Forces shaping our future

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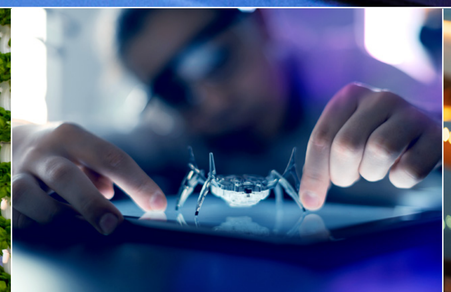


The forces shaping our future

We must remain focused on near term 'trends', alongside longer term 'fringe forces' both inside and outside of the ICT industry, in addition to the impact of possible combinations.

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Technology

Artificial gets real

AI supports all aspects of life, and becomes a primary competitive differentiator

The mirror world

Blurring the physical and virtual worlds – for entertainment, autonomous vehicles and scenario planning

Connectivity in everything

Trillions of sensors in everything – from devices to nature

Beyond the smartphone

From XR wearables, to devices with a full spectrum of senses, to the first 'bio-interfaces'

Society & geopolitics

The climate crisis

Moves from 'a challenge' to 'the challenge' that will dominate the next decade

Post pandemic society

De-urbanization; increasing virtual interactions and collapsed cycle of innovation

Redefining trust

Trust becomes more important and harder to earn

Socio-economic shifts

AI & automation, emplyment disruption and persistent economic uncertainty

Global fragmentation

Higher emphasis on national digital sovereignty – threatening global collaboration

Implications for the ICT industry

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01

More will be demanded to address sustainability. Carbon neutrality becomes a table-stake – companies will be held accountability to the difference they could make.

02

The business environment will be turbulent – trust issues challenge take-up; fragmentation creates silos; an uncertain economy clouds investment decisions.

03

The arrival of 'connectivity in everything' will necessitate the need for new networks of 'limitless connectivity' – coverage, speed, capacity & latency.

04

Networks will need to be continually optimized for AI & processing in the core, the edge, and everywhere in between.

