Helping firms digitalize

Several countries are seeking to become regional digital hubs, including Australia, Djibouti and Morocco.

However, most businesses are not yet digitalized. The European Commission estimates that only about one in five EU companies have reached this point; it has introduced digital innovation hubs to allow companies of all sizes to ‘test before they invest’ in digital technologies.

Australia’s Industry 4.0 strategy, Tech Future (2018), proposes establishing ‘test labs’ at universities, to help businesses transition to ‘smart’ factories (see chapter 26).

Malaysia is helping firms to digitalize their business processes through the Smart Automation Grant launched by the Malaysia Digital Economy Corporation in July 2020, as part of the National Policy on Industry 4.0. This matching grant targets firms in the services sector which pay at least half of the total cost of their digitalization project. Due to be launched in 2021, the Smart Manufacturing Experience Centre will give SMEs access to existing platforms and technologies, in order to provide them with a ‘test bed’ to trial their innovation (see chapter 26).3

In the Philippines, meanwhile, SETUP 4.0 offers micro-enterprises and SMEs loans of up to PHP 5 million (ca US$ 100 000) to innovate in areas related to Industry 4.0; there were plans to support 800 companies in 2020, including through the provision of equipment and training (see chapter 26).

The AI race

Between 2016 and 2020, more than 30 countries4 adopted dedicated strategies for AI. Whereas Canada is striving to assume a leadership role in the international conversation on the potential social impact of AI (see chapter 4), China, the Russian Federation and USA are vying for a competitive advantage in the field of AI itself.

The Russian president, Vladimir Putin, stated in 2017 that ‘whoever becomes the leader in this sphere will become the ruler of the world’ (see chapter 13).

By 2030, China aims to be ‘the world’s primary centre for innovation in AI,’ according to its New Generation Artificial Intelligence Development Plan. China is already the world’s biggest owner of AI patents but lacks top-tier talent in this field; it has launched megap ogammes in science and engineering to 2030 that include quantum computing and brain science (see chapter 23).

The US government’s 2020 research budget proposal for 2021 included major increases for quantum information science and AI as part of its goal of doubling government-wide investment in research in these two areas by 2022 relative to 2019 levels (see chapter 5).

Digital and green agendas advancing in parallel

Most countries are convinced that their future economic competitiveness will depend upon how well they succeed in transitioning to digital societies.

Meanwhile, the adoption of the SDGs in 2015, combined with the rising cost of unsustainable development and the impact of climate change, has made countries’ green transition a priority agenda. The converging phenomena of strong economic growth, heightened dependence on technology and rising temperatures are driving up energy needs. In Central Asia, for instance, two decades of rapid economic growth have raised demand for electricity, pushing up carbon emissions and eating into export revenue: 86% of Uzbek natural gas is now used for domestic consumption (see chapter 14).

Countries are keenly aware that their future economic competitiveness will depend upon how quickly they manage