



A Web That Works for Future Generations

Making sure the web meets the needs of rising generations, especially women and girls



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Introduction

The NewNow is a global group of rising leaders using their collective power to work for dignity, justice and equality around the world. All the NewNow Leaders have used the internet in some way, to build and strengthen their communities, for creating much needed change and advancing new ideas. They are part of a rising generation acting now for a stronger future, using technology to take on the challenges the world faces.

We are at a tipping point for addressing many of the challenges today's rising generation - and those that follow - can shift. Young people, especially girls and women, are using the internet to take on the challenges the world throws at us.

The NewNow believes the web is a public good that must be secured for all people to achieve equality in the future. The free and open web faces real challenges, however. Half of the world's population are not online and most of those excluded are girls and women. For the other half who are online, the web's benefits come with risks: to privacy, democracy, and for many, to their fundamental rights.

In 2015, world leaders agreed to a blueprint for collective action to overcome poverty and inequality and build a better future, the Sustainable Development Goals (SDGs). It is widely agreed that the internet is critical to achieve the aims of the SDGs, and all countries agreed to "build resilient infrastructure, promote sustainable industrialisation and foster innovation" including a guarantee of universal, affordable internet access for all people by 2020. Across all the SDGs we find targets and indicators linked to a free, fair, secure internet. Yet significant gaps remain in delivering the web we want, for the future we demand. This report synthesises a wide body of available research from across multiple sectors, respected actors and influential investors, to point out why universal access to the web is vital,



and why we will need to addressing the challenges faced by the web if we want to secure a more equal and just future for all generations.

The NewNow Leaders see the web as critical infrastructure for human development. It's a pathway to accessing education, healthcare and economic opportunity, as well as a vital tool for building community, connecting people around the world to share and solve common problems. It's as much a way to derive knowledge as it is an opportunity to promote peace and inclusion, overcoming many of the underlying causes of conflict today.

The internet can be instrumental in delivering a more inclusive, equal and just world. This report strives to share the inspiration found in the stories of girls, young women, and rising leaders who are already using the internet to transform their communities.

From November 2018 to November 2019, The NewNow worked with a collective of organisations convened by the World Wide Web Foundation to create a new 'Contract for the Web'. The Contract must be the deliverable action plan, more than warm words. It must be a binding and actionable agreement between citizens, governments, and businesses on how the world will build a better web - and a more equal future for all people.

The 'Contract for the Web' could not be parachuted in from Silicon Valley, Davos, Berlin or London. It was built by opinion leaders and experts, along with rising generations, considering those in future who will live with the web we build now as their reality. It includes the voices of girls and young women at its heart, unfiltered and connected directly to where the power for change exists.

How rising generations are using the Web to change their world

For rising generations, especially girls and women, the web can be a pathway to quality healthcare, education, economic opportunities, justice, and a means to build vibrant communities.

For an individual girl or woman, the benefits of getting online can be huge, and this in turn can benefit whole families, entire communities, and eventually, society at large.

Keeping Healthy

The health challenges faced today by girls and young women all over the world are frequently neglected. We believe access to quality healthcare is a human right that should not be determined by wealth. All governments have committed to providing equal access to quality healthcare for all people by 2030 and to significantly cut maternal mortality, 99% of which occurs in developing countries. Access to healthcare and education about women's health in developing countries can be vastly better served by a web-enabled population, making the most of healthcare workers and bringing affordable, high-quality care to all – including the 830 women who die each day from preventable causes related to pregnancy and childbirth. The shocking fact is that minor complications during pregnancy are dealt with routinely in the rich world can be a death sentence for women in low income countries.¹

Myanmar has one of the highest maternal mortality rates in South East Asia, owing largely to poor access to knowledge and services in rural areas. 'Maymay' is an app with 105,000 users (2017) that allows women to access vital health information before and after birth, as well as the location and contact details of nearby health workers in clinics. 54% of women using the

¹ World Health Organisation (2018) 'Maternal Mortality', available at <http://www.who.int/news-room/fact-sheets/detail/maternal-mortality>

app said they had improved their maternal health practices. This is just one example of a trend that has seen the doubling of mHealth products in low- and middle-income countries in the past 5 years. People in these countries now use mHealth apps more than in high income countries, with 2 million Rwandans using one app, Babyl, alone.^{2,3,4,5}

In many instances the health challenges faced by girls and young women, such as sexual reproductive health or mental health, are shrouded with stigma and taboo. Accessing support online can allow them to get the help they need, while avoiding stigma.

Project Insaka is a trial initiative that provides mental health support for HIV positive pregnant women and new mothers in Zambia. It allows women to access 6 different peer-to-peer support groups through the Android app Rocket.Chat. Zambart, the Zambian research organisation jointly running the project, has reported that participants of similar trials in other countries have better adherence to drug therapies, as well as better mental wellbeing, in part due to reduced social isolation.^{6,7}

The internet can also strengthen health systems in low-income countries trying to tackle huge health burdens with very limited resources. Web enabled tools expand the range and impact of community health workers, enhancing their diagnostic capabilities and therefore treatment decisions in remote areas, which helps use limited resources more effectively.

² United Nations Population Fund (2016) 'New census report: 2,800 women die each year in childbirth and pregnancy', available at <https://myanmar.unfpa.org/en/news/new-census-report-2800-women-die-each-year-childbirth-and-pregnancy>

³ 3 FT (2017) 'Tech start-up tackles maternal mortality rates in Myanmar', available at <https://www.ft.com/content/28217d56-8655-11e7-bf50-e1c239b45787>

⁴ Broadband Commission for Sustainable Development (2018) The State of Broadband: Broadband catalyzing sustainable development, available at https://www.itu.int/dms_pub/itu-s/opb/pol/S-POL-BROADBAND.19-2018-PDF-E.pdf

⁵ Evening Standard (2018) 'The Rwandan project: how Babylon helped rebuild healthcare in a war-shattered country', available at <https://www.standard.co.uk/futurelondon/health/the-rwandan-project-how-babylon-helped-rebuild-healthcare-in-a-warshattered-country-a3885946.html>

⁶ The SHM Foundation (2018) 'Project Insaka', available at <https://www.shmfoundation.org/news/project-insaka>