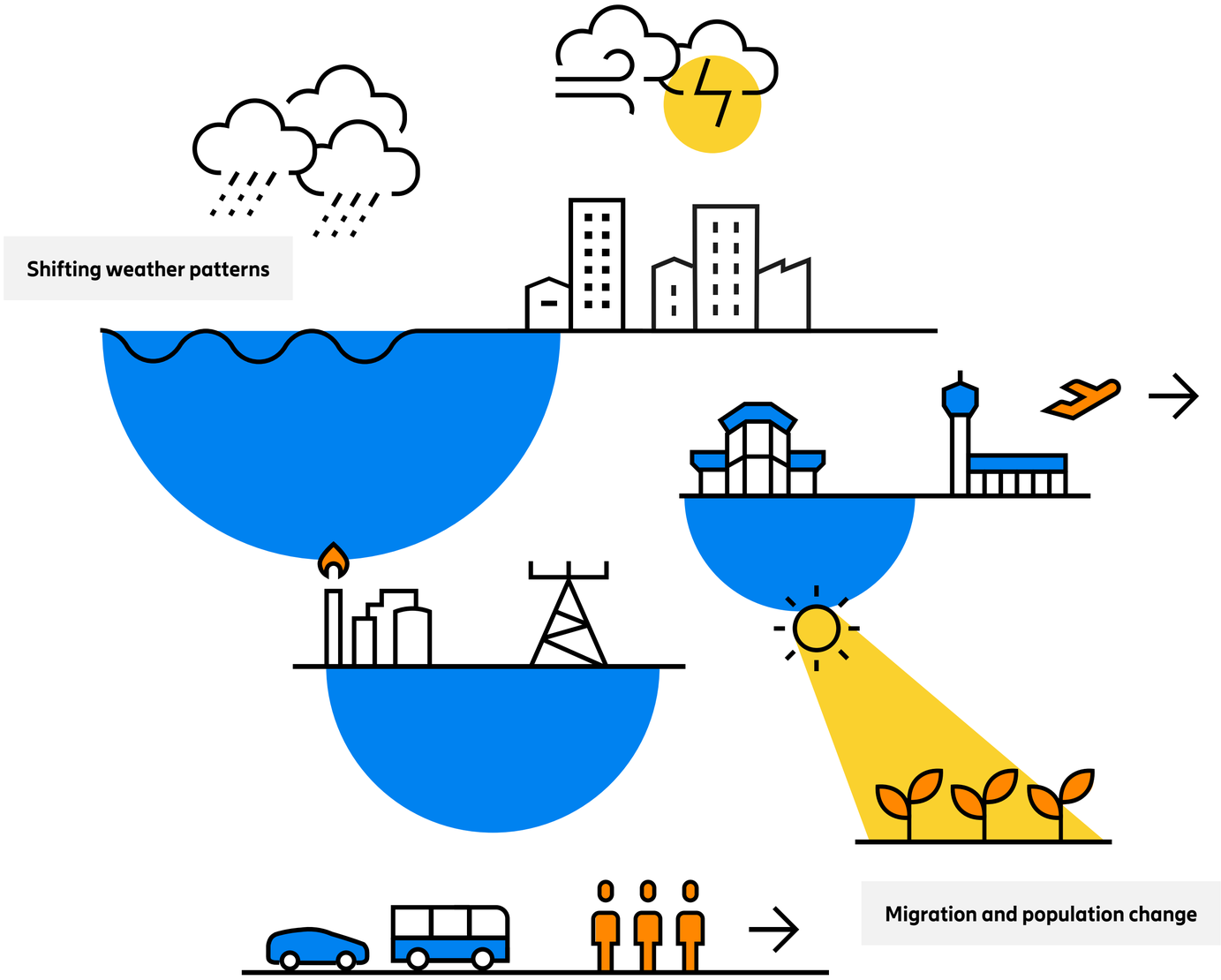
05

Smartphones will no-longer be the dominant form of consumer device connectivity – we'll see an explosion of new consumer device formats which will consolidate towards the end of the decade.

BUT – changes in societal dynamics and a strong desire for continual innovation will drive new opportunity development

The climate crisis

The urgency of climate change will dominate the next decade. Its impact across the world is already clear – from shifting weather patterns that threaten food production, to rising sea levels risking widescale flooding, to mass migration and population change – impacts that will be irreversible without drastic action today.

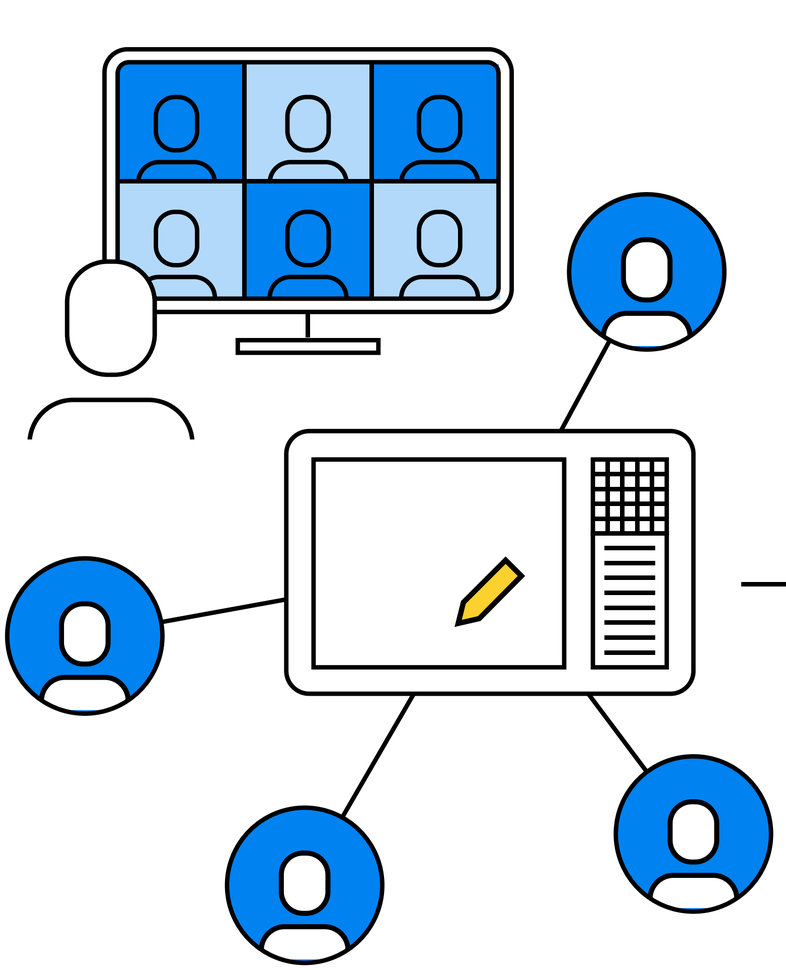


Post pandemic society

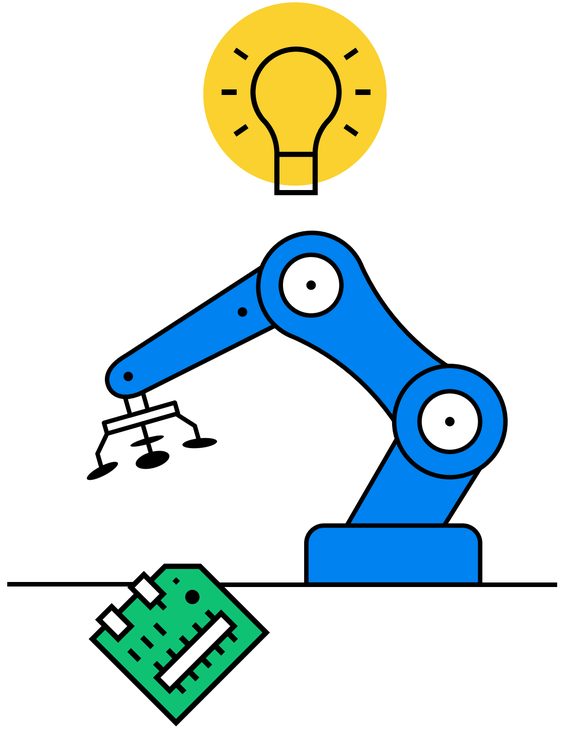
The upheaval and adjustment to Covid-19 has accelerated at least two major trends.

