14th July 2022

3G: The end of an Era

Do you need assistance upgrading your 3G product?
Extel Technologies is a leader in this field, and we are managing the upgrade migration challenges to 5G or NBiOT for several of our customers right now.

Check on your migration progress before your product is made obsolete

By the end of 2022, several electronic devices will be rendered obsolete because of this phase-out program. Wireless service providers worldwide have developed their own 4G and 5G networks, which share the same radio spectrum as current wireless technologies, thus replacing both 2G and 3G. Where there was a strong 2G or 3G signal, but a slow cellular speed, the 4G, 5G and NBiOT infrastructures are replacing those signals, providing faster mobile data speeds.

If you have already started the migration process, but it is not progressing quickly enough, or you are concerned about the longevity of the solution, we can smooth your migration path. Our team of specialists can assess and develop an improved migration roadmap to ensure your devices are rolled out in the most efficient, sustainable, and cost-effective way.

If you need to partner with a company that can manage your technology upgrades faster, speak to the team at Extel today.

3G phase out to end 20-year era
With the introduction of 3G networks in 2003, mobile devices could connect to the internet from anywhere. As compared to second-generation (2G) networks, which provided slower mobile connections not available everywhere, 3G was a huge step up. In addition to the introduction of smartphones, 3G technology paved the way for industrial devices that connect to the internet in more locations, at speeds faster than those provided by 2G.

It is not surprising that 3G networks are rapidly being phased out in favor of improved networks as new technologies bring greater advantages suitable for a variety of purposes:

Fourth-generation (4G)
Capable of streaming videos and live broadcasts.

Fifth-generation (5G)
Designed for the purpose of connecting people, machines, objects, and devices on earth.

Narrowband Internet of Things (NBiOT)
Offering low power and low total costs for remote data transfer.

The natural progression in technology has led to mobile network service providers around the world phasing out 3G networks to make way for 4G, 5G and NBiOT networks.

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Most carriers have set a timeline on when their 3G networks will be shut down...

USA
AT & T
Shut down its 3G network in February 2022.
Devices that do not support 4G LTE or voice-over LTE will not work with AT&T.

Verizon
Shutting down its 3G CDMA network in December 2022.

Australia
Optus
Operates two spectrum bands; 2100MHz and 900MHz. It reallocated its 3G 2100MHz spectrum band in May 2022, with no plans to cease the latter, so Optus' 3G 900MHz can still be accessible but it is not known for how long.

Telstra
Announced in October 2019 that it would be shuttering its 3G network in June 2024.

All Australian carriers are now supporting 4G, 5G and NBiOT.

Vodafone
No confirmed plans to phase out their service soon.

In **New Zealand,** the main network carriers, *Spark, 2degrees* and *Vodafone*, have switched off 2G services and aim to phase out 3G by 2023 but are yet to announce precise dates.

When to prepare for the 3G phase-out.
As carriers phase out 3G, the final transition into 4G, 5G and NBiOT will affect not just mobile phones, but a wide range of high-tech devices that rely on mobile connectivity. Those devices that have not yet been upgraded to 4G, 5G or NBiOT will not work once 3G is phased out. Despite being turned on, internet of things (IoT) devices that rely on 3G networks cannot establish a connection. This includes all but is not limited to the following mobile-based electronic connected devices.

- ATMs (Automated teller machines): As of June 2021, it was recorded that there are around 26,000 ATM terminals in Australia, with more than ten times the number in the US (approximately 470,135 ATMs).
- EFTPOS (Electronic funds transfer at point of sale): there are approximately 941,000 EFTPOS terminals in Australia as of June 2021
- Medical devices: About 35 medical device companies are listed on the Australian Securities Exchange even though most of the devices are imported. The United States has more than 6500 medical device companies, mostly small and medium-sized businesses.
- Home security systems
- Navigation services
- Remote monitoring devices

Despite the widespread presence of electronic mobile devices, many companies are not yet prepared to handle the wave of 3G devices that will soon lose connectivity. For IoT devices to succeed, they need to be reliable everywhere they are, often over an extended period, and flexible with the providers they use.

IoT devices powered by 3G make up a significant amount of the mobile landscape. How can businesses deal with the growing complexity of their wireless infrastructure as new radio access technologies (RATs) emerge and the demand for new wireless services grows?

As the market for wireless services grows, it is critical to recognize the importance of 4G and 5G. Among the main advantages of 5G are its extremely low latency and high bandwidth, as well as its ability to enable more AI, cloud, and sensor capabilities. To ensure successful deployments, it is necessary to consider the needs of newer 4G devices, as well as the requirements that will ensure connectivity and access to crucial data and resources. The advanced electronics industry focuses on areas such as remote medical devices, vehicle-to-vehicle communication, or real-time video surveillance. 5G is the ideal technology for these kinds of applications. It follows that IoT device makers must now focus their efforts on 4G, 5G and NBiOT networks.

While 3G technology is not used by new devices in the market, many existing devices do operate on 3G and were not designed to connect to 4G, 5G and NBiOT. Consequently, businesses with Internet of Things devices need to be aware of the impending 3G shutdown and ensure that the product development team will avoid the impact of legacy devices not being migrated in time or under the best solution.

