rail to become a cornerstone of a sustainable

freight network across Ireland. With transport accounting for approximately one fifth of all emissions nationally the expansion of modern rail freight facilities and services can help develop an attractive alternative to road haulage, encourage modal shift from road to rail and support decarbonisation and environmental targets across the regions.

However, there has been a critical decline in the volume of freight transported by rail over the last three decades. A change in approach, supported by investment, is necessary to realise the benefits of rail as a freight transport mode for a sustainable Ireland.

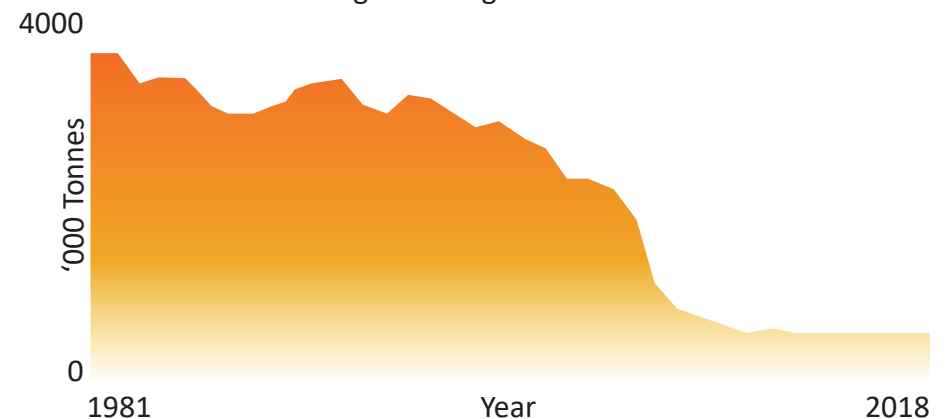
Rail Freight 2040 has the ability to support national objectives concerning the decarbonisation of transport networks, while also addressing challenges to include the current financial performance and the financing of capital investments.

Declining Rail Freight

Recent decades have shown that the current model for rail freight in Ireland is a declining business. A completely new approach is required if it is to be revitalised for it to fulfil its potential and serve current policy priorities.

Much of the rail freight business in Ireland had become uncompetitive and has been rationalised. This decline has been brought about by the transition of customers from rail freight and expansion of the motorway network.

Rail Freight Tonnage since 1981



The need for a strategy

Emissions from Freight Traffic

Heavy Goods Vehicles (HGVs) and Light Goods Vehicles (LGVs) account for a distortional 20% of transport emissions in Ireland while rail is responsible for just 1%.

CO2 emissions from HGVs rose by over 30% between 1990 and 2007 across Europe, mainly due to increasing road freight traffic, and are currently approximately 19% above 1990 levels.

In 2018 freight emissions accounted for approximately 20% of all CO2 emissions within the land transport category, while in Ireland emissions from HGV activity have been increasing since 2013.

Without intervention freight emissions will continue to grow in line with rising freight activity levels, increasing population and economic growth.

Impacts on Health

High emissions have a severe negative impact on health, to such an extent that the World Health Organisation (WHO) has described air pollution as the **'single biggest environmental health risk'**.

Environmental Targets

A 51% reduction in transport emissions by 2030 and net-Zero by 2050 support a Europe objective to decarbonise transport networks. Should these targets not be met Ireland could become liable for significant fines. To achieve this ambition the transport industry must deliver a step-change in emissions performance over the coming decade.

At a Europe-wide level, the European Commission Green Deal Policy includes targets for 75% of inland freight currently carried by road to shift onto rail and inland waterways. The current level of rail market share across Europe is approximately 18%, whereas rails market share in Ireland is 1%.

112g CO₂
per freight tonne km



VS

18g CO₂ per freight tonne km



5 A vision for rail freight

By 2040 Ireland will have a thriving rail logistics system which support supply chains, the economy, society and the environment. This vision will underpin and build on Ireland's strong economic growth positioning environmental considerations at the centre of the development of a sustainable freight transport system. The vision sets a high level of ambition for Rail Freight 2040.

Reduce Environmental Impacts

An expansion of the rail freight network can help in reducing Ireland's transport impact on the environment and air quality. Current rail freight services save 28,750 lorry movements per year. This saves over five million kilograms of CO2 emissions per year, due to the HGV traffic avoided. With the expansion of rail freight services there is the potential to increase this saving fivefold by 2040. The environmental impact objective is to position rail freight to become part of the key considerations of governments and developers when investing in infrastructure, housing and other developments to support the objectives of Project Ireland 2040 and the Climate Bill 2050.

Encourage Intermodal Freight

In 2011 the European Union set the goal to shift 30% of longer distance road freight traffic to rail or water-borne transport by 2030. Intermodal rail movements have been growing by 3-5% per year in several countries across Europe including Germany, Italy and the UK. By contrast, in Ireland road remains by far the dominant mode of freight transport and has been growing at over 1.5% per year with consequential impact for the environment.

The objective of Rail Freight 2040 is to convert some large trucking movements (attracted by new rail freight service options, modern facilities and operating procedures) to rail, and by the provision of rail connections at each of Ireland's Tier 1 ports. By 2040 it is aimed to have increased the number of daily intermodal services from two to ten based on a modal shift towards rail along key freight corridors and projected market growth.

Providing intermodal freight terminals will allow for the integration of rail and road freight services, with both working together where HGVs are used for the movement of goods over short distances to and from intermodal depots and rail is used to move these goods over long distances between depots and ports.

Develop Bulk Traffic

The movement of bulk freight in Ireland is limited despite such requirements being particularly suited to rail. There is a much greater role for rail freight to play in the movement of these commodity types in the future. Through continuous engagement with large organisations and the major ports, collaboration with industry stakeholders, establishing new partnerships, acquiring rolling stock, infrastructure development and providing connections to some industrial plants, increased volumes of bulk traffic will be serviced.

