

Belfast Region Infrastructure Investment Framework

Interim Report

REP/2605757/IP/001

Issue Interim v2 |

INTERIM REPORT – This report represents the current stage of development of the Belfast Region Infrastructure Investment Framework. Further testing of proposals and iterations to the report are anticipated to be required as part of this process to complete this framework for the region.



This report takes into account the particular instructions and requirements of our client.

It is not intended for and should not be relied upon by any third party and no responsibility is undertaken to any third party.

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A dynamic, inclusive, connected Belfast region



1 Introduction

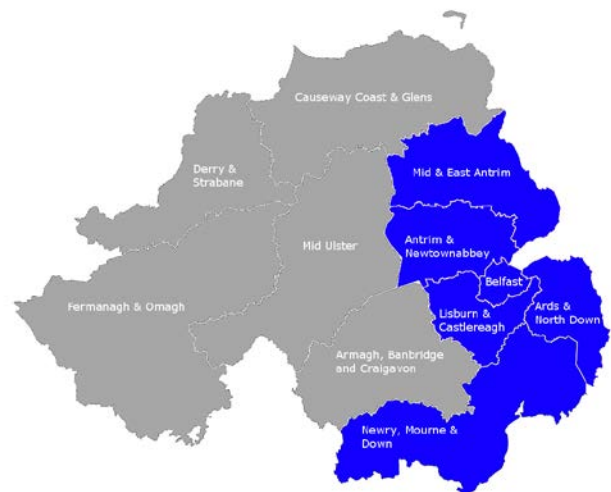
1.1 A Dynamic, Inclusive, Connected Belfast Region

The six Councils comprising the Belfast Region have commenced negotiations with the UK Government and NI administration on a Belfast Region City Deal.



The Belfast Region forms an identifiable ‘travel to work’ area around Belfast and includes the strategically important economic corridor between Belfast and Dublin. It is viewed as enabling a ‘step change’ for the economy, a catalyst to achieve growth aspirations across the region.

In consultation and collaboration with the Department for Infrastructure, the partner Councils have identified that infrastructure planning for the Belfast region needs to be taken forward with a strategic and integrated approach. This Belfast Region Infrastructure Investment Framework (BRIIF) is a holistic, prioritised, phased and costed investment framework for delivering the interventions needed to deliver the physical infrastructure required to support the growth requirements and themes of the Belfast region.



The BRIIF will support the three main focus themes of the Region;

- Infrastructure,
- Innovation and
- Employability & Skills.

It supports the Belfast Region, facilitates the Regional Industrial Framework and provides a collaborative approach to resolving physical regional hard infrastructure issues.

It thus sets out the key interventions in the physical infrastructure network needed to deliver the growth agenda of the Belfast Region and realise the associated targets for jobs, GVA (Gross Value Added) and population.

1.2 Connecting Infrastructure and Economic Growth

Infrastructure is key to unlocking and driving economic growth, fundamentally enabling businesses to produce and increase productivity.



The National Infrastructure Plan (2014) outlines that for every £1 spent on infrastructure construction £2.84 is generated in returns to the UK's economy.

Infrastructure connects business to markets, supply chains and the labour force and connects people to jobs, training and leisure opportunities, physically and digitally.

Infrastructure is a necessity of a connected and productive economic ecosystem. Therefore, a strong strategic framework for infrastructure investment in the Belfast region will directly support the ambitions for jobs, GVA and population growth.

1.3 Scope

The scope of the review has been centred on 4no. infrastructure strategic themes, namely:

- **Transportation** (Road/Rail/Bus/Cycle/Walkability, Ports & Aviation),
- **IT/Communications** (Fixed and Mobile);
- **Energy/Utilities** (Gas, Electricity/Renewables, Water & Waste Water; and
- **Tourism/Placemaking** (Infrastructure needs to support growth in this sector).

The scope of this report has also excluded any review associated with both waste and social infrastructure.

1.4 Status of the BRIIF

Currently this Interim Report provides a review of the critical themes identified by the six councils within the region, alongside the detailed perspective from the key stakeholders who have a greater insight into their own infrastructure needs assessment using the evidenced review of network capacities.

Building on a review of the existing evidence base, this framework brings together the views of significant stakeholders in the region, together with Arup's analysis of infrastructure need to achieve regional objectives and strategic options to address this need.

The programme for review and consultation with key stakeholders has been undertaken in a very short timeframe. Whilst every effort has been made to clarify issues from relevant documents, guidance, policy or strategy, there has been some limitation of available data from certain sectors such as existing Telecommunication providers. In addition, there has been no further time allocated for re-consulting with stakeholders to date.

1.5 Further Analysis Required

This Interim Report includes our own assessment based on all the consultation and baseline evidence collated to date. There are several aspects which will require further development, both in the development of the BRIIF and wider support to the future assessment of the Belfast Region City Deal project prioritisation. It needs to be acknowledged the value to which infrastructure can deliver not only economic growth but also increasingly important the health/wellbeing, sustainability and social benefits and return on investment.

Further testing with central government departments will be required, in the context of ongoing work to develop NI wide regional infrastructure plans, in addition to re-engagement with statutory providers to test the identified infrastructure projects and cross-analyse future scenarios.

2 The Belfast Region: Its Context and Need

2.1 Baseline Evidence Review

A comprehensive review was undertaken against existing key strategic documents, plans and also studies.

The principal themes identified from this exercise are:

- The issue dates of the majority of the reports are now becoming dated and in need of a re-re-fresh, including for example, the Investment Strategy for Northern Ireland which only articulates the pipeline of investment until 2021, a very limited time window in the context of investment planning;
- The existing documentation is becoming superseded by each of the Local Development Plans and the current Industrial Framework for the sub-region being developed;
- There are known technical infrastructure models and policies that are currently under review and will have a bearing on the critical infrastructure needs. One example is the Northern Ireland Transport model and the subsequent update required to the Belfast Metropolitan Transport Model. This requires not only a re-fresh to reflect the current committed and proposed developments to the highway infrastructure and proposed development sites but also a view to testing future scenarios for developments and formation of new economic growth corridors across the region.
- The focus of the reports is predominantly on addressing the legacy of under-investment in infrastructure and by virtue focussed on short-term horizons.



It is clear that the baseline evidence is focussed on addressing ‘today’s need’ and not delivering a future vision. There is a need for greater cross-infrastructure sector analysis of current needs and barriers to growth and inter-relation of impacts.

The summary of all completed strategies, plans and studies related to infrastructure needs and planning in the sub-region that has been reviewed is listed in Appendix A.

The Belfast to Dublin corridor accounts for more than **1 million jobs**. Improved transport infrastructure has the potential to better match employers and employees: improving workers' access to jobs and businesses' access to workers.

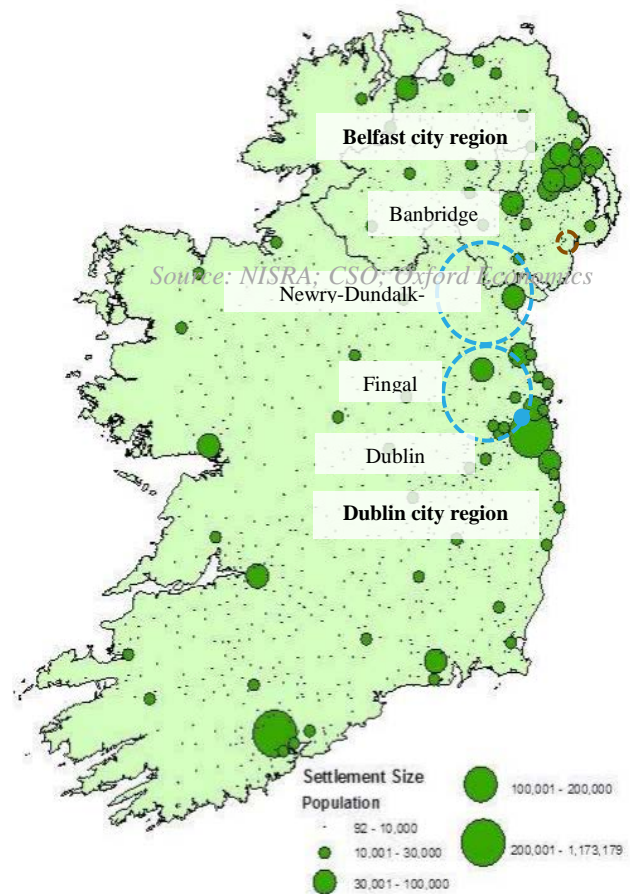
There are clear priorities already established for addressing the current transportation needs for the Belfast Region with key infrastructure flagship projects being identified, including **York Street Interchange, Belfast Transport Hub (Weavers Cross), Belfast Rapid Transit (Phase 2)**. There is a recognition that improved connectivity is required to support growth, enhance the quality of life for all and reduce environmental impact as outlined in the DRD Ensuring a Sustainable Transport Future (2011) ¹.

In addition to generating the ability to better match employers and employees with the relevant skills, improved transport links also create more opportunities to share knowledge through agglomeration benefits. These 'knowledge spill-overs' boost productivity.

This corridor is therefore well-placed to take advantage of these agglomeration benefits and both the road and rail infrastructure need investment to enable this growth to take place which will also mutually benefit the wider Belfast Region.

Tourism Sector Growth

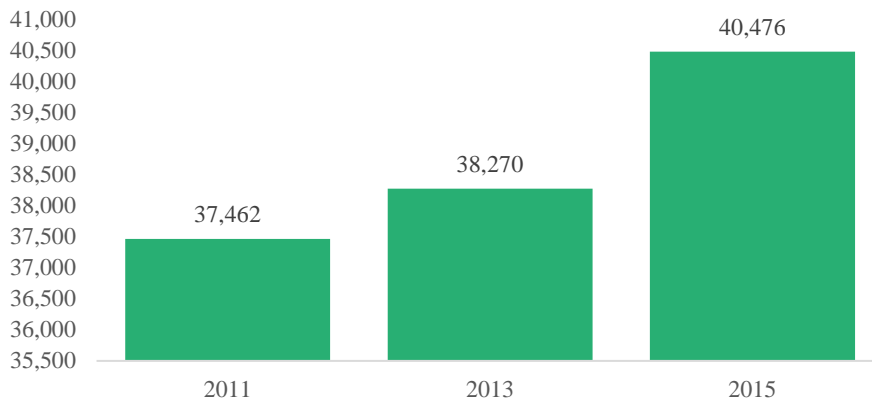
Another significant indicator of economic improvement is the tourism sector. Investment in visitor attractions, such as Titanic Belfast, which attracted 667,000 visitors in 2016, have been a cornerstone of the tourism strategy in NI that has seen such strong growth in visitor numbers and expenditure.



Source: CSO Census of Population, 2016 & NISRA NINIPS

¹ <https://www.infrastructure-ni.gov.uk/publications/ensuring-sustainable-transport-future-new-approach-regional-transportation>

Tourism Jobs in the Belfast Region



Source: NISRA Northern Ireland Tourism Statistics

Although starting from a relatively low base in comparison with our nearest neighbours, government investment in tourism has been highly successful in delivering growth and new investment from the private sector, for example, in the construction of new hotels across the Region. The developing tourism strategy for Northern Ireland identifies the critical importance of our natural, built and cultural heritage to continuing growth in the value of tourism.

National and International Connectivity Growth

Both the Belfast International Airport and Belfast City Airport have seen growth in passenger numbers over the last few years with further forecasted growth predicted for their respected destination and commuter markets. Air access into Northern Ireland is dominated by GB routes, in comparison to RoI where there is a greater diversity of routes aligned with the Dublin Hub market.

Whilst there has been significant recent growth in the aviation sector, the ports and maritime sector has been relatively subdued, although connectivity continues to improve in the cruise ship and ferry passenger port market.

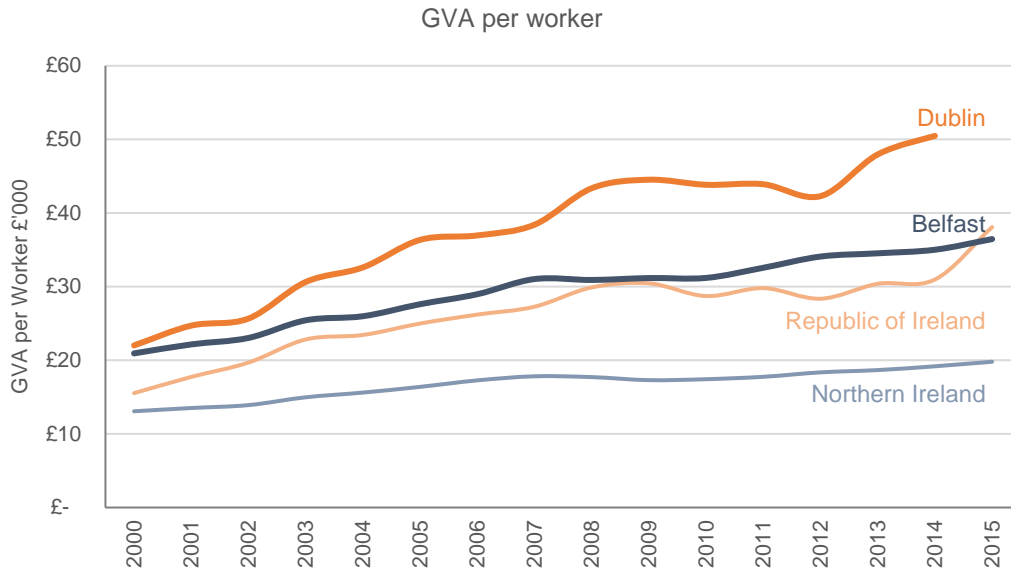
The infrastructure requirements needed to sustain both aviation and port sectors are associated with improved road access/connectivity and investment in enhanced offer associated with operational aspects such as Ro-Ro infrastructure and cruise terminal berths.

