



Rialtas na hÉireann
Government of Ireland

Mobile Phone & Broadband Taskforce

Quarterly Progress Report Q1 2019

Contents

1. Introduction	4
1.1. Background	4
2. Progress Update	5
2.1. Summary of progress made	5
2.2. Progress update – Q1 and Quarterly Reporting	9
3. Topical Discussion	16
3.1. Introduction	16
3.2. Improving Access to Mobile Phone Services	16
4. Glossary	21

1. Introduction

1.1. Background

The Mobile Phone and Broadband Taskforce (the Taskforce) was established in 2016 from a commitment arising from The Programme for a Partnership Government. Now in its third year of operation, the Taskforce continues to identify solutions to barriers to the rollout of telecommunications infrastructure and aims to improve mobile phone and broadband coverage nationwide.

The Taskforce is chaired by Séan Canney T.D., Minister of State with responsibility for Community Development, Natural Resources and Digital Development. The current membership of the Taskforce is as follows:

- Department of Rural and Community Development (DRCD)
- Department of Communications, Climate Action and Environment (DCCAE)
- Department of Transport, Tourism and Sport (DTTAS)
- Department of Housing, Planning and Local Government (DHPLG)
- Transport Infrastructure Ireland (TII)
- Local Government Management Agency (LGMA)
- County and City Management Association (CCMA)
- Commission for Communications Regulation (ComReg)
- Advertising Standards Authority for Ireland (ASAI)
- ESB Networks
- Office of Public Works (OPW)

The Taskforce is also supported in its work by Ibec, representing the Telecommunications Industry.

Each year, a suite of new actions is agreed and progressed by Taskforce members.

This is the first quarterly progress report of the 2019 Work Programme. Reports previously published are available at www.drkd.gov.ie and www.dccae.gov.ie

2. Progress Update

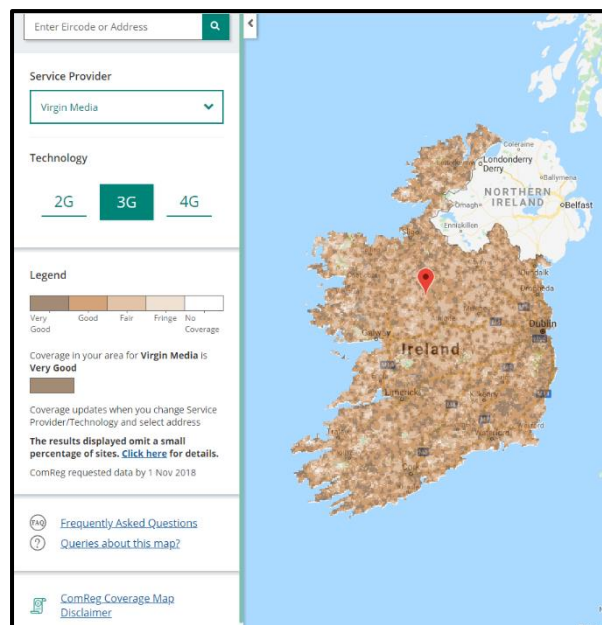
2.1. Summary of progress made

DTTAS

DTTAS is working with TII on the feasibility of options that will allow TII to improve access to its ducts. Under existing legislation, TII has no commercial mandate to commercialise the use of its ducts for the deployment of fibre by telecommunication operators. A note providing clarity on what changes are required to TII's legislation in order for it to actively promote the use of its ducts is being prepared by DTTAS and TII. This will cover a range of options and will be brought to the Taskforce shortly.

