



Rialtas na hÉireann
Government of Ireland

Delivering the National Broadband Plan

The National Broadband Plan
is a Government of Ireland initiative led by
the Department of Communications, Climate Action & Environment.

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Foreword from Minister for Communications, Climate Action and Environment Richard Bruton T.D.

Digital technology is transforming how we live, learn and work. In the future, it will be as critical to modern living and working as more traditional infrastructure such as electricity and water. Without the National Broadband Plan, rural Ireland will be left behind.

This Plan is about making sure every home, business and farm in Ireland has access to this vital service. We are investing now, to make sure rural Ireland has the same opportunities as people who live in our towns and cities.

Up to 146,000km of fibre will be deployed as part of the Plan, delivering high speed broadband to over 1.1 million people, in approximately 540,000 premises all across the country.

This network will unlock a huge amount of potential in rural Ireland. Businesses will have access to a reliable, modern service which will enhance their offering and allow them take advantage of more opportunities. Finally, they can have confidence in taking electronic payments and bookings.

Individuals will be able to take advantage of more flexible working arrangements and access to remote GP and nursing services, medical monitoring and other medical and wellbeing services.

Farmers, already acutely aware of the benefits that smart farming methods can have on their livelihoods, will have confidence in the reliability of their access to a high speed internet connection.

Technology is also transforming our education system. All our students will now be able to participate fully in the digital revolution that is taking place.

The National Broadband Plan will unlock all of this potential for rural Ireland.

Richard Bruton

Minister for Communications, Climate Action & Environment, May 2019

Introduction

The National Broadband Plan (NBP) is the Government's initiative to deliver high speed broadband services to all premises in Ireland.

The NBP will deliver this through a combination of private industry investment and a State intervention (known as the Intervention Strategy) in those parts of the country where private companies have no plans to invest.

Up to 146,000km of fibre will be deployed as part of the State intervention, delivering high speed broadband to over 1.1million people, in approximately 540,000 premises all across the country. This investment, along with private sector investment means that by 2026 all premises in Ireland will have access to high speed broadband, positioning Ireland as one of the top countries in the world to achieve universal access.

Delivery of the NBP will enable citizens throughout Ireland to seize the opportunities arising from advances in technologies across multiple sectors including Education, Health, Enterprise, Environment, Smart Farming, Social Inclusion & Rural/Regional Development, Tourism and Transportation, ensuring a state where every citizen and business, no matter where they are based, can progress together.

Digital participation helps small and medium businesses to compete successfully on a global scale, accessing more customers.

Access to world-class high speed connectivity is core to Ireland's competitiveness and key to establishing Ireland as a world leader in this transformational digital age. The NBP will foster innovation and employment growth by ensuring that our workforce is connected through world class broadband.

It will help communities to have greater reach, supporting older citizens to live independently, and will mean a higher quality of life for citizens through better public services, such as more personalised health and education services.

A key investment in a future-proofed network now will also allow for much wider activities in the future – for homes, schools, farms and businesses. This will enable advances in virtual reality, virtual offices, smart homes, cloud computing, distance learning, precision farming, automated driving, artificial intelligence, connected devices and the Internet of Things.

The National Broadband Plan will allow Ireland to take full advantage of the opportunities in this digital economy which is conservatively expected to expand to more than €21 billion or 6% of GDP, by 2020.

1. Purpose of this document

In May 2019, Government approved the appointment of a “Preferred Bidder”. This is the final step in the NBP procurement process before a Contract is awarded and deployment begins. It means that Granahan McCourt has passed the rigorous evaluation process carried out by the Department of Communications, Climate Action and Environment.

This document gives information about the procurement process and provides information on how the network will be built, how long it will take and how much it will cost.

