Recommendations of the Broadband Commission on SDG5: Gender Equality

Desk Research Based on 2011-2022
Broadband Commission Publications

BROADBAND COMMISSION
FOR SUSTAINABLE DEVELOPMENT

ITU

unesco

BROADBAND COMMISSION FOR SUSTAINABLE DEVELOPMENT

Recommendations of the Broadband Commission on SDG5: Gender Equality

Desk Research Based on Broadband Commission Publications

This is a compilation of research and recommendations relating to digital gender equality from the Broadband Commission for Sustainable Development, which can be found at www.broadbandcommission.org/publications. This is not an exhaustive list but rather an illustrative example.

Introduction

Gender Equality in ICTs: Progress Towards the Broadband Commission's Advocacy Target 7

The Broadband Commission's Advocacy Target 7 states that to achieve universal meaningful connectivity by 2025, we must reach gender equality in ICT access, use and skills.

We have not yet achieved this target.

According to the ITU estimates, 69 percent of men used the Internet in 2022 compared to 63 percent of women. This means, there were 259 million more men than women using the Internet in 2022. Gender parity is deemed achieved when the gender parity score, defined as the female percentage divided by the male percentage, stands between 0.98 and 1.02. Over the last three years, the world has been taking small steps towards gender parity, moving from 0.90 in 2019 to 0.92 in 2022.

When measured in terms of Internet use, the digital gender gap in LDCs remains significant with no sign of narrowing. In 2022, 43 percent of the male population in LDCs was online, up from 28 percent in 2019. That is 13 percentage points more than the uptake among the female population (30 percent).

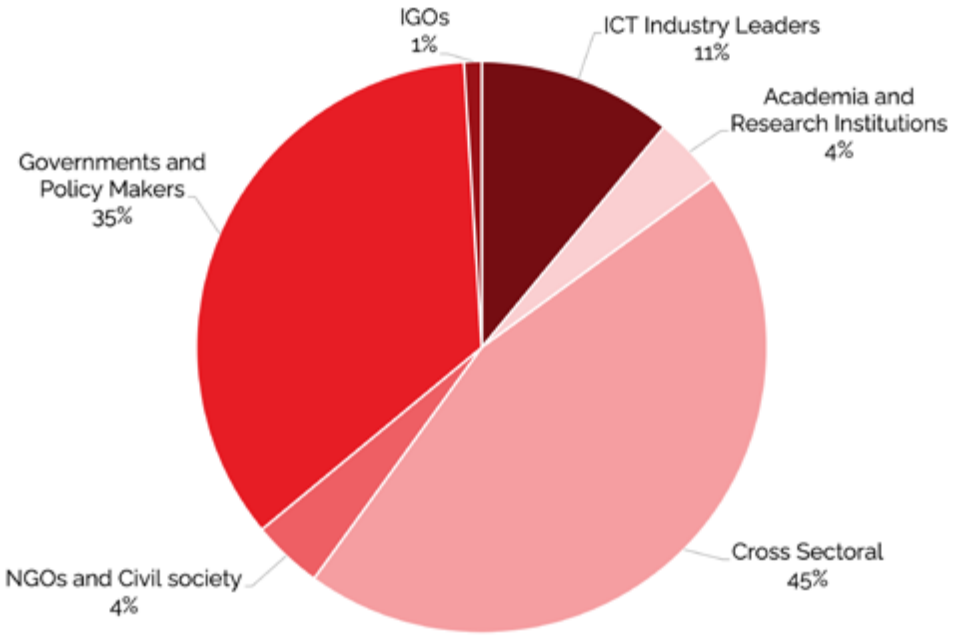
Bridging the Gender Digital Divide: Recommendations and findings from Broadband Commission Publications

While not all Broadband Commission publications are directly focused on the topic of gender digital equality, the majority examine how prevalent issues affecting broadband policy, access, affordability, skills and use, have a disproportionate impact women and girls, and provide best practices and targeted actions needed to address these inequalities. In line with Broadband Advocacy Target 72, the work of the Commission helps to exemplify the complementary roles of different actors, including governments and policymakers, the private sector (industry players), inter-governmental organizations, NGOs, and academia/research institutions, as the digital gender divide can only be bridged effectively by coordinated and collaborative multistakeholder efforts.

The following analysis reviews selected recommendations by the targeted stakeholder and focus area.

Stakeholders

Recommendations from Broadband Commission publications address stakeholders from: the public sector, policy makers/government, the private sector (ICT industry players), civil society/ NGOs, Inter-Governmental Organizations/IGOs, and academia. An additional category has been added to reflect recommendations that are actionable across sectors, these are referred to as "cross-sectoral" for the purpose of this analysis.



Takeaways

Targeted actions by a range of stakeholders are required to address the gender gap in Internet access and use.

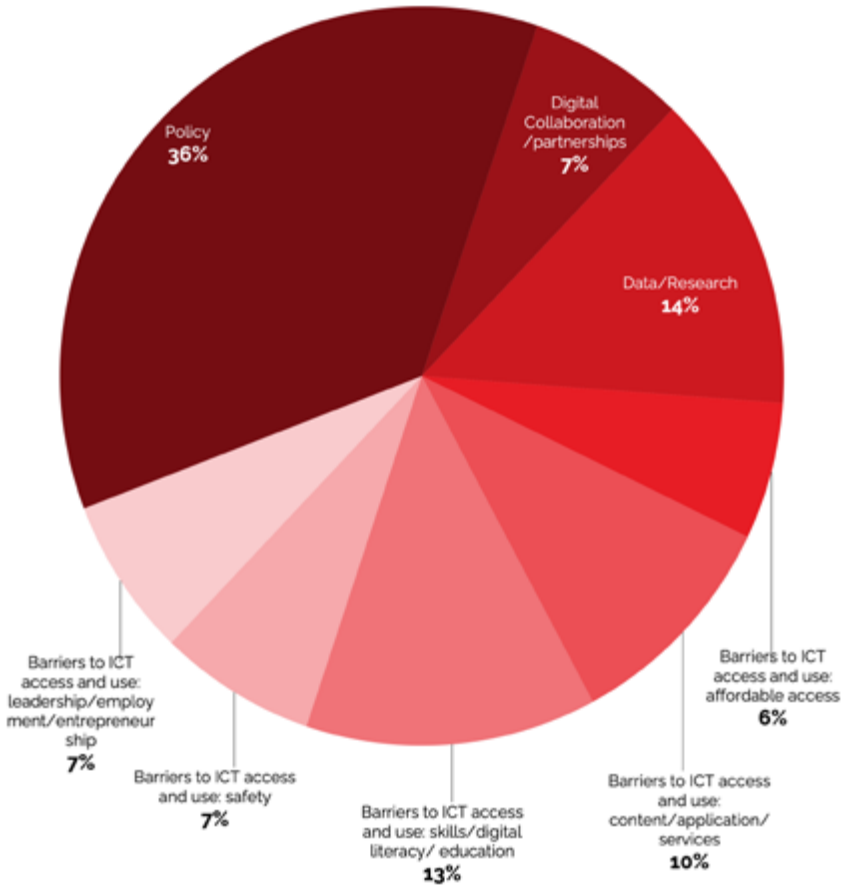
Based on the distribution of recommendations analyzed, in terms of individual actions to be taken by each stakeholder type, the government targeted actions are the most dominant group which may suggest the important role of the policy, strategy, regulations and enabling environment for addressing the digital gender divide.

The chart also suggests that a prominent proportion of action should come from collaborative efforts, shown by a large percentage of cross-sectoral recommendations. Closing the gender digital divide requires action on various levels and by many different stakeholders working together. Cooperation between these stakeholders will be crucial in enabling the development of policies and business models that are targeted effectively towards women's needs.

Types of Actions Needed to Close the Gender Digital Divide

In addition to grouping recommendations by stakeholder, the targeted actions have been examined thematically using the methodologies proposed by the Broadband Commission Working Group on the Digital Gender Divide (2018) and the EQUALS Global Partnership for Gender Equality in the Digital Age.

Used together, these methodologies group action for gender inclusive practices by themes such as: policy creation (i.e., integrating a gender perspective in strategies, policies, plans and budgets), data and research, digital collaboration and partnerships, and additional measures to address barriers to ICT access and use (such as investment, programming and advocacy). The category of "Measures to address barriers to ICT access and use" has been further broken down by the specific barrier to gender equality challenge that they address, see graphic.



Takeaways

The analysis suggests that the largest category of actions laid down in the reports are those concerned with the integration of gender perspectives in relevant strategies, policies, plans, and budgets. This underlines importance of the work being done by policymakers as well as business players who are setting strategies, policies, plans and budgets that:

1. Incorporate gender equality targets for Internet and broadband access and use;
2. Include strategies, policies, plans and budgets for gender equality considerations; and
3. Consult and involve women as well as relevant local communities and experts in decision making.

The distribution of the recommendations also demonstrates the importance of addressing the barrier of digital skills, literacy, and education. This may suggest the digital skills training and literacy is fundamental to breaking down the subsequent barriers and for that reason it is the most urgent issue to address. Following closely behind is the need for curated content, applications and services for women and girls. This reinforces the assumption that after acquiring basic ICT skills, gender-inclusive applications are critical to the success and progress of this group. Finally, the remaining three categories share approximately the same percentage of recommendations from the Commission, illustrating that work in these areas is of equal urgency and importance.

While some barriers are presented with more recommendations than others, it is important to recognize this is by only a small percentage and emphasize that all barriers must be addressed simultaneously to advance gender equality at the pace needed to realize the Broadband Commission 2025 Targets and UN 2030 Agenda.

