



# Game changer

5G mobile communication is coming this year as Jon Mamonski reports

The Consumer Electronics Show in Las Vegas this year was a blast and leading the charge was 5G, the next generation of communication technology. Your current mobile phone runs on 4G but 5G is radically different and so much faster. Qualcomm makes the 5G chips now released as the Snapdragon 855. Both Telstra and Optus have demonstrated 5G and switched on 5G towers in Melbourne's CBD and Tullamarine. 5G mobile phones will be in the market here after Easter.

5G will usher in an age of boundless connectivity and intelligent automation, changing the game for you, businesses and governments alike. It will be faster, more flexible and more powerful. 5G will connect devices, sensors, machines and people, leading to significant growth in the industrial IoT, (Internet of Everything) and transforming how we interact with the world.

In the next few years, 5G will

fundamentally transform our lives, bringing us a society and environment where everything is smarter and more connected. From agriculture and healthcare to automotive and more, 5G will radically change the way we live.

We need to prepare for the possibilities that this next-generation connectivity will offer with those that are fastest to embrace the changes set to gain a competitive advantage over their rivals. This next-generation network connectivity is set to reinvent the world of business – here are some reasons why 5G is the future.

## Autonomous cars

5G is essential to the future of autonomous cars that need to detect obstacles, interact with smart signs, follow precise maps and



communicate with other cars on the road. Ideally, this will in time, eradicate road trauma and death.

Large amounts of data will need to be transmitted and processed in real time in order to ensure passenger safety and only 5G can provide the capacity, speed, low latency and security needed to bring millions of autonomous cars to the roads.

Not only do autonomous cars have the potential to reduce pollution and congestion and improve passenger safety, but they could also open up an entirely new market.

As drivers become passengers, they will gain extra free time that they did not have, either to work or relax. By 2025, there will be more than 60 million autonomous cars built.

## Health, public transport and smart cities

Smart cities will rely heavily on connected devices, many of which will need to interact with autonomous cars and on-demand smart buses and flying drone taxis, which will also rely on 5G network connectivity. Smart buildings will enable businesses to work more efficiently by regulating energy consumption, while devices such as smart billboards will enable companies to target consumers more directly.

Smart city data will help authorities and town planners to understand how resources such as electricity are used in cities as well as how traffic and commuters move around the area. In turn, this will provide a clearer picture of any gaps in local services. The 5G-based infrastructure that smart cities will be built on is set to offer a wide range of opportunities for forward-thinking businesses.

In the future, 5G will enable a host of new innovations such as remote robotic



surgery and personalised medicine based on data from wearable health trackers. The ability to monitor health to such a degree could well have a major impact on the insurance sector, with the price of premiums dictated by customer lifestyles. The industrial-scale transfer of sensitive data means that IoT security will be a source of major investment in coming years.

Real-time health management systems that accurately track patients, their medical records, recommend treatments and appropriate medicines and set up follow-up appointments. Taking contextual information into account, such as genetic information, patient lifestyle assumptions and the current physical condition of the patient,

when developing treatments – much less guesswork.

## Immersive entertainment

5G networks will be vital for supporting the growing demand for mobile video and to enable a new breed of immersive entertainment, thanks to technologies like VR and AR. These technologies are already helping to boost the fan experience in sports and other live events with innovations such as AR games and interactive game day programs, while VR is helping to recreate the live experience for those at home and on mobile devices.

## Communication and collaboration

5G's core function is the mobile network so it will help organisations to benefit from deep data by improving data transfer speeds and data analytics. Best of all, 5G will help to support remote working and also help colleagues to work on cloud-based collaborative documents and platforms in real time.

Although it will take time, Australians are world leaders in embracing new technology so we will be amongst the first to benefit from all that is 5G.





**REVIEW**  
CONSUMER ELECTRONICS SHOW

For the past 52 years, the Consumer Electronics Show in the US has drawn technology companies and innovators from around the world to exhibit. The biggest tech-fest there is had four and a half thousand companies gathered in Las Vegas this year, to be viewed by 180,000 show attendees (including this writer). The CES Innovation Awards choose the very best and most innovative products, judged by 89 of the world's most-revered tech experts. Earning a CES Innovation Awards is often the difference between a product coming to market or not. To gain a CES Innovation Award, your tech has to be very special and rise above the thousands of new tech on offer. Here are the 2019 winners.



