ICT Projects and WSIS Action Line Related Activities in Africa

Regional WSIS Stocktaking Report 2019-2020

Information and
Knowledge Societies for
Sustainable Development Goals
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World Summit
on the Information Society
Turning targets into action
Geneva 2003 | Tunis 2005 | New York 2015

ITU

WSIS Stocktaking Regional Report 2019-2020

ICT Projects and WSIS Action Line Related Activities

Africa

(Zero Draft)

Introduction

The World Summit on the Information Society Forum 2020 represents the world's largest annual gathering of the 'ICT for development' community. The WSIS Forum, co-organized by ITU, UNESCO, UNDP and UNCTAD, in close collaboration with all WSIS Action Line Facilitators/Co-Facilitators, has proven to be an efficient mechanism for coordination of multi-stakeholder implementation activities, information exchange, creation of knowledge, sharing of best practices and continues to provide assistance in developing multi-stakeholder and public/private partnerships to advance development goals. World leaders committed themselves to regularly review and follow up progress in implementing the action lines outlined in the WSIS Outcomes.

ITU has been contributing enormously to WSIS implementation and follow-up from 2005 to the present. The tasks carried out by ITU at the operational and policy level cover all mandates assigned to it relating to the WSIS process, in particular:

- in its capacity as lead facilitator in coordinating the multi-stakeholder implementation of the Geneva Plan of Action (§109 of TAIS) and primary organizer and host of the annual event, the WSIS Forum;
- as facilitator for Action Lines C2 (Information and communication infrastructure) and C5 (Building confidence and security in the use of ICTs), as well as C6 (Enabling environment);
- as co-facilitator for Action Lines C1, C3, C4, C7 and C11
- as partner in Action Lines C8 and C9;
- as rotating chair and vice-chair of the United Nations Group on the Information Society (UNGIS) (§ 103 of TAIS);
- as lead partner on Measuring ICT for Development (§ 114 of TAIS);
- as facilitator of the WSIS Stocktaking process (§ 120 of TAIS);
- as organizer of World Telecommunication and Information Society Day (§ 121 of TAIS);
- as lead of the Connect the World Initiative (§ 98 of TAIS).

The United Nations Economic and Social Council (ECOSOC) resolution 2020/12 "Assessment of the progress made in the implementation of - and follow up to the outcomes of the World Summit on the Information Society" , that reiterates the importance of sharing best practices at the global level, and, while recognizing excellence in the implementation of the projects and initiatives that further the goals of the World Summit, encourages all stakeholders to nominate their projects for the annual WSIS Prizes, as an integral part of the WSIS Stocktaking process, while noting the report on the WSIS success stories.

The outcome document of the UNGA High-level Meeting on the overall review of the implementation of the outcomes of WSIS recognized the importance of reporting and sharing of best practices for the implementation of WSIS outcomes by all stakeholders beyond 2015, recognizing the WSIS Forum as a key platform for doing it. In this context the WSIS Stocktaking process plays a strategic role in supporting WSIS Forum in its endeavor.

Moreover, the WSIS Overall Review called for close alignment between the WSIS process and the 2030 Agenda for Sustainable Development, highlighting the cross-cutting contribution of ICTs to the Sustainable Development Goals. In this context also the WSIS Stocktaking evolves into the unique global process for collection of information on actions carried out in context of WSIS, while underlining their contribution to the implementation of the 2030 Agenda for Sustainable Development.

In the period 2019-2020, WSIS Stocktaking Reports have reviewed 1,838 (1,062 in 2019 and 776 in 2020) ICT-related projects and activities carried out by international organizations, governments, the private sector, civil society and other stakeholders in the Africa Region. WSIS Stocktaking reports are based on the multi-stakeholder approach, including input from stakeholders from all over the world responding to ITU's official call for stocktaking updates and new entries. The inputs from WSIS action line facilitators and co-facilitators also contribute to the reports.

1,838 projects listed in this Report were also nominated for the WSIS Prizes contests in the period 2019-2020, while some of them were awarded with the WSIS Prize Winner or WSIS Prize Champion recognition. WSIS Prize is a unique global recognition for excellence in the implementation of WSIS outcomes. The contest is open to all WSIS stakeholders.

The WSIS Stocktaking community comprises of more than 300,000 stakeholders who are eager to contribute to the WSIS Process year after year. By identifying trends in implementing WSIS Outcomes, the WSIS Stocktaking Process makes a significant contribution towards building an inclusive Information Society.

The principal role of the WSIS Stocktaking exercise is to leverage the activities of stakeholders working on the implementation of WSIS outcomes and share knowledge and experience of projects by replicating successful models designed to achieve SDGs.

We take this opportunity to extend sincere gratitude to all of the stakeholders from the Africa region who have been engaged in the WSIS Process, sharing their national advances on implementation of the WSIS outcomes since 2004. We would also like to invite all ITU Member States and Sector Members of Africa region to continue engaging with the WSIS Stocktaking process by submitting projects relevant to WSIS Action Lines and the newly established SDGs, promote the WSIS Stocktaking process within their communities, and follow new developments of the WSIS Prizes 2020 contest.

The WSIS Action Lines break down into 18 categories:

1) The role of governments and all stakeholders in the promotion of ICTs for development
2) Information and communication infrastructure
3) Access to knowledge and information
4) Capacity building
5) Building confidence and security in the use of ICTs
6) Enabling environment
7) E-government
8) E-business
9) E-learning
10) E-health
11) E-employment
12) E-environment
13) E-agriculture
14) E-science
15) Cultural diversity and identity, linguistic diversity and local content
16) Media
17) Ethical dimension of the information society
18) International and regional cooperation

The 17 Sustainable Development Goals (SDGs) are:

Goal 1. End poverty in all its forms everywhere
Goal 2. End hunger, achieve food security and improved nutrition and promote sustainable agriculture
Goal 3. Ensure healthy lives and promote well-being for all at all ages
Goal 4. Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all
Goal 5. Achieve gender equality and empower all women and girls
Goal 6. Ensure availability and sustainable management of water and sanitation for all
Goal 7. Ensure access to affordable, reliable, sustainable and modern energy for all
Goal 8. Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all
Goal 9. Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation
Goal 10. Reduce inequality within and among countries
Goal 11. Make cities and human settlements inclusive, safe, resilient and sustainable
Goal 12. Ensure sustainable consumption and production patterns
Goal 13. Take urgent action to combat climate change and its impacts
Goal 14. Conserve and sustainably use the oceans, seas and marine resources for sustainable development
Goal 15. Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss
Goal 16. Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels
Goal 17. Strengthen the means of implementation and revitalize the global partnership for sustainable development

Countries in Africa Region

- Angola (Republic of)
- Benin (Republic of)
- Botswana (Republic of)
- Burkina Faso
- Burundi (Republic of)
- Cameroon (Republic of)
- Cape Verde (Republic of)
- Central African Republic
- Chad (Republic of)
- Congo (Republic of the)
- Côte d'Ivoire (Republic of)
- Democratic Republic of the Congo
- Equatorial Guinea (Republic of)
- Eritrea
- Ethiopia (Federal Democratic Republic of)
- Gabonese Republic
- Gambia (Republic of the)
- Ghana
- Guinea (Republic of)
- Guinea-Bissau (Republic of)
- Kenya (Republic of)
- Lesotho (Kingdom of)
- Liberia (Republic of)
- Madagascar (Republic of)
- Malawi
- Mali
- Mauritius (Republic of)
- Mozambique (Republic of)
- Namibia (Republic of)
- Niger (Republic of the)
- Nigeria (Federal Republic of)
- Rwanda (Republic of)
- Senegal (Republic of)
- Seychelles (Republic of)
- Sierra Leone
- Somali Democratic Republic
- South Africa (Republic of)
- South Sudan (Republic of)
- Swaziland (Kingdom of)
- Tanzania (United Republic of)
- Togolese Republic
- Uganda (Republic of)
- Zambia (Republic of)
- Zimbabwe (Republic of)

WSIS Stocktaking 2019: Summary

In 2019, the WSIS Stocktaking Platform has seen the biggest increase in new entries, including the number of stakeholders registered, with more than 100,000 stakeholders representing governments, the private sector, international organizations, civil society, academia, technical communities, and others. This has strengthened its position as the major ICT for development (ICT4D) online platform. This increase was predominantly the result of the Online Voting Phase during which almost 100,000 individuals cast more than 2 million votes.

The WSIS Stocktaking Global Report was officially released during the WSIS Forum 2019. It has reflected 1,062 WSIS-related activities that were submitted to the WSIS Stocktaking process for the period September 2018 - January 2020. Most of the submitted projects also ran for the WSIS Project Prizes contest, which as a part of the WSIS Stocktaking Process is a unique way of recognizing excellence in the implementation of WSIS outcomes.

About 30 percent of the projects submitted were government initiatives, while 23 percent originated from civil society, 33 percent from the private sector, 6 percent from international organizations, and another 11 percent from academia. Regarding the geographic distribution, 18 percent of the projects in 2020 were submitted by Arab States, 20 percent were from Europe, 21 percent from the Asia-Pacific Region, 23 percent the Americas, 14 percent from Africa, 3 percent from the CIS, while less than 1 percent came from international organizations and international NGOs.

The WSIS multi-stakeholder community was invited to participate and cast its vote for one project in each of 18 categories. The list of the 18 most appreciated/ voted projects was identified and winning projects were announced officially to the public during the prize ceremony held during the WSIS Forum 2020. The success stories showcased examples of projects on the implementation of WSIS outcomes, emphasizing the achievements of stakeholders working towards achievement of WSIS goals, transferring experience and knowledge at the global level, and spreading and fostering WSIS values.

WSIS Prizes 2019: Summary

Eighteen tech for development projects were awarded at the opening of the 10th World Summit on the Information Society Forum. "As we mark the Forum's 10th anniversary, let's remember that this decade has seen a period of extraordinary growth and progress for ICTs," said Houlin Zhao, ITU Secretary-General. "But with progress come challenges. So today, I'm calling on you to work together across sectors and industries to make technology work for development – and for everyone. It is up to all of us to ensure that ICTs and these emerging technologies continue to prove a force for good."

The WSIS Prizes recognize individuals, governments, civil society, local, regional and international agencies, research institutions and private-sector companies for leveraging the power of tech towards the achievement of the United Nations Sustainable Development Goals. In 2015, the United Nations General Assembly called for a close alignment between the WSIS process – 11 Action Lines - and the 2030 Agenda for Sustainable Development.

Year on year, the WSIS Prizes gain in popularity. This year, for the eighth edition of the contest, a total of 1062 projects were nominated, compared to 492 last year. Furthermore, two million people and entities voted on the projects, which is almost twice as many as in 2018.

- The nominated projects cover the globe: almost one-third of the projects (29%) originate from Asia and the Pacific; 27.7% from Western Europe and North America; 19.4% from Latin America and the Caribbean; 16.9% from Africa; 6.5% from Eastern Europe; and 0.5% are international projects.
- One-fifth (20%) of the projects benefit women and almost another fifth benefit youth, followed by remote and rural communities, people with disabilities, the elderly, unemployed and poor, indigenous and nomadic people, refugees and internally displaced people, and migrants (4%).
- One-third of projects were submitted by the private sector (33%), followed by government (27%), civil society (23%), academia (11%) and international organizations (6%).

RESOURCES

- WSIS Prizes 2019 winners
- WSIS Prizes 2019 Champion projects (nominees)
- All 1062 nominated projects can be found in the WSIS Stocktaking Database
- WSIS Prizes 2019 pictures on Flickr

WSIS Stocktaking 2020: Summary

In May 2020, almost 13,000 updated entries were registered in the WSIS Stocktaking Database, reflecting all entries submitted since its launch in 2004. The WSIS Stocktaking Report and the Success Stories for the year 2020 were officially released during the final week of the WSIS Forum 2020 (7-10 September 2020, in Geneva, Switzerland).

Following a comprehensive review of 776 projects submitted, the ITU Expert Group nominated 354 projects, which were published online for public appreciation.

The 354 nominated projects break down into 136 projects from the government sector, 94 from private sector, 41 from the academia, 64 from civil society, and 19 from international organizations. As regards to regional distribution, 88 projects are from the Arab States, 90 from the Asia and Pacific region, 57 from the Americas region, 63 from the Europe region, 10 from the CIS region and 46 from the Africa region, while 19 nominated projects come from international organizations.

The members of the WSIS multi stakeholder community were invited to participate and cast their votes for one project in each of 18 categories. The deadline for voting was 24 January 2020. More than 1 million votes were cast.The list of the 18 most appreciated/voted projects was published in April 2020 and winning projects were announced officially to the public during the WSIS Prize ceremony held during the WSIS Forum 2020.

The success stories showcased examples of projects for implementation of WSIS outcomes, emphasizing the achievements of stakeholders working towards the achievement of WSIS goals and SDGs, transferring experience and knowledge at the global level, and spreading and fostering WSIS values.

WSIS Prizes 2020: Summary

These highly sought-after awards recognize outstanding initiatives from governments, the private sector, civil society and academia that channel the contributions of information and communication technologies (ICTs) towards the betterment of society. Now in its ninth edition, the WSIS Prizes winners represent the year's most innovative and high-impact projects from around the world that demonstrate the vital role of ICTs in achieving the United Nations' Sustainable Development Goals.

ICT Projects submitted to WSIS Prizes 2020 are tightly linked with the UN Sustainable Development Goals. Image source: WSIS Stocktaking.

The prizes are awarded across 18 categories, each directly linked to the 11 WSIS Action Lines defined in the Geneva Plan of Action. This year, 806 projects were submitted by the WSIS community around the world. Of these, 354 projects were nominated after the deliberation of the Expert Group. From there, 90 Champions were selected based on over two million votes cast by WSIS stakeholders. 18 winners were announced just after the WSIS Forum's virtual opening ceremony.

Contenders for the coveted WSIS Prizes 2020 come from all over the world. Image source: WSIS Stocktaking

Meet the winners

From open data to digital clinics, to highlighting the voices of women and youth in media, the 2020 WSIS Prizes winners featured a wide range of impact-driven projects that leverage ICTs to improve lives, bridge digital divides, reduce inequalities and more. Below is the full list of the 18 winners, in order of Action Line:

• **Action Line C1** - *The role of government and all stakeholders in the promotion of ICTs for development*
Winner: Digital Clinic, Infocomm Media Development Authority, Singapore
• **Action Line C2** - *Information and communication infrastructure*
Winner: Digital Inclusion - Free WiFi, Agencia Digital de Innovación Pública, Mexico
• **Action Line C3** - *Access to information and knowledge*
Winner: UAE Infrastructure Geo-spatial Platform, Ministry of Energy and Infrastructure, United Arab Emirates
• **Action Line C4** - *Capacity building*
Winner: Siberkreasi (Indonesia's National Movement for Digital Literacy), Siberkreasi, Indonesia
• **Action Line C5** - *Building confidence & security in the use of ICTs*
Winner: Global Accredited Cybersecurity Education Scheme: Centre of Excellence for Capacity Building and Lifelong Learning, CyberSecurity Malaysia, Malaysia
• **Action Line C6** - *Enabling environment*
Winner: Start-up Tunisia, Ministry of Communication Technologies, Tunisia
• **Action Line C7** - *E-government*
Winner: Sabooj Sathi Online 3.0, Backward Classes Welfare Department, India
• **Action Line C7** - *E-business*
Winner: Business Digital Transformation Centers, Ministry of Information and Communication Technology, Colombia

• **Action Line C7** - *E-learning*

Winner: The First International CyberSchool of the future for the new IT generation, KIBERone, Russian Federation

• **Action Line C7** - *E-health*

Winner: Early Diagnosis of Breast Cancer using Artificial Intelligence (AI), Ministry of Health, Oman

• **Action Line C7** - *E-employment*

Winner: Recruitment Process Management as a Shared Service for Govt Agencies of Bangladesh, Bangladesh Computer Council, Bangladesh

• **Action Line C7** - *E-environment*

Winner: China Unicom "Smart Blue" public service big data platform, Network Intelligent Operation Research Center of China Unicom Research Institute, China

• **Action Line C7** - *E-agriculture*

Winner: Eyes in the Sky, Smart Techs on the Ground, Technical Centre for Agricultural and Rural Cooperation ACP EU, Netherlands

• **Action Line C7** - *E-science*

Winner: Open Data Policy and Portal, Ministry of Transport and Communications, Qatar

• **Action Line C8** - *Cultural diversity & identity, linguistic diversity*

Winner: Attaa initiative (العطاء الرقمي), Ministry of Communications and Information Technology, Saudi Arabia

• **Action Line C9** - *Media*

Winner: Voices of Women Media, Voices of Women Media, Nepal

• **Action Line C10** - *Ethical dimensions of the Information Society*

Winner: ICT and Media: Efficient tools for youth to Counter Violent Extremism, Ghana Investment Fund for Electronic Communications, Ghana

• **Action Line C11** - *International & regional cooperation*

Winner: Asociación Innovactoras, Spain

The WSIS Prizes winners pose with ITU Secretary General Houlin Zhao. The photographs in the above composite were digitally produced, with each winner photographed separately. All social distancing guidelines were respected. Image credit: ITU

WSIS Stocktaking Regional Report 2019-2020: ICT Projects and WSIS Action Line Related Activities

Action Line 1

In **Botswana**, in 2009, the national telecommunications operator **Mascom**, in partnership with the Government, rolled out local telecommunications hubs known as Kitsong Centers in 41 villages, through the Nteletsa II Rural Telecommunications Development Project. To build on the success of the project, Mascom decided to continue to improve the lives of young people by establishing 69 additional centres throughout Botswana, bringing the total number of Kitsong Centers to 110.

The centres are a key part of Mascom's corporate social responsibility strategy. The goal is to promote the use of ICTs and bridge the rural/urban digital divide in order to transform small villages into knowledge-based economies. The ICT equipment and services provided by Mascom offer an enabling environment for communities to gather information, create, learn and communicate with others while developing essential digital skills.
The project is relevant to **SDG 8.**

Also, in **Botswana**, **the Youth Empowerment Scheme** in Information and Communications Technologies is a youth-owned business network that provides ICT services across the country. The franchise ecosystem comprises 23 regional centres at full roll-out, with each center owned and operated by young ICT graduates. The centres offer aggregated ICT services and computer literacy training to communities.

At full roll-out, the network seeks to create 514 sustainable jobs for graduates by placing at least one Affiliate Technician in every village in the country. The aim is to reduce unemployment among ICT graduates (there are 4,000 unemployed ICT graduates in the country, as of 2015), provide universal access to ICT and services, cultivate entrepreneurship among young people and bridge the digital divide. The founder and champion of the initiative, Ms. Rona Tshiamo, is working with the Association of Citizen-owned Companies in Information Technology to encourage its experienced members to subcontract companies from the Youth Empowerment Scheme in Information and Communications Technologies for nationwide projects. Target customers include communities, government departments and ministries, schools, parastatal organizations and private companies in need of ICT services or access thereto.
The project is relevant to **SDGs 4** and **8.**

Also, in **Botswana**, **LonePearl Group** is a digital content development and aggregation company that provides holistic solutions for the education sector. The company's approach is to combine technology, content/curriculum, training and key strategic partnerships to provide a one-stop education hub. It aims to provide equitable education and resources to all, regardless of race, tribe, gender, economic status or geographical location.

LonePearl Group provides cost-effective, high-impact, localized content to create educational solutions that are relevant in

a global context, allowing students to not only learn about, but also with and through ICTs. The company is developing an e-store cloud (named ThutoMate) that collects and distributes educational soft-ware, applications, e-books, games and videos, and provides a platform for continuous teacher training to integrate ICTs into the education system.

The project relates to **SDG 4** and **8.**
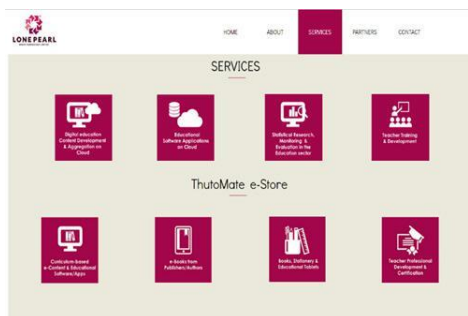
In **Burundi**, **the East African Common Digital Market Place initiative** aims to provide single window access to all East African e-commerce services; a supply chain connected to this is the best solution. A common digital marketplace will enable businesses to expand their cross-border sales potential, which will in turn contribute to sustainable development and enhance the stability of the entire region.

The initiative involves creating a single-entry point for e-commerce platforms operating in the East African Community. It aims to interconnect East African e-commerce platforms, payment systems, logistic chains associated with e-commerce and regulators. The purpose of the project is to bring together all regional e-commerce service providers, government policymakers and regulators to discuss the practicalities of the East African Common Digital Marketplace initiative, in order to ensure that they are engaged and involved.

The project is directly linked to **SDGs 1, 3, 5, 8, 10** and **16.**

In **Ghana, the Investment Fund for Electronic Communications** was established by law, under the aegis of the Ministry of Communications, to facilitate access to and use of ICTs in unserved and un-deserved communities. As part of efforts to expand access to and use of ICTs in rural communities, the fund commissioned the Fiber to the Community programme as a potential way to use aerial fibre technology to provide smarter, quicker and cheaper last-mile delivery of connectivity to neglected rural communities in Ghana. The initiative seeks to leverage the use of existing electricity pylons and aerial fibre networks operated by power distribution companies to deliver last-mile solutions to provide secure and robust broadband connectivity.

The Digital for Inclusion project aims to provide access to improved digital financial services for unserved and underserved communities. It has also enhanced access to the Internet in areas that had hitherto lacked any form of connectivity. As part of the Government's ongoing digitization agenda, the roll-out of this intervention has also facilitated the implementation of key government initiatives, such as the National Digital and Property Addressing System and the National Identification Card. The project directly relates to **SDGs 1, 4, 7, 8, 9** and **11.**
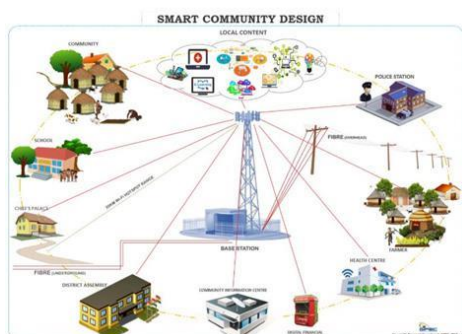
In **Ghana**, the objective of **GhanaPostGPS** is to implement novelty digital address system critical for effective tracking and identification of all landed properties and locations in Ghana to facilitate delivery of door-to-door and emergency services for Ghanaian residents. The system has made some achievements, as GhanaPostGPS address is mandatory requirement for acquisition of national ID card and accessing other government services, such as company registration, passports, drivers' license, social security cards etc. Today, banks require GhanaPostGPS address before opening account or accessing loan, making it possible for petty traders or small business owners to access bank services. Before GhanaPostGPS, it was impossible due to poor property addressing regime. Increasingly, a number of applications for API sharing has been approved for organizations for system integration for verifications, running online taxi and courier services, thereby creating jobs. Through the Nation Builders Corp, Government has recruited over 25,000 graduates deployed across country to help tag all landed properties with GhanaPostGPS addresses, which has also been beneficial in door-to-door deliveries, pickup services, tracking locations etc. GhanaPostGPS has online panic buttons allowing for easy communication between users and Police, Fire and Ambulance in case of imminent danger. It gives just in time location information to providers of the services. The project is relevant to **SDG3, SDG8, SDG9, SDG11, SDG16**.
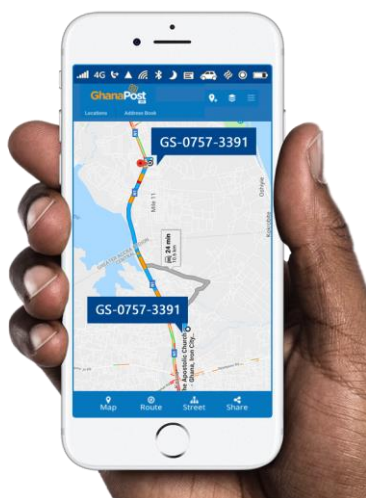
In **Kenya**, a mobile/web/SMS platform called **Ma3Route** uses crowdsourced transport data to provide users with traffic information, directions and driving reports. Ma3Route aims to make travelling easier in developing countries by democratizing access to timely transport information. The team behind the project hopes to bring greater sanity to the roads and inform city planning and transport regulation policies in emerging economies by providing transport data and trend analyses.

The start-up was founded from a need to identify which roads were jammed in order to avoid them, and to provide up-to-date information to commuters on traffic accidents and other issues. The application is designed to provide users with traffic updates, give directions and enable people to report rogue drivers. By crowdsourcing data from locals, the service is able to inform other users which areas to avoid and is crucial in mapping the most efficient routes, saving commuters time and money. The objectives of the initiative relate to **SDG 11.**

In **Eswatini**, in an effort to ensure that a functional health system exist in the Kingdom of Eswatini, the government through the Ministry of Health has developed a centralized robust **Client Management Information System (CMIS)**. The purpose of the CMIS is for the systematic collection of clinical service data, storage, processing, analysis and action-oriented reporting, dissemination and use of quality information for improved health care provision, patient management and decision making. To realize the benefits of the system, the basic requirement is that it needs to be accessible to all of the country's health facilities and centers. To assist the government's efforts in proving better health care services, the Eswatini Communications Commission, through the Universal Service Obligation Fund, initiated a project to connect forty-five (45) rural health facilities and centers around the country to the centralized platform. The wireless broadband connectivity project for health centers, provides connection speeds of between 20 and 50 mbps to the centralized CMIS platform for all the health centers and is deployed using the latest wireless technologies. In addition, the project also covers all adjacent public service centers to the health facilities. The project is relevant to **SDG1, SDG2, SDG3**.

In **Mauritius**, the **MVL** Online System Project was launched by the Prime Minister in November 2018. The principal objective is to provide a secure and scalable platform for key e-services provided by the National Transport Authority or for the general public, as well as a robust service platform to facilitate the online payment of motor vehicle licenses, in order to improve operational efficiency, service delivery and business operations.

The project has had a nationwide impact, as all vehicle owners must pay for vehicle licenses. Previously, the payment of licenses was permissible at post offices, district courts and the sub-offices of the National Transport Authority. Every day, more than 1 000 individuals apply to the above-mentioned locations to renew their vehicle licenses. This heavy flow of people has caused much inconvenience: long waiting times in queues, parking problems, the need to take time off work, as well as heavy workloads for the officials behind the counter.

The objectives of the initiative relate to **SDG 9.**

In **Nigeria**, **WELTI** is a non-profit organization whose objective is to empower young women aged 14-30 to become competent leaders who will leverage technology for sustainable economic development. Through WELTI's programs which are centered on four pillars of Technology, Education, Leadership and Health, these young women are equipped to become CORE(Competent-Organizationally skilled-Responsible and Ethical). WELTI's activities are carried out through programs like Open data day held in March where the young women are taught how to work open and access data that can be used to improve their lives with focus on WELTI's pillars. International women's day organized in March also sees these young women

learning from experts and mentors on how to apply critical thinking in what they do to achieve their aims/purpose in life and seminars being delivered on sexual abuse and how the young women can shun all forms of abuse be it gender based or otherwise. Non-profit organizations (NPO) conference in September to foster partnerships and creative leadership. International day of the girl child held in October to hinge on the young women becoming leaders and owning their craft regardless of the society being perceived as being male dominated. **Business meets Technology (BMT)** held in November brings together a cohort of young female businesses to leverage technology for their businesses to thrive. Several organizations are present and offer these businesses solutions they can use and apply to enable these businesses scale. The project is relevant to **SDG5, SDG16**.