Cross-sectoral Recommendations

Recommendations	Category	Date	Source
More can be done to collect and publish granular, reliable and gender-disaggregated data related to infrastructure deployments as well as Internet adoption and use in accordance with international guidelines and standards.	Data/research	September 2022	*The State of Broadband 2022*
Developing dynamic policy recommendations that spur action from decision-makers based on scanning and interpreting data while also understanding the policy impact on populations, social groups such as women or youth, and society at large	Policy	September 2022	*Artificial Intelligence and Digital Transformation Competencies for Civil Servants, WG on AI Capacity Building*
High quality content, solutions and platforms for empowering learners and teachers must be inclusive, thereby addressing the needs of girls, children and youth belonging to minorities, indigenous and marginalized groups, refugees and forcibly displaced populations, as well as children with disabilities.	Barriers towards ICTs access and use: content/ application/services	September 2020	*The Digital Transformation of Education: Connecting Schools, Empowering Learners, WG on School Connectivity*
In order to address this, a rigorous research approach must be carried out to inform policy, implementation strategy and evaluation metrics, ensuring that African women form a key part of the digital economy. Research can point to regions and populations less likely to use the mobile internet. In the case of Africa, this will more likely include women relative to other regions in the world, as noted above.	Data/Research	October 2019	*Connecting Africa Through Broadband, WG on Broadband for All: A Digital Infrastructure Moonshot for Africa*
Child sexual abuse is a horrific crime affecting an estimated 9–19.7% of girls and 3–7.9% of boys. Safety experts, NGOs, governments and companies all have an interest in disrupting and preventing the sexual exploitation of children across online technologies and need to work together when possible, to be most effective.	Barriers towards ICTs access and use: safety;	October 2019	*Child Online Safety: Minimizing the Risk of Violence, Abuse and Exploitation Online, WG on Child Online Safety*
Thoughtful approaches in this regard, by governments, service providers, digital platforms, and all participants in the connectivity ecosystem, embody an understanding of the complex nuances, take into account the nature of different types of current usage and adoption (such as the metered mindset and that of sipping and dipping, noted above), and recognize that cultural barriers and social norms may be influencing non-adoption (as in the case of the digital gender divide). These thoughtful policies, products and services place a primary focus on the digital inclusion of marginalized users and communities which are traditionally overlooked and underserved, including, but not limited to, individuals with disabilities, those who are low-income, or reside in rural or remote geographies, and women and girls.	Policy	September 2019	*The State of Broadband 2019*

Promote Science, Technology, Engineering and Mathematics (STEM) education, advanced business digital skills and life skills such as accounting and financing among women. Governments, civil-society organisations and the private sector should establish and deliver more programmes proactively targeted towards women.	Barriers towards ICTs access and use: skills/digital literacy/education	September 2018	*Digital Entrepreneurship Report, WG on Digital Entrepreneurship*
Promote and celebrate women role models. Women are more likely to choose STEM when they know other women in STEM. Awareness raising is not just about communication but about generating a necessary cultural change.	Barriers towards ICTs access and use: leadership/employment/entrepreneurshi	September 2018	*Digital Entrepreneurship Report, WG on Digital Entrepreneurship*
Collecting, analyzing, and tracking data: the collection of robust, reliable, accurate, and timely sex-aggregated data is a crucial step in understanding the gender digital divide and measuring progress in addressing the issue	Data/Research	March 2017	*Recommendations for action: bridging the gender gap in Internet and broadband access and use, WG on the Digital Gender Divide*
The Working Group calls on stakeholders to research women's access to and use of the Internet to improve understanding of the needs, circumstances, and preferences of women in different local contexts, and the factors limiting women's access to and use of the Internet, including cultural and social norms.	Data/Research	March 2017	*Recommendations for action: bridging the gender gap in Internet and broadband access and use, WG on the Digital Gender Divide*
The pace of technological development that characterizes ICTs means that flexible and responsive polices and strategies are required which are driven by accurate, up-to-date information that is shared between stakeholders. The Working Group recommends that sex- disaggregated data and research should be published and shared among stakeholders in a safe and secure manner.	Data/Research	March 2017	*Recommendations for action: bridging the gender gap in Internet and broadband access and use, WG on the Digital Gender Divide*
The Working Group recommends that stakeholders investigate the ways in which men and women from diverse population segments are impacted by affordability issues and develop strategies for achieving affordable access based on this understanding.	Policy	March 2017	*Recommendations for action: bridging the gender gap in Internet and broadband access and use, WG on the Digital Gender Divide*
The Working Group recommends that stakeholders work to reduce the cost of devices for accessing the Internet, and of data, so that access becomes more affordable to women, particularly those with lower incomes. This can be supported through policy and regulatory measures, the design of products and services, and technical and/or market innovation.	Policy	March 2017	*Recommendations for action: bridging the gender gap in Internet and broadband access and use, WG on the Digital Gender Divide*
The Working Group recommends that stakeholders should collaborate and support efforts to increase network coverage, capacity and quality, particularly in underserved areas where a significant proportion of the population are women.	Digital collaboration/partnerships	March 2017	*Recommendations for action: bridging the gender gap in Internet and broadband access and use, WG on the Digital Gender Divide*

The Working Group recommends that stakeholders conduct research on the threats pertaining to women's ICT use, as well as cultural and social norms, that prevent women from accessing and using the Internet in different regions and social and cultural contexts.	Data/Research; Barriers towards ICTs access and use: safety;	March 2017	*Recommendations for action: bridging the gender gap in Internet and broadband access and use, WG on the Digital Gender Divide*
The Working Group recommends that stakeholders make use of awareness campaigns, digital literacy programmes and/or formal education programmes/ curricula to raise awareness of the threats that prevent women from accessing and using the Internet, and how they can be addressed or reduced.	Barriers towards ICTs access and use: skills/digital literacy/education;	March 2017	*Recommendations for action: bridging the gender gap in Internet and broadband access and use, WG on the Digital Gender Divide*
The Working Group recommends that stakeholders ensure that digital literacy and capacity-building initiatives consider women's needs, interests and local contexts in order to encourage strategic and meaningful use of the Internet.	Barriers towards ICTs access and use: skills/digital literacy/education;	March 2017	*Recommendations for action: bridging the gender gap in Internet and broadband access and use, WG on the Digital Gender Divide*
The Working Group recommends that stakeholders should support the development of online content and services that are accessible to women with limited literacy, language and ICT-related skills, and confidence; and should ensure that women with lower literacy levels are included in the pilots and user testing of these services, including online government content and services.	Barriers towards ICTs access and use: content/application/services,	March 2017	*Recommendations for action: bridging the gender gap in Internet and broadband access and use, WG on the Digital Gender Divide*
The Working Group recommends that educators, teachers and local leaders should be trained to use tools and understand the benefits of delivering digital skills training to women in their communities; that stakeholders should invest in pre- and in-service training of teachers and educators to support their ongoing learning and development; and that the number of female teachers of ICT across all levels of education should be increased.	Barriers towards ICTs access and use: skills/digital literacy/education;	March 2017	*Recommendations for action: bridging the gender gap in Internet and broadband access and use, WG on the Digital Gender Divide*
The Working Group recommends that female role models should be promoted as leaders and Internet users within communities and amongst staff in decision-making positions.	Barriers towards ICTs access and use: leadership/employment/entrepreneurship;	March 2017	*Recommendations for action: bridging the gender gap in Internet and broadband access and use, WG on the Digital Gender Divide*
Since a lack of perceived value can be a barrier to Internet access and use, the Working Group recommends that stakeholders help raise awareness of the potential benefits that can be achieved through women's access to and use of Internet-enabled content, applications, and services.	Barriers towards ICTs access and use: skills/digital literacy/education; content/application/services,	March 2017	*Recommendations for action: bridging the gender gap in Internet and broadband access and use, WG on the Digital Gender Divide*

Improve sex-disaggregated ICT Statistics and Measurement (Note: There are sub-recommendations in the full report, p.39)	Data/Research	September 2013	*Doubling Digital Opportunities: Enhancing the Inclusion of Women & Girls in the Information Society, WG on Broadband and Gender*
Improve relevant and local content online (Note: There are sub-recommendations in the full report, p.41) Strengthen local capacities for digitizing existing content and creating new relevant information; Encourage more women/girls into the ICT sector – since only when women and girls are fully involved in producing the content and services, will more content and services designed for and relevant for women appear; Incentivize development of services and apps geared towards women's needs and priorities; Foster partnerships to encourage collaboration between tech providers, manufacturers, and content providers to provide women-tailored content; Support the creation and the development of online content that is relevant to women and girls, and especially content developed by women and girls; Incentivize local developers and social entrepreneurs to develop gender relevant content that is easily accessible and understandable by local users, especially those at the bottom of the pyramid; Promote use of local and indigenous content that communities hold and share it online and via other means of communication; Consider launching online campaigns to address online harassment and other Internet safety issues.	Barriers towards ICTs access and use: content/application/services,	September 2013	*Doubling Digital Opportunities: Enhancing the Inclusion of Women & Girls in the Information Society, WG on Broadband and Gender*
Training in digital skills must take priority in education systems, planning and policies, along with teacher training and development. This is essential for bridging the gender divide, and for providing girls and women with the skills and the opportunities to engage as fully as possible, using all available technologies.	Barriers towards ICTs access and use: skills/digital literacy/education;	September 2015	*The State of Broadband 2015*
Although technology does not perceive gender, ICTs are not "gender neutral" as they may be used in different ways by men and women and may take on the gender perspective of their developer from basic content through to use to functionality to beneficiaries. More women need to be involved in the ICT industry to ensure that technology is shaped to include the needs of female consumers.	Barriers towards ICTs access and use: leadership/employment/entrepreneurship;	September 2012	*The State of Broadband 2012*
Governments, educationalists and policy-makers should address proactively the issue of gender/ICT, starting in early stages of education and encourage more girls to study ICT	Barriers towards ICTs access and use: skills/digital literacy/education; leadership/employment/entrepreneurship;	September 2012	*The State of Broadband 2012*