Firstly, the rapid development and rollout of vaccines has helped reset our expectations around the pace of innovation. This, combined with the need for economic rebuilding, could bring an unprecedented era of innovation across all sectors of society.

Secondly, an increased comfort with online collaboration and communication tools – using technology to shrink distance and simulate physical presence. While this won't eliminate the need for human contact, millions of people are now comfortable replacing physical events with virtual ones, opening new possibilities for how and where we celebrate, connect, and work.



Adoption of online collaboration

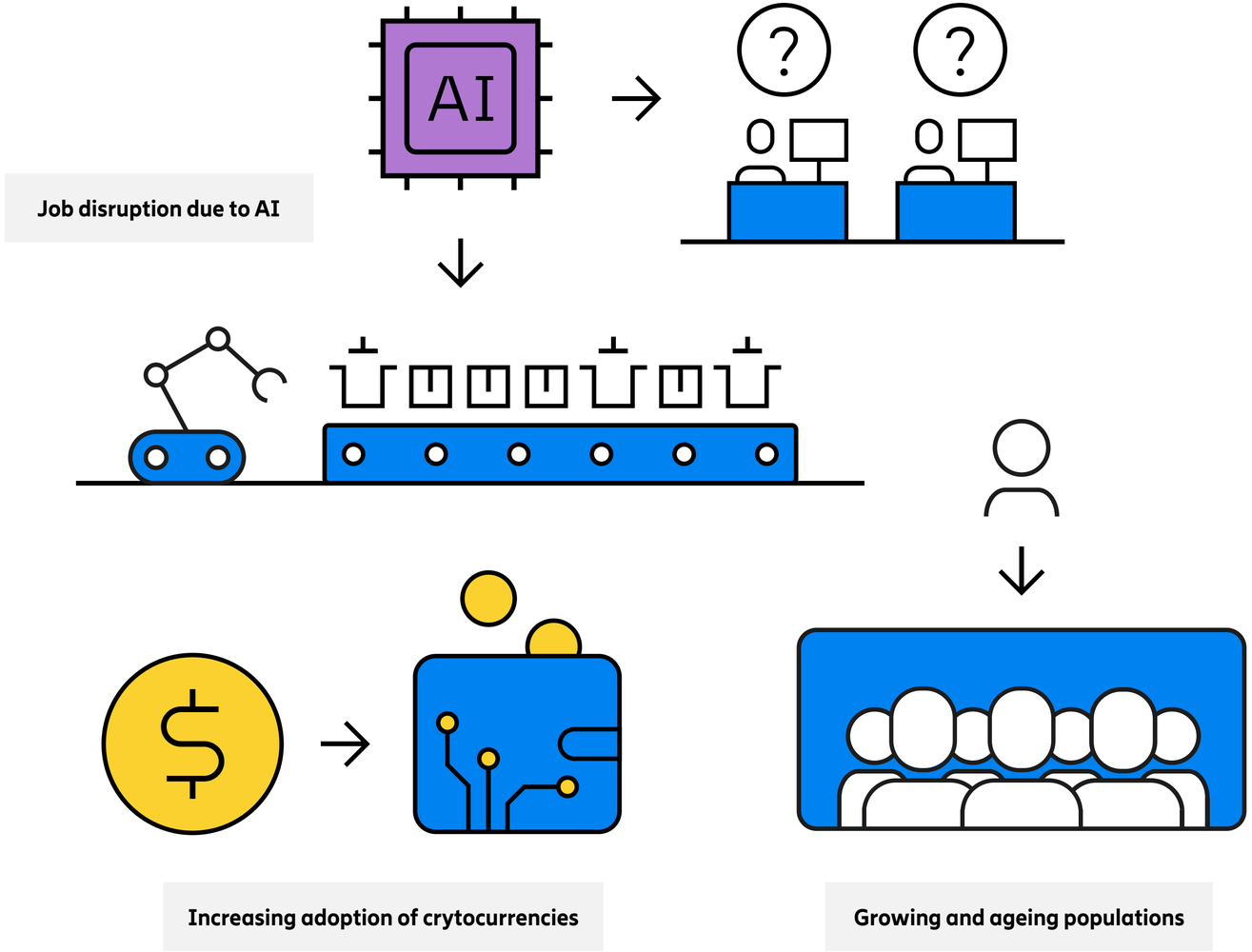


Innovation Expectations

Socio-economic shifts

Growing and ageing populations, and job disruption due to artificial intelligence (AI) and automation, will lead to increased competition and new forms of employment in the global job market.