Rail freight can be competitive over shorter distances

Rail can be competitive over reasonably short distances with the average rail freight distances travelled in the UK and EU at 150km and 220km respectively and with much of Ireland's freight travelling within this range.

'On distances exceeding 150km the average costs of moving goods by rail are usually lower than road' European Commission

Increasingly companies are choosing to use rail, for its efficient performance and competitiveness along with its recognised sustainability benefits, even over shorter distances. IKEA, for example, with Maersk have recently begun using rail to transport their products a distance of 100km from Barcelona to Tarragona in Spain after successfully applying a similar solution in Italy.

A vision for rail freight

Enhance Quality of Life and Well-Being

Freight movements can have a significant impact on the quality of life of residents living near key freight arteries. Freight vehicles can impact heavily on the environment, making it a less pleasant experience to walk and cycle, with emissions impacting on air quality.

With rail freight these downsides are minimised, so that the benefits from an effective multimodal freight distribution network can be enjoyed by residents with minimal cost to their quality of life.

An expanded rail freight network will also improve regional balance by encouraging the consolidation of businesses to locate adjacent to rail freight distribution terminals where reliable, sustainable and cost effective rail freight services can provide access to markets in higher density areas such as Dublin, Cork and Limerick for example.

Increase the Safety of Freight Movement

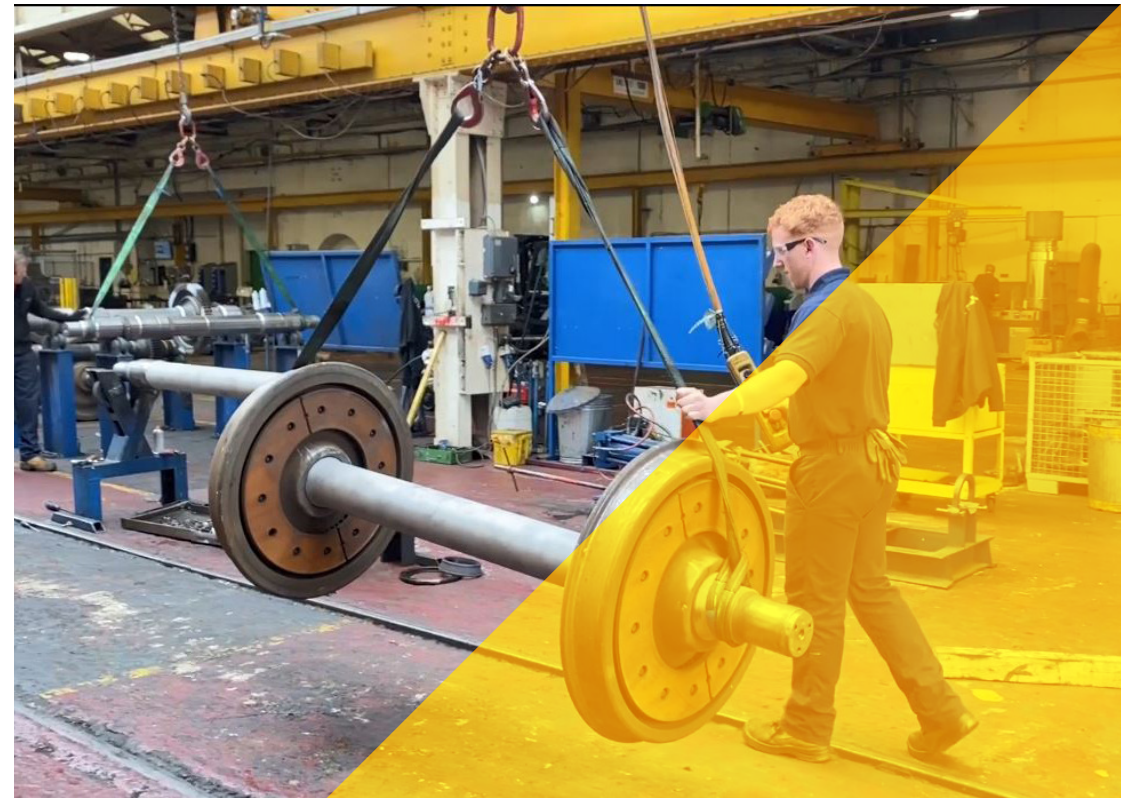
Ireland seeks to improve the health and quality of life of its citizens by increasing cycling and walking and improving facilities for these, but vulnerable road users will potentially come into contact with more road freight vehicles as the economy grows. Whilst data on road accidents across Ireland demonstrates that roads are getting safer, it is important to recognise that incidents involving a HGV tend to result in more serious outcomes in terms of number of people killed or seriously injured. The increased use of rail freight can contribute to a continuous reduction in serious injuries and fatalities.

Vision: A thriving rail logistics system, supporting sustainable supply chains, the economy, society and environment.

Financial Stability

The current performance of rail freight is unsustainable. This performance has not allowed for investment in new facilities, rolling stock or infrastructure. The current rolling stock is near life expired. Service options available to customers are limited. In recent years, business development activities have had limited success in attracting new custom.

The financial stability objective is to establish a basis for the wider economic and societal benefits of rail freight to be recognised and form the basis for government to invest in the rail freight sector. In turn this investment will drive the development of an attractive logistics offer which encourages new rail freight customers and traffic, providing financial stability up to 2040 and beyond.



6 Challenges

A fundamental step in the development of the Strategy is to explore the challenges faced by Ireland and how rail may contribute to addressing them. To develop a strategy that builds on the benefits of rail for improved outcomes for Ireland, Iarnród Éireann and its' stakeholders considered the challenges to expanding rail freight services and how existing systems, structures, networks and services can be improved to address these challenges.

Project Ireland 2040

Supporting climate objectives

The railway is required to take on a leading role in the fulfilment of economic growth and regional development for a growing population under Project Ireland 2040.

CHALLENGE

Rail freight has an opportunity to become a central part of a sustainable freight distribution network in Ireland, supporting not only economic growth, but contributing to the decarbonisation of our transport networks.

