

5 things businesses need to know about 5G

With 5G going live in five cities across Ireland and rural roll-outs to follow, we look at what all the fuss is about 5G and why business owners and managers need to pay attention.

On Tuesday (13 August) [Vodafone switched on its 5G network in five locations](#) including Cork, Dublin, Limerick, Galway and Waterford.

The company was first out of the traps ahead of expected launches by rivals Eir, Three and Imagine in the coming months.

“5G is set to revolutionise how we use and adopt technology and will have a huge impact on businesses and society in Ireland,” said Vodafone Ireland’s CEO Anne O’Leary on the day of the launch.

O’Leary has previously said that 5G is the priority investment for Vodafone through 2019 to 2020 and beyond. Eir is investing €150m an upgrade to its 4G and 5G networks. Three is planning to spend €100m a year on its 5G roll-out plan while Imagine is working on a plan to cover 1m Irish homes and businesses in underserved areas with 150Mbps connectivity using fixed 5G. The company is rolling out 325 fixed wireless sites across rural Ireland.

1. What is 5G?

5G represents the fifth generation of mobile networks since they first became possible in the 1980s (1G), steadily evolving to GSM and GPRS (2G) in the 1990s, UMTS and CDMA (3G) in the mid-2000s, LTE (4G) today and now 5G New Radio, which became a standard in late 2018.

2. What is all the fuss about 5G and how fast will it be?

Well, the technology promises a 100-fold increase in network capacity compared to the current 4G networks and a world where speeds above 1Gbps on mobile may soon be commonplace.

In 2017 five firms including Imagine, Airspan, Vodafone, Three and Eir successfully bid for spectrum licenses in the 3.6GHz spectrum after bidding €78m between them. This compares to the €854.6m that operators paid when 4G licenses were awarded in 2012.

3. Will it be a replacement for fibre?

While a lot of the marketing and hoopla around 5G will centre on a new crop of smartphones, it is more likely that early deployment will be driven by business and household fixed wireless access

for broadband connectivity.

But will it be a dependable replacement for fibre? In some cases, possibly. But overall, not entirely. While fibre guarantees speeds in multiples of 1Gbps and beyond with a steady, uninterrupted flow of data at the speed of light, wireless networks will always be hampered by physics. The more people who require access to a 5G base station simultaneously, for example, or the further you are away from it, the slower it will get.

But that said, operators like Vodafone see 5G as offering a much more efficient architecture than 4G, with lower latency and a higher reliability.

The operator envisages clever use of 5G to enable connected cars, and even medical internet of things applications where doctors can use robotics in remote surgery applications, for example. To coincide with the launch of the new mobile network Vodafone announced a strategic partnership with the ASSERT Centre (Application of the Science of Simulation to Education, Research and Medical Technology) in University College Cork (UCC), making it the first 5G connected telemedicine and medical robotics training centre in the world.

4. When can I get it, do I need a different handset, and how much will it cost?

Vodafone's 5G coverage will be first available in parts of Dublin, Cork, Limerick, Galway and Waterford ahead of a more general roll-out. The new network has been built using standardised Ericsson 5G deployed over spectrum acquired by Vodafone.

The network is live but you will not be able to use existing 4G handsets to access it. Instead, new handsets that will support the new 5G network include the Huawei Mate 20X 5G which went on sale on 14 August or the Samsung Galaxy S10 5G which will be available to buy from Vodafone on 30 August.⁵

To access 5G you will need a 5G plan from Vodafone, with prices costing from an introductory €25 per month for a SIM-only mobile plan or from €40 with a handset. The operator said that all of its RED Complete plans are 5G-ready. If you are using a 5G compatible phone in an area that doesn't have 5G coverage, your phone will automatically swap to 4G, 3G or 2G - depending on the signal that's available. Your 5G phone will then automatically reconnect to the 5G network once you're back in a 5G area.

5. How will 5G benefit my business?

Well, in areas where it works perfectly Vodafone says you will get office Wi-Fi speeds on the go with speeds of up to 1Gbps, 10 times faster than what is standard on 4G.

If you are a manufacturer or an engineering firm, the low latency will reduce delays in connectivity

and data sharing and making the use of technologies like robotics and augmented reality more feasible.

Another potential benefit is 5G will enable more devices to connect at once. Vodafone says that it will allow more devices to connect simultaneously in dense urban areas. Using the new technology, public transport vehicles and emergency services will be able to relay information in real-time, while data from CCTV footage will improve things like traffic control. Eventually 5G will be used to allow swarms of connected, autonomous (self-driving) vehicles to talk to each other in real-time, avoiding collisions and getting people where they need to go safely.

Image: [Fit Ztudio](#)/Shutterstock

Written by [John Kennedy](#) (john.kennedy3@boi.com)

Published: 15 August 2019