⁷ Rocket.Chat (2018) 'Rocket.Chat x Project Insaka Launches Today', available at <https://rocket.chat/2018/07/16/rocketchat-x-project-insaka/>

Dr. Raj Panjabi set up Last Mile Health with the aim of saving 30 million lives worldwide by 2030, and in response to the dire shortage of doctors in his home country of Liberia. Following the devastating civil war, there were only 51 doctors left in the country of 4 million people. Raj wants healthcare to be within reach of "everyone, everywhere", and he believes this is best achieved with trained community members and health workers. Last Mile Health has created the Community Health Academy, a virtual platform for educating health workers, and with digital classes to teach local leaders how to build community health worker programmes. Each community worker gets a smartphone with an app that automates the diagnosis of 3 of the deadliest diseases in Africa: malaria, diarrhoea, and pneumonia. The app can also be used to register and triage pregnancies, provide instructions on prescriptions and referrals, and send reminders and follow-ups. These features give the community healthcare workers credibility with patients and allows their works to be tracked by funding organisations and provides feedback to the entire health system. ^{8,9}



Ida Tin
CEO, Clue

Danish entrepreneur Ida Tin is helping women understand their bodies better. Her app, Clue, which has 10 million active users across 190 countries, is for women at any stage of life – puberty, pregnancy, or menopause. It allows them to track their periods and fertility, to record how they feel both physically and emotionally, and can be used to find patterns of anomalies. Subscribers who share their data contribute to advancements in reproductive health research that benefits people around the world. Ida believes that “it is essential for women to encourage and help each other take up space in the industry and continue to break gender stereotypes in order to pave the way for others.” She thinks that her app and movements like #MeToo are opening up conversations about women's health and making words like ‘menstruation’ less awkward. Femtech is also increasingly lucrative the market is estimated to be worth \$50bn by 2025.

⁸ Time 2018, ‘How Community Health Workers Could Save 30 Million Lives by 2030’, available at <https://time.com/5305122/how-community-health-workers-could-save-30-million-lives-by-2030/>

⁹ Devex (2018) ‘New Initiative leverages technology and philanthropy to reinvent healthcare,’ available at, <https://www.devex.com/news/new-initiative-leverages-technology-and-philanthropy-to-reinvent-community-health-care-91878>

Of course, when it comes to healthcare, web based services are not a silver bullet to solve all problems. There is no escaping the fact that investing in trained healthcare workers, doctors, nurses, and well resourced clinics and hospitals is required for all populations, rural and urban. But leveraging the web as part of a well-functioning healthcare system can help to make the most of resources, and to support girls and women especially in understanding their physical and mental health needs.¹⁰

Getting Educated

Knowledge is power, and in a world where 30,000,000 girls are not in school, access to education is a major cause of embedded inequality. Many girls and young women are using the web to learn. Between 77% and 84% of poor women in urban areas surveyed by Intel reported using the web to further their education . One of them described it like “having a library in your own home.”¹¹

Online learning allows for a highly personalised experience, especially once artificial intelligence is added into the mix. Learning languages, priorities, difficulty, and speed can all be tailored to a student's needs.

Web based tools can also strengthen education systems that are greatly stretched in low income countries. EdTech tools can enhance the curriculum provide access to assessment and certification, improve the quality of teacher training and methods, and improve administration.

Many countries face a chronic lack of trained teachers. The problem is worst in Sub-Saharan Africa, where 90% of secondary schools face an acute lack of teachers. The Teacher Education in Sub-Saharan Africa (TESSA) project creates open education resources (OERs) that can be used flexibly by teachers, based on local needs, and are available in multiple

¹⁰ European CEO (2018) ‘Ida Tin leads the femtech revolution with health app Clue’, available at <https://www.europeanceo.com/profiles/ida-tin-leads-the-femtech-revolution-with-health-app-clue/>

¹¹ Intel (2011) Women and the Web, available at <https://www.intel.com/content/dam/www/public/us/en/documents/pdf/women-and-the-web.pdf>

languages. In Sierra Leone, where only 27% of girls stay enrolled in school at secondary level, TESSA is helping to address the lack of female teachers by preparing young women for teacher training, through a multi-pronged approach that includes the use of an interactive handbook. ^{12, 13, 14, 15, 16}

Nivi Sharma Has dedicated her career to digital access for children, youth and adults. In 2011 Nivi co-founded eLimu, which digitised the Kenyan primary school curriculum and has become the leading digital education content provider in East Africa.

Nivi is now managing director at BRCK, whose mission is to connect Africa to the Internet. She influenced some of the design elements of the Kio Kit, a ‘digital classroom in a box’, which includes a Wi-Fi hotspot and the seven-inch Kio tablet, designed for harsh, dusty environments. The tablet features web-based content and cached videos, both from local providers and international institutions like Ted-Ed. Thanks to BRCK, thousands of children across 17 countries are accessing digital education tools.

But it's not just kids who benefit. Samburu woman, whose traditions and customs often keep them at home, are inspiring their children to take their education seriously by taking classes themselves, on topics like digital multimedia. Nivi says her major takeaway is tools and content need to be intuitive and interesting for teachers to use.



Nivi Sharma
Managing Director, BRCK



¹² Yae Podcast 2018, Episode 006: Beyond the Tablet: Transforming Education with Nivi Sharma, available at <https://www.yaepodcast.com/podcast1/2018/6/1/episode-006-beyond-the-tablet-transforming-education-with-nivi-sharma>

¹³ Nat Geo (2018) In Rural Africa, Tablets Revolutionize the Classroom, available at <https://www.nationalgeographic.com/photography/proof/2018/01/africa-technology-samburu-kenya-education/>

¹⁴ BRCK, available at <https://www.brck.com/>

¹⁵ UNESCO (2019) Improving the quality of teacher education in sub-Saharan Africa, available at <https://unesdoc.unesco.org/ark:/48223/pf0000260604>

¹⁶ TESSA Africa ‘Sierra Leone Improving Girls’ Learning Outcomes, available at <http://www.tessafrica.net/content/sierra-leone-improving-girls%E2%80%99-learning-outcomes-0>

Making Money

Girls and young woman face uncertain economic futures. In cities there may be more work for machines and less work for humans as technology allows machines to undertake repetitive tasks. A greater proportion of manual jobs currently being done by women are likely to be lost to machines than jobs undertaken by men. In rural areas where climate shocks threaten those already living on the economic edge, women who undertake most farm labour work are also more disadvantaged economically than men.