2. Background

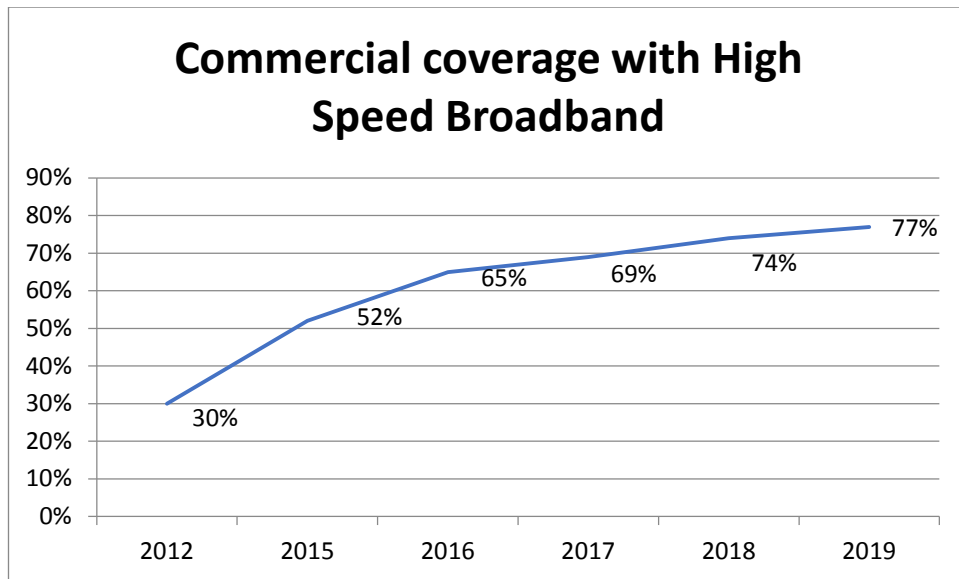
The National Broadband Plan (NBP) reflects the Government’s ambition to ensure that the opportunities presented by digital transformation are available to every community in Ireland, by realising the goal to have high speed broadband available to every home, farm and business in the State, regardless of location, through a combination of commercial and State investments.

Stimulating Commercial Investment

The NBP has supported and stimulated commercial investment through policy, legislative and regulatory measures. This engagement between the State and the telecommunications industry has resulted in accelerated high speed broadband provision, supported by a considerable upsurge in commercial investment.

The NBP has already enabled the delivery of many citizen benefits such as greater availability of services, higher broadband speeds, and more competitive consumer packages and pricing. Demand for high speed broadband services is increasing all the time, illustrating the growing demand for higher capacity and higher quality commercial broadband products.

Since the launch of the NBP in 2012 demand for higher broadband speeds and a reliable consistent service has increased. In 2012, 30% of premises had access to high speed broadband. Today, 74% of premises in Ireland have access to high speed broadband, expected to rise to 77% by the end of 2019.



Intervention Area

The NBP recognises that telecommunications industry investment will not extend to all parts of Ireland and therefore the State needs to intervene. This area is known as the Intervention Area. The Intervention Strategy was published in 2015 and outlined Government's plan for the Intervention Area¹.

¹ <https://www.dcae.gov.ie/documents/Updated%20Strategy%20December%202015.pdf>

Who is in the Intervention Area?

Following extensive engagement with commercial market operators, who were invited to inform the Department of their plans for commercial broadband deployment, a High Speed Broadband Map was developed. The Map shows the areas targeted by commercial operators to provide high speed broadband services and the areas that will be included in the State Intervention Area under the National Broadband Plan. More information on the mapping exercise and the current High Speed Broadband Map² is available on the Department's website.

The NBP Intervention will impact:



540,000 premises



1.1 million people
(23% population)



100,000 enterprises
(including farms)



44,000 businesses
(small and micro)



56,000 farms
(68% national total)



674 Primary schools

² <https://www.broadband.gov.ie>

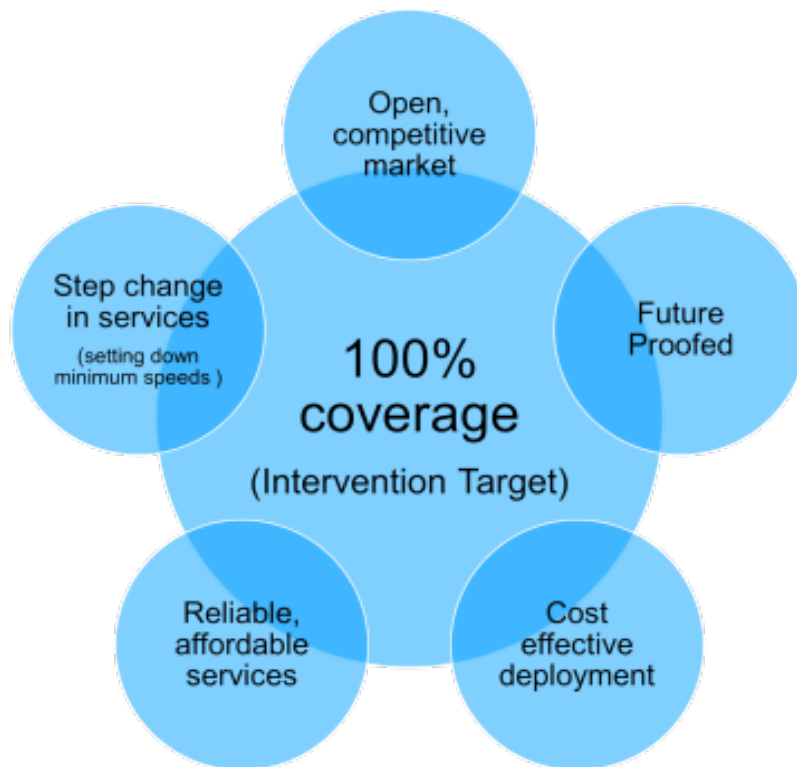
3. Vision - Access to high speed broadband for all

Access to high speed broadband is a key Government objective and a core enabler of other Government plans and initiatives including Project Ireland 2040 (2018), the National Development Plan 2018 – 2027, and the National Planning Framework.

