Special Program of the Broadband Commission and the World Economic Forum meeting report

March 2018

Introduction

The UN Broadband Commission for Sustainable Development has described broadband internet as "the nervous system of the global economy". Broadband is also an indispensable driver of economic development and diversification, as well as technological and social transformation at the individual, business and government levels. However, approximately half of the world's population still remains offline. The digital divide is a stubbornly persistent problem, yet also one characterized by several key new dimensions that have emerged over the past year.

Following the inaugural joint Broadband Commission/World Economic Forum meeting that took place at the World Economic Forum Annual Meeting 2017, this meeting again gathered senior leaders from business, government, civil society and international organizations to discuss progress, action and commitments needed to ensure internet for all. Specific issues discussed included:
– How do we ensure sustained and continued efforts by policy-makers, international institutions and industry players to address the digital divide?
– How do we address the continued and growing challenge of the digital gender divide, including employment, representation and participation of women in the tech sector?
– How do we ensure that safeguards are in place to protect internet users from cybercrime and cyber-bullying?
– As we move further into the Fourth Industrial Revolution, how do we take advantage of the opportunities that new technologies can bring without creating a Fourth Industrial Revolution divide in areas such as artificial intelligence (AI) and the internet of things (IoT)?
– As interest grows in new models for financing development, how can we involve new actors and innovative models to accelerate the financing of solutions to bring the rest of the world online?

Welcoming remarks

The primary function of connectivity is to improve people's lives. This is the primary purpose of the Internet for All project, which catalyses and facilitates broader multistakeholder cooperation on internet inclusion both at global and country level. At the global level, Internet for All and the Broadband Commission support principles of digital inclusion and contribute to the implementation of the Sustainable Development Goals (SDGs). At the country level, Internet for All is currently operational in Rwanda, South Africa, Argentina, and Jordan. Special mention was given to the forthcoming launch of a new financing platform for connectivity infrastructure, an effort that links the global-level and country-level work. Developed by a sub-group of the Internet for All Global Steering Committee, the platform will launch in South Africa as part of its Internet for All country project in March 2018.

Houlin Zhao, Secretary-General of the International Telecommunication Union (ITU), expressed his gratitude to the World Economic Forum for its continuous cooperation and close work with United Nations agencies, of which several were at the meeting. He urged the participants to work together towards the concept of the four "Is" being promoted by the ITU – infrastructure, investment, innovation and inclusiveness. All four are needed to achieve meaningful Internet access and adoption. He highlighted the collective responsibility to bridge the digital divide and reiterated that the gender divide in particular is a priority for ITU, engaging in multistakeholder partnerships such as EQUALS. Zhao called the attention of participants to the forthcoming "AI for Good" Global Summit, which the ITU will organize in Geneva in May 2018, focusing on the potential of AI to accelerate progress towards the SDGs.

Carlos Jarque, Executive Director, of América Móvil, addressed the meeting on behalf of Carlos Slim, Co-Chair of the Broadband Commission for Sustainable Development. Jarque noted that not having access to broadband is a development and welfare divide. Without the ample use of broadband everywhere, none of the SDGs will be reached in a timely manner.

Lynn St Amour, Chair of the Multistakeholder Advisory Group at the Internet Governance Forum (IGF), gave a short overview of the origin and objectives of the IGF. She highlighted several initiatives in which the IGF is partnering with the ITU and the World Economic Forum, including EQUALS: the Global Partnership to achieve Gender Equality in the Digital Age.