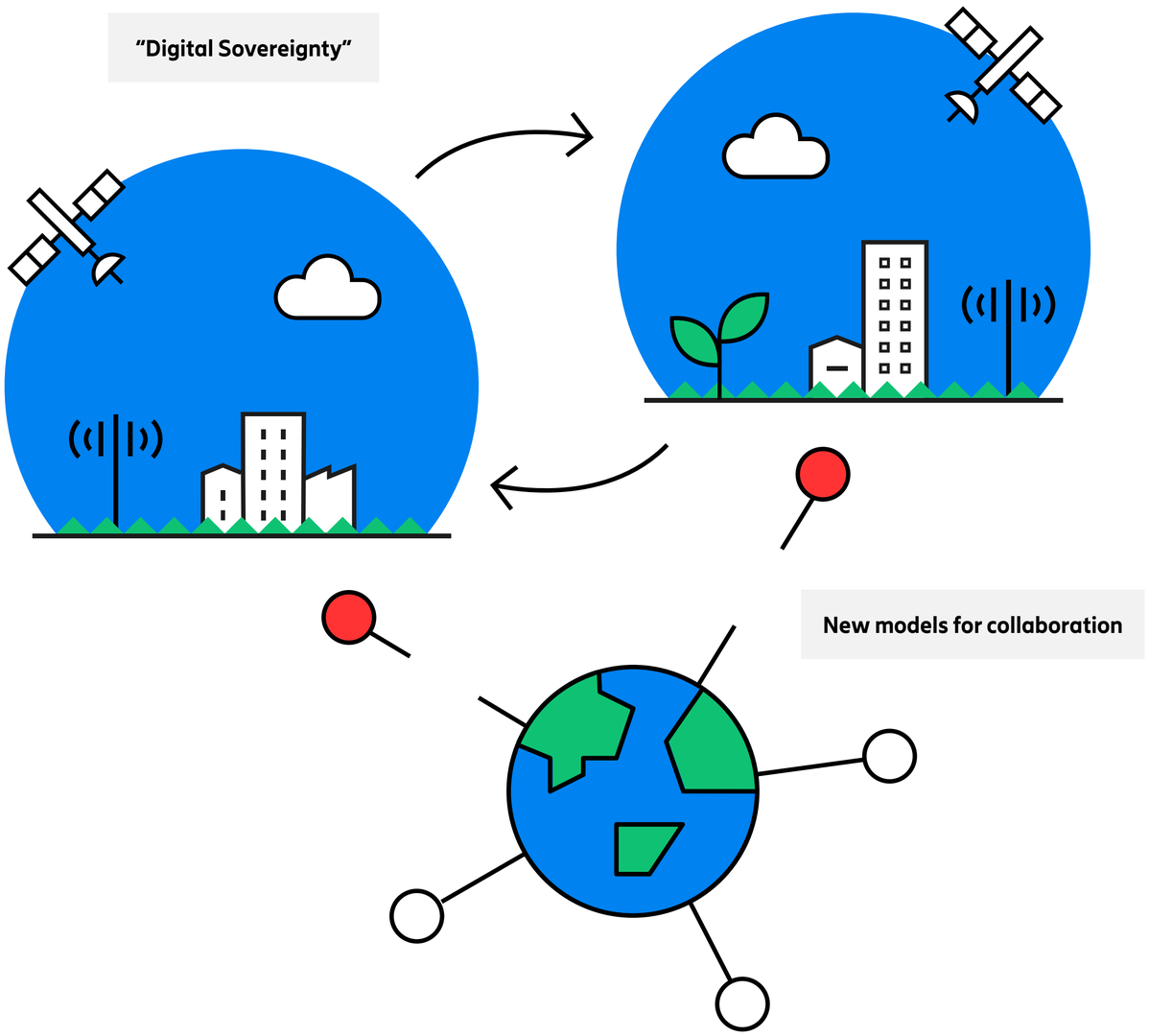
Shifting wealth from west to east, and the increasing adoption of cryptocurrencies will start to change the global financial landscape, while persistent economic uncertainty could threaten digital infrastructure investment.



Global fragmentation

Recent years have seen a retreat from the global community in favor of national interests. This trend sees countries seeking greater 'digital sovereignty' or creating 'splinternets' of national internets and digital trading environments.

It could start to challenge the approach to the global standards that have shaped mobile connectivity in the past, and possibly require a new model for global network collaboration.

