

Highlights from the Spring Meeting

Dubai, United Arab Emirates
12-13 March 2016

Background

On 13 March 2016, the *Broadband Commission for Sustainable Development* held its Spring Meeting at the Palm Atlantis hotel in Dubai, United Arab Emirates, generously hosted by Mr. Sunny Varkey in parallel with the [Global Education and Skills Forum \(GESF 2016\)](#). 27 Commissioners attended, as well as a number of Focal Points and Special Guests. The meeting featured the participation of: H.E. Minister Jean-Philbert Nsengimana, Minister of Youth and ICTs of the Government of Rwanda, on behalf of H.E. President Kagame of Rwanda; Ms. Irina Bokova, Director-General of UNESCO; and Mr. Houlin Zhao, Secretary-General of ITU. Special Guests included Mr. Fareed Zakaria, a renowned journalist from the Washington Post, who addressed the Commission on broadband and education. This document summarizes the key highlights from the meeting.

Confidential Internal Briefing

This document does not constitute an official summary of the meeting.



12 March 2016 – Working Group Meetings

A number of Working Group meetings preceded the full Commission meeting. The Working Group on Digital Health convened to discuss its work examining the issues surrounding the scale-up of digital health solutions towards long-term sustainable solutions to improve health outcomes at the national level. Dr. Ann Aerts of the Novartis Foundation, co-Chair of the Working Group, suggested that Ministries of Health are struggling to address ICTs in a fast-changing environment. The Group should examine success factors and best practices, and produce recommendations as an integrated tool which can be applied to local health programmes. Dr. Aerts announced that a consulting company has been selected to undertake the study, which will be reviewed by a number of independent experts and WHO. Florence Gaudry-Perkins of Nokia, co-Chair, called for the report to engage Health Ministers, as well as a broader audience, and to help break down the silos. The report should identify a basket of success factors that will help make the introduction of digital health systems work in low- and middle-income countries. The Group reviewed the timeline and selection of countries.

The Working Group on Platforms and Content for the SDGs began with an update from the Chair of the Group, Professor Jeffrey Sachs of the Earth Institute, Columbia University. The Group will examine programmes that could demonstrate what a Platform for the SDGs could look like. In health and education, there is a need for a platform that ties provision of services and content to end-users, guided by online applications of best practice protocols in, for example, managing the treatment of infectious diseases, or screening of Non-Communicable Diseases (NCDs), or designing



K12 curricula. Relevant and accessible content is needed to populate such platforms, which need to reflect cultural and linguistic diversity in order to help countries achieve the SDGs. In the discussion that followed, the Working Group discussed the role of the public and private sector, making the case for identifying market gaps where the private sector is not in a position to provide services on a commercial basis. Debate centred on the business models for such platforms. The Group discussed the ‘public good’ nature of such a platform, the need to tap into existing platforms and to create a platform of networked platforms, as well as the importance of human interfaces in ensuring the quality of inputs and outputs.

The Working Group on Demand convened to discuss its work to promote effective demand, digital skills and empowerment through the adoption and use of broadband services and applications. Mr. Gordon Graylish of Intel, Chair, suggested that spurring demand is a key factor in boosting the growth of broadband, and that greater attention needs to be given to best practices in building effective demand for broadband. Although 3G coverage has currently attained nearly 70% of the global population, there is evidence to suggest that the rate of growth in Internet penetration is slowing. Demand programmes are necessary to increase the penetration, where increases in the value of connecting, affordability and focus on people and usability are needed. The report will examine success factors and best practices, and a set of policies for boosting effective demand. The Group reviewed the outline of the report, timeline and selection procedure for choosing best practice programmes.

13 March 2016 – Spring Meeting

Opening Address & Welcoming Remarks

On behalf of His Excellency President Paul Kagame of Rwanda, co-Chair of the Commission, H.E. Jean-Philbert Nsengimana opened the meeting. In his Opening Address, he noted that the SDGs have ushered the development community into a new era that comes with unprecedented opportunities to strengthen the role of our Commission. He suggested that “the world will become smart, village by village, city by city, country by country”; however, based on experience with the MDGs, country leadership is critical. Rwanda adopted its most recent Broadband Plan in November 2015, *Smart Rwanda 2020*, which has also been aligned with the SDGs and recognizes the need to invest in IoT, Big Data, creative industries and multimedia, mobility and digital lifestyles, backed by ubiquitous broadband infrastructure and skilled human capacity. The *Smart Africa initiative* has adopted a similar vision at the continental level.