Jobs & Productivity Growth

Whilst the Belfast Region generates over two-thirds (68%) of Northern Ireland's GVA, across 483,000 jobs, a key challenge is that this is at a significantly lower level than desired. A stark comparison is in viewing Belfast and Dublin cities, where similar productivity levels existed in 2000, however a gap of approximately £15,000 more GVA per worker now exists.

This partly reflects the larger role of public sector employment in the Belfast Region. While this can provide stability and protection from economic downturns

(contributing to, for example, lower unemployment rate), it can also reduce overall productivity. There is also a risk that a large public sector ‘crowds out’ more productive sectors such as financial services or high-tech industries.



Source: ONS & CSO

Whilst there are uncertainties in the shape and size of the future economy, particularly recognising the impacts of Brexit, forecasts by UUEPC for the region’s Industrial Framework indicate potential net additional employment within a baseline scenario of 28,800 jobs for the city region. (Source: NISRA Northern Ireland Tourism Statistics).

Belfast Region Growth & Infrastructure Need

Growing population, particularly in urban centres, growing employment levels, growing GVA and a growing tourism sector all combine to demonstrate the strong vision for the Belfast Region. This vision can be enabled and realised through investment in the region’s infrastructure. Addressing the historic underinvestment and aligning strategic priorities to ensure sustainable, inclusive growth throughout the region is vital.

3 Economic Narrative: Developing the Belfast Region

3.1 Where we are now

The overriding theme in analysing current economic performance is one of emerging positivity. The region is now able to grasp opportunities across a wide range of sectors in a way hitherto denied to it, attracting investors and visitors, enabling jobs, income and prosperity.

In short a re-imagination has occurred. There is demonstrable potential within and across the Belfast Region and what is required now is the capability to secure that potential.

Unemployment is at historic lows; competitive with the best in Great Britain and better than Ireland. But statistics mask the hidden unemployment behind the persistent rise in those off register for health or disability reasons and the concentration of unemployment in particular areas and age-groups. The challenge here is to support employability by raising skills and training opportunities. These newly trained and skilled individuals can add to the overall labour supply, which is increasingly in short supply. Inclusive growth is then critical to securing growth.

Labour markets become more efficient, benefitting everyone, both employers and employees, when travel to work is easier. Transportation thus drives jobs creation and better paid employment.

Manufacturing has been holding its own for some years, tenaciously developing new products and markets while always increasing its value added content. The industrial strategy for the region has identified areas of comparative advantage for local firms to fully exploit, highlighting the scope for considerable growth through the deployment of innovation. The challenge here is to reduce the inherent challenges of peripherality, with its high transport costs and, traditionally, adverse energy costs due to lying to the edge of a network. Manufacturing therefore needs better roads with less congestion, ports and airports with a best in class freight offer and a dedication to improving the local development of innovation.

The majority of employment is however in services and here steady growth, perhaps faltering in current headwinds including Brexit uncertainty, is underappreciated as a shift from an overly dominant public sector to a resurgent private sector plays out. When retrenchment within the public sector stops the overall improvement will become more noticeable, feeding consumer confidence, building yet further impetus for growth. The challenge here is to create a high employment / high wage economy whose wealth generation can cover the desired high quality public services.

In general there is a need within the Region to co-ordinate, developing competitiveness by encouraging distinctiveness, so that, for example, a locality might grow a media cluster with powerful synergy and the Region's ports win greater business in aggregate by specialisation and growing unique value added offerings rather than competing on cost in a race to the bottom.

There is a global tendency to urbanisation and indeed 80% of the UK's population now live in cities. The historic, tidal flow outward from contested areas in the region is now reversing; consequently investment needs to aid the process of a fast growing Belfast Region.

The aim is to deliver growth rather than displacement.

A major challenge to be faced is the economic impact of Brexit, both in the current climate of uncertainty and associated political statement, and the changes that businesses may need to face with regard to work-force connectivity, security of supply-chain and export market trade links.

Whilst there is a realistic prospect of a negative growth perception when looking to the short and medium-term forecast, as a collective region there needs to be a positive approach to achieving and delivering high economic growth which requires consideration and prioritisation of supporting infrastructure investment that meets the current critical needs and enables future growth aspirations to be realised.

Northern Ireland's legacy of division, is not yet addressed, remaining manifested in separated neighbourhoods that are increasingly homogenised, with attendant impacts on transport and economic development patterns. A shared Belfast region can reap direct benefits of reduced strife and tension, reduced duplication of services, agglomeration benefits from a more integrated scale and an enhanced image. These will lead to second round benefits, including greatly increased tourism and inward investment, shared growth and a critical mass for creating sustainable services, including transport. The Executive Office leads on this issue on a Northern Ireland wide initiative but the Belfast Region provides the opportunity for a step change in provision to support action here.

There has been a recognised long-term underinvestment in infrastructure within the Region (and indeed all Northern Ireland) which the anticipated 'peace dividend' has not fully addressed. Funding arrangements (under a Supply and Confidence agreement involving the DUP) acknowledge this and have provided £1bn to address this historic underspend and other legacy issues, including health, notably mental health. Such funding focussed on addressing the overhang from the past needs to be coupled with a view as to how the future can be different – the latter is the role of future funding arrangements, including, but not limited to the Belfast Region Deal which can play a galvanising role in transforming the very approach to the provision of infrastructure.

The narrative is then one of clear need to set in place an infrastructure fit for a renewed Belfast Region, one which draws on its myriad strengths and assets to

deliver inclusive growth, identifying mechanisms to galvanise this revolution, directly driving provision, leveraging other development and framing an opportunity led pro-active approach that facilitates investment.

Infrastructure Imperatives:

The economic narrative then demands that infrastructure is:

- Generating economic activity;
- Connecting people, places, goods and services;
- Serving essential services from potable water to waste;
- Sustainably operating;
- Leading change, notably comprehensive access to ultrafast digital provision; and
- Attracting investment, both FDI and local, encouraging enterprise and growth.

3.2 How an infrastructure revolution will help us get there

Driven by the vision of a shared Belfast region, benefitting all areas and all individuals, the economic narrative is based around three strands, namely: Sharing in growth; Supporting growth, and; Sharing in the proceeds of growth.

3.2.1 Sharing in growth

- Sharing heritage, natural and build environment with visitors, driving tourism to new levels;
- Sharing economic activity within and across the entire Belfast Region, through reduced congestion allied with local and regional transport initiatives, telecoms connectivity, the natural benefits of agglomeration, and differentiation that creates clusters of activity where they are most suited
- Sharing places through major new land use and development, better utilising the underused and sensitively redeveloping new locations, creating job hotspots across the region;
- Sharing with the private sector and third sector through integrated investment;
- Sharing knowledge through the creation of dedicated innovation centres and facilities, developing high level skills; and
- Sharing capability with neighbours by reinforcing transport links with nearby markets, including the Dublin economic corridor and enhanced route connections to the Central Belt in Scotland the Northern Powerhouse, and London.

3.2.2 Supporting growth

- Supporting society undertake a strong modal shift in urban centres particularly through the further development of a sustainable transport offer across the sub-region;
- Supporting better social inclusion and social mobility by improving digital connectivity across the region, balancing a need for rural accessibility with centres of enhanced digital capabilities;
- Supporting a viable, resilient, low carbon energy provision through future energy scenario planning and delivery of an energy strategy;
- Supporting the investment in an effective, sustainable, compliant waste water management to limit the impacts of a potential barrier to economic growth; and
- Supporting the location specific ‘opportunity sites’ across the region through the review of the spatial implications of forecasted growth, and delivering enabling infrastructure to enhance site viability and therefore attractiveness to investors.

3.2.3 Sharing the proceeds of growth

- Sharing benefit through actions directly and obliquely aiding deprived areas and the more vulnerable with employability actions, neighbourhood work hubs and crèches, plus diversity in occupations and working modes;
- Share with future generations through an emphasis on sustainability, but also on generating a real return on investment measured by increases in GVA and in the generation of local taxes.

4 Economic Vision: Where are we headed

4.1 A dynamic and ambitious region: one creating, supporting and sharing growth.

The defining tone of the economic narrative for the Belfast Region is the need for, and benefit from, inclusivity. Growth must be shared across the Region, benefit all and be fairly spread at a neighbourhood and community level.

Economic success can help alleviate the general losses caused by decades of economic underperformance and civil strife, but addressing community division is critical to delivering that prosperity everywhere, not just those neighbourhoods most directly affected. The costs of division remain a burden as services are duplicated or poorly accessed by some in need. Rising employment has not reached many who are distant from economic opportunity. Action on these fronts is a challenge but offers tremendous potential.

Inclusive growth is thus the context for the economic narrative which asks:

4.1.1 How can growth be higher and fairly shared? And how can sharing create further opportunity?

This is an ambitious vision which calls for much more than iterative change. Accordingly, the Belfast Region is based not on addressing today's challenges but on creating the conditions by which this shared future can be realised. The need for transformation within Belfast Region is self-evident.

The need here is for the City and Region to work as one, complementing and deepening each other, ensuring that growth in Belfast generates activity across the entire region and vice versa.

Inclusive growth for the Belfast Region will therefore require that people and goods can move easily and cheaply, high quality digital services are uniformly available and utilities such as power and water are sustainably delivered.

An example of this is through the improvement of connections which will allow the Eastern Economic corridor to build on the existing trading relationships. Improving connectivity along the Eastern corridor can help the region attract new investment and firms' headquarters, while Dublin and its surrounding region's firms would benefit from expanded labour markets and supply chain relationships.

The Eastern Economic corridor can take advantage of the complementarity of their economic clusters. Furthermore, the expanded markets (for customers and employees alike) will help new clusters and specialisations to develop.

4.1.2 Vision and Drivers of Change for BRIIF

Accordingly, infrastructure is at the heart of the Belfast Region's aspirations. It provides the basis on which the shared successful future is built.

This shifts infrastructure planning centre stage, from a demand led provision traditionally under-funded to one that can help shape the future of the region. Transport, for example, is thus about where and how people might live, rather than simply facilitating journeys. This future-making is particularly challenging given technological advances from driverless cars to renewable energy and new forms of digital communication.

A sub-regional infrastructure investment framework will be influenced by a number of globally recognised key drivers, influencing infrastructure needs and delivery mechanisms. These need to be recognised to ensure the long-term resilience of infrastructure provision.

Such trends include a growing and ageing population that is leading to smaller household sizes, a desire for urban living that provides ready access to employment, services and amenities, and a demand for improved alternatives to car travel. The trend towards urban living presents the opportunity to use infrastructure more effectively and reap the agglomeration and smart specialisation benefits that densification can present. Land use policies must respond to this.

Energy affordability, security of supply and climate change challenges must be addressed through diversification and certainty of our energy supply. Green infrastructure, meanwhile, can offer a multitude of benefits, from reduced flood risk to improved air quality and encouraging more people to walk and cycle. Innovative, disruptive technologies such as mobile internet and the Internet of Things are changing how we use and interact with infrastructure systems. There is scope to use technology to make better use of what we have now.

The BRIIF vision is then for flexible and responsive infrastructural provision that supports rather than constrains and evolves rather than decays. One which allows the entire Belfast region to be economically competitive and all to share in the gains it confers.

5 Consultation Process

There has been active engagement with both Local Authorities within the Belfast Region and wider stakeholders including statutory providers, with a significant proportion of those who have either a direct role to play or influence in the shape and future direction of hard infrastructure provision being engaged. A list of the contacted organisations is summarised in Appendix B.

The following section reflects:

- **the perceptions of infrastructure investment need for each of the 6no. local authority areas, together with a headline summary of the interventions each local authority has identified as important to support economic growth; and**
- **key outputs from wider stakeholder consultations, including statutory providers.**

Within the consultation process, an evaluation of the stakeholder's perception of the current infrastructure provision, across a number of themes, has been undertaken, compared to the perceived future needs to achieve the vision for the Belfast Region. The outputs from this is shown in spider diagrams in each of the following sections.

Whilst there are sub-regionally specific priorities and themes considered in this Chapter, these will be reviewed against the wider stakeholder analysis in Chapter 6, where we will provide our assessment of the resulting critical infrastructure needs that are significant for the region as a whole.

The current Interim Report has reviewed the sub-regional priorities at a strategic level but further analysis over prioritisation and evaluation of infrastructure projects will need to be undertaken to establish a future infrastructure pipeline.