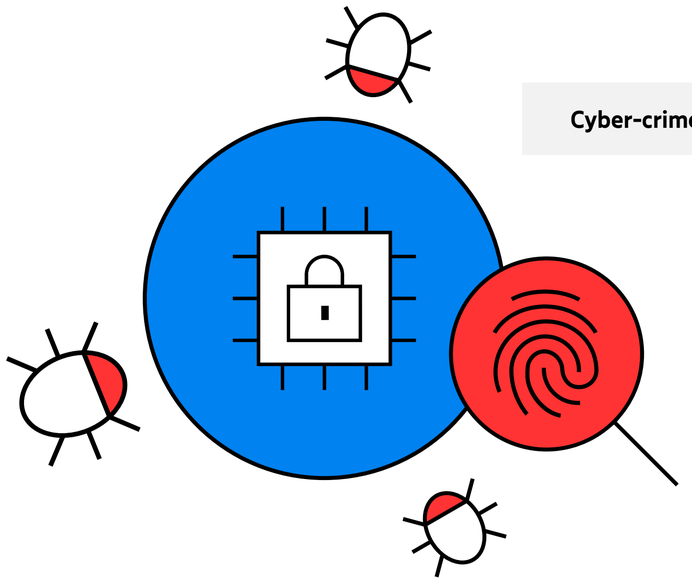


A re-definition of trust

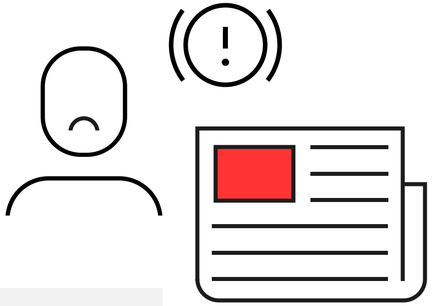
The last decade has witnessed change in who and what we trust. The explosion of cyber-crime and non-transparent gathering and usage of personal data has heightened concerns about our interactions with the digital world.

The proliferation of 'fake news' and discrediting of traditional journalism has shaken trust in conventional sources, while we've seen an increase in the trust we place in brands and corporations.

As we enter a decade that will intertwine our lives more closely with technology, we must understand the shifting nature of trust and how it is earned.