Develop rail freight in supports of future regional development and economic growth by providing a viable, robust and resilient rail freight network which meets the expectations of modern supply chains.

ACTION

Develop a sustainable rail freight systems as a viable alternative to road based freight services to encourage new business and modal shift.

Development of an expanded rail freight network will required investment in infrastructure and rolling stock to modernise rail freight services and attract new customers.

IMPLICATION

The provision of viable alternative to road based freight will reduce the economy's reliance on HGV's and lessen the impact of freight on the environment and the communities they serve.

Without investment in supporting infrastructure and rolling stock, improvements in the delivery of rail freight services will be limited. This risks a continued reliance on road based freight services.

RISKS

Growth in the freight sector outstrips the rate of modal shift to rail resulting in a continued increase in harmful emissions.

Cost Competitiveness

Financial Stability

The cost effectiveness of rail in comparison to road is a barrier to the widespread use of rail freight. Track Access Charges make up a large percentage of the costs born by the customer.

CHALLENGE

Secure sustainable funding and revenue streams to sustain the long term viability and investment in rail freight.

Develop mechanisms which provide supports and incentives for freight customers to transition from road to rail based services while also pursuing operational efficiencies which drive down the effective cost of delivering services.

ACTION

Increase the number of customers and rail freight services while also establishing government support for rail freight.

Reduction in the cost of rail freight services to customers will increase the attractiveness of rail as a viable mode choice. However, recognising that cost is not the only factor influencing decision makers, reductions in costs will need support by improvement in service delivery.

IMPLICATION

Investment in rail freight increases the attractiveness of the service and encourages new customers to ensure the long term viability of sector in Ireland.

The cost base of rail services is made up of a number of factors. To address these costs will require a change in approach to the development of rail freight services and multi stakeholder support.

RISKS

New services do not result in the levels of modal shift required to sustain an expansive rail freight business in Ireland.

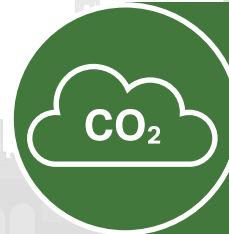
Failure to address these challenges will result in:



Growing congestion on road networks especially in and around our cities



Lower levels of growth across the regions and a continued reliance on Dublin



Increasing levels of noise and air pollution



Reduced levels of competitiveness for businesses

7 Working with stakeholders

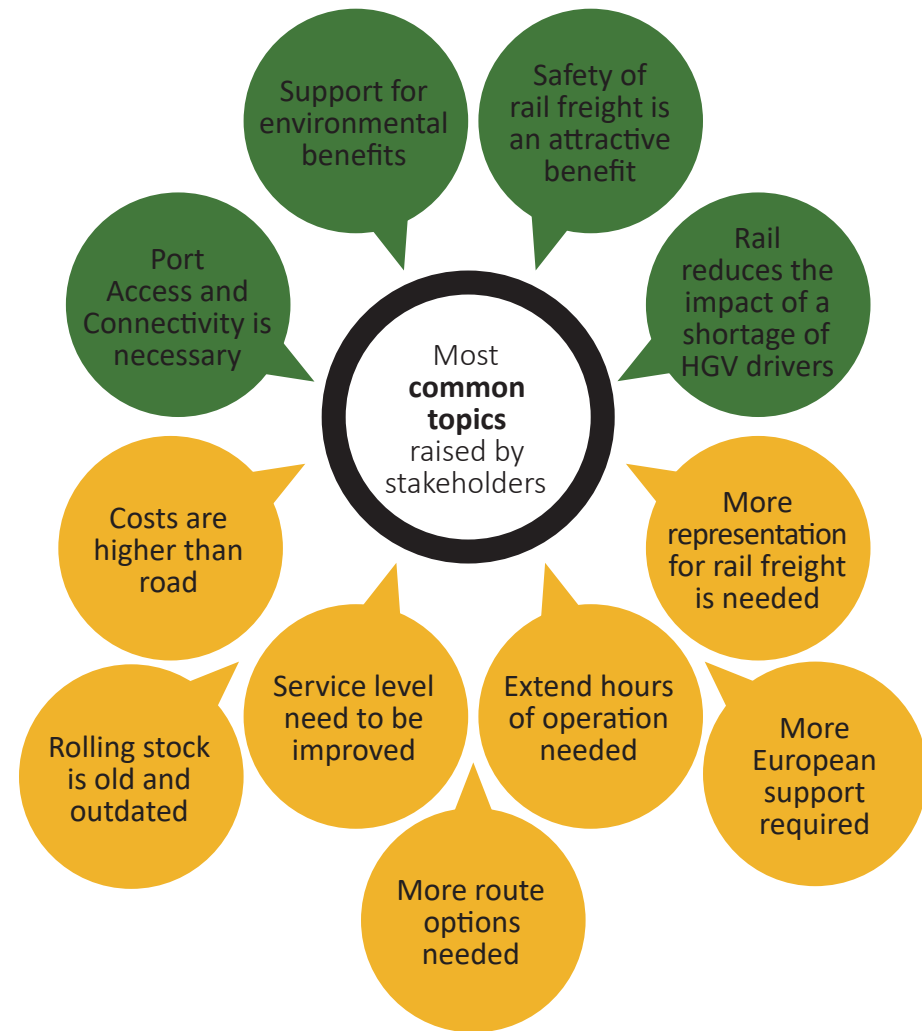
The ability to deliver Rail Freight 2040 will be reliant on collaboration and input from a wide range of stakeholders. In the development of the strategy stakeholders have been engaged with to establish an understanding of the market requirements of an expanded and modern rail freight network in Ireland. Engagement with this group has been a valuable source of information to support the formation of strategy options and an important step in creating alignment on Rail Freight 2040.

By engaging with over 50 stakeholders from across the public and private sectors the key decision making factors for organisations when deciding on logistics solutions, as well as the key issues and opportunities as perceived by sector participants, have been incorporated in to the strategy.