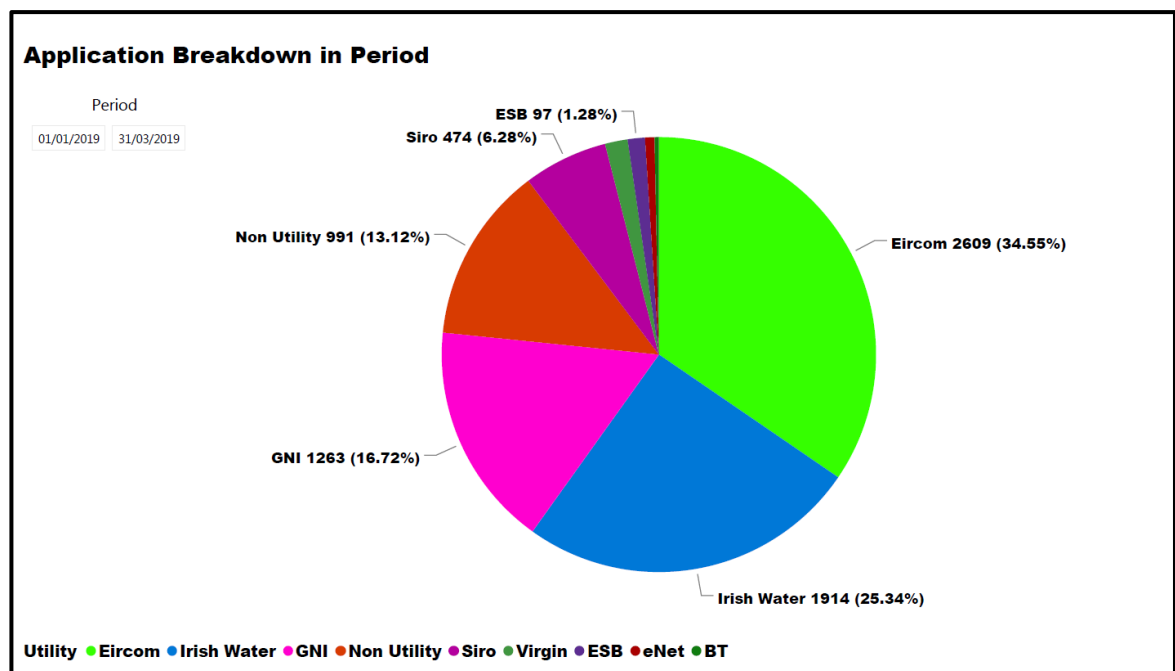
COMREG

ComReg launched its outdoor National Coverage Map for mobile coverage in February 2019 and is continuing to monitor its usage. ComReg intends to update the map with operator data regularly and is also working towards providing enhanced user features. In addition, ComReg is committed to improving its understanding of mobile consumer experience and will shortly re-run its consumer mobile experience survey and conduct a new mobile confidence survey.



CCMA

The MapRoad Roadworks Licensing System (MRL) is the national online system for the management and processing of roadworks licence applications. Usage statistics of the MRL system are made available to Local Authorities as well as presented to the Joint Utilities / Local Authority (JULA) User Group. CCMA is working on developing a public version of this data for quarterly release.



ASAI

The ASAI has developed Guidelines for telecommunications operators on the advertising of telecommunication services. The draft Guidelines, “Marketing Communications for mobile phone and broadband services”, have been circulated to key stakeholders and a consultation exercise completed. The Guidelines are expected to be issued in Q2 this year. Following publication, and a lead in period for implementation, ASAI will then monitor telecommunications operators’ compliance with the Guidelines starting later this year.

DRCD

DRCD continues to support Local Authorities (LAs) in increasing access to public WiFi via a range of different mechanisms. Through the European WiFi4EU initiative, Ireland was awarded 62 vouchers worth €930,000 to install free public WiFi in centres of life across the State. DRCD has supported all LAs in their applications to the initiative and will provide match-funding to ensure maximum impact from the scheme.

In addition, and through the Digital Innovation Programme, funded by DRCD, LAs have advanced a number of WiFi-enabled projects across the country. DRCD is also continuing to engage with DCCAE, LAs and other stakeholders on the roll-out of the Broadband Connection Points (BCP) programme, which aims to provide free public WiFi in approximately 300 locations nationwide within the amber intervention area of the National Broadband Plan.