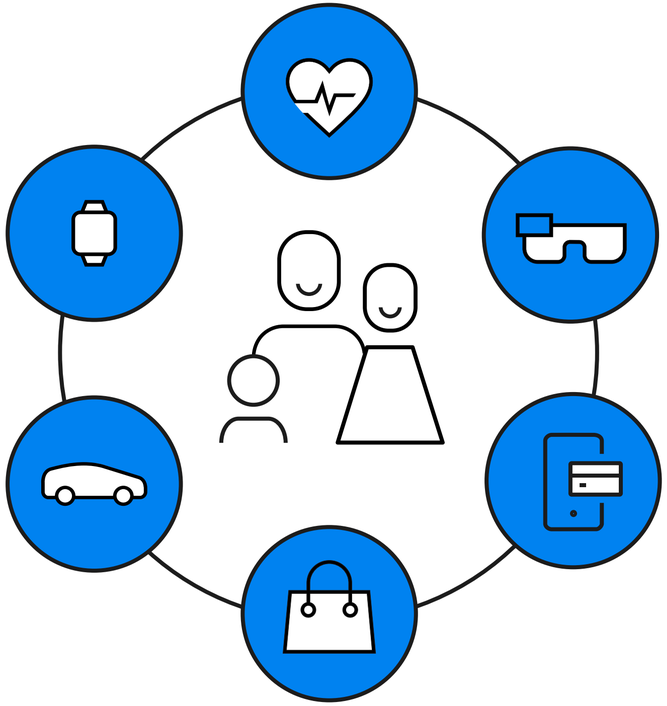


Cyber-crime



Fake news

Connectivity is intertwined in our lives

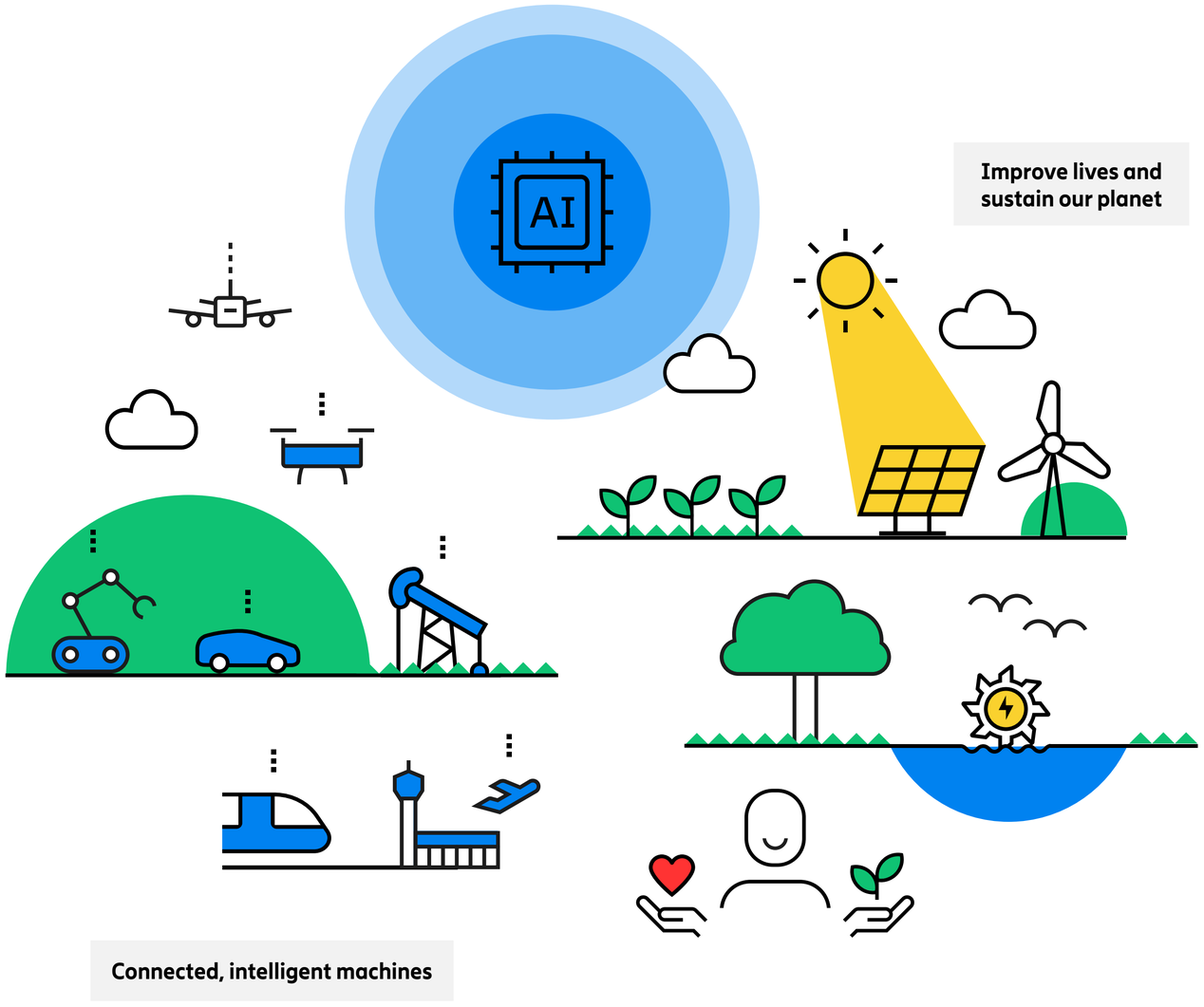


Artificial gets real

AI will become central to our world in 2030. It will drive breakthrough innovation to improve lives and sustain our planet, and become a primary source of competitive advantage for countries and businesses.

We will start to see AI used across many aspects of life – from driverless vehicles, to medicine, agile manufacturing, synthetic entertainment and media.

There will be a world of connected, intelligent machines interacting and learning amongst themselves, while remaining accountable to human intent and ethics.