Presentations

Doreen Bogdan-Martin, Chief of Strategic Planning and Membership Department of the ITU, presented progress made by the Broadband Commission since the World Economic Forum Annual Meeting 2017. She also highlighted the launch of the seven targets the Broadband Commission has set for 2025:

1. All countries to have a funded national broadband plan
2. Entry-level broadband services to be affordable at less than 2% of gross national income per capita
3. 75% of broadband internet-user penetration worldwide, 65% in developing countries and 35% in least-developed countries
4. 60% of youth and adults to benefit from sustainable digital skills
5. 40% of usage of digital financial services worldwide
6. Reducing by half the unconnectedness of micro-, small- and medium-sized enterprises
7. Reaching gender equality across all targets

Eric White, Project Lead of Internet for All, showcased selected results of the initiative. As of 2018, the project has established four operational country programmes, a global community with over 500 members that are united through working groups, steering committees and country fora, and projects. These include Rwanda's Digital Ambassadors Programme, which has already reached over 5,000 beneficiaries, a sponsored data project in Argentina, and South Africa's Imbizo campaign, which trained 500 students on the day of its launch.

01: from left to right: Eric White (Project Lead, Internet for All, World Economic Forum), Carlos Jarque (Executive Director, International Affairs, Government Relations and Corporate Affairs, America Movil, Mexico), H.E. Mr Alexander De Croo (Deputy Prime Minister and Minister of Development Cooperation, Digital Agenda, Telecommunications and Postal Services of Belgium)

Special remarks

Mercedes Araoz, Prime Minister of Peru, highlighted the many innovations in her country that are providing connectivity. For example, Peru is using balloon technology from Google's Project Loon to bring internet connectivity to remote areas. She also stressed the urgent need to address the digital gender gap. There are still disproportionally more men than women using the internet and, according to ITU statistics and research, the digital gender gap is widening (ITU, 2016).

The Deputy Prime Minister of Belgium, **Alexander de Croo**, said it is not enough to simply provide internet access and that people need to be skilled and incentivized to use the internet. Specifically, education on digital literacy has become imperative and governments need to reform education systems to include new training in digital skills.

Liu Zhenmin, Under Secretary-General for Economic and Social Affairs, United Nations, outlined a five-step framework – trust; managing the unpredictable; efficient progress towards the SDGs; overcoming inefficiencies; and going beyond digital policies.

Mukhisa Kituyi, Secretary-General of UNCTAD, spoke about the challenge of governments that are excluded from the digital economics. He said those that are starting to be "left behind" are often those that are least prepared to catch up and need assistance. Importantly, he stressed the role of regulators, who may often be too quick in blocking innovations, but should rather facilitate and not hinder progress.

Achim Steiner, Administrator of UNDP, described how development today is extremely different from development work only 20 years ago, as many people and services now use digital platforms. One objective for UNDP is to become an enabler for the digital development of economies and a digital platform operating organization.

Imad Najib Fakhoury, Jordan's Minister of Planning and International Cooperation, highlighted his country's challenges and successes in increasing internet access and adoption. He noted that digital development has been a strategy of Jordan's government since the mid-1990s to boost the economy and develop the country's human resources. Following a number of cooperative public- and private-sector interventions over recent years, the country's internet penetration is approaching 100%; 80% of Arabic internet content is hosted on Jordanian servers and just over a fifth, or 21% of the top 100 start-ups in the Middle East and North Africa region, are now located in Jordan. Looking ahead, Fakhoury noted an increased focus on providing internet access for the 3.6 million refugees living in Jordan and plans being developed to bring a full suite of e-government services to the public by 2020.

Rwanda's Minister of Information Technology and Communications, **Jean de Dieu Rurangirwa**, focused on the internet's role in growing economies and bringing the world towards a more peaceful future. Noting that, 20 years ago, the role of the internet today would have been impossible to predict, he called on participants to leverage their significant collective experience to brainstorm future-oriented solutions for the internet to address socio-economic problems. He invited the assembled participants to the Broadband Commission's forthcoming meeting in Kigali, 7-8 May.