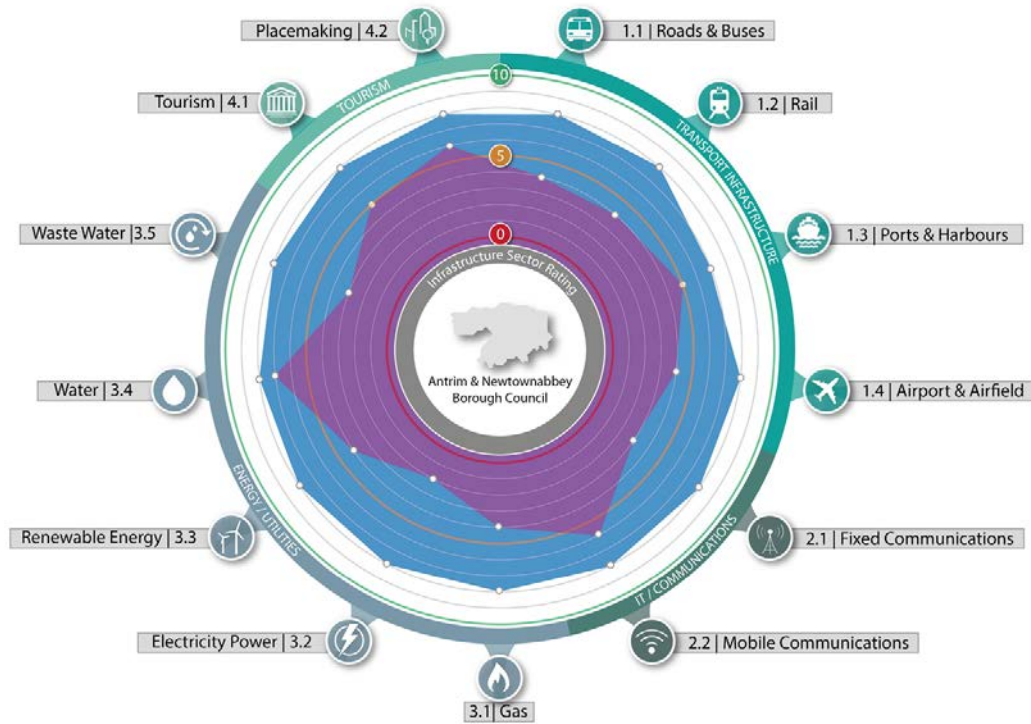
It should be noted that the presentation of potential projects is qualitative and indicative only. More detailed modelling, to include affordability and return on investment, will be carried out by KPMG in relation to those projects shortlisted for inclusion in a future City Deal bid.

5.1 Local Authorities Review of Perceived Need and Proposed Interventions

5.1.1 Antrim and Newtownabbey Borough Council



Critical Infrastructure Needs Perceptions:



Current and Required Infrastructure Consultation Feedback (Purple: Existing Need, Blue: Target)

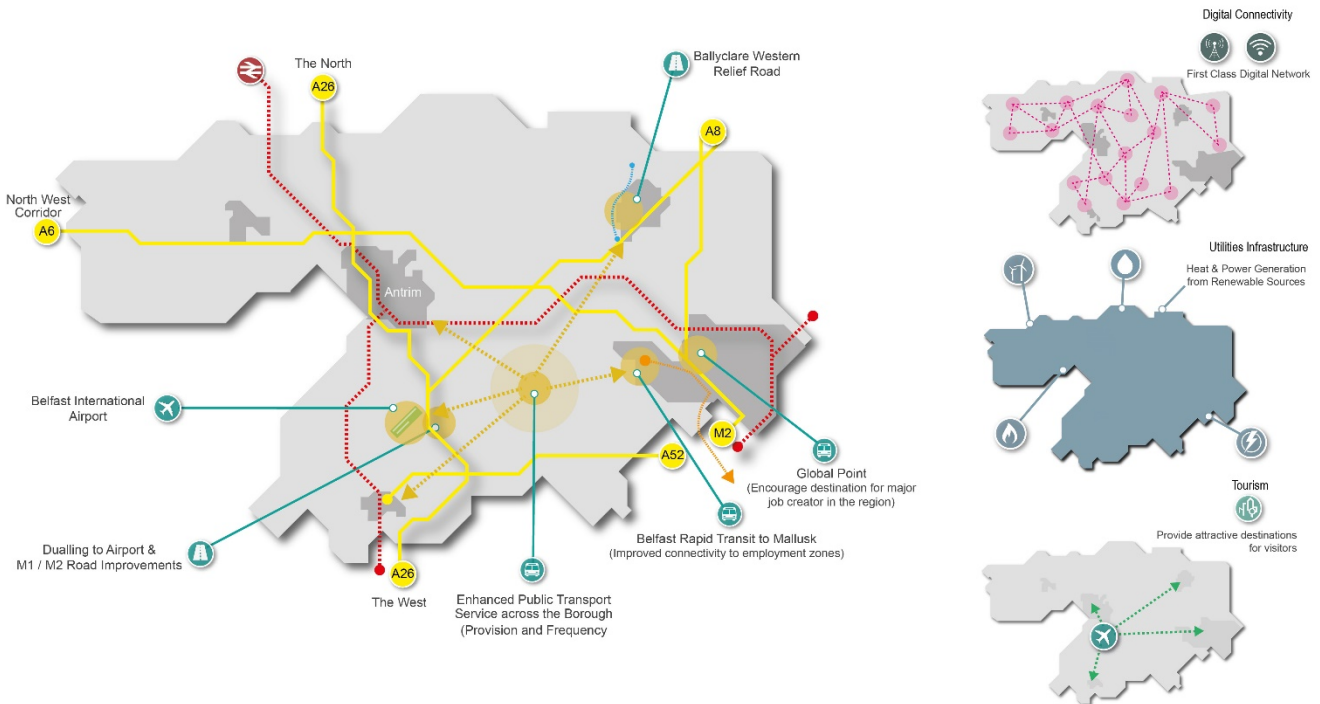
(Scoring 0-10, 0=Very poor, 5=adequate, 10=outstanding)

The above diagram illustrates the following key infrastructure themes whereby the need for interventions are recognised, namely:

- Poor road connectivity and bus provision within the sub-region;
- Poor Rail Halt connectivity;
- Fixed Communications poor in the rural areas;
- Electrical Point very poor and preventing development sites from commencing; and
- Waste Water connectivity poor

Identified Infrastructure Interventions to support Sub-Regional Growth

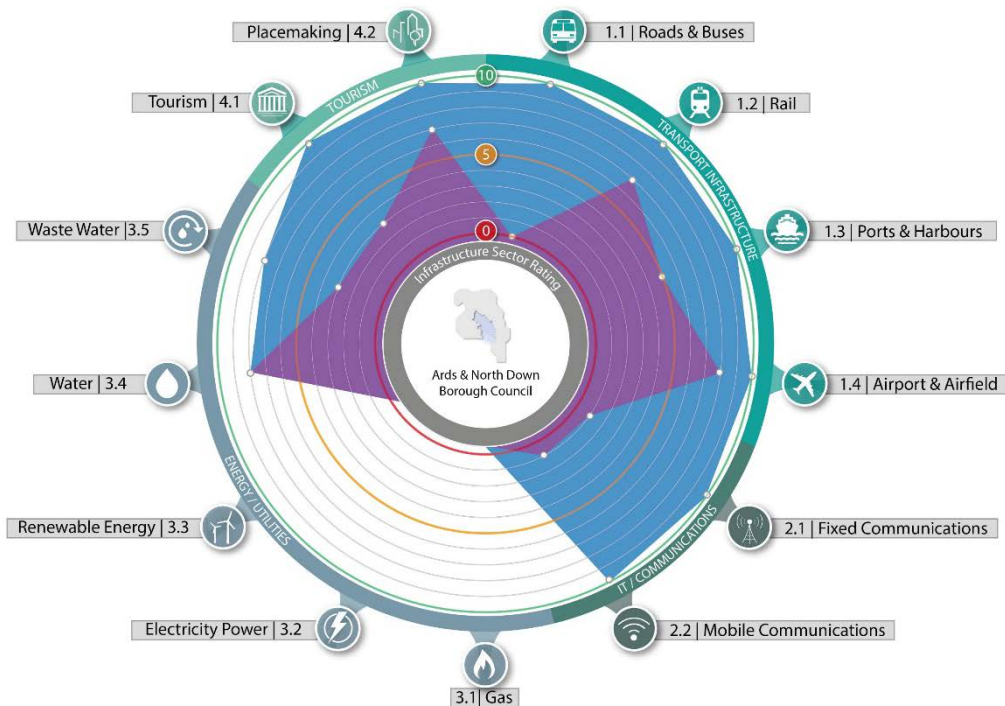
Key areas for intervention to improve infrastructure provision within the local authority area are identified diagrammatically below, together with key highlighted potential solutions.



- BRT to Mallusk or alternative means for improved connectivity to the employment zones in the region;
- Transportation across the borough to provide easy access by employees from their communities to their place of work;
- Belfast International airport - dualling to airport and road improvements onto M1 and M2;
- Improved park and ride provision to rail and consideration of new halts; and
- Ballyclare relief road.

5.1.2 Ards and North Down Borough Council

Critical Infrastructure Needs Perceptions:



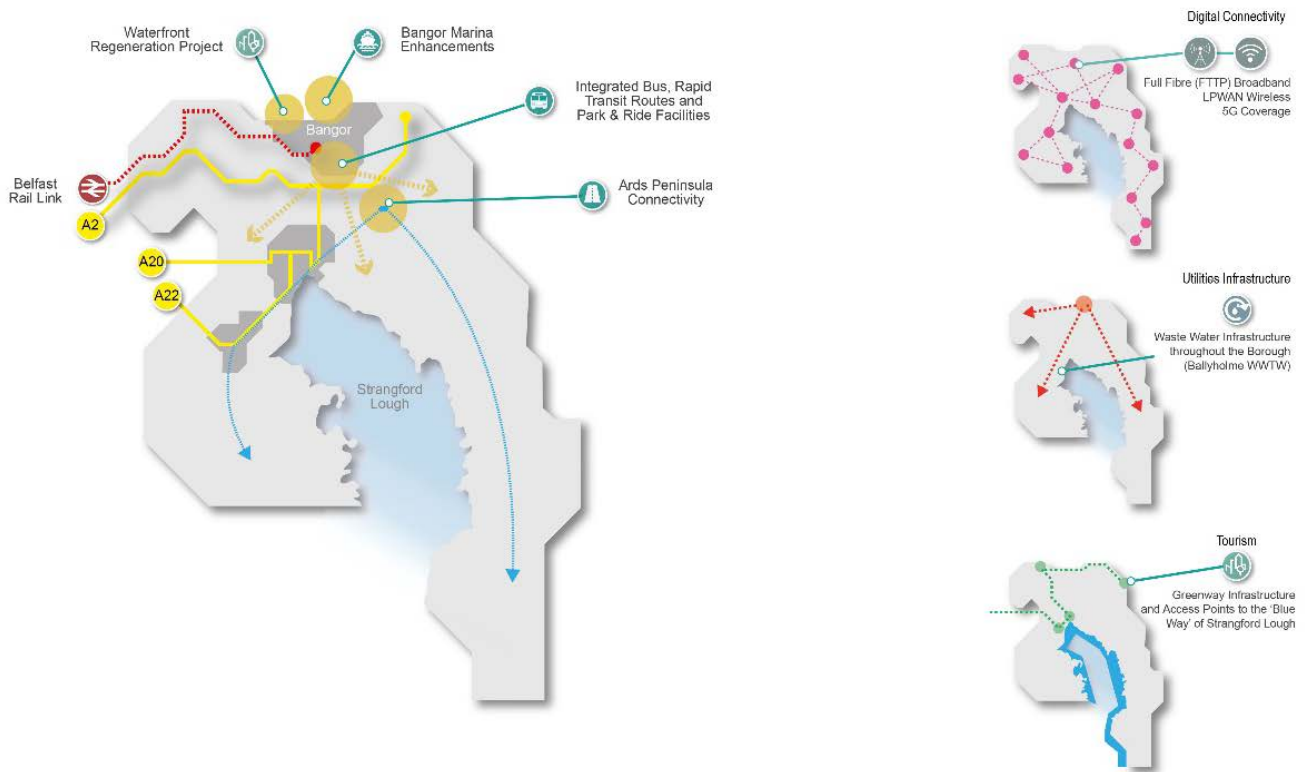
*Current and Required Infrastructure Consultation Feedback (Purple: Existing Need, Blue: Target)
(Scoring 0-10, 0=Very poor, 5=adequate, 10=outstanding)*

The above diagram illustrates the following key infrastructure themes whereby the need for interventions are recognised, namely:

- Very Poor road connectivity along the coastal roads;
- Public Transport bus provision and connectivity to Park & Ride sites to be improved;
- Very poor rural fixed communication provision;
- Below adequate waste water treatment provision; and
- Enhance tourism package required and supporting infrastructure.

Identified Infrastructure Interventions to support Sub-Regional Growth

Key areas for intervention to improve infrastructure provision within the local authority area are identified diagrammatically below, together with key highlighted potential solutions.