Rising generations of women are using the Internet to create new economic opportunities. This benefits whole families and communities, because when women work they reinvest 90% of their earnings in their families.¹⁷

- Internet access is worth \$450-\$630 per year to individuals in low and middle income countries, equalling a per capita GDP increase of 15%.
- 3 in 10 women in urban areas in low- and middle-income countries reported that the Internet has helped them increase their income “a great deal” or “somewhat”.
- The median American gains more than US\$3000 annually from the Internet.
- An additional 600 million women online would result in a \$13-\$18 billion increase in annual GDP across 144 low and middle income countries

For many years, and in many countries, low-wage work in factories and workshops has been the primary route out of extreme poverty for young women. While this work may be tedious, arduous, or downright dangerous, it has nonetheless often provided women with a degree of economic independence. Entire economies, especially in Asia, have taken off by tapping

¹⁷ WEF (2014) ‘Why women make the best tech investments’, available at <https://www.weforum.org/agenda/2014/01/women-technology-world-economy/>

into pools of low-skilled cheap labour. But this pathway to increased wealth may be blocked in future, as robots and machines take over the repetitive physical and intellectual tasks these jobs involve.^{18,19,20,21}

Young women will need to be resilient, adaptive, and to constantly seek new opportunities in cut-throat global markets. Rising generations of women are doing just that, using the web to open up economic opportunities, to access financial services, to find jobs, learn new skills, build professional networks, and to manage flexible work patterns that suit their own needs.

Women often face significant barriers to setting up their own business, such as start-up costs and time commitments. But online business models can help overcome these obstacles. A recent survey found that in several countries, women run more firms online than men. It also found that women-run businesses are more likely to leverage online tools to make their businesses succeed. Specifically, women-run small- and medium-sized enterprises are more likely to use online tools to promote products and services; to advertise to potential new customers; and to provide information and to communicate with customers or suppliers. Women running business online also report high levels of business confidence, which may in part be explained by how they are embracing new technologies as a way to level the gender playing field.^{22,23,24,25,26}

¹⁸ Deloitte (2014) 'Value of Connectivity: Economic and social benefits of expanding internet access', available at https://www2.deloitte.com/content/dam/Deloitte/ie/Documents/TechnologyMediaCommunications/2014_uk_tmt_value_of_connectivity_deloitte_ireland.pdf

¹⁹ Web Foundation (2015) Women's Rights Online: Translating Access into Empowerment, available at http://webfoundation.org/docs/2015/10/womens-rights-Online_Report.pdf

²⁰ World Bank (2016) 'Digital Dividends', available at <http://documents.worldbank.org/curated/en/896971468194972881/pdf/102725-PUB-Replacement-PUBLIC.pdf>

²¹ Intel (2012) Women and the Web, available at <https://www.intel.com/contentidam/www/public/us/en/documents/pdf/women-and-the-web.pdf>

²² Reynolds M. (2016) 'No limits: How Roya Mahboob fights inequality with education', Wired, available at <https://www.wired.co.uk/article/roya-mahboob-coding-afghanistan>

²³ Soboleva A. (2018) 'Defying Society to become a tech queen', BBC, available at <https://www.bbc.co.uk/programmes/p06r5q71>

²⁴ Digital Citizen Fund

²⁵ OECD (2017) Going Digital: The Future of Work for Women, available at <https://www.oecd.org/employment/Going-Digital-the-Future-of-Work-for-Women.pdf>

²⁶ OECD (2018) Future Business survey: Financing and Women owned Small businesses: The Role of Size, Age and Industry, available at <https://www.oecd.org/going-digital/empowering-women-in-the-digital-age-brochure.pdf>



Roya Mahboob
NewNow Leader and
CEO, Digital Citizen Fund

Getting on the web changed Roya's life forever. It opened new economic opportunities and started a journey that eventually led to her being named one of Time magazine's 100 Most Influential people in the world.

Aged 16, in the only Internet cafe in her hometown of Herat, Afghanistan, Roya logged onto the web for the first time and was enthralled by the plethora of information and possibilities. Soon after she enrolled in computer courses and went on to earn a degree in computer science from Herat University

Roya used her training and experience to launch the tech start-up 'Afghanistan Citadel Software' with a majority female employee base. She has gone on to establish further ventures including a vocational training site, EdyEdy, and an export company bring Afghan tea and coffee to the US.

Roya started a not for profit, Digital Citizen Fund, which runs digital and financial literacy training Afghan youth, especially girls, which has now trained over 15,000 students and created over 100 young female entrepreneurs.

Roya is also the coach of the world-renowned Afghan Girls' Robotics team, the Afghan Dreamers. The success of these six girls on the world stage has changed not only the perceptions of what girls believe they are capable of, but is also slowly changing the perceptions of males in a country where tradition means women are usually only educated to work in the home.

Roya has plans to build a significant higher education institute dedicated to STEAM subjects, designed by Yale Engineering faculty and supported partly by the Afghan government.

Rising generations of young women are using online platforms to construct flexible working schedules, overcome distance, reach new markets and capture a larger share of profits. Platforms can enable women to have an international reach and operate beyond the boundaries set by cultural norms. Online communities can allow them to engage more profoundly than on a purely transactional level, for example by linking women that need help with challenges at home or at work with women that have relevant experience and expertise. Platforms can also allow flexibility which is a key issue for many women as they seek to balance work and family life.