As stated in the Programme for a Partnership Government 2016:

“One of the biggest challenges facing rural Ireland is to bridge the digital divide with urban areas. To remedy this situation for at least the next 35 years, we will guarantee the delivery of next-generation broadband to every household and business in the country. No town, village or parish will be left behind under the National Broadband Plan. Once the Contract is awarded the roll out phase will begin immediately.”

4. Objectives



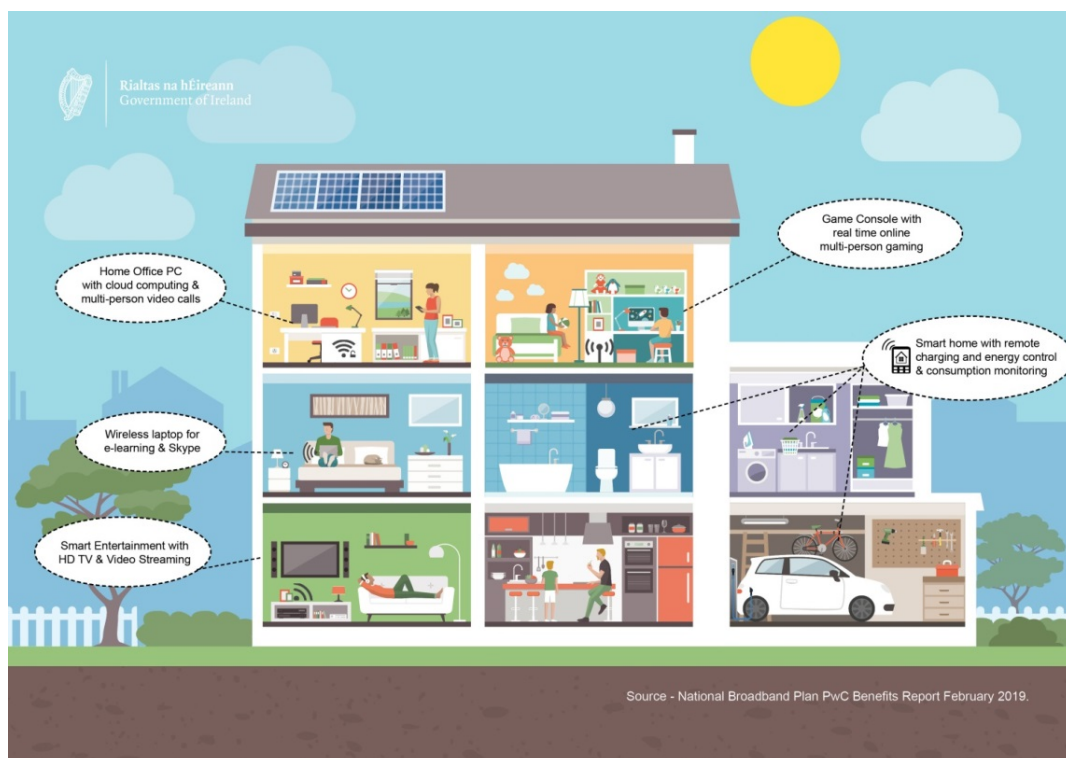
The key objectives of the NBP Strategy are to:

1. Ensure that every home and business will have access to high speed broadband with a choice of service providers.
2. Deliver the intervention as quickly as possible to ensure a national high speed broadband network for Ireland.
3. Ensure that the network can meet current and future demand.
4. Maximise re-use of existing infrastructure.
5. Incentivise additional commercial investment.
6. Stimulate growth and retention in jobs while enabling Smart Farming, eHealth, trading online, education, tourism, savings for consumers etc.

5. What are the benefits?

To deliver the Intervention Strategy, the Department has gone through a rigorous procurement process to select a company to build, operate and maintain a high speed broadband network that can provide access to all premises in the Intervention Area.

As a result of this process, people in the Intervention Area can now expect to be able enjoy the same benefits as people resident or working outside of this area, as soon as their premises are connected.