In his opening remarks, Mr. Houlin Zhao, Secretary-General of ITU and co-Vice Chair of the Commission, noted that these are also momentous times for the ICT industry, with accelerating momentum in 4G network launches by operators, as well as in license awards by regulators. There are now realistic prospects for download speeds of 1 Gbps becoming commercially available over a mobile network by the end of 2016, which is a very exciting development, as it promises ‘fixed’-like capacities and throughput over mobile access networks. Such advanced networks will not come cheaply, however. In January, ITU published an [estimate](#) of a cost of US\$450 billion dollars for connecting the next 1.5 billion people by 2020. This is a very considerable sum of money, so governments and industry have to work together in partnership to be able to fund the roll-out of new networks.

In her welcoming remarks, Ms. Irina Bokova, Director-General of UNESCO and co-Vice Chair of the Commission, expressed her special gratitude to Mr. Sunny Varkey, UNESCO Goodwill Ambassador and Chair of the Varkey Foundation, for his generous invitation to host the Commission during the [Global Education and Skills Forum 2016 \(GESF-16\)](#). With the adoption of the 2030 Agenda for Sustainable Development in September 2015, the UN and the world has crafted a new vision for the sustainable development that will guide us for the next 15 years – now, we must adopt strong measures, and express very strong political will to move forward with the Agenda. The Director-General called for a new focus on gender equality in the Commission, in order to explore new ways to bridge the gender digital and knowledge divides at every level. The world is going through a staggering confluence of emerging technological breakthroughs that can open vast new horizons for growth and development – access, connectivity and extensive use of technologies are absolutely crucial to build knowledge societies and achieve sustainable development.

Introducing New Commissioners

Mr. Rajeev Suri, CEO of Nokia, recognized that the Commission has already succeeded in raising visibility on the importance of connectivity and broadband, and their social and economic benefits to all. He assured the Commission of his sincere and solid engagement and the responsibility he feels to ensuring that the next billion people gain access to Internet connectivity. He called for the Commission to take on several projects to really show what broadband can do.

H.E. Abdulaziz Salem Al Ruwais, Governor of CITC of the Kingdom of Saudi Arabia, expressed his belief that that the SDGs will benefit very much from the Broadband Commission’s work across the globe, and expressed his willingness to contribute to the goals of the Commission. Mr. Philipp Metzger, Director-

General of OFCOM, Switzerland, expressed his belief that broadband is a pivotal element of an inclusive society and a key element of the attainment of the SDGs.

Baroness Beeban Kidron, award-winning filmmaker and 5Rights Campaign champion, called for young people and children to get special and differential treatment as they come online as full citizens. A large proportion of people now coming online are under 18, who will constitute the workforce, educators, consumers, citizens and communities of the future.

Mr. Mats Granryd, Director-General of GSMA, highlighted that in the 25 years since GSM was launched and the Internet really took off, 3.2 billion people have now got connected via a mobile device, forecast to grow to 4.7 billion by 2020. He suggested that the mobile industry is possibly the first industry that is collectively supporting the 17 UN SDGs, with many good examples of how the mobile industry is contributing to the SDGs.

Mr. Scott Gegenheimer, CEO of the Zain Group, expressed his appreciation that ITU and GSMA are working together to figure out how to push the regulatory environment forward. Technology is changing very fast: the next generation of mobile technology is rolled out approximately every ten years (2G, 3G and 4G). However, from his perspective, the regulatory environment has really fallen 10, 15 years behind the technology – we need to work on this together.