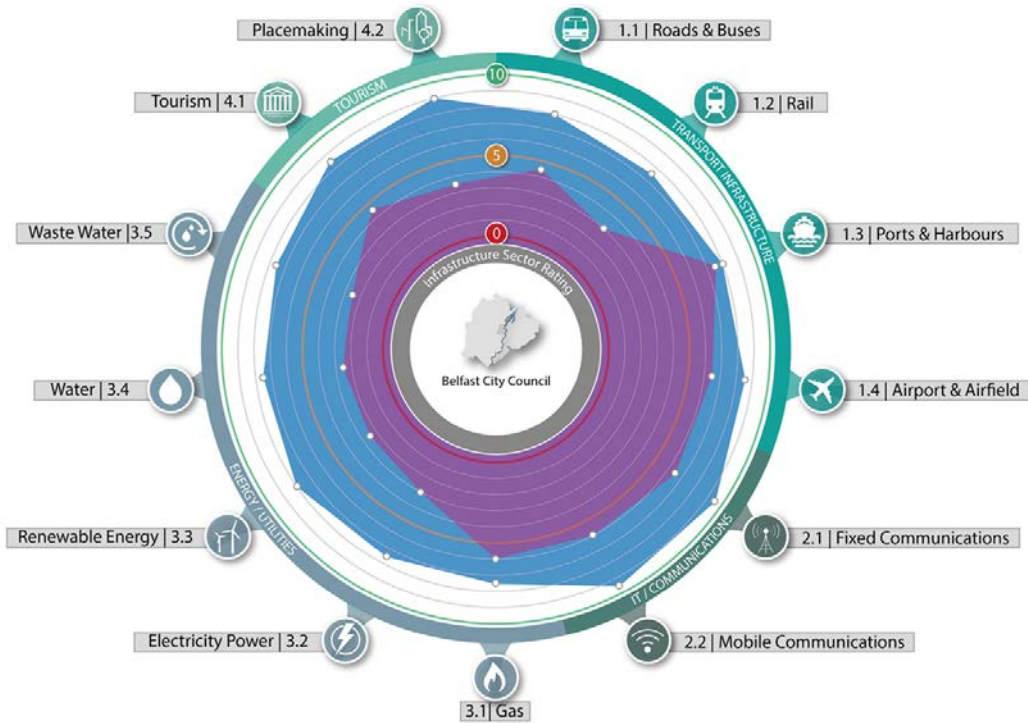
- Better connectivity to/from the Strangford Lough peninsula and provide enhanced tourist offering;
- Better integration of bus, rail provision across the sub-region and improved Park & Ride capacity to encourage modal shift in transportation;
- Enhanced, connected tourism offering spanning district and encompassing rural and coastal areas of Ards and North Down.

5.1.3 Belfast City Council



Belfast
City Council

Critical Infrastructure Needs Perceptions



Current and Required Infrastructure Consultation Feedback (Purple: Existing Need, Blue: Target)

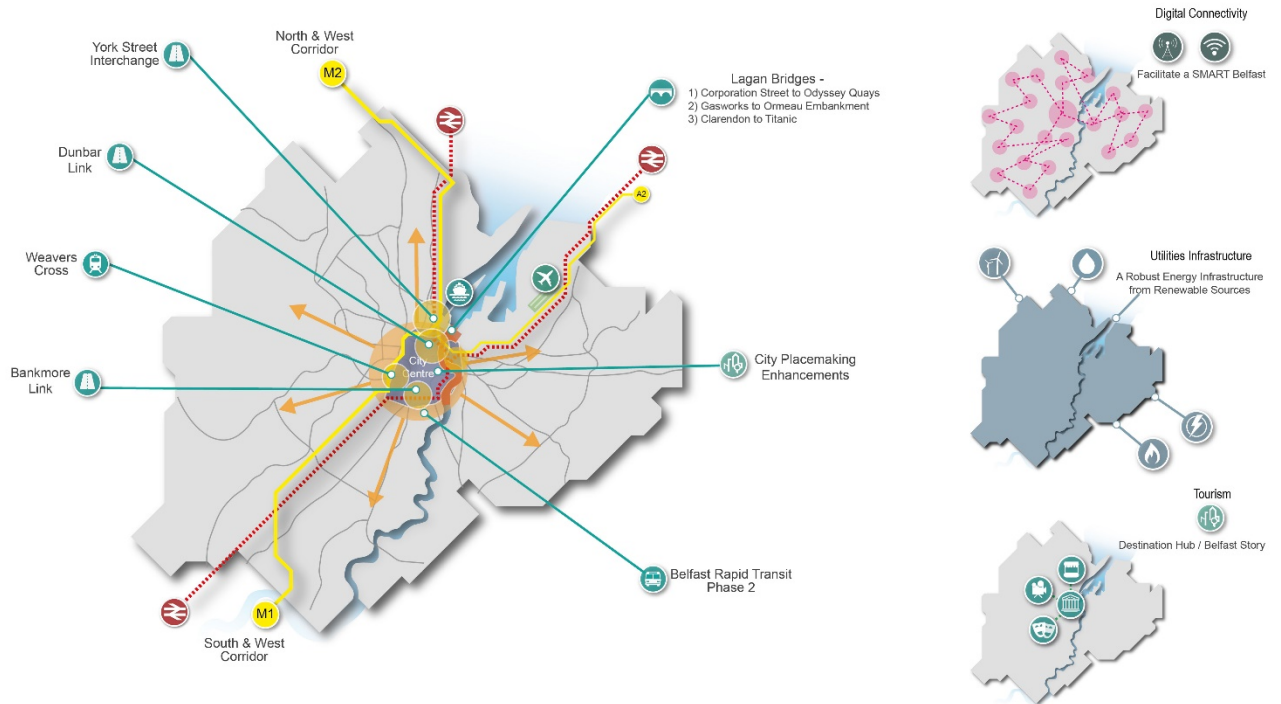
(Scoring 0-10, 0=Very poor, 5=adequate, 10=outstanding)

The above diagram illustrates the following key infrastructure themes whereby the need for interventions are recognised, namely:

- Rail connectivity across sub-region, but particularly cross-border along Eastern economic corridor to Dublin;
- Utilities provision including electricity and wastewater provision; and
- Enhanced placemaking and tourism infrastructure to enhance the place offering.

Identified Infrastructure Interventions to support Sub-Regional Growth

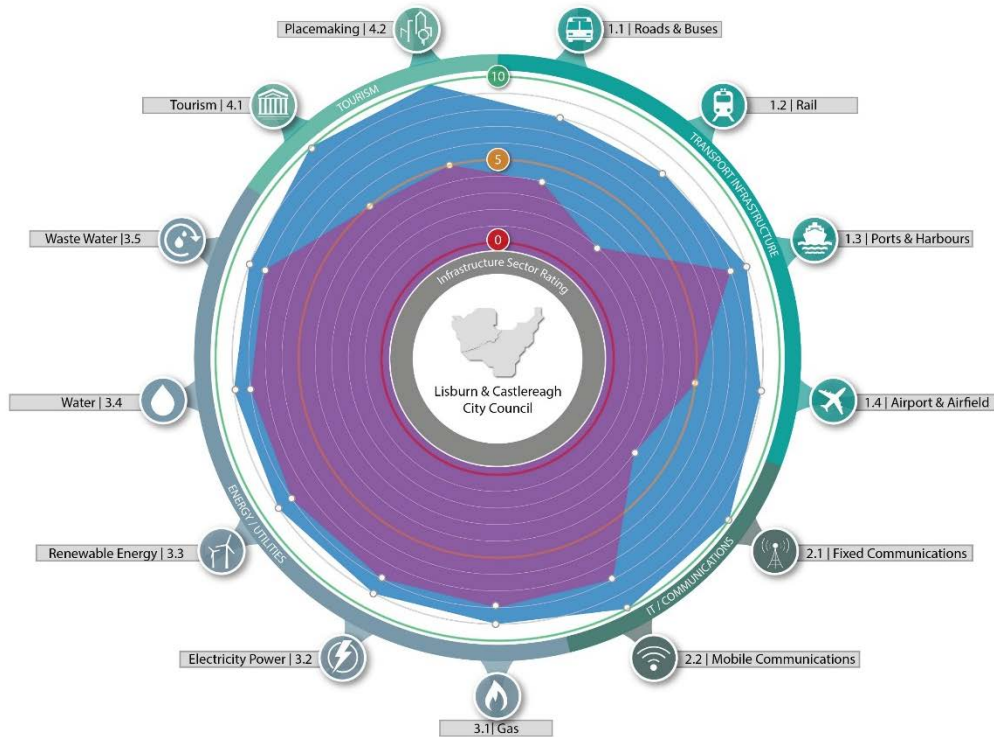
Key areas for intervention to improve infrastructure provision within the local authority area are identified diagrammatically below, together with key highlighted potential solutions.



- Enhanced connectivity across the River Lagan through a series of bridges;
- Key road improvements including York Street Interchange and a number of smaller Link Road interventions;
- Extended public transport network, particularly through BRT Phase 2 and improved walking and cycling networks;
- Vulnerable waste water and electricity provision in the city, not capable of meeting forecasted demand;
- Targeted enhanced digital connectivity, particularly in locations of target growth sector investments.

5.1.4 Lisburn & Castlereagh Council

Critical Infrastructure Needs Perceptions



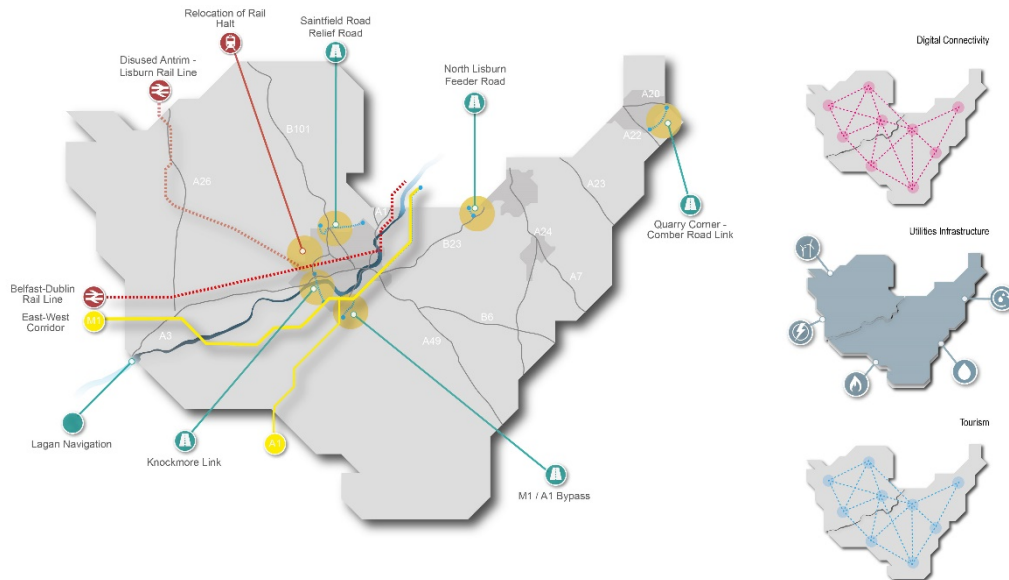
*Current and Required Infrastructure Consultation Feedback (Purple: Existing Need, Blue: Target)
(Scoring 0-10, 0=Very poor, 5=adequate, 10=outstanding)*

The above diagram illustrates the following key infrastructure themes whereby the need for interventions are recognised, namely:

- Poor digital connectivity, particularly fixed communications in rural areas;
- Need for additional placemaking and tourism infrastructure;
- Transport connectivity below expectations, including both roads and public transport provision.

Identified Infrastructure Interventions to support Sub-Regional Growth

Key areas for intervention to improve infrastructure provision within the local authority area are identified diagrammatically below, together with key highlighted potential solutions.

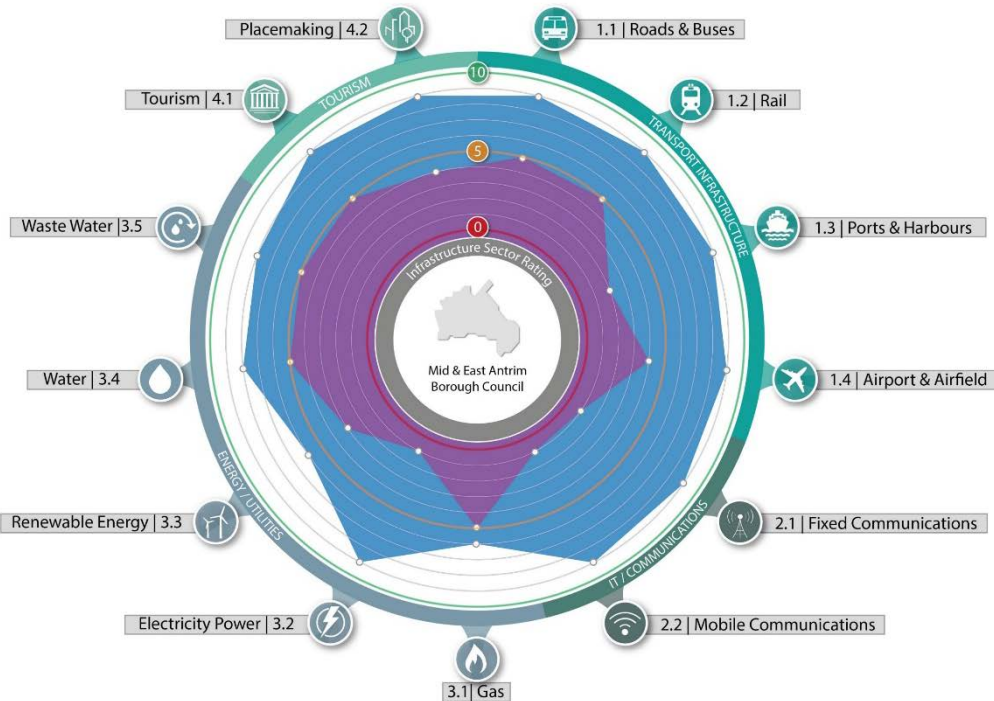


- Strategic road improvements including North Lisburn Feeder Road, Saintfield Road Relief Road and Knockmore Link Road;
- Rail enhancements through relocation of halts and re-opening of infrastructure for public use; and
- Tourism improvements through new and improved offerings at Dundonald, Hillsborough and the River Lagan.