Since the source code of FOSS (free and open sourced software) products is available to all, institutions and specialists in developing countries can readily adapt them to local needs, including local languages and cultures. Despite the freely available nature of FOSS, however, there still is a significant gender divide with regard to women as users and as content developers. The inequalities between women's and men's access and participation in all aspects of the development of FOSS should be urgently addressed.	Data/research	September 2011	*The State of Broadband 2011*
Special attention should be given to ensuring that women's organizations and networks are brought on board, in order to further promote freedom of information and to foster awareness of its relevance for the rights of women, among other stakeholders. Representatives of the Internet industry, governments and civil society should work together to protect freedom of expression as a fundamental human right.	Digital collaboration/partnerships	September 2011	*The State of Broadband 2011*

Public Sector: Recommendations for Governments & Policymakers

Recommendations	Category	Date	Source
Ensure inclusive representation (gender, social groups, persons with disabilities, and other marginalized sections of the society) and meaningful engagement at every stage of policy development, implementation, and feedback to encourage ownership, promote adoption, and ensure that policies are aligned with population needs.	Policy	June 2022	*The Future of Virtual Health and Care Driving access and equity through inclusive policies. WG on Virtual Health and Care*
Special programs and outreach for women covering all levels of health and care digitization can overcome exclusion by gender. For example, public maternal health programs that do not require smartphones or special knowledge of digital tools. For instance, in Uganda, FamilyConnect, an SMS-based service by the Ministry of Health's Community Health Suite of Tools, sends targeted messages to expecting and new mothers, male partners, and caregivers for ensuring optimal child and maternal health.	Barriers towards ICTs access and use: content/application/services,	June 2022	*The Future of Virtual Health and Care Driving access and equity through inclusive policies.*
Ensuring gender-responsive broadband plans that specifically focus efforts on closing the digital gender divide	Policy	September 2021	*The State of Broadband 2021*
Integrate gender in national broadband plans and strategies and undertake action plans to advance gender equality in access to broadband	Policy	September 2020	*The State of Broadband 2020*
Ensuring gender responsive broadband plans that specifically focus efforts on closing the digital divide	Policy	September 2020	*The State of Broadband 2020*
Individual states could ensure gender sensitivity in their strategies and public responses to disinformation	Policy	September 2020	*Balancing Act: Countering Digital Disinformation While Respecting Freedom of Expression.*
Supporting gender-responsive policy and regulatory approaches to affordable broadband deployment and services: to contribute to the elimination of the digital gender gap. Achieve digital inclusion by supporting digitally inclusive policies, strategies and targeted approaches to address the increasing gender and digital divide: to ensure the social and economic empowerment of disadvantaged groups and persons with specific needs including rural communities, differently abled persons, youth and children and women and girls. Broadband policies, including those aimed at improving device affordability, should be gender responsive and address the unique barriers to internet access and use faced by women.	Policy	October 2019	*Connecting Africa Through Broadband. WG on Broadband for All: A Digital Infrastructure Moonshot for Africa*

Conduct a comprehensive review and study of the scope of technical skills, needs, training options, and employment, and develop plans to expand education and training opportunities and incentives (including requirements for gender equality).	Policy Research/Data	October 2019	*Connecting Africa Through Broadband, WG on Broadband for All: A Digital Infrastructure Moonshot for Africa*
Ensuring gender-responsive broadband plans that specifically focus efforts on closing the digital divide In 2013, the Broadband Commission drew attention to the importance of gender equality among internet users by introducing an additional target, so that the benefits of broadband internet reach everyone. As a result, from 2013 onwards, important disaggregated data has been collected to inform effective decision-making by policy makers. While the gender gap has decreased in many developed countries, it has expanded in many developing economies – creating a specific need to support digital gender equality in these countries. Part of this effort also depends on ensuring that national broadband plans (as part of Advocacy Target 1) are gender responsive, building in a focus on programmes and policies designed to close the digital gender divide.	Policy	September 2019	*The State of Broadband 2019*
Governments should offer public access points and ICT education packages to women that include family policy support, such as childcare, to ease women's family responsibility.	Policy	September 2018	*Digital Entrepreneurship Report, WG on Digital Entrepreneurship*
Identify and monitor gender targets, including interim ones. The UN Broadband Commission's Connectivity Targets boldly call for establishing gender equality throughout the technology sector by 2025. In order to reach that, the Working Group on Digital Entrepreneurship proposes that the legal and political framework for engendering this transition should be in place by 2020.	Data/Research Policy	September 2018	*Digital Entrepreneurship Report, WG on Digital Entrepreneurship*
Deliver Equal Opportunities. The UN Broadband Commission calls for gender equality to be achieved across all targets by 2025. By 2020, stakeholders should have provided the practical and political basis for this transition, including access to more programmes promoting science, technology, engineering and mathematics (STEM) education and advanced business skills among girls and women.	Policy Barriers towards ICTs access and use: skills/digital literacy/education;	September 2018	*Digital Entrepreneurship Report, WG on Digital Entrepreneurship*
Develop and Enhance National Broadband Plans NBPs should also ensure gender equality considerations are taken into account, from planning, to monitoring and evaluation.	Policy	September 2017	*The State of Broadband 2017*
Formulate education policies that promote and monitor the inclusion of digital skills development for disadvantaged groups irrespective of gender, age, race or disability.	Policy	September 2017	*Digital skills for life and work, WG on Education*
Encourage non-formal digital skills providers to deliver programmes for out-of-school children, youth and adults, especially illiterate or unemployed adults through flexible face-to-face programmes in well-established community spaces and through affordable digital technology, including mobile phones (UNESCO, 2013a).	Barriers towards ICTs access and use: skills/digital literacy/education;	September 2017	*Digital skills for life and work, WG on Education*

Prioritize public investment and incentivize the private sector to support gender equality in digital skills development with a particular focus on promoting girls' and women's participation, achievement and continuation in STEM studies and careers.	Policy	September 2017	*Digital skills for life and work, WG on Education*
The Working Group calls on stakeholders to ensure that ICT/broadband access targets are included in gender equality and other related strategies, policies, plans and budgets. To ensure consistent action and progress, it further recommends that stakeholders should implement clear accountability structures to ensure targets are delivered and women are supported in accessing and using the Internet and broadband.	Policy	March 2017	*Recommendations for action: bridging the gender gap in Internet and broadband access and use, WG on the Digital Gender Divide*
The Working Group recommends that stakeholders use gender analysis tools to assess and develop strategies, policies, plans and budgets to ensure that gender equality considerations are sufficiently reflected and prioritised.	Data/research Policy	March 2017	*Recommendations for action: bridging the gender gap in Internet and broadband access and use, WG on the Digital Gender Divide*
To ensure that policy development is centered on women and their needs in diverse contexts, the Working Group recommends that stakeholders consult and involve women and local communities, gender equality advocates and experts, as well as researchers and relevant NGOs, from the outset in the development of strategies, policies, plans and budgets.	Policy	March 2017	*Recommendations for action: bridging the gender gap in Internet and broadband access and use, WG on the Digital Gender Divide*
Providing public access facilities: The Working Group recommends that stakeholders should support and invest in the provision of safe and accessible public access facilities to serve women.	Barriers towards ICTs access and use: affordable access; safety;	March 2017	*Recommendations for action: bridging the gender gap in Internet and broadband access and use, WG on the Digital Gender Divide*
The Working Group recommends that stakeholders strengthen measures to protect women against ICT-mediated abuse and harassment; including through legal and policy frameworks that recognise and address ICT-mediated abuse, harassment and fraud, and through measures that promote and simplify access to justice investing in education and capacity-building initiatives	Policy Barriers towards ICTs access and use: safety	March 2017	*Recommendations for action: bridging the gender gap in Internet and broadband access and use, WG on the Digital Gender Divide*
The Working Group recommends that stakeholders invest in public education and capacity-building initiatives that pay particular attention to increasing women's digital literacy and confidence, including women across all levels of education, income, and familiarity with ICTs and the Internet.	Barriers towards ICTs access and use: Skills/digital literacy/education;	March 2017	*Recommendations for action: bridging the gender gap in Internet and broadband access and use, WG on the Digital Gender Divide*
Integrate gender and national ICT & broadband policies (Note: There are sub-recommendations in the full report, p.38)	Policy	September 2013	*Doubling Digital Opportunities: Enhancing the Inclusion of Women & Girls in the Information Society, WG on Broadband and Gender, September 2013*