Mr. Jean-Yves Charlier, CEO of VimpelCom, Ms. Catherine Novelli, US Under-Secretary for Economic Growth, Energy & Environment; Mr. Rupert Pearce, CEO of Inmarsat; and H.E. Ramin Quluzade, Minister of Communication and High Technologies of Azerbaijan were unable to be present, but were recognized *in absentio*.



Session 1: Broadband & SDGs – how can we fulfil the sustainable development agenda?

Prof. Murenzi, Executive Director of TWAS, moderated this Session. He asked several scoping questions as to how broadband will support the achievement of Sustainable Development – from education to health, to life on land, life in water, to agriculture, to water. ICTs will help education, but education will also help ICTs in the long-run. Dr. Robert Pepper of Cisco suggested that there had been considerable consternation that ICTs were only mentioned in several SDGs, but in fact ICTs are enablers which will accelerate the adoption and successful achievement of all the SDGs.

Mr. Sunny Varkey, Founder and Chairman of GEMS and host of the Spring Meeting, welcomed Commissioners to the GESF 2016, and observed that the Commission will be able to play a very important role in giving access to quality education throughout the world.

Prof. Jeffrey Sachs of Columbia University argued that “there is no conceivable way to achieve the SDGs without the central role of broadband and ICTs in general. This is the single most empowering technology we have”. The only way to achieve the SDGs is through a massive scale-up of information technologies, but this will not be achieved by Business As Usual – a breakthrough is needed. He recommended that the industry should build content together with expert communities and the development community for national-scale platforms, in a way that can allow for a rapid-scale uptake.

Mr. Mats Granryd of the GSMA agreed, pointing out mobile money is helping millions of people out of extreme poverty, but that needs to be carefully regulated, so we don't kill that good initiative with over-regulation. There are also an estimated 2 billion people on the planet without an identity. A number of mobile operators (e.g. Telenor, Millicom and Orange) are starting to deploy platforms for registering births and newborn babies online.

Dr. Dato Lee Yee Cheong suggested that the Commission could bring the technology and experience of Big Data to bear to support development, and produce evidence-based lessons learned. Mr. Paul Mitchell of Microsoft was concerned about viable business models – while philanthropy is incredibly important, it is not a business model, and may prove unsustainable alone. Cloud services put massively scalable computing power once reserved for large corporations with billions of dollars of spending power into the hands of virtually anyone with a few cents. He described how Microsoft is mapping its many activities to sustainable business models.

Ms. Sun Yafang, Chairwoman of Huawei, described the Chinese Government's FTTVillage programme installing mobile base stations in 95% of 600,000 villages in China. 79% of villages are already covered with fibre, and enjoy cable TV services and 2K and 4K quality television to farmers. Dr. Speranza Ndege, Kenyatta University, called for training in ICTs and for broadband to be introduced as a compulsory unit in education. Dr Aerts, Novartis Foundation, called for broadband to ensure equal access to Health for All, as well as equal access to Education for All (EfA), although we are not yet there. Digital health solutions have been revolutionary for healthcare in low and middle-income countries. She described the work of the Working Group on Digital Health, of which she is co-Chair, and urged policy-makers to engage with other sectors.

Mr. Rajeev Suri, CEO of Nokia, urged Governments to take a look at the broader policy situation – we need to consider how ICTs and telecom interact with other sectors to ensure that many ICT use cases are enabled, not constrained, by outdated regulation. He called for the Commission to take on some projects to show what is possible – Mr. Amir Dossal concurred. Dr. Robert Pepper of Cisco drew attention to a growing digital divide in IP-enabled devices. H.E. Victor Calvo-Sotelo, Ministry of ICT of Spain, described how Spain introduced a new Telecom Law two years ago, making it easier for the private sector to deploy telecom networks. Spain is working closely on the European Digital Single Market initiative and has a national plan for smart cities, and is working with ITU on standards for smart cities.

H.E. Dr. Debrezion Gebremichael, Minister of ICT of Ethiopia, called for the Commission to develop guidelines to be used as a reference in implementing the SDGs. Mr. Jose Toscano of ITSO underlined the importance of satellite technology as a highly cost-effective and efficient solution to give everyone, especially populations in rural and low population density areas, the possibility of being connected. H.E. Opoku Agyamang, Minister of Education of Ghana, suggested the focus should be on education, as it underpins the other SDGs. Mr. Frank LaRue of UNESCO called for the Commission to make a statement to the High-Level Political Forum (HLPF) in July 2016, which assesses progress made and remaining gaps towards the SDGs.