01: from right to left: Min Anusha Rahman Khan (Minister of State for Information Technology and Telecommunications of Pakistan), Marcos Souza (Secretary of Innovation and New Business of Brazil), Dr Hwang Chang-Gyu (Chairman and Chief Executive Officer, KT Corporation, Republic of Korea)

Break-out discussions

Participants formed four break-out groups: EQUALS: Bridging the Gender Divide in the Tech Sector; New Financing Solutions for Connectivity; Privacy, Safety, and Security; and The Fourth Industrial Revolution Divide.

Group 1 – EQUALS: Bridging the Gender Divide in the Tech Sector

Discussion Leader:
– **Jimmy Wales,** Founder, Wikipedia.org, USA

Firestarters:
– **Cherie Blair,** Founder, Cherie Blair Foundation for Women, United Kingdom
– **Binete Diop,** Founder and President, Femmes Afrique Solidarité, Switzerland
– **Zydrune Vitaite,** Director, Group Sales, Eldes, Lithuania. World Economic Forum Global Shaper
– **Marissa Mayer,** President and Chief Executive Officer (2012-2017), Yahoo, USA

Jimmy Wales highlighted the importance of bridging the digital gender divide for Wikipedia. Noting the gender imbalance entrenched in tech-focused workplaces as well as in internet access more broadly, he called on the participants to help him brainstorm ways to bring about a more equitable internet.

Firestarters discussed the need to challenge the culture of the tech industry and change the belief that women and girls are somehow neither fit nor talented for technology. They highlighted past experiences in promoting women in the tech industry and suggested that more positive stories needed to be told to counter the negative perceptions that are highlighted by the media. They gave examples of effective mentorship programmes and agreed that there is a critical need for genuine commitment to achieve positive outcomes.

In a wider discussion, participants underlined the need to scale existing initiatives, as well as create new ones. It was noted that the commitment of male allies should be recognized and leveraged and they should be included in discussions to identify and promote top best practices for leadership in the tech sector.

The ITU presented EQUALS: the Global Partnership to achieve Gender Equality in the Digital Age (www.equals.org), which has established a network of organizations working to ensure that women and girls are given access, and equipped with ICT skills, and leadership potential to work in the ICT industry.

The idea of a specific gender equality pledge for tech leaders was introduced for further reflection and engagement after the Davos meeting. Themes that could be addressed included: improved gender balance in decision-making and governance teams as well as the workforce; equal compensation for male and female employees with equivalent roles and responsibilities; promoting education, training and professional development for women and men equally; privileging enterprise development, supply chain and marketing practices that empower women; and developing and maintaining internal policies that foster diversity and advancement opportunities for all.

Companies need to put a "premium" to address the topic of gender inclusion and investing in education. Many jobs are becoming more dependent on technology and tech skills are becoming ever more important across a wide range of industries, therefore, there is a need for a pipeline of skilled women and girls who can become consumers and then creators of content. The dialogue needs to remain positive and follow a holistic approach such as the EQUALS partnership.

The participants of the session were invited to follow and join the #EqualsInTech movement, engage in the established partnerships and continue the discussions after Davos.

Group 2 – New Financing Solutions for Connectivity

Discussion Leader:
– **Wolfgang Bock,** Senior Partner and Managing Director, The Boston Consulting Group, Germany

Firestarters:
– **Hwang Chang-Gyu,** Chairman and Chief Executive Officer, KT Corporation, Republic of Korea
– **Patrick Khulekani Dlamini,** Chief Executive Officer and Managing Director, Development Bank of Southern Africa, South Africa
– **James Scriven,** Chief Executive Officer, IDB Invest, USA
– **Stéphane Bacquaert,** Managing Director and Chief Executive Officer, Wendel Africa, Wendel, France

– **Rashad Kaldany,** Partner, Chief Investment Officer, BlueOrange Capital, USA
– **Pierre Guislan,** Vice-President, Private Sector, Infrastructure, and Industrialization, African Development Bank, Côte d'Ivoire

The conversation began with an acknowledgment of a challenge: according to the ITU and the Broadband Commission's analysis, connecting the next 1.5 billion people to the internet will cost $450 billion in infrastructure capex. However, with MNOs and ISPs largely held responsible for such investment, there is the risk that some areas may never attract investment without support from other entities. Given the strong upside that internet use brings to society, he proposed a discussion focused on ways to achieve more cross-sector collaboration in promoting ICT infrastructure development.