Boost the affordability and usability of ICTs(Note: There are sub-recommendations in the full report, p.40) Engage with device manufacturers to promote more affordable devices, including from the Global South with innovative solutions to reach bottom of the pyramid populations; Foster local Innovation on low-cost devices and connectivity plans; Incentivize development of smartphone, tablet, and computer user interfaces geared towards low literacy and limited resource environments; Promote local assembly and manufacturing of devices; Support innovators in developing user-friendly interfaces in local languages; Promote infrastructure sharing to lower costs; Foster spectrum harmonization policies to reduce access costs.	Barriers towards ICTs access and use: affordable access;	September 2013	*Doubling Digital Opportunities: Enhancing the Inclusion of Women & Girls in the Information Society, WG on Broadband and Gender, September 2013*
Initiate an action plan to achieve gender equality in access to broadband by 2020: (Note: There are sub-recommendations in the full report, p.42) Digital Literacy training for women and girls Empower women to participate in policy and decision-making process and hold key policymaking positions within government Improve outreach to women/girls	Policy Digital cooperation/Partnership	September 2013	*Doubling Digital Opportunities: Enhancing the Inclusion of Women & Girls in the Information Society, WG on Broadband and Gender, September 2013*
Governments, educationalists and policy-makers should address proactively the issue of gender/ICT, starting in early stages of education and encourage more girls to study ICT.	Policy	September 2012	*The State of Broadband 2012*
Policy-makers need to pay attention to the gender digital divide in designing policies considering accessibility, affordability and digital literacy. Incentives for content development need to promote content catering to the interests and needs of women, including content focusing on education, health, jobs and economic empowerment, family, and community life. Policy also needs to encourage women and girls to embrace technology for their own empowerment, to study and choose careers in this sector, and to engage passionately in the future of broadband.	Policy	September 2012	*The State of Broadband 2012*

Public Sector: Recommendations for NGOs & IGOs

Recommendations	Category	Date	Source
Intergovernmental and other international organisations, as appropriate, could support gender sensitive responses to disinformation.	Digital cooperation/partnership	September 2020	*Balancing Act: Countering Digital Disinformation While Respecting Freedom of Expression, WG on Freedom of Expression and Addressing Disinformation*
Develop and share tools, guidelines, case studies and other materials which can support national and international efforts to address the digital gender gap	Digital cooperation/partnership Data/research	March 2017	*Recommendations for action: bridging the gender gap in Internet and broadband access and use, WG on the Digital Gender Divide*
Support and encourage multi-stakeholder cooperation and sharing of expertise in national and international efforts to address the digital gender gap.	Digital cooperation/partnership	March 2017	*Recommendations for action: bridging the gender gap in Internet and broadband access and use, WG on the Digital Gender Divide*

ICT Industry Recommendations

Recommendations	Category	Date	Source
A competent, supported, and motivated workforce is to be developed so that the contribution of every member is recognized and valued by ensuring diversity in the workforce through mechanisms that enable gender equality in the workforce and help support people living with disabilities to enter the workforce.	Policy	June 2022	*The Future of Virtual Health and Care Driving access and equity through inclusive policies, WG on Virtual Health and Care*
Provide direct funding support for extending affordable broadband access to commercially challenging rural and remote areas to women and low-income users under a Mobilizing Finance for Development approach.	Barriers towards ICTs access and use: affordable access;	October 2021	*21st Century Financing Models for Bridging Broadband Connectivity Gaps, WG on 21st Century Financing Models*
Promote equitable and inclusive use of AI irrespective of disability, social or economic status, ethnic or cultural background, or geographical location, with a strong emphasis on gender equality, as well as ensuring ethical, transparent and auditable uses of educational data. It is also necessary to consider that algorithms are not free from biases and these need to be properly assessed and addressed to include diverse and gender-balanced inputs for its development to avoid deepening the disparities in education.	Barriers towards ICTs access and use: content/application/services,	September 2021	*Connecting Learning Spaces: Possibilities for Hybrid Learning, WG on Digital Learning*
Another challenge with fully automated solutions is that some of the risks affecting children – grooming and bullying, for example – are context dependent, and those systems do not have the ability to interpret (human) context. This can lead — among other things to AI-driven outcomes that discriminate against minorities, women and girls, and other traditionally disadvantaged groups. Given these limits of technology, human review and intervention remains a critically important element in the online child protection space. At this point in time, no child protection AI tools should be utilized in a silo without additional safeguards and protocols to ensure accuracy of data.	Barriers towards ICTs access and use: safety; content/application/services, Data/research	October 2019	*Child Online Safety: Minimizing the Risk of Violence, Abuse and Exploitation Online, WG on Child Online Safety*
Innovating to reduce the cost of devices and services: The Working Group recommends that stakeholders work to reduce the cost of devices for accessing the Internet, and of data, so that access becomes more affordable to women, particularly those with lower incomes. This can be supported through policy and regulatory measures, the design of products and services, and technical and/or market innovation.	Barriers towards ICTs access and use: affordable access;	March 2017	*Recommendations for action: bridging the gender gap in Internet and broadband access and use, WG on the Digital Gender Divide*

Developing safety applications and services: The Working Group recommends that stakeholders invest in applications and services that make it safer for women to access and use the Internet, while addressing issues of harassment, abuse and violence.	Barriers towards ICTs access and use: safety; content/application/services,	March 2017	*Recommendations for action: bridging the gender gap in Internet and broadband access and use, WG on the Digital Gender Divide*
To ensure women can benefit from the development of relevant content and services, and can also participate in their production, the Working Group recommends that stakeholders encourage and participate in the development of an ecosystem of quality, non-stereotypical services, applications, and content relevant to women which are designed with an understanding of women's wants and needs.	Barriers towards ICTs access and use: content/application/services, leadership/employment/entrepreneurship;	March 2017	*Recommendations for action: bridging the gender gap in Internet and broadband access and use, WG on the Digital Gender Divide*
A better understanding of the wants and needs of diverse groups of women, as distinct from men, will help stakeholders improve the relevance of content, applications, and services to women's needs. The Working Group recommends that stakeholders involve women from diverse backgrounds, including those in low-income groups and those who do not currently make use of ICTs, in the design, testing and iteration of content, applications, and services.	Data/research Barriers towards ICTs access and use: content/application/services,	March 2017	*Recommendations for action: bridging the gender gap in Internet and broadband access and use, WG on the Digital Gender Divide*

Academics & Civil Society Recommendations

Recommendations	Category	Date	Source
Educational organizations should pay particular attention to dimensions of equity in their data literacy programmes, in order to address the underrepresentation of women and individuals from the Global South in the field of data science.	Barriers towards ICTs access and use: skills/digital literacy/education;	September 2022	Interim Report: The Transformative Potential of Data for Learning
Guide the effective pedagogical practices and professional development of teaching staff and other pedagogical facilitators and steer the use of technologies in varied learning spaces towards advancing inclusion, equity, gender equality, and quality of learning in the context achieving SDG4 by 2030.	Barriers towards ICTs access and use: skills/digital literacy/education; content/application/services,	September 2020	The Digital Transformation of Education: Connecting Schools, Empowering Learners, WG on School Connectivity
Researchers could ensure female experts are visible as a way of addressing gender inequalities in international debates on disinformation.	Barriers towards ICTs access and use: leadership/employment/entrepreneurship	September 2020	Balancing Act: Countering Digital Disinformation While Respecting Freedom of Expression, WG on Freedom of Expression and Addressing Disinformation
The media sector could ensure preparedness of staff for safety risks associated with reporting on disinformation, e.g. increased security threats, online abuse, physical attacks, and ensure gender sensitivity in responding to these dangers.	Barriers towards ICTs access and use: safety;	September 2020	Balancing Act: Countering Digital Disinformation While Respecting Freedom of Expression, WG on Freedom of Expression and Addressing Disinformation

Findings: Advocacy Target 1
Make Broadband Policy Universal

By 2025, all countries should have a funded National Broadband Plan (NBP) or strategy, or include broadband in their Universal Access and Service (UAS) Definition

Target 1: Policy Findings	Date	Source
It is also important to note that while the available data focused on mobile access, ownership and Internet use, Target 7 is also about access to affordable and meaningful broadband. Government policy can play a particularly impactful role in supporting gender equality in the digital economy. For example, a 2018 analysis by the Web Foundation, A4AI and UN Women found that universal service and access funds (USAFs) could be a mechanism to financially support targeted programmes to increase Internet use by women. In Africa, over 68 per cent of countries had a USAF in place; however, only three of 37 countries with USAFs have universal access policies that explicitly aim to connect women and girls through the fund. Similarly, a 2018 report by the Web Foundation found that only a handful of countries are taking steps to meaningfully address issues of gender inequities online, and that even these actions in place are inadequate to advance true progress toward digital equality.	September 2020	The State of Broadband 2020
Indeed, gender continues to be a major differentiating factor in terms of ICT access and use (UNESCO, 2016c). This is highlighted in the recent 'Digital Gender Divide' report from the Broadband Commission (2017a) which reflected on a persistent gender gap in internet access rates in all regions of the world despite sustained policy and practical efforts to address these inequalities. Recent ITU (2017b) data suggests that males are now 12% more likely to make use of the internet than females — a figure that rises to 25% in Africa. Similar gendered disparities are evident in rates of mobile phone ownership (UNESCO, 2014c) and other basic forms of technology access (BMZ, 2017).	September 2017	Digital skills for life and work, WG on Education

Findings: Advocacy Target 2
Make Broadband Affordable

By 2025, entry-level broadband services should be made affordable in low- and middle-income countries at less than 2% of monthly Gross National Income (GNI) per capita