In his closing summary, Prof. Murenzi reminded everyone that it is vital to remember there are still 4 billion people without basic access to the many advantages offered by ICTs, and this should be our primary focus.

Session 2: The Growth of Broadband & Targets for Tomorrow

Prof. Jeffrey Sachs of Columbia University moderated this Session. He outlined the success the Commission has had with its targets originally developed in 2011 (with the target for gender equality in access to broadband added in 2013), but highlighted the need to review and update them.

Ms. Irina Bokova of UNESCO called for a new target to measure school connectivity and whether teachers have relevant competencies for teaching and learning with technologies. UNESCO is currently defining preliminary indicators for statistics on education for the Agenda 2030. In addition, Ms. Bokova proposed to also set a target increasing linguistic diversity on the Internet. The third proposed new target linked to a UNESCO General Conference resolution, which underlines the Internet should be rights-based, open, accessible and multistakeholder-shaped, for which UNESCO is developing indicators. The fourth, newly proposed goal linked to SDG 16 targets the adoption and implementation of constitutional, statutory and/or policy guarantees for public access to information by 2020.

Dr. Robert Pepper of Cisco agreed, but suggested that connected classrooms could be even more relevant. Mr. Rajeev Suri, CEO of Nokia, called for the Commission to consider National Digitalization Scorecards by which Governments could assess digitalization and their global policy framework across multiple sectors, a suggestion which received broad support – Mr. Mats Granryd of GSMA suggested these should include different technologies.

Mr. Leong Keng Thai of IDA, Singapore, called for the Commission to look at the next generation of Plans, data protection and IoT, to see how NBPs are taken into account with other sectors. Dr. Speranza Ndege called for the Commission to work with Governments to help them redefine their NBPs. Mr. Philipp Metzger of OFCOM suggested that Plans need to be reviewed annually. Prof. Jeff Sachs suggested that the Commission may need to examine SDG Strategies, instead of NBPs. Dr. Dato Lee Yee Cheong suggested the Commission should develop a Strategic Plan and an Action Plan to evaluate its priorities. Mr. Paul Mitchell of Microsoft concurred, calling for the Commission to stay focused on its core priorities.

Ms. Sun Yafang, Chairwoman of Huawei, questioned the basic definition of basic broadband, which has increased from 2 Mbps or 4 Mbps to 25 Mbps in many countries. The Government of China requires that every new home with FTTH should have 50 Mbps service. Professor Murenzi argued that education and data protection would be vital areas to consider. H.E. Victor Calvo-Sotelo, Ministry of ICT of Spain, highlighted that Spain already monitors classroom connectivity. Mr. Gordon Graylish of Intel emphasized that the Commission should avoid fragmentation and retain clear, simple goals. Baroness Beeban Kidron called for the rights of children online to be taken into account. Dr. Robert Pepper of Cisco underlined that we can only have targets that are readily definable and measurable.



H.E. Dr. Siyabonga Cyprian Cwele, Minister of ICT of South Africa, pointed out that we cannot increase adoption unless we come up with best practices about mitigating risks – including risks about protecting personal data, risks, fraud. H.E. Dr. Debretsion Gebremichael, Minister of ICT of Ethiopia, suggested that indicators on village connectivity and local content would be important. Mr. Houlin Zhao of ITU described a visit he had made to a school in Tonga, and the state of connectivity he had found there. Before closing, Prof. Jeff Sachs presented comments on targets on behalf of Ericsson to the Commission. Ericsson wishes to: retain the focus on the core targets; support the inclusion of school connectivity, IoT and gender; express some skepticism about targets on social media and a target on privacy.