Migration is an excellent opportunity for digital hygiene and future-proofing your IOT device.
Product companies are aware of the upgrade, importance, timeline, and the best path forward. Those who have not developed a path forward must understand that this can mean losing the ability to provide their products and services. Additionally, not using a specialist in the field of advanced electronics can result in reworking your migration strategy, which costs considerable time and money. During the migration process from a 3G network, location and specific needs should be considered, and a roadmap for meeting these specific requirements, including component availability and future-proofing design, provided. Taking this opportunity to review digital hygiene and the robustness of the device will help make your IoT device ready for whatever the future holds.

What Next?
Hopefully, you have already started the migration to 5G or NBiOT. Should you not have started, please contact us today for assistance. You may already have started the migration process, but it is not progressing quickly enough, or you are concerned about the longevity of the solution. We can assess and develop an improved migration roadmap to ensure your devices are rolled out in the most efficient, sustainable and cost-effective way.

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If you need to partner with a company that can manage your technology upgrades faster, speak to the team at Extel today:

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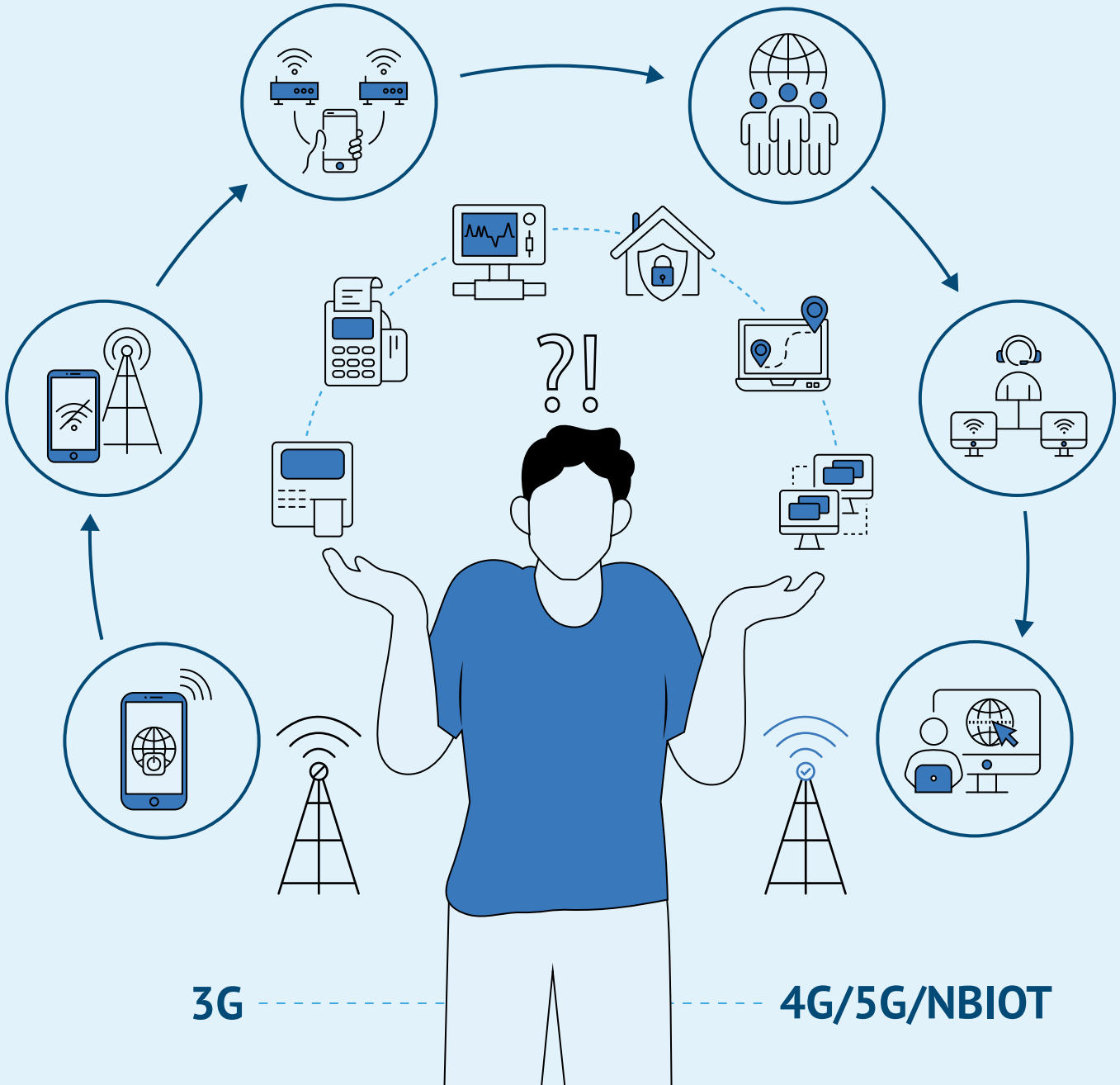
DO YOU NEED ASSISTANCE MIGRATING YOUR 3G PRODUCT?



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NEW ZEALAND

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Migrate with confidence

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Speak to one of our specialist team members today:

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