Target 2: Affordability Findings	Date	Source
Similar to the story we have seen in mobile Internet use, the gender gap in smartphone ownership had been reducing year-on-year across LMICs—from 20 per cent in 2017 to 16 per cent in 2020—but over the last year this has reversed. Women are currently 18 per cent less likely than men to own a smartphone.	September 2022	The State of Broadband 2022
In general, women have lower levels of adoption of the internet and digital technologies as compared to men. The ITU estimates that in 2019, 55% of males used the internet worldwide as compared to 48% of females. Also, women in low- and medium-income countries are still 20% less likely than men to use mobile internet, meaning around 300 million fewer adult women than men use mobile internet globally.	June 2022	The Future of Virtual Health and Care Driving access and equity through inclusive policies, WG on Virtual Health and Care
Barriers to participation persist for women, even when access is widespread. The ITU data also show that fewer women than men own a mobile phone. Out of 85 countries surveyed, a substantially higher proportion of men had mobiles than women in 61 countries, with nearparity or a gender divide in favour of women in just 24 nations. Since 2010, the GSMA has focused on sizing and addressing the mobile gender gap, launching the GSMA Connected Women Programme a decade ago. Their latest report highlights that currently 54 per cent of women in low- and middle-income countries use mobile Internet, but that women remain 20 per cent less likely than men to use mobile Internet. The mobile Internet gender gap is closing quickly, driven by South Asia, and women's awareness and perception of relevance of mobile Internet is increasing. Cost and digital skills remain key barriers to mobile ownership and mobile Internet use. And while video consumption is growing rapidly among men and women, lower levels of smartphone ownership limit women's use of mobile services. Overall mobile ownership helps women feel safer and more informed. While mobile phone ownership and mobile Internet use have increased significantly among women, there is still a persistent gender gap. Women's lower levels of mobile ownership and use not only reflect existing gender inequalities, but also threaten to compound them. If the mobile gender gap is not addressed, women risk being left behind as societies and economies digitize. Considering Advocacy Target 3 (broadband-Internet user penetration levels by 2025), the result of this target would be that by 2025, 75 per cent of women worldwide would be using the Internet, as well as 65 per cent in developing countries, and 35 per cent in LDCs.	September 2020	The State of Broadband 2020

Women are a critical component of any digital transformation in Africa. However, restrictive gender norms exist in different regions, as is the case in Sub-Saharan Africa, that limit women's access to and usage of digital technologies, further excluding them from opportunity. Gender norms differ greatly between regions, countries and even subregions, however, gender gaps in mobile ownership and mobile internet use are often wider where mobile penetration is lower, as is the case in Sub-Saharan African. An additional concern is the mobile gender gap (that is, the extent to which a woman is less likely to use the mobile internet compared to a man). In Sub-Saharan Africa, this gap is estimated to be 41 percent – only South Asia as a region has a higher gender gap in mobile internet use. In Africa, affordability is the highest barrier to mobile ownership. Note that the gender gap has also evolved over time as it is typically higher when overall penetration rates are low. However, as more expensive smartphones enter the market, we may continue to observe a persisting gender gap in mobile phone ownership and mobile internet use, driven in part by the underlying gender wage gap in almost all countries.	October 2019	Connecting Africa Through Broadband, WG on Broadband for All: A Digital Infrastructure Moonshot for Africa
Eighty per cent of women in low- and middle-income countries own a mobile phone today (including basic 2G phones), and 48 per cent use mobile internet (data services). Despite growing uptake of mobile internet among both sexes, globally women are 23 per cent less likely than men to use it. Substantial differences in mobile internet use also exist across regions. This gap is widest in South Asia, where women are 58% less likely to use mobile internet than men, followed by sub-Saharan Africa where women are 41% less likely than men. The usage gap again widens for more specific use cases with high digital skills requirements – for example, IP messaging such as Whatsapp, and browsing the web. Also, as with mobile ownership, the rural gap is almost always wider – even when there is no urban gap at all. Women's mobile phone ownership has increased significantly in low- and middle income countries since 2014, and 80% of women in these markets now own a mobile phone. However, women are still 10% less likely than men to own a mobile, and 23% less likely than men to use the mobile internet. The mobile gender gap varies by region and country, but is widest in South Asia, where women are 28% less likely than men to own a mobile and 58% less likely to use mobile internet. The usage gap is also reflected in mobile spending. Across low- and middle-income countries, female mobile owners spend on average 17% less than men on mobile services. This spending gap is evident even in countries where there is not a gender gap in mobile ownership or mobile internet use. While mobile phone ownership and mobile internet use have increased significantly among women, there is still a persistent gender gap. Women's lower levels of mobile ownership and use not only reflect existing gender inequalities, but also threaten to compound them. If the mobile gender gap is not addressed, women risk being left behind as societies and economies digitize.	September 2019	The State of Broadband 2019
It is clear that these gaps limit the potential of ICTs for women and girls and perpetuate inequalities between boys and girls, which sometimes start from very early on. Some barriers may be obvious (such as affordability or lack of access to or decision-making over money and resources or limitations over women's physical and social mobility); other barriers may be more subtle – such as prioritizing access by boys to available computers and phones or lack of access for girls and women to safe and women-friendly cyber-cafés and public spaces with ICT facilities.	September 2016	The State of Broadband 2016

Findings: Advocacy Target 3
Get Everyone Online

By 2025, broadband-Internet user penetration should reach: i) 75% worldwide; ii) 65% in low- and middle-income countries; and iii) 35% in least developed countries

Target 3: Universal Connectivity Findings	Date	Source
In 2022, the gender digital divide persisted with 69% of men using the Internet compared to 63% of women, according to ITU estimates. However, gender parity increased from 0.89 in 2018 to 0.92 in 2020. Some regions and income groups have reached gender parity in Internet use including high-income countries, SIDS, the Americas, CIS countries and Europe. The substantial gender gap in mobile Internet use in LMICs had been improving previously, driven primarily by South Asia where it decreased significantly from 67% in 2017 to 36% in 2020, according to GSMA. However, notable gender gaps in mobile Internet access persist in LMICs, and in some countries the mobile Internet gender gap has even increased.	December 2022	Year in Review 2022
According to the latest ITU estimates, 69 per cent of men were using the Internet in 2022 compared to 63 per cent of women. Gender parity 42 increased from 0.89 in 2018 to 0.92 in 2020. Some regions and income groups have reached gender parity in Internet use including high-income countries, SIDS, the Americas, CIS countries and Europe. However, notable gender gaps in mobile Internet access persist in LMICs. The substantial gender gap in mobile Internet use in LMICs had been improving, driven primarily by South Asia where it decreased significantly from 67 per cent in 2017 to 36 per cent in 2020, according to GSMA. However, this progress has now stalled across LMICs and in some countries the mobile Internet gender gap has even increased. As reported by GSMA, women were 16 per cent less likely than men to use mobile Internet across LMICs in 2021. 43 By comparison, this gender gap was 15 per cent the year before, and prior to that it had reduced every year from 25 per cent in 2017. While more women continue to use the Internet than ever before, and it remains the primary way most people access the Internet in LMICs, their rate of adoption has slowed over the last year. Furthermore, in some countries, men's rates of mobile Internet adoption has been higher than that of women's, driving an increase in the mobile Internet gender gap. These gender gaps also exist in women's access to and use of mobile money services, which are helping drive financial inclusion for women, can increase their economic independence, and strengthen their role as financial decisionmakers. It is important to also ensure that women can access and use mobile money on par with men.	September 2022	The State of Broadband 2022

Gender bias in credit assessment: Several analyses by MFIs have shown that women are often lower risk customers than men. Despite such evidence, alternative credit score assessment algorithms have been reported to be unintentionally biased against women. For example, using credit scoring thresholds for the number of SMS sent, time spent on calls, or the number of top-ups might be biased against women. This can result in the widening of the gender gap in mobile Internet usage, as creditworthy women are more likely to be denied credit than creditworthy men.	September 2022	Strategies Towards Universal Smartphone Access, WG on Smartphone Access Report
As more people use the Internet around the world, the growth rates of Internet adoption may be faster for men than women as the gender gap in Internet use appears to be larger in developing and least developed countries. In 2019, it is estimated that globally, 55 per cent of the male population was using the Internet, compared with 48 per cent of the female population. In terms of the gender gap in mobile Internet use, particularly in LMICs, the gaps have been declining in the past three years. However, women in LMICs are still 20 per cent less likely than men to use mobile Internet, meaning around 300 million fewer adult women than men use mobile Internet.	September 2021	The State of Broadband 2021
In most countries, the digital divide in gender circa 2008 to 2010 was in the single digits (with more men than women using the Internet). 88 However, there were some notable exceptions such as in New Zealand and Thailand where more women than men were using the Internet. However, there were also countries with divides in the double-digit percentage points where more men were online versus women, such as in Turkey, where in 2010, 50.1 per cent of men aged 15 to 74 were using the Internet, whereas only 29.9 per cent of women were online. In 2019, the ITU published robust comparisons of the gender gap in Internet adoption around the world and the progress between 2013 and 2019. That analysis showed that the gender gap appeared to have widened significantly, with the proportion of men using the Internet versus women using the Internet rising from 11.0 per cent in 2013 to 17 per cent in 2019. The ITU data indicates that in almost two-thirds of countries worldwide, women are lagging behind men in the opportunity to take advantage of the power of digital technologies. Further, that gap has been growing in the world's major developing regions: Africa, the Arab States and Asia-Pacific. Only in the emerging economies of the Commonwealth of Independent States (CIS) and the highly-connected countries of Europe have the digital gender divide slowly been narrowing. The Americas, as a region, stand alone in achieving near-parity in men's and women's digital use with a difference of less than one percentage point. Overall, the proportion of all women using the Internet globally is 48 per cent, compared with 58 per cent of all men. Also note, in LLDCs significantly more men than women use the Internet (31.7 per cent versus 20.2 per cent), however in SIDS, slightly more women use the Internet than men (52.5 per cent versus 51.1 per cent). More men than women use the Internet in every single region of the world except the Americas where the differences are less than one percentage point. Similarly, across countries covered in the Inclusive Internet Index, men are 13 per cent more likely than women to have access to the Internet (down 3 per cent from last year), and the gender gap is a remarkable 34.5 per cent in low-income countries.	September 2020	The State of Broadband 2020

