Saudi Arabia and UAE's leap into the future: Article in The National, Nov 2017

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Saudi Arabia and UAE's leap into the future

The kingdom's $500bn megacity plan and UAE's AI initiatives adapting to a new oil normal way of life

Saudi Arabia last week hosted some 3,000 global leaders, politicians and key industry players to announce a glittering vision for the future.

These include plans for a new city, the US$500 billion Neom investment zone on the Red Sea (spread across three nations including strategic allies Egypt and Jordan), the near-doubling of the size of its sovereign wealth fund to $400bn by 2020, as well as a $1bn investment in Virgin Galactic and associated companies to support the commercialisation of access to space. A precursor of the brave new world being envisaged in Saudi Arabia is Sophia, an advanced robot "who" was granted Saudi "citizenship".

Not be outdone by its neighbour, the UAE has adopted an artificial intelligence (AI) strategy – covering sectors ranging from transport, health, space, renewable energy, education and traffic, among others – along with the appointment of the world's first minister of state for AI.

Close on its heels came the launch of the One Million Arab Coders initiative, aiming to empower Arab youth across the

wider region with skills in coding and programming, thereby opening up employment opportunities for the beckoning digital age.

Both Saudi Arabia and the UAE are responding to the pressures of the new oil normal and need to develop their non-oil sectors. Economic diversification in the New Digital Age of AI, blockchain, hyper-connectivity, fintech and associated technologies requires deep structural reforms in education, laws and regulations along with R&D and investments in new technologies.

Our Arab region's societies, businesses and people need to acquire new technological skills, literacy and knowledge to adapt to AI and associated technologies that will dramatically disrupt activities from services (including medicine, law and finance), manufacturing to education and all public services.

A paradigm shift in educational programmes, a revolution, is required to prepare the labour force to work in new technologies.

For this, our region needs huge investments in science, technology, engineering, and mathematics (Stem) and life sciences: a cultural social-educational transformation is the key to building the required techno-human capital of current and next generations.

We are entering an era in which the new fields of biotech and bioinformatics, genetic engineering, robotics and nanotechnology are in the process of revolutionising the relationship between humans and technology.

New technologies will be integrated into our bodies, promising a tremendous increase in human capacity and productivity but also blurring the distinction between humans and androids.

A similar legal and regulatory transformation, digital laws and regulations, is also required to address issues including digital identity and data privacy, recognition of digital assets, cryptocurrencies, and ownership of intelligent machine generated ideas, clarity on copyrights and patents and digital governance before AI becomes mainstream.

AI is a general purpose technology and will become ubiquitous

in all aspects of our lives. Accordingly, we must guard against IP ownership rights being monopolised by a small number of entrepreneurs and companies. AI rights should be publicly owned with open access. AI will need to be regulated to protect humans.

The prospects are that increased automation – via the widespread use of industrial robots, supported by advances in AI and robotics – will disrupt labour markets, possibly leading to greater inequality and unemployment, and social unrest.

Economists and technologists have identified a large number of jobs, or repetitive tasks that will disappear. A McKinsey Global Institute study of the labour force in 46 countries found that about half of all the activities people are paid to do could be automated by 2055.

Jobs at risk include low skill, low pay jobs including cashiers, drivers, food service workers, but also skilled, high-paid occupations, including accountants, lawyers, bankers, credit analysts and insurance professionals. The Bank of England estimates that about 15 million mostly service jobs in the UK – half the country's total – could succumb to automation and widen the gap between rich and poor.

Given the unpredictability of innovation and technological change, we do not yet know if a robotised, intelligent machine world will lead to mass human unemployment and growing inequality or more prosperity and leisure, the creation of new types of work, new products, jobs and industries. But it means we must prepare our economies and societies.

We need to retrain the existing skilled workforce and also upgrade skills as necessary. Alongside investments in new technologies, we need to set up incubators and accelerators, undertake multi-disciplinary R&D with partner countries, entrepreneurs and businesses to become innovative producers and not merely consumers of the new digital age.

Many challenges will face Saudi Arabia, the UAE and the countries across the region as they undertake new investments to diversify and introduce new technology.

Which policies should governments prioritise?

First, transform education systems to promote Stem and life sciences.

Second, invest in mass technological literacy and enable the acquisition of new skills.

Third, develop and apply digital laws and regulations to facilitate new digital age investments that will also protect humans.

Finally, invest to develop domestic AI and new tech productive capacity.