1. AI-optimized manufacturing

Paper and pencil tracking, luck, significant global travel and opaque supply chains are part of today's status quo, resulting in large amounts of wasted energy, materials and time. Accelerated in part by the long-term shutdown of international and regional travel by COVID-19, companies that design and build products will rapidly adopt cloud-based technologies to aggregate, intelligently transform, and contextually present product and process data from manufacturing lines throughout their supply chains. By 2025, this ubiquitous stream of data and the intelligent algorithms crunching it will enable manufacturing lines to continuously optimize towards higher levels of output and product quality – reducing overall waste in manufacturing by up to 50%. As a result, we will enjoy higher quality products, produced faster, at lower cost to our pocketbooks and the environment.

Anna-Katrina Shedletsky, CEO and Founder of Instrumental

2. A new era of computing

By 2025, quantum computing will have outgrown its infancy, and a first generation of commercial devices will be able tackle meaningful, real-world problems. One major application of this new kind of computer will be the simulation of complex chemical reactions, a powerful tool that opens up new avenues in drug development. Quantum chemistry calculations will also aid the design of novel materials with desired properties, for instance better catalysts for the automotive industry that curb emissions and help fight climate change. Right now, the development of pharmaceuticals and performance materials relies massively on trial and error, which means it is an iterative, time-consuming and terribly expensive process. Quantum computers may soon be able to change this. They will significantly shorten product development cycles and reduce the costs for R&D.

Thomas Monz, Co-Founder and CEO of Alpine Quantum Technologies

3. 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 change 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.

Maha Achour, Founder and CEO of Metawave