Following a request from the Taskforce to the Telecommunications Industry for case studies regarding recent developments, the Arranmore Island project undertaken by Three was chosen for inclusion in this report. It is the Taskforce's intention to include further case studies from telecoms operators and infrastructure providers in future reports.

Arranmore Island

Ireland's first offshore Digital Hub

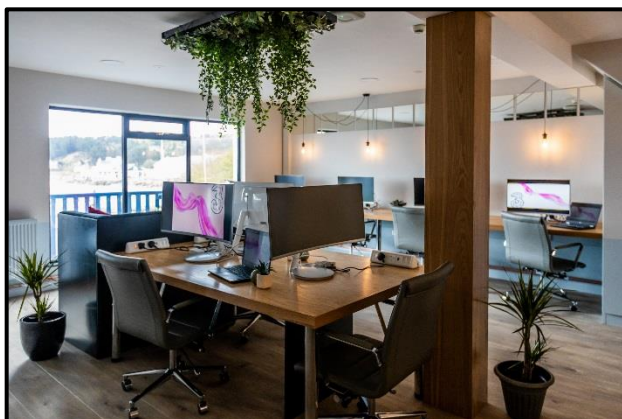
Arranmore, an island five kilometres off the coast of Donegal, has long suffered from a significant lack of connectivity. Three has partnered with the island's community to improve services, but also to establish Ireland's first offshore digital hub.



Thanks to key collaboration between Arranmore Community Council, supported by Donegal County Council, and Three, the local community now benefits from improved connectivity, a new Digital Hub and broadband connection to a number of local business and community facilities, including the medical centre.

The project came about from an effort by Arranmore Island Community Council to encourage the community to remain on the island by providing them with the necessary tools to create business and employment opportunities. Three worked with the Community Council to identify connectivity solutions and Donegal County Council found support in the Department of Rural and Community Development through the Town and Villages Renewal Scheme to fund parts of the project.

The Digital Hub has been fitted with 13 desks and offers work and conferencing facilities to local residents and visitors while Scoil Athphoirt offers students interactive whiteboards and online learning and research facilities. Business and community facilities across the island now also benefit from broadband connection.



This new partnership enables the island to stay connected, create and grow businesses, and facilitates remote working. More importantly, it improves its population's way of life and allows people to remain on the island to live and work, sustaining and developing a vibrant connected community.



2.2. Progress update – Q1 and Quarterly Reporting

Action 3			
Develop the GIS module of the MRL to incorporate more geo-spatial data in respect of road openings and underground infrastructure.			
Timeline	Timeline Status	Lead Body	Supporting Bodies
Quarterly Reporting	Not started	CCMA	None
Performance indicator:			Status:
<ul style="list-style-type: none"> Module developed and implemented. 			Not started
<p>The expectation is that this information will be available through a portal of the MRL system. The CCMA is investigating the possibility of agreeing a digital spatial file format between Telcos and local authorities to facilitate the upload of <i>as constructed</i> ducting location to the portal.</p>			

Action 4			
The RMO to publish a regular (quarterly) report on the MapRoad Licensing System.			
Timeline	Timeline Status	Lead Body	Supporting Bodies
Quarterly Reporting	Underway	CCMA	None
Performance indicator:			Status:
<ul style="list-style-type: none"> Reports issued on a quarterly basis. 			(Not started)
<p>Information from Maproad Roadworks Licensing system is currently being produced for local authorities and presented at JULA meetings. The CCMA is finalizing an agreed reports templates which will be published by the end of Q2.</p>			

Action 6			
Each telco to produce a quarterly report to the Taskforce Implementation Group on network enhancements, new services and future plans and the benefits to consumers of their products and services.			
Timeline	Timeline Status	Lead Body	Supporting Bodies
Quarterly Reporting	Underway	Ibec	Telcos
Performance indicator:			Status:
<ul style="list-style-type: none"> Quarterly report published. 			Underway
Telcos continue to work with the Taskforce on finding a reporting format that captures relevant telco activity using data readily available without compromising commercially sensitive information.			