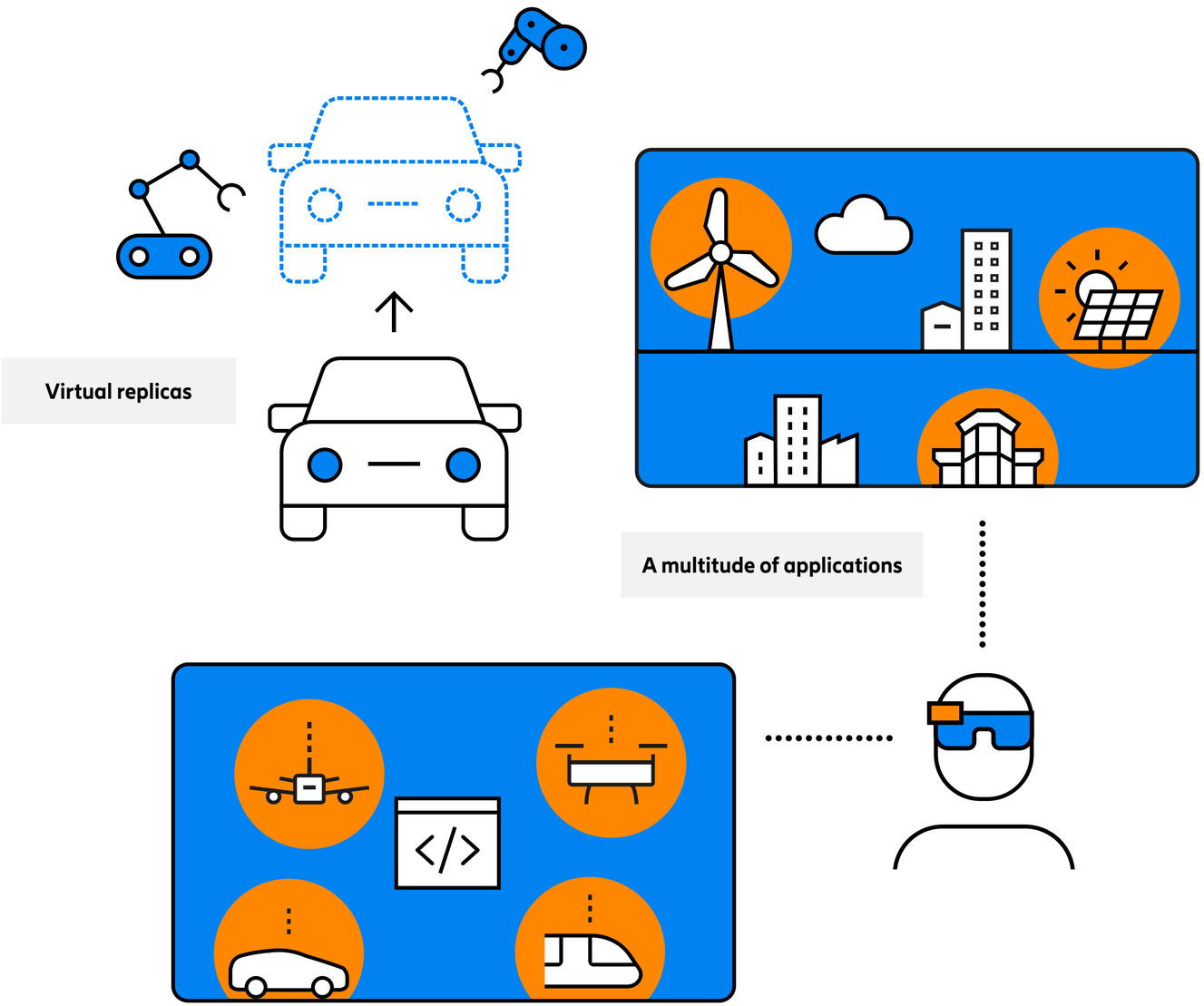


The mirror world

'Digital twins', virtual replicas of the environment around us, are already used in the automation of industry, helping with predictive maintenance in smart factories, for example.

With the continued evolution of digital & spatial mapping technologies, we expect to see the creation of a complete 'mirror world' to our own.

This will offer a multitude of applications, from entertainment and 'digital overlays' to the real world via smart glasses, to scenario planning for urban development and climate action, to programming autonomous vehicles and delivery drones to ensure safe and super accurate operation.

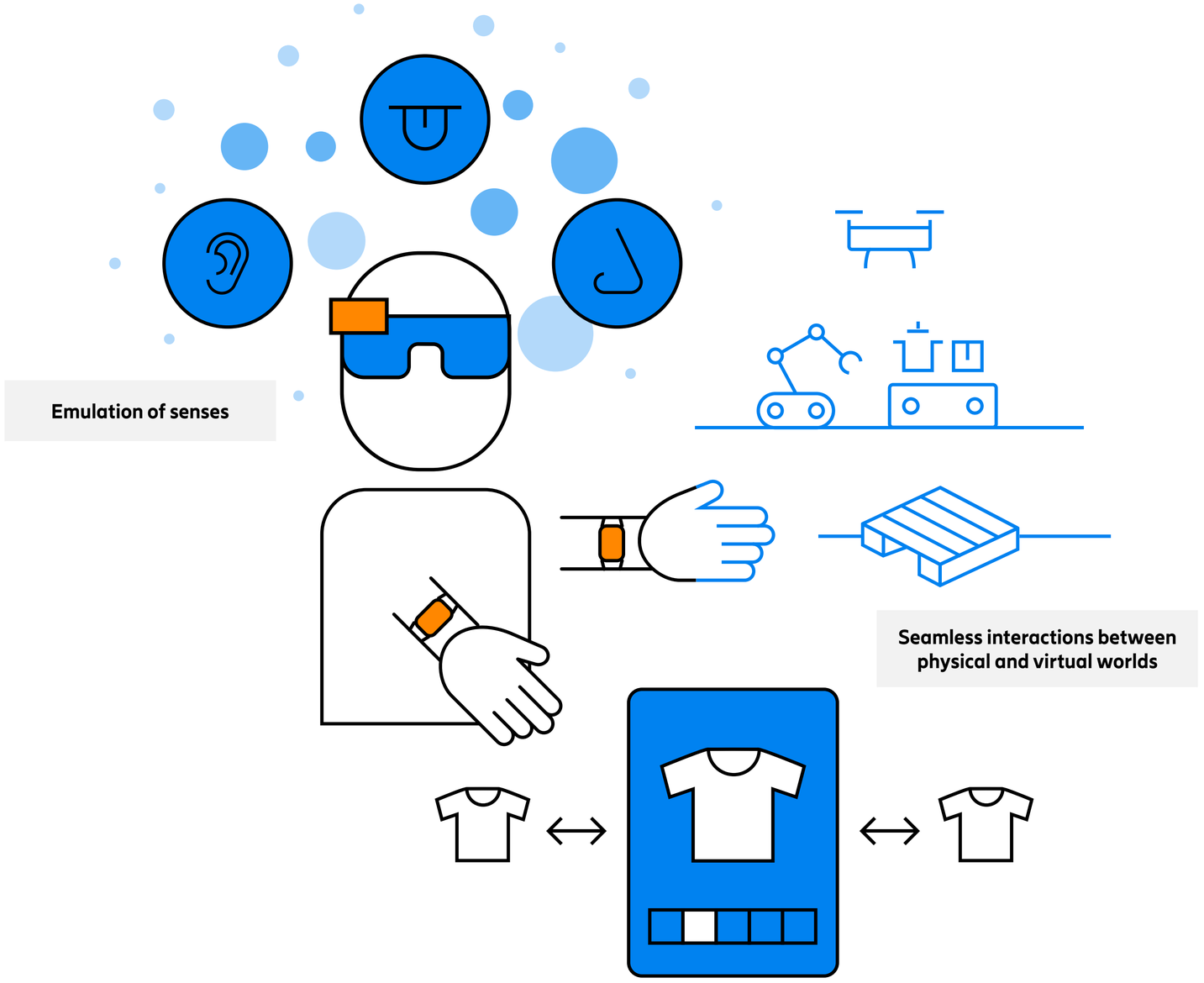


Beyond the smartphone

The arrival of increasingly sophisticated wearable technologies will create ever more seamless interactions between the physical and virtual world.