5.1.6 Mid & East Antrim Borough Council



Critical Infrastructure Needs Perceptions



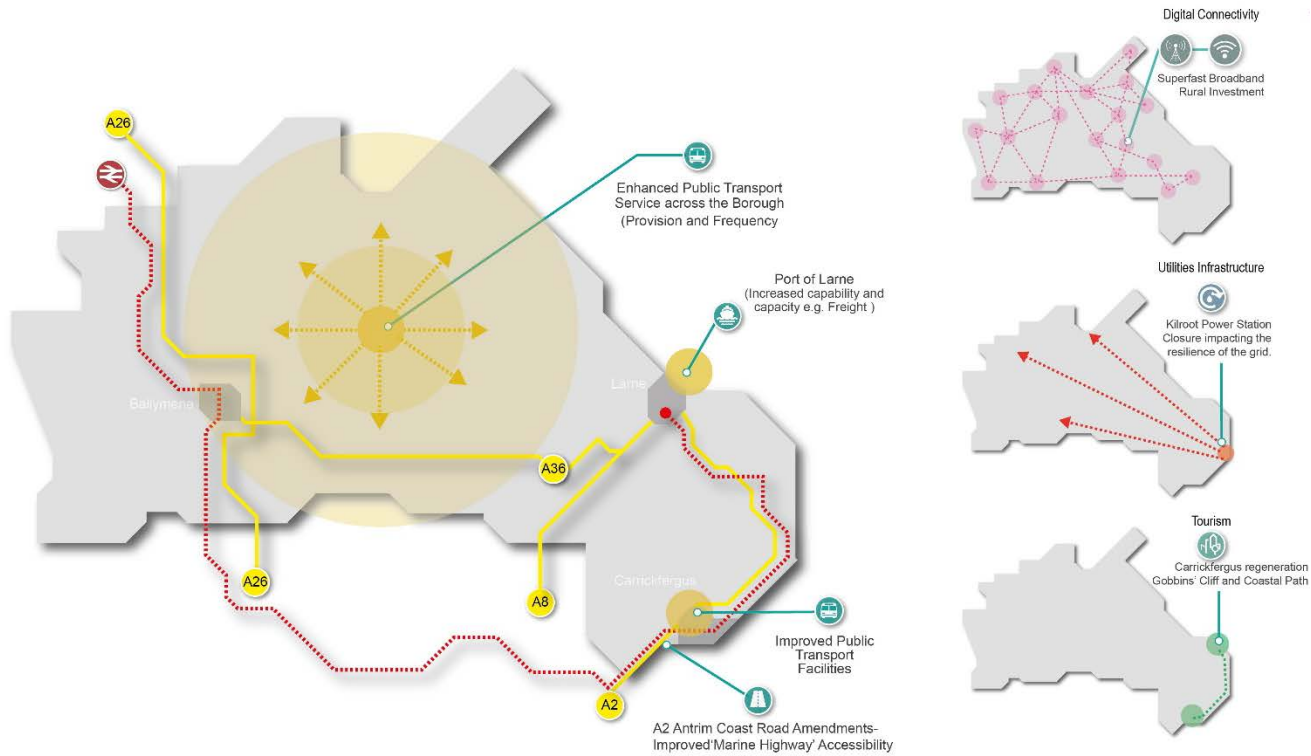
*Current and Required Infrastructure Consultation Feedback (Purple: Existing Need, Blue: Target)
(Scoring 0-10, 0=Very poor, 5=adequate, 10=outstanding)*

The above diagram illustrates the following key infrastructure themes whereby the need for interventions are recognised, namely:

- Transport provision spanning road, rail and, in particular harbour capability at Larne;
- Limited viable, reliable digital connectivity across the region, and in particular rural areas;
- Poor electricity and waste water capacity to meet anticipated need;
- Additional tourism offering needed to encourage increased visitor numbers.

Identified Infrastructure Interventions to support Sub-Regional Growth

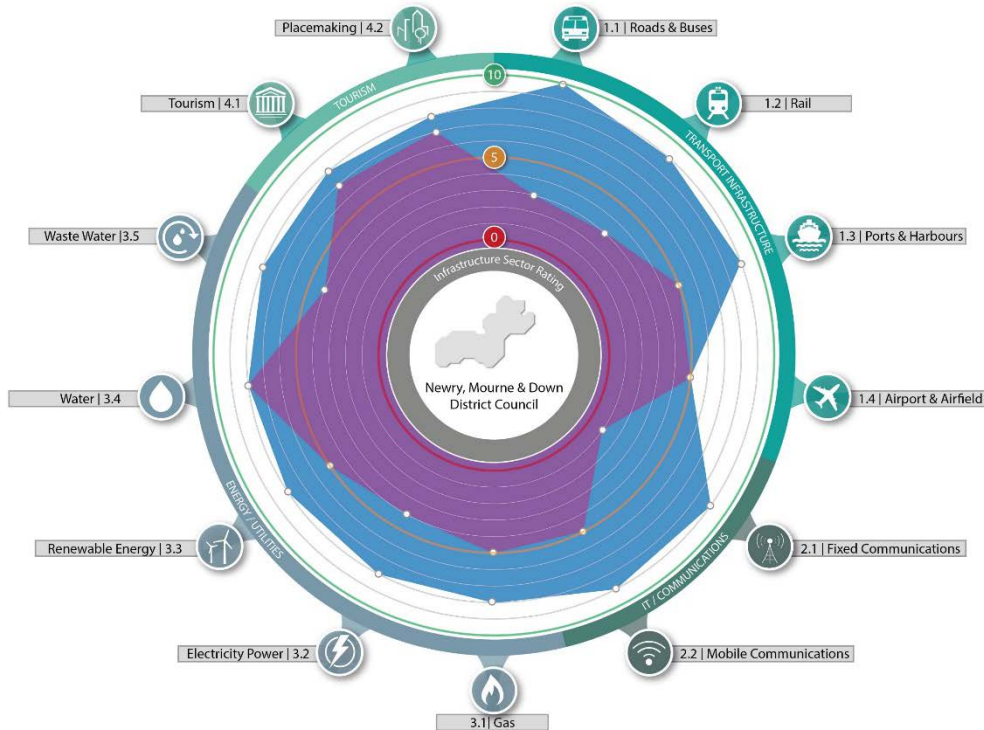
Key areas for intervention to improve infrastructure provision within the local authority area are identified diagrammatically below, together with key highlighted potential solutions



- Improved capability and capacity at Larne Harbour;
- Regeneration of Carrickfergus as a combined jobs and tourism growth area, combined with Gobbins Cliff and Coastal Path Phase 2 potential;
- Need for resilient energy supply, particularly with the closure of Kilroot power station;
- More connectivity on public transport across the region;
- Fibre roll out needs, particularly to rural areas.

5.1.7 Newry Mourne & Down District Council

Critical Infrastructure Needs Perceptions



Current and Required Infrastructure Consultation Feedback (Purple: Existing Need, Blue: Target)

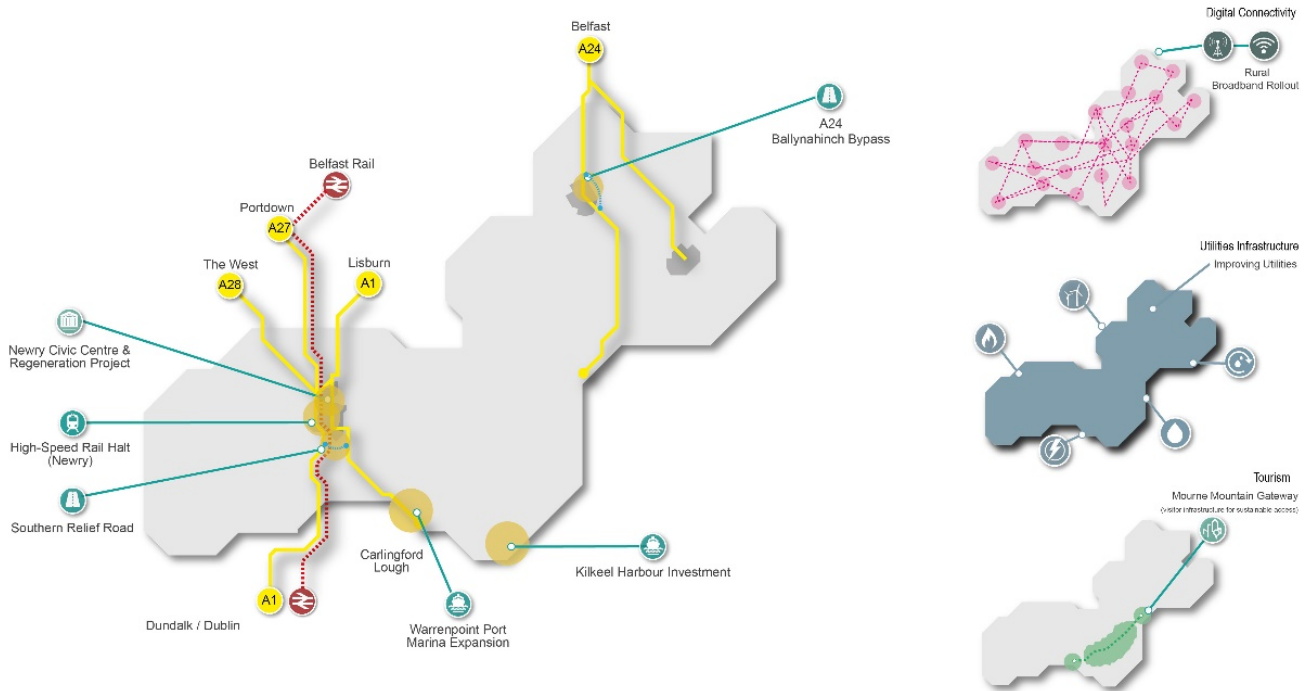
(Scoring 0-10, 0=Very poor, 5=adequate, 10=outstanding)

The above diagram illustrates the following key infrastructure themes whereby the need for interventions are recognised, namely:

- Support to Warrenpoint Harbour through improved road connectivity on Southern Relief Road;
- Digital connectivity, particularly in rural areas, vital to supporting social inclusion and mobility;
- Utilities provision in the form of electricity and wastewater key to region's success;
- Transport provision insufficient across both road and public transport.

Identified Infrastructure Interventions to support Sub-Regional Growth

Key areas for intervention to improve infrastructure provision within the local authority area are identified diagrammatically below, together with key highlighted potential solutions.



- High Speed Belfast to Dublin rail halt and overall improved public transport connectivity to link with this;
- Strategic road improvements including Southern Relief Road and A1 / A24 improvements;
- Building on existing tourism offering to new Mourne Mountain Gateway package;
- Rural digital connectivity, both fixed and mobile.

5.2 Wider Stakeholder Consultation Feedback

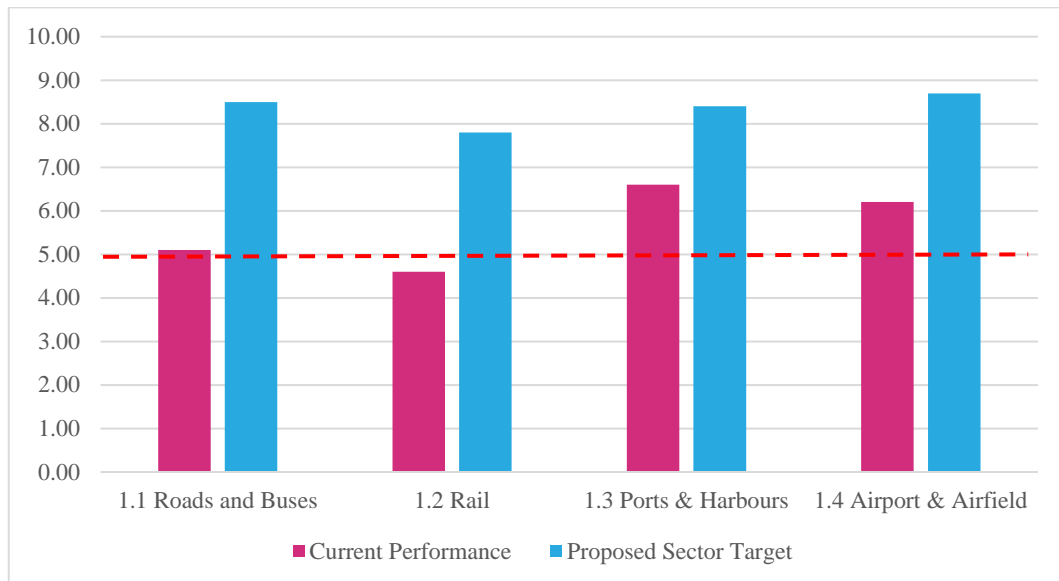
The following sections reflect the key outputs from wider stakeholder consultations, including statutory providers (as identified in Appendix B). The stakeholders provided a diverse range of response and perceptions which are based on either their direct in-depth understanding from their Infrastructure sector alongside other more general views.

The charts below represent the cumulative views, held by wider stakeholders consulted, on the current and future infrastructure provision in the Belfast region.

The scoring was applied following the consultation with key representatives of the wider stakeholder companies and organisations and reflects their view of the infrastructure sector to which they have direct involvement in and also those which are inter-related. The evidence basis on which the feedback was prepared is therefore vastly ranging and this has been grouped into the sub-sections below and not assigned to individuals or associations.