In **Nigeria**, **Fempower Initiative Africa** is a Pan African non-profit that works to put an end to gender inequality in high-tech industries and startups. We do that by educating and empowering women who are passionate about technology. As a result, we offer everything from coding courses to bootcamps to hackathons and startup competitions no matter age or profession. It is our mission to support women with the access and community they need to succeed in tech. FIA was founded in 2017 and headquartered in Lagos Nigeria. The Fempower initiative Africa community is 5 chapters strong with an impact of more than 5000 members in 5 countries in Africa. As a result, events and programming in each chapter vary to fit the unique needs of each community. Target audience: Women (18-35 years old) We bring together the power of community and technology to network, share wisdom, make friends, and start businesses. Empowerment: We inspire women to innovate and use their voices to build the futures they want to see. Education: We facilitate learning and skill-building through programming for both beginner and advanced professionals. CSR and Internship opportunities: To the companies and startups, we provide a low-cost high impact way to achieve their social impact goals, access to potential pool of female technical and non-technical talent for internships and recruitment. Access to Investments potentials: To the impact investors and venture capitalists, we provide them access to potential early stage women owned startup investment opportunities, access to pool of female founder talent for mentoring and investment. The project is relevant to **SDG5, SDG16**.

In **Senegal**, the Government has set up two economic and social development programmes in peripheral and suburban areas that are linked to the Emerging Senegal Plan: the Emergency Program for Community Development and the Emergency Program for the Modernization of Frontier Axes and Territories. This reflects the Government's concern for development in rural and isolated areas. Digitalization promotes integration and supports socioeconomic development; it facilitates the development of trade, money transfers, transportation and agriculture, thus helping to promote the well-being of people living in cities.

Rural and remote areas lag behind with regard to digital development and are not covered by national digital services and systems in a quantitative and qualitative way. To address this problem, an initiative has been developed to set up digital boxes, designating a kind of digital space, in villages or rural areas, in order to provide a framework for the exchange and development of digital-based socioeconomic activities. The objectives of the initiative relate to **SDG 8**.

In **South Africa**, an event called the **Technovation Challenge** was held in Cape Town, in which more than 100 girls participated. The goal of the challenge is to inspire girls to see themselves as not just users of technology, but as inventors, designers, builders and entrepreneurs.

The Technovation Challenge is a global competition started by Iridescent, an organization based in San Francisco. Two teams from Cape Town made it to the semi-finals. The challenge had an impact on almost 100 girls, and extended to teachers from the various schools, mentors and the girls' parents. The girls learned how to create a mobile application and how to develop a start-up, not only from a technical point of view, but also from a business perspective. The project is relevant to **SDGs 4** and **1.**

In **Togo**, the online and mobile crowdfunding platform **OMobileFunding** provides financial solutions and products to promote social inclusion and social entrepreneurship through technology. OMobileFunding is being implemented in **Togo** and Côte d'Ivoire. Jobs are being created in these countries in the fields of ICT and entrepreneurship. Clients are using this technological and financial solution to obtain funding for their sustainable development projects.

African countries have many needs and solving these problems via OMobileFunding is a day-by-day challenge. OMobileFunding provides a link between technology and entrepreneurship and creates employment opportunities, especially for young people and women.

The project is relevant to **SDGs 3** and **8.**

In **Zimbabwe,** a chapter of the Forum for African Women Educationalists is beginning to set up a weather station network by donating ATMOS 41 weather stations to schools and helping them to install the equipment, putting girls at the front and centre of the installation process. The network will provide educational opportunities for students (in engineering, meteorology, statistics, etc.) and will eventually be used to track the climate and predict the weather.

One of the aims of the project is to improve the daily lives of local farmers and set the stage for more women in farming to find the time and resources to enroll in school.

Those involved in implementing and maintaining the weather stations will lead their communities in owning the technological solution to a key problem.
The objectives of the initiative relate to **SDGs 3, 4** and **8.**

FAWEZI DONATES WEATHER STATIONS, LAB EQUIPMENT, AWARDS ESSAY WINNERS.

Action Line 2

In **Angola**, the **SOUTH ATLANTIC CABLE SYSTEM (SACS)** went into commercial operation in September 2018.   It was the first, high volume, ultra-low latency fibre optic cable to connect Africa to South America.   SACS has been designed with 100Gbps coherent WDM technology on an end-to-end solution. With 4 fiber pairs it offers a total design capacity of 40 Tbit/s between Fortaleza (Brazil) and Luanda (Angola).   Manufactured and powered by NEC Corporation, the SACS cable is one of the most advanced submarine telecommunications systems to go into commercial operation in the Southern Hemisphere. Given the onward connections to the Monet cable system and the West African Cable System (WACS) and the potential to expand the network Eastwards, SACS not only opens the door for Africa and Brazil to meaningfully participate in the growing global digital economy but has the potential to connect East to West through a more direct routing.   For businesses to operate and for economies to flourish in the global digital economy, access to reliable connectivity and capacity is not just vital – it is essential. The project is relevant to **SDG2, SDG3, SDG4, SDG8, SDG9, SDG10, SDG11**.

In **Botswana**, the **computerization and broadband connectivity to primary schools** in rural areas has been identified as a project of paramount importance in driving digital inclusion and promoting ICTs from grassroots.   This is also in support of Sustainable Goal 4 on Quality Education. The first phase of the project covered schools in Ghanzi District, Kgalagadi District and Mabutsane Sub-District.   The project covers: Construction of Local Area Network (LAN) in each identified Primary School; Provision of 5 Mbps dedicated broadband Internet to each Primary School; Provision of Wi-Fi enabled tablets and related peripherals such as printers to 68 Primary Schools; Augmentation of computers in 9 Junior Secondary Schools with 30 laptops per identified school; Employment of Information Technology (IT) officers at identified Primary Schools. The Fund has contracted 7 suppliers who have supplied 50 tablets, multifunction printer, networking equipment, laptop per IT Officer per primary schools. The Fund is proud to have employed 68 IT Officers to be our ICT Champions in rural areas. This is also in line with the Government's agenda of creating job opportunities for the youth.   The schools' computerization and connectivity project will go a long way in promoting digital literacy and bridging the gap between rural and urban schools. The UASF endeavours to promote an enabling environment for the use of ICT in rural areas. The project aims to: promote digital literacy to bridge the gap between rural and urban schools; promote ICT education from the grassroots level; promote an enabling environment for the use of ICT in rural areas; and encourage private sector participation in providing services in

rural areas.

The project is relevant to **SDG4, SDG9, SDG10.**
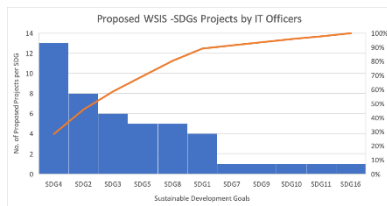
In **Botswana**'s continued effort to bridge the digital divide, Orange Botswana in partnership with Botswana Communications Regulatory Authority (BOCRA), Ministry of Transport & Communications (MTC), Ministry of Basic Education (MoBE) and Ministry of Local Government and Rural Development (MLGRD) rolled-out the **Schools Connectivity Project** and upgrades of base stations to 3G technology in 18 rural and undeserved villages of Mabutsane, Morwamosu, Sekoma, Khonkhwa, Keng, Khakhea, Kokong, Kanaku, Mahotshwane, Itholoke, Kutuku, Mokhomma, Seherelela, Sese, Maokane, Samane, Lefhoko, and Betesankwe villages. The main objective of this project is to address the problem of lack of broadband Internet and low bandwidth capacity in government schools across the country. In addition, the project seeks to bridge the digital divide that exists between rural and urban centers, through providing basic computer skills to learners at grassroots level. This is over and above the assistance for the computerization and connection of broadband Internet in public schools in selected rural areas.   As a result of this project, a population of over 5,000 learners from the aforementioned villages continue to benefit from the project, not only giving them access to Information & Communication Technologies, but also helping in standardization, which is one of the essential building blocks of the Information Society. The project would also enable them to participate effectively in the global economy and also change their lives. The project is relevant to **SDG4, SDG8**.

In **Madagascar**, **the TICBUS or Bus numérique** is a project which will put into circulation specially equipped itinerant buses, connected to the Internet and equipped with computer equipment. These buses will cross towns and villages accessible by road to raise awareness and introduce them to the use of ICT. Access to TICBUS is free.

The services offered by TICBUS are:

- Initiation to the use of computers and tablets
- Initiation to the internet connection and free Wi-Fi
- Initiation and training in IT
- Multi-services and itinerant micro-editions
- Animation around themes related to TIC
- Web Marketing for the benefit of rural and urban micro-entrepreneurs (database, market)
- Mobile advertising space via the large flat screen (communication tool)

The TICBUS project has been operational for 2 years. Results obtained per year with six existing TICBUS are: 22,400 people sensitized and initiated in the use of ICT, 84% of these beneficiaries are those under 18, distance traveled: 85,700Km with 57 furrowed cities distributed in the six provinces of Madagascar and also 36 schools and 20 national fairs beneficiaries. Impact generated: improvement in the rate of digital integration, reduction of the national digital divide, improvement of fluidity and access to information.

The project is relevant to **SDG4, SDG9, SDG11, SDG17**.

In **Mauritius**, in line with its Programme 2015-2019, the Government aims to transform the country into a truly forward-looking, environmentally sustainable, economically vibrant and innovative country with a modern infrastructure, global connectivity, high skills and technology. The objective of the project is to implement a wireless local area network in every primary school providing fast and reliable Wi-Fi, connected to a state-of-art high-speed wide area network connecting primary schools to the Government Online Centre for seamless access to online educational content.

The infrastructure is fully managed through the Government Online Centre, the Central Information Systems Division and the Ministry of Education and Human Resources, and the Tertiary Education and Scientific Research sites. The project is relevant to **SDG 4.**

Also, in **Mauritius**, **GINS** provide a joined-up infrastructure for public sector institutions to communicate and collaborate more effectively. One of the requirements for effective e-governance is a connected government; the GINS project provides a vehicle for creating an interconnected government. The GINS network interconnects all ministries and departments within the public sector in **Mauritius**. This project aims to enhance the efficiency of ministries and departments through the use of ICT, facilitating faster access to e-mail and government applications.

The project is relevant to **SDG 9.**

Current Topology of High Speed Connectivity for Primary Schools
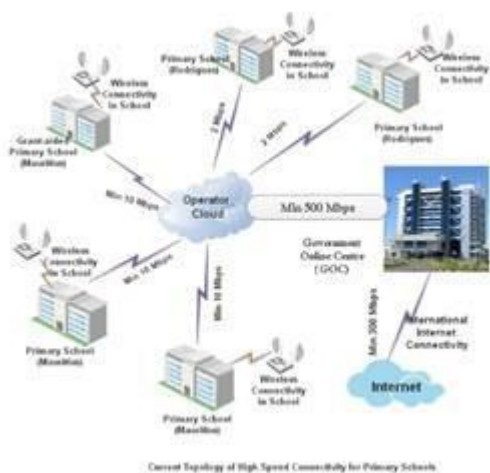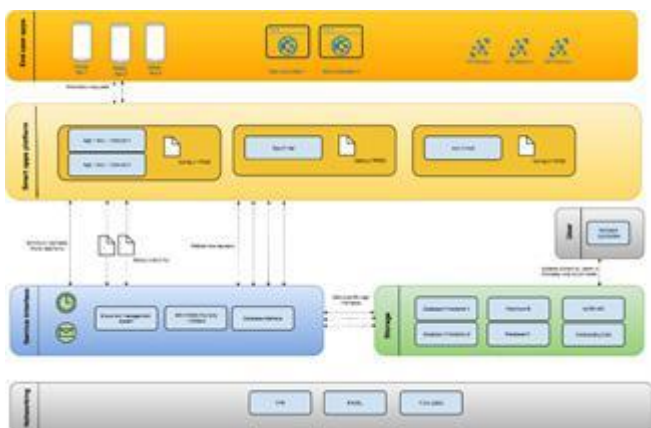
Also, in **Mauritius**, the mobile revolution is the main vehicle through which other technological disruptors can be accessed. For example, 91 per cent of teenagers with smartphones access social media through their devices. By adopting a strategic direction that involves adopting and promoting innovative and modern technologies, the Smart Mobile Apps Platform implemented by the Government of **Mauritius** – has been formulated to develop new applications to provide innovative services to citizens.

The platform comprises of three main components:
- A service-oriented architecture system for the rapid and consistent deployment of mobile application servers.
- A government application store website to reference and promote existing mobile applications, as well as any future applications.
- 11 mobile applications, available on major platforms.

The project is relevant to **SDGs 1** and **11.**

In **Nigeria, the Tech Girls Advocacy Program (TGAP)** de-livered digital literacy training and enhanced the creative skills of 100 adolescent girls using digital technology, media and the arts. It also provided a platform for girls to raise awareness of issues pertinent to them using their digital creative skills. The programme was unique in its focus on adolescent girls who

are often left out of development-related dialogue and interventions. TGAP worked to teach girls how to use digital technology, coding, film, photography, creative writing, and digital painting/ illustration to make girls' voices count.

TGAP trained girls to advocate for issues that affected them in three thematic areas: gender-based violence, child early or forced marriage, and girls' education. The programme also promoted girls' civic engagement on social media using the #TechGirlsAdvocacyProgram #TGAP campaign to mobilize community action on is-sues affecting girls.

The project is relevant to **SDGs 3, 4, 5** and **10.**

Also, in **Nigeria, ARPGTech** has invented a low cost solar-powered obstacle detector robot to improve children's learning performance in physics and mathematics. The product is sold to schools with instructions, with a support service provided by a team of experts in rural and urban communities. A significant number of schoolchildren, namely 125 children over two months, have benefited from this service to train a solar obstacle detector robot.

The company also provides digital marketing training to women entrepreneurs in the National Youth Service Corps so that, after a one-year service period, they can find mentors and placements in digital marketing companies within their catchment areas. ARPG Tech also runs basic ICT training for women retirees and women aged 55 or older, to foster their interest in using technology to maximize their productivity.

The project is relevant to **SDGs 4** and **5.**

Also, in **Nigeria**, **Reborn Initiativ**e is an educational and entrepreneurship residency programme for women and girls in rural areas of Delta State**,** where they can study, learn a trade and develop their confidence. These women and girls face oppression in the form of gender poverty, violence and marginalization. They are not encouraged to study, or work and harsh cultural practices prevent them from achieving their potential. At Reborn Initiative, these women and girls reside full time in a supportive environment, where they can develop their own unique academic and creative talents.

Our main strategy focuses on formal education for children, community programming and advocacy, vocational training,

social change programmes and seminars, and mentoring. Over 500 women and girls have been empowered, in their professional and educational lives, through the Reborn Initiative.

The project is relevant to **SDGs 1, 4** and **16.**

Also, in **Nigeria**, **TechHer** is a project to create a hub for women in technology to learn, network, develop skills and support each other to grow as a community. The project aims to harness the intrinsic community-building, collaborative abilities of women to form networks and alliances to foster development at the local, state, and national levels. TechHer exists to demystify technology and to provide safe spaces for practical learning and economic advancement. It provides a response to gender inequalities in the technology industry and society at large.

Women in the TechHer community have, among other things: forged new business partnerships within and outside of the group; found new jobs as a result of the opportunities shared; learned new skills (coding and web development/management); and aligned their businesses with legal requirements via the business/legal classes offered.

The project is relevant to **SDGs 3, 4, 5** and **8.**

In **Nigeria**, **the ICT for Community Development initiative** aims to educate and develop the mental capacities of pupils in public primary schools under six different local governments in Oyo state. The Oyo state government, under the leadership of Governor Alao Akala and in conjunction with the State Universal Basic Education Board of Oyo State has replicated the project in 27 other local government regions. Before the inception of this project, public primary school pupils in Oyo state were not taught computer science. The ICT for Community Development initiative was rolled out at 30 different primary schools in Oyo state before the state government took over the project and replicated it in all local government regions in Oyo state.

The project is relevant to **SDG 4.**

In **Nigeria, the Gender Mobile initiative** is an accessible intervention platform designed to provide specialized support services for girls and women who are survivors of social injustice. Gender Mobile is leveraging technology in the form of a 24/7 dedicated mobile telephone helpline and a web platform where potential victims and survivors can reach specialized agents who are ready and able to provide the help they need. The initiative combines a phone-based helpline with a web and online chat interface that provides survivors with comprehensive information, assistance and long-term help.

Another component of Gender Mobile's work includes connecting victims and survivors to livelihood support opportunities to foster their self-reliance. Another long-term initiative is the Adolescent Hub Project, designed to raise awareness among adolescents in secondary schools and universities of matters relating to various patterns of violence.

The project is relevant to **SDGs 4** and **16.**

In **Senegal**, **Free-Space Optics (FSO)** can transmit a high data rate, up to 10 Gbps, from several meters to kilometers, depending on meteorological conditions. It provides a potential means to meet the need for a high data rate and longer last-mile connectivity in order to develop mobile broadband networks in many countries. The performance and availability of FSO systems are generally affected by weather conditions.

A research paper aims to investigate the reliability and resilience of a 5 km FSO link simulated using visibility data recorded from Dakar city.

In adverse weather conditions, which often occur in a tropical climate, the effect of turbulence induced irradiance fluctuation, varying beam divergence angles and misalignment issues were analyzed and estimated. In addition, lognormal distributions were established to facilitate the use of channel modelling and survey FSO systems in similar physical environments.

The project is relevant to **SDGs 4** and **16.**

Also, in **Senegal**, **the m-Women programme**, launched by Orange in 2015, promotes women's self-sufficiency through digital technology, offering essential services tailored to their needs with support from local stakeholders. Digital inclusion for women aims to boost their contribution to sustained social and economic growth. In Africa, women are the core of the family; they manage most aspects of everyday life, from health care to food, agriculture, schooling, family finances and trade. This is why the digital inclusion of these millions of informal micro-entrepreneurs constitutes a formidable growth driver for social and economic development. Providing women with access to the essential services that will facilitate and improve their daily lives through an ordinary mobile phone is part of a broader approach to drive progress and create shared values.

The objective of the programme is to achieve a situation where 20 per cent of women in Senegal use digital technology to boost their business activities.

The project is relevant to **SDGs 5** and **16.**

Also, in **Senegal**, the population in general, and young people in particular, are enthusiastic about ICTs/tele-communications. Most training and teaching curricula for pupils and students have an ICT/ telecommunications component. However, there is a lack of know-how resulting from a lack of interaction with advanced ICT/ telecom equipment in training institutions, which prevents young graduates and professionals from obtaining the specialist qualifications and professional profiles that they need for self-employed work.

In addition, a significant number of young people have self-taught skills relating to ICTs/ telecommunications; they know how to adjust and manipulate ICT/telecom equipment and perform maintenance tasks. This group also requires guidance and support, in order to make their existing competences more professional and structured. A project has been launched to set up digital infrastructures to reinforce the know-how of professionals and young graduates in the digital professions.

The project is relevant to **SDG 4.**

Again, in **Senegal**, the ICT / telecom, arouse enthusiasm, at the level of populations and young people. Most of the supervisory and teaching structures of pupils and students devote an ICT / Telecom component to their interventions and teaching. However, a lack of know-how resulting from a lack of interaction with heavy ICT / telecom equipment, practically nonexistent in our training schools, is a hindrance for the profile-post adequacy in the specialized structures as well. for the self-employment of young graduates and professionals.
In addition, a good number of self-taught young people in ICT / Telecom know how to tinker, manipulate ICT / telecom equipment and ensure their maintenance. This segment of the population also requires guidance and support to make their practices more professional and better organized.
Objectives:
-    Set up digital infrastructures in order to reinforce the know-how of professionals and young graduates in the digital professions and specifically:
-    Video and images on removable media or via the internet, on the assembly and maintenance of IT or telecom equipment such as computers, printers, switches, routers and other ICT / Telecom devices of great capacity.
-    Video and images on the assembly and maintenance of IT or telecom equipment
-    Have ICT / telecom tools recycled from partners for demonstrations.
-    Have standard kits for experimentation and maintenance in ICT / Telecom and related accessories (Photocopiers, Televisions).

Results:
-    A framework for exchange, strengthening operational skills in ICT / Telecom and digital services is created. More specifically:
-    -maintenance and repair of digital equipment;
-    -familiarization of young graduates and professionals in digital devices and tools for better know-how;
-    -an impetus for innovation and job creation;
-    -be able to use digital tools to meet the needs of the people.
The project is relevant to **SGD 4**.

In **South Africa**, **Geekulcha** is where young, skilled, creative and ambitious tech minds meet to connect with each other, share knowledge, collaborate on projects, network with industry leaders, obtain training to further improve and enhance their skills, and put those newly acquired skills to work. The platform is used by over 9,400 students across Africa. All Geekulcha programmes are curated with the intention of building skills capacity in the tech/digital ecosystem with a focus on realization, acquirement, development, redistribution and utilization.

Established on 15 March 2013 in **South Africa**, Geekulcha focuses on empowering young geeks through ICT skills development and training, while giving them a taste of what awaits them in the wider world through industry exposure. The ultimate goal is to help young geeks/innovators gain the skills they need to find employment and/or for innovation development.

The project is relevant to **SDGs 4** and **8.**

In **United Republic of Tanzania**, the program **Piloting the use of TV White Space Technology for Community Network in Rural Tanzania** deploys a community-based network in rural Tanzania using TV White Space technology, which offers advantages in terms of coverage and spectrum availability. The community-based network has proved to be the feasible bottom-up approach to connect the unconnected population in rural Tanzania where commercial Internet Service Providers and Mobile Network Operators do not see value in investing because the return on investment is not realized within short-time of the period. The project has connected four education institutions in Kondoa, Tanzania and offered access to high-speed Internet.
The project is related to **SDG9**.
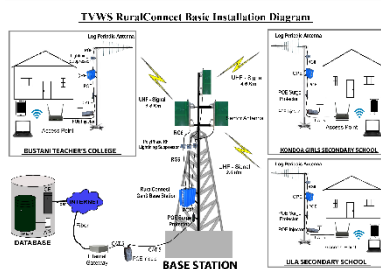
In **Zimbabwe**, the **CQE energy cube** is a self-charging solid state battery that uses moisture in the environment to produce power. The Technology exploits the energy released when Hydrogen combines with Oxygen to form water. The energy generated creates an electric current that can be used to power different devices and can also be used for domestic and industrial purposes. This new source of power can be used to create sustainable energy generation systems to augment and reduce the cost existing power generation for small appliances.
The project is related to **SDG3, SDG7, SDG8, SDG9, SDG10, SDG13**.
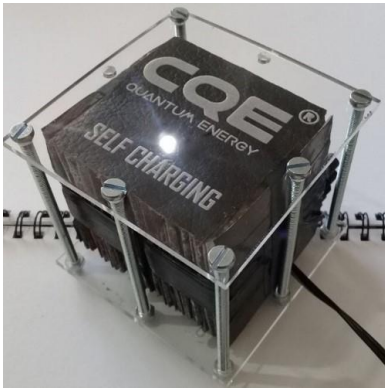
Action Line 3

In **Cameroon, Girls in Tech** Cameroon has played a key part in lay the groundwork to inspire next genera-tion of female leaders in STEM fields in Cameroon and throughout Africa. Girls in Tech Cameroon focuses on the engagement, education and empowerment of girls and women who are passionate about technology, by highlighting the special "spice" women have to offer in these fields. Since its inception, Girls in Tech has worked tirelessly to promote the advancement and empower-ment of girls through hands-on practical approaches to build skills for next generation jobs in the field of ICTs, science, technology and engineering.

The target audience has been girls enrolled in schools, aged 7-18. Girls in Tech has been able to harness the potential of female role mod-els in schools by creating STEM clubs led by female STEM teachers in schools and encour-aging girls to join clubs and work on projects through the STEM your School programme.

The project is relevant to **SDGs 5** and **9.**

In **Ghana**, **TAWO Mobile App** is a mobile and web-based directory and local listing application, where individuals, businesses, organizations, educational and governmental institutions and others can create a profile for their entities, activities, events, programmes, services and products with their contact details, URLs, maps, and pictures to be made accessible and available to users with free and paid subscriptions. The application will create an information pool for **Ghana** and beyond. Using the right keywords and names, users can find whatever they are looking for in Ghana or near their location, with up-to-date contact details, website and digital addresses, maps and GPS directions. The application can be used for looking up and connecting with old school friends from all schools in Ghana. It also enables members in communities across Ghana to find and locate the nearest healthcare facilities and can be used to send SMS to health professionals and connect to them by live chat. The platform will also be used to provide health tips, alerts, educational material and health-related information to the general public.

The project is directly linked to **SDGs 1, 3, 8** and **17.**

In **Kenya, Ma3Route** is a mobile/web/SMS platform that crowdsources transport data and provides users with information

on traffic, public minibus directions and driving reports. Ma3Route aims to make travelling easier in developing countries by democratizing timely transport information. We hope to bring greater sanity to the roads and inform city planning and transport regulations in emerging economies by providing transport data and trend analysis.

Ma3Route simply means Matatu Route. *Matatu* refers to public trans-port minibuses in Nairobi. *Tatu* is the Swahili word for "three". *Matatu* means MaThree in Sheng. Sheng is a Swahili-based cant, perhaps a mixed or creole language, originating among the urban dwellers of Nairobi.

The project is relevant to **SDG 11.**

In **Kenya**, **Whiz Kids Africa** equips children with Digital Literacy Skills to enable them to harness technology, use it safely, optimally and effectively. It enables children to code with AI, Robotics and Content Development and also advocates for children with Neurological Disability, specifically Autism.

The project is related to **SDG4** and **SDG5**.

In **Mauritius, Smart Traffic** will allow citizens to avail themselves of the latest traffic information on major roads. The mobile app will provide useful information on roadblocks and heavily congested routes, as well as road deviations. The mobile application features a map to show different levels of traffic congestion, using different colour codes for each level (for example, heavy traffic, medium traffic and normal traffic).

The congestion status of major roads on the map is dynamically updated by officers from the traffic branch of the police force as soon as they receive field information from officers deployed along major roads across the island, and is then passed on to the general public via the back end.

The project is relevant to **SDGs 9** and **11.**

In **Mauritius, the Smart Police mobile application** will provide citizens with quick access to valuable information, such as

the police directory, the latest news and important communiqués from the police force and will enable users to make emergency calls.

It provides a communication channel between the police force and the public.

Further functionalities may be added in the future, in later versions of the mobile application.

The project is relevant to **SDGs 9** and **16.**

In **Nigeria,** the **Tech Girls** project aims to empower marginalized girls living in urban slums and attending low-income schools, by enhancing their ICT and digital skills in order to bridge the gender skills gap. Through the use of after-school programmes and girls' clubs in schools, Marvella has reached more than 250 girls. Even girls who had never had the opportunity to use a computer can now boast of their computer skills. The most exceptionally talented girls are given free Raspberry Pis on completion of the programme. This has greatly encouraged girls to enroll, and even perform well, in STEM subjects.