Input from a broad stakeholder group has also assisted in the identification of potential demand for rail freight and where the likely key customers' of rail freight may be located in the future.

The engagement with stakeholders from across the sector has highlighted broad support for the development of a more comprehensive rail freight network. Growth of rail freight facilities, infrastructure and services can support the development and expansion plans for a number of stakeholders consulted including ports, businesses, local authorities and regional assemblies.

Stakeholders recognised that the current level of operations and services does not support these ambitions and that a change in approach to development of the network and funding of rail freight is required to realise the full benefits of the mode.



8 Planning for the future

The analysis of demand for rail freight services underpins the formulation of Rail Freight 2040. In determining this demand, existing and future Heavy Goods Vehicles traffic as well as the level of traffic to and from Ireland's Tier 1 ports, has been assessed.

The demand analysis considered existing and projected articulated Heavy Goods Vehicle traffic across Ireland, and at Tier 1 Ports (Dublin, Port of Foynes and Port of Cork). A 74% increase in HGV traffic nationally by 2040 (as identified by Transport Infrastructure Ireland projections) has informed an assessment of the scale of the addressable market and identified the most heavily used routes where freight services could potentially transfer to rail given the right operating conditions and cost profile.

Focus on Dublin

Unsurprisingly the highest county to county flows all involve trips to Dublin along the main interurban networks. The 4th and 5th highest flows are from Cork to Tipperary and Clare, showing the importance of this urban centre in the south-west region.

Port traffic

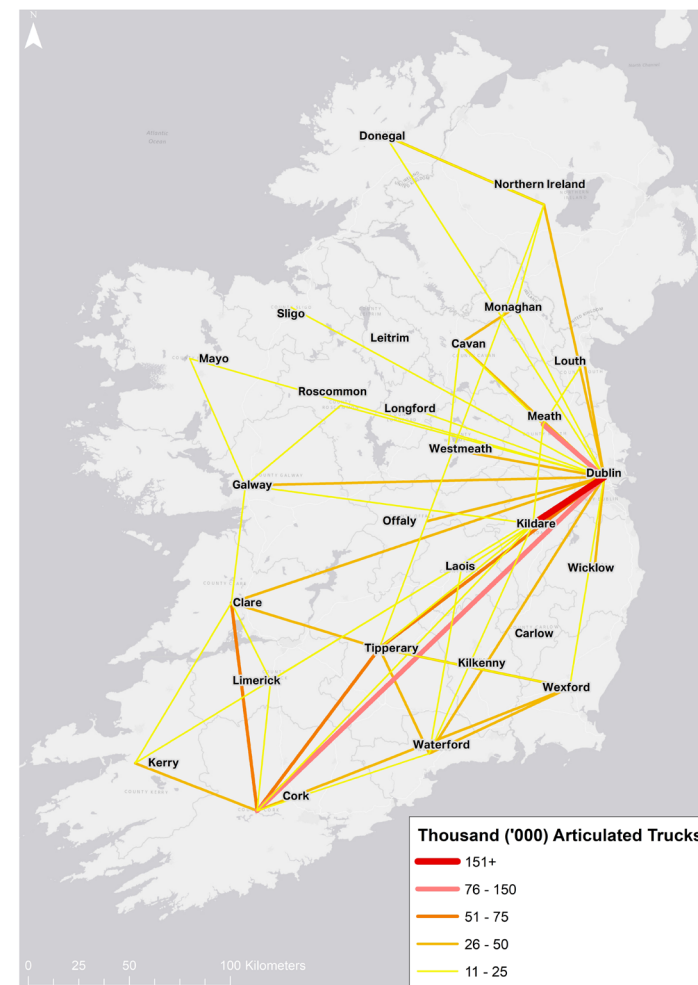
As the busiest port in the country, Dublin Port (with approximately 14,000 inbound and outbound articulated HGV journeys per week) has sufficient scale to support additional rail freight services. It is also evident that 52% of the traffic travelling to Dublin Port originates from over 70km from the Port while the remaining 48% comes from within 70 kilometres of the port. Additionally, 38% of traffic emerging from the port is travelling to destinations 70kms or more from the port while 61% of traffic is travelling to locations within 70km.

Dublin-Tipperary-Cork

The Dublin-Tipperary-Cork axis currently accounts for 428,000 articulated HGV's movements per year, increasing to 658,000 by 2040 (a growth of 2.24% per annum). This represents the strongest potential for the provision of new rail freight services nationally.

Short journeys

The heaviest traffic flows of articulated HGVs are along the Dublin-Kildare route (48km), followed by Dublin-Meath (40km). This traffic is servicing the industrial, commercial and retail industries along the M3, M4 and M7 who in many cases require next day delivery and a combination of ambient and chilled loads, a requirement that existing rail services cannot meet. However, some of this business may have longer term potential for transfer to a shuttle service between Kildare and Dublin with the development of suitable rail freight infrastructure and services.



Future Growth

Heavy Goods Vehicle (HGV) traffic

By 2040, articulated HGV traffic is projected to increase by 74% over 2016 levels. It also shows that the top ten routes in the country accounted for 20% (1,476,000) of all HGV journeys in 2016, increasing to 25% (2,615,000) in 2040.

Dublin Port

Long term forecasts for growth at Dublin Port are projected to be 2.5% (Average Annual Growth Rate) per annum up to 2040. Despite short term challenges faced by Brexit and Coronavirus, the long-term forecasts for overall growth at the port are positive.

Foynes

New container services planned for introduction in 2022 are targeting 2% to 6% of the container market nationally within two years, with aspirations to grow this significantly to deliver an alternative to Dublin Port in the longer term by providing a comprehensive suite of services, particularly for businesses in the south and west of Ireland.

Cork

The planned expansion of container facilities at Cork will attract new customers to the port, widen its catchment area and increase the level of intermodal traffic handled in the port. Concentration of bulk freight services at the rail connected Marino Point port offers the opportunity to develop rail freight for high volume movements as the port expands its customer base.

