3. Our changing world: megatrends in focus

To make sense of our responsibilities as a business, we must understand the context of the global challenges we operate in, along with how we can respond to these and make sure our customers and communities are also prepared for an ever-changing world. Globally, Fujitsu Group has been working to understand the megatrends that will affect our business and society at large.[i] We believe the following megatrends are most pertinent to our business and stakeholders in terms of the value we can add in contributing to these challenges within our region.

Our changing population and the future of work

Globally, the population is expected to rise to 9.6 billion by 2050, from seven billion today. By 2050, there will be two billion people aged 60 or older, making up 22 per cent of the population.[ii] The trend will see a shift in the working population and also the types of work available. The workplace will soon see four generations of employees in the office, which will create a cultural shift and a need for creative and collaborative environments. Management will need to adjust significantly.

The future of the workplace is a much-discussed topic with no clear answer. While some studies have said approximately 30 per cent of workers worldwide could be displaced by 2030 due to artificial intelligence (AI), many others say that AI will simply change the workforce structure.[iii] Following Fujitsu's vision of human-centric technology, we will strive to employ automation that will let workers contribute quality input to the work, and increase personal happiness and freedom.

Part of our strategic vision is to enable a connected and agile workforce with space for collaboration, creativity, and engagement, to have an exciting employee experience.[iv]

Low carbon growth on a resource-stressed planet

In December 2015, world leaders gathered at the COP21 in Paris to settle on a universal agreement on climate change. Leaders realised the need to decouple carbon emissions from economic growth and that innovation and technology are key to achieve this.

Fujitsu and Telstra developed the SMARTer2030: ICT Solutions for 21st Century Challenges report in response to the 2015 Global e-Sustainability Initiative (GeSI) and look at global opportunities in the Australian context. The report details how we can use ICT to address a range of sustainability issues, particularly improving energy efficiency and transitioning to low-carbon growth.

SMARTer2030 examines eight industry sectors and how existing ICT solutions impact each sector, and shows that ICT also has the potential to reduce emissions by more than 20 per cent annually by 2020 (compared to 2006 levels).[v]

Between 2012 and 2025, global waste generation is expected to nearly double to 2,216 million tonnes.[vi] It's important to note that, of all the waste streams, waste from electrical and electronic equipment containing new and complex hazardous substances presents the fastest-growing challenge in both developed and developing countries.[vii]

In 2050, more than 50 per cent of the world's population will live in water-stressed area. This presents a huge risk to predicted growth for developing economies.[viii]

Rapid urbanisation requires smart cities

More than half the world's population lives in urban areas. On average, 60 per cent of the world population is likely to live in cities in 2030, ranging from 81 per cent in developed countries versus 56 per cent in the developing world. This will create pressure on social infrastructures.[ix] Rapid urbanisation, population density, energy demands, and public transport investment means cities need to be redesigned, including the opportunity to develop smart cities.

A smart city is not just about technology and data application, but using it to drive economic and sustainable growth, managing energy, resources, and services better, and accelerating innovation. Ultimately, it's about improving the lives of people, creating human-centric technology to improve quality of life and living.

Big data and security

The digital landscape is rapidly advancing, so introducing new ways of storing and managing data responsibly has now become a significant issue. Data has become a valued commodity that can drive economic growth.

By 2020, it is estimated that the accumulated volume of data will increase from 4.4 zettabytes in 2013, to roughly 44 zettabytes, or 44 trillion gigabytes. If this was represented by 128 GB tablets in a stack, then in 2013 it would have stretched two-thirds the way to the moon. By 2020, this would look like 6.6 stacks from the Earth to the moon. Originally, data scientists maintained that the volume of data would double every two years, thus reaching the 40 ZB point by 2020. That number was later increased to 44ZB when the impact of IoT was considered.[x]

IoT could connect as many as 28 billion 'things' to the Internet by 2020, ranging from bracelets to cars.[xi] Through IoT, data is being generated faster than ever before, which is much more than we can comfortably deal with by conventional analysis techniques. AI can potentially take this data and help us to make sense of it, and help us to make more informed decisions.