The Digital World

During 2016 our digital world has continued to expand – with rapid developments not only in autonomous vehicles and the Internet of Things but also in the way that the digital world can impact on policy and how we manage our lives.

The Knowledge Future: Intelligent Policy Choices for Europe 2050

I was part of an Expert Group which was tasked with tackling this theme for the European Commission.

The report from the Expert Group asks – how do ideas become reality? The whole process of transforming knowledge – creating it, sharing it, and using it – has become important to policy makers. They see it as connected somehow with how rich we are, how competitive Europe can be, how healthy or happy our citizens are, and how sustainable our world will be. It looks at the future of this knowledge engine – towards the challenges of 2050. It recommends steps to ensure that, through maintenance of a robust system for transforming knowledge into action, Europe's citizens are better off, rather than worse off, in that distant future.

Vital to that system is the 'knowledge triangle.' The acts of learning, discovering and innovating all go together, like three pistons in an economic engine. Education, research and innovation; universities, laboratories and companies; academics, researchers and entrepreneurs – all are part of an engine that, if well managed, creates wealth, jobs, growth and, if one is an optimist, social progress. Europe today has many such triangles, of varying strength, specialisation and fecundity.

They include very large, multi-disciplinary agglomerations of big universities, companies and agencies; specialised but no-less dynamic sectoral hubs; and rising new centres. Increasingly, they interconnect: Indeed, EU initiatives like the Framework Programmes or, within them, the European Institute of Innovation and Technology, include linkage as an aim. But despite these centres individual vibrancy, many policy makers share an overriding concern that they aren't enough: That competition from the US, China, India and elsewhere risks leaving Europe behind – and that the difficulties coordinating and managing a European response are enormous.

At least three major trends are destabilising the status quo in Europe's knowledge system.

Globalisation is one. As the world gets more inter-connected, and economic competition expands, the way we learn, discover or innovate will change, and the impact will hit home faster and harder.

Demographic change is another. The move to cities, the ageing population, the shifts in family size and social norms – all will alter what we expect and can do in education, research and innovation.

And technological change is accelerating. Just 35 years ago came text editors. Now: gene editing. By 2050, what next? Each invention, coming faster and faster, changes

not only our society and economy, but also our expectations and the way we work in education, science and business.

How will Europe cope with these changes? Can we continue to play a key role in the global generation, spread and use of knowledge? Can we use the knowledge system to improve our lives, integrate our societies, preserve and improve our environment?

The report makes policy recommendations to the Commission under three headings –

An open innovation system – including re-thinking intellectual property laws

Flexibility and experimentation in innovation – including new economic analysis metrics

European-level co-operation – better to hang together than hang separately.

As Commissioner Moedas says in the foreword:

"Globalisation, demographic changes and technological advances pose important challenges and opportunities for research and innovation in Europe. By reflecting on the trends and articulating scenarios, this report helps us think differently about European policies in the medium to long term.

In Europe we need to:

- *Create the necessary conditions to capitalise on the results of research and innovation;*

- *Boost excellence in cutting-edge, fundamental research;*

- *Reinforce our international engagement through science diplomacy.*

On this basis, I have set my priorities to be Open Innovation, Open Science, and Open to the World."

The report is available on the EC's web site at
https://ec.europa.eu/research/pdf/publications/knowledge_future_2050.pdf

Written by Gill Ringland, SAMI Fellow and CEO, published 24 February 2016.

Why Digital Citizenship could change Europe

Governments are not traditionally renowned for a 'go ahead' attitude to delivering services, often until the time when the cost of delivery becomes prohibitive and it drives innovation out of necessity. However, in the Republic of Estonia, sitting in Europe on the edge of the Baltic Sea, a completely different approach has been taken to providing Government services, which has put the user's wishes at the heart of making the process easier. It is now setting a new standard in the use of digital and its e-residency idea is catching the attention of many countries far removed from the Baltics. It also highlights a number of issues that will resonate for many businesses.

Until the early 1990s, Estonia was part of the Soviet Republic and there was limited use of technology in Government. However, in the last few decades it has embraced online services in a way that few others have. 'Going paperless' wherever possible became a mantra long before it was fashionable in other parts of Europe. There was significant investment in countrywide wifi, fibre optic cables were laid and the stated aim was to provide everything possible online. This includes each person having an ID card that enables them to interact with Government over the Internet, using digital signatures. Anyone, anywhere in the world, can become an e-resident and then they can set up a company in Estonia, register with a bank, start trading or pay taxes. The aim is to reduce bureaucracy and make everything as simple as possible. A tax return, for example, takes minutes rather than hours, although it does help that Estonia also embraced simplified processes and regulations alongside its digital path.

An e-resident has control over their data. Only they can see all the data that is held about them, with each Government service only permitted to view that which is relevant to their requirements. E-citizens have the right to have any data removed from the system. Clearly concerns have been raised about cyber-security and the fear of hacking into such a confidential database, but the latest techniques are engaged to minimise the risks with end-to-end processes and the ability to move the whole system to a back-up system if needed. As an adviser to the Government told a packed audience in Tallin recently: 'If you have good brakes, you can go really fast'.

There is much for business to learn from the Estonian approach. As a client or customer centric approach, the Estonian principle of 'ask only once' is a compelling way to consider collating client data. They see their country's Government services as just that – a service – which should not require the user to repeat information or send back multiple versions of similar forms. They are about reducing bureaucracy for the end user and a person has the right to refuse to provide information that has already been submitted elsewhere.

But of course what is really interesting is what happens when the e-resident reaches a border and has to cope with the swift Estonian approach rubbing up against a more old-fashioned mindset. It's no surprise to see that this is still a problem area. Many neighbouring countries, such as Finland, are exploring using the same technology as Estonia. However, what about the multitude of other countries that one might want to trade with? The system is set up to be accommodating to working with other countries and a few European Governments are in discussions but seamless transactions across borders are still not a reality. So for now, Estonia remains a fascinating and singular example of taking the pain out of dealing with Government.

Written by Francesca Lagerberg, Grant Thornton, published 19 October 2016.