There is also the issue of women and girls' access to information, which is often restricted in certain contexts, and threatened by the presence of domestic violence, potentially limiting their access to counter-disinformation efforts.	September 2020	Balancing Act: Countering Digital Disinformation While Respecting Freedom of Expression, WG on Freedom of Expression and Addressing Disinformation
There is also a stark gender gap in the least-developed countries: with girls 71% less likely than boys to use the Internet.	October 2019	Child Online Safety: Minimizing the Risk of Violence, Abuse and Exploitation Online, WG on Child Online Safety
Gaps in access to the Internet by the sexes appear to be narrowing slightly at a global level, with decreases in the disparity between men and women in their access to the internet: in 2017 men were 31.5% more likely to have access to the internet, whereas the figure declined to 24.8% in 2018. A significant driver of this reduction is the increase in women's use of the internet in low-income and lower middle-income countries. There are a few countries where more women than men are participating online, such as in Argentina, China, Ireland and the Philippines. In 2018, ITU published robust comparisons of the gender gap in internet adoption around the world and progress between 2013 and 2017. That analysis showed that the gender gap appeared to have widened slightly, with the proportion of men using the internet versus women using the internet rising from 11% more males than females using the internet in 2013 to 11.6% more males than females using the internet in 2017. Across the world, the proportion of men using the internet is higher than the proportion of women using the internet in two-thirds of countries. The only region where a higher percentage of women than men are using the internet is in the Americas.	September 2019	The State of Broadband 2019
Historically, the digital gender divide was originally evaluated at 11% between men and women (ITU, 2013), which then actually increased to 11.6% in 2017 (ITU, 2017). Despite this adverse trend, it is hoped that gender equality in Internet access can be achieved by 2025. The proportion of men using the Internet is higher than the proportion of women using the Internet in around two-thirds of countries worldwide. According to GSMA, over 1.2 billion women in LMICs do not use mobile Internet. Women are, on average, 26% less likely to use mobile Internet than men. Even among mobile owners, women are 18% less likely than men to use mobile Internet. Beyond cost, barriers to mobile ownership may relate to the local context, including low digital literacy and literacy, and safety and security concerns in Latin America, all of which tend to affect women disproportionately. Women may be generally less aware of mobile Internet compared with men, which can significantly limit their uptake, particularly in Africa and Asia.	September 2018	The State of Broadband 2018
Globally, women have less access to – and make less use of – information and communication technologies than men. And the gap is not narrowing: the International Telecommunication Union's most recent estimate indicates that the global Internet user gender gap grew to 12% in 2016, up from 11% in 2013. And in least developed countries, the gap in Internet access between male and female Internet use may be as large as 33%.	September 2018	Digital Entrepreneurship Report, WG on Digital Entrepreneurship

In March 2013, the Broadband Commission called for gender equality in access to broadband by 2020. Progress towards gender equality in Internet access has in fact stalled, and ITU estimates that the digital gender divide is actually widening, not narrowing. ITU estimated that the international digital gender divide stood at 11% fewer women than men online in 2013 (as a % of the total pool of women/men), whereas by 2015, this has in fact moved slightly backwards – by 2015, 12% fewer women used the Internet than men worldwide, and this disparity is more pronounced in low- and lower-middle income countries. A recent study conducted by the Economist Intelligence Unit (EIU) and Facebook also suggests that the Internet gender gap is growing. Disparities in gender access are largest in developing countries, especially in Africa. The EIU Index reveals that only 11.6% of women access the Internet in Africa, while 88% of them access the Internet in Europe. According to ONE, an anti-poverty advocacy group, if current trends continue, 71% of female Africans might still be offline in 2020, compared with 48% of men.	September 2017	The State of Broadband 2017
The offline population is disproportionately rural, low income, elderly, illiterate and female. The ITU estimates that the overall global Internet user gender gap grew from 11% in 2013 to 12% in 2016. Across all regions of the world, Internet user penetration rates are higher for men than for women. The McKinsey and Co. report estimates that 64% of offline individuals live in rural areas. Almost 50% of the offline population has an income below "the average of their respective country's poverty line and median income." With these disparities in Internet user penetration, targeted efforts are critical to promote inclusion, access and affordability for these populations.	November 2016	Enabling the Use of ICTs and Broadband: Understanding What Works to Stimulate ICT Adoption, WG on Demand
Regrettably, progress towards gender equality in access to broadband (the Commission's fifth target) has stalled, with the global online gender gap in fact widening slightly. 'Business as Usual' will not produce the results needed to connect the remaining offline populations, who are now found in more remote, rural areas, and consisting disproportionately of poorer, minority, less educated, and often female, members of society. The World Bank points out that many of these offline populations share common characteristics – they are predominantly rural, low-educated, with lower incomes, and a large number are women and girls (World Bank WDR, 2016). The ITU estimates that in fact, the overall global Internet user gender gap grew from 11% in 2013 to 12% in 2016. Internet user penetration rates are higher for men than for women in all regions of the world (Figure 18, top chart), with the smallest gaps observed for the Americas (<2%) and CIS (5%), and largest gaps found in Africa (23%), Arab States (20%) and Asia-Pacific (17%). The gap is also growing in the LDCs at 31%, up from almost 29% in 2013. GSMA estimates that there was an overall gap of 202 million fewer women owning a mobile phone.	September 2016	The State of Broadband 2016

Findings: Advocacy Target 4
Promote Digital Skills Development

By 2025, 60% of youth and adults should have achieved at least a minimum level of proficiency in sustainable digital skills

Target 4: Digital Skills Findings	Date	Source
The Consensus emphasizes the importance of developing AI applications in education that are free from gender bias and to ensuring that the data used for AI development are gender sensitive (p. 8). The risks of Data for Learning are drawn along lines of existing inequalities and are exacerbated by the digital divide. Disconnected learners, marginalized learners, and women and girls risk being underrepresented in datasets. As many educational technology (EdTech) programmes and platforms rely on large datasets to develop their tools, the misrepresentation or invisibility of certain learners in these datasets may result not only in ineffective data-driven tools, but also in a reproduction of broader social inequalities.	September 2022	Interim Report: The Transformative Potential of Data for Learning
Inequalities in education, in some instances prompted by social and cultural norms, are major contributors to gender gaps in digital illiteracy. In low- and middle-income countries, women are less likely than men to have mobile phone access and are less likely to be Internet literate. This is particularly the case among those who have low income and basic literacy levels, live in rural areas, or are disabled.	September 2022	Strategies Towards Universal Smartphone Access, WG on Smartphone Access Report
Girls and women experience particular barriers related to accessing education. Gender stereotypes often limit their activities, opportunities, potential, and self-perceptions. Girls are at higher risk for child marriage and early pregnancy, which impacts their ability to progress through school more generally, and their ability to allocate time to studying outside of school. Unfortunately, in many places the threat of gender-based violence keeps girls from attending school at all, as travel to and from schools may be too dangerous. These threats also exist in online spaces, where girls may be victims of sexual solicitation or abuse. Many schools in less-developed countries lack safe washing facilities, which discourages girls from attending. Poverty is another challenge, as poor households cannot pay costs associated with school, and may prioritize boys' education while leaving girls to care for siblings and work at home (World Bank, 2021a). In countries with traditional social norms where gender inequalities are high, the design and implementation of ed-tech initiatives can reflect and reproduce these inequalities, leading to greater benefit for boys than girls (Crompton et al., 2021). Ensuring physically and emotionally safe spaces for girls, both in physical and online locations, is essential to help overcome these barriers and inequalities. Teachers and families should be supported to identify and reduce their biases toward girls' use of technology and access to education. Governments should strengthen the resilience and gender-responsiveness of their education systems, and curricula and hybrid programme design must be inclusive and responsive to the needs of girls in their particular context.	September 2021	Connecting Learning Spaces: Possibilities for Hybrid Learning, WG on Digital Learning

Children in already vulnerable positions (gender, disability, caste, ethnicity, war) are among the first to be left out of school thereby perpetuating the cycle of poverty, exclusion and violence. The effect of the COVID-19 pandemic could even reverse progress made on the attainment of SDG5 on gender equality, and on SDG16 (in particular target 16.2). 20 In those places where schools have been reopened, teachers are noticing that girls are notably absent. Some are getting married (being married off), forced to work or falling pregnant, all whilst remaining without access to their teachers who might provide them with support in these difficult times. Despite all efforts, all these groups still continue to be left behind in ICT. Today, women and girls are 25 per cent less likely than men to know how to leverage digital technology for basic purposes. According to the Equals.org partnership, women represent just 6 percent of software developers; overall, the proportion of all women using the Internet globally is 48 per cent against 58 per cent of all men.	September 2020	The Digital Transformation of Education: Connecting Schools, Empowering Learners, WG on School Connectivity
National e-inclusion policies to address the shortfall in women's internet access and adoption are in place in a range of countries around the world, however at least 28 nations with gender gaps in access still do not have them in place. Such strategies focus on digital skills programmes for women and targeted efforts to increase e-inclusion, promoting internet access and encouraging girls to participate in the STEM fields of study (science, technology, engineering and mathematics). In recent years, due to the rapidly declining price of connectivity and hardware, skills deficits have eclipsed barriers of access as a primary driver of digital gender divides. For years, this divide was assumed to be symptomatic of technical challenges: The thinking went that women would catch up with men when the world had cheaper devices and lower connectivity prices, due to the limited purchasing power and financial independence of women compared with men. While the cost of ICT access remains an urgent and salient issue, this challenge is surpassed by educational gaps. In cross-national surveys, lack of understanding, interest or time was more commonly cited than affordability or availability as the reason for not using the internet, even in countries such as Colombia, where subscription prices were highest relative to average income. More broadly, the EU estimates that 90 per cent of all jobs will require digital skills. Women who do not have these skills are at risk of being left behind, and the OECD estimates that labour market returns for women with ICT skills are considerably higher than the returns generate by other skills, and that returns are also higher for women than for men. However, despite the excess demand for employment in the digital sector, women's enrolment in ICT studies has declined in the EU since 2011, even as related job opportunities have increased dramatically. Evidence indicates that this shortfall actually begins at an earlier age. Across OECD countries only 0.5 per cent of girls aspire towards ICT-related careers at age 15, versus 5 per cent of boys. However, at earlier ages such as in the primary and lower secondary education levels, the gender gap in actual digital competence is either non-existent or reversed in favour of girls. Results from the most recently completed International Computer and Information Literacy Study (ICILS), a computer-based assessment of eighth grade students' skills conducted in 21 countries, showed that girls scored significantly higher than boys in all countries except two. Yet despite demonstrating promising early performance, girls had lower levels of self-efficacy, even when they outperformed or performed similarly to boys on measures of digital skills. On the ICILS assessment, girls' self-efficacy scores – that is, their perceived, as opposed to their actual, abilities – for advanced ICT tasks were significantly lower than boys' in all countries. This suggests a real impact of gender stereotypes around technology due to a 'self-efficacy' gender gap (or the difference between girls' and boys' confidence and belief in their abilities).	September 2019	The State of Broadband 2019