Beneficiary	Benefits
General Public	<ul style="list-style-type: none"> ✓ Smarter homes, connected devices, multiple users ✓ Working from home ✓ Reduced costs of communications bundles e.g. mobile, internet, television, landline ✓ Time savings for online transactions, grant applications, passport renewal
Farming	<ul style="list-style-type: none"> ✓ Increased outputs and reduced costs ✓ Reduced administrative burden ✓ Enable mandatory compliance with EU requirements ✓ Remote monitoring of livestock ✓ Better security and alert systems
Enterprise and Jobs	<ul style="list-style-type: none"> ✓ Growth in SMEs, new start-ups, job creation ✓ Bigger talent pool available to employers with remote working arrangements ✓ Cloud computing, back-up and recovery, e-commerce and business efficiencies ✓ Will facilitate changes and improvements in work practices
eHealth	<ul style="list-style-type: none"> ✓ Remote monitoring of older or vulnerable people in their homes ✓ Improved home-based care as an alternative to hospitalisation ✓ Video medical appointment
Education	<ul style="list-style-type: none"> ✓ Availability of online educational tools which complement classroom learning and allow equal engagement by distance learning ✓ Easier access to specialist teaching resources through online tutorials or webcasts
Environmental and Social inclusion	<ul style="list-style-type: none"> ✓ Reductions in travel needs, reducing fossil fuel consumption ✓ Cloud computing, smart homes and precision farming increase energy efficiency and reduce emissions ✓ Increase social inclusion and digital literacy through community hubs ✓ Smarter communities – real-time flood warning systems, smarter street lighting, public Wi-Fi in rural communities
Tourism	<ul style="list-style-type: none"> ✓ Free, quality Wi-Fi access to guests and tourists ✓ Access to an increased customer base, better ability to market internationally ✓ Reliable online bookings and payments
Transportation	<ul style="list-style-type: none"> ✓ Coordination of traffic management facilities with intelligent systems ✓ Supporting automated driving systems ✓ Real time digital maps for Electric Vehicle charge points and Public Transportation systems

6. NBP Progress to Date

At the same time as the Intervention Strategy³ was launched in December 2015, a procurement process to find a company that would build, operate, and maintain a network to serve the strategy ambitions began. The type of procurement process used is known as a competitive dialogue process.

Competitive dialogue is commonly used for large and complex infrastructure projects, when the contract involves design or innovative solutions, or where the nature and complexity of the contract requires engagement with bidders to identify the best approach before bidders are invited to submit their final tenders.

All bidders wishing to participate in the NBP procurement process had to first pre-qualify in order to participate in the remaining steps of the process.

This first step ensured that bidders participating in the remaining stages had demonstrated that they had the relevant technical and professional experience, strong financial and economic standing, and were otherwise eligible to bid for the Contract. Five bidders applied to be pre-qualified to participate, and the three bidders that passed were invited to proceed to the dialogue phase of the procurement process.

This involved the Department engaging extensively with each of the three bidders separately in relation to what would be the requirements of the Contract. There were over 800 hours of dialogue during this phase of the procurement. As part of this process, bidders submitted draft bids called “Detailed Solutions”.

During the dialogue, two bidders withdrew from the process, one in September 2017, and one in January 2018. In September 2018, the dialogue phase concluded, and the Department invited the remaining bidder to submit a final tender.

³ <https://www.dccae.gov.ie/documents/Updated%20Strategy%20December%202015.pdf>

The final tender put forward by Granahan McCourt was required to set out detailed plans on how it would build, operate, and maintain the network if it was awarded the Contract. The Final Tender was assessed against extensive evaluation criteria set out by the Department in 2016.

The Department NBP team rigorously assessed the Granahan McCourt proposals, supported by technical, financial, commercial and legal advisors. This evaluation took a number of months and following conclusion of the assessment, the Department was satisfied that it met all the required criteria and could deliver on the objectives of the NBP.



7. Who Will Deliver the Network?

The “Preferred Bidder”

The bidder that submitted the final tender and has been appointed “Preferred Bidder” is led by Granahan McCourt, a company that has an extensive global track record in the delivery of telecommunications networks.

“Preferred Bidder” is a procurement term and means that the bidder has been selected following an evaluation process as the company that it is intended to award a contract to, subject to the completion of the final stage of the procurement process, which includes the finalisation of financial and legal documents.

Granahan McCourt has incorporated a new Irish registered company to be known as National Broadband Ireland (NBI) to build, operate and maintain the network. NBI will be supported by a number of internationally experienced subcontractors including KN Group, the Kelly Group, enet and Actavo.

NBI will be a significant employer, anticipated to create a large number of permanent jobs within the first 2 years of operation. In addition, its key subcontractors are likely to require substantial workforces during the deployment of the network.