Bulk traffic

The movement of construction materials into Dublin represents an opportunity for additional bulk traffic. Currently two million tonnes of sand and gravel are transported to Dublin from the Mid-West annually. As the sources of these materials are exhausted and move further west, the opportunity for rail to offer an economic alternative to road increases.



9 Rail Freight 2040

To realise the objectives of the strategy and fulfil on the ambitious vision for rail freight nationally, Rail Freight 2040 has been developed around five key pillars. These pillars focus on internal and external aspects of the rail freight business and when pursued as part of a cohesive strategy will result in wide ranging transformation of rail freight in Ireland.



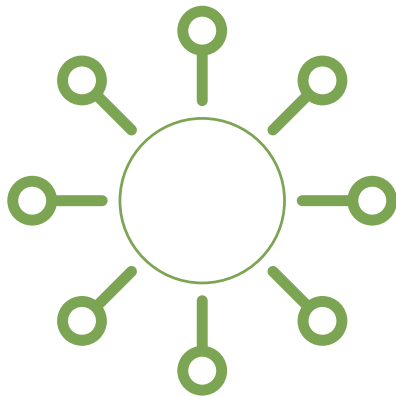
Enhancing connections
with sea ports



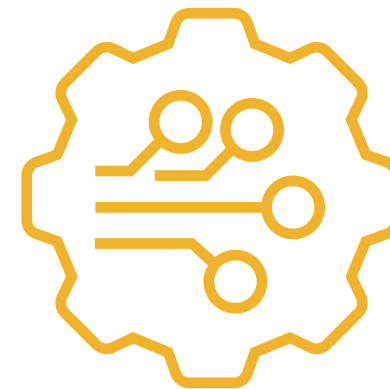
Addressing rolling
stock requirements



Policy
initiatives



Developing an intermodal
port network



Network
developments

Enhancing connections with seaports

Irish port traffic accounts for over 90% of annual imports and exports. The importance of port freight traffic underlines the need for modern and effective freight infrastructure to facilitate the movement of goods and materials in and out of the island of Ireland. Central to Rail Freight 2040 are initiatives to have all Tier 1 Ports connected to the rail network. This degree of connectivity will establish an expansive freight network which provides the options and resilience required by modern supply chains and potential customers.



Dublin Port

Dublin Port Facilities

As the largest port in the country, (responsible for approx. 50% of all goods handled by ports in Ireland) it is important that rail is integrated into the operations of Dublin Port. Accommodation of future rail services at the port must be assessed including the consideration of a grade separated junction at the entrance to the port and in the interim the operation of off-peak and night time services.



Port of Foynes

Limerick to Foynes rail connection

The reinstatement of the rail connection to the Port of Foynes will be fundamental to the growth objectives for both intermodal and bulk traffic at the port and will play an important role in improving connectivity along the western seaboard. Reinstating the line will give customers more options and support projected traffic growth resulting from mining, power generation and container transport in the region as well as passenger services which could be provided along the route at a later date.



Marino Point

Marino Point, Cork Freight Facilities

The disused rail line to Marino Point will be reintroduced to facilitate the transport of bulk commodities to and from the port.

Port of Waterford

With capacity to handle additional freight there is opportunity to build on the recent success of new intermodal services from Ballina at the rail connected Belview Port outside Waterford. Development of connections with large manufacturing facilities in the vicinity of the port has the potential to increase rail freight volumes further.

Case Study: Stockholm Norvik Port

Port developments across Europe recognise that providing new rail infrastructure is essential to economic growth, with network connectivity considered as integral to operations as building a new road.

The Stockholm Norvik Port in Sweden opened in May 2020 with a rail line added in June. This line connects the container terminal to the rail network. The construction of the rail connection included the development of 4,400m of track, 360m track on the port esplanade, a railway yard with three 750m tracks and a 100m siding.

This new rail freight connection has already resulted in a reduction in HGV traffic along the congested routes to and from the port. Initially operations consist of weekly services to and from Southern Sweden with plans to increase services as connections are established to the west and north of Sweden as more shipping lines are attracted to the port.

This example demonstrates the synergetic opportunities between port and rail freight. In this case the connection allows for the movement of intermodal containers to and from the port by rail by the Swedish rail freight operator, Green Cargo. This example could serve as a 'blueprint' for the development of port facilities in Ireland and illustrates the benefits of modern rail facilities when incorporated into existing ports. The example also highlights the potential opportunities, challenges, costs and timeframes for such projects.



Developing a network of intermodal terminals

To realise the potential demand for rail freight services additional infrastructure is required to provide an attractive network of facilities and a freight service offering which is a viable alternative to road, for existing and potential new customers. In time, this investment will provide an expansive network of inland rail freight terminals establishing rail freight in each of the regions and providing strong national coverage.