Session 3: Innovating in Education through Technology

Ms. Irina Bokova of UNESCO introduced this session. We have learned much from the MDG experience – access and quality of education can only be improved together. She described UNESCO’s work in hosting the yearly Mobile Learning Week. She observed that the question is no longer whether technology is changing education, but HOW technology is changing education. We need to ensure that this technological revolution increases the opportunities for all, increases access for all, including marginalized people left behind and women and girls. She informed the Commission about her speaking commitments in GESF and asked Mr. David Atchoarena, Director in UNESCO’s Education Sector, to moderate this Session on her behalf.

Mr. Rajeev Suri, CEO of Nokia, observed that online education can help solve a number of issues – the lack of specialized teachers in remote areas, better economic growth, better education, and better jobs. He identified some of the key trends shaping future education: Gaming and Virtual Reality (VR), while m-learning on mobile devices and cloud-based delivery are helping education become more individual-centric. Ms. Sun Yafang, Chairwoman of Huawei, described Huawei’s ICT-Teachers or ICT-C programme, which now has over 3,000 students and professional people who will learn how to develop knowledge and elearning for the development of teachers via the Internet.

Mr. Gordon Graylish of Intel suggested the device is only part of the system. We need to align incentives and encourage teachers to be successful in using the technology, rather than having it imposed on them. H.E. Al Ruis of Saudi Arabia drew attention to how broadband is helping many universities open branches of their campus in different cities. Dr. Dato Lee Yee Cheong described the [Main a la Pate initiative](#) of the French Academy of Sciences. Dr. Speranza Ndege shared her experience of e-learning and best practices – Kenyatta University bought 2,000 tablets, but students work mostly offline to minimize connection costs.

H.E. Victor Calvo-Sotelo, Ministry of ICT of Spain, emphasized the role of incentives – he shared his experience that 1/3 teachers know how to use ICTs and like ICTs, 1/3 like ICTs, but don’t know how to use them, and 1/3 don’t like or use them at all! Spain typically spends 300 euros per year per child on textbooks, so publishers are resisting losing this lucrative market. Investments are also needed in national language processing technology, to ensure linguistic diversity is respected. Mr. Zhao of ITU emphasized that improvements can still be made to optimize language software, and that ITU values the contribution of its Academic Institutions and partners. Mr. Battikh of Ericsson described Ericsson’s Connect to Learn programme, which has been deployed in 22 countries, with over 70,000 students are benefitting from it.

H.E. Dr. Debretsion Gebremichael, Minister of ICT of Ethiopia, underlined that prioritization is needed, according to the effectiveness of ICT access at university versus primary or secondary levels of education. At higher levels, international dimensions to content have been higher, but in primary or secondary levels, content should be local and respectful of local culture and considerations. Prof. Murenzi pointed out that the original WSIS target of connecting schools related mainly to fixed access, and needs to be adapted for WiFi and mobile broadband boosting school connectivity. Mr. Frank LaRue agreed connectivity is a

priority, but it is vital to pay attention to cultural and linguistic diversity and underlined the importance of content and that it is easily understood by children. Prof. Sachs highlighted the benefits of remote education and machine learning translation for universities, including standardized remote libraries.



Address by the Special Guest, Mr. Fareed Zakaria of the Washington Post

Mr. Fareed Zakaria argued that broadband can solve two major problems confronting education. Firstly, the online revolution can help address scale and providing education to a growing population. With the exception of China (which is launching a university per month), no country has begun to address the expansion of educational capacity needed. The Yale economist Robert Shiller taught more people online last year than he had taught in 32 years of lecturing. The founder of [Coursera](#), Andrew Ng, pointed out that, last year, around 40,000 people took his computer science course, and of the top 500 spots, not a single spot was taken by a Stanford University student. Broadband can enable a huge capacity for expansion, and the potential to cultivate human talent worldwide.

Broadband also offers another enormous advantage – scale and quality in education have traditionally been inversely correlated. Technology is making it possible to imagine that scale and quality can now go together. Big Data is making courses far more customized and personalized than top university courses. Even only a 5% completion rate for online courses and MOOCs can still yield enormous benefits, from a starting base of hundreds of thousands. Online learning is helping people spread their skills and talents via YouTube videos, websites, or an educational eBay matching instructors with students that now has 20 million students.