National Broadband Ireland - Capacity and Experience

All bidders in the NBP procurement process had to pass rigorous tests to ensure that they were eligible to participate in the process and had the appropriate technical and professional ability and financial and economic capacity. This was known as the pre-qualification process. This process aimed to ensure that the companies had the ability to build, operate and maintain the network, if they were to be awarded the Contract.

NBI has put together an experienced team to deliver its requirements in relation to the NBP. Collectively, the personnel behind NBI’s management team have many decades of experience in designing, building and operating telecommunications networks. The team have managed the successful roll out of 24 national telecommunications networks in Ireland, Europe, US and Central America and delivered more than 56 fibre broadband projects. They will also be supported by a number of companies with relevant expertise in rolling out broadband including the KN Group, the Kelly Group, enet and Actavo. Nokia has been named as a key technology partner.

What will NBI be contracted to do?

Subject to conclusion of the procurement process, NBI will sign a Contract with the Minister to build, operate and maintain the network and services over a 25 year period, with a commitment to provide services for another 10 years (to 2054).

NBI will build the network with maximum re-use of existing infrastructure to minimise costs and reduce potential environmental impacts.

It will also implement necessary upgrades to the network to accommodate new innovations in technology to ensure that the network is future-proofed. The infrastructure will provide high quality, affordable, reliable broadband for decades to come.

NBI will be a wholesale operator. This means that it will sell services to retail operators (Retail Service Providers) and not directly to customers, and will do so on a non-discriminatory basis. Retail Service Providers such as eir, Vodafone, Sky and local operators will then offer services to home and business broadband customers.

Who will own the network?

NBI will own any new infrastructure that it builds for the NBP. However, only a small percentage of the infrastructure to be used for the NBP network will be new infrastructure. This is because most infrastructure will be existing poles and ducts leased from other operators. This requirement to re-use existing infrastructure such as poles and ducts is outlined in the State Aid Guidelines for Broadband⁴.

⁴ http://ec.europa.eu/competition/state_aid/legislation/legislation.html

8. How will NBI Deliver the Network?

The NBI network will involve:

- **Over 1.5 million poles**
- **Over 15,000 km underground ducts**
- **Up to 146,000 km new fibre cable**
- **Running along over 100,000 km of the road network**

The new network will connect the majority of homes and businesses with a fibre connection. A small percentage of remote or difficult to connect premises will be connected with alternative technology such as fixed wireless connections.



Up to 146,000 kilometres of new fibre cable will be deployed across aerial poles and through underground ducts. The majority of fibre will be installed overhead. These poles and ducts lie along approximately 100,000 kilometres of road network throughout Ireland. It is anticipated that the network will involve over 1.5 million poles from networks throughout the country and over 15,000 kilometres of underground duct networks for fibre cable. The existing State-owned Metropolitan

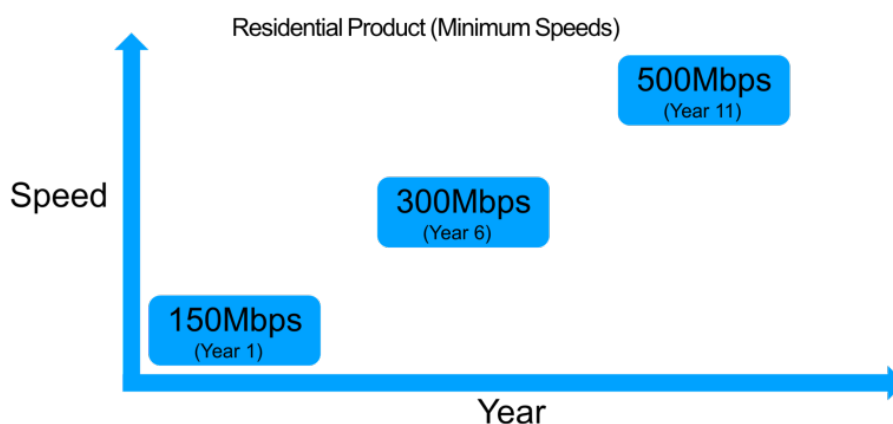
Area Networks (MANs) will also be used. Electronic equipment will be housed in 200 existing local exchanges as well as in the MANs.

What will the speeds be?

- **Network will be predominately fibre**
- **Basic connection is 150Mbps**
- **Business connections up to 1Gbps**
- **Connection speeds will increase over time**

The basic product that NBI will offer is 150Mbps, with 1Gbps available to businesses as requested.

The network is designed with a roadmap to upgrade the services over 25 years, including upgrades to increase residential speeds to 300Mbps by Year 6 of the Contract and 500Mbps by Year 10. This ensures that the network is future-proofed to meet requirements in years to come.



The service will be offered on a wholesale basis to retail service providers, large and small. This will mean a choice of providers for customers in all areas.

