



5G

The evolution towards a revolution

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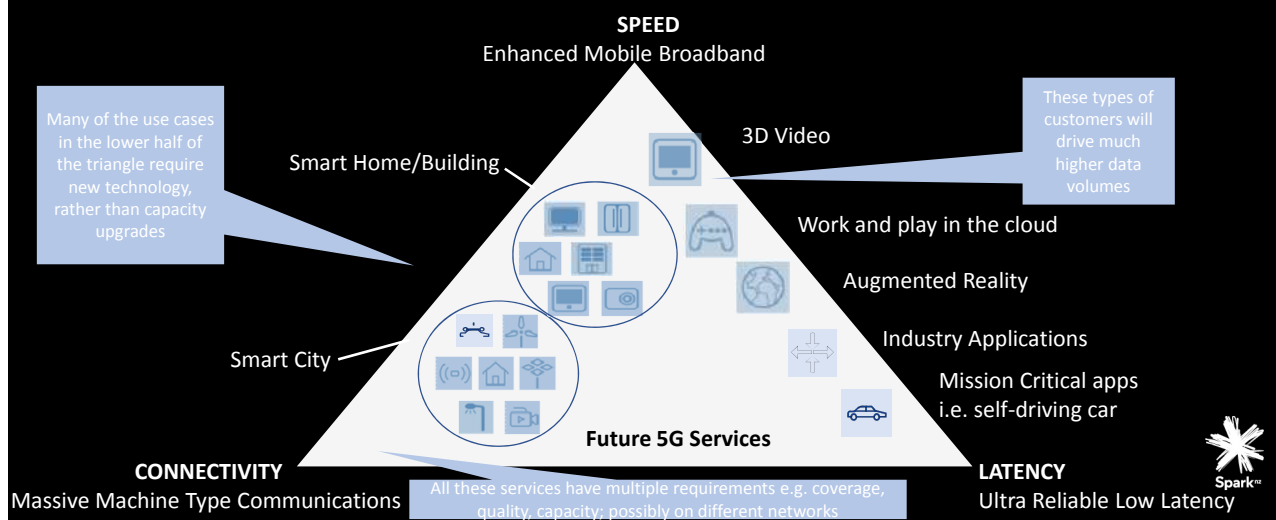
5G IS THE NEXT EVOLUTION IN MOBILE CAPABILITY

			
1G Talk	2G Send messages	3G Email & internet	4G 4.5G Faster email & internet + video
1987	1990's	2001	2013 2016 →



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In a 5G world, customers will consume a much greater range of services than they do today



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WE'RE MAKING A **BIG** INVESTMENT IN 5G BECAUSE

- 5G allows us to manage the exponential growth in demand for mobile data. Research predicts that it'll grow more than 8 times between now and 2023.
- The mobile data growth on Spark's network was over 50% this year and that's without adding 5G capabilities
- We want our network investments to be future-proofed as a means of keeping ahead of expected data growth
- 5G will enable us to become much more of a digital services provider than a telco and deliver wider economic benefits to NZ
- 5G enables us to provide additional capacity at a lower incremental cost than 4G which means we can further invest in growing the network



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**WE ARE LEADING THE WAY ON 5G TO ENSURE
NEW ZEALAND IS NOT LEFT BEHIND**

Subject to Government making spectrum available
we plan to launch Spark's 5G network by July 2020.

But, we're not waiting. In fact we're up and running.



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**THE 5G LAB IS A
PLACE OF EXPERIMENTS**

www.spark.co.nz/5g/home/visitlab



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To explore these possibilities we created

THE 5G CO-LAB SPACE

A place for New Zealand businesses to experiment with the potential of 5G.



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Let's look at some examples of
how 5G might affect our daily lives.



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ENERGY

- To eliminate safety risks associated with all climbing activity drones can be used for surveillance of towers and wind farms
- Remote monitoring of energy sites i.e. windfarms and solar farms
- Using 5G for real time management of a smart grid

