

Sustainable Development Solutions Network

Report Part Title: ICT: A catalyst for achieving the SDGs

Report Title: ICT & SDGs

Report Author(s): The Earth Institute, Columbia University and Ericsson

Published by: Sustainable Development Solutions Network (2016)

Stable URL: <https://www.jstor.org/stable/resrep15879.6>

JSTOR is a not-for-profit service that helps scholars, researchers, and students discover, use, and build upon a wide range of content in a trusted digital archive. We use information technology and tools to increase productivity and facilitate new forms of scholarship. For more information about JSTOR, please contact support@jstor.org.

Your use of the JSTOR archive indicates your acceptance of the Terms & Conditions of Use, available at <https://about.jstor.org/terms>



JSTOR

Sustainable Development Solutions Network is collaborating with JSTOR to digitize, preserve and extend access to this content.

المنارة للاستشارات

1

ICT: A catalyst for achieving the SDGs

What are the SDGs?

Adopted by world leaders at the United Nations Sustainable Development Summit on 25 September 2015, the 2030 Agenda for Sustainable Development includes 17 Sustainable Development Goals (SDGs) and 169 associated targets to end poverty, fight inequality and injustice, and tackle climate change by 2030. Also known as the Global Goals, the SDGs build on eight anti-poverty targets—Millennium Development Goals (MDGs)—that the world committed to achieving by 2015. The new SDGs go much further to address the root causes of poverty and universal need for development that works for all. In addition to ongoing development priorities such as poverty eradication, health, education, food security and nutrition, they set out a broad range of interconnected economic, social and environmental objectives including more peaceful and inclusive societies. Global and universally applicable, the goals take into account different national realities, capacities and levels of development as well as defining means of implementation.

The 2030 Agenda for Sustainable Development fundamentally recognizes that “the spread of information and communication technology and global interconnectedness has great potential to accelerate human progress, to bridge the digital divide and to develop knowledge societies”. While none of the SDGs is specifically about ICT, several targets refer to ICT and technology, and ICT will underpin the achievement of every goal. All three pillars of sustainable development—economic development, social inclusion and environmental protection—need ICT as a key catalyst; and ICT, particularly broadband, will be absolutely crucial for achieving all 17 SDGs. Here are some of the ways we envision the role of ICT in accelerating the achievement of the SDGs:



End poverty

ICT is key to helping end poverty by providing possibilities to improve productivity among millions of people so that they can better provide for themselves and their families and move out of poverty. This can occur in many ways, for example, by providing timely and accurate information services to help ensure equal rights to economic resources, as well as enabling services such as mobile banking and micro-credit, and in helping small producers to find the best markets for their products.



Healthy lives & promote wellbeing

ICT can deliver substantial and significant benefits across the whole of the global healthcare ecosystem. Connectivity enables health workers to be connected to information and diagnostic services, while analytics can help make projections about disease outbreaks, health service usage, patient knowledge, attitudes, personal continuous management of diseases and health practices.



End hunger & achieve food security

ICT can help to reduce hunger and increase food security by giving farmers direct access to market information, weather forecasts, as well as planting, harvesting and targeted irrigation advice, logistics and storage, thereby helping to increase yield, restore soil, reduce waste and improve both productivity and effectiveness.



Ensure inclusive and equitable quality Education for all

ICT is helping to improve education globally, allowing students to access learning assets and teachers to prepare for classes anytime, anywhere.²⁴ ICT can assist in opening up access to education for all, particularly underserved populations and those living in remote, resource-poor areas. It also can deliver online certification and student advisory services, in turn leading to improved economic opportunities for all.



Achieve gender equality and empower all women and girls

ICT can enhance gender equality and gender empowerment, allowing women and girls to access information of importance to their productive, reproductive and community roles as well as involving women in urban planning. Women's sustainable livelihoods can be enhanced through expanded access to markets, education, training and employment.



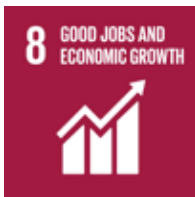
Water & sanitation for all

ICT will be crucial in ensuring the availability and sustainable management of water and sanitation for all. ICT is particularly important in terms of smart water management, infrastructure location, better and lower-cost maintenance, optimized operations and improved quality of service to customers.



Ensure access to energy for all

ICT is already demonstrating its strong potential to improve energy efficiency and reduce emissions, both by making ICT itself more environmentally sound and less carbon-intensive, and through ICT-enabled solutions such as smart grids, smart buildings, homes and smart logistics that allow other sectors of the economy to improve their energy efficiency and lower energy consumption.



Economic growth, employment and decent work for all

ICT skills have become a prerequisite for many forms of employment in the 21st century. Digital technology is transforming the way that business is being done everywhere, from traditional

employment sectors including farming, manufacturing and the health sector to new sectors such as offshore services. Moreover, ICT is important for economic and productivity growth. Recent research shows that a 10 percent increase in ICT capital services is associated with a 0.9 percent increase in GDP.²⁵



Infrastructure, industrialization, innovation

ICT will continue to play an essential role in building and maintaining resilient infrastructure, in promoting inclusive and sustainable industrialization, and in fostering innovation in the emerging information and knowledge societies which depend on open access to academic research, transparency to make informed decisions and the power of online collaboration to support cross-sector and in-house co-creation, learning and work.



Reduce inequality

ICT can help reduce inequality within and between countries, especially when used to help bring information and knowledge, and therefore social and economic progress, to disadvantaged segments of society—including those living with disabilities, as well as women and girls.



Sustainable cities and communities

ICT is essential in offering innovative approaches to managing cities more effectively and holistically, with ICT basic infrastructure and applications such as smart buildings, smart water management, intelligent transport systems, and new efficiencies in energy consumption, resource waste management.



Sustainable consumption & production patterns

ICT can foster sustainable consumption and production through product-specific improvements, increased dematerialization and virtualization, and the implementation of smart technologies in sectors including agriculture, transportation, energy, supply chain management, and smart buildings.



Urgent action to combat climate change and its impacts

Smart ICT applications, particularly in the areas of, energy, transport and buildings, manufacturing (Industry 4.0), smart services and agriculture and urbanization in general,²⁶ can help tackle climate change and mitigate its impacts. ICT can optimize value chains, reduce resource usage and waste, and also plays a crucial role in sharing climate and real-time weather information, forecasting early warning systems as well as supporting resilience and climate adaptation.



Oceans, seas and marine resources

ICT can assist in oceanic conservation and sustainability. Satellite monitoring delivers timely and accurate global data, improving accountability, while big data can be used to analyze biodiversity, pollution, weather patterns and ecosystem evolution, and to help plan mitigation and adaptation strategies.



Halt and reverse land degradation

ICT can play a significant role in the conservation and sustainable use of terrestrial ecosystems and preventing biodiversity loss through improved

monitoring and reporting, which leads to increased accountability, as well as through use of big data to analyze short- and long-term trends and plan mitigation activities. ICT also improves efficiencies in land restoration via sensors, data collection and analysis.



Peace, justice & strong institutions

Within crisis management, humanitarian aid and peacebuilding, ICT has proven to be a powerful tool in areas such as electoral monitoring, through the use of crowdsourcing. Government use of open data increases transparency, empowers citizens, and helps to drive economic growth.



Strengthen the means of implementation & partnerships for development

ICT is unique in its capability to specifically strengthen the means of implementation for the SDGs, through enhancing international cooperation and coordination; promoting technology transfer; capacity-building; forging multi-stakeholder partnerships; and enabling and improving data monitoring and accountability.