Most of the girls go on to study computer science and other related technology subjects at university. The project was first launched in Lagos, and has been replicated in Ibadan, another city in south-west Nigeria. Save Our Needy hopes to take the project to north- east Nigeria, where there have been violent conflicts, in order to reach internally displaced people, particularly girls.

The project is relevant to **SDGs 4** and **5.**

Also, in **Nigeria**, through cutting-edge digital technology and a self-help approach, the People, Environment and Sustainability Foundation promotes sustainable solutions to financial and farm-related challenges facing women in rural communities. The target audiences are girls and women; the foundation's vision is to democratize access to technology by bringing new sources of information to women, in order to create a planet without hunger and poverty.

Since 2013, the foundation has been involved in various agriculture education projects, empowering and educating women farmers through digital literacy. Our main objectives are: to promote commercial production and increase the local consumption of yellow cassava varieties in **Nigeria** through technology; to promote the adoption of production technologies for enhancing sweet cassava yields; and to optimally utilize ICTs for purposes such as strategic learning, monitoring, evaluation, scaling, communication and stakeholder engagement.

The project is relevant to **SDGs 1, 2 and 5**.

In **Nigeria**, the program **Menstrual Hygiene Management Education and Reusable Sanitary Pad Making** has successfully empowered 3450 girls from various rural secondary schools in Enugu State with menstrual hygiene management education and provision of sanitary packs. Also empowered 35 girls and 5 males in hard to reach villages on how to make reusable sanitary pads themselves with free provision of start-up materials. This initiative has helped to keep girls in school, end/delay child marriage, eliminate Female genital mutilation, dispel long-held patriarchy and taboos surrounding menstruation, end girl's exchange of sex for sanitary pads, teenage pregnancies, and also helped in improving girls' self-esteem about sexual reproductive health rights.
The project is related to **SDG5**.

In **Nigeria**, "**Connecting Marginalized Women to Technology and Development**" was launched in 2017. The project aims to give marginalized and underserved women aged between 18-35 including unemployed graduates, single-mothers, out-of-school youths, survivors of gender-based violence (GBV) and women living with HIV access to technology and digital skills training to enable them to gain knowledge and build their capacity to earn a sustainable income through ICT. The program empowers marginalized women living in disadvantaged communities who do not have access to technology and who do not have a reliable source of income with adequate knowledge and skills to improve their lives by starting income-generating activities using ICT.   (**SDG5**)

Save Our Needy

In **Rwanda**, a project entitled "**Using ICT to Provide Legal Aid to the Rwandan Population**" is being implemented by the Legal Aid Forum. The widespread use of mobile technology in Rwanda is allowing the Legal Aid Forum to provide legal information and advice through this project to vulnerable populations, free of charge. The project has two primary goals: to make sure that Rwandan citizens are aware of their rights, and of procedures and laws in force; and to ensure that citizens have better and easier access to legal services. So far, 55 legal information bulletins have been drafted and are available in both IVR and USSD format.

The project was launched in March 2018; by mid-September 2018, around 1,998 people had contacted the call centre operators (legal experts based at the offices of the Legal Aid Forum); 19,230 people had booked telephone appointments with legal experts); and 53,585 people had listened to the legal information uploaded onto the platform.
This project relates to **SDG 16.**

In **Rwanda**, **Igire Rwanda Organization (IRO)** started an initiative which close the gender divide in the ICT sector and SheCanCODE was formed. SheCanCODE committed to promoting women empowerment by providing young women in

Rwanda with digital skills and professional skills training. Through experienced facilitators, mentors, blended learning model and the market outcome is driven curriculum. The IRO has placed approximately 70% of SheCanCODE graduates into leading tech companies in Rwanda. The target of the organization is to train 1 million young women in Rwanda by 2025 and creating job placement for more than 70.

The project is related to **SDG5** and **SDG16**.

In **Senegal**, **Beinday** is an environmental conservation and protection platform that offers digital content via free Wi-Fi access points. The platform makes staying connected simple and easy; users are able to connect in real time using a new, innovative concept that, in addition to offering free online access through the Beinday network and social net-work channels, also strives to be eco-friendly in an environment where most companies still use traditional communication media involving paper and plastic.

The Beinday Platform App sup-ports environmental protection by providing communication support in real time that avoids plastic, paper and spam emailing campaigns. It offers access to content through a Wi-Fi connection on mobile devices in line with its slogan, Free is Green!

This project relates to **SDGs 11** and **13.**

In **Sierra Leone**, increasing the visibility of women's rights issues in policy-making spheres is vital to creating the conditions and regulations that will enable women to maximize the benefits of a digital society. Policy dialogue on gender issues seeks to encourage institutions to commit to gender and ICT policy action plans, and to grass roots education. The Campaign for Human Rights and Development International will organize public lectures, community engagement sessions and teaching on region-al/international human rights treaties and instruments on digital law/policy and stakeholder engagement.

The organization will host the Policy Interactive Forum-PIF for the donor community, organize diplomatic missions, and engage public- and private-sector leaders in **Sierra Leone,** in line with cybersecurity compliance requirements, and host a workshop on women and ICTs in development.

This project relates to **SDGs 4, 5** and **16.**

In **South Africa, GoMetro Pro** utilizes a mobile application for the in-field collection of public transport operations data. The application has been used quite extensively to drive various projects linked to the minibus taxi industry, including to determine transport business value. The mobile application enables field collectors to quickly and easily gather data on trips, travel duration and distance, stops, passenger counts, basic passenger demographics and revenue. The data are automatically uploaded to the GoMetro Pro project management platform and converted to a GTFS standard algorithm.

The analysis includes passenger transit patterns and network characteristics. These can be visualized and supported in an interactive visualization environment. The GoMetro team designs, builds, implements and licenses products in an adaptive way to ensure client satisfaction and robust outcomes.

The project is relevant to **SDGs 3** and **11.**

In **South Africa**, **Geekulcha** is where young, skilled, creative and ambitious tech minds meet to connect with each other, share knowledge, collaborate on projects, network with industry leaders, obtain training to further improve and enhance their skills and to put those new skills to work. The platform has over 9 400 student users across Africa. Established in 2013, Geekulcha focuses on empowering young geeks through ICT skills development and training, while giving them a taste of what awaits them in the wider world through industry exposure. Geek + Culture = Geekulcha.

Geekulcha started in 2013 as a Facebook group that brought together a network of developers (affectionately referred to as "geeks") to share information on the IT industry and networking events. Soon, they had turned their passion for building tech communities into a start-up. Today, Geekulcha has over 9 000 actively engaged users across the country, with an impact on the lives of thousands of others.

The project is relevant to **SDGs 4** and **8.**

In **Uganda**, **the Mobile Solar Computer Classroom** helps to bridge the digital divide in the country by making computer skills accessible and relevant to rural and suburban schools, libraries and communities. The project is designed to address the problem of limited hands-on computer training in schools and communities. It overcomes the lack of infrastructure and resources by maximizing scarce resources through the use of solar power and by reusing reliable, efficient computers to reach under-re-sourced schools and communities.

Using two modified all-terrain vehicles equipped with solar panels, laptops, an Internet router, a tent, tables and chairs, the project provides lessons on computer skills and ICT awareness-raising camps in schools, libraries and community centres, offering a digital curriculum delivered over the course of two years. The project contributes to improving the quality of education through building digital skills and the confidence of trainees. It has had an impact on over 57 000 people.

The project is relevant to **SDG 4.**

In **Uganda**, the **Women's Technology Empowerment Centre (W.TEC)** is a Nigerian nonprofit organization committed to building a more inclusive technology ecosystem, with the next generation of women technology creators, entrepreneurs and leaders. The programmes encourage more girls to pursue technology careers and support women (entrepreneurs and in civil society) to use technology confidently to increase their economic power and ability to speak about issues affecting their lives. Over the last year and a half, the work the center has expanded to explore how technology can improve learning outcomes and better integrate other under-represented groups, with a focus on girls with developmental disabilities and special needs, such as Autism and Down's syndrome.
The project is related to **SDG1, SDG5** and **SDG16**.

In **United Republic of Tanzania, Sheria Kiganjani** is an online legal digital solution that allows a user to access legal services via their mobile phones. The solution is available via website and a mobile application, and it is in Swahili language to ensure that majority of Tanzanians can easily access and use it. Users are able to locate the nearest lawyer to them, talk and chat with a lawyer 24/7, access a number of legal documents (customizable drafts), access to over 5000+ legal questions and answers, access a number of informative legal articles and news, access to an e-library for legal students and practitioners. The main objective of Sheria Kiganjani is to increase access to legal services especially to those who cannot access these services due to financial constraints.
The project is related to **SDG5**.

In rural Karoi in **Zimbabwe**, **NatiV** has partnered with Tererai Trent International (a registered private voluntary organization) to donate mobile tablets containing learning applications such as the NatiV Shona App, which helps children learn to read

and write Shona, a Zimbabwean native language. The tablets are being used as part of the Literacy Boost Programme launched by Tererai Trent International in 2013. The programme covers ten rural schools and is currently impacting the lives of around 265 students, 141 of whom are girls. NatiV also contributes monitoring and evaluation technologies to help Tererai Trent International track and assess the programme.

The literacy boost programme m-learning module is to be scaled to cover more children in the area. The work is also being replicated in Zwimba district (a rural area).

The project is relevant to **SDG 4.**

Action Line 4

In **Botswana**, **The Eskills4Girls** is a computer school in Botswana providing ICT skills to kids and teens mostly girls aged between 5 years and 18 years. We concentrate on equipping young girls with the relevant knowledge on computer science through a fun and interactive learning that make them appreciate computing concepts as well as STEM subjects. It started its operation in 2013 with two branches in Maun and Gaborone. Our Modules are: Computer Basics Programming, Networking, Software Development, Applications training (word, excel, PowerPoint, publisher).
The project is relevant to **SDG5, SDG16**.

In **Botswana**, **The Clicking Generation** is an ICT Academy for kids and teens; a social enterprise that offers computing and technology curriculum to underprivileged kids and teens in both urban and rural areas of Botswana. The approved curriculum offers STEM and technology related exploration to learners who are future technology creators of socially relevant ICT solutions. Early child technology education is key if young innovators are going to become global player in the digital economy. We explore digital concepts through a comprehensive curriculum to include: computer coding, design thinking, career guidance and age appropriate creative process learning. The Clicking Generation digital literacy training is a core service that we offer to participants. We conduct classes, create lesson plans through utilizing the comprehensive STEM curriculum. Our services are offered to kids and teens (with special focus on women and girls) between the ages 6yrs-18yrs and facilitated by our experience staff and volunteers. Our marketing is made to appeal to parents and guardians who are key in authorizing enrollment for the after-school programs. The beneficiaries are spread out in many rural structures of Botswana. The Clicking Generation is the SDG-Generation! We embody the spirit of leave-none-behind.
The project is relevant to **SDG5, SDG16**.

In **Burundi**, **Innovation Hub (BiHUB)** is the first "techpreneur" hub initiative in Burundi, which aims to bring together young talent in an environment conducive to innovation through capacity building, collaboration, the use of new technologies, a culture of entrepreneurship and a sense of service towards society. Our target audience is young people, girls and women. We currently run four programmes, one of which is ICT CULTURE, designed to promote digital literacy and tech skills to young people, women and girls.

This will help to fill the gaps in digital literacy and the education system in Burundi. The Burundian education curriculum does not take into account coding literacy, training students as users rather than creators of digital technology.

The project is relevant to **SDGs 4** and **5**.

In Africa (currently in **Cameroon** and upcoming in Gabon), **the Digital Coalition** has been established, under which mentoring programmes for teenage girls and students at university are carried out. It is first necessary to bridge the gap prior to 16-18 education and get more girls into STEM subjects at university. Appropriate coaching and mentoring from professional women in STEM fields should then be introduced. Lastly, the educational gaps should be filled by providing additional digital courses to complement outdated curricula.

Our role is to fill technical, professional and societal gaps to attract girls to STEM from school to the early stage of their professional careers through our targeted programmes: Hack4Girl (Girls in ICT celebration) and Womentor.
This project relates to **SDG 5**.

Also, in **Cameroon, GirlsTEK Global** is a non-profit organization which aims to pro-mote girls in STEM and entrepreneurship by equipping and training them in advanced technological and entrepreneurial skills. It aims to help them become young women who can provide solutions to the social problems of Africa and the world through technological innovation, reaching other people and bringing sustainable growth to their communities. Our headquarters is in Molyko, Buea in the southwest region of Cameroon. We focus on transforming young girls into highly skilled technological innovators through technological education and entrepreneurial knowledge. We achieve this through our six-month "technovation" boot camps that run twice a year. We welcome any young woman who has an interest in technology and economic growth. The project is relevant to **SDGs 4** and **5**.

In **Cameroon**, looking at the rise towards digitalization and the lack of IT skills among girls, GirlsTEK Global' project: **Web Development Bootcamp** is designed to reduce the gender divide in the tech sector, by giving young girls hands on experience in Graphic Design and Web development thereby preparing them for the future job market. Web Development Bootcamp is an intensive skill acquisition career development program designed to reduce the gender divide in the tech sector by giving young girls hands on experience in Graphic design and web development, allowing girls to acquire these skills in a fun, relaxed, secure and interactive environment by this means preparing them for the future job market. WDB activities merge technology and entrepreneurship projects to spark the imaginations of each girls endowing them with creative confidence and the zeal to pursue STEAM fields with no fear. WDB builds the capacity of young girls giving the hands-on experience in industry standard programs like Adobe Photoshop, HTML, CSS, JavaScript and Materialize Framework. The concept behind WDB started early in 2017 and is the core of GirlsTEK as it is designed to inspire, encourage and empower girls with 21st century IT skills and the power to code. GirlsTEK Global achieved great results as we have empowered young girls in the towns of Buea and Ngaoundere in Cameroon training girls to technological innovators.

The project is relevant to **SDG4, SDG5, SDG8**.

In **Cameroon**, **AfriStack** is a non-profit organization providing hands-on training in STEM (Science, Technology, Engineering, and Mathematics) and Entrepreneurship to women and vulnerable communities. Their main goal is to empower underserved populations with technological and entrepreneurial skills so they can be chances to build their career or to be able to create their own enterprises. The vision is to empower by innovation.

The project is relevant to **SDG4, SDG5, SDG8, SDG14**.

In **Côte d'Ivoire**, **WeFly Agri** is a company that provides user-friendly, drone-enabled technologies and services developed exclusively for agriculture in Africa. Its promise is to give farmers eyes in the sky to remotely monitor crop progress, identify production inefficiencies and enable better crop management. Thanks to its drones' advanced imaging capabilities, WeFly Agri empowers farmers and gives them new ways to increase yields, reduce costs and maximize productivity.
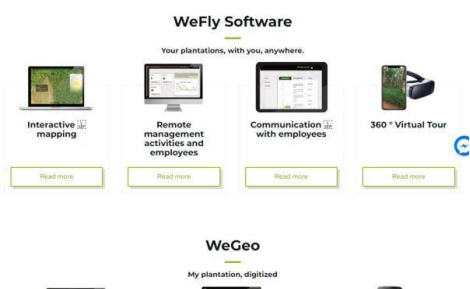
Côte d'Ivoire-based start-up WeFly Agri is using drones and mobile technology to allow absentee land-lords to monitor their farms and plantations remotely. Launched in January, WeFly Agri uses drones to map and monitor land, and offers users access to proprietary software that monitors all the activities on the plantation. The start-up, which launched in January, aims its product at absentee landlords, who live far away from their land and find it

difficult to keep track of what is going on. "Imagine you have hundreds of hectares where it is impossible to visit it in a single day", said Joseph-Olivier Biley, CEO of WeFly Agri. "Or to blindly trust the plantation's supervisor reports, which, to be honest, is not always a good idea." WeFly Agri offers farmers a third option, a solution that will enable them to monitor their plantations from their mobile devices.

The project is relevant to **SDG 2.**

In **Ghana**, the Soronko Academy started with the programme, **Tech Needs Girls**, a mentorship programme for girls aged 6-18 to teach them how to lead and innovate by learning to code. To measure the impact of the Tech Needs Girls programme, the first coding and human-centered design academy in West Africa was set up. Ghana's unemployment rate continues to de-cline, almost doubling to 11.9 per cent in 2015. The World Bank, in its latest report on jobs, estimated that in Ghana some 48 per cent of young people between the ages of 15-24 are unemployed. The report confirms that young women are particularly disadvantaged and have much higher inactivity rates than men.

While there is no firm guarantee to finding jobs, there is significant evidence that digital skills are critical to improving career opportunities and vital to surviving in the modern workplace.

The project is relevant to **SDGs 4** and **5**.

Also, in **Ghana**, **STEMbees** is a nonprofit focused on encouraging and mentoring more young African women to pursue their dreams and careers in STEM fields. The aim of the project is to increase the participation of young girls in STEM to help minimize the gender gap, by building a community of women in STEM, a SiSTEM (Sisters in STEM). STEMbees was founded by Linda Ansong, Angela Koranteng and Lady-Omega Hammond in 2014. All three founders have a background in STEM and after experiencing the effects of the gender gap them-selves, they decided something had to change.

For co-founders Angela and Lady-Omega, their parents played a huge role in inspiring them to become interested in STEM. Angela's father is an engineer who always made Math fun for her and helped her understand that doing STEM subjects made her more versatile, enabling her to explore any career.

The project is relevant to **SDGs 4** and **5**.

In **Ghana**, **Code Club** is a nonprofit committed to providing all elementary school children, especially girls, with experience in computer science. Children between the ages of 8-16 can gain basic computing skills while creating their own games and animations, and building their own websites. Our team moves from school to school, organizing coding sessions while

training interested teachers from those schools to continue such activities in after-school clubs.

We provide project guides and the materials needed to make each session fun. Code Club runs at least once a week for up to two hours, organized by the Ghanaian NGO "Healthy Career Initiative".
The objectives of the initiative are related to **SDGs 4**, **5** and **16**.

In **Ghana**, **The ICT Skills for Entrepreneurial and Women Empowerment programme** is an initiative commissioned by GIFEC in partnership with UNESCO to assist the disadvantaged girls and women (hairdressers, seamstress, traders etc) by way of increasing their direct access to information, education and services. This project seeks to rely on the established Community ICT Centres (CICs), largely set up to bring ICTs within reach of rural areas and other privileged groups, as a potential vehicle to assist train the disadvantaged girls and women to acquire literacy skills, numeracy skills, entrepreneurial skills and more importantly help the unemployed start and build their own businesses. Project Objectives: The ultimate goal of this initiative is to expand the digital capabilities and benefits of ICTs to the disadvantaged women and girls through capacity building, education, and awareness. Specific objectives are 1. Strengthen the capacity of current and potential women entrepreneurs on utilizing Information and Communication Technologies (ICTs); 2. To equip disadvantaged women and girls with the requisite ICT skills; 3. To increase women participation in the digital economy; 4. To increase awareness on the use and importance of the CIC. Expected Outcome: 1. Improved employment opportunities for women in ICT; 2. Increased access to information; 3. Improved ICT skill of women; 4. Improved access to IT enabled services. The project is relevant to **SDG4, SDG5, SDG8, SDG10**.

In **Ghana**, **Kumasi Hive**, based in Ghana, one of the sub Saharan Africa regions is an innovation hub which provides the platform rapid prototyping of ideas, supporting local Innovations and impact start-up and promoting entrepreneurship. Currently, about 4000 people have been trained, 240 innovative projects developed, and 90 innovative startups formed (including Dext, Invent Electronics, KLAKS 3D etc.) have been seeded from the program. Our audience are youth both unemployed and employed, Children, educational and industrial partners, the non-formal groups such as artisans, Investors/grant makers both local and international, Governmental and Non-governmental organizations, the local

community and Regulators. Our major activities are the following: 1. Digital Skills Training in (Internet of Things, Robotics, Graphic Design, Web Development, Augmented Reality, Digital Fabrication, Mobile App Development); 2. Makerspace for Prototyping of Ideas; 3. Information Technology and Product Consultancy; 4. Business Incubation and Accelerator Support; 5. Affordable Space Rental and Devices Services. Through our subsidiaries and initiatives, we together stand for these objectives: 1. Bridging the Digital Gender Divide for Future Jobs in Africa (shortened as ''Bridge the Gap'') – this initiative seeks to bridge the existing Digital Gender Divide between females and males in the technological ecosystem. Hence empower women/girls through training in Digital Skills and Entrepreneurship to prepare them for the future of jobs as well as promote female led startups in Africa. 2. Prac science - A low cost lab for basic schools to make the study of science easy through Experiments and also promote STEM education in Africa. 3. Digital Skills Training - this initiative promotes training in Digital Skills (listed above). 5. Kids makers - Training kids in how to program/code at early stages of school. The project is relevant to **SDG1, SDG5**.

In **Ghana**, **Young Women in Programming (YWIP)** provides standard and dynamic software development training to young girls of varying talent and capability.   The company also maintains a base of corporate and institutional clients that seek the expertise of our team to help in IT related services. Services that we provide include but are not limited to: Programming languages like JavaScript, Python and Android App development, Microsoft office portfolios. The project is relevant to **SDG4, SDG5, SDG8**.

In **Kenya**, about eight years ago, a group of young women practicing tech in various places convened at the iHub and had a conversation, which led them to conclude: they were a minority. At that time there were very few female coders and it was always assumed that they occupied lower roles simply because they were women. This formed part of a larger conversation on women and girls continued systematic underrepresentation as users and

leaders in science and technology, despite progress in ensuring opportunities for women in STEM fields. Their conversation led to the foundation of **AkiraChix** (*akira* means energetic and intelligent in Japanese) and their decision that, to maximize their impact on the target demographic, they must reach out to local young girls from poor socio-economic backgrounds, who would otherwise have no chance of post-secondary education. Many years later, AkiraChix has grown to include various other programmes that impact women and tech in various ways. The project is relevant to **SDG 5**.

Also, in **Kenya**, ICT is assuming a central role in all aspects of life but there are still fewer girls enrolling for ICT-related technical skills and jobs, hence the digital and technical divide. Girls from disadvantaged backgrounds and underserved communities are especially marginalized. Working in informal settlements has exposed us to issues affecting young women such as the

increased school dropout rate, early pregnancies leading to early marriages, higher risks of contracting sexually transmitted diseases and gender-based violence. In 2015, NairoBits opened three centres targeting marginalized girls aged 17-19 from Mathare, Kibera, Korogocho, Huruma, Kawangware, Dandora and Kariobangi settlements. The programme aims to facilitate the enrolment of vulnerable girls from Nairobi's informal settlements and their obtaining a sustainable income through ICT skills by advocating for equality in skill education and access to opportunities for girls and by lobbying at the employment level for equal job opportunities with those from other learning institutions. The project is relevant to **SDGs 4** and **8**.

Also, in **Kenya**, the **Yusudi** project took its name from "Y" for Youth and "*kusudi*", which means "purpose" in Swahili. Yusudi believes that finding a personal purpose is what drives the self-motivation, learn-ing and development of today's youth. Through its six-month programme, Yusudi helps young people to grow into attractive professionals by offering training in critical skills, such as negotiation and emotional intelligence, alongside business skills, such as digital marketing and business development.
The training is intensive and challenging, in a positive sense, and promises to transform participants. Yusudi reports an 87-per-cent post-internship hiring rate and an average 100 per-cent increase in income.
The project is relevant to **SDGs 4** and **8**.

Also, in **Kenya**, **Ignite Technology** in Women (Ignitech Women) is an initiative of the Modcom Institute of Technology which aims to impact 2000 girls and women nationwide. The key areas of focus include: mobile applications and web development courses, digital literacy, digital marketing, networking and mobile and cellular technology.
Since inception, it has helped over 1400 youth and conducted girls' workshops and training exercises, with 75 per cent of participants award-ed scholarships. The key goal is to offer as many scholarships as possible to allow local women and youth to tap into the incredible potential of the mobile and telecommunication field. The initiative aims to provide equal access to career and technical skills for underrepresented populations and reduce the gender tech gap, while promoting tech skills.
The project is relevant to **SDGs 4** and **5**.

Also in **Kenya, the African Centre for Women, Information and Communication Technologies (ACWICT)** is involved in offering ICT and life skills to young people from deprived back-grounds so that they too can compete on the global level,

which has fast become a global village. With the skills acquired during training, students become able to program, code, work with the Microsoft Office suite and pursue college work.

One major objective is to have as many centres as possible in Kenya's 47 counties, and even beyond its borders, in order to reach the grass roots and ensure maximum outreach to students. ACWICT's work is innovative and has had an impact on many because digital skills are offered free of charge, attracting more and more young people and helping to level the playing field for them.

This project is relevant to **SDG 4**.

In **Kenya, AfChix** is a network of women in IT who work as volunteers. One of its main pro-grammes is to provide mentor-ing to girls and encourages them to consider careers in computer science and IT. It achieves this through making school visits, holding annual Girls in ICT Days, running technical workshops for young women already in the industry and role-modelling, which is a very recent addition to its pro-grammes and its nominated innovation.

Research shows that role-modelling is a proven and powerful method for mentoring, teaching and passing on knowledge, skills and values. Research also shows that role models have a notable impact on female students' self- confidence in the pursuit of careers in science, technology, engineering and mathematics. The project is relevant to **SDGs 4** and **5**.

Also in **Kenya**, **iHub Kids Hacker Camp (KHC)** offers children an opportunity to learn the STEAM skills needed to become involved, or even leaders, in the tech industry and to identify problems in their community and challenge themselves to solve them. During the week of 12-16 November 2018, iHub ran a camp at the Kiota primary school.

The team loved the children's enthusiasm, creativity and resourcefulness. A project-based learning approach was used to teach electronics concepts and challenge the children to think about how electronics operate and to develop problem-solving and critical-thinking skills. The projects comprise three areas: electronic assembly, artwork and prototype testing. iHub is an innovation hub and hacker space for the technology community in Nairobi. It was started in March 2010 by Erik Hersman a blogger, TED fellow and entrepreneur. This coworking space in Senteu Plaza is a nexus for technologists, investors, young entrepreneurs, designers, researchers and programmers.

The project is relevant to **SDG 4**.

Also, in **Kenya**, thanks to the **Seweto** East Resource Centre, women of the Kibera slum have benefited from their first experience in being taught how to use computers in their daily work. Project participants are now able to operate computers and use Microsoft Word and Excel to create files. A lack of Internet access was posing challenges, which the Resource Centre sought to address by connecting its computers to the Internet. When fully connected, the project will continue to train more slum residents on how to use the Internet for access to online resources and for communication purposes. The target audience for computer training was women and men of Kibera Soweto East slum. Women with small children bring them along. The objective of the computer training was to address the general lack of ICT skills and knowledge. Participants with a grasp of computer concepts are encouraged to assist other participants who are slow or left behind.

This project is relevant to **SDG 4**.

Also, in **Kenya**, **Cherehani Africa** leverages mobile phones to provide credit and financial education to women and adolescent girls who own micro-enterprises in Africa and aims to support the growth of women -owned businesses in Kenya through bespoke advice and access to a suite of financial and information services. Its customers are members of locally registered groups of between 10 and 25 members, according to business type, and mostly common business types in close proximity. These are formal groups that meet often and are run by elected officials. The loan products are issued to individuals but membership and continued participation in the registered groups is a prerequisite. Adolescent girls and younger women access adequate mentoring as members share their business experiences during meetings.