Anou is an artisan led craft cooperative in Morocco, where members, including home based female weavers, sell rugs and other textiles over the web to customers all over the world. The artisans list their own prices and receive the full amount; the additional 20% on the price covered by the customer keeps the website going and pays the salaries of the team, who manage materials and partner relationships. Anou’s platform, which allows sellers to add products, manage inventory, and track orders, is language-free, so that literacy is not an obstacle. Some groups active on the platform, such as Association Tithrite, invest some of their profits back into the community, for training girls in traditional weaving techniques and for weekly literacy classes for the village girls and women.²⁷

Kenza is a fierce advocate for her Moroccan village and its traditional craft, weaving. She is Founder and President of the Association of Tithrite, which has 150 members. For each rug that the weavers sell, nearly 50% of the price is set aside for their village fund which pays for digital literacy classes for their weavers and health projects. Kenza and her colleagues sell on Anou, Morocco’s only artisan-owned and managed online platform, for which the women photograph their own work and set their own prices.

Anou’s Instagram account has thousands of followers, and is full of photos of women proudly holding up their woven masterpieces, and videos of women preparing cotton threads side by side. There is a photo of Kenza with a rug that she designed - the first rug made using Anou’s own in-house sourced wool and non-toxic, environmentally friendly dyes. The women in her Association use their income to support their families, and to fund travel, further education, and other pursuits.



Kenza Oulaghda
President, Association
Tithrite

Most people in low-income countries work in farming, and so agricultural output must be central to efforts to tackle poverty and meet the aspirational goals set by the SDGs. Rising generations of farmers are using web-enabled AgriTech services to get ahead. Farmers in Zambia use Lima Links, a mobile phone-based platform that won the country's award for best FoodTech/AgriTech Startup in 2018. Lima Links connects small-scale

²⁷ Anou

farmers with traders, allowing users to see live market prices, to know whether their produce has been sold, and to negotiate fees.^{28,29,30,31}

Globally, 27% of women are employed in agriculture. In countries like Nepal and Uganda, the rate is as high as 83% and 74%, respectively. The pathway from small scale subsistence farming to greater prosperity is tough, and this is especially the case for women, who face additional barriers. In Africa, women obtain less than 1% of credit given in the agricultural sector. In Kenya, only 19% of women own land, compared to 81% of men. Rural women are also time-poor, as alongside their farm work, they are responsible for childcare and housekeeping. In theory AgriTech could help overcome some of the challenges women face, but in most developing countries, the barriers to take-up of these AgriTech tools by women remain high.^{32,33}

A project in Uganda, where 83% of women are involved in agriculture, is working through public libraries to encourage women to use AgriTech tools and to help them develop the skills they need to make the most of them. Women learn to search for and request weather forecasts, crop prices, and planting information, as well as how to set up online markets for their crops. In the village of Kyangatto, the training represented the first experience of computers for 95% of the trainees. Libraries can be cheaper and safer to visit than cyber cafes, and are more likely to employ female staff. They often have the necessary infrastructure already available, and the local community already engaged.^{34,35}

²⁸ Goodrich P. (2016) 'Kenza Oulaghda', available at <http://www.patriciagoodrich.com/atelier/oulaghda.html>

²⁹ British Council (2015) 'Common Thread Residents 2015', available at <https://design.britishcouncil.org/blog/2015/aug/02/common-thread-residents-2015/>

³⁰ World Bank (2015) 'Supporting Women's Agro-enterprises In Africa With ICT', available at <http://documents.worldbank.org/curated/en/918931468001791047/pdf/930770WP0P121800TA0No-020web0209015.pdf>

³¹ Lima Links, available at <http://www.limalinkszambia.com/>

³² World Bank (2018) 'Employment in Agriculture, Female,' available at https://data.worldbank.org/indicator/SL.AG.R.EMPL.FE.ZS?view=chart&year_high_desc=true

³³ 'Supporting Women's Agro-enterprises In Africa With ICT', available at <http://documents.worldbank.org/curated/en/918931468001791047/pdf/930770WP0P121800TA0No-020web0209015.pdf>

³⁴ Beyond Access (2012) 'Empowering Women and Girls Through ICT at Libraries', available at http://beyondaccess.net/wp-content/uploads/2013/07/Beyond-Access_GirlsandICT-Issue-Brief.pdf

³⁵ Electronic Information for Libraries (2013) 'Improving lives and livelihoods through innovative public library services', available at http://www.eifl.net/system/tiles/resources/201408/uganda_hires.pdf

One piece of AgriTech that could really benefit women farmers is mCrops, an automated system that can spot the signs of the four main diseases responsible for ravaging cassava crops. Farmers submit photos of their crops taken on cheap smartphones and the images are analysed remotely. The tool is reported to achieve a 200% improvement on current methods, which require experts to come and assess the crop in person. Cassava provides 800 million people with their main source of carbohydrate and is commonly known as a 'women's crop' in Sub-Saharan Africa because it is typically grown by female smallholder farmers.^{36,37}

Of course, whether it be in major cities or rural areas, access to the web cannot overcome all the barriers to economic advancement that young women face, such as gender discrimination, availability and affordability of childcare, or sacrificing productive time to undertake unpaid care work in the home and extended family. A survey by the Web Foundation found that women are a third less likely to use the web for job seeking than men. The World Bank has made the point that the web may have the undesired effect of delaying wider social reforms, instead of breaking barriers. For example, if the social norm continues to be accepted that women should work primarily in the home, or if childcare continues to be unaffordable, even when women do use the web to get around such constraints, social change may remain unprovoked. It is therefore essential that wider reforms go hand in hand with expanding internet access.^{38,39}

³⁶ Mwebaze, E. (2015) 'Automated monitoring of viral cassava disease', available at [https://www.datascienceafrica.org/slides/dsa15/De KUT-DataScience-Workshop-Ernest- 2015.pdf](https://www.datascienceafrica.org/slides/dsa15/De%20KUT-DataScience-Workshop-Ernest-2015.pdf)

³⁷ Forsythe L. et al (2016) 'A crop of one's own? Women's experiences of cassava commercialization in Nigeria and Malawi', available at <http://agrigender.net/uploads/JGAFS-122016-6-Paper.pdf>

³⁸ Web Foundation (2015) Women's Rights Online: Translating Access into Empowerment, available at http://webfoundation.org/docs/2015/10/womens-rights-online_Report.pdf

³⁹ World Bank (2016) 'Digital Dividends', available at [http://documents.worldbank.org/curated/en/896971468194972881/pdf/10272 5-PUB-Replacement-PUBLIC.pdf](http://documents.worldbank.org/curated/en/896971468194972881/pdf/102725-PUB-Replacement-PUBLIC.pdf)