Action 8			
DRCD and DCCAE will work together to improve public awareness of the work and impact of the Taskforce.			
Timeline	Timeline Status	Lead Body	Supporting Bodies
Quarterly Reporting	Underway	DRCD/DCCAE	None
Performance indicator:			Status:
<ul style="list-style-type: none"> Increased media engagements throughout 2019. 			Underway
A new approach to communications messaging has been piloted by DRCD at a recent TAG. In addition, a comprehensive communications strategy is currently being refined and finalised in consultation with DCCAE's Strategic Communications section and DRCD's Press Office.			

Action 9			
ComReg to continue to provide and promote information for consumers through ComReg's Consumer Engagement programme, including via ComReg's consumer website pages and using ComReg's outreach programme.			
Timeline	Timeline Status	Lead Body	Supporting Bodies
Quarterly Reporting	Underway	ComReg	Ibec/ASAI
Performance indicator:			Status:
<ul style="list-style-type: none"> Consumer Information provided on ComReg's website and directly to consumers by ComReg consumer engagement activities. 			Underway
In accordance with its Strategy ¹ , over the last two years, ComReg has expanded its consumer engagement with the publication of current information on the ComReg website			

¹ ComReg is currently consulting on its [draft Strategy Statement for Electronic Communications Services \(ECS\) for the period 2019-2021](#), which also acts as a midterm review of its Five Year ECS Strategy which was published in 2017.

and ComReg Compare value comparison tool, campaigns through social media, digital and traditional marketing, networking events and outreach activities.

In Q1 2019 ComReg hosted a stand at the Holiday Show Limerick/Shannon Airport, presented to a county Active Retirement Group and displayed consumer guides in county libraries and County Council Offices, as well as in over 1,300 medical waiting rooms nationwide.

In Q2 ComReg plans to continue outreach initiatives, guide display, run targeted public awareness campaigns and develop the ComReg consumer identity/brand and a consumer communications strategy.

Over the coming year, ComReg intends to maintain this level of engagement and further expand it by timely and relevant consumer communications offering targeted messaging through multiple channels.

ComReg will also continue to provide information to consumers through www.comreg.ie and the services available there, including ComReg Compare, Service Checker and the Mobile Coverage Map.

Action 10			
ComReg will develop and implement a programme of enhancement of the National Coverage Map.			
Timeline	Timeline Status	Lead Body	Supporting Bodies
Quarterly Reporting	Underway	ComReg	None
Performance indicator:			Status:
<ul style="list-style-type: none"> Programme enhancement developed and implemented. 			Preparation underway
ComReg is monitoring the mobile coverage map following its recent go-live in February 2019 and is working towards a programme of periodic data updates and functionality enhancement after an appropriate period of stabilisation.			
In Q2/Q3 ComReg plans to update the operator data and provide enhanced user features.			

Action 14			
Telecommunication operators to appoint a senior person to take responsibility for engagement with local authorities as a designated first point of contact for problematic applications.			
Timeline	Timeline Status	Lead Body	Supporting Bodies
Q1	Underway	Ibec	Telcos
Performance indicator:			Status:
<ul style="list-style-type: none"> Appointment of senior person to role by each telco operator. 			Underway
<p>Telcos are in the process of designating a senior point of contact for engagement with Broadband Officers on applications which are particularly problematic with the understanding that routine communications between local authorities and telcos is to continue along established channels.</p>			

Action 22			
TII and DTTAS to evaluate the feasibility of changes required to TII's statutory mandate in order to allow TII to actively promote the use of its ducts.			
Timeline	Timeline Status	Lead Body	Supporting Bodies
Quarterly Reporting	Underway	DTTAS	TII
Performance indicator:			Status:
<ul style="list-style-type: none"> Clarity over what changes are required to TII's legislation. 			Underway
<p>Access to TII ducts is governed by Section 21 of the Communication Regulation Act (2010) that amends Section 52 of the Principal Act. The Statutory Mandate for TII is set out in the Roads Act (1993) as amended. DTTAS is working with TII on the feasibility of possible options that will allow TII to improve access to the use of its ducts.</p>			
Next Steps:			
A short note will be prepared that will cover a range of options.			