The project is relevant to **SDGs 5** and **8**.

Also, in **Kenya**, **KamiLimu** is a six-month structured mentoring programme for University students of computer science. The programme was motivated by feedback on the computing degrees offered at Kenyan universities noting their failure to equip graduates with the ICT skills needed by the job market.

While there are many factors that affect the quality of university education, structured mentoring is one way of preparing computing students for the global playing field, beyond classroom learning. KamiLimu aims to fulfil this role. It was founded in September 2016 with 35 students from 4 Kenyan universities and is now working with its third intake of 36 mentees and 13 peer mentors from 10 universities. The programme maintains a 50:50 male to female student ratio in order to provide

a balanced learning environment. The project is relevant to **SDGs 4**, **5** and **10**.

In **Kenya**, **DLEEP** equips young people in rural Kenya with digital, employability and entrepreneurship skills to unlock and expand their educational and economic opportunities. It enrolls young people (15-18yrs) in rural schools and introduces them to Basic Digital Skills through school-based ICT clubs. This ensures collaboration with schools and incorporates Digital skills training in school activities. Schools contribute teachers, computers, classrooms, and chairs towards the project. Secondly, the project offers after-school programs on Advanced Tech Skills and Non-tech skills to enable beneficiaries gain deeper understanding of computers and the internet, and enhance their employability and entrepreneurial initiative, through application of the skills learnt. Finally, beneficiaries are attached in TAP Africa's Digital Center as part of a paid internship program to gain desirable job skills. On the other hand, they are equipped with complementary skills e.g. life skills, leadership skills, resume writing & interview skills, customer service skills, financial literacy skills, among others. Results: More than 22 young people, including 9 girls have been trained with basic digital skills and are on course to being enrolled in advanced tech skills courses like coding, beginning January 2020, when they resume school. 3 girls have been sponsored to attend our Lluna Leadership Camp in Nairobi to acquire useful complementary skills. 22 young people have received mentorship from women in tech. 3 computers and 4 laptops, and a coding robot acquired. 1 school, 2 teachers, 1 young female trainer engaged. 4 partner organizations on board. Impact: 35 students touched and learnt to use a computer for the very first time in their lives. 22 adequately trained on basic ICT skills. 9 young people, including 3 girls, graduated and received certificates after passing their final test. Goal: Train 2000 young people, 70% girls.
The project is relevant to **SDG1, SDG4, SDG5, SDG8**.

In **Kenya**, NairoBits Trust through **the SisTech project**, targets out of school girls and women aged 17 to 24 years residing within the informal settlements. NairoBits partners with community-based organizations to host training centers within the informal settlements in Nairobi. Currently NairoBits has 10 training centers spread across 7 slums. The main objective is to empower the women and girls with ICT skills such as creative design and coding. By equipping them with employability skills we hope to address unemployment among women and girls and the gender divide in STEM. The main goal is to achieve sustainable livelihoods through addressing unemployment among women in marginalized communities by providing market relevant skills and knowledge in ICT leading to decent and gainful employment. The girls are also equipped with entrepreneurship skills, photography skills, life skills, as well as sexual and reproductive health and rights knowledge, all integrated as part of the training program. Each of the project beneficiary is placed in an internship host institution for three months to undertake their practicum. The girls also participate in boot camps to equip them with leadership skills. They participate in quarterly company visits where they visit tech companies to learn more about the industry. Each beneficiary is paired up with a mentor and they participate in guest mentorship sessions where professionals from diverse fields give

talks and share their experiences and good practices. Once the girls graduate, they become project ambassadors and conduct in school mentorship and outreach activities to encourage more girls to pursue STEM related careers.

The project is relevant to **SDG1, SDG4, SDG5, SDG16**.

In **Kenya**, **AkiraChix** aims at expanding participation and access of IT by young women, in Kenya, thus contributing to increasing their socio-economic ability. The project specifically targets vulnerable young women from low socioeconomic backgrounds in order to promote their economic and financial independence. **codeHive** is one year fully funded hands-on technical training program that provides education and economic opportunity to young women between the age of 19-24 from socio-economically disadvantaged backgrounds. These young women are those that have completed high school but due to financial constraints are unable to further their education. Essentially, this program aims to develop their capacity and skills in computer literacy, software development (for both mobile and web applications), hardware & product design, graphic design, entrepreneurship, life skills, communication skills, and professional development. Through codeHive, we envision changing the narrative for young women in the following ways: (1) Train 50 young women in technology-based knowledge and skills to prepare them to take up tech-based jobs. (2) Connect 30% (up from 20% last year) more young women to job opportunities to advance their career trajectories in the technology sector. (3) Enable project beneficiaries to improve their economic situation by 4 times to be able to support themselves and their families. (4) Increase and/or significantly improve the perception of technology for women particularly in institutions of learning as well as in the communities that targeted beneficiaries come from.

The project is relevant to **SDG1, SDG5, SDG8, SDG16**.

In **Kenya**, I am a Google Digital Skills trainer from Emobilis Mobile Technology Institute. I started training in 2017 and this has helped me achieve my social entrepreneurship goals of helping youths, women and underrepresented groups in the society. **Google Digital Skills** aims at training people in Entrepreneurship and the digital platforms.   After one year in the program I came up with an idea of starting a small company where I aim at empowering women in tech and entrepreneurship. I started **EntTech consultancy** to offer mentorship, consultancy and training to women in tech and how they can link with the jobs available.   I have been able to connect with different groups like W4 voices of hope in Kajiado where I offer mentorship, Nakuru Muslim Women, I volunteer with GDG and WomenTechMakers Eldoret community to see that girls get the skills they need in ICT, I took part in organizing a very successful Girls 'in ICT event this year at Safary Alpha and I do full time mentorship to Mobigalz in Westlands.   Our target is girls from high school to people who are employed.   Our objectives is to impact, empower and engage.

The project is relevant to **SDG5, SDG8**.

Google Digital Skills

g.co/digitalskills

In **Lesotho**, **BasaliTech** aims to bridge the gender gap and increase female participation in STEM through science and technology training and mentorship and to improve science and technology education for all children, male and female by innovative and exciting projects to get them started at a young age and give them access to science and technology resources[**GirlsWhoCodeLesotho**]. Our target audience is young girls in STEM courses in Lesotho universities and colleges, young girls about to transition into universities, young girls (14–18) and children (6-13). We aim to train 10000 young girls and children by 2030. To increase the number of women in STEM and help them occupy some of the 261 000 jobs posted in 2018 (https://cyberstates.org). To help them become valuable community leaders by exposing them to technology and mentoring. Why girls and children?   •   Our focus is on girls so that our sisters, nieces and aunties who grew up thinking that science and technology is for boys/men to learn that they can take part too, as their intellect can too impact society and the nation for the better. And to break the vicious cycle for females who are intimidated by the current already low participation.   • introducing science and technology to children at a young age, will spark an interest in both girls and boys which may lead to a balance between the males and females that will participate in STEM in the future, as the stereotype will have been broken while they are still young and curious.

The project is relevant to **SDG5, SDG9, SDG16**.

In **Liberia, the Independent Dames Endeavor (TIDE)** is a non-government organization that is making a concert-ed and conscious effort to encourage women to take their destinies in their own hands through free computer training programmes and campaigns against gender-based violence. TIDE's target audience is high-school students, community youths and university students.

The project is relevant to **SDGs 4**, **5** and **16**.

The Independent Dames Endeavo

In **Malawi**, **mHub** is Malawi's first technology Hub. It trains, men-tors, incubates and accelerates emerging innovators, promoting digital skills to build sustainable technology solutions. The target audience of mHub is children, girls and young people aged 7-35. The main objective is to enhance digital skills among this group so that they can transcend the role of technology consumers and become creators. Activities include: Children's Coding Club, with over 2000 children having been trained to develop animations, games and mobile applications; Girls for Code, with over 4000 girls receiving training in basic computer skills in order to develop games, websites and mobile applications; Robotics Club, which provides training to girls in the basics of robotics and is Malawi's first robotics club; Social Entrepreneurship Boot Camps, at which girls are trained to develop sustainable business models; and Impactathon, a social entrepreneurship challenge for young people to pitch and develop social- impact business ideas further.

This project is relevant to **SDG 4**.

Also, in **Malawi, Children's Coding Club** is a programme run by mHub as part of its mission to introduce computer skills to children between the ages of 6 and 17. It is held at mHub's premises in Lilongwe every Tuesday and Thursday. The children are taught coding skills using programming tools that were specially designed for the purpose of teaching children and to facilitate basic application development. Currently, the training makes use of MIT Scratch and Snapp. Scratch is a visual programming language.

The language is used by students, scholars, teachers and parents to create games easily and provide a stepping stone to the more advanced world of computer programming. It can also be used for a range of educational and entertainment purposes, including Math and Science projects, simulations and visualizations of experiments. Interacting with Scratch will help children to develop skills that can be applied in different areas of their study.

This project is relevant to **SDG 4**.

Also, in **Malawi**, **Girls for Code** is another mHub initiative. It aims to equip girls with diverse ICT skills, including programming, block programming, mobile application development and website development, photography and graphic design. Girls are trained to use the MIT App Inventor to develop mobile applications, and HTML and CSS to develop websites. The programme

has been running for more than two years and has reached out to 1000 girls and sparked their interest in the innumerable disciplines that incorporate the STEM fields.

The Girls for Code programme has recently partnered with the Girl Up Club, with which it shares common interests in empowering the girl child.

The project is relevant to SDGs 4 and **5**.

Also, in **Malawi**, **TakenoLab** is an ICT school for refugees and the host community living in and around the Dzaleka refugee camp. It focuses on computer programming and business entrepreneurship. Remy Gakwaya is a Burundian refugee residing in the camp. He is a natural born entrepreneur and has built his own coding organization, originally using paper cut-out keyboards when he had no access to computers. After the launch of connectivity and AppFactory in the camp, he and his company took on a new initiative to attract 100 women to coding.

They performed a feasibility study and are now running twice weekly programmes, with class sizes of over 50, for women in the camp and its surrounding villages. He does this work with very little financial support but with purpose, knowledge, drive and a sense of community. He is a true game changer. The project is relevant to **SDGs 4** and **5**.

In **Malawi**, **Youth Business Movement** a leading youth community-based organization under Chiponde Business Group working for the capacity development of youths and women that turns job seekers to job creators [**ICT Village Education and Development Initiative**]. It was also established in order to create a resourceful networking database for those with a strong interest in entrepreneurship and introducing business startup, Innovation and Good Governance in the capacity of youth in Malawi for developing positive leadership skills and to espouse an honest work ethic. Youth business Movement Initiative was established on 2016 serving vulnerable Youths and women affected by education and promoting youth and women entrepreneurship and enterprises through the provision of business incubation services and innovation programs. Broadly, the empowering youths for improved employability in decent work and sustainable entrepreneurship in Malawi project is designed to offer youths development service in the area of entrepreneurship and enterprises through provision of business incubation services in the key focus areas of agriculture, innovation, interior designing and ICT. Our vision is to improve youth, student's achievement by using ICT in new and creative ways, encouraging variety in the way the curriculum is delivered to inspire wonder and awe in our students. We hope to provide a curriculum which prepares students for the

demands of the technological world of the future. We want to use ICT in innovative ways to enhance attainment in our students and to support the development of a more tailored and diverse curriculum which enhances students' creativity and exploits opportunities to inspire wonder and awe within them. We want to use ICT to engage students in the concept of the global village and challenge how they see themselves within this world. We want to be open to experimentation with new technological developments and working styles which could enhance the service we provide. The project is relevant to **SDG5, SDG16**.

In **Mauritius,** the National Computer Board (NCB), operating under the aegis of the Ministry of Technology, Communication and Innovation, is implementing **the Digital Youth Engagement Programme (DYEP)**, which comprises the provision of introductory courses 15-hour training on coding to youngsters, including primary school students as early as Grade 4 and Grade 5. Training sessions are provided in NCB Cyber Caravans, which proceed to various primary schools around the island. It is expected that this initiative will, in the long run, contribute towards creating an adequate and di-versified talent pool to fill the increasing number of technology jobs that will open up in the future and drive the growth of the ICT sector.

This project relates to **SDG 4**.

In **Nigeria, the Tech Girls Advocacy Program (TGAP)** de-livered digital literacy training and enhanced the creative skills of 100 adolescent girls using digital technology, media and the arts. It also provided a platform for girls to raise awareness of issues pertinent to them using their digital creative skills. The programme was unique in its focus on adolescent girls who are often left out of development-related dialogue and interventions. TGAP worked to teach girls how to use digital technology, coding, film, photography, creative writing, and digital painting/ illustration to make girls' voices count.

TGAP trained girls to advocate for issues that affected them in three thematic areas: gender-based violence, child early or forced marriage, and girls' education. The programme also promoted girls' civic engagement on social media using the #TechGirlsAdvocacyProgram #TGAP campaign to mobilize community action on is-sues affecting girls.

The project is aligned with **SDGs 3, 4, 5** and **10.**

Also, in **Nigeria, ARPG Tech** has invented a low cost solar-powered obstacle detector robot to improve children's learning performance in physics and mathematics. The product is sold to schools with instructions, with a support service provided by a team of experts in rural and urban communities. A significant number of schoolchildren, namely 125 children over two months, have benefited from this service to train a solar obstacle detector robot.

The company also provides digital marketing training to women entrepreneurs in the National Youth Service Corps so that, after a one-year service period, they can find mentors and placements in digital marketing companies within their catchment areas. ARPG Tech also runs basic ICT training for women retirees and women aged 55 or older, to foster their interest in using technology to maximize their productivity. The project is relevant to **SDGs 4** and **5.**

Also, in **Nigeria**, **Reborn Initiative** is an educational and entrepreneurship residency programme for women and girls in rural areas of Delta State**,** where they can study, learn a trade and develop their confidence. These women and girls face oppression in the form of gender poverty, violence and marginalization. They are not encouraged to study, or work and harsh cultural practices prevent them from achieving their potential. At Reborn Initiative, these women and girls reside full time in a supportive environment, where they can develop their own unique academic and creative talents.

Our main strategy focuses on formal education for children, community programming and advocacy, vocational training, social change programmes and seminars, and mentoring. Over 500 women and girls have been empowered, in their professional and educational lives, through the Reborn Initiative.

The project is relevant to **SDGs 1, 4** and **16.**

Also, in **Nigeria**, **TechHer** is a project to create a hub for women in technology to learn, network, develop skills and support each other to grow as a community. The project aims to harness the intrinsic community-building, collaborative abilities of women to form networks and alliances to foster development at the local, state, and national levels. TechHer exists to demystify technology and to provide safe spaces for practical learning and economic advancement. It provides a response to gender inequalities in the technology industry and society at large.

Women in the TechHer community have, among other things: forged new business partnerships within and outside of the group; found new jobs as a result of the opportunities shared; learned new skills (coding and web

development/management); and aligned their businesses with legal requirements via the business/legal classes offered.

The project is relevant to **SDGs 3, 4, 5** and **8.**

In **Nigeria**, **the ICT for Community Development initiative** aims to educate and develop the mental capacities of pupils in public primary schools under six different local governments in Oyo state. The Oyo state government, under the leadership of Governor Alao Akala and in conjunction with the State Universal Basic Education Board of Oyo State has replicated the project in 27 other local government regions. Before the inception of this project, public primary school pupils in Oyo state were not taught computer science. The ICT for Community Development initiative was rolled out at 30 different pri-mary schools in Oyo state before the state government took over the project and replicated it in all local government regions in Oyo state.

The project is relevant to **SDG 4.**

In **Nigeria, the Gender Mobile initiative** is an accessible intervention platform designed to provide specialized support services for girls and women who are survivors of social injustice. Gender Mobile is leveraging technology in the form of a 24/7 dedicated mobile telephone helpline and a web platform where potential victims and survivors can reach specialized agents who are ready and able to provide the help they need. The initiative combines a phone-based helpline with a web and online chat interface that provides survivors with comprehensive information, assistance and long-term help.

Another component of Gender Mobile's work includes connecting victims and survivors to livelihood support opportunities to foster their self-reliance. Another long-term initiative is the Adolescent Hub Project, designed to raise awareness among adolescents in secondary schools and universities of matters relating to various patterns of violence.
The project is relevant to **SDGs 4** and **16.**

Digital Balance for Better
In **Nigeria**, the mission of **Girls Education Mission International** is to support girls and women in reaching their potentials focused on defending, protecting and promoting their right to education. Girls Education Mission International reaches out to and advances the circumstances of girls who are deprived of education and training opportunities to reach potentials and

attain a better life. Our specific objectives are: 1. Improve access to education. 2. Support reproductive health and well-being. 3. Identify and support girls and women who have suffered discrimination, violence and abuse. The project is relevant to **SDG5**.

In **Nigeria**, **Magvoile Vocational Center** is a capacity building institute located in Kaduna, aimed at addressing youth/women unemployment and poverty by providing technical training, community development programs to individuals so as to improve their economic independence with sell-able hand-on skills. At Magvoile Vocational Center we do believe that the development of vocational skills is critical not just to the growth and development of individuals alone but to the nation at large. We offer our trainees quality practical and theoretical skill training programs, preparing them to meet the challenges and needs of the Nigerian market by inculcating in them skills that meet global standards. We run the widest selection of creative vocational and entrepreneurial courses using NBTE curriculum, our instructors and resource persons are professionals in various skills and teaches with utmost professionalism and deep passion not compromising standards. Furthermore, at Magvoile Vocational Center we are also consultancy services and community development initiative, with our subsidiary company Ronex Consult. The project is relevant to **SDG5, SDG9, SDG16**.

In **Nigeria**, **Aniwura Enhancement Foundation** is a non-profit social enterprise that develops and provide mentoring, financial and business support for the Nigerian youths with focus on Technology. They have designed several year round social entrepreneurship and technology innovation programs that will enable the Nigerian youths to form and transform their ideas into impactful interventions by harnessing the power of technology. They have organized different programs vary from AEF Scholar program, the upcoming AEF Community Interest Technology and Entrepreneurship Fellowship Program. They have a continuous weekend free training programs in different areas of tech. They have trained over 700 young boys and girls for free in different skills and still counting. They also have residency for youths whose income will not be sufficient for logistics like transportation. They feed well over 20 youths at every point who are undergoing training at their training centre. This are youths whose parents cannot afford the cost of transportation etc. The project is relevant to **SDG5, SDG16**.

In **Nigeria**, it's important to develop women's expertise in technology in Nigeria because it's been an area that for too long has been neglected. If we are going to move forward as strongly as we would like and keep in step with other developing countries, then it just makes good sense to develop women in digital skills. **Blue Sands Academy** decided to train Nigerian

girls in leadership in technology. My organization is passionate about developing technology skills among women. I am worried that Nigerian females are not exposed to technology training like their male counterparts. The ratio of male to female studying and practicing engineering and other technology related courses in the country is widening daily. Blue Sands Academy which is an intervention educational center in Kaduna state Nigeria provides top notch digitized education to young girls and women. This organization also train female teachers in the community on how to be a 21st century digital teacher, we also deliver STEM education to young girls and also build the future female Tech entrepreneurs by developing Apps to solve problems in their communities. Blue Sands Academy targets young girls and women in Kaduna and also girls that have dropped out of school. Our major objectives are to create a free tech space for girls in Nigeria that will become the tech Icons of tomorrow through technology for education and innovative teachers and processes. We pride herself over innovative learning processes and a safe environment for young girls and women to explore all their technological potentials. We also aim to build the 21st Century girl child through digital learning in enabling a shift from trans-missive pedagogies (old way of teaching) to trans-formative pedagogies (21st century teaching methods) which then translate into a technological enabling environment for young girls and women who are denied access to information technology space due to gender reasons. The project is relevant to **SDG4, SDG5, SDG8, SDG16**.

Blue Sands Academy
www.bluesandsacademy.com.ng

In **Nigeria**, **The Visiola Foundation** is committed to nurturing, mentoring, and educating high-potential girls and young women in the STEM fields to build a pipeline of leaders and innovators who will help to transform African countries. The Foundation trains, educates, and mentors girls and young women from underserved communities to build their technical skills, analytical ability, and leadership acumen. We recognize the importance of bridging the gender gap in STEM; while enabling the marginalized to exercise their agency for the common good. Our after-school STEM Clubs for Girls are customized around the core foundational literacies, competencies, and character qualities required for success in the 21st century. The content of our programs is designed to complement the academic instruction taught at schools, with emphasis on Science, Technology, Engineering, Math and English. The program has been expanded in 2019 to train 1,000 girls attending 20 government secondary schools. It is teaching girls Full Stack Web Development, Mobile App Development, leadership, and entrepreneurship. Our STEM Camps for Teenage Girls teach students valuable skills in critical thinking, problem solving, and teamwork, as they are taught to view the world through the lens of the STEM subjects. Students learn to build and program robots, electronics, and mechanical structures. Our Coding Boot Camps for Girls teach young women aged 17 – 25 how to code as a foundation for future careers in software development, programming, and tech entrepreneurship. The project is relevant to **SDG4, SDG5, SDG8, SDG16**.

In **Nigeria**, **Dufuna-Fem** (a 6-month intensive training programme) aims to increase the number of women in tech (only 30% of people in tech are women in Sub-Saharan Africa) by equipping ladies with economic-empowering knowledge & skills required to get them into Software Development, Data Science and Product Development jobs. During this programme, scholars go through 5 months of classroom and online training taught by industry professionals, participates in group hackathons and individual projects. The project is relevant to **SDG4, SDG5, SDG8**.
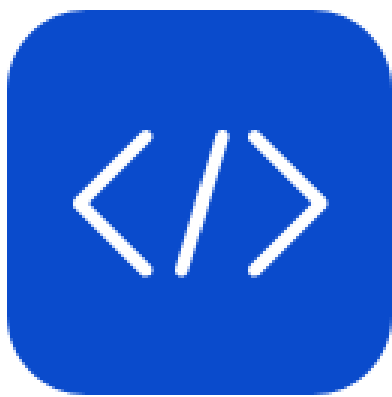
In **Rwanda, Igire Rwanda**, a Non-Governmental Organization, which has a mission to support youth and women to mass skills and opportunities for growth to make sure they are self-reliant. Igire Rwanda Organization is known in the community through empowering women and girls to have access to ICT skills and job readiness. In 2017, Igire Rwanda Organization worked on a projected called girls in ICT which aims to help girls who dropped out of the school because of social problems like pregnancy, family conflicts and poverty to basic computer literacy, professional competence and entrepreneurship. 25 girls were selected to participate in 3 months' intensive boot camp, and the finalist of the program was offered job opportunity by JUMIA FOOD company a big online selling company in Rwanda.
The project is relevant to **SDG1, SDG3, SDG4, SDG5**.

In **Rwanda**, to be the leading service providers of building management systems in Africa and training fresh Engineers from institutions practical skill with this strategy, we target to improve security, increase profits and empower young engineers with practical skills [**BM Investment Ltd**]. This will enable them to secure great job opportunities within construction companies especially majoring in Mechanical, Electrical and Plumbing, to enable people realize the beauty of a digital and smart solutions. We are targeting 1000 great companies minimally. The project is relevant to **SDG5, SDG9**.

BM Investments

In **Senegal, JJiguene Tech Senegal**, the first women network in technology in Senegal, aims first to encourage, inspire and initiate more Senegalese women to integrate the IT ecosystem through networking, training, mentoring and knowledge sharing. We are promoting STEM for girls at school, for professional women at work and for female entrepreneur. We train them on how to use technology to improve their business.

The core team consists of four passionate women about technology, recognizing its impact on the current and future generations, especially measuring the importance of women in the development in Senegal even in Africa. This team has always been there and willing to support the IT communities in their volunteering role of organizing, sharing and popularization of IT knowledge."

The project is relevant to **SDG4** and **SDG5**.

Also, in **Senegal**, **Volkeno** is a digital company based in Dakar, Senegal. We train students and professionals in 4 areas: Web Development, Mobile Development, Digital Marketing, Graphic Design, and Business.

They have two technology training models led by experienced coaches.

1.   Bakeli - Short training: it concerns professionals and young graduates. The training lasts 3 months and at the end you have a certificate.

2.   Bakeli - Diploma course: it lasts 2 years and delivers three types of diplomas: CAP, BEP and BTS.

Volkeno is working to address two needs at once: young people's need for training and digital start-ups' need for skilled workers.

The project is related to **SDG4** and **SDG8**.
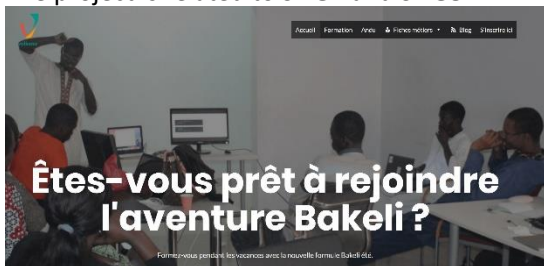
Again in **Senegal**, **Festic** has enabled a platform where women in the IT and telecom ecosystem meet, network and lobby for the leadership of women in the public and private sector Members have found themselves promoted to leadership role in their organization Through this organization women has gain access to financing programs for their projects Has encouraged the government to nominate women in strategic positions in the media and IT sector and on top of that a women at the ministry of post and communications Has organized networking events where many organizations in the IT and media, and the ICT ministry have joined has a mentoring program for girls They have created opportunities for the girls in ICT, most of them IT programming, to meet the President and access financing programs Has provided trained in leadership and Technology (how to use tech) for adult and young person's Members are invited on behalf of Festic to major events national and international.

The project is related to **SDG5**.

In **South Africa**, **Taungana** is a movement that provides rural high school girls in the Southern Africa (starting with Zambia, Zimbabwe and South Africa) with an opportunity to explore the fields of Science, Technology, Engineering, Entrepreneurship and Mathematics (STEM). The main objective is to contribute to equal representation in STEM fields by developing programs that address socio-economic and gender barriers to engagement in these fields. Taungana targets high school female students with high aptitude for math, science and application of STEM for community development. An excursion, entrepreneurship and skills exposure bootcamp occurs annually where students spend 7 days visiting STEM industries, meeting and interacting with STEM female professionals for mentorship. The organization also conducts future skills sessions, career planning and tertiary readiness workshops for rural based high schools.

The project is related to **SDG4** and **SDG5**.

Also, in **South Africa**, **WomEng** is an authentic values-driven organization for women in engineering by predominantly women engineers who have developed programme to address the issues facing women in the engineering sector from school level all the way through to industry. Being a dynamic organisation, WomEng has been able to meet the changing demands and needs of the global engineering industry.

WomEng has been able to deliver cost effective, impactful programming and has a successful track record spanning over 12 years in developing programme that work. It is a financially transparent organisation, with a strong board of directors. WomEng's unique model ensures lasting impact created by passionate and committed people.