Fighting for Justice

In every single country, in every single town, in every single village, girls and young women lack access to their fundamental rights under the laws that govern their nations. In 2008 the Commission on Legal Empowerment for the Poor reported that 4 billion people lack access to justice, a figure that has been revised to over 5 billion by recent global initiatives. All governments have promised equal access to justice for all people by 2030 through the SDGs, yet commitments to finance this are lagging and grassroots justice defenders often face threats, intimidation and even murder through their work. ⁴⁰⁴¹⁴²

- 1 in 3 women and girls worldwide experience physical or sexual violence in their lifetime
- In some countries up to 70% of women have experienced violence by an intimate partner
- Less than 40% of women who experience violence seek help
- Ever day, 6,000 girls and women globally experience female genital mutilation alone, despite many countries having outlawed this practice

Rising generations are finding ways to demand the changes needed to achieve gender equality and overcome long-held, harmful cultural practices that keep young woman from taking their rightful place in societies. In many cases, women are using the web to crowdsource justice and fight for the rights of girls and young women everywhere.

⁴⁰ WHO et al (2013) 'Global and regional estimates of violence against women: prevalence and health effects of intimate partner violence and non-partner violence', available at <https://www.who.int/reproductivehealth/publications/violence/9789241564625/en/>

⁴¹ UN Economic and Social Affairs (2015) 'The Worlds Women 2015: Trends and Statistics', available at https://unstats.un.org/unsd/gender/downloads/worldswomen2015_report.pdf

⁴² Okoro S. (2018) Be the Generation that ends FGM', World Bank, available at <https://blogs.worldbank.org/voices/be-generation-ends-fgm>

The web makes it possible to collect, document, map, and publicise acts of violence and injustice, shining a spotlight on the perpetrators, letting survivors know that they are not alone. Ushahidi was initially founded by Kenyan lawyer Ory Okolloh to crowdsource and map incidences of violence in the wake of the disputed 2007 Kenyan elections. The platform is built on the belief that “with enough volume, a truth emerges that diminishes any false reports.” Women are using Ushahidi’s tools in a multitude of ways. For example, Safecity spreads awareness about gender-based crimes and has accumulated 10,000 stories from 50 cities in India, Kenya, Cameroon, and Nepal. HarassMap allows women to anonymously report harassment in Cairo and helps to identify harassment hotspots. It also provides users with encouragement, safety tips, and instructions on how to file a police report.^{43,44}



Jaha Dukureh
NewNow Leader,
Founder of Safe Hands
for Girls

Jaha is fighting to end female genital mutilation (FGM), which afflicts 1 in every 3 girls in 30 countries.

Achieving deep cultural change in local communities is key to meeting the SDG target for all governments to end FGM by 2030. Safe Hands for Girls leverages deep community engagements to work on cultural change at its roots, alongside digital technology and Jaha’s social media following to connect the needs of survivors in communities where FGM is damaging girls’ long-term prospects with wider change.

In 2014, Jaha began an online petition on change.org asking President Obama to investigate the prevalence of FGM in diaspora communities in the US, which she publicised through Twitter. 220,000 people signed the petition, and in 2016, the Institute of Peace convened a Summit to End FGM for the first time. That same year, Jaha’s home country, The Gambia implemented a law banning FGM.

In the aftermath of the military coup in Honduras in 2009, the national feminist movement documented abuses perpetrated by armed forces and uploaded them to YouTube. By linking up with other similar organisations in neighbouring countries, protests were held outside Honduran embassies

⁴³ Harvard Kennedy School of Gov. (2018) ‘10 Years of Innovations and Global Impact.’

⁴⁴ HarassMap, available at <https://harassmap.org/en/>

across Latin America, which ultimately generated the political pressure to keep many political activists safe.^{45,46,47,48,49}

Social media allows women to connect and speak out with a collective voice. Across the world, the 'MeToo' movement has spread at a rapid pace, shining a light on the extraordinary prevalence of sexual harassment and the enabling culture that has allowed it to become a norm. 'MeToo' has been searched online in 196 countries, and the #MeToo hashtag was used more than 19 million times in one year on Twitter.⁵⁰

In New Delhi, India, the Facebook Group 'The Consortium of Pub-Going, Loose and Forward Women' was set up in 2009 in response to physical attacks on women by a right-wing group, and in parallel to an offline campaign. It gained tens of thousands of members, provided a platform for women to share experiences and plan offline meetings, and attracted the participation of unexpected demographics, including older women.

The campaign to allow women in Saudi Arabia to drive began decades ago, but in 2011 when Saudi women began posting videos of themselves behind the wheel on social media, the group gathered support and attention from all over the world, and trended internationally on Twitter. In June 2018 women were finally allowed to drive in Saudi Arabia.^{51,52}

⁴⁵ Naib F. & Essa A. (2018) Jaha Dukureh: 'Don't Sensationalise FGM Survivors', Al Jazeera available at <https://www.aljazeera.com/indepth/features/jaha-dukureh-don-sensationalise-fgm-survivors-180204114924441.html>

⁴⁶ Topping A. (2014) Jaha Dukureh: 'In Washington, they don't want to talk about vaginas', The Guardian, available at <https://www.theguardian.com/society/2014/may/12/jaha-dukureh-washington-female-genital-mutilation>

⁴⁷ UN Women (2018) 'In the words of Jaha Dukureh' available at <https://www.unwomen.org/en/news/stories/2018/3/in-the-words-of-jaha-dukureh>

⁴⁸ Davis A. (2018) "FGM Survivor who won ban in Gambia "inspired by London sisterhood", Evening Standard, available at <https://www.standard.co.uk/news/world/fgm-survivor-who-won-ban-in-gambia-inspired-by-london-sisterhood-a3756411.html>

⁴⁹ Cummings C. & O'Neil T (2015) 'Do digital information and communications technologies increase the voice and influence of women and girls'

⁵⁰ Brown D. (2018) '19 million tweets later: A look at #Me Too a year after the hashtag went viral', USA Today, available at <https://eu.usatoday.com/story/news/2018/10/13/metoo-impact-hashtag-made-online/1633570002/>