Strategic Rail Freight Interchange (SRFI) at Dublin and Limerick

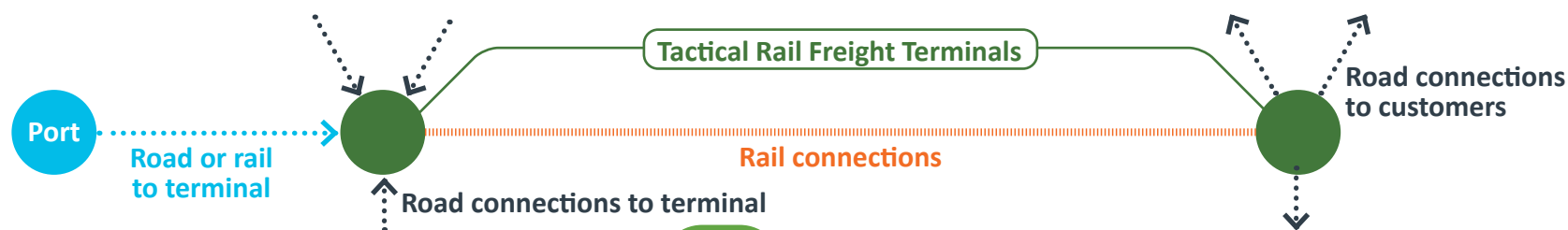
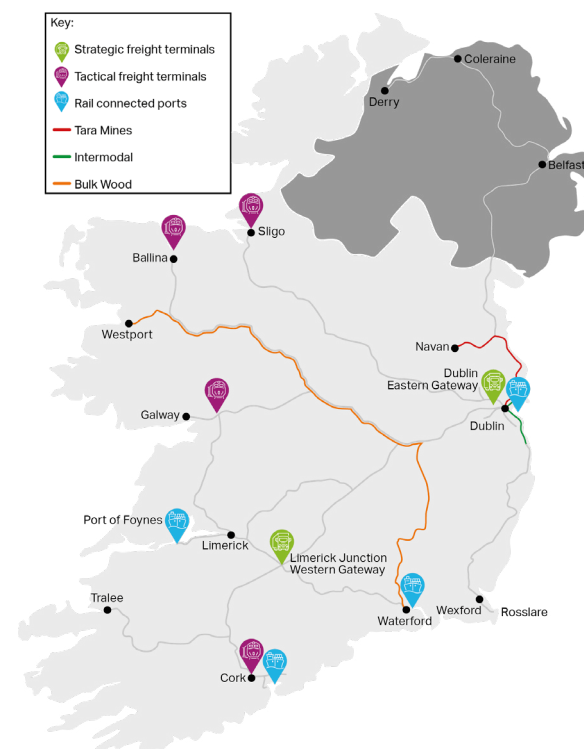
Large multi-purpose freight interchange and distribution centres linking the rail and road networks are increasingly being developed across Europe, acting as hubs that attract logistics activity while supporting regional economic growth. These typically have multiple rail sidings, gantries for container handling and large areas for storage, warehousing and transfer between modes. The Strategy plans to develop two of these, one each at Dublin west and Limerick Junction, located to service the primary demand corridor, close to motorway networks and established distribution facilities.

Tactical Rail Freight Terminals (TRFT) in Cork, Galway and Sligo

In time smaller lower capacity TRFTs will be developed at Sligo, Galway and Cork to serve local areas and facilitate regional access to rail freight. These would be similar to the existing facility at Ballina. They would be located near to existing industrial areas and consist of a single track, a locomotive run-around loop and mobile reach stackers. They could be scaled according to demand, increasing with growth over the longer term.

Dublin Construction Terminal

In response to projected growth plans for the construction sector, and to service the demand for stone and mixed aggregates a new dedicated bulk construction materials terminal will be developed on the west side of Dublin with ease of access to the motorway network. This facility will ideally be co-located with the Dublin west intermodal terminal for integrated and efficient operations.



Case Study: Teesport to Doncaster

There is strong demand for additional inland intermodal terminals in many countries including the UK. The Teesport to Doncaster example shows that it is feasible to run container trains efficiently over shorter distances where the services are provided efficiently.

Commencing in June 2019, short-distance rail services have been implemented between Teesport (north-east England) and the new iPort Terminal in Doncaster (Yorkshire). The intermodal rail service operates two complete round-trip services per day, covering roughly 140km in each direction with a turnaround time of two to three hours. The service has replaced 120 road trips per day for the main customer along the route, IKEA.

The train works as a shuttle service with 14 wagons and 28 platforms allowing for intensive use of rolling stock and infrastructure with quick turnaround times.

The Teesport example demonstrates that for distances comparable to the distance between Dublin and Limerick an inland terminal can be made to work effectively if built as part of a national network.

A terminal at Limerick Junction could allow easy connections to four of Ireland's largest ports: Dublin, Cork, Waterford and Shannon Foynes. This presents a potential opportunity to utilise parts of the Iarnród Éireann network that are currently not used for freight movements.



Addressing Rolling Stock Requirements

The expansion of rail freight services will be facilitated by the identification of new markets and customers as well as improvements in operational efficiencies. Servicing this will require new fleet with a large proportion of the existing stock near life expired, necessitating high levels of maintenance and limiting the ability to serve new customers. Investment in new wagon fleets will ensure existing and future services are not constrained by the technical limitations of rolling stock and that operational efficiencies (resulting from longer trains and quicker turn around times) can be realised. Investment in new rolling stock would be sequenced to take place on agreement for new traffic flows thus linking cashflow requirements to committed business contracts. The core requirements consist of:

Investing in the intermodal wagon fleet

Investment will be made in modern intermodal wagons. These wagons will reduce the impacts on track infrastructure, be capable of higher speeds and have better braking capability to facilitate longer trains. These new units would also be flexible to cater for 45' boxes, temperature controlled units and support track and trace systems.

Investing in new bulk wagons

Similarly, investment will be made in the bulk wagon fleet as part of a collaborative approach with new and existing customers to secure rail traffic.

Investing in bi-mode locomotives

New locomotives will also be required to replace the aging 071 diesel fleet which will be life expired by 2030. New locomotives will be electric bi-mode freight dedicated locomotives which will enhance the green credentials of rail freight and assist in reducing operating and maintenance costs further.



Network Developments

The connection of industrial sites directly to the rail network has the potential to realise large volumes of repeat business and establish long standing relationships with large organisations. This offers greater resilience within the network which increases the attractiveness of rail freight to customers.

Connecting to industrial sites

Expanding the reach of the rail network to connect directly with industrial premises, particularly where rail is used for the initial stages of the journey, will increase the volumes of material capable of being transported by rail.

Iarnród Éireann will work with existing and potential customers to identify and develop these opportunities further.

Development of passing loops

As the volume of passenger and freight services increases up to 2040, the capacity of the network to operate all services on a predominately single track network will become increasingly difficult. To develop a more resilient network a series of passing loops and more extensive application of double tracking will be developed at key points across the network. This will facilitate an increased level of activity across both passenger and freight services.