**VERY SMART CHARGER**

BTFreq from Scosche Industries add multiple technologies to a vehicle with a charger that offers Amazon Alexa voice-activated assistance. It also Bluetooth enables the vehicle for hands-free calling and music streaming through the stereo system and charges two devices at once. No price yet but should be available in the third quarter of this year.



**FOR THE LOVE OF BEES**

French Tech company Beelife say bees are becoming endangered and CoCooon is a smart beehive with active thermal system and IOT features. The system is a way to fight against climate change and an embedded treatment for the most dangerous bee killer, the varroa destructor. This is a solar self-powered product, with complete remote control and monitoring via GSM. Full version will sell for around \$1299 but will be recovered by savings in three years by the beekeeper.



**TOP HEADPHONES**

The newly acclaimed Sony 1000X member, the WH-1000XM3 offers industry-leading comfort, noise cancellation and sound quality. Built with consumers in mind, the WH-1000XM3 headphones offer upgraded noise-cancelling performance to enhance the listening and user experience. Priced at \$399.



**WIRELESS LAPTOP CHARGER**

Energysquare has developed a universal wireless charger for phones, tablets and laptops, based on its 'Power by Contact' patented conductive charging technology. Fast, powerful, with no electromagnetic waves, the purpose is to keep your devices always charged avoiding the inconvenience of conventional wired charging. On Kickstarter from around \$90.



**BENCHTOP PORTABLE DISHWASHER**

Innovation in the kitchen. Did you know that handwashing dishes takes 10 times more water than using a dishwasher? If a 2-person household were to switch from handwashing to a Tetra dishwasher for one meal a day, they could save 5000 litres of water in a year. Tetra is an internet-connected compact dishwasher that quickly cleans tableware, wine glasses, baby bottles, etc. in minutes using four litres of water. With its own water reservoir, no plumbing is required and there's no heating coils – it uses environmentally-friendly graphite plates that heat water to the right temp and stops mineral scaling. Place and use it anywhere that has a standard electrical outlet. Should retail for \$499.



**A BOX YOU CAN TRUST**

The TrustBox is the answer to the ever-increasing demand for digital security at home. The Scalys TrustBox is the high-grade secure router and Internet-of-Things gateway for safe and trusted communication with the connected world. It secures the communication and connectivity of connected devices at home and on-the-go with military-grade security. At the CES 2019, TrustBox won the Best of Innovation Award for Cybersecurity and Personal Privacy. No price yet. Due to be released by Easter.



**SKIN READING**

The scientific and medical communities have long known the link between skin pH and common skin concerns, yet there has never been a consumer-friendly way to measure it. L'Oreal's My Skin Track pH is the first-ever wearable sensor and companion app to measure personal skin pH levels and create customised product regimens to better care for skin. Using microfluidics technology, the sensor captures trace amounts of sweat to provide an accurate skin pH reading within 15 minutes.



**SMART PREGNANCY**

Thanks to Owlett Baby Care, expectant mothers can wake up to a health report of their unborn child and be notified if heartbeat or movement are within normal pre-set ranges with the new Owlett Band. Specialised ultra-thin fabric sensors placed on the mother's abdomen track her baby's wellness inside the womb. Available in Australia from [www.owletcare.com.au](http://www.owletcare.com.au) for \$399.99.



**TALK TO YOUR TAP**

The Sensate kitchen tap with US company KOHLER Connect allows you to turn the water on/off or dispense to a measured volume through voice-commands, KOHLER Connect App or touchless motion-based interactions. You can fill a cup of water or a large pot with hands-free voice control – just by asking. From \$1750.

**SPEAKER BOTTLED**

AQUIO, from iHOME, is a fashion-inspired hydration bottle for stylish and active music-loving individuals. A double wall insulated, BPA free, stainless steel bottle and removable waterproof Bluetooth speaker combine for a product that hydrates body and mind. AQUIO speaker bottle is the ultimate convenience and is now available online for \$69.