Action 27			
Increase access to publicly available WiFi through EU, Government and private sector initiatives.			
Timeline	Timeline Status	Lead Body	Supporting Bodies
Quarterly Reporting	Underway	DRCD	Telcos/LAs
Performance indicator:			Status:
<ul style="list-style-type: none"> Number of WiFi points installed. 			Underway
<p>DRCD have supported local authorities in their applications for WiFi4EU funding. As a result of the last call, Irish local authorities have been awarded 62 vouchers worth</p>			

€930,000. DRCD has committed to providing matched-funding to ensure maximum impact from the scheme.

DRCD continues to engage proactively with DCCAE, local authorities and other stakeholders on the roll-out of the BCP programme, which will provide free public wifi access at 300 locations nationwide within the amber intervention area.

Through the Digital Innovation Programme (DIP), DRCD has provided funding to a number of initiatives around the country that provide wifi services to the public free of charge.

Action 29 Install ducting on new national primary/secondary roads and engage in consultation with industry on where additional ducting is required to improve coverage.			
Timeline	Timeline Status	Lead Body	Supporting Bodies
Quarterly Reporting	Not started	TII	None
Performance indicator: <ul style="list-style-type: none"> Ducting installed where required. 			Status: Not started
TII plans to install ducting on approximately 26km of the M18 and M7 in the vicinity of Limerick. The commencement date of the works will be determined by the programme for prospective installation of fibre infrastructure by prospective lessees.			

Action 31 ComReg to continue to deepen its understanding of the mobile consumer experience through further surveys.			
Timeline	Timeline Status	Lead Body	Supporting Bodies
Quarterly Reporting	Underway	ComReg	None
Performance indicator: <ul style="list-style-type: none"> ComReg to re-run its consumer mobile experience survey in 2019 Conduct quarterly mobile consumer confidence survey beginning Q2 2019. Continued engagement with stakeholders. 			Status: Underway
ComReg will continue to conduct appropriate research and engage with stakeholders including the Consumer Advisory Panel, Disability Forum, Departmental Consultative Committee, Broadband Officers (Mobile Phone and Broadband Taskforce) and Economic Regulators Network Subgroup.			

In Q1 ComReg conducted engagement activities with stakeholders including the Consumer Advisory Panel, Disability Forum, Broadband Officers (Mobile Phone and Broadband Taskforce) and Economic Regulators Network Subgroup.

In Q2 ComReg plans to continue stakeholder engagement including Departmental Consultative Committee, Consumer Advisory Panel and Mobile and Broadband Taskforce. ComReg is also preparing to conduct a re-run of our consumer mobile experience survey and a new mobile confidence survey.

Action 32			
ASAI to develop guidelines for telecommunications operators on advertising of telecommunications services.			
ComReg to support ASAI in the context of ComReg's role in area of open internet access.			
Timeline	Timeline Status	Lead Body	Supporting Bodies
Q1	Underway	ASAI	ComReg
Performance indicator:			Status:
<ul style="list-style-type: none"> Guidelines published. 			Underway
<p>The ASAI Draft Guidelines were completed and circulated to key stakeholders. The ongoing consultation process, longer than anticipated, is proving to be significantly beneficial to the interested parties. It is expected that the process will be completed early in Q2 2019 following which the Guidelines will be published.</p>			

Action 33			
ASAI to monitor telecommunication operators compliance with the implementation of the new ASAI guidelines.			
Timeline	Timeline Status	Lead Body	Supporting Bodies
Quarterly Reporting	Not started	ASAI	None
Performance indicator:			Status:
<ul style="list-style-type: none"> Lack of breaches with new guidelines. 			Not started
<p>ASAI plan to implement a lead-in period prior to the Guidelines becoming effective to allow providers current investments in advertising campaigns to end naturally. The Guidelines are likely to be effective in Q3 2019. Within the limited monitoring internal resources presently available to ASAI, it is planned that limited monitoring of a proportion of relevant advertising will take place in Q4 2019.</p>			

Action 34

DCCAIE's Digital Skills team to liaise with the Broadband Officers to raise local awareness of the Digital Skills Scheme.

