

#SMARTer2030

ICT Solutions for 21st Century Challenges



GeSI
GLOBAL e-SUSTAINABILITY
INITIATIVE

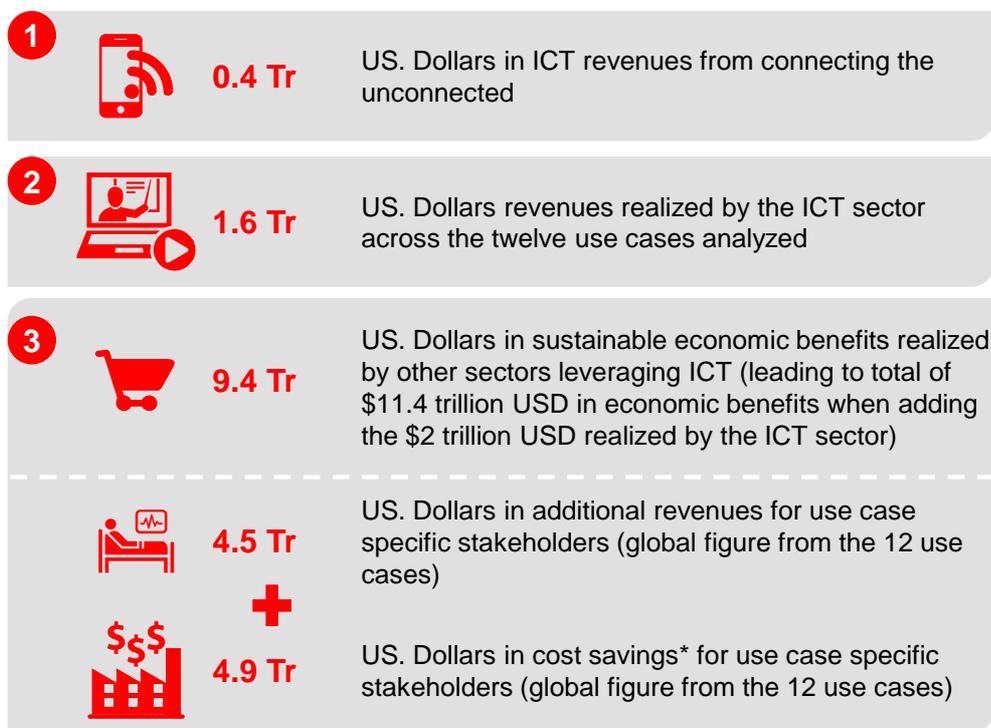
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2.3 Economic – ICT is good for business, creating new revenue opportunities and reducing costs

By 2030, 75% of the global population will be connected via smart devices and broadband internet, providing growth opportunities not only in the ICT sector itself, but in a wide range of other sectors too.¹ By connecting 2.5 billion extra people, ICT is good for business, creating new revenue opportunities and generating significant cross-sector cost savings.

The digital revolution is changing the way people think about living, working, shopping, traveling and eating. Innovative new business models are disrupting existing businesses, delivering exponential growth with asset-light business structures. Significant growth opportunities are created by companies like Airbnb and Uber, using only technology to build their businesses without owning any of the physical assets found in traditional models. As digital density increases through rapid smartphone penetration, new business models unimaginable a decade ago have the potential to transform our lives and to drive strong growth opportunities across the different sectors. ICT's capacity to disrupt the status quo and to transform business as we know it remains unprecedented.

Figure 1: Economic – Global economic benefits of ICT-enabled solutions (2030)



* Global result includes costs savings coming from translating to US \$ the fuel, energy, water and paper savings in the applicable Use Cases