The project is related to **SDG4, SDG5** and **SDG16**.
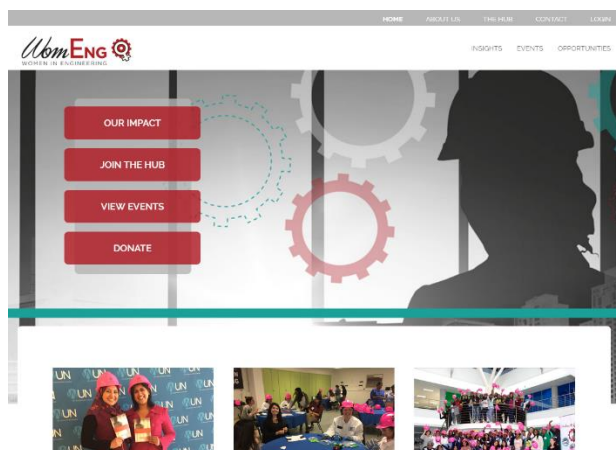
Also, in **South Africa**, **mLab Southern Africa** builds Africa's most vibrant tech innovation ecosystem through communities, code, lean innovation and start-up Labs. mLab SA was launched in 2011 as a mobile technology laboratory and incubator. Since then, it has grown to provide tech skills development training, and has broadened its mandate by adopting a hybrid model – skills for incubation and acceleration.

From its base in Tshwane near Pretoria, mLab has launched programs in three townships throughout the Gauteng province (which includes Pretoria and Johannesburg) as well as other cities like Cape Town in the Western Cape province. This year, the organization will continue its expansion into three other more rural provinces, primed for building new digitally focused ecosystems.

Along the way, the mLab's leadership team has taken an iterative and agile approach to provide tailored support

to different stakeholder groups and remain demand-focused in each new location.

The project is related to **SDG4**, **SDG8** and **SDG9**.
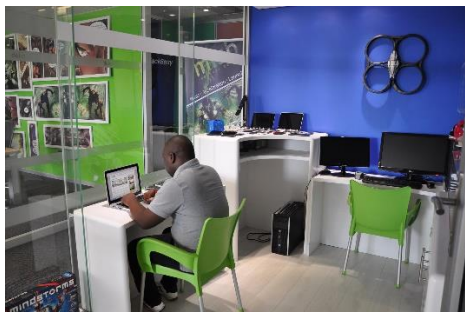
Again, in **South Africa**, **Geekulcha** creates and enables platforms for Innovation and Creativity while exposing young talent and skills to the corporate world. Born out of a Facebook Group (INNOvatorz.IT), Geekulcha seeks to build a strong Geek Culture in South Africa to realize a state of more Producers than Consumers. Geekulcha is where the young, skilled, creative and ambitious tech minds meet to connect with each other, share knowledge, collaborate on projects, network with industry leaders, obtain training to further improve and enhance their skills and to put that newly acquired skill to work. The platform has over 9 400 students across Africa.

The project is related to **SDG4, SDG5, SDG8**.
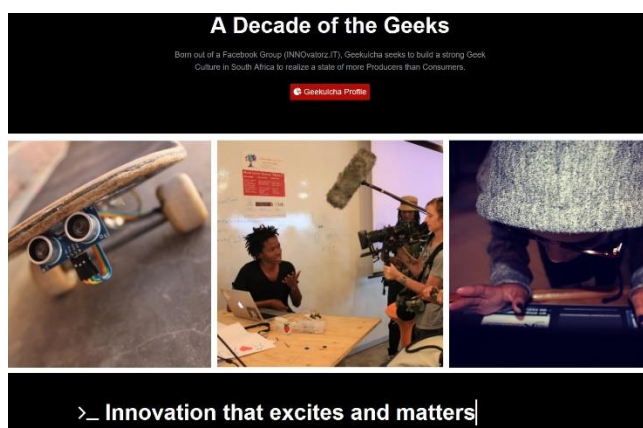
In **South Africa, OUTREACH SOCIAL CARE PROJECT** has produced changes in attitudes and increased knowledge and skills which equipped and motivated the community and individuals to continue providing services to girls and young women after the project has end. To scale up and strengthen the activities, more involvement of the beneficiaries and their communities from planning to completion ensuring that they take active role and ownership in the project so that sustainability can be ensured. The Project has used ICT literacy to bring about meaningful changes in girls and young women's daily life. We desired to see the girls and young women at the centre of the project for sustainability and accountability. The Project has involved all the stakeholders including the communities and the beneficiaries which are keys to project success and project sustainability to take the ownership of the project. To be empowered to take control of their lives, and the successful project being replicate elsewhere. The monitoring tools has been put in place such as reporting, monthly meetings, project visits and advisory meetings has been held regularly and information has been channelized to the review the progress of the project with all stakeholders including the primary beneficiaries. Monitoring and Evaluation Officer and facilitators compiled weekly reports including a detailed description of training attendance, full participation in the project, home visits, family situations; challenges faced and required follow-up steps.

The project has directly interacted with 1000 girls and women monthly with the support of 10 facilitators, monitoring and evaluation officer and intents to interact with the larger community through mass social media, in future upon acquiring funds to sustain the activity. We value the power of communities. We know that by working together and building capacity, we can achieve the greatest goals and ultimately make contributions that benefit people at the very bottom of the economic pyramid.

The project is related to **SDG4** and **SDG5**.

In **South Africa**, **XL Africa** is a pan-African programme designed to support later-stage technology start-ups that are ready for growth and scale. Africa Excelle is a unique acceleration programme designed to support high-growth digital businesses operating in French-speaking Africa. It is working with companies that already have a product or service in the market, that are starting to make significant sales, and that are looking to raise from USD 250 000 to USD 5 million. The idea behind l'Afrique Excelle is to support francophone African start-ups that have the potential to become globally competitive, and to have disruptive impacts on day-to-day life and the economy through their tech solutions.

This programme aims to help with access to funding, networks, mentoring and a community of like-minded entrepreneurs. It can also help refine a business model, grow revenue and market share, and accelerate cross-border expansion.

The project is relevant to **SDGs 8** and **9**.

In **South Africa**, **Code for Cape Town (Code4CT)** is a programme that introduces young girls to basic web building skills and exposes them to opportunities in the Information and Communication Technologies (ICT) sector. Participants are trained in web development, design principles, as well as courses in professional development. Code4CT aims to inspire a generation of young girls who are well-prepared with a toolkit of technical and soft skills in order to achieve high impact in the workplace.

These are skills that everyone should have. Even if you have no intention of becoming a professional coder, you will benefit from knowing how to think in this way in this increasingly computerized economy. A growing number of permanent job positions that use information technology to deliver a product or a service are becoming available in the local economy. It is estimated that nearly 75000 such jobs will come online in South Africa within the next five years. These digital jobs will mostly be driven by the ICT, Business Process Outsourcing (BPO), and the financial services industries. These are the fastest growing sectors in our economy. They are also the sectors that have the highest demand for entry-level digital skills.

The project is related to **SDG4** and **SDG5**.
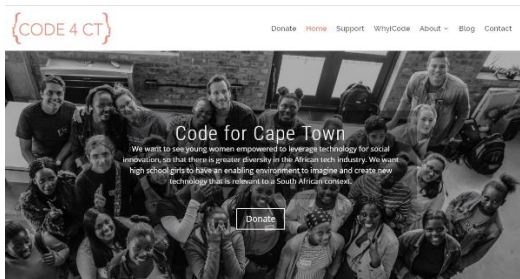
In **South Africa**, **CODETRIBE™ ACADEMY** is a full-time work-based skills development programme for aspiring mobile application developers. It is a practical, blended learning programme, focusing on Mobile Solutions Development, SCRUM Agile and Cloud technologies which aims to drive South Africa's digital advantage within the mobile innovation sector and ensuring transformation and inclusion of youth within this important sector.

Industry partners are invited to sponsor a participant from only R25,000 for a 6-month full time course (April - September) and can engage with mLab on the benefits of donations and B-BBEE scorecard value. Sponsors will also have recruitment opportunities post training.
The project is related to **SDG4** and **SDG8**.
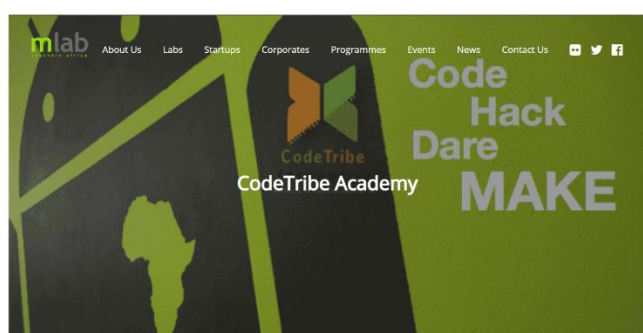
In **South Africa**, **Code for Cape Town** introduces high school girls to coding and creative problem solving with the purpose of encouraging young women to enter STEM-related career and study paths. It's Code Space's technology that enables a learning environment that's radically different to traditional classrooms: our online learning portal provides an adaptive learning experience, directing students to the content required to meet project requirements, while our blended learning approach shifts lecturers from content delivery to learning facilitators – reducing the cost of education while improving the quality of outcomes. We've developed a tool for identifying talent and this allows us to direct learners into the best-suited study and career paths. As a provider of high-quality tech education with the vision of enabling young South Africans to leverage technology to drive innovation, CodeSpace powers Code4CT. On a practical level, this means training young people to enter the ICT industry – from introducing learners to coding and robotics at high school level to offering full-time programmes in web development enabling young professionals to become industry-ready, innovative thinkers. CodeSpace scales the impact of these programmes by working with partner organisations to enable them to be able to integrate coding into their existing educational services, and through a uniquely scaleable model can reach an unprecedentedly wide audience. The project is relevant to **SDG4, SDG5**.
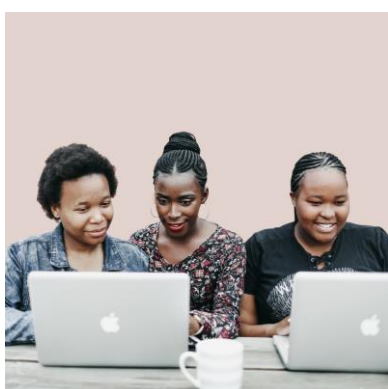
In **South Africa**, **GirlCode** is a non-profit organisation aimed at empowering young girls and women to have the confidence to pursue a career in software engineering through their various initiatives. GirlCode has been operate for the last 5 years where they have hosted successful hackathons every women's month with varsity/college level female students who have then received job opportunities from the hackathon sponsors. Some of the other activities include monthly workshops for females who have no background in coding but are keen to learn the basics, as well as weekend coding clubs for high school girls. The project is relevant to **SDG5, SDG16**.

In **South Sudan**, **The #TTOSICT project** empowers women and girls in STEAM (Science, Technology, Engineering, Arts and Mathematics) courses. The first of its kind in South Sudan, a country that has been affected with conflict and the issue of girls and women education is still a great challenge especially in Technology related professions that are looked at as a male thing. The #TTOSICT project is not a novel idea but it is an innovation that is tailored to suit the context of South Sudan; aimed to encourage girls to stay in school through creative problem solving using technology for like programming with SCRATCH; and through the ICT challenges that come with prizes like school fees that supports the girls' education especially those who might have dropped out as a result of poverty. The Time to Shine ICT #TTOSICT project is supported by UNDP South Sudan The project is relevant to **SDG5, SDG16**.

In **Uganda**, **Mobile Money Access Programming Interface (API)** is an open platform that enables developers and programmers to get free access to an MTN Mobile Money proprietary software platform. MTN Mobile Money is the most widely used mobile money platform in Uganda. Developers can now access it, create products that ease payment options and leverage the 10 million MTN clients registered on Mobile Money. This is an exciting development for the Ugandan start-up ecosystem. Innovators will now be able to develop applications that ease the customer experience in terms of Mobile Money payments. The company hopes that this move will spur innovation in the developer community around the country because this is the first time this is being done in Uganda.

In January 2018, MTN Uganda and Consultative Group to Assist the Poor (CGAP) entered a partnership intend-ed to drive customer growth and activity by facilitating a wider range of mobile wallet applications for all customers through open APIs. According to CGAP, open APIs have the potential to further drive financial inclusion, which is already being accelerated by the usage of Mobile Money. The project is relevant to **SDG 8**.

In **Uganda**, **Uganda Computer Aid** is an amazing initiative implemented by Musabe Foundation. Uganda Computer Aid is active in the field of Information & Communication Technology in the remote, disadvantageous region of the Rwenzori Mountaions bordering the Rain forests of Democratic Republic of Congo. Uganda Computer Aid promotes Digital literacy and bridging the digital gender gap in   the   rural   areas.   Uganda being one of the world's developing countries, it has limited technology, a high rate of digital illiteracy, Gender Technology Inequality, Technology discrimination of disabled children (Blind and Deaf). Uganda Computer Aid saw the need to impart (I.C.T) modern technology skills into all the Ugandans, the major target groups of this project were girls, women, disabled people and children with disabilities (the blind and the deaf) in the remote, disadvantageous region of the Rwenzori Mountains bordering the Rain forests of Democratic Republic of Congo.   Below are the objectives of the Uganda Computer Aid: To motivate girls, women and the disabled children (blind and deaf) to take on technology opportunities.   To make ICT out reaches in schools in remote mountainous areas for girls, women and the disabled children to access ICT skills. To break the barriers of gender ICT equality. The project is relevant to **SDG1, SDG4, SDG5, SDG16**.


In **Uganda**, **Fundi Girls** program is one of the popular programs at Fundi Bots established in 2017, which aims at increasing the number of girls accessing our STEM program. On this program, the girls are empowered to become champions of their own learning through the robotics science tool. They learn to build robots and practical projects using the tool; they acquire skills required for learning science in school, working and managing teams, become critical thinkers and innovative towards solving problems now and in the future as well as confidence in choosing careers in science and technology fields. The program particularly targets girls in rural areas within the country and the region as well as female science teachers. The project is relevant to **SDG4, SDG5, SDG9, SDG16**.

In **Uganda**, **The Smartup Factory** is an innovation hub and a skills training center currently operating in Uganda and Ethiopia, targeting marginalized youth between the ages of 17 and 26. It offers young people free-of-charge 4-month long training programmes, which includes classes in topics such as computer skills, coding, fashion design, entrepreneurship, photography, arts and crafts, and more. The content is largely driven by the youth and their interests, and the youth also take charge of facilitating many of the classes and become mentors for new Smartup Factory students. The project pays particular attention to empowering girls and women and bridging the gender gap and aims to reach the most marginalized and vulnerable youth in the communities it serves. The project started in 2016 in Kampala, Uganda, and it has since expanded to 7 hubs in Uganda and 2 hubs in Ethiopia. In Uganda over 5000 and in Ethiopia over 1000 youth have graduated from the training programme. Over 60% of the participating youth are young women. Around 1000 businesses/community initiatives have been started as a result of the Smartup Factory programme.
The project is relevant to **SDG1, SDG2, SDG4, SDG5, SDG8, SDG9, SDG10, SDG13, SDG17**.

In the **Untied Republic of Tanzania**, **Mobile Computer Lab** is a program under PEN Tanzania, established in the year 2016 with its main focus on teaching girls in public primary school on basic practical computer knowledge (ICT), computer coding and introduction to robotics. We teach girls from class five to seven who belong in the age group of 11-15. Mission Prepare a generation of girls through ICT training with the purpose of creating equal opportunity and bridging the existing gap.
The project is related to **SDG4** and **SDG5**.
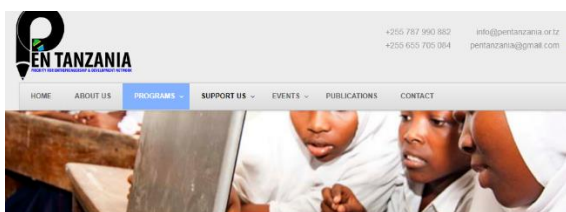
MOBILE COMPUTER LAB

In the **Untied Republic of Tanzania,** In Tanzania the gender gap in STEM subjects is still very wide with females lagging far behind males." SHE Codes for Change, a Tanzanian tech mentorship project aims to close the gender gap in the technology sector by educating, inspiring and equipping high school girls with the skills and tools for innovation and social change. She Codes for Change (SC4C) works with partners to inspire, educate and equip girls with computing skills. Our mission is To expose more girls in Africa to technology at a young age, to amplify impact in the continent and world at large.

She codes for change works with girls aged 13-19 years of age, the objectives are to inspire them to choose STEM as field of study and later venture into STEM careers. We take completely beginners and run them in a four weeks program where they choose to either of three programs namely web development, game development and makertronics. In the third week they work on projects in teams of five students and they make prototypes of their development and present at the final day of the graduation.

We also teach them in public speaking skills in terms of pitching projects and provide industrial visits that act as inspiration of what their future could look like. We also call in role models who give speeches that inspires the girls."

The project is related to **SDG4** and **SDG5**.
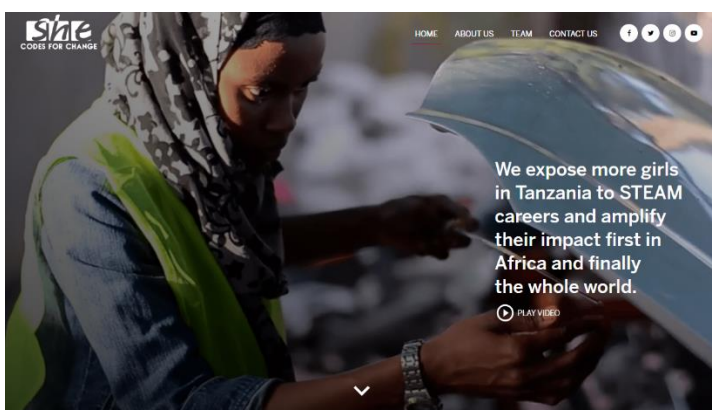
In the **Untied Republic of Tanzania, Tanzania Girls in ICT** program is an initiative looking to nurture young girls to develop interest in Information and communication Technology (ICT) at early stage of their careers through teaching them basic ICT skills. The initiative is structured in such a way that young girls can build foundation in basic ICT skills by learning early stage programming skills and work in teams in small projects.

For a long period, technology in Tanzania has been considered as a male-dominated industry, this starts in schools. In the past, there was a huge push for men to get into technology than women, there are also not a lot of role models in the industry for women to look up to, and so females are not as encouraged to get into the industry. This initiative seeks to provide relevant information and exposure to the industry to female Secondary school students and inspire them to pursue the industry. Since having a technical skill-set is in high demand and considered as an added advantage regardless of whatever field one might end engaging in, this program aim to begin as early as secondary schools when girls begin to define their career journey to spark their interest in tech industry so as to contribute to the vibrating growth of economy through technology innovations.

The initiative targeted girls in Secondary schools specifically Form 3 aged between 14-17 years as we believe that in this stage girls are required to choose their career tracks, it is the right time to influence their decisions and encourage them to choose science subjects which will in turn give them opportunities to pursue ICT studies on their tertiary education.

The project is related to **SDG4** and **SDG5**.

In **Tanzania**, the renewable energy project aimed at: (1) Enhanced capacity of communities on Renewable Energy; (2) Access to renewable energies; (3) Information on Renewable Energy documented and shared. The adoption of alternatives sources of energy was high, the following were achieved: •   Biogas interventions minimized the use of firewood, fuel for lighting and provide employment to youth of constructing, maintenance and repair of biogas. • Improved Cooking Stoves (ICS) reduced women workload of consuming more time looking for firewood, students spent most time for studies, health of women and children are improved because smoke is going outside through chimney. • Solar installation and electrification reduced the cost of buying fuel for lamp, it helps student to spent 2-3 hours for private studies, security have improved because of lighting. • Employment creation: through Renewable Energy intervention, youth employed as barbershop, technician and solar shops also women employed in entrepreneurship activities. • Networking: Increased networking and collaboration between TAGRODE, local Authority and RE companies. The project is relevant to **SDG7**.

In **Tanzania**, **Apps and Girls** is a Tanzanian social enterprise that empowers girls to create the world they want to live in by using technology. At Apps & Girls, we give girls the skills and a platform to become effective tech-entrepreneurs, including high-quality software and hardware programming. We focus on girls and young women from underprivileged backgrounds, in secondary school, university, or out-of-school, as our mission is to reduce the gender gap in ICT and empower more change makers in Tanzania and across Africa.

Apps and Girls' overarching objective is to invest in young women as potential tech entrepreneurs, tech creators, tech role models, and leaders, in Tanzania and across Sub-Saharan Africa.

Apps & Girls seeks to bridge the tech gender gap by providing quality coding training (web programming, mobile app development game development and robotics) and entrepreneurship skills to girls in secondary schools via coding clubs, and to university level students at academic institutions. Apps and Girls also organizes holiday events such as hackathons, bootcamps, and competitions and provides internships opportunities.

Apps & Girls also provides high class mentorship (from local and international mentors) to girls to create tech startups, connect them with jobs and internships and a 3-year incubation to emerging young female TECH entrepreneurs and use our network to promote their work to customers, partners and potential funding opportunities.

The project is relevant to **SDG5, SDG8, SDG16**.

Also in **Zambia**, **WECREATE | ZAMBIA** serves as an entrepreneurial community center for women interested in starting or expanding an existing business. The Center provides mentoring, business connections, specialized training, connections to the community, media attention, access to markets and capital along with the technical tools and resources necessary for taking any business to the next level. Since inception, the Centre's interventions have resulted in creating more than 2,743 jobs directly and indirectly. Achievements include: Over 8,700 new and existing businesses reached; 870 new businesses grown; 2,743 jobs created; 187 linked to business networks and other resource; 104 mentors trained and certified; 56 linked to sources of finance; 11 savings groups and 3 co-operatives affiliated to WECREATE. The project is relevant to **SDG5, SDG16**.

In **Zambia**, **Asikana Network** seeks to increase the number of females working in STEM related careers with a particular focus on Technology. They aim to do this through capacity building and utilization of a network where women can connect and learn from each other. Their target audience include learners in primary & secondary schools, College & University students, teachers from primary & secondary schools, Govt, private sector, other non-profit organizations globally. Their major objectives include building interest in Technology among girls in school by encouraging peer to peer learning, helping more women harness the skills they learn to earn an income for themselves. Some of the major activities they undertake include basic computer usage training for primary and secondary learners, income generation activities such as web and mobile app development projects for the women who train with us, outreach programs to various schools' country wide. The project is relevant to **SDG4, SDG5**.

In **Zimbabwe**, **DIV:A Initiative** is a non-profit initiative dedicated to empowering young girls with coding and development skills. It's the brainchild of Fadzayi Chiwandire, Development Lead at OnePointFour Consulting. She's taken it upon herself to pass on her significant knowledge and experience to her students (Div:as), in order to protect their futures and address the industry's gender imbalance. Our aim is to: Give young girls truly useful and relevant skills to fall back on in the event that they're not able to receive a tertiary-level education. The idea is that no Div:a student should find themselves in the kind of vulnerable position where marrying young is their only prospect after leaving school; Address South Africa's (and by extension SADC's) significant shortage of developers in general; Ensure that women are better represented in the development industry by empowering our girls to go out and correct the gender imbalance themselves; Meaningfully contribute to correcting South Africa's youth unemployment rate by giving young people skills that are in high demand

The project is related to **SDG4** and **SDG5**.

Div:a is a non-profit initiative dedicated to empowering young girls with coding and development skills, in order to protect their futures and address the industry's gender imbalance.

Also in **Zimbabwe**, **Bridging the gender digital divide** is a project that sought to empower female students at the University of Zimbabwe by bridging the gender digital divide. The target audience was 2 916 female students' resident in three University female hostels. The objectives were to a) to create an enabling ICT environment b) to train the basic computing skills (International Computer Driving License), c) to enhance ICT literacy skills. Activities involved setting up of computer labs in three female hostels. Engaged Computer Society to train in ICDL, selected (100)less privileged female students.
The project is related to **SDG4** and **SDG5**.

UZ | University of Zimbabwe
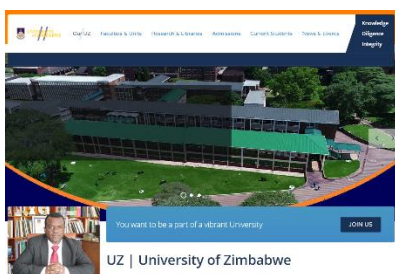
Action Line 5

In **Kenya**, Our objective is to deliver a technology solution to cross-border transfers into and within sub-Saharan Africa, this will result in more financial inclusion in Africa as well as eradication of poverty and allowing the positive contribution to the African Economy **[Cross-border remittances]**. Through our Application, money is sent securely through our mobile and web application and money delivered to recipients straight to their phones or bank account for P2P Cases and straight into Mobile Wallets and Bank accounts belonging to our partners for C2B Models The project is relevant to **SDG1, SDG2, SDG3, SDG4, SDG5, SDG8, SDG9, SDG10, SDG11**.

In **Mauritius**, **Making the Mauritian cyberspace safe** is one of the primary interests to the government. A number of initiatives are being adopted and undertaken by the government to detect, prevent, investigate and prosecute cybercrimes. In line with this, the Mauritian Cybercrime Online Reporting System (MAUCORS) (http://www.maucors.govmu.org) has been established and is operational since March 2018.
MAUCORS is one of the key initiatives of the National Cybercrime Strategy that sets out the government's approach to combat cybercrime in Mauritius. MAUCORS has been developed by CERT-MU, a division of the National Computer Board. It is a centralized system that connects the Computer Emergency Response Team of Mauritius (CERT-MU), the Cybercrime Unit (Mauritius Police Force), the Data Protection Office and the Information Communication Technologies Authority (ICTA). The system allows citizens to report incidents on one platform that can reach out the respective institutions. The system acts as

an online one-stop shop for reporting social media incidents such as online harassment, identity theft, cyber bullying, sextortion, online scams.

Since March 2018 – till date, more than 300 incidents have already been reported on MAUCORS.

The project is related to **SDG11**.

In **Senegal**, **Prov-IT** is a platform which provide the authentication and security of documents on the Blockchain, a storage technology and an information' transmission, transparent, secured, and working without a central control organ. The first use case that we are addressing our solution is the education by providing security and confidence between institutions or e-learning platform, students and recruiters. The product will be introduced in the form of a web platform and application for the users who will be the students and will be integrated into the management software of schools like Univers Edu of Kiwi and the institutions' databases. The project is relevant to **SDG4, SDG10**.

Action Line 6

In **Cameroon**, "AFRICA WOMEN DIGITAL"" is an innovative platform, virtual and physical, which aims at promoting women digital Entrepreneurship to allow women and girls entrepreneurs to participate in the development of the digital economy and have it as career.

The CEFEPROD was finalist in 2014, at GEM TECH Awards, Category 4.

The sector of digital technology is very important in the development of nations and women are under-represented within this sector which represents the world of future, the economy of tomorrow. This is to say that digital technology is an opportunity for everyone, but particularly for women. This is a key for equality and for education. Women must also try their luck to become entrepreneurs, creating start-ups in the digital universe and bringing projects within large companies around digital transformations.

It is for this reason that CEFEPROD organizes in July 2016 the AFRICA DIGITAL WOMEN FORUM.

The goal of the AFRICA DIGITAL WOMEN forum is to bring together women and girls entrepreneurs, those of small and medium enterprises, associations Leaders, Women Leaders, Artists, Artisans, Unemployed Graduates, startuppers, Rural women, Students and people passionately fond of ICTs, all having the entrepreneurial passion to develop their potential through ICTs.