Online learning can also help address the challenge of lifelong learning. This kind of bottom-up education can respond much more quickly to the challenges and demands of the market than the formal education system. This may not be formal education, but it does fulfil the very important need by people to upgrade their skills, to upgrade their knowledge in lifelong learning and enrichment. Mr. Zakaria also described the largest 4G roll-out in the world, which is happening in India, where the four big companies are rolling out 4G on a massive scale. Reliance has already built 90,000 cell-phone towers and will have 150,000 in place by 2018; Bharti will probably match this. Some 300 million Indians speak English and India has a very open system, so all this suggests we are going to see something very interesting in India over the next ten years.

Session 4: Open Discussion

Mr. Amir Dossal moderated this Session. The moderators of the previous Sessions summarized the outcomes of their Sessions. Prof. Murenzi of TWAS concluded that ICTs and broadband are integral for sustainable development, and underpin the achievement of the SDGs. Prof. Jeffrey Sachs summarized the discussions of the second Session on targets, and suggested a programme to review the targets and report back to the September meeting with a revised set of targets. Mr. David Atchoarena summarized his Session, drawing attention to linguistic diversity and the need for local content. Mr. Mats Granryd of the GSMA proposed a new Working Group on the gender digital gender divide, which was warmly endorsed by Commissioners. Ms. Sun Yafang of Huawei drew attention to the importance of fixed backbone network infrastructure for carrying as much as 80% of the forecast explosion in video traffic. Mr. Jose Toscano of ITSO presented his background document to the Commission.

H.E. Victor Calvo-Sotelo, Ministry of ICT of Spain, described the work of the Government of Spain on linguistic diversity in education. Gordon Graylish of Intel wondered whether the Commission should engage in project work, or whether the Commission is more of an advocacy group. Prof. Jeff Sachs highlighted that broadband is inherently the responsibility of a mixed public/private space, and emphasized the industry as a source of content. The discussion that followed debated the role of public versus private sector, and the need for viable, ongoing models to development. It was decided that the Commission will prepare policy statements and op-eds, including for UN events such as the World Humanitarian Summit, the High-Level Political Forum, Habitat III and the IMF/World Bank Finance Ministers Meeting. The Commission may present revised targets to the New York meeting in September.

Closing Remarks

Ms. Irina Bokova, Director-General of UNESCO, thanked the co-Chairs and all Commissioners for the extremely rich and productive discussions in the Working Group meetings and full Commission meeting. She expressed her view that the Broadband Commission has matured considerably in its approach and thinking. This Commission is indispensable for implementation of the Agenda 2030. She invited Commissioners and moderators to propose their ideas and to use flexible ways of working. She suggested the Commission contribute a statement to the HLPF to demonstrate its common commitment to leverage broadband connectivity, content and applications for the implementation of the SDGs.

Mr Houlin Zhao, Secretary-General of ITU, expressed his deep appreciation of the Commissioners' valuable contributions. He found a relatively positive view on the ICT industry here, but not much mention of the challenges and risks which the ICT industry faces. The ICT industry is high risk – although many well-known companies are present, there are many more which have failed, which are no longer with us. It is vital to build a good environment to encourage investment in ICTs, and there are various tensions emerging between different players. We must continue to invest, and to create a good regulatory and business environment to attract investment and support our industry to support sustainable development.

On behalf of H.E. Paul Kagame of Rwanda, H.E. Jean-Philbert Nsengimana thanked Commissioners for a very enriching meeting. We have heard a lot about the SDGs and the power of ICTs to bring about real transformation. ICTs represent the best means of implementation of the SDGs, and broadband represents the best promise to shape education to meet the challenges of both the present, and future. Access to broadband still remains a challenge for the majority of humanity, so we need to remain focused until everyone is connected, and empowered with appropriate content and services. He expressed his satisfaction at the enthusiastic discussion on the direction of the Commission, and reiterated President Kagame's commitment to this Commission. He thanked the Sunny Varkey Foundation for its generous welcome and his co-Vice Chairs, before closing the meeting.