

# Move to 5G services without abandoning 4G investments



By [Simon McCullough](#)

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These are exciting, yet challenging times for service providers and telcos as 5G comes ever closer to becoming a reality.



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Wireless can finally become a leading connectivity option, with speed and latency similar to traditional hardline copper or fibre. 5G will also create massive opportunities around expanding IoT, enabling connected vehicles, building smart cities and more.

However, it will still take time and work to realise this promise. Service providers are taking a big step forward as they begin to roll out new 5G radios, but other parts of their infrastructure will remain 4G for some time. No one wants to abandon the substantial investments made in 4G, but no one wants to fall behind in the race to deliver 5G either.

The good news is that there is still a great deal that companies can do with existing infrastructure to position themselves to be ahead of the curve as 5G lights up. For example, we recently announced several additions to our NFV offering that enables the optimisation and scale of existing 4G and new 5G networks. As service providers deploy 5G and focus on the edge, they can begin monetising “5G-like” services—kickstarting their 5G portfolios as they roll out other elements in the years to come.

## Start with people

5G is not only a major new chapter in connectivity, it’s also a cultural change for organisations, and a skillset change toward the ongoing practice of operating your company as a virtual environment.

A lot of the network services that used to be a router or a switch will now be applications. You need people that understand the dynamics among all of those software components to deliver your services.

With automation, workers can get some relief from tasks like looking after capacity reports or monitoring the network for scale limitations or looking for malicious traffic. Instead, they're managing to outcomes. Previously, an engineer had to plan, purchase hardware, deploy hardware, run cables, and launch projects taking weeks or months to change services or make a new service available. In an automated environment, those problems can be solved within minutes or avoided entirely.

Success will be much more likely if leadership has a clear vision of what the transition looks like and workers feel empowered and understand that vision.

## **Automate, Automate, Automate**

Automation may be the single most important technology element of the transition to 5G. For a period, service providers will need to manage concurrent bandwidth and connection requirements, and unfortunately many 4G networks are simply not built on platforms that can handle the required scale. This is where automation comes in: with virtualised and cloud-based technologies, existing networks will scale as necessary while easing and optimising the migration to 5G services.

One challenge in running a highly distributed environment is getting the analytics and the performance data out of the infrastructure. By moving to a virtualised, automated environment across clouds and networks, service providers can gain common visibility into applications in order to understand the end-user experience and application performance.

And once 5G cores are deployed in a native virtual environment, automation tools will help streamline things like capacity augmentation, failover, high availability and service restoration, while offering greater service predictability across networks and systems.

## **Deliver new services**

Service providers don't need to wait for 5G to begin rolling out new services. With a nimble organisation and a network optimised through automation, service providers can leverage incremental 5G technology upgrades to deliver differentiated services. Because they are built on a virtualised infrastructure, up-front costs can be kept low and risk can be minimised.

Take IoT. The demand for new IoT services is growing, and while service providers can monetise the data connectivity, with the ability to manage high volume and latency requirements, they can also create and support new services built across these thousands of additional endpoints. Service providers can offer new levels of security, different SLAs, and managed services that improve this entire ecosystem.

As with every major industry transformation, the key to preparing for 5G will be to embrace the change. For service providers, this is a pivotal year—one that represents an opportunity to get ahead by implementing really cool technology to solve real problems and create new solutions that have never been possible.

With careful focus and investing in the right areas, companies can reap value now while positioning themselves for the new world of high speed, low latency wireless.

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