5.2.1 Transport Infrastructure

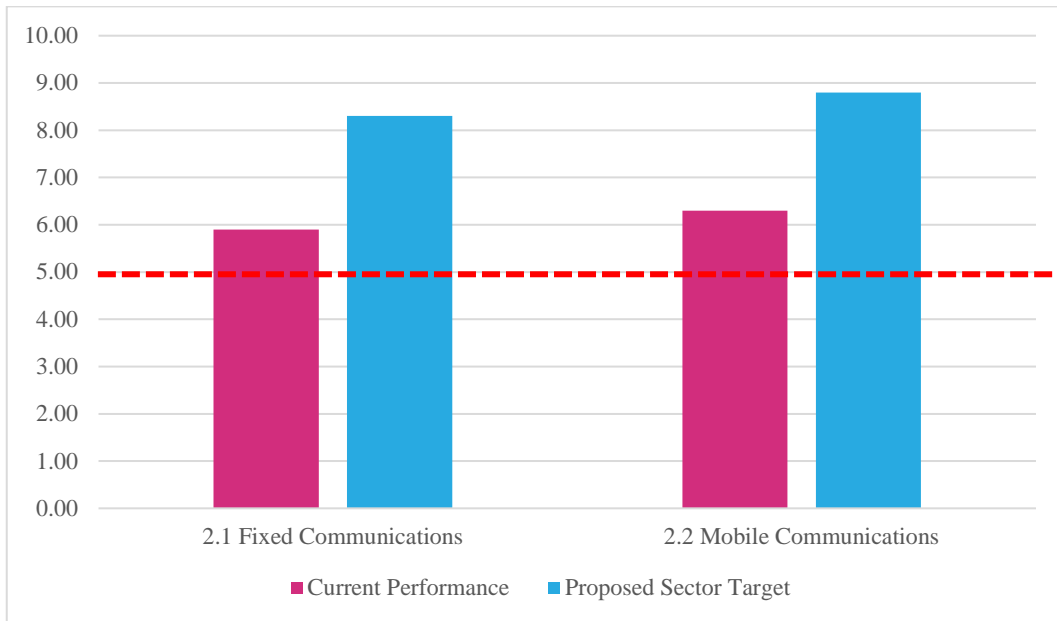
The chart below represents the cumulative views, held by wider stakeholders consulted, on the current and future transport infrastructure provision in the Belfast region.



*Current & Proposed Transportation Infrastructure Wider Stakeholder Consultation Feedback
(Scoring 0-10, 0=Very poor, 5=adequate, 10=outstanding)*

5.2.2 Digital Infrastructure

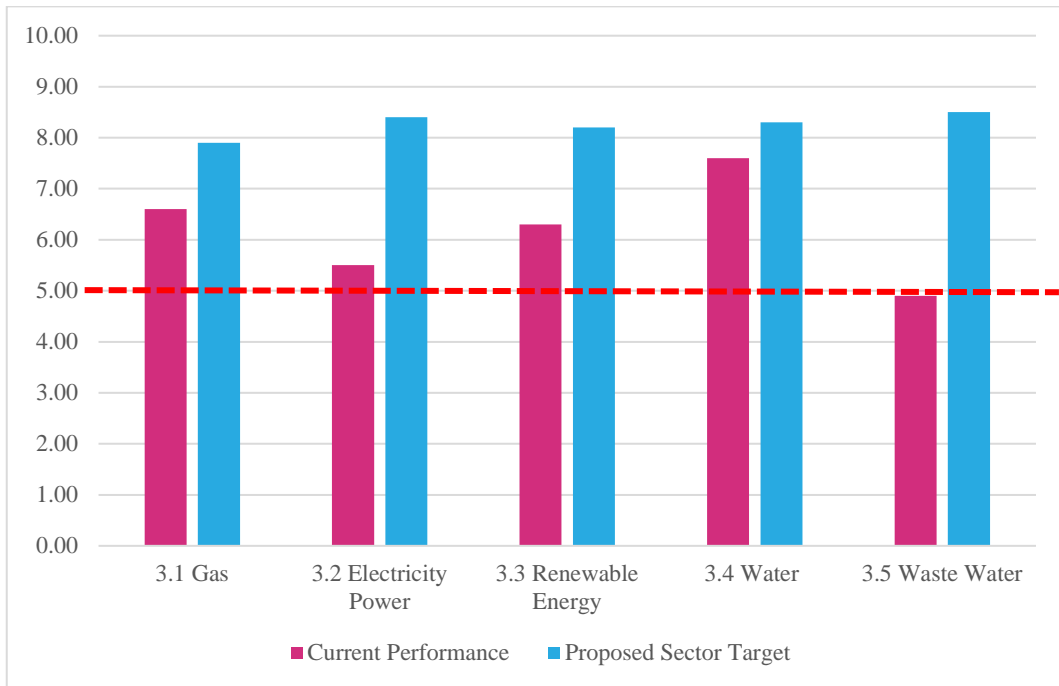
The chart below represents the cumulative views, held by wider stakeholders consulted, on the current and future digital infrastructure provision in the Belfast region.



*Current IT/Communication Infrastructure Consultation Feedback
(Scoring 0-10, 0=Very poor, 5=adequate, 10=outstanding)*

5.2.3 Utilities Infrastructure

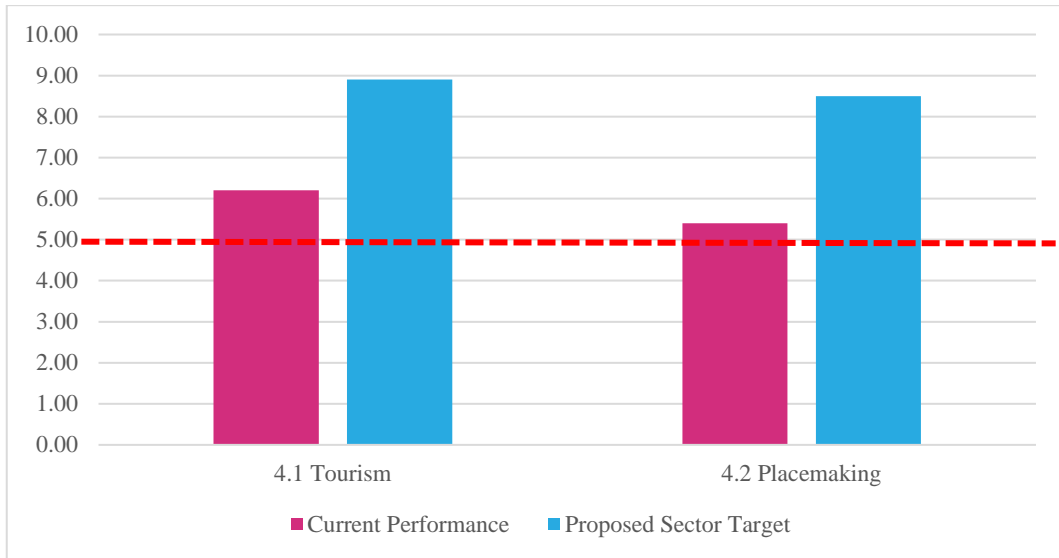
The chart below represents the cumulative views, held by wider stakeholders consulted, on the current and future energy / utilities infrastructure provision in the Belfast region.



*Current Energy/Utility Infrastructure Consultation Feedback
(Scoring 0-10, 0=Very poor, 5=adequate, 10=outstanding)*

5.2.4 Tourism / Placemaking

The chart below represents the cumulative views, held by wider stakeholders consulted, on the current and future tourism / placemaking infrastructure provision in the Belfast region.



*Current Tourism Infrastructure Consultation Feedback
(Scoring 0-10, 0=Very poor, 5=adequate, 10=outstanding)*

5.2.5 Summary of Wider Stakeholder Views

The existing status of Belfast Region infrastructure provision

There are significant gaps in the Belfast Region infrastructure offering which have been made more pronounced by sustained under-investment over many years.

- **Transport infrastructure**, and links, across road, rail, walking and cycling remain a problem. Belfast has no direct rail links to either of its two airports and links to and between other urban centres across the region require investment.
- General standards of roads in the sub-region areas is deteriorating through budgetary constraints.
- The **utility network** is unable to support current development growth aspirations, and no clear vision for delivering programmes of investment to achieve higher growth aspirations is evident.
- **Digital connectivity** is variable, with limited evidence of investment placing the region at the forefront of rapid technological changes.

Infrastructure to meet current needs for Belfast Region

Key infrastructure projects identified as being critically significant to address the current need for the Belfast Region:

- **BRT Expansion** - The development of the Belfast Rapid Transit system will enhance the city's public transport offering to a degree when it goes live in September. Work should be done in collaboration with the Department of Finance and the Department for Infrastructure to advance Phase 2 of this flagship project.
- **Belfast Transport Hub** - The development of the Transport Hub should not only provide a new regional and international gateway to the region but could also provide an opportunity to create more Grade A office space, as suggested in the Belfast City Centre Regeneration and Investment Strategy.
- **Rail Investment** - There are opportunities to develop rail to air links not just with the George Best City Airport and the Belfast International Airport but also onward transport to City of Derry Airport and Dublin Airport. Linking these transport centres will offer more choice and flexibility for commuters across the region, across the island and internationally.
- **New and Expanded Park and ride capacity** – enhanced provision at each location and enhanced connection from wider rural communities.
- **New and Expanded cycling infrastructure** – improve the health and wellbeing through leisure-use and encourage sustainable transport commuting mode of travel.

- **Road Investment** - York Street Interchange, highway dualling of carriageways in the Region, in particular to Belfast International Airport, Knockmore relief road, and new Southern Relief Road in Newry.
- **Address future pressures on spatial planning and environment** - identified in the Living with Water Programme.
- **Fixed Communications** - Fibre rollout plan for 2018 involves considerable expansion of Virgin Media network in Antrim and Newtownabbey and Ards and North Down local authority areas. VM are also working closely with Belfast City Council on their successful Local Full Fibre Network (LFFN) bid.

Infrastructure to meet future needs for Belfast Region

Key Projects Identified as being critically significant to address the future need:

- **Links to other urban centres** across Northern Ireland should also be explored with a view to expanding rail and road transport options. There are, for example, no direct rail services to locations in the South West of the region and only a limited amount of options for connections to any stations West of the Bann outside of the Enterprise Service line. A concerted effort to enhance the Dublin to Belfast High Speed Rail system would make the region more accessible to frontier workers and visitors keen to explore the tourism product in Northern Ireland.
- **Rail Investment** – Additional investment in rail fleet and dualling of the Dargan Bridge to allow 2-way rail movements across the Dargan Viaduct in Belfast. This will create additional capacity for enhanced rail service provision across the northern rail network and permit longer train, reduced journey time and increased frequency.
- **Ports** - Belfast Region has the potential to grow, however if the entry points to the region remains small, then industry can't use the other infrastructure elements. This could include extension of general cargo quays at Larne and the addition of a modern roro ramp.

5.2.6 A Vision to Unlock Investment

One aspect that was consistently identified by the wider stakeholder consultees was the absence of a coherent, bold infrastructure vision for Northern Ireland as a whole.

A distinct lack of clarity on the long-term infrastructure needs and priorities, articulation of the aspirations for infrastructure investment and limited tangible future projects was consistently raised as a barrier to understanding the scope and developing the means to build infrastructure which will unlock the region's potential.

6 Strategic Infrastructure Priorities for the Belfast Region

It is evident from the baseline evidence review and stakeholder consultation process, that there is significant scope to improve the infrastructure provision for the Belfast region, thereby supporting the realisation of ambitious economic growth.

The following section provides a strategic overview of where the current challenges exist in the state of the region's infrastructure across the 4 main theme areas. Summaries of the opportunities for infrastructure investment which should be prioritised are identified together with some of the required actions to tackle barriers and maximising opportunities.

It should be noted that the presentation of potential projects is qualitative and indicative only. More detailed modelling, to include affordability and return on investment, will be carried out by KPMG in relation to those projects shortlisted for inclusion in a future City Deal bid.

6.1 Transport Infrastructure

Challenges

- Although the perception from the stakeholder consultation is that the NI road infrastructure is inadequate, it is our suggestion that the main trunk roads would be largely adequate if a modal shift away from traditional car-dependency could be achieved.
- It has been well documented that Belfast is one of the UK's worst cities for traffic congestion with drivers spending 200hours a year stuck in traffic jams leading to lack of industry productivity², GVA, lack of commuter satisfaction and contribution to increased environmental pollution along the road corridors;
- There are pockets of need in the road infrastructure provision across the Belfast Region, including addressing challenges of coastal road erosion, key strategic interventions such as York Street Interchange and the Belfast Transport Hub.

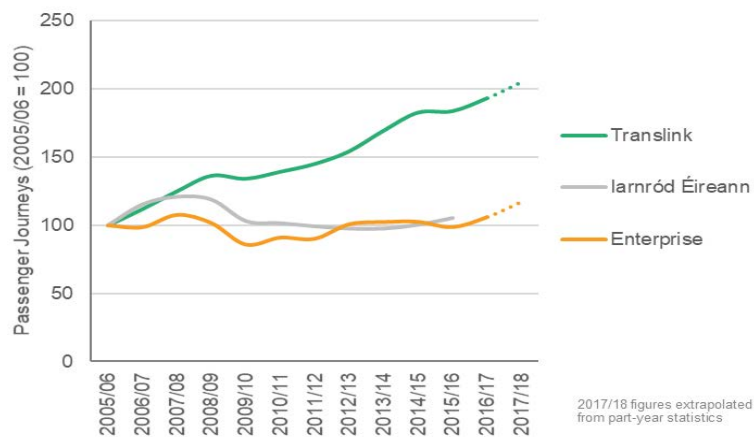
Opportunities

- The transformation from a car-dominated choice of travel requires additional measures to be in place to encourage modal shift which includes enhanced public transport provision for local and rapid bus network provision, cycle routes and rail infrastructure enhancement. This includes new fleet of

² <https://www.belfasttelegraph.co.uk/news/northern-ireland/belfast-uks-most-congested-city-with-drivers-stuck-in-jams-200-hours-a-year-35466547.html>

buses/trains and operational efficiencies in the route choices, reliability and frequency of service.