The project is related to **SDG5**.

In **Cameroon**, The **Green Girls** Organisation is into a Pan-African infiltration of renewable energy in African rural communities.

The Green Girls Organization exclusively trains women and girls in African rural communities on how to generate energy from the sun and waste using a unique scoring model (MNKB92). The main objectives of the Green Girls Organization are to provide clean energy to Women and girls in African rural communities so that these women and girls no longer have to cut down trees for firewood, use bush lamps for lighting and also get sensitized about the SDG's(Sustainable Development Goals) with particular focus on SDG 5(Gender Equality) and SDG 7(Access to clean and affordable energy). The main activities of the Green Girls Organization are carried out under the Green Girls Training platform which consist of activities such as: - Construction and maintenance of a bio digester   - Collection and packaging of organic fertilizer which is a bi-product from the bio digester   - Installation and maintenance of solar panels   - Capacity building workshops about renewable energy and the SDG's   -Assembling of portable quality solar reading lamps. The project is relevant to **SDG5, SDG16**.

In Ghana, Developers in Vogue aims at creating a relevant community of highly skilled developers who are passionate about using technology to revolutionize Africa and beyond. We provide the ideal environment for women to code, connect and collaborate. We train them using a practical and project-oriented curriculum. Dedicated mentors are also assigned to them to provide them with the needed support. The ladies also get the opportunity to work on real-time projects and jobs to apply their skills and earn an income. Our solution is digitally inclusive, labour market inclusive and financially inclusive. Ladies who come unto the Developers in Vogue program need not have a coding background. All we need is their passion to learn and enough motivation to get them committed to the program. We have partnered with tech companies who recruit the ladies who complete our program for internships, full-time and remote roles. We are also very particular on giving back, so the ladies are required to invest a minimum of 5 hours per month to teach a young girl how to code. What we believe in is simple: Technology for Impact. The stories of the ladies our company is impacting is enough reason for us to keep going. As one of the most promising tech startups in the country, we're showing the world that not only do we know how to take great selfies, we know how to build game-changing apps too.
The project is related to **SDG5, SDG9, SDG11**.

In **Kenya**, **Women in Tech Africa** aims to support women in technology across Africa so that they can support their communities positively. The mission of Women in Tech Africa is threefold: creating today's female leaders and role models for tomorrow's women; showing the world what a strong African woman is capable of achieving; and supporting African growth through technology. Women in Tech Africa has women members in over
30 countries in Africa and has chapters in Ghana, Kenya and London with launches in South Africa and Nigeria planned before the end of the year. Their target audience is women in science, technology, engineering, and mathematics as well as young

ladies studying technology- related courses in tertiary institutions. Their major objectives are to create today's female leaders and role models; create models for tomorrow's women; and support African growth through technology.

The project is relevant to **SDGs 4, 5** and **8**.

In **Mauritius**, **the e-Government Strategy** 2013-2017 was formulated in 2013 by the Central Informatics Bureau to re-engineer the e-Government agenda and to rethink delivery of its services and operations with citizens given pride of place. Five years on, around 75 per cent of the e-Government Strategy has been implemented and has helped to further integrate technology in support of government operations and service delivery. Policies and projects in areas including data sharing, open source, open data, e-participation, e-payment, digital signatures, document management system, e-procurement and mobile apps have reformed how the Government transacts with its stakeholders.

These measures have assisted and guided the Government in driving its e-government agenda and have consolidated Mauritius as the digital leader in Africa (United Nations E-Government Development Index), the most digitally se-cure country in Africa (ITU Global Cybersecurity Index) and the best African country for doing business (World Bank).

The project is relevant to **SDGs 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16 and 17**.


In **Mauritius**, One of the key measures of the Budget Speech 2019 – 2020 and the Digital Government Transformation Strategy 2018 – 2022 calls for improved cooperation among government institutions to ensure that businesses and individuals have to communicate their data only once to public institutions and that in consequence government will no longer make multiple requests for the same information when they can re-use the information they already have. The main objective of the **once-only principle** is to reduce the administrative burden of citizens and businesses by re-organizing public sector internal processes. It is based on the fact that collecting information is more expensive and burdensome than sharing already collected information. Hence this principle proposes to collect information only once and then share this information, respecting other constraints, such as regulations.   Additionally, this new principle has provided the following benefits:

- Improving the work processes and business operations of public institutions;
- Improving administrative efficiency and quality of service delivery;
- Reducing administrative burden on citizens and businesses;
- Increasing customer satisfaction and better image of public authorities;
- Better functioning digital economy of the country;

- More efficient and lower-cost government administration;
- Fraud prevention.

The project is relevant to **SDG3, SDG4, SDG8, SDG9**.
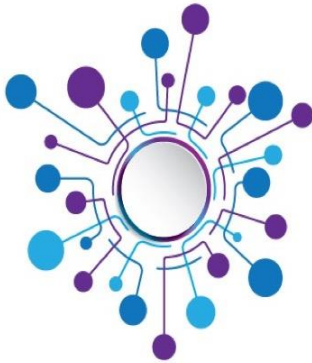
In **Nigeria**, **Women Economic and Leadership Transformation Initiatives (WELTI)** is a non-prof-it organization that empowers young women aged between 14 and 30 on the three pillars of economic development, technology and health. In the past few years, it has had an im-pact on the lives of young women in leadership, health and entrepreneurship through the use of technology. These women have been able to start out with small businesses and have gone on to pursue their aspirations in leadership in their own small way. WELTI's flagship programme called "Business Meets Technology" (BMT) is held annually has been run successfully since its inception in 2016.

To date it has had an impact on 350 young women. The idea of BMT started in the knowledge that most businesses die within the first five years of their inception, not through any fault of their own, but because they focused on the wrong things like having an official car first, hiring a professional accountant etc. instead of lever-aging simple technological tools to develop the business to a certain point.

The project is relevant to **SDGs 4, 5 and 8**.

Also in **Nigeria**, the objective of this project was to expose women to the basics of computer literacy: how to operate a computer; basic components of computers; the use of Microsoft Word for interactions; designing business fliers; documenting and filling in documents both online and offline; using Excel sheets for financial and customer relationship managements; and how to use multimedia for quality presentations [**Learning Initiative for Entrepreneurs**].

We also participated in the Women and Web Alliance Project by World Pulse, where we empowered women on the use of the Internet and mobile phones in 2017. The objective was to expose women and girls to the Free Basics Platform. This is a situation where women can access the Internet without data, they can also use their mobile phones as a learning tool by studying various courses on the Free Basics Platform. The project is relevant to **SDGs 1, 4 and 5**.

In **Rwanda**, The project came up following a research conducted by LAF completed in 2017 on citizen perception of justice and legal services in Rwanda [**Using ICT to Provide Legal Aid to Rwandan Population**]. The study found that the distance Rwandans have to travel to reach legal aid providers represent an access problem. Rwandans can dial 845 and listen to free

information on their legal rights and are also given the option to access a legal aid hotline for a personal consultation, staffed by call center operators from the Legal Aid Forum. One of the callers to the Service was 23-year-old Sarah (Name has been changed to protect privacy). When she was just 15, she was sexually assaulted by a neighbor, who later got a life sentence in prison. Several years later, the father of the offender physically assaulted her, stabbing her several times. She reported this to the court, and he too received a life sentence in prison. Later, within the same year, the mother and the brother-in-law of the offender attacked her again, stabbing her several times as well. They too received life sentences. Subsequently, Sarah's family wanted to claim for victim compensation, however, they were unable to do so, as they had spent all their money on filing the previous cases. She dialed 845 and requested to be called back by a Legal Aid Forum call center operator. A few days later, she received a call from a Legal Aid Forum operator. Through the Legal Aid Forum, she was provided with a lawyer to pursue her victim compensation claim – free of charge. Since the content was launched on our 8-4-5 Service in Rwanda in September 2018, over 1,200,000 calls have been placed to access the legal aid information and over 120,000 people have requested a call back from a lawyer. So far, over 35,000 call-backs have been made by the Legal Aid Forum hotline call center, with lawyers providing more information, referring callers to different justice handlers, and offering free legal representation. So far, 58 beneficiaries have been given lawyers to assist them in court free of charge. The project is relevant to **SDG16**.

Action Line 7

Action line 7 E-AGRICULTURE

In **Botswana**, **AgroGeoBW** came up with the idea of Submitted Combating Food Insecurity through remote sensing technology. This project is aimed at combating food insecurity by smart farming through the implementation of remote sensing technology, by observing and analyzing the factors that affect plant growth.

Botswana is a medium, semi-arid country, with 76 per cent of its population dependent on agriculture. The instability of Botswana's food security as a sub-Saharan country has led to the necessity of utilizing technology and developing policies for sustainable solutions to support a constantly growing population.

Agriculture is the basis of food security; however, due to various factors that range from climate change to socio-economic constraints, fluctuations in crop production have led to deficits and thus lowered the standard of living in Botswana.

Monitoring will increase agricultural efficiency to achieve food security and reduce risks through accurate forecasting. This research falls under technological applications for sustainable agriculture in line with the Vision 2036 to make Botswana food sufficient. The project is relevant to **SDGs 1, 2, 3, 4, 5, 8, 9, 10, 12, 13 and 15**.

In **Côte d'Ivoire**, **WeFly Agri** is the Ivorian company that provides user-friendly, drone-enabled technologies and services developed exclusively for agriculture in Africa. Our promise is to give farmers eyes in the sky to remotely monitor crop progress, identify production inefficiencies and enable better crop management. Thanks to our drones' advanced imaging capabilities, we empower farmers and give them new ways to increase yields, reduce costs and maximize productivity.

We provide hassle-free access to accurate information to enhance transparency and improve crop management.

Our services are designed to deliver real value to farmers:
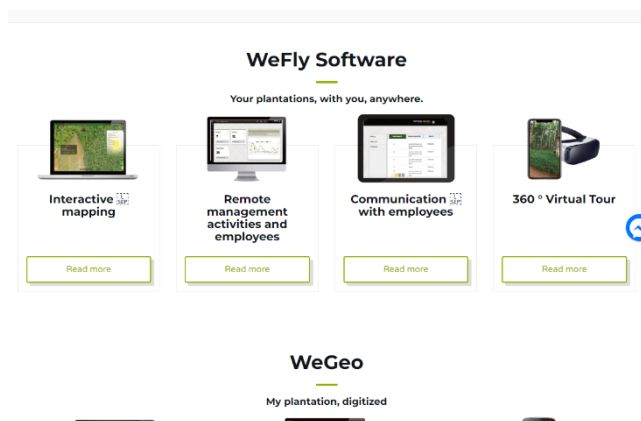
Interactive plantation map

Crop progress tracking

Virtual 360° Tour with VR headsets

Remote employee monitoring

Geographic information system (GIS)

The project is related to **SDG2**.

In **Gambia**, as a youth led, social impact, tech for good initiative with focus on women and girls, HackWeakEnd follows the premise of women as home makers to solve issues affecting our society using technology.   Target is everyone with focus on girls and women in technology.   Our objective of **HackWeakEnd Social Impact Project** is to drive real world solutions for real world problems.   he HackWeakEnd technology event yearly features a hackathon to solve issues affecting sectors and software development training. The first edition was won by an almost all women team, also the 2nd edition say the 3rd position being women. Also the software development training gives more focus to girls and women we plan to start their software development journeys. The project is relevant to **SDG5, SDG9, SDG15, SDG16**.

In **Ghana**, **Farmerline** has made interacting with rural farmers a lot easier. It has developed a platform that communicates with a network of 200 000 farmers in their native languages while collecting data. The platform provides farmers with valuable market data, while also enabling companies to gather farm-level information. This information is very relevant to farmers, including management practices tailored to particular locations and the crops grown. Farmerline.org can also get the food prices for nearby markets, thus reducing farmers' travelling. It provides farmers with services that help them sell more food, anything from weather forecasts to market prices, in a way they understand and can use.

Farmerline's system generates automated phone calls, and the "content and language is different de-pending on the country the farmer is in". The farmers simply pick up a call and listen to a message. It's a powerful way to communicate timely and valuable information. The project is relevant to **SDGs 2** and **10**.

In **Kenya**, **Agronet** is a new and exciting innovative concept of business process automation and information sharing in dairy farming. It is a membership-driven information and payments platform facilitating a network of interactions and transactions among rural small-scale dairy farmers, agro dealers and processors in the dairy value chain. Agronet uses mobile technology to facilitate inter-actions between stakeholders, and to provide payments, markets and information solutions in the dairy farming value chain. By so doing, Agronet ensures maximum efficiency, accountability and transparency in agribusiness.

The Agronet system has been designed by Zege Technologies, a firm with experience in developing mobile payment and communication solutions. As a payment and communication tool tailor-made for the agricultural sector, Agronet utilizes Zege's mobile cash register for data capture and a mobile payment platform, MPAYER, for transactions processing, customer management and information sharing in the whole ecosystem. The project is relevant to **SDGs 2 and 8**.

Also, in **Kenya**, **MFarm**'s CEO is Jamila Abass, a 29-year-old computer scientist from Kenya. She founded MFarm in 2010 after reading about how farmers have been oppressed for decades and disconnected in terms of information. MFarm seeks to solve this by providing up-to-date market prices via an app or SMS, direct to farmers. It also connects farmers with buyers directly, cutting out the middlemen. MFarm realized that the root problem was not pricing transparency, but the fact that farmers are producing in low volume and that many buyers in big cities don't want the hassle of getting the volume they need from multiple different farmers. This led MFarm into offering a group technological selling tool.

For many low-volume Kenyan farmers, the only source of information about the market rate for crops comes from the very people who are trying to buy them. The lack of pricing transparency means that farmers don't always get the best deal. MFarm seeks to solve this by providing up-to-date market prices via an app or SMS, direct to farmers. It also connects farmers with buyers directly, cutting out the middlemen. The project is relevant to **SDGs 2, 8 and 16.**

Another project in **Kenya**, **LishaBora**, aims to improve the profitability and sustainability of smallholder dairy farming in Kenya through high-impact products and services, and through the digitization and formalization of the informal dairy sector. LishaBora's vision is to be the last-mile distributor for rural East Africa, spreading high-quality products and best farming practices across the region by harnessing the power of micro-entrepreneurs through business development and credit solutions.

LishaBora provides input and practices and co-manages outputs for Kenya's smallholder dairy farmers, to enable more informed farm management, and credit and banking solutions. By sourcing quality-assured dry-feeds and animal health products and delivery to the farmer, LishaBora improves access to inputs and reduces costs for smallholders. By engaging its customers with grass management and best farming practices demonstrations, the company ensures their cows' productivity is not hindered by forage shortages or preventable diseases. To scale its high-quality feeds, silage services and best farming practices, LishaBora works with dairy traders, representing the informal market, where 70 per cent of milk sales are generated. By formalizing and digitizing their milk collection process through the company's business management mobile application, LishaBora improves market access for smallholders, and provides credit solutions to a segment of the population that had no credit before. LishaBora is the only feed company working throughout the value chain, addressing the systemic reasons that keep smallholders trapped in poverty. The project is relevant to **SDGs 2 and 8**.
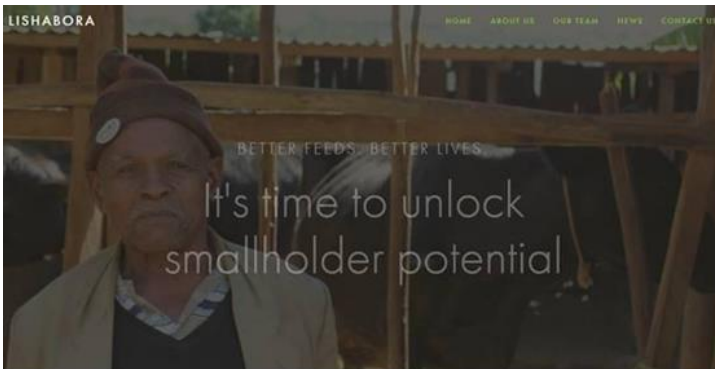
The last project from **Kenya**, **Cashbox**, is a mobile point of sale application that agrodealers use at their stores to manage their customers, payments and inventory. It gives business owners real-time visibility into their outlets and allows the management and anticipation of reorder levels. Because it works on an Android mobile device, it is most suitable for remote and dispersed branch networks.

Agriculture as a critical backbone of the economy needs proper supply and distribution systems to provide inputs to farmers. Doing this in an efficient way is a big challenge for agrodealers. There is no visibility into the outlets, nor is there proper customer engagement and tracking. Project goals include the following:

- give agrodealers a simple enough system for their shop attendants to be able to use;
- track customers through the network and seamlessly avail every customer's info at any and all outlets;
- (c) provide the head office with real-time visibility into the business at every outlet;
- (d) integrate real-time reminders of reorder levels as well as farmers' stock alerts through SMS; and
- (e) meet the need for a point of sale that works in areas with intermittent Internet connection, allowing both offline and online transactions. The project is relevant to **SDG 8**.

Cashbox: Mobile POS
SaaS / Mobile app

In **Mauritius**, **The MOKARO system**, whose name literally means "My Field" in Mauritian Creole, is an initiative by the Mauritian Government to tackle the difficulties encountered by the small (& often vulnerable) farmers in Mauritius. Indeed, due to climate change & increased competition from big corporations, Mauritian farmers need to improve the efficiency of their farming strategies in order to guarantee their livelihood. The MOKARO app serves mainly as a decision support system for farmers. By using Mokaro, a planter will be able to understand the actual market for their produce. Based on the plant type, region, period of the year and statistical/historical data, a recommendation is generated for the user through the use of simple graphical easy-to-understand icons. Farmers also receive advice based on meteorological data that is fed daily into the system. The system automatically analyses this data and generates advice n irrigation and spraying of crops. The model used for this calculation considers the meteorological data, water stress (based on the variety of the crop), wind direction (to determine loss rate of pesticide droplets) amongst others. Thirdly, the MOKARO app fosters local micro-economies by connecting individuals, cooperatives and small business which offer services linked with agriculture (e.g. renting of a truck, de-rocking services, seedling suppliers etc.). The system uses the geolocation of the user and displays a list of the relevant services nearest to him/her. It should be noted that the system supports registration/validation (through SMS and manual account activation by Govt. Officers) for service providers so as to prevent abuse. Farmers do not need to register to use the system. Finally, the planned calendar of activities and events informs planters on activities of stakeholders where they may be invited to participate. Finally, in case of critical disasters (e.g. crop diseases, insect plague etc), the system also supports warnings/alerts to all users. The project is relevant to **SDG2, SDG8, SDG12, SDG15**.

In **Nigeria**, in today's increasingly connected world, women are being left behind. A significant gender gap in mobile phone ownership and usage in low-and middle-income countries is hindering growth for the mobile industry and means women are missing out. **Women Agricultural Extension Services (WAGES) MOBILE** is an ICT based mobile platform – which brings all agric offerings for small farmers under one roof. It connects small farmers to their various needs – Seeds, fertilizers, equipment, crop advisory & market linkage of agric produce. Our mission is to support our women farmers to increase food security and increase financial inclusion.

Our objectives are:

• Bring together proven e-agriculture solutions that will benefit women;

• Share knowledge on successful e-agriculture solutions and identifying ways of scaling up implementations at national level and Strengthen Community e-agriculture solutions with women farmers.   So far reaching over 20,000 smallholder farmers across in Nigeria over the last 3 years with relevant information has improved the entrepreneurial success.   The project is relevant to **SDG1, SDG2, SDG3, SDG4, SDG5, SDG7, SDG8**.

In **Rwanda**, Many small farmers usually sell their produce at giving away prices due to lack of market information. The middlemen often take advantage of this to buy produce at low prices even when the prevailing market prices are higher. This has affected farmers' morale leading to low productivity and a decline in household income. However, this could soon be history, is why I need to create **a platform that can connect farmers and buyers** that will also link farmers and other players within the agricultural value chain, easing management and communication of market data, including prices.   The project is relevant to **SDG2, SDG5, SDG8, SDG16**.

In **Senegal**, a year ago I met Ibrahima a 72-year-old farmer father of 17 kids, 3 boys and 14 girls. He was tired and frustrated because he had just lost all his crop of potatoes that had rotten in the open air. This story is not unique to Ibrahima because according to FAO the majority of African farmers lose up to 70% of their stocks due to lack of preservation system. What frustrates me is that Africa is hungry even though it is the largest producer in the world. It would be enough to solve the problem of preservation so that Africa is satiated. As a young African woman I get involved to find a solution to this scourge the solution is TSG (**The Smart Granary**) is a smart attic made from recycled plastics that will ventilate and water fruits and vegetables automatically to convert heat into freshness thanks to new technologies and all is powered with energy solar. And that will allow farmers to keep their stocks much longer in order to save time for selling their products (fruits and vegetables). I have already tested with a farmer who grows mangoes and he was able save 70% of his crops while he was making a yield of 33 % . Next steps we want to add triggers pesticides natural and deploy this system with 30 farmers in 6 months. The project is relevant to **SDG2**.
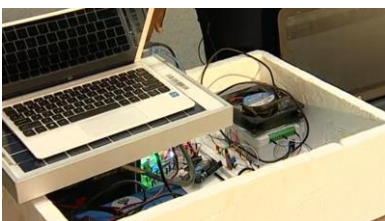
In **South Africa**, **SwiftVee** (Livestock) is a first livestock and agricultural trading platform that enables all agricultural users to communicate and have a direct source of contact with the agrinetwork in and around South Africa.

SwiftVee (Livestock) is an agriplatform addressing water scarcity, food security and market efficiency for the livestock sector. It brings livestock trading into industry 4.0. by offering substantial profit margins that facilitate sustainability and social impact. SwiftVee (Livestock) has been recognized as one of South Africa's top 100 most innovative companies (TT100) and has global scaling potential. What began as an idea from a university student grew into an award-winning start-up that provides a better way of doing business. SwiftVee (Livestock) draws on blended skill sets of agricultural expertise, software engineering and legal acumen contributed by its founders, Andrew, Alex and Russel. The project is relevant to **SDG 2**.
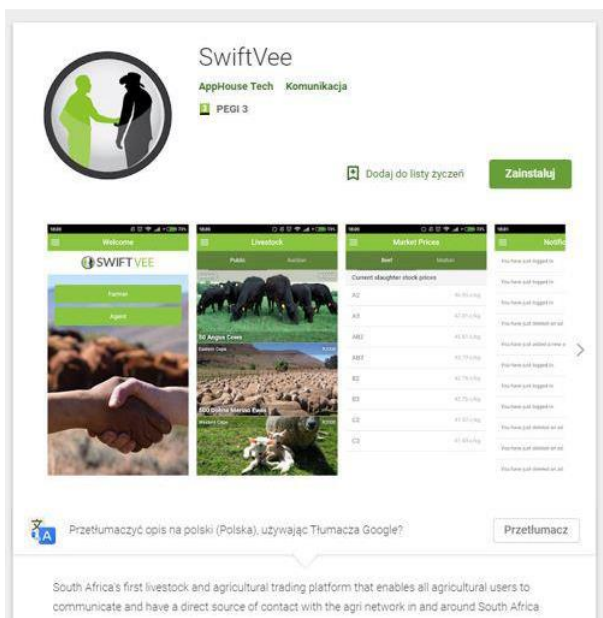
In **Uganda**, Quest digital finance has facilitated access to services and products for women and youths in Uganda. The flagship product **Akellobanker** (named after a certain woman) enables women in trade and agriculture to access capital for improved technologies for stocking their businesses with seed, irrigation equipment, or tractor hire services over their mobile phones. They work with rural savings and credit cooperative societies as placement centres (where the technology is set up) for women who need to access these services. Moreover, the platform generates credit scores for women, hence enabling them to access credit services without placing any collateral security.

The mission of this project is to leverage ICT to innovate mobile and web-based solutions that increase access and usage of financial services among local communities. The main objective is the easiest credit access to rural farmers and traders by an integrated mobile and web-based application that fits the needs of the local communities. The project is relevant to **SDGs 1 and 9**.

Action Line 7E-BUSINESS

In **Cameroon**, **Somtou** is a simple management console for traders. It consists of a wooden shell carrying a touch screen and a numeric keypad, designed to be robust. It embeds the software WITHOUT TEXT based only on images and voice, being thus accessible to anyone, whatever the level of education. Somtou was launched in 2014 to address these needs of informal and small-scale businesses in Africa and the developing world.

The intuitive software and hardware device combines a solar-powered central console with a tactile screen, a barcode reader and a mechanical scale, allowing the device to re-cord the many types of transactions that occur in small shops. The project is relevant to **SDG 8**.

In **Kenya**, **Twiga** builds fair and reliable markets for agricultural producers and retailers through transparency, efficiency and technology. Twiga Foods Ltd. is a business-to-business marketplace platform that sources produce directly from farmers and delivers it to urban retailers at below-market prices. Twiga builds fair and reliable markets for agricultural producers and retailers through transparency, efficiency and technology.

Since 2014, Twiga has been bridging gaps in food and market security through an organized platform for an efficient, fair, transparent and formal marketplace. Today, it sources quality produce from thousands of farmers, providing them with a ready guaranteed market, and delivers from its pack houses to thousands of vendors, at prices that are fair to everyone. The project is relevant to **SDGs 2, 8 and 1**0.

In **Kenya**, **Pesa Zetu** is a crowdfunding plat-orm that aims to give borrowers small loans for business, health and educational purposes. The funding sources come from individual lenders on the platform and uses MPESA for the disbursements of loans and collections of repayments. Each borrower goes through risk profiling, where multiple data points are used to assess the borrowers' credit worthiness and debt burden capacity. These data points combine information from MPESA, a government database, the Credit Reference Bureau and behavioural user- generated data. There are more than 2 000 individual data points per borrower.

Using a state-of-the-art credit risk model, Pesa Zetu then offers the best loans to its borrow-ers. Lenders can lend manually by picking the loans they want or can set up preferences for automated lending allocation. This automati-cally allocates funds to loans and automatically recycles repayments based on the lenders' risk profile settings. The project is relevant to **SDG 8**.

PesaZetu: P2P Lending Platform

Startup / SaaS / USSD / Payments

In **Kenya**, **UpayHR** is a great place on the cloud to have an accurate directory of a company's employees, manage and process payroll, and print all related reports. An application on the cloud is scalable and secure, has unlimited storage and backup recovery, requires no new hardware, and uses devices users probably already have as well as the Internet. UpayHR allows clients to easily create employee profiles, and quickly find and update employees' in-formation. Each profile contains:

(a) employees' biographical data, e.g. names, contacts, birth and employ-ment dates, emergency contacts, etc.; (b) work history, skills and addi-tional trainings; (c) bank and statuto-ry account numbers to allow for de-ductions and remittances; (d) leave information and company resources held; and (e) fixed and variable payroll parameters. UpayHR also allows users to process payroll both for permanent and casual employees, and print and e-mail all the related reports. The project is relevant to **SDG 8**.

In **Kenya**, for the modern business, technology is necessary to grow a steady customer base. Businesses with more that 100 repeat customers especially need systems to track, keep and grow their customers. Receiving mobile payments that automatically fit into the business process is extremely critical to ensuring overhead in additional reconciliation tasks. MPAYER is built with customer centered businesses in mind.

