

Real Estate to go

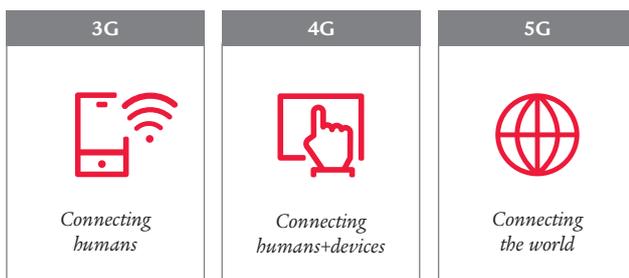
The next technological catalysts for change

Issue #7 – January 2022

5G: the need for speed

5G is the next generation in wireless mobile technology, delivering three significant impacts: First, bandwidth, (data transferred per second), will improve by up to 100x compared with 4G, allowing a 2-hour film to be downloaded in 3.6s vs. 6 minutes; second, latency, (the response time of devices to instructions), will reduce becoming instantaneous; Third, user capacity (supported devices) will expand significantly from 10,000/km² to one million/km².

A new world of connectivity



Source: Accenture

Increasing hunger for data?

The adoption of 5G is expected to be rapid. Within 5 years, there will be 3.5bn subscriptions globally. In Western Europe it will account for 69% of all mobile subscriptions. The higher bandwidth on offer is expected to underpin increased mobile traffic. Data usage per smartphone in Europe is forecast to increase from 11GB/month in 2020 to 47GB/month by 2026, reflecting a compound annual growth rate of 28%.

Appetite for data

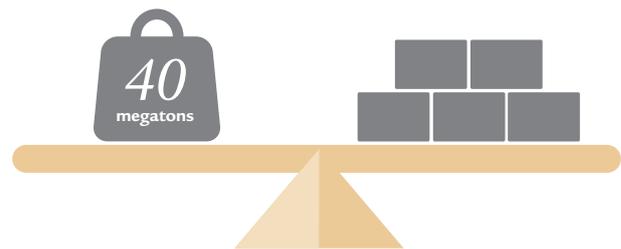


Source: Ericsson

Supporting sustainability goals

5G will accommodate the growing number of devices able to connect wirelessly to the internet to communicate and share data (referred to as “the internet of things”). 5G networks will have many uses, supporting improved productivity and efficiency within the manufacturing industry; in the UK this could save 40 megatons of carbon by 2035. If this scale was achieved across Europe the impact would be profound.

Cutting back on carbon



Source: Accenture

Boosting economic expansion

5G will revolutionise the way we live and work by unlocking the potential of new technologies, such as artificial intelligence and the Internet of Things (IoT). It will change our real estate needs and the locations we favour as cities become ‘smarter’. The benefits will be felt on an individual and commercial level. Over the five years to 2025, 5G is forecast to add up to €1.0 trillion to European GDP and has the potential to create or transform up to 20 million jobs across all sectors of the economy.

The economic benefits

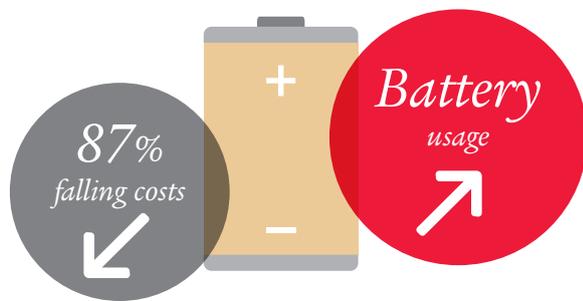


Source: Accenture

Plugging in: the role of battery technology

The IoT supported by 5G is enabling the development of 'smart' cities, shaping the built environment. These cities need to be sustainable and battery technology will play a key role. Batteries enable assets with on-site renewable energy sources to store excess energy and use it when needed, not only when it is generated, reducing dependence on the grid. Affordability remains an obstacle, but battery costs have fallen 87% over the last decade, making them more feasible in supporting resilient, sustainable, and cheaper power access.

Falling costs will support battery usage

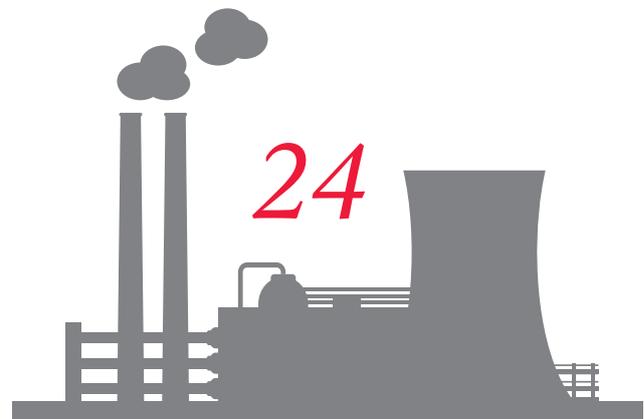


Source: Bloomberg, NEF, 2020

A development opportunity?

Demand for batteries to power electric vehicles (EV) is growing and as batteries become a key component of on-site energy, demand will only increase. Currently there are 24 gigafactories, to manufacture batteries, in the development pipeline across Europe. Combined, these will produce 600 GWh per annum. However, with demand from EVs alone anticipated to be running at 1,200GWh by 2040 in Europe, more land and investment is needed.

Planned gigafactories in Europe



Source: CIC energigune, April 2021

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