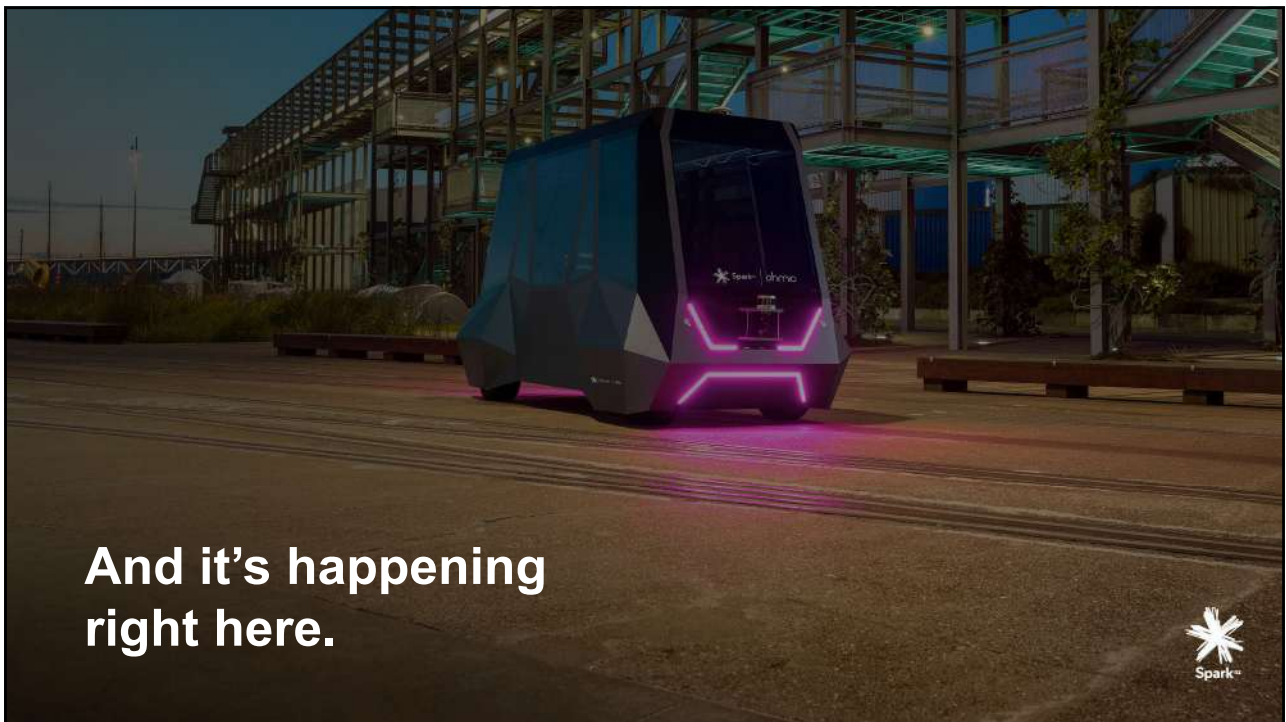
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TRANSPORT

- A network of self-driving and connected cars, communicating near instantly with each other, traffic lights, road sensors, even aerial drones
- Crashes could be a thing of the past
- Traffic jams a thing of the past
- Vehicle monitors and books its own maintenance needs in real time



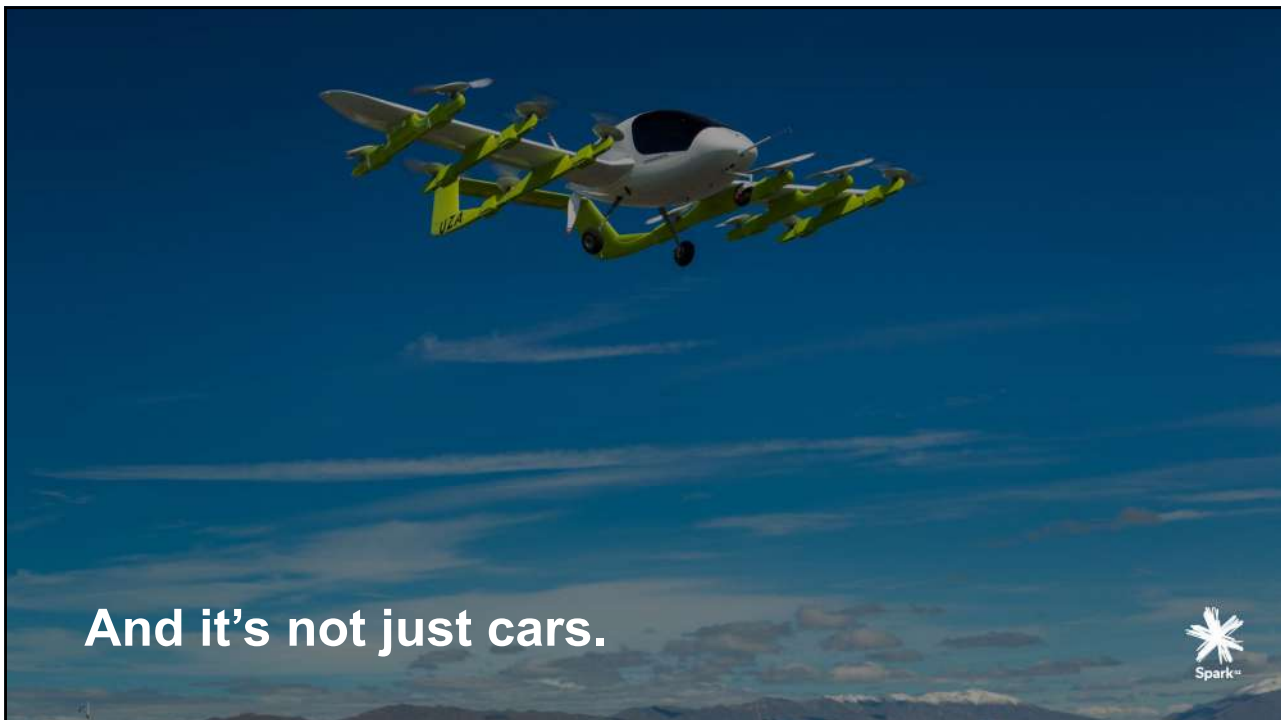
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HEALTH CARE