Eight sectors will benefit most from ICT

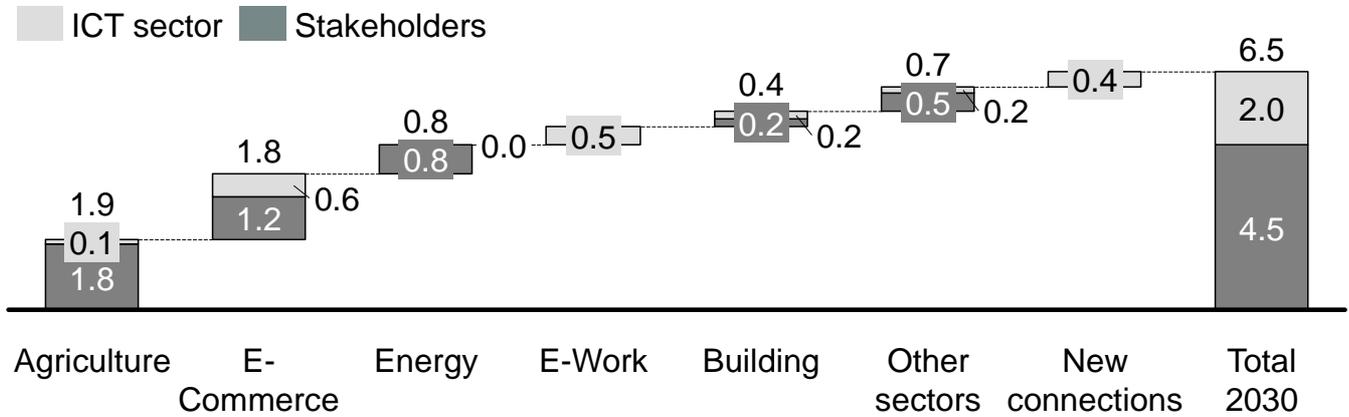
Overall, ICT could generate \$11.4 trillion in sustainable economic benefits annually, comprising \$6.5 trillion in revenues and \$4.9 trillion in cost saving opportunities.

We estimate that \$2 trillion of these new revenues are generated by the ICT sector itself and \$4.5 trillion are enabled by ICT across the eight sectors analyzed. We expect that the estimated \$2 trillion in ICT sector revenues will be made up of \$0.4 trillion from connecting 2.5 billion additional people to the knowledge

¹ European Internet Foundation: The Digital World in 2030, p10

economy and \$1.6 trillion from ICT services delivered to the eight sectors analyzed, including e-commerce, E-Work solutions, etc. The other \$4.5 trillion will come from ICT-enabled services such as Smart Agriculture solutions, additional e-commerce revenues, Smart Energy solutions, etc.

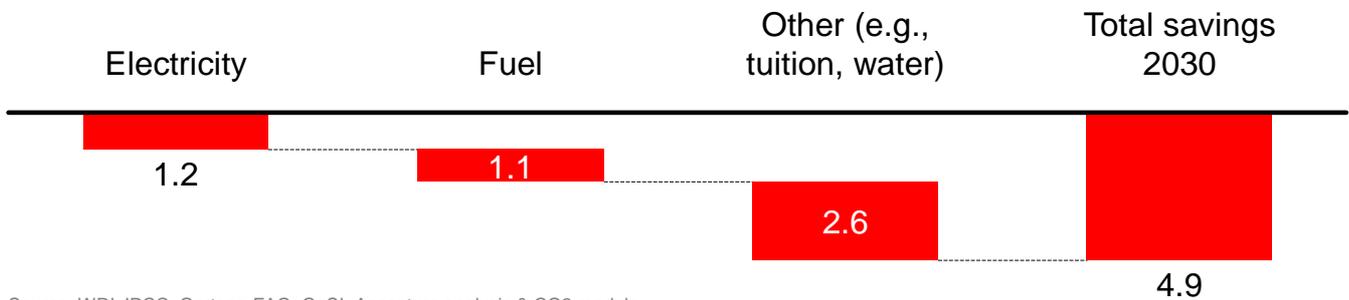
Figure 2: Economic – ICT-enabled revenue opportunities across sectors (2030)



Creating cost savings

ICT will also help save close to \$5 trillion of costs across the global economy, made up of \$1.2 trillion from reduced electricity expenditure, \$1.1 trillion from reduced fuel expenditure, and another \$2.6 trillion from other savings including on tuition, water, paper, and food waste.

Figure 3: Economic –ICT-enabled cost saving opportunities (2030)



Source: WRI, IPCC, Gartner, FAO, GeSI, Accenture analysis & CO2 models

Return on investment

ICT-enabled solutions also provide profitable investment opportunities, as investing in ICT can generate significant value for money. For our report, we have analyzed investment opportunities across four sectors in more detail to better understand the dual return: financial return and sustainability benefits achieved.