- The customer experience and well-being should be at the forefront of encouraging uptake in public transport provision together with fiscal and policy measures to make it commercially attractive and to reach out to a wider network of communities across the Belfast Region.
- Improved transportation interconnectivity, such as the Belfast Transport Hub (Weavers Cross) and accessibility to rail/bus provision through park and ride facilities and outer-Belfast City multi-storey car-parks should be encouraged and expanded upon to meet future needs.
- There is an opportunity to grow demand and attract passengers from coach and car. Around 850,000 journeys were made on the Enterprise service in 2016/17, but less than a quarter of these journeys were end-to-end trips between Belfast and Dublin. Intercity patronage between Dublin and Belfast is currently low compared to flows such as Dublin to Cork or Galway (both smaller cities than Belfast). Furthermore, ridership has barely changed since 2005/06: it has not kept pace with demand for other rail services in Northern Ireland, as demonstrated in the chart below.



Belfast Region Transport Projects

The table below summarises a qualitative analysis of projects that are considered to have significant contribution to the region and provide strategic case context in support of subsequent economic analysis. Whilst there are additional sub-regional transport projects that have been reviewed and deemed important for the local context, only those identified as regionally significant feature on the preliminary list below.

Project	GVA and Jobs Impact	Place-making / natural asset / investment attracting	Tourism generating	Movement supporting	Sustainability promoting	Supportive of further growth

York Street Interchange	****	**	***	****	***	***
BRT Phase 2	***	**	**	****	****	***
Knockmore Relief Road	**	**	*	**	**	**
Southern Relief Road	***	**	**	***	**	****
Urban Public Transport Network – Connectivity/ expansion of P&R	***	**	**	****	****	**
Translink Rail Investment – Additional Rolling Stock	****	**	***	****	****	****
Belfast – Dublin (Higher Speed) Rail.	****	**	****	****	****	****

(Qualitative Scoring: * Low, ** Medium, *** High, ****Very High)

In Summary:

- Road infrastructure has currently very high levels of congestion but the solution to address this issue is not through building of further roads but an increase in a high quality public transport provision to encourage modal shift, offering alternative sustainable travel modes including rail (additional trains), buses (including BRT), cycling, walking and future shift to Autonomous Vehicle / Electric Vehicle networks.

6.2 Digital (IT/Communications) infrastructure

Challenges

- Across the rural areas of the digital infrastructure need is centred on basic connectivity including broadband roll-out and 3G / 4G provision.
- The mobile network provision, access/reliability varies greatly outside the Belfast City urban centre and there are concerns over provision across the cross-border community areas, especially any impact following Brexit.

Opportunities

- The Belfast Region is rapidly increasing its reputation as an attractor to new businesses start-ups and relocations in the digital market, in particular specialist expertise in cyber security.
- The stakeholder consultation provided contrasting views on the current infrastructure provision of both fixed and mobile communications sector.

- A coherent strategy for the siting of high growth sector businesses, including any future digital hub, data centres or innovation business sector improvements will ensure a high level of digital connectivity in terms of speed, resilience and latency.

Belfast Region Digital Projects

Proposed digital projects will be considered as part of the report by Future Cities Catapult.

In Summary:

- Digital connectivity is currently not adequate to support sustainable, inclusive growth to the level of the aspirations of the region. As such investment in both fixed and rural connectivity is required, offering a combination of ‘hot spots’ of high speed, latency and frequency in identified urban centres together with broader full fibre deployment throughout the rural areas of the sub-region.

6.3 Energy/Utilities

Challenges

- Changes to the single electricity network and investments in the transmission network across the island of Ireland will be critical elements to ensure the Region’s growth ambitions are achievable. However, risks remain due to the costs of connection and supply, security of supply and sustainable energy aspects, particularly within the context of potential Brexit impacts.
- The suitability of wastewater infrastructure to meet current need is limited, with the need for significant investments to upgrade and increase network capacity critical to enabling economic growth across the Belfast Region.

Opportunities

- Within the Belfast Region, the availability and resilience of gas provision is considered adequate to support economic growth.
- Similarly, through sustained focused investment on the clean water supply network, the strategic needs are understood to be adequate until at least 2030.
- The renewable electricity provision within Northern Ireland is well catered for and current renewable targets set for NI wider region of 40% are being rapidly approached (34.8% for the 12 month period January 2017 to December 2017). Furthering this contribution will be largely determined by the ability of the electrical infrastructure to facilitate this and whilst

currently world leading capacity of 65% renewable generation in being achieved on the island, this is recognised as needing to go higher again.

Belfast Region Energy/Utilities Projects

The table below summarises a qualitative analysis of projects that are considered to have significant contribution to the region and provide strategic case context in support of subsequent economic analysis. Whilst there are additional sub-regional utilities projects that have been reviewed and deemed important for the local context, only those identified as regionally significant feature on the preliminary list below.

Project	GVA and Jobs Impact	Place-making / natural asset enhancing / investment attracting	Tourism generating	Movement supporting	Sustainability promoting	Supportive of further growth
Living With Water Programme (LWWP) - Improvements to address the critical needs for waste water infrastructure and Sewage Treatment Works	**	***	*	*	****	****

*(Qualitative Scoring: * Low, ** Medium, *** High, ****Very High)*

In Summary:

- Electricity infrastructure provision is broadly adequate across the region to meet today's need however concerns exist regarding the cost of generation, transmission and distribution investment needed to support the bold economic growth targets of the region, together with the risks associated with the time delays involved in delivering infrastructure of this nature. With the market constrained to meeting today's need and limited / no future energy scenario planning for the region, the scale of the risk and investment needed cannot even be quantified at this point.
- With regards to waste water infrastructure, forecasts of demand have been developed and the Living with Water programme has been constructed to better enable investment. It should be recognised however that this is currently restricted to the network out falling to Belfast Lough only at this stage.

6.4 Tourism/Placemaking

Challenges

- To maximise the wider Belfast Region tourism offer there is a need to prolong and deepen the visitor stay within the region by offering a mix of tailored experiences.
- The infrastructure requirements needed to support the tourism sector include investment in additional ‘experiences’ to support the offer, together with more subtle aspects such improved signage, way-finding and improved visitor access to coastline and water-sports.

Opportunities

- The Belfast Region has in recent years been evolving into providing a world leading tourism offer, in particular with the Titanic Visitor Museum and ancillary offer.
- Capitalising on the natural and cultural assets which span the entire region will help articulate the experience to be expected, driving forward the potential growth of the tourism sector further.

Belfast Region Tourism Projects

The table below summarises a qualitative analysis of projects that are considered to have significant contribution to the region and provide strategic case context in support of subsequent economic analysis. Whilst there are additional sub-regional tourism projects that have been reviewed and deemed important for the local context, only those identified as regionally significant feature on the preliminary list below.

Project	GVA and Jobs Impact	Place-making / natural asset enhancing / investment attracting	Tourism generating	Movement supporting	Sustainability promoting	Supportive of further growth
Bangor Waterfront	***	****	**	**	**	***
Belfast Streets Ahead Phase 5	**	***	*	**	**	***
Improved Greenway and Open space Parks in Belfast	**	***	*	*	*	**

*(Qualitative Scoring: * Low, ** Medium, *** High, ****Very High)*

{Note, Tourism projects are reflected in the Deloitte Tourism Strategy developed as part of the City Deal Project}

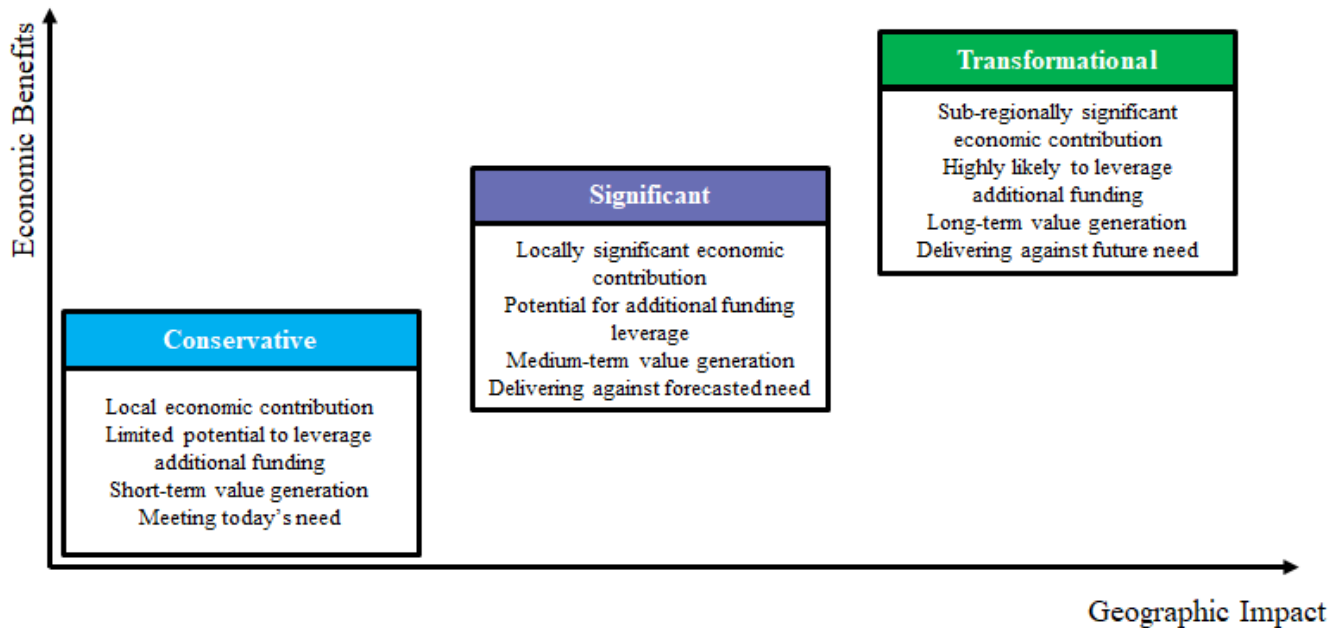
In Summary:

- Promotion of tourism / placemaking projects is an essential part of generating jobs, economic growth across the region and creating an attractive place to live, work and enjoy. Through the holistic development of the entire sub-region tourism offering, opportunities are afforded greater than the sum of individual parts. The required infrastructure needed to support the facilities are predominantly transport related but the necessary utility infrastructure must also be readily available at these locations.

7 Transforming the Belfast Region through Infrastructure

The proposed economic narrative to “share in growth, support growth and share in the proceeds of growth” will require transformational interventions in the region’s infrastructure.

The baseline review and stakeholder consultation process has highlighted a range of projects which could contribute towards the Belfast region vision within the Industrial Framework. These tend to focus in the spectrum of **Conservative – Significant Projects** (as shown in the diagram below), where impacts are likely to be seen in a more localised area, with either those that will have more localised impact or, if they are more significant to the Belfast Region as an entirety, are quite focused on addressing quite short-term forecasted need. It is recognised that these infrastructure projects are important and have a key role to play in addressing the local gaps and current critical infrastructure needs, as a consequence of the infrastructure deficit in the region.



However, to maximise the economic growth and achieve a *Dynamic, Inclusive, Connected Belfast Region*, there needs to be a step-change in infrastructure provision to catalyse further investment and growth. ‘**Transformational Infrastructure Investment Projects**’ are needed which will deliver sub-regionally significant economic contributions, are highly likely to leverage additional funding, will generate long-term value and crucially are focused on more future based time horizons.

Transformational projects may be individual projects or a package of schemes benefiting from a wider collective of enhancements.

For example, through the glomeration of current tabled Tourism Projects combined into a package, 'Belfast Region Tourist Way' could be imagined as a transformative tourism offering to support sharing of the growth across the city region.

Potentially transformative infrastructure projects for the region are summarised below.



7.1 Transforming through Transport

- **High Speed Belfast to Dublin**

Higher speed connectivity on a new rail route from Belfast to Dublin, along the Eastern Economic Corridor.

- **Mobility As a Service**

Investment in a digital platform that integrates end-to-end trip planning, booking, electronic ticketing, and payment services across all modes of transportation, public or private, including the provision of enhanced public transport services.

- **Upgrading A1 to motorway**

Conversion and supplementary new lanes to upgrade the current road infrastructure from Belfast city to the Border.

- **AV Test Region**

Creating a connected Belfast Region Autonomous Vehicle Test Area with expanded links to the wider Region.

- **EV Networks**

Infrastructure provision to expand electric vehicle roll-out of charging points and addition of pilot projects for domestic community EV charging hubs.

7.2 The Digital Transformation

- **Straight to 4G/5G**

Technological solution in the mobile communications sector to uplift the current rural provision and enhance the Belfast City provision by creating a testbed project for 5G.

- **Broadband Roll-out across the Region**

As identified in the FCC Digital Strategy, the basic fixed communication needs for the Region need to be met ahead of providing enhanced digital capability and attracting high-growth digital FDI.

7.3 Resourcing a Transformation in Utilities

- **Innovative energy generation & storage**

Research and Pilot Project to review innovative solutions for addressing low-carbon energy generation solutions for Northern Ireland and integration of battery storage (Domestic and Industrial scale) to address expected future electrical energy supply shortage and balance the demand either side of the daily peaks.

- **Enhanced 'Living With Water' Programme**

Investment in the Waste Water sewer network and the Sewage Treatment Works across the Region to address the critical infrastructure needs (provide capacity and improved networks to meet future growth of the Belfast Region).

