

COMMUNICATIONS AND THE DIGITAL ECONOMY

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Ireland's communications network supports economic growth, provides citizens with access to work, entertainment and social media. Staying connected and competitive in a globalised society is central to Ireland's continued prosperity.

Ireland needs to have a fast and secure communications infrastructure to meet the expectations of the many technology companies located here and to continue to attract new foreign direct investment. For example, the growing number of data centres is placing major demand on communications and electricity networks.

Broadband as an essential service

Broadband needs to be recognised, delivered and supported as an essential service similar to electricity. As Ireland's dependency on the Internet increases, service level agreements and legislation to ensure the delivery of the network and the service should be considered to drive the roll-out of the National Broadband Plan and the maintenance of the network for all users. A robust network that can withstand adverse weather and other forms of outages is critical as public services are increasingly automated.

Broadband speeds have been continuing to increase and by Q3 2017, 70% of all Internet connections exceeded 30 Mb/s, considered to be high-speed broadband (Fig.1).

However, our dispersed population poses a challenge; coverage in rural areas is uneven and the State will need to intervene for 542,000 premises or 21% of the population. To deliver services such as 'Internet of Farm' and eHealth (see overleaf), greater service levels are required, especially in rural areas. Studies have shown that a 10% increase in broadband penetration is associated with a 3.6% increase in efficiency and that it can raise GDP by 0.9-1.5%. Super-fast broadband is rapidly becoming an expected utility and can yield major economic benefits.

Future-proofing communications networks

The vision of a future society with autonomous cars and remote doctors is rapidly becoming reality. Currently the technology and applications exist but Ireland does not have the digital footprint necessary to support the true potential of the 'Internet of Things' and 'Big Data'.

The network should be future-proofed to ensure it is scalable and complies with any revisions to the EU broadband speed targets. New building developments should also include provision for infrastructure to support broadband rollout, for example, internal wiring in buildings, homes and industrial parks. There is good 3G and 4G mobile coverage across most areas, but as we move to 5G, thousands of extra masts will be needed to provide coverage.

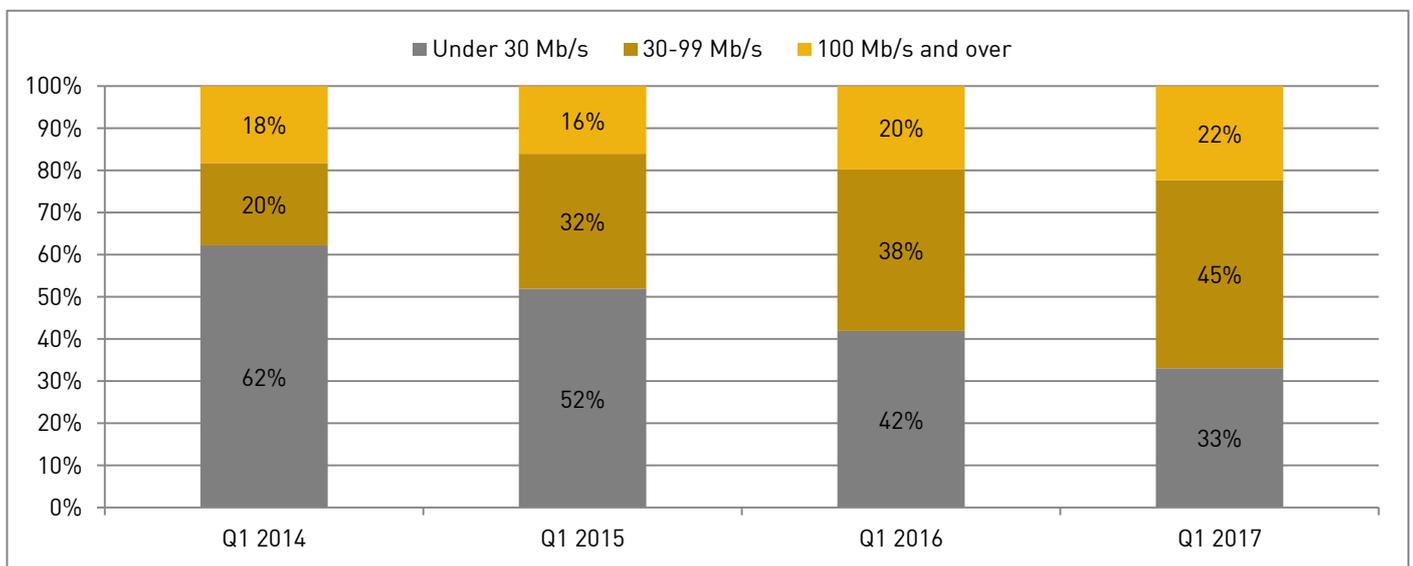


Figure 1. Total fixed broadband subscriptions by speed [ComReg]

Engineers Ireland Policy

Click [here](#) for more policy briefs on Digital Economy & Industry 4.0.

Further reading

Engineers Ireland (2017) State of Ireland 2017

ComReg (2017) Quarterly Key Data Reports

DCCAIE (2015) Ireland's Broadband Intervention Strategy (Updated)

DCCAIE (2012) Delivering a Connected Society: A National Broadband Plan for Ireland

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Engineers Ireland

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Deliver the National Broadband Plan

The National Broadband Plan (NBP) is a critical part of Ireland's digital strategy and its speedy delivery is crucial. The NBP aims to address the broadband deficit which is primarily in rural locations and defined as the intervention area.

The ambition of the NBP is to provide 100% access to high-speed broadband in the intervention area by the end of 2020, thereby meeting EU targets. This ambition is being future proofed by stipulating that the network must be able to evolve to speeds of up to 1,000 Mb/s.

The speedy award of the contract is necessary to ensure Ireland does not fall behind when it comes to competing with other countries when attracting new overseas business and supporting the establishment of domestic enterprise. Moreover, the plan has the potential to create an estimated 2,600 direct and indirect jobs.

Connectivity and Security

Ireland is currently connected to mainland Europe and North America by a number of subsea cables ensuring the country has access to both continents, allowing ultra-high capacity transmission to businesses wishing to locate operations here. However, with increased connectivity comes the increased threat to the security of Ireland's digital networks. The National Cyber Security Centre should be adequately resourced to stay ahead of developments in cyber-attacks.

The implications of Brexit for data security and sovereignty should be clarified. Post-Brexit, from a data protection perspective, Ireland's direct connectivity with the EU will become more important as much of our communications will leave the EU to pass through the UK.

Internet of Farm

The fourth industrial revolution, driven by new technologies, is impacting on even the most rural of industries – farming. The 'Internet of Farm' can deliver more efficient farming techniques through monitoring of land and animals. However, given that the majority of farmers are located in rural Ireland, the limitations of the broadband network in rural areas is having an effect on the ability of farmers to adapt their methods and realise the full potential of new agricultural technologies.

eHealth

In Ireland, we are only beginning to see the emergence of technology in providing eHealth services. Progress is being made with Electronic Healthcare Records to create and share information to improve patient experiences and deliver a more cost-efficient service. Other possibilities are extensive and include e-monitoring to reduce GP visits and the average hospital bed stay, as well as remote monitoring to manage chronic disease and assisted living, reducing dependency on residential care.

For example, the Ballymore Eustace 'hub' situated in the town's post office currently provides an online consultation service with doctors. The online medical consultants, VideoDoc, provide a virtual doctor's office where patients can speak with a doctor by video link regarding minor ailments.