On skills and gender equality, digital technology allows female entrepreneurs to manage and own a higher proportion of online-only businesses in developing countries. A strong link is observed between gender parity in the enrolment ratio in tertiary education and gender parity in Internet use, as the digital gender divide reflects broader social inequalities. The only region where a higher percentage of women than men are using the Internet is the Americas, where countries also score highly on gender parity in tertiary education. While the gender gap has narrowed in most regions since 2013, it has widened in Africa. In Africa, the proportion of women using the Internet is 25% lower than the proportion of men using the Internet. In LDCs, only one out of seven women is using the Internet compared with one out of five men.	September 2018	The State of Broadband 2018
This digital divide reinforces other gaps in digital entrepreneurship. Women are also missing out on relevant education. More than five times fewer women than men enrol in tertiary level computer science and engineering programmes in OECD countries. In addition, women enrolment ratios into higher education are much lower in developing countries than in developed economies. As a result, female participation in ICT professions is low: in developing countries, women are three times less likely than men to work in the ICT sector and eight times less likely to have an ICT occupation.	September 2018	Digital Entrepreneurship Report, WG on Digital Entrepreneurship
The gender divide in ICT access and use is closely connected to education. A recent ITU report (2017a) shows a strong correlation between gender parity in enrollment ratios in tertiary education and gender parity in internet use. The only region where a higher percentage of women than men are using the internet is the Americas, where countries also score well on gender parity in tertiary education. Globally, girls are less like to participate in science, technology, engineering and mathematics (STEM) subjects, areas of study that often spark an interest in broadband technologies and support the cultivation of intermediate- and advanced-level digital skills. This is true in developed and developing countries. UNESCO (2017a) has observed that gender differences in STEM education begin as early as primary school and become more visible at higher levels of education. Globally, female students represent only 35% of all students enrolled in STEM-related disciplines in higher education, and women who enter STEM professions leave in disproportionate numbers compared to men (UNESCO, 2017a). Parallel to gender inequalities, there is also growing evidence that digital technology use for both men and women is not the equitable and democratic activity that it is often portrayed to be. Experts have called attention to distinctions between engaging 'meaningfully' and in 'capital-enhancing' ways with digital technology, as opposed merely to 'functioning' with technology (Pearce and Rice, 2017). For example, in terms of gender inequalities, a 'sizeable gap' persists in terms of the nature of ICT specialist professions: In 2014, 5.5% of male workers in OECD countries were ICT specialists compared to just 1.4% of female workers. While this is a relatively small group, it involves well-paid jobs in high demand and with good career prospects. (OECD, 2016c) While it was being suggested at the turn of the 2000s that such digital divides were a temporary phenomenon that would diminish in a few years of their own accord (Selwyn and Facer, 2007), it appears that these inequalities are an enduring characteristic of the broadband society. Most of the gender inequalities outlined earlier, for example, remain prevalent among children and young people as well as in adult populations (Livingstone et al., 2017). Globally, gender divides are severe; women are 1.6 times more likely than men to report lack of skills as a factor impeding their use of the internet (Web Foundation, 2016). Certainly, the restricted progression of girls and women into higher-level, higher-status forms of digital skills education remains a persistent trend and concern around the world (Accenture, 2016).	September 2017	Digital skills for life and work, WG on Education

Of course, connectivity and participation in tech jobs and designing and creating future technologies are important, but they are only part of the solution. In many ways, more subtle, but longer term differences arise in the content, knowledge and skills boys and girls are able to acquire through access to the Internet. If women and girls are less able to access relevant content, they will find themselves at a serious disadvantage in acquiring digital skills and literacy, learning about and exercising their rights, participating in public processes and accessing more skilled jobs, which generally tend to be better paid. Many of these disadvantages are very difficult to measure and evaluate, however.	September 2016	The State of Broadband 2016

Findings: Advocacy Target 5
Increase use of E-finance

By 2025, 40% of the world's population should be using digital financial services

Target 5: E-Finance Findings	Date	Source
In many countries, the gender gap is lower with mobile money than with traditional financial services, and mobile money is closing the gender gap. Research in Kenya indicates that gender is not a significant variable in determining access to mobile money accounts – though it is for formal financial institution accounts. 10 There is evidence from the 2017 Global Findex that the mobile money gender gap has narrowed in 17 countries in Sub-Saharan Africa and in one country in Latin America (Bolivia). GSMA Global Adoption Survey data revealed a strong positive correlation between the percentage of female agents in a provider's network and female customers. As of July 2019, 24 mobile operators had already committed to reduce the gender gap in their mobile money customer base by 2020 through the GSMA Connected Women Commitment Partner Initiative.	September 2019	The State of Broadband 2019
According to the World Bank, financial inclusion is growing, but the gains have been uneven. However, globally, 1.7 billion adults still remain unbanked and gender-based divides persist, with the divide between male and female in developing economies unchanged since 2011 at 9%.	September 2018	The State of Broadband 2018
Mobile money can help bridge gender gaps in developing countries, and address key constraints to women's access to financial services. Illiterate, rural women are perfectly able to learn to use and appreciate such services.	September 2013	The State of Broadband 2013

Findings: Advocacy Target 6
Get MSMEs Online

By 2025, improve connectivity of micro-, small- and medium sized enterprises (MSMEs) by 50%, by sector

Target 6: MSMEs Findings	Date	Source
A study by UNDP Indonesia also demonstrated that, once prepared, female MSME owners are more keen than male MSME owners to apply new strategies, including joining digital platforms, developing a marketing plan or expanding their market orientation.	September 2022	The State of Broadband 2022
Traditionally, women are less active in the MSME sector and often absent or excluded from ownership, access to finance and other resources. The introduction of ICTs in MSMEs has further exacerbated the gender gap, leaving women behind as they have less access to technical know-how and training. For instance, when it comes to access to venture capital, women-owned startups receive 23% less funding and are 30% less likely to have a positive exit – i.e. be acquired or to issue an initial public offering (IPO) – compared to businesses owned by men. Once this triple divide is overcome, the benefits are clear. When women engage in digital entrepreneurship, they often do very well – for themselves and for the countries at large. A survey of 11 countries found that 75% of online-only e-commerce businesses are women- owned. Businesses founded by women ultimately generate higher revenue than those founded by men. Among entrepreneurs in the Middle East and North Africa, women are 60% more likely to offer what they describe as "innovative" products and services."	September 2018	Digital Entrepreneurship Report, WG on Digital Entrepreneurship
Women's lower adoption rates result not just from a shortage of access but from a variety of social, economic, cultural infrastructure and content-related factors. Several initiatives are focusing on empowering women to use the Internet as a tool for economic growth and entrepreneurship. For example, Facebook launched #SheMeansBusiness in 2016. #SheMeansBusiness was created to inspire and empower women to start businesses – it offers training, resources and a community for women entrepreneurs. In a small number of countries, female use of the Internet actually exceeds male use of the Internet.	September 2017	The State of Broadband 2017

Findings: Advocacy Target 7
Bridge the Digital Gender Divide

By 2025, gender equality should be achieved across all targets

Target 7: Gender Equality Findings	Date	Source
Significant gender gaps remain at other levels of the ICT value chain. Among the world's leading tech companies, just 23 per cent of women were engaged in roles such as software development and engineering, and women represented only 26 per cent of board members in 2020.	September 2022	The State of Broadband 2022
ICTs can play an important role in tackling and mitigating these impacts, from digital solutions supporting gender-based violence survivors (UNICEF, 2020b) to ensuring women have access to essential public services (UNDP, n.d.). This important function of ICT in empowering women and girls has been a long-standing focus of the Broadband Commission for Sustainable Development (2018b).	June 2022	Importance of ICT and Global Cooperation for Future Epidemic Management, WG on Epidemic Management
Similarly, women and girls have been particularly badly affected. The 'quarantine paradox' (Mittal & Singh, 2020) has seen lockdown policies designed to improve public safety leading to increases in gender-based violence. In addition, women's access to health services has declined (Chattu et al., 2021).	June 2022	Importance of ICT and Global Cooperation for Future Epidemic Management, WG on Epidemic Management
According to a study by the National Bureau of Economic Research, the negative impact on gender equality is likely to be greater from COVID-19 than previous economic crises (Alon et al., 2020). The reasons include more women being employed in sectors that are not "telecommutable", and school closures forcing mothers – including single mothers as well as those from dual-income families who were already burdened with more housework than their spouses – to leave their jobs. ICTs can play an important role in tackling and mitigating these impacts, from digital solutions supporting gender-based violence survivors (UNICEF, 2020b) to ensuring women have access to essential public services (UNDP, n.d.). This important function of ICT in empowering women and girls has been a long-standing focus of the Broadband Commission for Sustainable Development (2018b).	June 2022	Importance of ICT and Global Cooperation for Future Epidemic Management, WG on Epidemic Management
At a country level, in Bangladesh's recent National ICT Household Survey 2018-2019, over 90 per cent of responses by women who are not using the internet attribute 'cultural reasons', 'no permission to use Internet' and 'security issues'. The household survey highlights the offline factors of the digital gender divide, such as cultural barriers and points to the importance of public access facilities, for instance, to support women's use of the Internet in certain places. The survey also showed that for-profit telecentres / cybercafes were used mostly by men, but that 45 per cent of respondents who accessed the Internet did so through public access points (such as libraries), and the vast majority of these users are women (82.5 per cent in the survey).	September 2020	The State of Broadband 2020