Timeline	Timeline Status	Lead Body	Supporting Bodies
Quarterly Reporting	Underway	DCCAIE	None
Performance indicator: <ul style="list-style-type: none">Percentage increase in number taking up the digital skills programme.			Status: Underway
<p>In November 2018, DCCAIE took the opportunity to contact all the Local Authorities to remind them of the Digital Skills for Citizens Grant Scheme. The Department has recently received a copy of the update Broadband Officer List and has contacted each of the Broadband Officers directly to encourage further promotion of the Digital Skills for Citizens Grant Scheme.</p> <p>A copy of the Digital Skills brochure in Irish and English was circulated for their attention along with a link to the Digital Skills page on the Departments website which includes a link to upcoming training classes which are available nationwide www.dccae.gov.ie/digitalskills.</p> <p>Each of the Local Authorities/Broadband Officers were requested to remind all organisations/partners/community groups/charitable organisations etc, within their network, of the scheme and the benefits to citizens that using the internet has to offer.</p>			

3. Topical Discussion

3.1. Introduction

It is essential that the Taskforce remains dynamic and responsive to new developments in the sector. This year, the format of the Taskforce has been refreshed, with a wider array of stakeholders invited to participate in quarterly thematic sessions, where emerging trends in the digital sphere will be presented and debated.

This new Taskforce format now affords a greater range of stakeholders the opportunity to feed into the decision-making process, ensuring that telecommunications policy remains fair, proactive and future-focused.



3.2. Improving Access to Mobile Phone Services

At the Q1 Taskforce meeting, three speakers were invited to present to the Taskforce and invited guests on the theme of 'Improving access to Mobile Phone Services'. Presentations were followed by an open discussion, led by Minister Canney, on the issues raised by each of the presentations and other associated matters.

Invited guests included Local Authority Broadband Officers, representatives of mobile phone operators and infrastructure providers.

Presentations

Colin Cunningham, CEO, Signal

Mr Cunningham presented a comprehensive overview of work currently being undertaken by Signal. Topics such as site selection and planning applications, public engagement and partnering with Local Authority Broadband Officers were addressed, leading to some valuable and productive discussion later in the session.

Mr Cunningham highlighted advancements in the design of telecommunications infrastructure and stressed the importance to his company of working with local communities and keeping work local; Signal operates from regional offices located across the country.

Several issues were raised during the presentation that may have the potential to impact on future telecoms infrastructure deployments, including access to State and publically owned assets. These issues were discussed with the wider group and noted for further consideration by the Taskforce.

Antoinette Brennan, Broadband Officer, Laois

Ms Brennan provided an overview of the role of the Local Authority Broadband Officer and spoke about the successes and challenges faced by Laois County Council as it addresses the county's mobile phone blackspots.

Ms Brennan discussed two recent initiatives that led to improved mobile phone services in Laois, describing the steps taken from identification of a blackspot to resolution of the issue. She emphasised that the most important element in such an undertaking is early, effective and open engagement between the Local Authority, local residents and mobile phone operators/infrastructure providers.

Ms Brennan also took the group through a case study describing the process of providing a remote and isolated tourist location with Wireless Fibre Extension data coverage. This section of the presentation included a step-by-step analysis of a solution to a common issue and discussed the relevant technology and engineering considerations (summary of case study below).

Fergal McCann, Director of Mobile Networks, eir

Mr McCann presented on eir's experiences as it continues to develop and transform its mobile network through 3G, 4G and 5G technologies. eir's high-level plans for the next 24 months were also discussed, including growth in both urban and rural areas.

Mr McCann provided an in depth and comprehensive review of current technology and insights into the future of mobile phone and mobile data services.