⁵¹ Intel (2012) Women and the Web, available at <https://www.intel.com/content/dam/www/public/us/en/documents/pdf/women-and-the-web.pdf>

⁵² Amnesty International (2018) 'The driving ban and women's rights in Saudi Arabia', available at <https://www.amnesty.org/en/latest/news/2018/05/the-driving-ban-and-rights-in-saudi-arabia/>

Another example of the power and reach of grassroots initiatives that leverage the internet for social and political change is NOSSAS, a Brazilian civic technology organisation that describes itself as a 'laboratory of activism'. It builds tools to empower and mobilise citizens and a number of projects are specifically focused on women. In 2016, it launched 'Mapa do Acolhimento', a platform that connects victims of rape with therapists and lawyers. A year later, it launched Beta, a feminist chatbot for Facebook, to allow women to make a stand for gender equality. The bot can send emails to politicians that are likely to vote against women's rights, filling up their inboxes and showing them what voters care about. More than 90,000 Facebook users have interacted with it and half have taken action at least once. ^{53,54}

Girls and women are also using online petition platforms such as Avaaz to demand change. In 2016, 1 million people signed an Avaaz petition calling for a ban on FGM in Somalia, which ended up receiving the signatures of the Somali Prime Minister, Foreign Minister, and Minister for Women and Human Rights. The platform has also contributed to achieving commitments from the South Africa's Department of Education to protect learners from abuses, especially rape, which is frequently unreported and unpunished. In Morocco, an Avaaz campaign resulted in a flood of photos of men wearing dresses on social media, in support of two women taken to court for wearing the garment. ^{55,56}

Rising generations of girls and young women are accessing government services through e- government initiatives. The state of Rajasthan is leading e-governance initiatives in India, with a focus on empowering women. The Bhamashah Scheme aims to broaden financial inclusion and make sure women and their families have access to services. The scheme designates women as the head of their household, and a Bhamashah card and bank

⁵³ NOSSAS, available at <https://www.en.nossas.org/>

⁵⁴ Souza M. (2018) 'Beta: The first cyberfeminist bot', Women's Media Centre, available at <http://www.womensmediacenter.com/fbomb/beta-the-first-cyberfeminist-bot>

⁵⁵ Avaaz, available at www.avaaz.org/page/en/highlights/

⁵⁶ Kanani R. (2011) 'Jeremy Heimans of Purpose.com on Mobilizing Millions for Change,' Forbes, available at

account are made in their name. Women are therefore the direct recipients of cash and non-cash benefits of 54 government schemes, including education scholarships, utility payments, health insurance, and skills training. More than 16 million households are enrolled in the scheme and almost half a billion transactions have been made. Bribes that were regularly made to clerks by women needing to receive such payments have been reduced. The beneficiaries' real-time data is available online, allowing the state to monitor and verify transactions. ^{57,58,59}

Often the first step to participation in e-governance initiatives is the provision of a formal digital identity. This can be particularly profound for women in countries where women's access to politics, public services, or businesses has historically been mediated by men. In Pakistan the Computerized National Identity Card (CNIC) helps ensure women are the true beneficiaries of cash transfer programmes, and not their male relatives. Recipients said they spent the cash mainly on food, followed by healthcare. 75% of women on the programme said they felt their importance in the family increased and were also more likely to report that they would vote.

Whilst digital identity and e-government approaches bring about efficiency in the provision of public services, safeguards are vital to ensure the systems performs for beneficiaries. In India, the biometric scheme Aadhaar was designed to address the fact that only 27% of welfare was reaching the right person. However, abuses meant the country's Supreme Court instructed the government to urgently implement privacy laws, highlighting concerns with these new identity schemes around privacy and surveillance. ^{60,61}

⁵⁷ Fidler R. & Kanowski S. (2018) 'Shaking up the power structure: Jeremy Heimans', ABC, available at <https://www.abe.net.au/radio/programs/conversations/jeremy-heimans/9736446>

⁵⁸ Aitken head D. (2018) 'New Power author Jeremy Heimans: 'Like it or not, the old world isn't coming back', The Guardian, available at <https://www.theguardian.com/politics/2018/apr/20/new-power-jeremy-heimans-social-media>

⁵⁹ Knox M. (2018) 'Jeremy Heimans: the up-start', The Monthly, available at <https://www.themonthly.com.au/issue/2018/apr/1522-501200/malco-lm-knox/jeremy-heimans-start>

⁶⁰ Dahan M. & Hanmer L. (2015) 'The Identification for Development (Id4d) Agenda: Its Potential for Empowering Women and Girls', World Bank, available at <http://documents.worldbank.org/curated/en/859071468190776482/pdf/99543-WP-P156810-PUB LIC-Box393205B.pdf>

⁶¹ Godfrey A. (2018) "Take Note: Abdalaziz Alhamza On Reporting About Life Under ISIS Rule", Radio WPSU, available at <http://radio.wpsu.org/post/take-note-abdalaziz-alhamza-reporting-about-life-under-isis-rule>



Abdalaziz Alhamza
NewNow Leader & Co-
founder of Raqqa is Being
Slaughtered Silently

Abdalaziz is the spokesperson for Raqqa is Being Slaughtered Silently (RBSS), a group of civilian journalists committed to bringing global attention to ISIS atrocities. Their documentations have been dubbed "the most reliable source of information from inside Raqqa," and rebroadcast by international media outlets, which would otherwise have no access to the terrifying events.

Though he was forced to flee Syria for his personal safety and that of his family, Abdalaziz and his RBSS colleagues continue to fight ISIS, not with guns or airstrikes, but with the truth, disseminated through digital platforms. RBSS has tens of thousands of followers, supports activists on the ground to encrypt their communication in order to remain protected and when people search for Raqqa on the web, instead of finding ISIS propaganda, they find the RBSS website listing the abuses carried out by ISIS.

Getting Everyone Online

To be offline today is to miss out on economic opportunity, global public debate, social and cultural exchange, basic government services, and democratic empowerment. It is akin to being locked out of the future. This is both an injustice to those who are not online, and to those of us who miss out on the potential to engage with their knowledge, skills and experience. So first and foremost, we need to get everyone on the web.