Blended finance was seen as a more promising (and practical) means to fund infrastructure projects. Such arrangements leverage public and development funds to improve the business case for private sector investors, having the effect of attracting more private capital, mitigating more risks and accelerating overall investment.

The group also proposed a number of ways that regulations can be used to improve funding. Specifically mentioned was the need to update antiquated regulations that do not account for modern internet usage or access technologies; the need to allocate spectrum more cheaply and efficiently, using the future outcomes of ITU's World Radiocommunications Conference (WRC) 2019; and the need for ICT infrastructure to be treated more like a utility, with fewer duplicative networks and more government support to expand beyond major profit centres.

It was suggested that the frame of reference on telecommunications infrastructure investment should be shifted – from viewing infrastructure as a conduit for corporate profits to infrastructure as a tool for economic development. Pointing to the agricultural uses of high-speed internet, for instance, the group identified a number of significant economic benefits that would accrue to rural farmers should the quality of internet access enable them to take advantage of the most cutting-edge agricultural technologies and services.

It was also suggested that MNOs and ISPs could fund infrastructure expansion in part by offering additional products and services. Given that sales of user data can attract significant interest from various private sector organizations, such a strategy could be used (with user consent) to generate extra funds for expanding infrastructure.

One participant pointed to the Indonesian government's use of Universal Service Funds to address issues of rural coverage. Noting Indonesia's archipelagic topological challenges, he pointed to the country's embracing of cutting-edge satellite technology to address inter-island connectivity. Public-private cooperation has also been important in achieving Indonesia's infrastructure goals, and three public-private partnerships currently in place to expand and improve connectivity were mentioned.

One inspiring example of infrastructure expansion was given. An NGO, seeing a rural hospital completely unconnected to the internet, provided grant capital to expand connectivity to cover the hospital. However, once the infrastructure was implemented, residents and businesses around the hospital soon took advantage of their newfound connectivity, which had the effect of increasing average revenue per user (ARPU) beyond the NGO's original expectations. Over time, usage increased and the network became profitable, eliminating the need for continued NGO funding. The story tells us that, sometimes, "If you build it, they will come" can work. Taking risks on seemingly low-income populations can sometimes pay off, generating positive impacts both for local communities and for MNOs and ISPs themselves.

Group 3 – Privacy, Safety and Security

Discussion Leader:
– **Rajeev Suri,** President and Chief Executive Officer, Nokia Corporation, Finland

Firestarters:
– **Anusha Rahman Khan,** Minister of State for Information Technology and Telecommunication of Pakistan
– **Philipp Metzger,** Director General, Federal Office of Communications (OFCOM), Switzerland
– **Lauren Woodman,** Chief Executive Officer, NetHope, USA
– **Matthew Prince,** Co-founder and Chief Executive Officer, Cloudflare, USA

A simple question was posed: given the degree to which internet-based threats currently affect internet users, how will we protect ourselves from these dangers when the number of internet connections per person is increased tenfold?

The group agreed that matters related to privacy, safety and security are fundamental for the Fourth Industrial Revolution and, if not solved properly, could become relevant bottlenecks for adoption of internet of things (IoT) and next generation communication technologies, such as 5G.

In addition, there was consensus on the perception that internet privacy, safety and security are global challenges that require unprecedented global collaboration, which may prove especially difficult to tackle, since they involve fuzzy responsibilities, the need for global legislation that cross state boundaries, and the participation of non-state actors (such as GAFA & BATX).