Discussion

Key points discussed included the following:

- Effective deployment relies on good relationships and meaningful engagement with key stakeholders (LA, residents, businesses, property owners, services, community groups).
- Engagement with Broadband Officers is key, their role should be full time.
- Deployments driven by local demand is a positive development.
- Access to State and publically owned property / assets is to be encouraged.
- 5G health concerns. Operators have experience of similar concerns regarding older technologies. Broad consensus that an independent, neutral and credible body should provide information to the public on the issue of 5G and public health.
- Telecoms operators value the Taskforce and the work it does.
- ComReg's outdoor mobile coverage map welcomed by telcos.
- A number of points raised regarding mobile phone blackspots:
 - Many blackspot areas are not commercially viable
 - For the sites that are not commercially viable, the charges for hosting infrastructure may need to be reviewed
 - A standard process for engagement between telcos/infrastructure providers and property asset owners may be required

Minister Canney thanked all for their participation and directed his officials to note the following points:

- BBOs are showing the benefit of their roles and need to be supported.
- With regard to mobile phone blackspots, there is a need to discuss issues around non-commercially viable sites.
- The public should have access to accurate and accessible information addressing health concerns and 5G technology. In this regards, the following two actions have been agreed:

- DRCD will draft a FAQ paper for the attention of the Broadband Officers to assist them in answering public queries.
- DCCAE and Ibec will hold further discussions on the key points that need to be addressed on the matter.

Connecting Donaghmore Museum

Working together; Laois County Council and Dense Air

Donaghmore Famine Workhouse Museum is a unique place in County Laois which aims to tell the story of the families who lived and died within the famine workhouse walls before, during and after the Great Famine. The remote location of the tourist/heritage facility inevitably meant a very poor level of coverage which negatively impacted not only the business but also the residents living nearby.

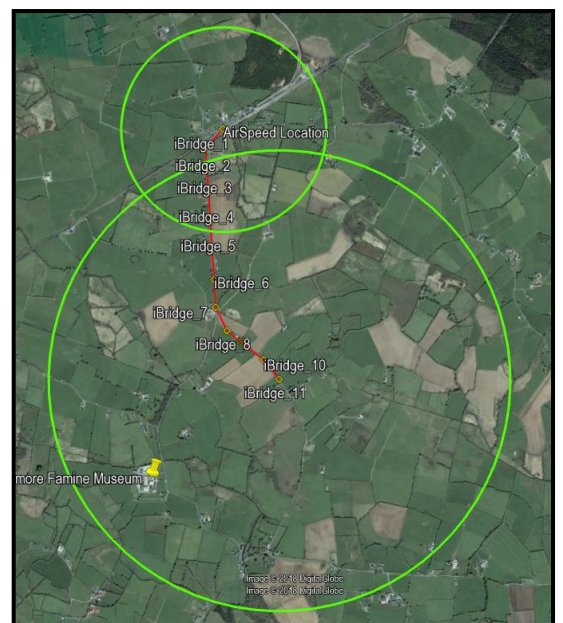


In order to provide better connectivity for all in the area, Laois County Council, via its Broadband Officer, undertook to contact infrastructure and telecommunication providers to investigate possible scenarios on how to improve the situation.

Dense Air Ireland carried out a visual survey around the location of Donaghmore Museum and proposed a suitable solution which consisted in extending the current infrastructure to ensure full coverage of the area. Building out the new network required Dense Air to engage with a fully compliant service provider, Laois County Council, ESB Networks, Enet, and the local community.

Six new roadside poles were installed to allow for infrastructure to be enabled and indoor equipment was deployed within the museum location (office and conference room) to allow maximum coverage both inside and outside the premise.

Thanks to continuous engagement between Dense Air, Laois County Council and the residents, the area now benefits from a strong, fast and reliable high speed connection.