Why fibre?

The procurement process was technology neutral, as was required by State Aid Guidelines for Broadband. This means that the process did not specify a preferred technology. However, all bidders in the process proposed fibre⁵ as the best solution. Fibre is a popular choice as it can meet the requirements and additional capacity can be added over time at low additional cost to network operators.

Fibre can deliver up to 10Gbps of speed with no major upgrades required, ensuring that the solution is future proofed and has a low running cost, making it an extremely efficient solution.

The Department considered technologies such as 4G and 5G or fixed wireless. It agreed with the national and international expertise in this area and concluded that a fibre-based solution was the most economical way to address all premises with a future-proofed solution over the 25 years of the Contract. This is in line with the approach being adopted in other EU countries and internationally.

⁵ Other broadband technologies may be used in limited circumstances where fibre is not cost-effective, as long as NBI meets the bandwidth and performance requirements of the Contract.

How long will Deployment take?

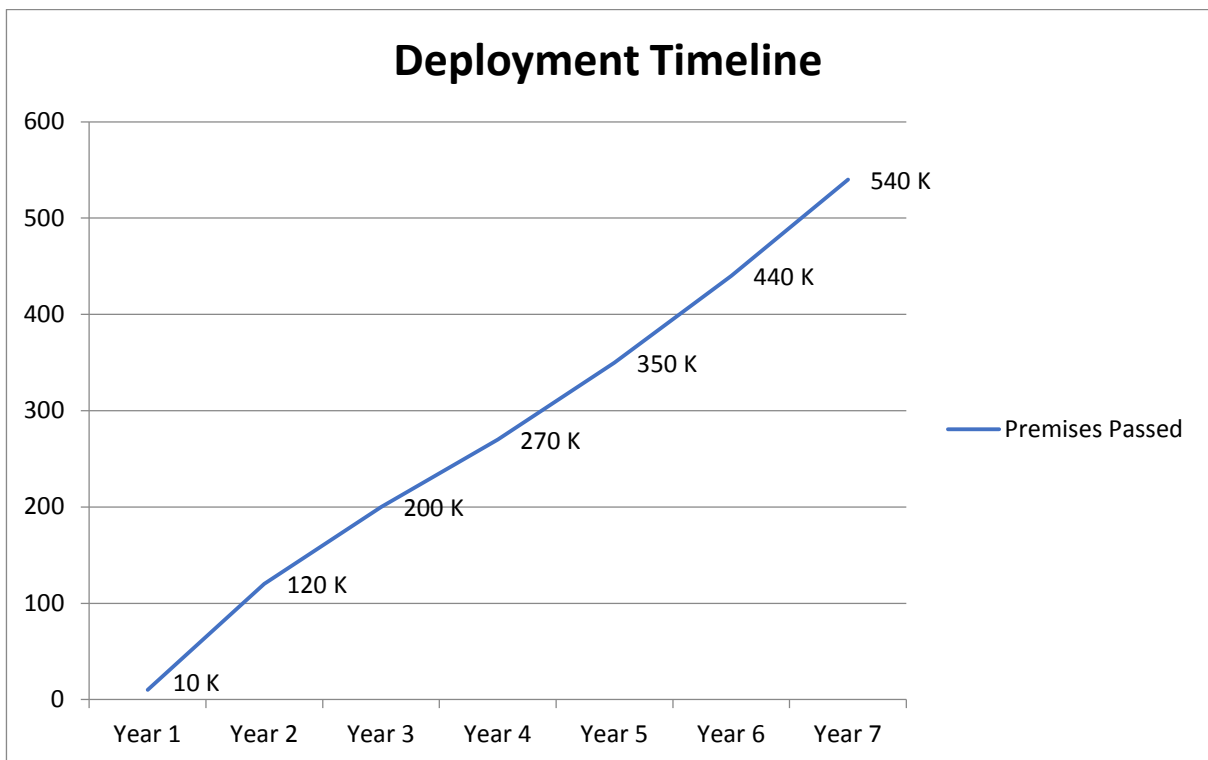
Deployment will commence at contract award and will take up to seven years to complete. By the end of the third year of the roll out, almost 40% of premises will be passed. There will be approximately 300 Wi-Fi hot spots will be deployed nationwide, with at least 7 in each county by the end of Year 1. Standard industry practice for a fibre deployment will also include activities such as surveying, design, tree trimming, testing and of course, connection. Connections to end users will be supported by National Broadband Ireland for the entire lifetime of the Contract, at a minimum.

Deployment Timeline

By Year 5, it is anticipated that 93% of the country will have high speed broadband.

The country will be divided into 110 deployment areas of around 5,000 premises each.

