

# The Telegraph

## Tech and talent must top the next government's wishlist

[JEREMY HAND](#)

4 MAY 2017 • 9:20PM

[2 Comments](#)



Businesses of all sizes and across sectors are changing thanks to advances in technology

When the British public votes in the General Election on June 8, it will be selecting a government to negotiate the UK's departure from the European Union.

The new government will also have responsibility for ensuring that the productivity of our economy improves by supporting UK-based entrepreneurs and fostering an environment that cultivates innovation, talent and investment.

The Fourth Industrial revolution (4IR) is characterised by the accelerating application of automation and connectivity, exemplified by the latest technologies, such as robotics, Artificial Intelligence, nanotechnology, driverless cars, the Internet of Things, 3D printing and quantum computing.

Like earlier industrial revolutions – the adoption of the spinning jenny and steam engine in the 18th century; the combustion engine and the light bulb in the 19th; and

a shift to digitisation in the late 20th century including PCs, mobile phones and the internet – the 4IR brings with it a period of enormous economic, social and political disruption.

Silicon Valley-originated inventions, like Google Glass, as well as sci-fi TV drama series such as Humans with its storyline about anthropomorphic robots, have captured the public imagination. But it is in everyday applications and everyday life where 4IR is making its most dramatic impact.

The incremental adoption and creative application of new technologies and new processes are transforming the way businesses of all sizes and across sectors operate, manufacture, market and sell. And in turn, incremental changes are shaping and sometimes disrupting the way customers and service users behave.

Machine-to-Machine communication and the Internet of Things (IOT) may be hidden from view but have helped improve the quality of our lives in myriad ways, while improving efficiency and reducing costs. This applies throughout the manufacturing process.

But think also of greenhouse monitoring, tele-medicine, smart power grids, security systems and smart homes. And the IOT creates new revenue opportunities in retail for example, by tracking footfall and measuring customer behaviours.



Machine-to-Machine communication and the Internet of Things have helped to create smart homes

Improvements in data processing and data storage are making “Big Data” a reality. Predictive and user analytics are helping businesses make better informed

decisions from managing supply chains to segmenting markets – while measuring risk and performance ever more accurately. All of these innovations combine to power productivity and growth.

When we at Lyceum Capital invested in Belfast-based digital workforce management software provider Totalmobile in late 2015, it tapped into growing demand for improved communications with mobile workers. By supplying employees with a tablet device running Totalmobile software, organisations such as Buckinghamshire Healthcare NHS Trust are now able to ensure that the right frontline nurse is in the right place at the right time with exactly the right information at their fingertips.

And with a typical mobile healthcare worker needing to access and update multiple legacy software systems over the course of a typical working week – from patient records to logistics to HR systems – Totalmobile's use of Big Data and Artificially Intelligent algorithms ensure better healthcare outcomes and improve patient and staff satisfaction, while freeing up time and saving cost.

In the race for international tech talent and inward investment, the UK ranks third in Europe behind Finland and Sweden for digital inclusion and skills (EC Digital Economy and Society Index – DESI). But the new government should not forget that around half of our most valuable tech workers hail from overseas with some 30pc coming from the EU and 20pc from further afield. To avoid a post-Brexit brain drain, the UK must remain a destination for international talent, with an immigration policy to match.

And to ensure that in the future more of our tech capability is grown at home with jobs filled by British citizens, the next government must do even more to encourage the take up of science, technology, engineering and maths (STEM) subjects in schools.

Of the 320,000 students in England studying for A-levels last year, the number taking STEM subjects was largely stable, according to Department for Education data. Where it is increasing, it is in tiny increments.



The number of students taking STEM subjects is only increasing by small amounts. Last year, the number of students entered for A-level computing increased by just 0.3 pc to 1.7 pc. And the 23.8 pc of A-level students entered for mathematics represented an increase of just 0.5 pc. STEM subjects need to move further up the education agenda accompanied by more support for targeted vocational training and apprenticeships.

Continued investment in infrastructure to support an increasingly digitised marketplace is also vital. Applications and productivity gains requiring world-class connectivity can only gather momentum if the physical backbone is there to provide the necessary support.

The last government's "Universal Service Obligation" aimed to give every business and individual in the country the right to request an affordable high-speed broadband connection. The intention was laudable, but in practice today the UK ranks no higher than sixth for overall European connectivity and just 10th for Next Generation Access. Further investment in digital infrastructure should remain a key priority for the next government.

The UK is the fifth largest global economy and renowned for innovation and our entrepreneurial spirit. We are home to many world class businesses spanning technology, hi-tech engineering and pharma research, financial services, the professions, education and the creative arts. Government initiatives to cultivate the smartest talent and encourage the right investment will help capitalise on these strengths and accelerate our position at the vanguard of the 4IR.

**Jeremy Hand is the managing partner of private equity firm Lyceum Capital**