Online disinformation is often used to target individuals (such as politicians, journalists, human rights defenders), governments, groups such as ethnic minorities, women and gender identity-based communities, and religious congregations and identities, including in messages which may lead to violence, hatred, and discrimination. This points to the need for responses to disinformation that recognise the risks at the intersection with hate speech and seek to reinforce norms and values like racial and gender equality, and religious tolerance.	September 2020	Balancing Act: Countering Digital Disinformation While Respecting Freedom of Expression, WG on Freedom of Expression and Addressing Disinformation
Since algorithms are subject to both potential implicit and explicit bias in their design and in the training data that is used to develop them (with particular implications for gender and racial equality), this is increasingly leading to significant problems, especially in circumstances where the companies have also limited users' ability to resort to a human appeals process.	September 2020	Balancing Act: Countering Digital Disinformation While Respecting Freedom of Expression, WG on Freedom of Expression and Addressing Disinformation
There is gender-blindness in many of the responses to disinformation, which risks missing the subtle differences in how false content often targets people, as well as overlooking differences in the way people respond to the content concerned. It is also important to note that established patterns of behaviour by disinformation agents include gendered attacks online (ranging from abuse and threats of sexual violence to digital security and privacy breaches).	September 2020	Balancing Act: Countering Digital Disinformation While Respecting Freedom of Expression, WG on Freedom of Expression and Addressing Disinformation
Another challenge with fully automated solutions (AI) is that some of the risks affecting children – grooming and bullying, for example – are context dependent, and those systems do not have the ability to interpret (human) context. This can lead — among other things to AI-driven outcomes that discriminate against minorities, women and girls, and other traditionally disadvantaged groups.	October 2019	Child Online Safety: Minimizing the Risk of Violence, Abuse and Exploitation Online, WG on Child Online Safety
78% of child sexual abuse material depicted girls, 17% depicted boys, and 4% depicted both sexes. Child sexual abuse is a horrific crime affecting an estimated 9–19.7% of girls and 3–7.9% of boys.	October 2019	Child Online Safety: Minimizing the Risk of Violence, Abuse and Exploitation Online, WG on Child Online Safety
GSMA, the association of mobile network operators, also highlights that safety and security is a key issue causing a gender gap in mobile ownership and in mobile internet use. Moreover, new research led by UNESCO through the EQUALS Global Partnership for digital gender equality suggests that the 'gendering' of technologies such as digital voice assistants may contribute to increased tolerance of sexual harassment and gender-based abuse, with many voice assistants being anthropomorphized as young, subservient women. Safety concerns should not, however, be used as an excuse for denying women access. Instead, the opportunities mobile technology and internet offer in terms of empowering women should be emphasized.	September 2019	The State of Broadband 2019

The disparity in gender equality in broadband is emblematic of more systemic differences, both in terms of employment in digital sectors, as well as in the engagement of girls and young women in study related to ICT. For example, significantly more men than women are currently employed in the digital sector. Globally, women hold only 24 per cent of all digital sector jobs, and in developing countries, men are 2.7 times more likely than women to work in the digital sector. In management roles in technology sectors, men are almost twice as likely to be in management positions and nearly four times as likely to be executives. And at the frontiers of technology, the gap widens dramatically: in Silicon Valley, recruiters for technology companies report that the applicant pool for technical jobs in artificial intelligence (AI) and data science is often less than one per cent female. Over time, the proportion of women in the digital sector has been on the decline. In North America, the share of women in computing jobs (less than 25%) has been dropping over the past two decades – a period when women were making considerable advancements in other fields. In programming and software development jobs, in the US women hold about 18% of jobs, down from 37% in the 1980s. In the UK, women hold just 12% of programming and software development jobs – down from 15% a decade earlier. At the same time, excess demand exists for employees to fulfill ICT jobs. In the EU for example, there will be a skills gap in excess of over 800,000 ICT jobs by 2020. Increasing the number of women pursuing ICT careers will help fill these gaps and strengthen countries' economies.	September 2019	The State of Broadband 2019
At home, household members may be able to access a household phone or connection, although socio-cultural norms may often still represent a major barrier to girls' and women's access to broadband and other ICTs in many regions of the world.	September 2016	The State of Broadband 2016
It is vital that women and girls are involved both as consumers and makers of technology, but according to recent research from the OECD, despite concerted efforts by policy-makers, the gender gap between men/women in Science, Technology and Mathematics (STEM) careers is in fact widening in many European countries. The gender gap in STEM careers (measured by comparing the proportion of men and women in ICT careers around parity, reflecting the balance of men and women in the overall population) has actually increased in many European countries over the period 2004-2014. Significant falls in the proportion of women participating in ICT jobs (as one specific example of the STEM domain) are observed throughout nearly all countries in Central Europe reaching to 10 percentage points, with somewhat smaller falls of 3-5 percentage points in Austria, Denmark, France, UK & Ireland (Figure 19). The only European countries where the proportion of women in STEM has actually increased marginally are Estonia, Belgium and Malta.	September 2016	The State of Broadband 2016
ICTs have the potential to alleviate some of the barriers faced by women, including illiteracy, poverty, time scarcity, lack of mobility and/or other cultural and social norms, and limits on participation in decisionmaking. In some countries, cultural norms can include restrictions on access to ICTs or lack of availability of relevant content. In some countries, the pervasive presence of sexualized content and aggressive behaviour of a proportion of the online community can act as a deterrent or as barriers to women coming online. To achieve equality and combat these restraints, it is vital to find ways to empower girls and women to participate in designing, building and leading our shared digital future, including awareness raising and professional training.	September 2016	The State of Broadband 2016

Young girls and boys represent a particularly important broadband user group, as their great gift for assimilating technologies provides added benefits for empowering them to contribute to the application of these technologies to development, not only as users but also as promoters and innovators.	September 2011	The State of Broadband 2011
The importance of the impact of broadband on women's lives should also be taken into account. Broadband is a unique means for preparing the groundwork for the empowerment of women, as it connects them to a wide range of resources used to enhance family life, improve health outcomes, bolster education, and pursue economic opportunities. Women are essential stakeholders and key resources in discussions about broadband going forward, including decision-making processes. However, in societies that impose strict social and gender roles, women (especially rural women) are often not able to enjoy or benefit from advances in Internet technology, which can clearly provide them with greater social and economic freedom and improved access to opportunities. Gender equality must be seen as a necessary condition for the achievement of development objectives, as well as being a fundamental human right.	September 2011	The State of Broadband 2011

Sources

Year in Review 2022, December 2022

The State of Broadband 2022, September 2022

Strategies Towards Universal Smartphone Access, WG on Smartphone Access Report, September 2022

Artificial Intelligence and Digital Transformation Competencies for Civil Servants, WG on AI Capacity Building, September 2022

Interim Report: The Transformative Potential of Data for Learning, WG on Data for Learning, September 2022

The Future of Virtual Health and Care Driving access and equity through inclusive policies, WG on Virtual Health and Care, June 2022

Importance of ICT and Global Cooperation for Future Epidemic Management, WG on Epidemic Management, June 2022

21st Century Financing Models for Bridging Broadband Connectivity Gaps, WG on 21st Century Financing Models, October 2021

The State of Broadband 2021, September 2021

Connecting Learning Spaces: Possibilities for Hybrid Learning, WG on Digital Learning, September 2021

The State of Broadband 2020, September 2020

Balancing Act: Countering Digital Disinformation While Respecting Freedom of Expression, WG on Freedom of Expression and Addressing Disinformation, September 2020

The Digital Transformation of Education: Connecting Schools, Empowering Learners, WG on School Connectivity, September 2020

Child Online Safety: Minimizing the Risk of Violence, Abuse and Exploitation Online, WG on Child Online Safety, October 2019

Connecting Africa Through Broadband, WG on Broadband for All: A Digital Infrastructure Moonshot for Africa, October 2019

The State of Broadband 2019, September 2019

The State of Broadband 2018, September 2018

Digital Entrepreneurship Report, WG on Digital Entrepreneurship, September 2018

The State of Broadband 2017, September 2017

Digital skills for life and work, WG on Education, September 2017

Recommendations for action: bridging the gender gap in Internet and broadband access and use, WG on the Digital Gender Divide, March 2017

The State of Broadband 2016, September 2016

The State of Broadband 2015, September 2015

Doubling Digital Opportunities: Enhancing the Inclusion of Women & Girls in the Information Society, WG on Broadband and Gender, September 2013

The State of Broadband 2013, September 2013

The State of Broadband 2012, September 2012

The State of Broadband 2011, September 2011