Dedicated freight paths

The ability of freight trains to reach their destination consistently on time is essential to bring about significant modal shift. Dedicated freight train paths will be developed to provide competitive journey times and the high levels of reliability necessary to support intermodal freight services.



Policy initiatives

The utilisation of rail freight in Ireland lags significantly behind that of other European countries. A lack of supporting policies has hindered the growth of the sector and led to a drastic decline in the volume of goods and materials transported by rail over the last two decades. While investment in new infrastructure and rolling stock is needed to increase rail freight services in line with European norms, there are also a number of policy initiatives required to establish a more favourable environment for rail freight and put in place the supports necessary to realise the potential for the sector in Ireland.

Support for environmental benefits

New funding sources will be crucial for the expansion of rail freight services. This funding will be sought from the domestic government to help meet the cost of capital investments for new infrastructure and also operating expenditure support particularly to assist with the ramp-up period of new services.

EU funding

Additionally, Iarnród Éireann will seek funding from the European Commission and its institutions including the Innovation and Networks Executive Agency (INEA) and its related programmes. Given the Commission's focus on climate action and decarbonisation, Iarnród Éireann is well positioned to apply for support funding.

Track access charges (TAC's)

Ireland has some of the highest freight track access charges in Europe at around €0.0077 per gtkm. These are charges paid by rail freight for the use of infrastructure and are transferred to the customer in proportion to the weight of goods moved and the distance travelled, to reflect the impact of the service on the network. While price is not the only motivating factor affecting choice the relatively high charges in Ireland are not attractive to potential customers. A review of track access charges will be undertaken to understand the differential between them here and those in other European countries. Iarnród Éireann will then identify any additional compensatory funding that may be required to facilitate the lowering of TACs for rail freight services.

Incentive programmes

Iarnród Éireann, with the support of government will seek to establish a Modal Shift Benefits scheme as used in some other jurisdictions. The systems would see supports being provided in return for the environmental, social and economic benefits of rail freight over other modes of freight transport.

Alternative sources of funding

Iarnród Éireann will seek private sector funding to finance the development of new infrastructure, facilities and rolling stock. Discussions will be held with freight stakeholders including port companies, private companies, logistics operators and property developers to identify potential investors.

Policy input

There is a need for better representation for rail freight during the development of policy. Iarnród Éireann will develop relationships with representative groups to help advocate for rail freight, make the case to businesses and provide input to emerging rail freight related policy. This will be achieved by engaging actively with European advocacy groups including CER (Community of European Railway) and ERFA (European Rail Freight Association).

Cross border services

The establishment of cross border rail services has the opportunity to generate demand. As such, a dialogue with the Northern Ireland authorities will be established to investigate the feasibility of such services.

Case Study: Haven Gateway EU ERDF Fund

With limited intermodal rail freight services at the Port of Felixstowe, large numbers of HGVs operating out of the port had led to significant congestion along the A14 and other routes from the port to the Midlands.

The European Regional Development Fund provided over £3m to the Haven Gateway partnership in 2013 to help introduce freight forwarders to the intermodal rail freight market by providing information and seminars. This programme successfully resulted in more than 50 SME freight forwarders using rail freight for the first time. These forwarders were then able to claim Low Carbon Freight Dividends of up to £75 per container to subsidise the cost of rail transport if it was dearer.

The provision of information brochures combined with industry awareness workshops was shown to be successful in encouraging modal shift towards rail freight, particularly with SMEs who had no experience of using rail freight. This avenue may be suitable for adaptation to the Irish freight sector, depending on the level of funding available and the target outcomes. Clearly providing a freight dividend or cash subsidy helped operators to give rail a chance. Many of the 56 freight forwarders who trialed rail, found the service good and have continued to use rail. As a result of these incentives and the development of new and existing rail freight facilities at the port the number of daily trains has grown from three trains per day during the 1980's to 21 per day during the 2000's, and to 34 per day in each direction out of Felixstowe today. Going forward, with the recent development of additional track capacity and the double tracking of the branch line it is hoped to increase these services to 45 per day.

The number of daily trains services at Felixstowe has grown from 3 to 34, with plans to increase to 45 in the future



10 Implementation

The implementation of Rail Freight 2040 is phased to take account of project priorities, market conditions, realistic project implementation schedules and technical considerations.

The strategy is made up of 25 initiatives at an indicative investment level of approximately €500 million, which when delivered as part of a cohesive strategy will achieve the full ambition of the vision for rail freight.