Deployment areas are distributed across all counties. Works will commence in all counties within first 12 months.



Broadband Connection Points

The Department recognises the need to roll out high speed broadband as quickly as possible. When the Department conducted its mapping exercise in 2014 the consultation documents listed some examples of potential broadband connection points in local communities. This principle was incorporated into the procurement process.

These key locations in rural communities will be connected with high speed broadband in Year 1 of the NBP State intervention deployment while waiting for the wider deployment to reach their area.

These locations are called Broadband Connection Points (BCPs). There will be approximately 300 nationwide. It is anticipated that between 7 and 23 BCPs will be deployed in each county, to provide with a community-based high speed broadband service in Year 1 of the NBP State intervention deployment.

Locations for the BCPs have been identified by local broadband officers and include schools, community centres and sports clubs.

All BCPs will provide free Wi-Fi access to communities. Some locations will also have additional facilities, such as hot-desking. The BCPs will provide access to digital services and enhance online participation. The BCPs should also be used as hubs to support local economic and social initiatives and will form an important element of the local digital strategy developed by local authorities to increase adoption and usage of digital technologies by businesses and communities throughout Ireland.

9. How Will I Get Connected?

Connections to Homes and Businesses

The State intervention network will be a wholesale open access network so people will order through a Retail Service Provider. These service providers will compete with each other to sell the broadband service to customers.

People in the Intervention Area will be able to place orders for connections as the network is built in each of the 110 deployment areas and will not have to wait until deployment is 100% complete. NBI is required to connect premises, to actively encourage take-up, and market the services to people and businesses.

Once a customer orders a service from a retail provider, the provider will contact NBI who will install the connection to the home or premises.

How will I know when broadband is available in my area?

NBI will run a national media campaign which will provide frequent updates on the on-going progress of national network deployment across all media platforms. NBI will have a dedicated website to provide people with information on the roll out, and on how people can order a connection.

A few months prior to NBI network deployment starting in your area there will be advertising in local media that the works are about to commence. These advertisements will provide details of how people and businesses can pre-register their interest in buying a new broadband connection.

As the works in your area conclude, and your home or business is passed by the fibre, further advertisements and marketing will appear from NBI and the retail operators, to tell people that they can now apply to be connected to the new network. People who have already pre-registered their interest during the build will be contacted by their provider of choice in order to arrange service connection.

NBI Community Enabling/Partnership Activities

NBI will communicate regularly with many special interest and community groups through the roll out period. They will do this in order to encourage and enable as many people as possible to take up all the benefits and opportunities their new digital society participation will offer.

The specific initiatives which will be run by NBI include:

- Seminars and Town Hall meetings
- Pop-up demonstration centres
- Sector specific partnership initiatives including Teagasc, Macra na Feirme, Age Action and education sector stakeholders.

How much will I pay for my connection?

Customers will pay similar prices to those in urban areas serviced by commercial operators.

In most cases, the standard wholesale connection charge that a house or business will pay to connect to the network will be one off charge of €100 (ex VAT). NBI will charge the retail operator this fee, which is in line with the fee charged in urban areas and it will be up to the retailer whether to pass it on to the customer or not.

The State will cover the majority of the actual cost of a fibre connection through a connection subsidy, so that broadband will be affordable, regardless of a person's location.

In very rare circumstances where a connection would cost over €5,000 to the State to complete, the person may be asked for an additional payment. However, it is anticipated that alternative technologies will be available in these cases and that connection will be able to be provided at lower cost.

The likely monthly cost to people for high speed broadband will be the same as offered commercially in other areas, approximately €40/€50 per month depending on the package you require.