The group identified opportunities for actors to build the mechanisms and institutions to enable collaboration and to promote global harmonization on such matters. A potential first step could be the development of a system of mutual recognition of "cyber principles" that lead eventually to a consistent, harmonized national set of rules across states.

The need for strong internet privacy laws was mentioned many times as essential for building the trust needed to make the internet ubiquitous among populations and for Fourth Industrial Revolution applications. Regulations should focus initially on principles and over-regulation without fully understanding the implications of new technologies may hamper future use cases and developments.

The rapid rise of threats – both in quantity and in complexity – make the discussion of internet privacy, safety and security urgent in the context of the Fourth industrial revolution. Cyber espionage, ransomware and identity theft are problems of today, not of some distant future.

On the topic of digital identity, conflicting, antagonistic visions on online identity versus right to anonymity are proving a roadblock to the creation of stronger frameworks.

The group also concluded that increasing awareness through better and deeper communications of cybersecurity, safety and privacy, their relevance and implications, are required for the general public and law-makers.

Group 4 – The Fourth Industrial Revolution Divide

Discussion Leader:
– **Tae Yoo,** Senior Vice-President, Corporate Affairs and Corporate Social Responsibility, Cisco, USA

Firestarters:
– **Marcos Souza,** Secretary of Innovation and New Business of Brazil
– **Börje Ekholm,** President and Chief Executive Officer, Ericsson, Sweden
– **Rob Shuter,** Group Chief Executive Officer, MTN Group, South Africa

The discussion opened with the presentation of some stark statistics. As the world entered the 20th century, the ratio between the richest and poorest nations (on a per capita basis) was 5:1. Entering the 21st century, this has increased to 246:1. Underscoring the ability of the Fourth Industrial Revolution to disrupt the economy and society, how can we make sure that such inequalities do not widen?

The group discussed the changing role of government. Traditionally, it has been the provider of critical infrastructure. However, in many contexts, some governments have seemed unable to undertake leapfrogging-sized infrastructure projects, such as providing complete and robust nationwide internet access. It was suggested instead that governments should give guarantees and incentives that enable private actors to do the heavy lifting of financing and building this infrastructure. To this end, however, it is paramount that governments create a shared and ambitious vision for connectivity and the roll out of internet access – without such a vision, the task will be impossible for private and public providers alike. Governments must also work to develop deep and integrated partnerships with private companies.

The group brought up the idea of a new Marshall Plan devoted to critical ICT infrastructure in developing countries to close the digital divide. The idea is that instead of fragmented investments to close the divide, the strategy should be a shared, unified one for investing in infrastructure for connectivity.

This effort should also focus on achieving technology integration and adaptation among citizens, communities, industries and society. Without this, the internet in particular and emerging Fourth Industrial Revolution technologies in general will not be transformative for developing and emerging economies.

The group discussed two examples of how to design and drive forward these public-private collaborations. The first one addressed lessening governments' risk adversity by piloting smaller projects with private companies and then partnering with a neutral third party such as an international organization to facilitate evaluation and post-assessment and then later scale up the project more systematically. A second example discussed was public-private collaboration through procurement measures. The example given was from Columbia where procurement policies were used to close the digital divide. A foreign technology company had its operating license renewed only after it agreed to provide laptops for 300,000 children nationally through a joint partnership between the government and the company.

01: Zhao Houlin (Secretary-General, International Telecommunication Union (ITU))
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Closing remarks

Thomas Reichert, of The Boston Consulting Group, conveyed the need to shift efforts away from basic connectivity towards a "Forward-Looking Internet for All", which is also the sub-title of the paper BCG is collaborating with the Internet for All project to produce this year. He mentioned that increases in GDP can be created not only by increasing internet penetration rates but also by increasing internet speeds. Reichert pointed out that internet infrastructure is a classic problem of a positive externality – the huge social benefit is not captured by the companies who have sole responsibility for bearing the cost of providing it. He called for greater, and more effective, cross-sector collaboration to achieve a forward-looking internet for all.

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