- **Site Infrastructure Investment Programme**

Spatial analysis of economic growth corridors and priority sites across the Belfast Region which align with respective LDP Growth Strategies to develop plans for the provision of necessary supporting transportation and utility infrastructure to enhance the encourage investment.

7.4 Tourism through Transformation

- **Belfast Region Tourist Way**

Infrastructure investment across a suit of tourism projects (potentially including Gobbins Phase 2, Belfast Story, ANDBC Regional Park, Mourne Gateway and Hillsborough HRP) to create an enhanced tourism offering across the Belfast Region.

8 Infrastructure Funding Opportunities

A broad range of funding options have been considered that could support the delivery of infrastructure across the Belfast Region. These are based on traditional and more innovative approaches, and informed by examples from elsewhere in the UK.

8.1 Funding Context

Many of the traditional public funding sources, e.g. central government grants and council rates receipts, are currently stretched protecting front-line services. Added to which central government grants are inherently uncertain in terms of quantum and timing making it difficult to plan long-term over multiple finance settlement periods. Whilst there may be limited scope to free up surpluses within these sources, increasingly new sources will be required to provide additionality in resources which could enable investment without displacing core services.

Financing & Funding

The terms financing and funding are sometimes used interchangeably but there are subtle yet important differences:

- **Financing** – the financial arrangements put in place to provide committed capital to meet the costs of a project as they arise. This is usually required to meet the substantial upfront CapEx costs to build a project and can be in the form of debt (e.g. bank loans) or equity. The cost of financing (e.g. debt interest payments) will need to be met from funding sources.
- **Funding** – the sources of revenue for a project that will be used to satisfy the capital and revenue costs (both operating and financing costs) over time. It addresses the fundamental question of who pays for the asset in the end, i.e. who bears the ultimate burden of meeting the costs incurred. Who pays can usually be answered in terms of the taxpayer or the user pays.

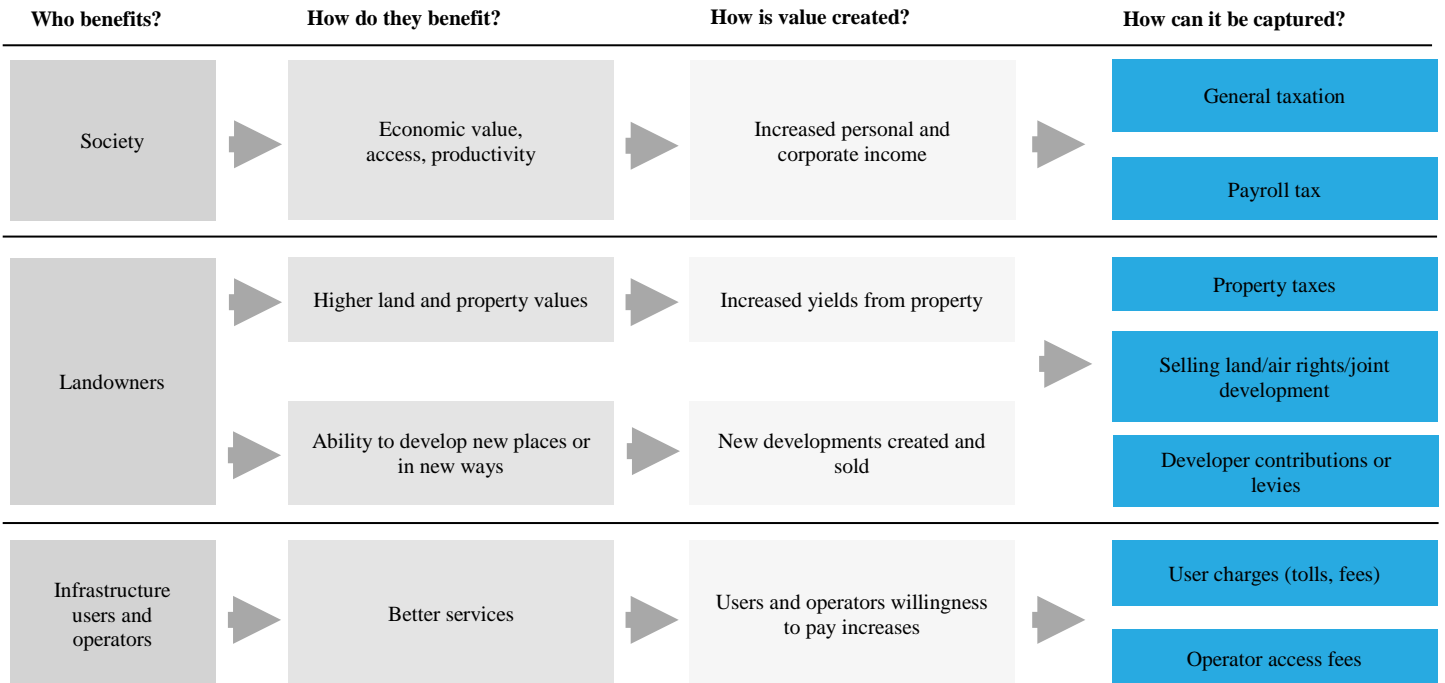
Local authorities can reduce the financing requirement for a project, e.g. by contributing some existing or new capital grant allocations or by selling an asset to raise the capital. This may reduce – or eliminate – the financing requirement or it may leave a gap between sources and requirements.

8.2 Funding Sources

Different funding sources can be categorised based on a qualitative judgment of the:

- Volatility of the funding source in terms of reliance when investing in new infrastructure projects (factors such as known baseline versus uncertain forecasts, within Belfast City Region/ member district control or third-party negotiations, cost to implement, etc.); and
- Quantum in terms of the level of funding required to deliver the infrastructure project.

A variety of different options are available for infrastructure funding, as shown indicatively below for transport funding options, whereby investment can deliver a range of benefits: and whereby some of the value created can be captured to fund the scheme.



A rapidly emerging option to support infrastructure investment is land value capture. Land value capture is a set of mechanisms used to monetise increases in land values that arise in the zone of influence of infrastructure investment projects. This may include instruments involving stamp duty tax revenues, retention of growth in business rates from increased rateable value of commercial property or development rights auction models.

To maximise the potential of infrastructure funding opportunities, a detailed appraisal will need to be undertaken of all projects following an independent prioritisation process.

9 Building a Legacy for the Belfast Region

The success of this Framework will be judged by its ability to achieve the desired outcomes being articulated for the Belfast region; and it is not just provision of the infrastructure in itself that will do this, but the conditions for growth that it creates.

The strategic nature of this Framework requires it to be resilient, against a backdrop of future social, technological, economic, environmental and political change.

Delivering strategic infrastructure investment in the Belfast Region will help to make it investment ready, a support the Region's journey to being a dynamic inclusive connection Belfast Region.

9.1 Next Steps

This interim report is a reflection on the work undertaken to date to identify the strategic infrastructure needs and consideration of solutions to support achievement of the Belfast Region objectives.

Further analysis and consultation is required to align this BRIIF with the emerging infrastructure plans for the region, local development plans for each local authority and status of strategic projects.

This is also required to contribute to the ongoing process for the city deal application being undertaken in parallel.

To support this, a collaborative approach to establishing an agreed 'infrastructure vision' for the Belfast Region is recommended to provide the context from which this framework can be further developed.

Appendix A

Baseline Documentation Review

A1 Baseline Documentation Review

Documents relating to Belfast Region Infrastructure Plan	Regional Focus of Belfast Centric
POP-Consultation-Report	Belfast Centric
Draft Programme for Government Framework	Regional Focus
Regional Development Strategy DRD	Regional Focus
Belfast Metropolitan Area Plan	Part Regionally focused - looks at Carrick, Castlereagh, Lisburn, Newtownabbey and North Down
Belfast Metropolitan Plan 2015 - 2004 Public Services and Utilities	Part Regionally focused looks at Boroughs outside of city
Programme for Government Consultation Documentation	Regional Focus
Industrial Strategy NI Consultation Document	Regional Focus
LDP-Topic-Paper-14-Renewable-energy	Regional Focus
LDP-Topic-Paper-15-Transportation	Regional Focus
Belfast Metropolitan Transport Plan	6 Councils: Belfast, Carrick, Castlereagh, Lisburn, Newtownabbey & North Down
NI Transport Statistics Annual 2016-2017	Regional Focus
Northern-Ireland-transport-statistics-2016-17-infographics	Regional Focus
Chapter-9-transport-and-disability-infographics	Regional Focus
2015/2016 stats	Regional Focus
https://www.infrastructure-ni.gov.uk/consultations/york-street-interchange-environmental-statement-notice-determination-and-publication	Regional Focus
Ensuring a Sustainable Transport Future - A New Approach to Regional Transportation (final version, April 2012)	Regional Focus
Regional Strategic Transport Network Transport Plan 2015	Regional Focus
TSNI-headline-report-2014-2016	Regional Focus
Control of Traffic orders: https://www.infrastructure-ni.gov.uk/articles/control-traffic-orders-2017	Regional Focus & Belfast Centric
City and Neighbourhoods are working on Green and Blue Infrastructure	Regional Focus
Regional Transportation Strategy 2002-12 - Whole Document	Regional Focus
Car Parking Strategy and Action Plan 2017	Regional Focus
DOE Parking Standards	Regional Focus
Draft Bicycle Strategy for Northern Ireland –August 2014	Regional Focus
Cycling in NI May 2015	Regional Focus

Cycling and walking to and from work in NI 2015-16	Regional Focus
Public awareness of Travelwise NI Initiatives May 2014	Regional Focus
<u>Cycle Route Orders: https://www.infrastructure-ni.gov.uk/articles/cycle-routes-orders-2014-2017</u>	Regional Focus
Continuing to Connect Telecoms 2015- 2017	Regional Focus
Ofcom – The Communications Market in NI	Regional Focus
Northern Ireland Broadband Improvement Project NIBIP Factsheet	Regional Focus
Broadband and Mobile in NI Factsheet	Regional Focus
digital-northern-ireland-2020-report	Regional Focus
Northern Ireland Waste Management Strategy - ‘Delivering Resource Efficiency’	Regional Focus
Waste Management Plan 2015	“arc21 councils: Mid East Antrim, Antrim & Newtownabbey, Belfast, Lisburn & Castlereagh, Ards & North Down, Newry, Mourne & Down.”
The £2.5 billion ripple effect	Regional Focus
NI Water Strategy	Regional Focus
Drinking Water Quality Annual Report 2016	Regional Focus
Strategic Drainage Infrastructure Plan Briefing 2014	Regional Focus
Sustainable Water a Long Term Water Strategy for Northern Ireland 2015-2040	Regional Focus
Strategic Energy Framework 2010	Regional Focus
SONI presentation Dec 2015	Regional Focus
Strategy for Open Spaces	Regional Focus
Exercise, Explore, Enjoy: A Strategic Plan for Greenways - November-2016-final	Regional Focus
Northern Ireland Water PC15 Business Plan	Regional Focus
Translink Network Utilisation Strategy	Regional Focus
High Speed Belfast - Dublin Strategic feasibility study	Regional Focus - includes Newry

Appendix B

Stakeholder Consultation Responses

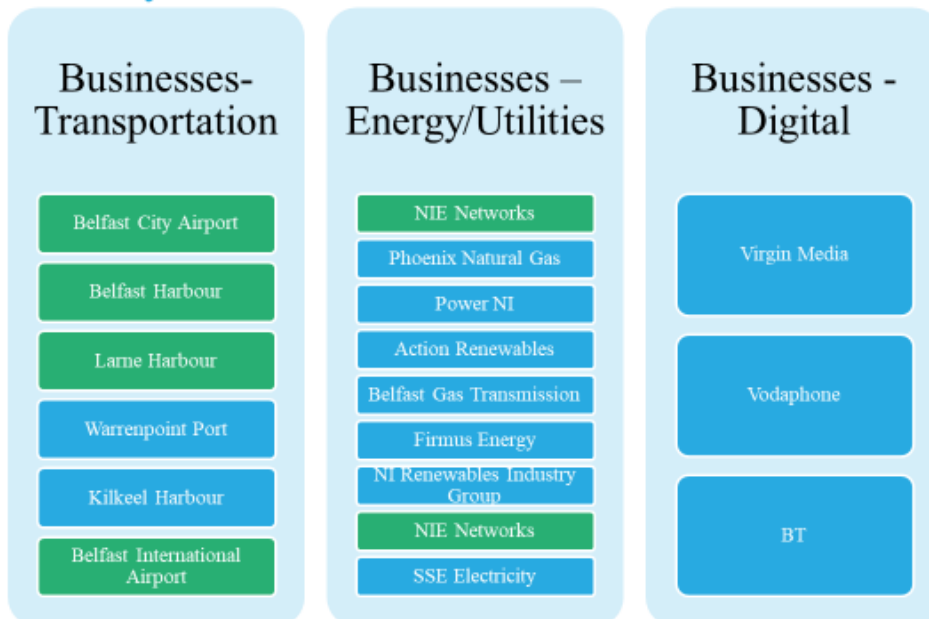
B1 Stakeholder Consultation List

Extensive statutory consultation was undertaken to support the development of the BRIIF. The graphics below show the stakeholders identified, together with those who provided a verbal or written response (highlighted in green).

Statutory Consultees



Statutory Consultees



Statutory Consultees

Government Agencies

NI Housing Exec
Arc21
Invest NI
Civil Aviation Authority
Translink
NI Water
DfI Rivers (Living with Water Programme)
SONI
Utility Regulator
Innovate UK
Tourism NI
SIB

NGOs

RICS
Belfast Chamber of Commerce
Retail NI
CIHT
NI Greenways
CBI
ICE