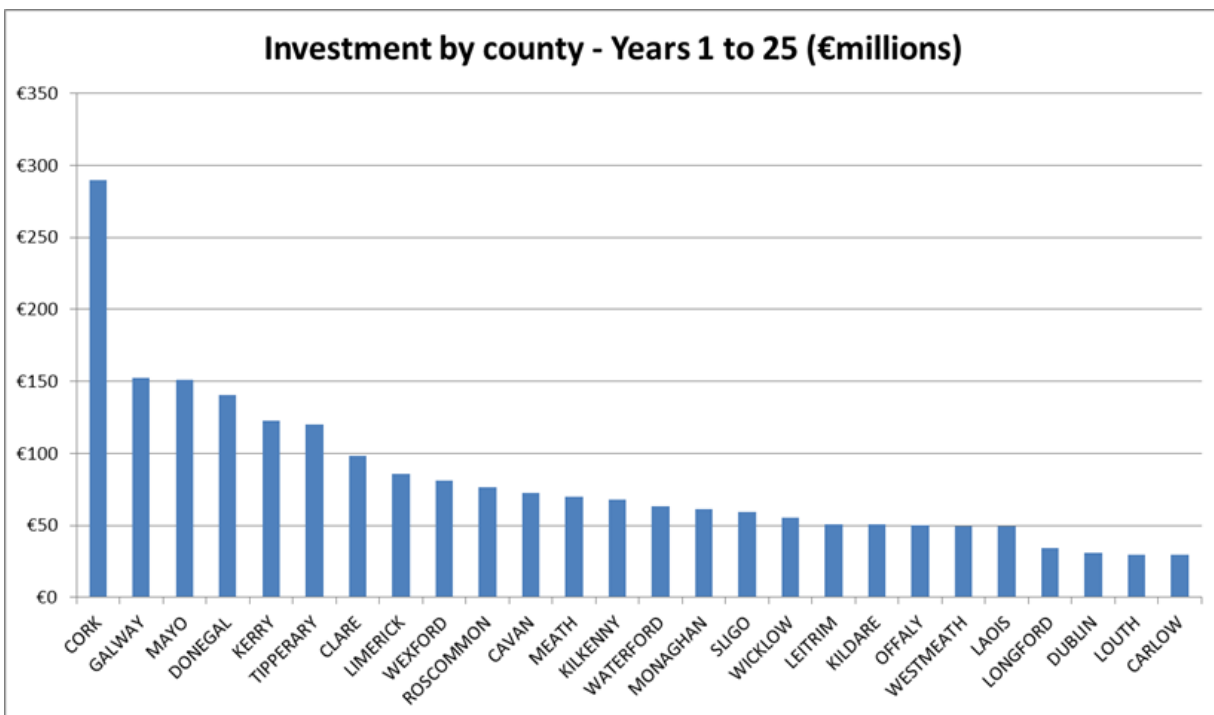
People will also be able to buy broadband bundled services (such as TV, mobile phone, landline) and avail of increased retail competition by being able to switch Retail Service Providers and take advantage of switching/introductory offers currently enjoyed by people outside of the Intervention Area.

10. How Much is the State Investing?

The deployment, operation and maintenance of the network will be funded using a mix of money from the bidder's investors (private equity funding), money from the sale of services (commercial revenues), and money invested by the State (subsidy).

The total subsidy is capped, meaning that it has a fixed ceiling regardless of unforeseen circumstances. If overruns are incurred, the company cannot request additional subsidy. If savings are made, or higher than anticipated profits occur, the State can reclaim some of the money from NBI.

The expected total investment across counties is €2.143 billion (ex. VAT and contingencies), capped at €3 billion including VAT and contingencies, over 25 years. Investment by county will be as follows:



A number of factors influence county investments, for example, there will be a network length of approximately 14,477 km in Cork, whereas it will be approximately 1,464 km in Carlow. Similarly, almost 14% of the intervention area premises are located in Cork, compared to about 1.5% in Carlow.

11. Governance and Accountability

Contract Provisions

To protect the State investment and ensure that the NBP milestones and deliverables are met, the Contract has been designed to include extensive protections, quality checks, and reporting and monitoring obligations.

A comprehensive set of protections and legally binding obligations are outlined in the Contract, these include:

- a suite of broadband products to cater for both residential and business users
- technical specifications of the minimum broadband service that must be delivered
- detailed wholesale product and price controls for future changes
- a suite of key performance indicators to ensure the service is maintained appropriately
- significant penalties to address under-performance
- substantial oversight arrangements to monitor progress, costs and take up etc.
- payments to NBI linked to the completion and verification of milestones such as premises passed and premises connected
- substantial provisions to reclaim ('claw back') subsidy from NBI in the event of cost savings achieved or additional revenues generated

ComReg will also have a role in the NBP with regard to its oversight of pole and duct infrastructure providers and Retail Service Providers. It is also responsible for addressing consumer complaints.

12. Next steps

The next steps are necessary to finalise the Contract and move to the roll out of the network. These include to:

- Conclude the NBP Contract prior to signing, over the coming months
- Conclude initial infrastructure and subcontractor agreements
- Establish and mobilise National Broadband Ireland
- Commence immediate roll out

13. Further Information

National Broadband Plan website

For more information on the NBP and key procurement documents, visit www.dccae.gov.ie.

High Speed Broadband Map

To find out how you will get high speed broadband, use your Eircode to check your status on the High Speed Broadband Map at www.broadband.gov.ie.

Local Authority Broadband Officers

For local information regarding the broadband roll out and BCPs, please contact your local broadband officer. The details are available on the [Broadband Officers contact list](#).



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ar son na hAeráide & Comhshaoil
Department of Communications,
Climate Action & Environment



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