

# 5G-READY? PARTNERSHIP AND IMPERATIVES

by Elizabeth Bennett Marsh, public education specialist at Office of Utilities Regulation



**At the height of the novel coronavirus pandemic rumours began circulating that there was a possible link between 5G Technology and the cause and spread of the virus, and that 5G had, in fact, entered Jamaica in a clandestine way. Both claims were wrong and unfounded.**

The Office of Utilities Regulation (OUR) was therefore prompted to issue a media release in April 2020 denying any deployment of 5G in Jamaica and explaining — as other regulatory agencies and experts worldwide have repeatedly affirmed — that there is no connection between 5G and the pandemic. The opportunity was also taken in the media release to underscore the benefits of 5G in respect of facilitating increased productivity, enhanced data handling, providing support for other new technologies, and transforming the country's digital capacity.

Of note, 5G is a significant evolution of today's 4G LTE wireless networks. It was developed to meet the very large growth in data and the pressing demands for connectivity in today's modern society, the Internet of Things with billions of connected devices, and tomorrow's innovations. In addition to delivering faster connections and greater capacity, a very important advantage of 5G is the reduction of latency (the time taken for devices to respond to each other over a wireless network). As an example, 3G networks had a typical response time of 100 milliseconds, 4G is around 30 milliseconds, and 5G is as low as one millisecond — virtually instantaneous — opening up a new world of connected applications.

With the Fourth Industrial Revolution already upon us, there are implications for the development of new business processes, research, data mining, application of new technologies in health and agriculture, and the development of enhanced consumer experiences; 5G is widely viewed as a key enabler for this development.

Telecoms companies in the Caribbean have varying experiences and views on the introduction of 5G in the region — from Telesur in Suriname, which is the 5G roll-out pioneer in the region, to Telecommunications Authority of Trinidad and Tobago (TATT), which is courting the technology, as well as companies like Flow and Digicel, which have highlighted a number of challenges preventing their foray into this area.

As part of its own drive to encourage progress on 5G, the OUR hosted a regional 5G technology media workshop in September 2021. The workshop, which saw participation from a number of countries in the region, was designed to educate journalists as well as harness and explore the different perspectives from regulators, operators, and suppliers.

OUR's deputy director-general, with oversight for the telecommunications sector, Maurice Charvis, in his presentation at the workshop, indicated that the historical trend shows that, in Jamaica, a new generation of telecommunications network is rolled out every decade since the advent of 1G in the 1980s. He noted that Jamaica is usually 10 years behind in rolling out these various technologies once they go on the market internationally. See Table.

Given this track record, he posed the question: Will Jamaica have to wait until 2030 to roll out 5G?

Telecoms operators provide several reasons for the slow pace of rolling out 5G in the region; among them the unavailability of low-cost phones that support 5G networks and the need to recoup/recover investments in the roll-out of 4G Technology being the chief among them. They also claim that the business case does not exist right now for 5G.

### **Telecoms providers' concerns**

Representatives of Cable and Wireless (marketing as Flow) and Digicel (pan-regional operators) proffered the following as contributing factors to their reluctance/inability to roll out 5G:

- \* Lower frequency spectrum: access to lower frequency spectrum that provides the best 5G coverage is restricted;
- \* Spectrum challenges: There is need for the deployment of new spectrum to 5G at a reasonable cost. Having the right spectrum in the right quantity and at the right price, they feel, is a requirement for the successful roll-out;
- \* significant cost outlay: To provide the high capacity, low latency full coverage there is need for a significant increase in the number of cell sites, perhaps a tripling of the current numbers. This, coupled with the other deep costs for infrastructure upgrade, make it an unattractive investment at this time. In addition, operators say they are still trying to recoup their investments for 4G technology, which in some cases is still being deployed. Incentives such as import duty reforms and a robust tax incentive regime, they feel, will encourage investors and telecoms providers to roll out 5G;
- \* Reliable fibre network: 5G is not possible without a reliable fibre backbone to provide backhaul from cell sites.
- \* Complete network transformation: This requires a move from legacy equipment to new technologies that come at a significant cost;
- \* Affordability of 5G handsets: There is currently a low penetration of 5G devices in the region due to availability and costs. This could result in only a few persons being able to access the 5G technology, preventing an opportunity for investors to realise a recovery of the costs associated with this outlay. If not timed right, there is also a danger of the network becoming obsolete before costs can be recouped.

### **Seizing opportunities**

It is perhaps instructive that while Flow and Digicel lament the major drawbacks that are preventing 5G implementation, Telesur in Suriname is leading its introduction in the region and currently utilises the technology to provide fixed broadband services. Telesur grabbed the opportunity of the recent discovery of oil and gas in Suriname to roll out 5G, as it projected that this discovery will attract foreign investors who are used to 5G services in their countries. It saw the need to put in place infrastructure to attract and retain foreign investors, with the growing demand for e-services, such as online order and payment, as well as more e-banking platforms and bill payment options.

The push to more online services and the demand for quicker response times helped to bolster the justification for implementing 5G. On November 25, 2019 Suriname introduced its 5G services pushing Safe City, e-Payment, e-Health, e-Education (free) services, among other services. According to its website, Telesur's 5G operates in a relatively low-frequency band because the low-frequency bands in Suriname are largely free.

Like Jamaica, Suriname faced some pushback, such as concerns about health risks (which were unfounded), and the availability of affordable handsets. Undaunted, the telecoms operator plans to roll out more 5G offerings.

The optimism for 5G introduction in the Caribbean is shared by OUR's Charvis, who pointed out that concerns preventing the roll-out is not supported by a global trend when one considers the following:

- Commercial 5G is now available in 1,336 cities across 61 countries;
- 5G deployments have surged despite the pandemic;
- As of February 2021, over 30 per cent of the world's countries have access to 5G;
- Some estimates forecast that by 2025 there will be 3.6 billion global 5G connections.

### **Old realities vs new**

Charvis opined that what is needed for the disruption of this 10-year-gap trend in implementing new technology is a change in assumptions by old and new players in the telecoms industry. Old assumptions are that the network has to be islandwide, voice will be the anchor, and it must be a public network. The new realities are that voice is no longer king; operators are beginning to offer fixed broadband using mobile networks; the pandemic has highlighted the need for fixed-styled unlimited data to support conducting work and school from home; there is no need now for a network to be accessible country-wide for the technology to be rolled out; and, the use of 5G is not confined to network operators as the technology can be used in private networks with the added advantage that unregulated spectrum can be utilised.

Therefore, the case for the speedy introduction of 5G in Jamaica is ideal:

- Fixed broadband passes less than 50 per cent of households and wireless technology is the best option for the rugged and mountainous interiors;
- Customers require unlimited broadband access;
- Broadband capability is enhanced with 5G;
- 5G features allow for enhanced productivity in industry, medicine, commerce, etc

Jamaica is way past the time for debating whether or not it should introduce 5G. The question, instead, as indicated by Charvis, should be: How do we get this technology in Jamaica?

The answer lies in a partnership and dialogue amongst policymakers, current and potential operators, and other interested parties.

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