For example, contact lenses that can display augmented reality content, or earbuds that can translate for you in real-time. We also expect the continued evolution of wearable technologies that can realistically emulate a spectrum of senses – including touch, smell and sound.

By the end of the decade, we may also see the arrival of the first 'bio-interfaces' – technologies that will integrate more directly with our bodies – bringing with them new forms of communication and other possibilities for digital inclusion.

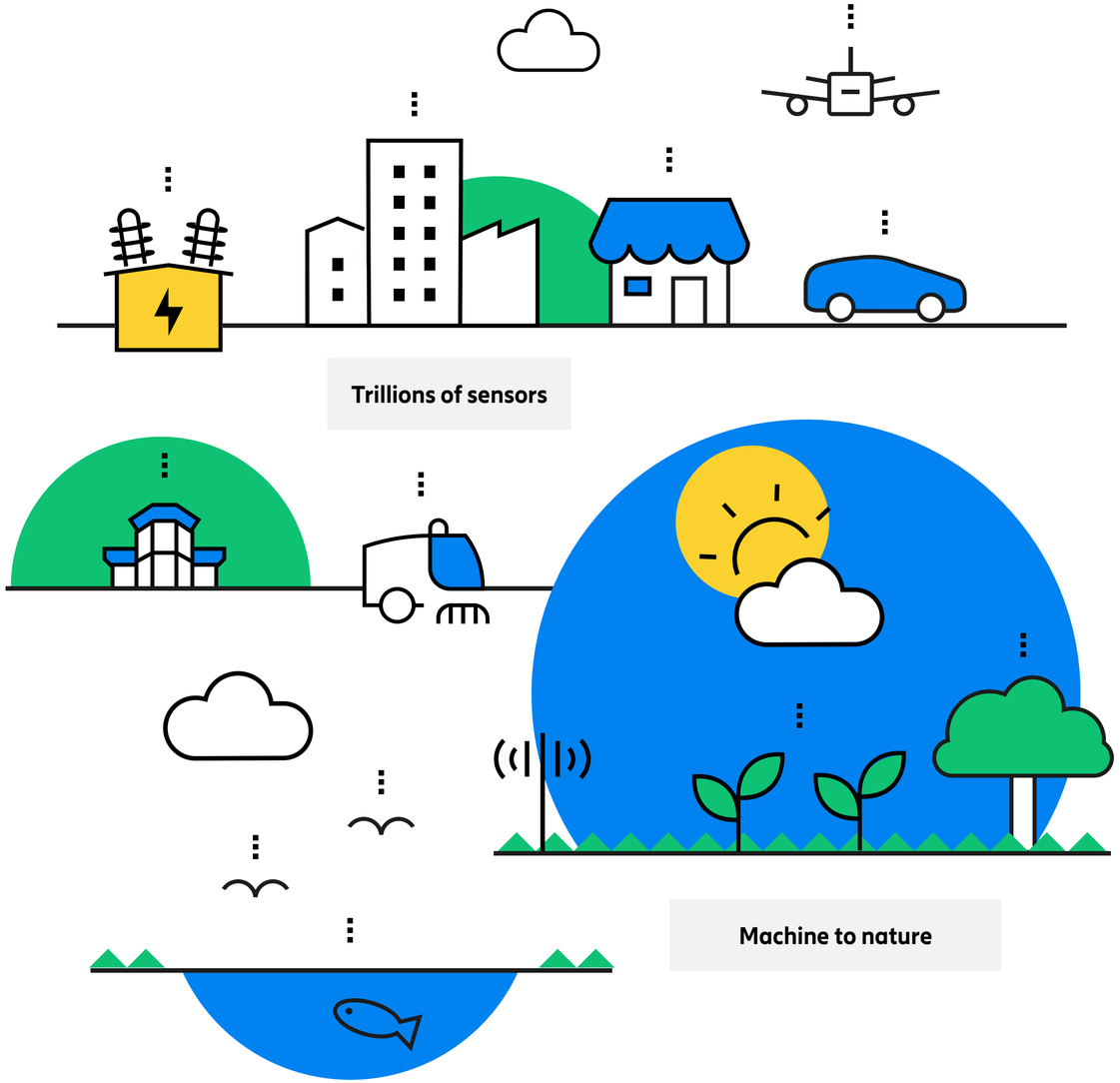


Connectivity in everything

Hundreds of millions of people already lead deeply connected lives – we use our smartphones to pay for things, our wearables to track our health, or our voice activated devices to help us around the home.

In the next decade, many more people will enjoy these benefits. We will see the arrival of trillions of sensors, powered by harvesting energy from the network and incorporating bio-degradable electronics.

This will enable connectivity in every part of the human world – from our cars to our clothes or our building materials – and open a new frontier of 'machine to nature' applications, where sensors can help us better understand and interact with the natural world.



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