Based on actual Accenture projects delivered to improve performance by installing smart solutions across buildings, manufacturing, agriculture and logistics we have summarized typical investment and sustainability results in the figure below.

Figure 4: Economic - Return on investment: Case examples

				
	Automation systems for Smart Buildings	Monitoring and forecasting systems for Smart Agriculture	Monitoring and smart production system for Smart Manufacturing	Monitoring and route optimizing systems for Smart Logistic companies
Net Present Value of implementation costs + obtained savings in energy consumption	USD525k – USD575k	USD1.20Mn – USD1.40Mn	USD1.0Mn – USD1.1Mn	USD800k – USD850k
Initial investment and installation costs estimation	USD250k	USD465k	USD254k	USD290k
Break even obtained from the model (project starting to give benefits)	2 - 3 years	3 - 4 years	1 - 2 years	2 - 3 years
Maximum yearly enabled revenues / savings	USD160k - USD170k	USD230k – USD255k	USD180k - USD190k	USD155k – USD165k
CO_{2e} abatement per USD invested	1 ton per 750 USD invested	1 ton per 420 USD invested	1 ton per 250 USD invested	1 ton per 360 USD invested

Source: Accenture case analysis (sanitized project results)

For example, building one vehicle assembly plant with smart manufacturing solutions can produce a *net present value* (NPV) of \$1-1.1 million by 2030 with an initial investment of \$254k. Breakeven levels can be obtained within one to two years and the average annual electricity saving generated from this investment is projected to be between \$180k and \$190k. The resulting CO_{2e} abatement in tons per dollar invested is 1 ton per \$420 invested.

Case examples of ICT solutions with economic benefits

Networkfleet – Improving accountability and controlling costs

Public transportation departments face a number of challenges overseeing the management of massive fleets with limited funds while answering to both elected officials and state taxpayers.

By employing Verizon’s GPS-driven Networkfleet solution across 2,500 Arkansas State Highway and Transportation Department (AHTD) vehicles, AHTD was able to improve accountability and achieve cost savings. By reducing unnecessary idle time and miles driven, AHTD saved nearly \$500,000 in bulk fuel expenses in the first year. In addition, reduced maintenance costs and other operational efficiencies added to the total savings. Moreover, better tracking abilities enable the department to operate more proactively, allowing dispatchers to direct dump trucks, snowplows, and other vehicles to emergency situations faster.

Surrey Police – Enhancing safety and efficiency while saving money

Surrey Police has delivered substantial savings in the running of their ICT services. However, due to diminishing returns Surrey Police was challenged to deliver more efficiency savings whilst the demands for new technology continued to drive end-user demand ever higher. The ICT challenge was to deliver current hosting services more cheaply without compromising on security.

A “platform as a service” developed by BT allowed Surrey Police to create a new, secure and virtual platform in BT’s secure cloud. This highly secure cloud-based solution encompassing 24x7 proactive service monitoring and *round the clock* protective monitoring allowed the police force to enhance their operational efficiency while generating cost savings.



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Acknowledgements: The Global e-Sustainability Initiative and Accenture Strategy thank the many experts engaged throughout the duration of this effort for generously providing their time, insights, and feedback to strengthen the quality of this report. A full list of SMARTer2030 team members is listed in the appendix.

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About GeSI

The Global e-Sustainability Initiative (GeSI) is a strategic partnership of Information and Communication Technology (ICT) companies and organizations committed to creating and promoting technologies and practices to foster economic, environmental and social sustainability. Formed in 2001, GeSI's vision is a sustainable world through responsible, ICT-enabled transformation. GeSI fosters global and open cooperation, informs the public of its members' activities to improve their sustainability performance, and promotes innovative technologies for sustainable development. GeSI's membership includes over 30 of the world's leading ICT companies; the organization also collaborates with a range of international stakeholders committed to ICT sustainability objectives. These partnerships include the United Nations Environment Program (UNEP), the United Nations Framework Convention on Climate Change (UNFCCC), the International Telecommunications Union (ITU), and the World Business Council for Sustainable Development (WBCSD). Such collaborations help shape GeSI's global vision on evolution of the ICT sector, and how it can best meet the challenges of sustainable development. For more information, see www.gesi.org.

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