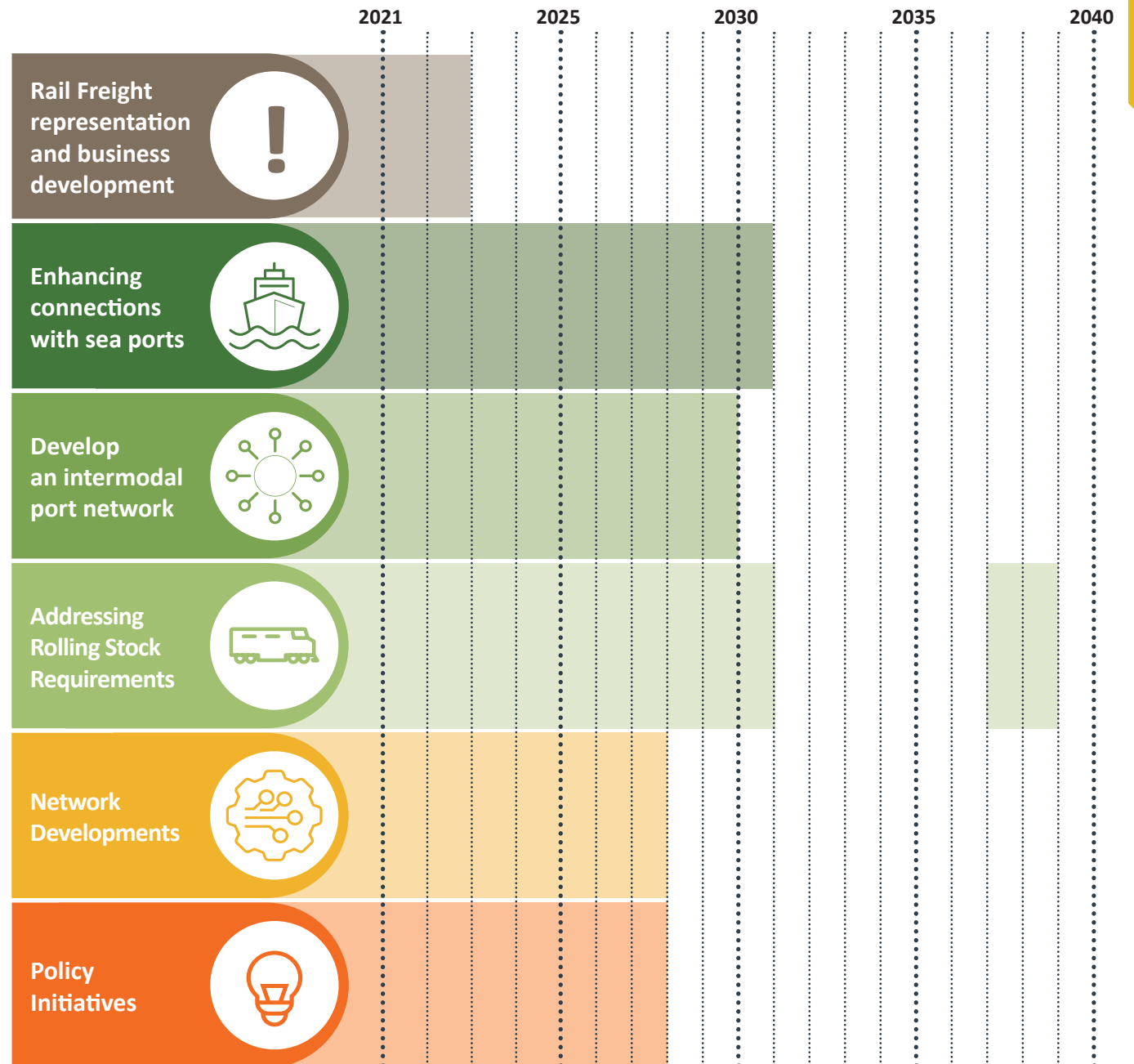
The core areas of investment are in the;

- Enhancement of infrastructure at sea ports;
- Development of a network of inland intermodal terminals, and;
- Purchase of required rolling stock.

Rolling stock priorities are for intermodal and bulk wagons over the coming ten years with new locomotives required later in the programme life to replace units then due for retirement.

Governance and resourcing

Appropriate governance and organisational structures, with the required resource levels and skill sets, will be established to ensure successful implementation. A steering group comprised of senior industry stakeholders, Government officials, Iarnród Éireann executive and advisory board members will be formed and tasked to govern delivery of the strategy over the coming years.



11 Beneficial outcomes

Rail Freight 2040 will transform the provision of rail freight services in Ireland bring about a wide range of benefits for our customers and result in a series of beneficial outcomes for Ireland, in line with Project Ireland 2040's National Strategic Outcomes. In doing so, the Strategy also contributes towards Ireland meeting its environmental and sustainability goals.

Regional Accessibility

The provision of rail freight connectivity across the regions, particularly in the west of the country will improve the accessibility of companies to larger markets in the east and promote regional balance. Efficient rail freight services will increase the likelihood of investment and growth to establish a viable counterbalance to Dublin.

Strengthened Rural Economies

Investment in rail freight in conjunction with logistics operations can be a catalyst to industrial development and could be part of a wider developmental strategy for the West of Ireland that may attract other capital investments from private industry attracted by lower land and labour costs. This could bring extra jobs and prosperity to towns in the west while contributing to rebalancing the economy.

Economic Development

In line with the jobs growth resulting from comparably sized developments in other jurisdictions (e.g. East Midland Gateway, I-Port Doncaster) Rail Freight 2040 has the potential to support the creation of up to 8,000 new jobs during the construction, operation and maintenance of new facilities and rolling stock, with many of these located in the regions. The development and operation of facilities in Limerick, Sligo, Galway and Cork, as well as Dublin will generate 5,000 new jobs in primary logistics related industries while implementation will also result in up to 3,000 secondary related jobs (associated with new retail shops, restaurants, coffee shops and gyms for example) which would open to service the staff and the families of staff now working in the freight terminals and adjacent logistics parks. The expansion of services is also expected to create up to 100 new jobs within Iarnród Éireann.

Iarnród Éireann at the core of Project Ireland 2040

Project Ireland 2040 aims for ten National Strategic Outcomes (NSOs). These NSOs are 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. Rail Freight 2040 provides a significant supporting role to realising these NSOs.

Rail Freight 2040 Strategy strongly supports the NCOs



Climate Action

Ireland has set a target to develop a low/near zero carbon emission transport network by 2050. Rail Freight has a unique opportunity to support this objective by providing a low carbon alternative to road freight. Existing rail freight operations save approximately 0.5 tonnes of CO₂ per service when compared to equivalent HGV services. These existing services result in savings of over five thousand tonnes of CO₂ per year, due to the HGV traffic avoided. With the expansion of rail freight services there is the potential to increase this saving fivefold by 2040. Rail is inherently more energy efficient than road transport and as such the development of the rail freight sector represents an opportunity to support a reduction of carbon emissions from transport.

Future proofing rail freight

Based on recent and current performance, the rail freight division is not considered to be a viable business and is not financially sustainable. By the expansion of freight services, the realisation of operational efficiencies and targeted support rail freight in Ireland can be put on a sustainable footing. This will not only ensure the continuation of rail freight services to 2040 and beyond, but will provide industry with a cost effective, sustainable alternative to road freight. Rail freight will also offer resilience to the supply chain and provide good connectivity to many parts of the north, west and south of Ireland. This will be important in helping to rebalance the economy.



Rail Freight 2040 Strategy