Right now 50% of the world are not connected to the Internet and the majority of the missing come from among the girls and women who make up half of all human beings on the planet. The Americas is the only region where a higher percentage of women than men are using the Internet. Most of the unconnected are from poor families in low- and middle-income countries.^{62,63}

- Men are 33% more likely to have Internet access than women.
- Women in poor urban areas are up to 50% less likely to be online than men in the same communities.
- The percentage of Europeans online today (80%) is nearly 4 times that of Africans (22%).

The good news is that the 50/50 moment when half the world are online was reached at the end of 2018. But the bad news is that, while the number of people online continues to grow around the world, the rate at which people are coming online is slowing. Between 2005 and 2014, new users were coming

⁶² Web Foundation (2015) Women's Rights Online: Translating Access to Empowerment, available at http://webfoundation.org/docs/2015/10/womens-rights-online_Report.pdf

⁶³ ITU (2107) 'ICT 2017: Facts and Figures', available at <https://www.itu.int/en/ITU-D/Statistics/Pages/facts/default.aspx>

online at a rate of around 12% annually; between 2015 and 2017 this rate of growth dropped to around 6.5%.^{64,65,66,67,68}

The declining growth rate for getting people online has been most prominent in the least developed countries. In 2014 the rate of new users coming online in these countries was 41%; by 2017, this growth rate had dropped to just 15%.⁶⁹



Annual % increase in the global number of people coming online (2005-2017)

Source: ITU World Telecommunications Database, 2018

The number one reason girls and young women are not on the web is cost; both in terms of the cost of getting access to the Internet in the first place, and the cost of using it thereafter. In its 2015 survey of the urban poor, the Web Foundation found that only 21% of women in the lowest income group use the Internet and that 1GB of prepaid mobile data can cost 10% of average monthly per capita income, twice the amount citizens in developing countries spend on healthcare. Other barriers to girls and young women

⁶⁴ UN News (2018) 'Internet milestone reached, as more than 50 percent go online: UN telecoms agency', available at <https://news.un.org/en/story/2018/12/1027991>

⁶⁵ The Inclusive Internet Index (2018) 'The Inclusive Internet Index: Measuring Success 2018', available at <https://theinclusiveinternet.eiu.com/>

⁶⁶ Web Foundation (2015) Women's Rights Online: Translating Access into Empowerment, available at <https://webfoundation.org/research/womens-rights-online-2015/>

⁶⁷ Web Foundation (2018) 'The Case for the Web Report', available at <http://webfoundation.org/docs/2018/11/The-Case-For-The-Web-Report.pdf>

⁶⁸ Ibid.

⁶⁹ Web Foundation (2018) 'The Case for the Web Report', available at <http://webfoundation.org/docs/2018/11/The-Case-For-The-Web-Report.pdf>

getting online are education; age; social norms and not knowing the benefits of the web or even knowing it exists.^{70,71}

- Only 2% of woman with no formal education are online.
- Woman with some secondary education are 6 times more likely to get online than those with primary education or less.
- While 50% of women aged 18- 29 are online, only 15% of women aged 50- 59 out online.
- In New Delhi nearly two-thirds of men think women should not use the Internet in public, and half of women think men should be responsible for restricting the online content women see.
- 25% of women in India and Egypt don't think they need the web.
- In Nigeria only 45% woman are aware of mobile web.

⁷⁰ Web Foundation (2015) Women's Rights Online: Translating Access into Empowerment, available at <https://webfoundation.org/research/womens-rights-online-2015/>

⁷¹ Intel (2012) Women and the Web, available at <https://www.intel.com/content/dam/www/public/us/en/documents/pdf/women-and-the-web.pdf>

The dark side of the web

For the half of the world who are online the web's benefits come with risks; to their fundamental rights, their privacy, their democracy. The Internet creates new dangers and it can also amplify existing ones.

The rise of harassment and bullying online is deeply disturbing. The Web Foundation's research has revealed that many teenagers across low- and middle-income countries face online harassment and feel powerless in protecting themselves from risks online. At least a quarter of teenagers in four high-income countries experience online harassment. Higher percentages are reported in other countries, such as Thailand (49%), Indonesia (80%), and Israel (82%).⁷²

These risks are greatest for girls and young women. Men in Zambia reacted negatively to their wives' use of mobile phones, despite women reporting socio-economic benefits. In Iran, conservatives posted abusive messages after a woman uploaded a Facebook photo of herself without a headscarf, accompanied by the hashtag #mystealthyfreedom, (although 230,000 people expressed their support.)^{73,74}

- 7 in 10 urban poor women aged between 18 and 24 in low- and middle-income countries who use the Internet daily have experienced online harassment.
- 1 in 5 women in the UK has been victim of online harassment or abuse.

⁷² Intel (2012) Women and the Web, available at <https://www.intel.com/content/dam/www/public/us/en/documents/pdf/women-and-the-web.pdf>
<https://www.intel.com/content/dam/www/public/us/en/documents/pdf/women-and-the-web.pdf>

⁷³ Wakunuma K. (2012) Implicating mobile phones in violence against women: What's gender got to do with it?', De Montfort University, Web Foundation (2018) 'The Case for the Web Report', available at <https://www.dora.dmu.ac.uk/xmlui/handle/2086/14627>

⁷⁴ Kanso H. (2017) 'How a hashtag on Wednesdays is fighting Iran's dress code for women,' Reuters, available at <http://news.trust.org/item/20170628050218-k8w6w/>

Facebook has faced many challenges in the past few years, amongst them criticism for groups using the platform fuelling anti-Muslim violence in Myanmar, where violence against the Rohingya people and sexual violence against Rohingya women shocked the world.^{75,76}

Online activism can also be fatal. Ruqia Hassan, a young Syrian journalist and member of the activist group Raqqa is Being Slaughtered Silently, is one of the members of this group executed by ISIS for documenting their war crimes. Their reports have been rebroadcast by international media outlets, which would otherwise have no access to the events, but this cost Ruqia's life.⁷⁷

