Technology Impact perspective for next 10 years.

Communication:

- The mobile 5G network will replace the current phone and internet systems.
- Starlink will work from any point of the UK, bringing high speed internet to even the most isolated locations.
- True Smart City/Town/village/houses where all electrical devices (including street lights) are connected to and monitored by AI via the internet.
- Commercial IoT, Remote manufacturing, Global inventory tracking, Robotics.
- Driverless cars communicating via the 5G network will potentially reduce road accidents by 95%
- Telemedicine will be the norm; everyone will wear a monitor (watch) so they will phone you to tell you that you are not well and what to do about it.
- Augmented and virtual reality could finally become a practical reality. VR telepresence apps will allow colleagues in distant cities to work "side by side," or sports fans to experience the roar of the crowd as England once again beats Wales at Twickenham.

Transport:

- There will be no need to own a car in 2030. There will be fewer vehicles on the roads, but each will benefit from much higher utilisation.
- By 2032 55% of all vehicles will be battery powered. When it becomes financially beneficial to run battery powered lorries, demand will outstrip supply.
- The convergence of AI, 5G and battery technology, transport as a service will become the standard way to travel.

Housing:

- The government has set out its plans and timeframe for its new Future Homes Standard which aims to 'radically improve' the energy performance of new homes, making them 'zero carbon ready' by 2025.
- The government confirmed that from 2025 it does not want any new home to be built with fossil fuel heating, such as a natural gas boiler.
- Roadside charging will no longer be needed, fast chargers will be used on major routes to add 500 miles in 5 minutes. (Porsche Taycan can charge at 10 miles per minute "optimum conditions")
- Home charging will reduce as we give up our cars to a "catch a ride" app.

All the above is already out there, identifying key markers for major change is the hard part, time is not a good measure, my rule of thumb, if something is increasing at greater than 13% on an increasing trajectory, something big is about to change. Electric cars currently account for 6.6% of total UK car sales.

Reference material

17 ways technology could change the world by 2025
https://www.weforum.org/agenda/2020/06/17-predictions-for-our-world-in-2025/

5. 5G will enhance the global economy and save lives

Overnight, we've experienced a sharp increase in delivery services with a need for "day-of" goods from providers like Amazon and Instacart - but it has been limited. With 5G networks in place, tied directly into autonomous bots, goods would be delivered safely within hours.

Wifi can't scale to meet higher capacity demands. Sheltering-in-place has moved businesses and classrooms to video conferencing, highlighting poor-quality networks. Low latency 5G networks would resolve this lack of network reliability and even allow for more high-capacity services like telehealth, telesurgery and ER services. Businesses can offset the high cost of mobility with economy-boosting activities including smart factories, real-time monitoring, and content-intensive, real-time edge-compute services. 5G private networks make this possible and changes the mobile services economy.

The roll-out of 5G creates markets that we only imagine - like self-driving bots, along with a mobility-as-a-service economy - and others we can't imagine, enabling next generations to invent thriving markets and prosperous causes.

The future of transport in 2030
https://octopusgroup.com/insights/the-future-of-transport-in-2030/

No more vehicle ownership

There will be no need to own a car in 2030. Right now, there are more than 35 million cars in the UK. Of that 35 million cars, only around 10% are in use at any given time, which is incredibly inefficient. Plus, a combination of depreciation and maintenance also make vehicles extremely expensive to own. But we don't currently have a viable alternative.

In the future, instead of owning a car, you'll use public transport, hail a taxi, or rent a vehicle on subscription, if you need dedicated access. Fleets will own vehicles (including autonomous ones) which will be called upon when needed, offering customers a cheaper, more convenient choice when it comes to mobility. There will be fewer vehicles on the roads, but each will benefit from much higher utilisation.

Government sets out targets for new Future Homes Standard
https://www.architectsjournal.co.uk/news/government-sets-out-targets-for-new-future-homes-standard

The government Future Homes Standard by 2025

The government has set out its plans and timeframe for its new Future Homes Standard which aims to 'radically improve' the energy performance of new homes, making them 'zero carbon ready' by 2025

The government confirmed that from 2025 it does not want any new home to be built with fossil fuel heating, such as a natural gas boiler. All new housing will also have to be future-proofed so that 'no further energy efficiency retrofit work will be

necessary to enable them to become zero-carbon as the electricity grid continues to decarbonise'.

Five Ways 5G Will Change Our Lives
https://www.vmware.com/radius/five-ways-5g-will-change-our-lives/#:~:text=5G%20could%20effect%20our%20lives,of%20a%20fully%20connected%20world.&text=5G%20antennas%20also%20consume%20less,of%20Things%20(IoT)%20devices.
Relying on a dense infrastructure of shoebox-sized "towers" every few hundred feet. That allows them to support billions of devices, with almost no latency,

1. Smart Cities (Towns and Villages)
Lighting, Goods Delivery, Monitoring the environment, IoT (Internet of things), home monitoring

2. The World of Work
Commercial IoT, Remote manufacturing, Global inventory tracking, Robotic.

3. Driverless Cars
According to the National Highway Traffic Administration, nearly 95 percent of traffic accidents are caused by human error. Removing humans from behind the wheel could save up to 1.25 million lives every year.
Once driverless infrastructure is in place, the streets may become less crowded and the air less polluted. With fully autonomous vehicles, fewer people will own cars and ride-sharing could become more common.

4. Telemedicine
Trips to the doctor's office may become as rare as house calls, thanks to virtual visits enabled by low-latency, HD-quality wireless networks. Wearable or implanted medical devices will capture your vitals and transmit them to health care providers, allowing them to detect early warning signs of heart attacks, strokes, or other life-threatening events.

5. Virtual Spaces
Thanks to 5G's high-bandwidth and low latency, augmented and virtual reality could finally become a practical reality. VR telepresence apps will allow colleagues in distant cities to work "side by side," or sports fans to experience the roar of the Super Bowl crowd from the comfort of their couches. We'll virtually roam shopping districts in Tokyo during lunch breaks and have the goods shipped to our homes.

It took 10 years for 4G to become the dominant cellular technology, and 5G might take even longer. But once it's fully in place, we'll wonder how we ever lived without it.