It allows the tracking of payments to clients' individual accounts. It provides engagement with clients through SMS and has built in notifications of transactions. Businesses can customize their payment flows and even further extend the functionalities through their APIs. MPAYER is popular with technology-based start-ups, financial ser-vices businesses such as Monetary Financial Institutions and Savings and Credit Cooperative Societies, subscription businesses and businesses with high member bases, such as estates and churches. The project is relevant to **SDG 8**.

In **Kenya**, **Sendy** is a platform for all delivery needs. Sendy's platform works similarly to a taxi dispatch app, but focuses on moving packages instead of people. Users can move anything from point A to point B at the touch of a button. Simply. Transparently. Since its launch in 2015, Sendy has quickly grown into one of Africa's top start-ups to watch, and has garnered attention from several investors. To date, the company has raised more than USD 3 million in equity funding and has be-gun planning its expansion.

It is a delivery platform whose mission is to connect businesses with local drivers. The company links customers with drivers to help deliver goods simply and transparently using a technology platform. Over the years, Sendy has managed to work with over 5 000 businesses and 50 000 individual customers, because it is cost-effective and efficient. The project is relevant to **SDGs 8 and 11**.

In **Mauritius**, **InfoHighway** is a project with the objective of implementing a da-ta-sharing platform with a data- sharing framework to provide for sharing of data via e-services between agencies. Some 50 organizations are already connect-ed as Publishers or Subscribers of the InfoHighway, with over 330 connections. It is estimated that users have gained a minimum of 1.12 years of time saved based on one minute saving per data sharing request. Realistically, this figure would probably amount to several years of savings, with a huge productivity gain to the country.

Citizens' lives are made easier by reducing the number of times they need to move office. In certain cases, such as with the Tourism Authority or local authorities, everything is done online with the help of InfoHighway, with data retrieved directly from the issuing authority in the sharing process. Data accuracy is 100 per cent. The project is relevant to **SDGs 1, 3, 4, 8, 9, 10, 11, 12 and 16.**

In **Mozambique**, **MOWOZA** is an innovation focus company that develops solutions for emerging markets. It believes that entrepreneurship can unlock human potential and make the world a better place. Millions of MSMEs operate independently, and the company is building solutions to bring value to these enterprises. MOWOZA's in sights are influenced by the data it has collected. This is transforming value chains. Solutions go beyond descriptive analytics and deliver predictive recommendations.

MABIZ is a training programme that in-creases business skills for micro and small informal retailers. WAZATI is a digital marketplace that connects micro and small retailers to supply chains. MOWIRE is a geolocation, micro tagging solution to drive insights in informal markets and supply chains.

The project is relevant to **SDGs 8 and 9**.

In **Nigeria**, **SmartDeals Discount Club** is an e-business via crowdfunding and discount community project that was set up to save local businesses from shutting down by providing discount incentives for consumers to continue patronizing local businesses while saving on expenses. It also provides the opportunity for low-income earn-ers to own certain necessities they ordinarily wouldn't be able to afford from their incomes without having to commit any form of crime.

The project has shown a great impact mostly among the youths and the poor in major cities in Nigeria, by helping people save money while carrying out some of their daily business transactions. The company was also able to reduce the operation costs for local businesses by providing an absolutely free online advertisement platform to business owners.

The project is relevant to **SDGs 5, 8 and 9**.

In **Nigeria**, **Mamamoni** is a social enterprise that empowers rural/poor women with different voca-tional skills, and provides finance for them. Mamamoni is a financial technology social enterprise that is closing the credit gap for low-income female entrepreneurs in rural and urban slum communities in Nigeria through instant mobile loans. Mamamoni was founded to address the challenges of business funding/capital for female small business owners. It seeks to empower women to start and sustain their small businesses, through its innovative loaning scheme, vocational skill trainings, financial literacy trainings, and computer and Internet trainings.

Mamamoni has made almost 4 000 women skilled by empowering them with free vocational skills. Due to this, women now have livelihood incomes. The company has also provided finance for 50 women who have been termed unbankable.

Mamamoni is empowering women to break the vicious cycle of poverty, one community at a time.

The project is relevant to **SDGs 1, 5 and 8**.

In **Nigeria**, **Greenfresh Nigeria (GFN)** is an online food stuff platform that enables farmers, fresh foodstuff sellers to sell their products to customers and get it delivered to them at theirs doorstep. GFN are dedicated in providing good, healthy and nutritious well packaged food stuff for our client at affordable price. GFN ensures that all foodstuff items ordered are delivered on time to the customer and collects customer satisfactory feedback on the point of delivery for management review of the company's performance and relationship with client. GFN's objectives is to encourage rural farmers, foodstuff sellers in various market(s) within the country to access millions of customers within and outside Nigeria, with the aid of smartphone, computer and internet. Also, GFN want to ensure that the federal government financial inclusion program for those living in rural areas is achieved, GFN encourages youths to go into agribusiness due to the abundance opportunity of selling their products to millions of people without paying for a shop rent or hiring vehicle to convey the product to the market. Also, people can easily order for fresh foodstuff they want to cook as meal and get it delivered to them at easy. GFN provides jobs, inspires youth to go into full time farming, support and motivates people to eat healthy, fresh and nutritious meals all day, reduces food shortage and promotes healthy living.

The project is relevant to **SDG1, SDG2, SDG3**.

In **Rwanda**, **Akokanya** is a product of Raisin Ltd., an event management platform offering services for online booking, e-ticketing and e-payment API. It is essentially a platform connecting event organizers and buyers. The event organizer creates an event, generates tickets and receive reports, while the buyer can purchase said tickets. The company's achievements are as follows:

As Rwanda is planning to go cashless by 2024, massive cashless consumption tools have to be set up and a sensitization campaign undertaken to raise awareness among the business community and general public about the role and benefits of e-payment.

Akokanya aims to become the leading e-ticketing and event management service provider in the African market. The main objective is to provide cashless solutions to a growing market. Akokanya reduces costs, is eco-friendly, and is connected to highly secured servers that ensure the security of user data on the platform.

The project is relevant to **SDG 8**.

In **Senegal**, **WEEBI**, which means "simple" in Peul, is a cash solution adapted to the needs of micro-enterprises in Senegal. To put it in context, it should be noted that in Dakar, the traders (restaurateurs, wholesalers, tailors, launderers, etc.) sell most of their articles on credit. Therefore, for the maintenance of their accounts, they make sure to seize, in a handwritten way, the individual balances of customers in a notebook. WEEBI was born when Amadou the neighborhood shopkeeper inadvertently spilled a bottle of oil on his account book, losing all traces of data from his customers. From this incident, which

caused chaos in the monitoring of its activity, the idea of developing a simple tool to guarantee the safeguarding of accounts was born.

The primary function of the tool is to help its users to track sales in order to anticipate recoveries. WEEBI is also a local service to support its customers in the analysis of data, and thus improve the performance of their company. Thanks to the tool, the trader has the possibility to follow his sales indicators: he will be able to know, for example, his best customers, or his strongest sales period.

The project is relevant to **SDG 8**.

In **South Africa**, **EmptyTrips** Enables Smart Transport, Reducing Waste, Emissions, and Costs. It aims to improve the transport industry by reducing carbon emissions and shipping costs for local SMEs. EmptyTrips' business model is similar to Airbnb, eBay, and other platforms that remain asset-less, lean, and scalable, while also offering add-on services to ensure viable revenue streams (e.g. cargo insurance). EmptyTrips is Africa's first smart transport marketplace to offer access to vetted transporters and carriers by road and rail.

The project is related to **SDG9, SDG13**.
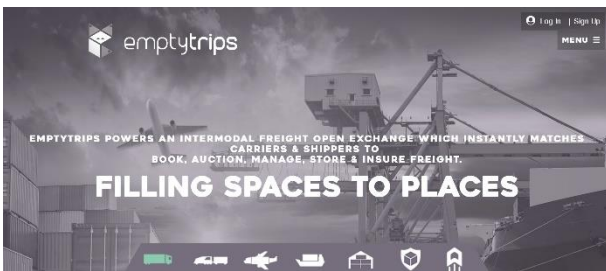
Also in **South Africa**, **Excelle** is a unique acceleration program designed to support high-growth digital businesses operating in French-speaking Africa. We are working with companies that already have a product or service in the market, that are starting to make significant sales, that are now looking to raise between $250K and $5M. The idea behind l'Afrique Excelle is to support Francophone African start-ups that have the potential to become globally competitive, and to have disruptive impacts on our day-to-day life and economy through their tech solutions. This program aims to help with access to funding, networks, mentoring and a community of like-minded entrepreneurs. It can also help refine a business model, grow revenue and market share, and accelerate the cross-border expansion.

The project is related to **SDG8, SDG9**.

In **Uganda**, **Mobile Money Access Programming Interface (API)** is an open platform that enables developers and programmers to get free access to MTN mobile money proprietary software platform. MTN Mobile Money is the most widely used mobile money platform in Uganda. Developers can now access it, create products that ease payment options and leverage the 10M of MTN clients registered on Mobile Money.

This is an exciting development for the Ugandan start-ups ecosystem. Innovators will now be able to develop applications that ease the customer experience in terms of mobile money payments. We do hope that this move will spur innovation in

the developer community around the country because this is the first time this is being done in Uganda.

In January 2018, MTN Uganda and Consultative Group to Assist the Poor (CGAP) entered a partnership intended to drive customer growth and activity by facilitating a wider range of mobile wallet applications for all customers through open APIs. According to CGAP, open APIs have the potential to further drive financial inclusion, which is already being accelerated by the usage of mobile money.

The project is related to **SDG8**.

In the **United Republic of Tanzania**, **Community Development and Relief Trust** has experience empowering girls and women through microfinance using e-kit and e-recording applications as a new and advanced smartphone technology running village saving and loan association (VSLA) mobilized groups, which of course helps to empower women economically. Therefore, the target is to reach 5 000 women and girls who have low incomes and mobilize them to form VSLA groups using advanced smartphone savings technology. The major objective is to empower women through microfinance in VSLAs using modern savings technology, and activities related will be for publicity, meeting with beneficiaries, educating them on the VSLA methodology, and using e-recording and e-kit.

Other objectives are to mobilize them to form savings and loan association groups, training the team of trainers on different entrepreneurship and business skills, monitoring and supervising formed groups, and collecting data for evaluating the well-performing VSLA group using management information system or CPRO software. The project is relevant to **SDGs 4, 5 and 8**.
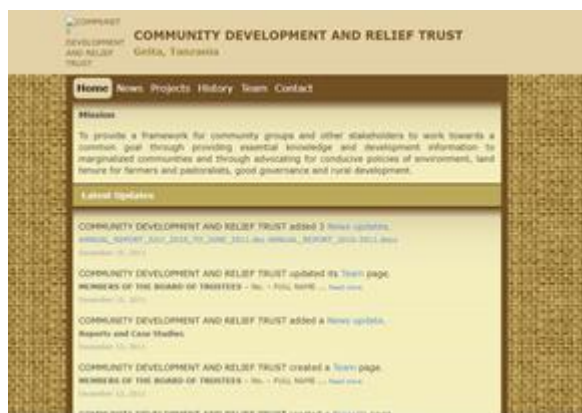
Action Line 7 E-EMPLOYMENT

In **Chad**, the Association of Technicians in Information Technologies and Communication has come up with the project **Training and Digital Inclusion of People with Disabilities**. The 2014 World Telecommunication Development Conference and the most recent Plenipotentiary Conference of ITU have in turn adopted measures to ensure the accessibility of ICTs for people, with appropriate legal frameworks, laws, regulations and policies at the national level. In solidarity with the set of resolutions adopted by the United Nations and its specialized agencies, the President of the Republic of Chad, Ydriss Deby Itno, initiated a policy on the care and social inclusion of persons with disabilities in all spheres of Chadian society.

As part of the translation into action of the vision of the Head of State, one of the major axes of the development strategy of the Digital Economy developed by the Association of Technicians in Information Technologies and Communication is dedicated to the promotion of digital culture through the widespread use of ICTs in society. This reference document serves as a strategic anchor for several initiatives, such as the present project, whose overall objective is to enable the digital

inclusion of the social class made up of people with disabilities in Chad. Several activities follow from this objective, listed in the rest of the document, budgeted for 1 733 332. The project is relevant to **SDG 10**.

In **Lesotho**, **SWIFT Codes** is a three-point strategy initiative that considers working with women of all ages in three key areas to address inequality, unemployment and undignified engagement spaces.

1. Advocate for innovative, inclusive and safe spaces (platforms such as conferences and seminars) for women and girls to create/develop through technology. Girl Tech Talk Conference founded by two women led organization in 2019 is proving to attract public and private support. It is a first in Lesotho and Southern Africa hemisphere.

2. Upskill young unemployed women as GEM Fellows in areas of technology, farming, creative industries and leadership to diversify their skills beyond what they studied to cope with challenges of unemployment.

The project is relevant to **SDG5, SDG9, SDG16**.

In **Rwanda**, **Youth Employment and Employability Platform (YEEP)**, as the Youth Empowering Project (YEP) is the direct response to Rwandan Youth workforce especially young women and other young disadvantaged people that are either leaving academia or have already entered Labor Force, because it will be the bridge between education community and employers to build the capacity of later workers.

Mission: YEEP is mainly aimed at adding value to the Rwandan Youth workforce by bridging their Skills Gap through digital and other enabling tools or programs. Below are specific objectives: 1) Raise awareness about employment opportunities in Rwanda. 2) Support informal education as an important skill at work to empower young people and women to efficiently develop and use their skills to get into employment. 3) Empowering the future workforce through internships as work experience. 4) Certify workforce soft skills they have to perform their job successfully and advance in career. At least 5,000 job candidates or transition workers will be certified in the first year. 5) Empower Youth, especially young women and young people with disabilities to become job creators not only job seekers. 6) Develop the best leading Big Data-based Labor Market Information System (BD-LMIS) in Rwanda.

Target Communities: Youth in general and especially young women and young people with disabilities. Programs: YEEP. Added values products: Professional Skills Certification, Internship Placement, Career Mentoring backed with Digital Community Program. Delivery of YEEP products to targeted communities: ICT Tools & Services to Support YEEP Programs Career Development Centers in Kigali and each Province of Rwanda. YEEP dissemination make YEEP a successful project: Via Rwanda Job Day and BusY Conference Resulted impacts: The qualified workforce in Rwanda, more jobs and hire more people, big Data-based Labor Market Information System (BD-LMIS). The project is relevant to **SDG3, SDG4, SDG5, SDG8**.

In **Senegal**, **Wutiko** is a professional platform which connects people to best business opportunities. Our matchmaking algorithms are proudly made with love from Africa. Wutiko, a professional network for Africa that lets anyone find jobs and jobseekers with their innovative machine learning technology, was a Seedstars World winner in Dakar Senegal.

The Wutiko platform was launched the day in Senegal during a two-day forum on the theme: "Human Capital for an Emerging Senegal ". It aims to facilitate the meeting between recruiters and job seekers.

Wutiko is a platform for business referencing and reception of Curricula vitae (CV) in a short time and will serve employment and facilitate the linking of businesses with job seekers. The Wutiko platform also consists of sharing useful business information and services online.

The project is related to **SDG8**.
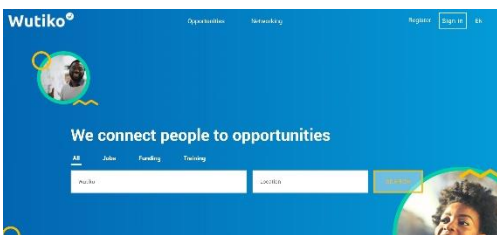
In **Senegal**, **ECMAAAA** is a project run by the African Civil Society on Information Society and a non for-profit project. The award project offers a platform opportunity to young innovators in Africa in the mobile application space to present creative ideas to develop ecommerce in African states description and also contributing to the achievement of the global Sustainable Development Goals (SDGs). For now, the Projects submitted as part of the competition must target one or more of the sectors categories but not limited to: Agritech, Banking finance and insurance, Health, energy, Industry, TIC, education and environment. The impact of African youths in ecommerce space has improved because many youths in Africa can now afford low-cost phones, which have become increasingly popular in the developing world. Because of this market niche and need of innovative solutions in African societies that address the fundamental material and existential problems that these countries face, each year the ECMAAA. ECMAAA aims to facilitate the integration of young start-ups in the continent in the ecommerce through innovations in mobile applications three winners are selected in each edition. In the spirit of pan africanism, this Project seeks to engage more African countries, partners and sponsors into the award project. The project is relevant to **SDG1, SDG4, SDG5, SDG10, SDG11, SDG13, SDG16, SDG17**.

Action Line 7 E-ENVIRONMENT

In **Mauritius**, **the Emergency Alert app** allows users to receive timely information and updates generated by the National Disaster Risk Reduction and Management Centre NDRRMC, that will enable the issue of timely, coordinated and efficient distribution of alerts, warnings and advisories to the general public and key stakeholders in times of emergencies/disaster. The messages sent through the system are CAP compliant (Common Alert Protocol), which means that most major disaster alert systems in the world are compatible with the system. Thus, alerts may also be sourced from international agencies as well as the NDRRMC in the future.

The key benefits of the app are:

- Improved disaster management and risk reduction

- Improved awareness both on local and national levels

- Sensitisation on climate change

The project is related to **SDG1, SDG11, SDG13**.

Also, in **Mauritius**, **the Green Living mobile application** is an innovative project where Air Quality Monitoring IoT sensors will give the Air Quality Index across the island. By providing public information regarding the air quality, education on pollution and climate change will be easier and hopefully, policies and projects for sustainable development will be easier to implement

The app introduces a number of innovations, including the use of IoT devices to collect air quality data and transmit it back to the servers.

The IoT Sensors will measure 5 different parameters (E.g. Carbon Monoxide, Sulphur Dioxide, Nitrogen Monoxide, Particulate Matter 10, Ozone), and transmit these to the application server. The app can then retrieve this data to calculate and provide the AQI.

The Air Quality Index (AQI) is derived using a model and this AQI allows a user to appreciate the quality of air he/she is breathing.

The project is related to **SDG9, SDG13**.

Again in **Mauritius**, **the Energy Efficiency app** is a helper app that focuses specifically on energy efficiency and how to improve (or more accurately, decrease) energy consumption.

Based on the user's selection (e.g. air conditioning issues), appropriate recommendations are displayed in the app. The app provides a number of recommendations over a range of household appliances and their everyday use.

Additionally, news and events regarding energy efficiency initiatives can also be posted regularly in the app.

In the long run, this application will help in sensitising the public on energy wastage and improving energy efficiency. By achieving public awareness on energy wastage, policies and regulations can be more efficiently implemented.

The project is related to **SDG12**.

In **South Africa**, **WooHoo+** was designed to help creative people to connect their ideas to companies who want to make the difference helping the planet. Users deposit your ideas in WooHoo+'s 100% secure platform with all the rights protected. Users say how much money they are requiring in order to finance your project, get the correspondent number of tokens which will be acquired by (a) company(ies) or investor(s). WooHoo+ is a peer to peer Blockchain-powered Atomic Swap Platform for eco ideas that allow for transactions to take place in an environment that is secure and transparent without the need for a centralized authority. The application allows individuals to submit ideas that provide sustainable solutions to many of the worlds environmental problems and procure investment from companies or investors who wish to make these ideas a reality, ensuring sustainable development and fostering innovation in the green economy. The project is relevant to **SDG9**.

Action Line 7 E-GOVERNMENT

In **Mauritius**, **the Consumer Rights Mobile App** has been designed specifically for the Ministry of Industry and Commerce – Consumer Affairs Unit, and provides an innovative citizen-centric approach to allow government-to -consumer interactions. The mobile app allows consumers to create complaints for poor service/defective products/high price practice directly to the consumer protection unit via the mobile app. Consumers may even send photos/files along with the complaint made via the mobile app. It has been a long-awaited mobile app, as the citizens of Mauritius (or users) required an easy way to report and follow up cases pertaining to a number of issues for consumer protection. The citizens can also benefit from the services of the app and make submissions for various issues experiences as a consumer.

The app also provides users with prompt notifications about decisions/news/events made by CAU to boost confidence between the two parties. With the IT system in place, the CAU now uses less paper and all entries/follow-ups remain in the digital format. The app is available on Google Play Store and the Apple App Store. The project is relevant to **SDG 9**.
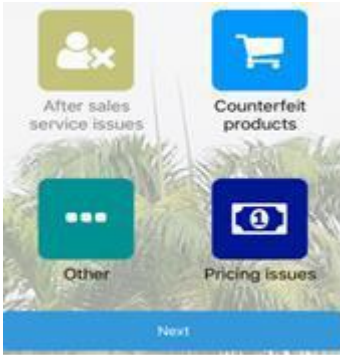
In **Mauritius**, **the Family Welfare Mobile App** was introduced to provide citizens with a mobile platform to allow them to report cases related to child or domestic abuse. The submission can also be anonymous. Victims of domestic/child abuse can also contact people using emergency contacts. A panic button ("Help me now!") will instantaneously inform the authorities when someone needs help. The mobile app was launched in June 2018 by the Minister of Gender Equality, Child Development and Family Welfare. The public and non-governmental organizations have welcomed the initiative from the Government of Mauritius. After the installation of 350 Wi-Fi hotspots throughout Mauritius Island, the app could be accessed and used on a 24/7 basis.

The family welfare app provides the possibility to select between English and French. The app is available in both the Google Play Store and Apple App Store, with over 100 downloads. The Ministry of Technology, Communication and Innovation has embarked on a massive market-ing strategy to improve uptake of the project. The project is relevant to **SDGs 5, 11 and 16**.

In **Mauritius**, **Search Gov App** is a citizen-centric mobile app that presents the user with a unified search function that gives results from dif-ferent sources, including news, events, cabinet decisions, government directories, e-services and mobile apps. The Ministry of Technology, Communication and Innovation has collaborated with the Government Information System (GIS) for this project. GIS, under the aegis of the Prime Minister's Office, is mainly responsible for covering all activities of ministries and departments, and dissemination of related information. Since the app's rolling out in June 2018, the Smart Gov app has been a positive impact on disaster information dissemination. There is a steady uptake of the app, and it will become a critical tool for infor-mation dissemination. The project is relevant to **SDGs 5, 9, 12 and 16**.
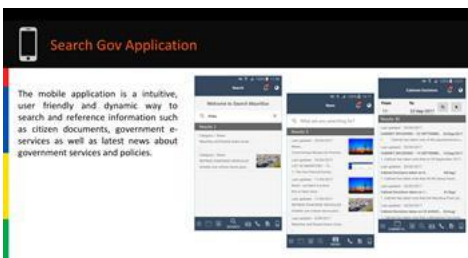
In **Mauritius**, the **Digital Government Transformation Strategy 2018–2022** has been launched. In 2013, this office formulated an e-Government Strategy 2013–2017 to re-engineer the e-Government agenda and to rethink delivery of its services and operations where citizens are given pride of place. Five years onward, around 75% of the e-Government Strategy has been implemented and helped to further integrate technology in support of government operations and service delivery. Policies and projects in areas of data sharing, open source, open data, e-Participation, e-Payment, digital signatures,

document management system, e-Procurement, mobile apps among others have reformed how government transacts with its stakeholders while improving international digital indices. During the last few years, new digital technologies have been changing the way governments operate and interact with its stakeholders. Mauritius had to adapt to this digital disruption. In anticipation of how expectations and demands from digitally engaged citizens would likely to grow in the future, this office responded with the formulation of the Digital Government Transformation Strategy 2018-2022 (DGTS). The DGTS facilitates the transition from e-Government to the next level of digital government which calls for more transformative set of changes to renew public sector service delivery. The DGTS advocates greater use of digital technologies and data sharing to achieve openness, transparency, engagement and informed decision-making as well as to offer integrated services to citizens and businesses. The strategy encompasses:

• A review of the existing e-Government Strategy 2013-2017;

• A needs-centric approach through consultations and surveys with citizens, businesses as well as government agencies to tackle the current challenges of Mauritius;

• Recommendations which will leverage on latest technological trends and best practice;

• An action plan to accompany government agencies in the implementation of the strategy. The project is relevant to **SDG1, SDG2, SDG3, SDG4, SDG5, SDG6, SDG7, SDG8, SDG9, SDG10, SDG11, SDG12, SDG13, SDG14, SDG15, SDG16, SDG17**.

In **Rwanda**, every year, billions and billions of dollars of humanitarian aid are dispatched towards different sectors in different countries under development. But most of the time, corrupted distribution channels make it hard for the right beneficiaries to actually benefit from that aid. This project will subjectively focus on the management, monitoring and controlling services and products, beneficiaries and enabling humanitarian organizations to register and search for the right beneficiaries in any country, assign their aid, follow up and track the progress of selected beneficiaries, and deliver services or products.

By bringing together information about people around the world who need help, under one rough (from different known and authentic databases), this software will offer easy and fast access to all sorts of information by a click of a button. The project is relevant to **SDGs 3, 12, 16 and 17**.

In **Rwanda**, an **Integrated Electronic Case Management System** (IECMS) was implemented to modernize Rwanda's Justice System introduced and operationalized since January 2016 to improve the provision of legal services and access to justice by reducing delays and transaction costs associated with judicial case processing and management. The main objective of Rwanda IECMS is to serve as a centralized and computerized judicial case processing system for whole judicial chain that is to say all justice sector institutions, including the Rwanda Investigation Bureau (RIB), National Public Prosecution Authority (NPPA), Rwanda Judiciary (RJ), and Rwanda Correctional Services (RCS) as well as Military court. Concerning Results achieved

are the successful implementation of the justice chain system that comprise 6 modules (Investigation, Prosecution, Adjudication, Civil Litigation, Correctional and Judgement Execution), allowing data and case sharing among institution but preserving institutional independence. The system's impact is to provide fast and affordable justice to citizens, with electronic and reliable case filing, processing and management, sharing of case information between various institutions involved in the case, access information to all case parties, strict adherence to legal requirements in all matters; accurate monitoring, evaluation and reporting on the work accomplished and creating a reliable jurisprudence archive that is accessible, searchable and available 24/7. The project is relevant to **SDG16**.

In **South Africa**, **Balloting and Electoral Services** (BES) of EISA has recently successfully managed the electronic registration of AMCU regional voting delegates and election of AMCU national office bearers at its 2019 national elective congress. Between April and July 2017, the Balloting and Electoral Services department, successfully concluded elections of seven office bearers at four of the AMCU regional elective congresses that is: KZN Coastal, KZN Midlands, Northern Cape and Gauteng West Rand. It is notable to mention that this was the first time that the KZN Coastal and Northern Cape regions have held an elective congress. AMCU observers assigned by branches, expressed their satisfaction with the voting and counting of ballots. EISA announced results immediately after counting. BES successfully conducted a further three elections for the AMCU Mpumalanga region in Parktown, Nelspruit and Secunda. Voting delegates varied between fifty and eighty per region with the nominated candidates being elected uncontested at all three regional elective congresses   Moreover,   BES conducted a demonstration of its newly developed electronic balloting for on sight non statutory elections presenting the electronic ballot paper to the SATAWU Eastern Cape provincial congress held in East London on the 17 and 18 May, 2014. We believe modern technology can be used to ensure the voting process is resilient. At the same time, this is not an intention to replace paper ballots but rather to supplement and improve systems that rely on them, and it is not designed to support internet voting. In short, it is a new tool for use by the existing election community and government entities that run elections. The project is relevant to **SDG16**.