AUTONOMOUS MEDICAL DRONES



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ENTERTAINMENT

AUGMENTED REALITY/VIRTUAL REALITY



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BANKING & PAYMENTS



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SMART MANUFACTURING

Replacing WiFi with 5G will speed up the robots.



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AND EVEN SPORT

Spark have partnered with ETNZ to provide the technology to retain the America's Cup.



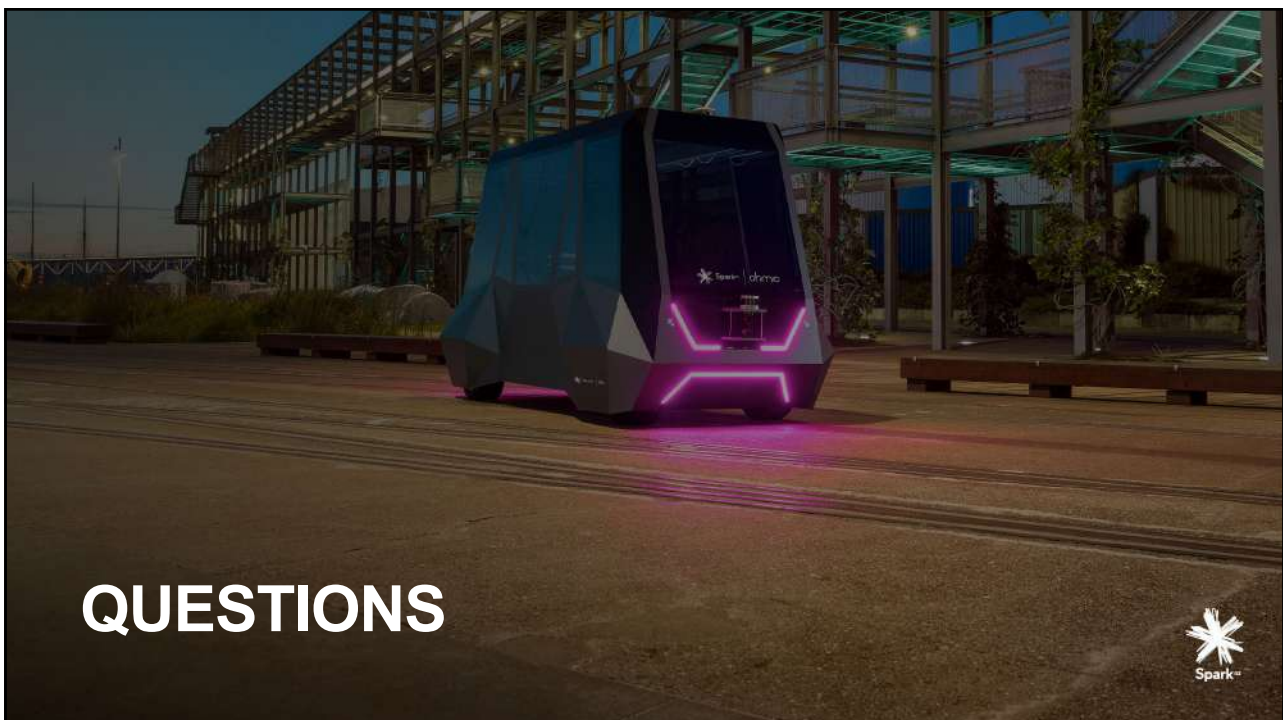
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