4. Glossary

ASAI	Advertising Standards Authority for Ireland The independent self-regulatory body set up and financed by the advertising industry and committed, in the public interest, to promoting the highest standards of marketing communications, that is, advertising, promotional marketing and direct marketing. www.asai.ie
CCMA	County and City Management Association The “representative voice” of the local government management network. Its members are Chief Executives of the County and City Councils and the Assistant Chief Executives of Dublin City Council. www.lgma.ie/en/CCMA
ComReg	Commission for Communications Regulation The statutory body responsible for the regulation of the electronic communications sector (telecommunications, radio communications, broadcasting transmission and premium rate services) and the postal sector. www.comreg.ie
DCCAE	Department of Communications, Climate Action and Environment www.dccae.gov.ie
DHPLG	Department of Housing, Planning and Local Government www.housing.gov.ie
DIP	Digital Innovation Programme The Digital Innovation Programme was launched in 2018 by the Department of Rural and Community Development with the aim of supporting digital development in Local Authority areas for the benefit of communities.
DRCD	Department of Rural and Community Development www.drkd.gov.ie
DTTAS	Department of Transport, Tourism and Sport www.dttas.ie
ESB Networks	Electricity Supply Board www.esbnetworks.ie
GIS	Geographic Information System System designed to capture, store, manipulate, analyse, manage, and present spatial or geographic data.
Green Book	Guidance on the Potential Location of Overground Telecommunications Infrastructure on Public Roads is designed to address the engineering appropriateness of siting telecommunications

equipment on the roads network. The Green Book can be found on the DTTAS website at: www.dttas.ie

Ibec	Ibec is Ireland's largest lobby group representing Irish business both domestically and internationally. Ibec and its trade associations lobby government, policy makers and other key stakeholders nationally and internationally to shape business conditions and drive economic growth. www.ibec.ie
JULA	Joint Utilities Local Authority Users Forum
LAs	Local Authorities
LGMA	Local Government Management Agency A state agency of DHPLG established to provide a range of services to the Local Government Sector in support of co-ordinated and cost effective delivery of Local Government services and policy www.lgma.ie
LTI	Long Term Impact
LUTS Committee	Land Use and Transportation Committee
MRL	MapRoad Roadworks Licensing is the new national system for the management and processing of roadworks licence applications.
NBP	National Broadband Plan A Government-wide initiative to deliver high-speed broadband services to all businesses and households in Ireland. The NBP defines high-speed broadband as a minimum speed of 30Mbps download and 6Mbps upload. This is being achieved through a combination of commercial investment by the telecommunications sector and a State Intervention in those areas where commercial providers acting alone will not provide this essential service. For more information, visit www.broadband.gov.ie
OPW	Office of Public Works www.opw.ie
Purple Book	The Guidelines for Managing Openings in Public Roads set out a summary of the legal framework relating to powers of road authorities, various statutory bodies and private individuals in opening or forming openings in public roads in Ireland. The document prescribes standards in respect of the work of forming openings, backfilling and the reinstatement of road surfaces and the associated materials to be used on all roads other than National Roads. Furthermore the document prescribes procedures and requirements in relation to the use of MRL and its use for all road openings in public roads other than

those carried out by a road authority. The Purple Book can be found on the DTTAS website at: www.dttas.ie

RMO	Road Management Office A local authority shared service to develop and provide supports to roads authorities in the development of best practice and supporting ICT tools for road pavement management and road licensing. www.rmo.ie
TAG	Telecommunication Action Group Monthly meetings organised by DRCD attended by all Broadband Officers providing an opportunity for networking and the dissemination of information.
Telcos	Telecommunications Operators
TII	Transport Infrastructure Ireland TII's primary function is to provide an integrated approach to the future development and operation of the national roads network and light rail infrastructure throughout Ireland. www.tii.ie
TII (Ibec)	Telecommunications Industry Ireland The Ibec representative body for leading industry and associated interest groups in the field of electronic communications. TII (Ibec) represents companies involved in fixed, mobile, wireless, fixed wireless, satellite and cable based service provisions, outsourcing and internet service provision. www.ibectii.ie