



## Fast Forward: the role of the information economy to power a prosperous future

### Executive summary

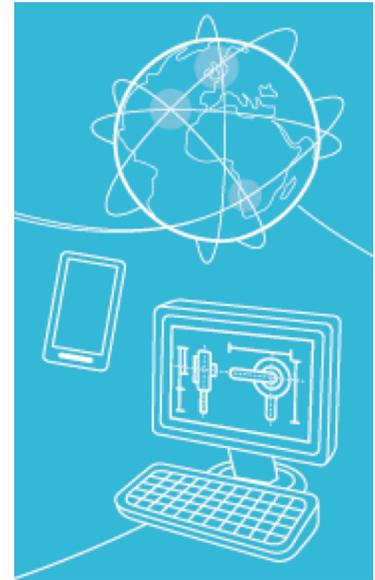
The information economy offers many opportunities to today's businesses. It can transform the way people work, reduce operating costs and strengthen UK competitiveness while reducing carbon emissions. However, in order to capitalise on these opportunities, there is a need for concerted joint action from Government, industry and academia to work in partnership towards the success of the sector and ensure that the benefits are felt across the rest of the economy.

The Global e-Sustainability Initiative (GeSI) and Boston Consulting Group report – *'Smarter 2020: The Role of ICT in Driving a Sustainable Future'* – demonstrates that ICT enabled solutions have the potential to create 29.5 million jobs, reduce greenhouse gas emissions by 16.5% and yield US\$1.9 trillion of savings by 2020 worldwide<sup>1</sup>. In the UK alone cloud computing could help save business US\$279,942,614 and reduce carbon emissions by over 670,000 tonnes CO<sub>2</sub>e<sup>2</sup>.

To make these potential economic advantages a reality, the UK Government recently launched its *'Information Economy Industrial Strategy'* which sets out a plan for Government and industry to work together to promote continued success for the ICT sector. It seeks to ensure that citizens benefit from the digital age, businesses across the economy make smart use of information technology and the UK builds a strong, innovative information economy sector exporting UK excellence to the world.

In June 2013 GeSI and Microsoft partnered with the Aldersgate Group to host an industry workshop to explore the potential outlined in the Smarter 2020 report, the new Government Strategy and specifically the role that ICT and cloud computing can play in addressing climate change and resource scarcity and building world-leading industries in the UK. Policy makers, industry representatives, academics and NGOs discussed how the Government and industry can work together to promote the success of ICT and the information economy.

Based on the SMARTer 2020 report, the Information Economy Industrial Strategy report and the outcomes of the industry workshop, the following key recommendations for the further development of the Information Economy Industrial Strategy are proposed:



<sup>1</sup> GeSI & Boston Consulting Group, 2012, *Smarter 2020: The Role of ICT in Driving a Sustainable Future*, available online at <<http://gesi.org/SMARTer2020>>.

<sup>2</sup> Thomond, P., 2013, *The Enabling Technologies of a Low Carbon Economy: A Focus on Cloud Computing*, GeSI, Microsoft, Johns Hopkins University & Think, Play, Do, available online at <[http://gesi.org/assets/js/lib/tiny\\_mce/jscripts/tiny\\_mce/plugins/ajaxfilemanager/uploaded/Cloud%20Study%20-%20FINAL%20report\\_1.pdf](http://gesi.org/assets/js/lib/tiny_mce/jscripts/tiny_mce/plugins/ajaxfilemanager/uploaded/Cloud%20Study%20-%20FINAL%20report_1.pdf)>, p.30



**GeSI**  
GLOBAL e-SUSTAINABILITY  
INITIATIVE

**Microsoft**

**ALDERSGATE  
GROUP** Leaders for a  
sustainable economy

- 1. Vision** - the strategy's vision is "a strong, innovative, information economy sector exporting UK excellence to the world". The overall vision should be broadened to incorporate a specific thread relating to the vast opportunities of a sustainable future, as set out in the SMARTer 2020 report. This should be formulated by all relevant stakeholders and revisited regularly.
- 2. Collaboration** - the strategy calls for concerted joint action from Government, industry and academia, all working in partnership. This should include specific work streams relating to a sustainable future. A good example of where this is already happening is the Smart Cities initiative, where cities, businesses and academics are working together to develop low carbon and efficient energy solutions. To maximise the full potential of the ICT sector, close collaboration with other sectors is vital, including energy, transport, building and agriculture. In addition, a more unified approach from within Government departments is essential, which might require putting formal frameworks in place.
- 3. Triple bottom line** - the strategy predominantly focuses on the economic and social aspects of the information economy, rather than environmental factors, which are a key component for enabling the business opportunities identified in the strategy. More needs to be done by industry and Government in the UK to demonstrate how ICT can reduce dependency on energy. Many opportunities exist as initiatives by Microsoft have shown, and the SMARTer 2020 report demonstrates. Developing new measurement frameworks that make business cases relevant and tangible would help this.
- 4. Active intervention** - the strategy states that we cannot "simply sit back and await change. We can look ahead to the technological innovations of the coming years and prepare ourselves". This should include helping companies make more informed decisions about the advantages of ICT systems through better communications. This can be supported by business hubs, academic research and industry awards, for instance through the sharing of good and best practice examples. Furthermore, supporting SMEs in accessing information and implementing ICT opportunities is needed to facilitate greater uptake of new technologies. SMEs form a substantial part of the economic landscape and therefore are an important area that should not be neglected. There are significant carbon savings for SMEs through using cloud solutions.
- 5. Economic strategy** - the strategy "sets out a road map to help the UK accelerate in the global race, focusing on our strengths". BIS has traditionally been a major supporter of manufacturing industries but more could be done to promote the UK's very strong services sector (including consultancy and advisory). The UK can become a powerhouse of knowledge expertise around the world and this will increasingly relate to reducing resource impacts.
- 6. Government as a catalyst** - the Government can support the development of ICT by integrating sustainability solutions across the public sector. For example, Government procurement could provide a significant demand push for ICT services, leading to innovation and potential export opportunities, but will require contracts being awarded on longer term timescales (leading to significant cost savings).



## 7. Specific focus areas

- (i) **Cloud computing** - in the UK, if 80% of organisations were using cloud-based services, this could result in CO<sub>2</sub> savings of 700,000 tonnes and cost savings of £180 million. However, some barriers need to be overcome to achieve this, particularly by offering more clarity around the technology adoption lifecycle by both policy makers and vendors.
- (ii) **Smart cities** - as the global population becomes increasingly urbanised, the need for smarter, cleaner, cities will become an imperative and here ICT will play a key role. SMARTer 2020's focus on the need for international standards to facilitate trade will support this. The potential measurement and reporting of carbon emissions will help the development of standards while reducing the carbon footprint of cities. To realise these opportunities, a rethinking of the way we look at services will need to take place and we are already seeing some interesting developments where public services in cities are being provided through horizontal platforms rather than vertical silos.
- (iii) **Remote working** - while the 'death of distance' is a concept that has been around for a while, it has failed to materialise at scale. Technology is no longer a significant barrier for much tele/home working, but organisational culture can be a barrier, as 'face-time' remains an important part of business culture. A management approach that is focused on outcomes rather than time spent in the office needs to be promoted to support this. Microsoft's [Anywhere Working](#) initiative has promoted the benefits of flexible working in the UK in partnership with the Department for Transport, to deliver both the technology to make flexible working possible and the required cultural change.
- (iv) **Trust in technology**: to enable many of the developments mentioned above, industry needs to have greater confidence that technology can provide effective solutions and Government must work with industry to ensure that trust issues around security of data are addressed.