

Edge computing: Revving 2021 up for your 5G future

By [Tony Bartlett](#)

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Last year as the world leaned upon digital platforms for connection, the power and absolute necessity of technology became 100% clear - let's call it the 2020 vision. This year, the evolution of those digital technologies carries renewed weight in edge computing. Edge continues to serve as the thread that sews the seams of our high-tech lives together today - and reinforces the fabric of our 5G-charged futures.



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Better, faster connections are more important than ever as we continue to make our homes smart hubs for all our worldly needs – whether that's smart TVs, personal assistants or security. It was no surprise that innovative smart home devices stood out at this year's virtual CES exhibition. From robot vacuums hoovers to smart lights built with seniors' carers in mind and poo-analysing toilets that provide personalised health recommendations, it didn't disappoint. The trend places human benefit at the heart of technology, in the centre of homes.

Looking ahead to a hybrid world, where homes must be comfortable central hubs and cities must evolve to guard our health post-Covid-19, IoT innovations are critical. This push towards smart city initiatives centre on edge computing solutions. Whether that means enhancing building security, home automation, or city asset management, the demand for real-time low-latency processing is acute. Along with the exponential increase in data and network traffic, it is driving up the value of the edge computing market.

Edge computing is not new, but it is inevitable

When looking ahead to dizzying futures of hyper-connected intelligent devices lighting up smart cities it's easy to get carried away. The truth is edge computing is not new. Looking back ten years ago, the first fax servers were set up to bring the old stalwart of office tech into the digital era – this was an edge technology. The difference now is that there is a convergence of ripe technologies accelerating our progress towards 5G speeds of connectivity. This is where the excitement stems from.

Edge computing is tied closely to another component of the hybrid cloud, providing enterprises with the opportunity to capitalise on smaller, more portable containerised services with modular servers. This reduces the distance between the point of processing and the consumption point of functionality within the network. It serves the needs of time-critical data processing – enabling real-time, reliable services where even a second's delay in response is costly. Whether that's spotting an intruder at home or alerting the emergency services to a family member's fall.



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Edge computing also provides lower latency so heavier workloads can be processed at speed. For example, workloads requiring AI-enabled analytics and real-time action like within an autonomous car or home security system will benefit from localised processing. Meanwhile, the opportunity to port what would previously have been a data centre's worth of servers, cooling facilities and bricks-and-mortars to mobilised microdata centred – placed closer to users for time-critical processing – makes operational and financial sense.

Ultimately, edge computing opportunities will succeed where they are most needed. As a fourth component to the hybrid cloud, it is the final piece in the cloud computing jigsaw. The on-premises data centre remains an optimal component for more sensitive, less time-critical data. Colocation facilities in fully managed buildings and cloud service providers still have their place in the cloud mix. But for businesses to optimise their digital services, innovating in the smart homes and cities of today and tomorrow, taking full advantage of that portfolio of opportunities and tailoring them to business needs will define their successes.

Edge computing, 5G and me

Not only does edge computing enable more responsive, reliable and human-centred applications for the technology, but it also sets the foundations for 5G connectivity. Accounting firm KPMG believes 5G and edge computing technologies will be key to the global economic recovery as we move beyond the Covid-19 pandemic. As the network matures across Africa, it is those with edge computing capabilities that will be poised to get the most out of the high-speed opportunity. 5G will make it possible to handle incredible amounts of machine-to-machine data as edge computing and IoT technologies converge.



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Industries like manufacturing, healthcare and transport eagerly await the full throttle of 5G and its transformative impacts. By reinforcing the digital backbone of the enterprise with the likes of edge computing networks, early improvements in

productivity and efficiency can be achieved. These benefits can then be felt more immediately across not only the enterprise but the human beings they serve. Whether that's through VR-enabled escapism, turbocharged gaming, super-efficient smart homes or robotic surgery and driverless cars. Let's build the future for today, not tomorrow.

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