The web lets us connect with others and our pooled data can create enormous benefits for addressing many systemic challenges. But it also creates new threats to our personal privacy. Internet-based systems require open and secure data environments that enable the sharing of often highly sensitive information (bank details, health information). In many low- and middle-income countries there is a lack of awareness of the many ways personal data can be misused. Policymakers need to create clear legal guidelines on data ownership, transfer and usage, and girls and women should be able to understand the pros and cons of allowing their data to be used. Despite large numbers of web users in countries including Kenya and Nigeria, they still lack adequate data protection and privacy laws. In fact, over 1.5 billion people live in a country with no comprehensive law on personal data protection.^{78, 79}

⁷⁵ Web Foundation (2015) Women's Rights Online: Translating Access into Empowerment, available at http://webfoundation.org/docs/2015/10/womens-rights-online_Report.pdf

⁷⁶ Naughton J. (2018) 'Facebook's global monopoly poses a deadly threat in developing nations', The Guardian, available at <https://www.theguardian.com/commentisfree/2018/apr/29/facebook-global-monopoly-deadly-problem-myanmar-sri-lanka>

⁷⁷ Khaleeli A. et al. (2016) 'Ruqia Hassan: the woman who was killed for telling the truth about Isis', The Guardian, available at <https://www.theguardian.com/world/2016/jan/13/ruqia-hassan-killed-for-telling-truth-about-isis-facebook>

⁷⁸ Bizimungu, J. (2018) 'Is Africa ready to protect citizens' personal data?', available at <http://www.newtimes.co.rw/news/africa-ready-protect-citizens-personal-data>

⁷⁹ Web Foundation (2018) 'The Case For the Web Report', available at <http://webfoundation.org/docs/2018/11/The-Case-For-The-Web-Report.pdf>

A growing number of internet-based services are automated, and this will only increase as artificial intelligence becomes more sophisticated and more widely used. But these systems are only as good as the data they have been trained on, and bias can occur owing to the misrepresentation of certain groups in the data, as well as a lack of diversity among computer scientists. For example, if an automated system used to shortlist candidates for job interviews has been trained using previously successful candidates who were predominantly male, then the system is likely to continue shortlisting more men. In October 2018 an Amazon recruitment tool was found to discriminate against women in this way. And previously Google has been shown to serve more ads for high-paying prestigious jobs to men than to women.^{80, 81}

Fake news spread by social and online media is an issue that first shot to prominence in relation to the election of Donald Trump in the USA and the Brexit referendum in the UK. Increasingly it is a global phenomenon. In the Philippines troll armies are considered to have "debased political discourse and silenced dissidents" through widespread sharing of fake news and amplification of hate speech. In Egypt, under the guise of protecting the public against "fake news", laws are being used to persecute dissidents.⁸²

While the web offers opportunities for women to become more connected, it is also associated with increased loneliness and reduced life satisfaction. Young people, who are online the most report feeling alone the most. Individuals can attempt to substitute real relationships with virtual ones, which can leave them feeling disconnected from the real world, as they invest less time in building offline relationships or taking part in social

⁸⁰ Hamilton I. (2018) 'Why it's totally unsurprising that Amazon's recruitment AI was biased against women', Business Insider, available at <http://uk.businessinsider.com/amazon-ai-biased-against-women-no-surprise-sandra-wachter-2018-10>

⁸¹ Carpenter J. (2015) 'Google's algorithm shows prestigious job ads to men, but not to women. Here's why that should worry you', The Washington Post, available at https://www.washingtonpost.com/news/the-intersect/wp/2015/07/06/googles-algorithm-shows-prestigious-job-ads-to-men-but-not-to-women-heres-why-that-should-worry-you/?noredirect=on&utm_term=.b26dba770a14

⁸² Web Foundation (2018) 'The Case For the Web Report', available at <http://webfoundation.org/docs/2018/11/The-Case-For-The-Web-Report.pdf>

activities. There should therefore always be an emphasis not only on enabling women to use the internet, but also to use it well.⁸³

The Contract For The Web

“If we spend a certain amount of time using the internet, we have to spend a little proportion of that time tending it, worrying about it, looking out for it... Do me a favour, fight for it for me.”

Sir Tim Berners-Lee, creator of the World Wide Web

The world has agreed through the Sustainable Development Goals to eradicate poverty and inequality by 2030. The goals include the target of “universal and affordable access to the Internet in the least developed countries by 2020.” This universal access creates a level playing field to build on. Beyond that, we know that the web has a role to play in achieving all 17 SDGs. But we haven't yet agreed exactly how the Internet will be made to deliver on this ambition.

The NewNow Leaders believe there is an unprecedented opportunity for a new Contract For The Web to be the action plan that fills the gap between commitment to a web-enabled shared future, and delivering it. It must be a binding and actionable agreement between citizens, governments, and companies on how the world will use the internet to meet the aspirational blueprint set out in the SDGs.

⁸³ Beaton C. (2017) Why Millennials Are Lonely, Forbes, available at <https://www.forbes.com/sites/carolinebeaton/2017/02/09/why-mi-11-en>

The Contract for the Web

The Web Foundation convened a global campaign for a new Contract For The Web, in which The NewNow is one of the core partners. The principles of the contract set out how a rules based system can ensure the Internet is ethically and transparently created as a public good and a basic right for everyone. The initiative calls on governments, companies and citizens to each play their part.

Government should: ensure everyone can connect to the Internet; keep all of the Internet available; and respect people's fundamentals right to privacy.

Companies should: make the Internet affordable and accessible to everyone; respect consumers' privacy and personal data; and develop technologies that support the best in humanity and challenged the worst.

Citizens should: be creators and collaborators on the web; build strong communities that respect civil discourse in human dignity; and fight for the web so the web remains open and a global public resource.

The full Contract For The Web involved 80 organisations in the drafting and received input from hundreds more individuals and organisations. The full text is available here:

<https://contractfortheweb.org/>

The NewNow Leaders are known for speaking truth to power, whether it be standing up for girls' education; challenging traditional powers who support female genital mutilation; or creating grassroots movements that campaign for girls and women's rights all over the globe. We commit to lifting the voices of girls and young women unfiltered, and to making sure they are heard in the corridors of power whenever key decisions about the web and its future are taken. Just as the web was built by its users over the past 30 years, the web that is fit for future generations must be built and protected by all of us – we all have a role to play.