In **Uganda**, **ePosta** is an Enterprise Transactional Postal Office Management platform that allows any Post Office to offer all its services, all government services as well as private services online using one single platform. ePosta is intended to revolutionize post office by turning it into a supermarket for all postal services, government services as well as Financial Services. ePosta seeks to provide a single platform through which all postal offices can seamlessly offer services and create new avenues for revenue enhancement. ePosta has transformed the way citizens communicate and transact business through the post office as well as propelled the postal industry into greater heights. This has helped Posta Uganda generate both incremental change and wide-ranging strategic reforms in the delivery of mail. ePosta has enabled citizens enjoy postal services electronically via any electronic device thus invigorating the aspect of convenience, inclusion and affordability in the postal services. The purpose is to provide a platform to help users access all services anytime anywhere at their convenience. Impact:

• Delivery of e Government Services through the Post Office (innovative, integrated and inclusive)

• Creation of new sustainable sources of revenue for the company; • Cost reduction

- More return of equity
- Productivity improvement
- Improved customer satisfaction
- Better customer retention
- Faster time-to-market

In Conclusion, ePosta is an enabler for the achievement of the Sustainable Development Goals (SDGs) in Uganda. The project is relevant to **SDG7, SDG8, SDG9, SDG10, SDG11, SDG12**.

Action Line 7 E-HEALTH

In **Kenya**, **Totohealth**, a social enterprise in Kenya, possess an outstanding innovation aimed at im-proving maternal health and preventing child mortality through the use of targeted interactive text and voice messages.

Registration is done through short code, where-by women who are expectant and those with children under five years of age receive timely messages on health, nutrition and proper development. Totohealth uses mobile technology to help reduce maternal and child mortality and detect developmental abnormalities in early stages. The project is relevant to **SDG 3**.

In **Kenya**, **Uthabiti** is a web and mobile platform that permits users to consult doctors and other health auxiliaries online, as well as order prescribed or non-prescribed medicines from pharmacies, and have them directly delivered at home. From an idea to a plan, Uthabiti has created continuous positive change, one drug after another. Uthabiti is using blockchain technology to safe proof the pharmaceutical data (batch number of products) supply chain across its distribution channels. It enables the general public to check pharmaceutical purchases through a mobile app or via its SMS service before consumption. When receiving a request, Uthabit automatically re-plies on the legitimacy of the products based on the database provided by the manufacturers. The project is relevant to **SDG 3**.

The fight against Fake Medicines

Nigeria is one of the most dangerous places in the world to give birth and to be born. According to the United Nations Children's Fund (UNICEF), a woman's chance of dying from pregnancy and childbirth in Nigeria is 1 in 13. One of the underlying causes of the high maternal and infant mortality in Nigeria includes limited availability of timely and reliable health information for decision-making, and poor access to and use of health facilities.

In addition, there remains a lack of collective community knowledge on safe and healthy pregnancy and infant care.

Mamalette is a platform that focuses on im-proving health outcomes for pregnant women and new mothers who are vulnerable or socially marginalized while simultaneously pro-viding employment opportunities for women. Mamalette trains experienced mothers who work as health champions in various neighborhoods, sharing important live-saving, maternal and infant health information peer support, group meetings and awareness campaigns.

The project is relevant to **SDGs 3** and **5**.

In **Nigeria**, **Jaracare** is an online medical consultation platform that enables people in remote areas to consult doctors at no cost. It is solving the problem of poor accessibility to quality health services among people in remote areas. Jaracare runs a business-to-business model where it refers patients to hospitals and the hospitals pay for their referrals. It uses the Internet and Unstructured Supplementary Service Data (USSD) to provide health information and service access to people in areas where there are no doctors. Jaracare currently has more than 100 000 patients in its platform and has the potential to reach out to more than 50 million people in Nigeria and beyond. Its mission statement is "Valuable Community Health-care Service at the Fingertips for Everyone Everywhere at Any Time". The company's goals and objectives are to become the number one digital healthcare service provider in Africa by constantly adapting to technologies that improve community healthcare delivery through bridging the scarcity of physicians, in order to create an abundance that supports the voices of patients. The project is relevant to **SDGs 3** and **17**.

In **Nigeria**, with pervasive poverty, poor healthcare financing and high maternal mortality, less than 3% of Nigeria's 200 million population have health insurance as it is considered an expensive luxury. Again, Nigeria generates over 34 million tons of waste yearly and about 20 billion PET bottles causing poor sanitation, poor healthcare and affecting the environment

SOSO CARE is a social enterprise low cost insurtech which aims to use recyclable garbage as a financial resource enabling millions of uninsured slum dwellers mostly pregnant women and kids to access micro health insurance and gain points on food stamps. By linking garbage to healthcare access and food stamps we are killing 2 birds with 1 stone a as the solution addresses the needs through the following:

• Access to healthcare to reduce infant and maternal mortality in these regions

• Improving sanitation & environment in slums and

• Creating Jobs for the distribution network and waste collectors

• Access to micro capital

• Access to food stamps

The project is relevant to **SDG2, SDG3, SDG6, SDG8, SDG11, SDG13, SDG17**.

In **Nigeria**, **VACAM** is an artificial Intelligence powered software that was programmed to detect the deficiency of vitamin A in the body by taking the picture of the face of the person. It is targeted to help detect vitamin A deficiency even at the first stage. It is designed to assist in medical activities and environments. At least this project has been tested on 100 women and detect the level of vitamin A in all the women. We also use the software to test 100 men and also got the vitamin A level in them. We have been able to detect vitamin A deficiency by taking just the picture of the face. The project is relevant to **SDG5, SDG16**.
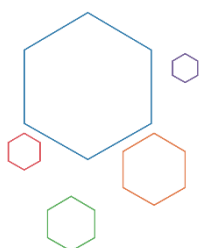
In **Rwanda**, **KosmoHealth** is a mobile resource for pregnant women and individuals seeking urgent care and home-based healthcare services. Key features include geolocation to help users search for nearby doctors and specialists, a call button for first aid support (urgent intervention) and access to home-based prenatal care. The app allows users to register at any point in their pregnancy and receive advice and alert messages related to their pregnancy term. For emergency health cases, individuals can use the KosmoHealth app's call button for urgent care from the hospital they want, or they can call for the mobile clinic. For pregnant women, they register and enter the week of their pregnancy, and start receiving advice in alert messages related to their pregnancy term and week and, depending on their wish, they can order home-based postnatal care. For parents whose babies are sick or individuals feeling unwell, they use a GPS feature in the app to search for nearby doctors, by specialty or by location. Kosmotive published 1 500 printed copies of Kosmos magazine for three maternal and child health editions published online and read by 32 000 individuals. By the average number of children per household in Rwanda (four), Kosmotive estimates that it has impacted 134 000 lives. The project is relevant to **SDGs 3** and **16**.
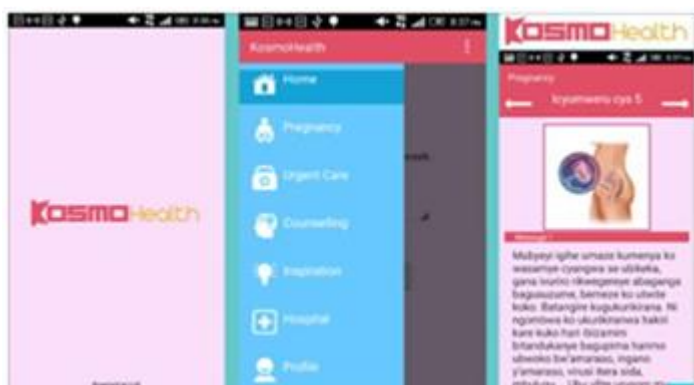
In **Rwanda, Zipline Rwanda** was established in Rwanda to increase accessibility to medical products: insulin, vaccine, etc and also the blood products: red cells, platelets, cryo, etc to remote and rural locations. By the end of our expansion contract our two distribution centers will serve more than 400 facilities and represent more than 90% of the hospitals and health centers in the country. The majority of the population in Rwanda leaves in those areas and having quicker and easier access to those vital products in some of the most remote areas was a challenge that our project was able to bring a solution and it is the reason why the Government of   Rwanda invested in Zipline in the first place. We have made over 23'000 deliveries (of which 7'800 were emergencies) with over 40'000 units of medical products (of which 16'000 were emergencies). Note that since we introduced medical products (pharmaceutical products) in March this year, we have made 300 deliveries of those and delivered over 1'250 medical products units. We are currently serving 24 hospitals and 20 health centers. The project is relevant to **SDG3**.

In **Senegal**, **APHIA** is a digitized patient record positioned at the core of the health system and aims to become THE comprehensive monitoring tool designed to support African public health authorities in piloting and strengthening health systems. Also, a number of the health challenges faced by West African countries are as much of a regional nature as they are of a national one. The Ebola crisis that happened a few years ago is a striking illustration of this reality. As a consequence, APHIA is designed to be rolled out regionally in order to facilitate harmonization and regional cooperation in the matter of public health. APHIA aims to develop prevention, optimize care processes, secure medical coverage and provide accurate data for health monitoring.

This first version of APHIA has been released on Google Play and the Apple App Store. It offers the following:

(a) a complete directory of health structures and professionals in Senegal (hospitals, health centres, health posts, clinics, specialists, laboratories, pharmacies, emergency rooms);

(b) geolocation of healthcare providers to find the closest to one's position;

(c) the medical care network;

(d) an "Information, Awareness and Training" module; (e) a multi-criteria search module;

and (f) an individual profile.

The project is relevant to **SDG 3**.

In **Senegal, breast cancer** is the leading cancer in women, as it is worldwide in both developed and developing countries. According to the World Health Organization, 519 000 women died of breast cancer in 2004, including 358 110 in underdeveloped countries. This high mortality rate in less developed countries is mainly due to the lack of early detection programmes, resulting in a high proportion of women with advanced disease and a lack of diagnostic facilities and appropriate treatment.

To overcome this problem, a digital laboratory was set up: Deep health, based on artificial intelligence, which allows revealing

the presence or not of breast cancer from a microscopic image of blood.

The project is relevant to **SDGs 1, 3** and **10**.

In **Senegal**, **eLearning platform of Health Ministry of Senegal** is a software for health workers. It allows them to learn new protocols and new health practices. It is used to plan, implement and evaluate a specific learning process. It is a web platform that facilitates access to learning content. And in the context of improving the performance of human resources, continuing training is important to have competent health workers whose knowledge is continually upgraded. Usually, health workers followed program's trainings out of their districts. This situation creates a problem of availability of health services. To train health professionals efficiently and effectively, it is therefore necessary to diversify the training support. The health Ministry introduce this platform to allow health workers to access on training content online. This platform allows them to learn from everywhere and every time. Health workers need to have Internet and parameters to access to courses content. Presently, we have many contents in different domains: maternal and child health, emergency management, malaria, diabetes… The project is relevant to **SDG3, SDG4**.

In **Senegal**, the blood stock deficit is estimated at 40% in 2017. This situation, arising in many African countries is becoming more and more alarming and is worrying the biggest actors in the health sector. Despite all the messages launched by the National Blood Transfusion Center, regular donors (those who make more than two donations per year) represent less than 35% of all donors. **Urge'Sang** is a mobile application, also available in a web version, which brings elements of solutions to different problems related to the depletion of blood stocks noticed in recent years. With already a functional prototype, the app includes the following features: A "Search" feature that locates users of a particular blood group in order to find a potential donor. A system of Link: Urge'Sang allows its users to save certain information related to their blood group and also a list of people to contact in case of emergency blood needs. This information is stored in accordance with all information security standards. They are accessible only for the owner and rescuers. In case of an accident, the rescuer enters on his board the number of the identity card of the accident victim to have his blood type and the list of his Links with their contacts. It will only be necessary to carry out medical tests and then save the casualty in time. The purpose of this feature is to give the injured more time to increase his chances of survival. A Chatbot to educate the user about blood related diseases, push the user to participate in blood donation campaigns. A News feature that allows you to post certain information such as donations of blood or requests for blood that will be sent to all users of the blood group concerned. For more visibilities, these publications can also be shared on social networks. Data collected analysis for stock depletion prediction (months before), thanks to AI and Data Mining tools. The project is relevant to **SDG3**.

In **South Africa**, **the reHealthAfrica** brand was engineered at the launch of Demola in 2016, the objectives are to accelerate South Africa's participation and to unlock the mHealth & medTech opportunities in this rare window of economic opportunity for African innovators and start-ups. At its launch reHealthAfrica partnered on mHealth and wellness challenges in the 2016 Winter Season of DEMOLA as a means to understand the market and innovation culture capacity for developing local solutions. This initial intervention had the following outcomes:

• A book published by the CSIR titled Strategies, Approaches and Experiences: Towards building a South African Digital Health Innovation Ecosystem Strategies, Approaches and Experiences: Towards building a South African Digital Health Innovation Ecosystem, free download available here

• Two students who participated in challenges where awarded internship opportunities at Powerhouse, a subsidiary of Innogy in Amsterdam.

• Challenge Team Medi-VR were awarded a seed grant to further develop their product after registering as a business.

• 3rd year Informatics team from UCT that participated in Demola were awarded 3rd prize in the Ernest & Young Final Year Project for their project.

• 30 Multidisciplinary Students gained exposure to real industry challenges, including the Health Sector through reHealthAfrica and developed crucial skills in innovation, presentation, project management and business relations.

The project is related to **SDG3**.
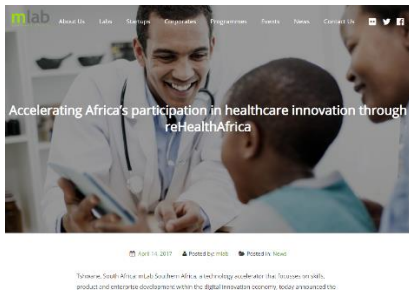
In **South Africa**, **mHealth Studio App** is the mobile interface for patient and facility data capturing and management. Its ecosystem design houses each mHealth solution for ease of use. mHealth Studio Cloud is the web application for online data management, surveillance, referrals and report generation: secure interoperable data monitoring in real time. It is a centralized data management integrated mobile and cloud-based platform that manages patient, facility and test data seamlessly.

The project is relevant to **SDG 3**.

Also, in **South Africa**, **HearScreen** is a mobile health start-up that aims to improve the lives of the 1.2 billion people who suffer from hearing difficulties. The South African start-up provides low-cost hearing tests that can be administered by users without training, and a referral system links patients with services. De Wet Swanepoel, co-founder of HearScreen, has been working in the field of hearing and hearing health care for 15 years.

About 1.2 billion people have hearing problems, which is one in seven people globally. Furthermore, 80 per cent of those people have no access to care. The current equipment is prohibitive, expensive and not mobile. De Wet Swanepoel aimed to develop a solution to democratize access to hearing health care using smartphone technology, to test hearing loss in children and adults according to ISO inter-national standards. HearScreen can be taken to communities in an affordable, broad-based manner.

The project is relevant to **SDG 3**.

In **Uganda, Mum Attendant** is a company that was founded to address complications of pregnancy and childbirth, which lead to the death of almost 300 000 women each year. Mum Attendant developed a comprehensive USSD application and set up a USSD gateway through which any woman with any type of phone is able to access lifesaving prenatal and postnatal information, locate the nearest health services, get maternity products such as safe birth kits, and receive a weekly SMS for prenatal information and reminders, etc. Mum Attendant has also developed a maternity mobile app that provides helpful offline prenatal/postnatal information, plus lots of other prenatal tools.

Through the USSD service, pregnant women starting at the very beginning of pregnancy register with Mum Attendant and are later able to get weekly SMS messages for prenatal compliance tips and reminders like those for prenatal visit dates. Beneficiaries are also among those able to request at any time specialized information of interest having to do with any prenatal/postnatal topics related to different pregnancy weeks/stages, and that information is instantly delivered onto their phone screen or sent through SMS.

The project is relevant to **SDG 3**.

In **the United Republic of Tanzania, Jamii** is a mobile micro-health insurance product for the informal sector launched in partnership with Vodacom Tanzania Ltd., the jubilee insurance of Tanzania Ltd. and Edgepoint Digital Ltd. It is increasing digital inclusion and making an impact. The start-up Jamii is expanding financial inclusion and healthcare coverage in the United Republic of Tanzania by delivering affordable micro-insurance through a mobile platform. In the United Republic of Tanzania, over 40 million subscribers have cellphones, but only 4 million adults have health insurance. This is especially perilous for low-income, informal workers.

Across the continent, high out-of-pocket health care costs plunge over 11 million Africans into poverty every year.

Fortunately, digital technology offers a scalable solution to this challenge. Jamii offers a mobile-based micro-health insurance product for as little as USD 1 a month to the United Republic of Tanzania's low-income, informal sector. Last fall, Jamii's founder, Lilian Makoi, participated in in-foDev's pan-African accelerator programme, XL Africa.

The project is relevant to **SDG 3**.

In **the United Republic of Tanzania**, **SmartFit** is a Tanzanian technology company that specializes in innovating, improving and customizing world-class technologies and services to fit in the African environment.

The company is currently developing and deploying self-operated water purification and vending machines to enable communities in sub-Saharan Africa to have easy access to clean and safe drinking water at an affordable cost and in a way that does not endanger the environment with plastic waste. The company provides a cheap and easy alternative to bottled water, providing unlimited access to cold, filtered and purified drinking water on the go. Its purification process it to offer water that is more purified than any other water refill station.

The project is relevant to **SDGs 3, 6 and 13**.

Action Line 7 E-LEARNING

In **Angola**, **SkillFinder** is a platform that helps students find tutors on any subject as close as possible to them. From students or professionals, there is always a need to improve our skills, for this we need in most cases to find people who understand these subjects for an explanation of them, and better if that person is closest to me. Soon SkillFinder came to improve the search for a tutor on any subject wherever the user is. SkillFinder comes to help unemployed students, tutors and professionals, thus improving student skills and a form of part-time jobs for tutors and professionals. The project is relevant to **SDG4**.
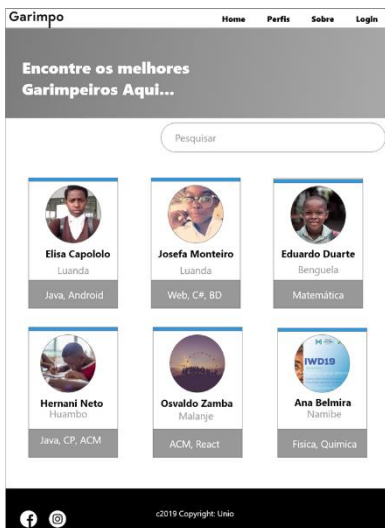
In **Cameroon**, **Genius Centers** is a company created in March 2017 that offers youths aged 4 to 17 years, activities to develop their leadership and creativity by learning computer engineering, robotics, design and leadership skills. To achieve this, Genius Centers provides a bilingual (French and English) e-learning platform (Genius eLab) containing interactive courses presented in a fun and engaging manner, specially adapted to the Age of the learner. Genius eLab works even in the absence of the internet. The platform is used in schools, homes and a network of approved centers.   A team of 15 people work daily to implement the orientations put in place by the board of directors and supported by a panel of advisers.   To date, Genius Centers is present in Africa (Cameroon, Morocco, Tchad, Benin,)   and has 6 centers, 50 partner schools and 4500 users of which 32% (1450) are girls.   By 2021, Genius Centers intends to make a turnover of 14 million USD with 2 million users (50% being girls), distributed over 35 countries. The project is relevant to **SDG5, SDG16**.

In **Nigeria**, **UniteS Academy** was established to promote educational development through the use of ICT. The focus is to make globally recognized ICT certification accessible and available to all Nigerian educational institutions. The Mind Wide Open Project creates an opportunity for young women all over the world and inspires them to pursue careers in ICT through hands-on exposure to the latest technology and engagement with industry professionals. The initiative is designed to make ICT education accessible and affordable to girls and women across the educational sector, including secondary school students in Nigeria, especially to girls. The academy also seeks to train a new generation of computer engineers and scientists, thereby turning Nigeria into an ICT hub.

The initiative targets young people, especial-ly girls between the ages of 10 and 19 years. They are encouraged to develop IT skills and earn industry-standard certifications to help narrow the gender gap and encourage greater female participation in the global workforce. The project is relevant to **SDGs 4, 8** and **16**.
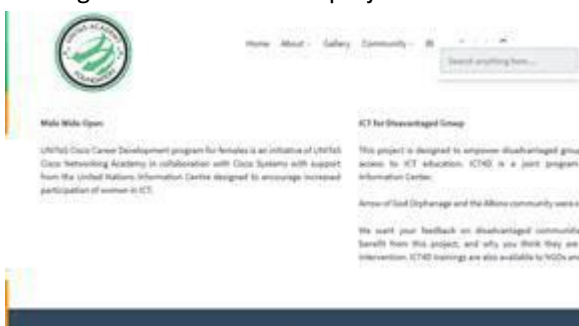
In **Nigeria**, Enabled to Enable is a non-govern-mental organization (NGO) that provides care and support to vulnerable women and girls, especially those living with disabilities. It empowers women and girls with disabilities, other vulnerable women and children, through advocacy, training programmes and the provision of support services, to enable them to contribute meaningfully to their immediate and global development. It envisions an egalitarian society void of any form of discrimination/limitation against women and girls with disabilities, other vulnerable women and children, where their rights to life are protected and respected.

So far, the organization has registered and commenced training for about 90 beneficiaries, which exceeds the target of 50

beneficiaries in the first month only. As a result of the training, especially the computer literacy training, about 40 women and girls now understand what they are capable of accomplishing with a computer. They are not just more confident but also more critical and creative when faced with any computing problem. The project is relevant to **SDG 16**.

In **Nigeria**, **Teachers.Ng** provides digital skills, resources and training for teachers in public schools in Nigeria, especially for those in underserved communities. Teachers are linked up with educators and researchers in developed countries in collaborative STEM projects for primary and secondary schools. Driven by WSIS C3 and SDGs 1,4,5,8,10; over 6,000 teachers have been directly imparted, reaching more than 320,000 underprivileged and marginalized children and youths with girls comprising over 55% of beneficiaries, since inception. It employs low-cost teaching resources such as open source software and use of discarded computers to educate children in slums, rural and remote communities. Re-use of old computers for hardware classes greatly reduces e-wastes, saving carbon emission and energy. With entrepreneurship, digital storytelling, coding, critical life skills and computational thinking also comprising integral components of this project; young people are prepared for sustainable livelihoods, innovation and are empowered to use their voices (especially girls) for positive impacts. With about 10.5 million Nigerian children aged 5-14 years out of school, this project, approved by states ministries of education immensely complements the government's efforts to provide quality, inclusive and accessible education for children and adolescents in the country. The project is relevant to **SDG1, SDG4, SDG5, SDG8, SDG10, SDG17**.

In **Nigeria**, this is a digital entrepreneurship education to train and empower TEN MILLION social and digital entrepreneurs in Nigeria and Africa. Here, leveraging on the digital skills, tools and space, we undertake a Learning- Working and Earning training , mentoring and empowerment of the active but idle youths and women to earn decent means of livelihood and overcome poverty, ignorance, hunger, social injustices and thereby minimizing illegal migration, violent extremism and vices. Our program on HETAVED DIGITO EDU-PRENEURSHIP is universally available and affordable through online, digital and offline formats. Please refer to https://mb100.hottopics.ht for our international endorsement. Also, kindly see our African Union - AU-endorsement as one of the unique innovations for TVET educational model in Africa at: https://www.dropbox.com/s/3d2hs3jwafz1yh6/Africa_Education_Innovations_Handbook_2018_final.pdf?dl=0. The project is relevant to **SDG1, SDG4, SDG5, SDG8, SDG9, SDG11, SDG12, SDG17**.


In **Nigeria**, **ARPG Tech** major objective is to deliver intricate solutions to spur businesses, improve educational outcomes and engage professional outlook at a competitive   advantage. They empower women and teenagers to maximize their

productivity but to also increase economic empowerment through proferring them technical solutions alongside tech skills. Our target audience are educational institutions, underrepresented women in tech, women in their mid career towards a transition in tech. The activities include science fairs, Edtech Fairs, Onsite and Virtual training on STEM courses and ICT skills. They also provide small and medium business with technology solutions. The project is relevant to **SDG5, SDG16**.

In **Rwanda**, after 6 years learning to code, it was not easy to understand exactly the coding without Reading it in our my language so I came out this the logic of creating the website of teaching coding in our language and currently I have 45 students in the only 2month and the problem that I was facing that time because of my background I don't want also student from bad background to face it and Africa we need to understand that our language has value which means learning content from language we understand is very important than leaning in language we don't understand.
The project is relevant to **SDG4**.
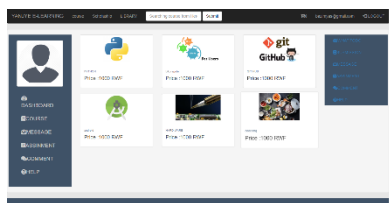
In **Senegal**, **UVS** is the country's first public online university. Created in 2014, its main objective is to use ICT in the development of higher education in Senegal. To proceed, the university has created and implemented Open Digital Spaces as innovative infrastructures, connected to optical fibre, equipped with the latest generation hardware, and designed to familiarize and facilitate access to digital re-sources and IT tools. These spaces are located in all the regional capitals of the country, contributing to strengthening the digital grid of the territory.

UVS students are free to connect to the numerical platform and to take classes from home or anywhere they are, with computer and 3G Internet keys that are given at registration, or to come to the Open Digital Spaces to connect there and take classes with other students. The university, created in 2014 with around 2 000 students, now counts not less than 28,000 students, making it the second largest university of the country in terms of numbers. The project is relevant to **SDGs 4** and **9.**

In **Senegal**, **Nio-Far** Agro-school cherche à instaurer une approche pédagogique moderne et pratique de l'enseignement de l'agriculture dans les écoles. Ainsi à bas âge, les élèves ont la chance de se familiariser avec ce métier de la terre, d'où une revalorisation de cette activité économique qui se trouve être le premier élément pour tout développement durable avec une approche pédagogique plus concrète et pratique à travers de petites fermes installées au sein des établissements pilotes. Nous ferons en sorte que l'enseignement soit à la portée de tous par des modules simples, ludiques et instructifs. The project is relevant to **SDG1, SDG2, SDG3, SDG4, SDG5, SDG6, SDG7, SDG8, SDG9, SDG10, SDG11, SDG16, SDG17**.

In **South Africa**, the 12 e-Learning Classrooms (what are traditionally called computer labs in other libraries) are located in 12 libraries from all 8 regions in the City of Johannesburg, and were introduced in 2016 to be used only for online courses. This was an initiative introduced and managed by a private company. In 2017, the City discontinued funding the management of these facilities; thus, the City of Johannesburg libraries had to find ways of ensuring that these facilities continued to be utilized. The e-Learning Unit redesigned and introduced different programmes in these **e-Learning Classrooms** in 2018, turning them into spaces where the communities could enjoy various services, both offline and online, and assist libraries without computer facilities through the concept of "Mobile e-Learning Classrooms".

While generally the introduction of technology, the Internet and online learning has made libraries more appealing, the e - Learning Classrooms have played a major role in encouraging communities to come back into libraries in a safe environment to access the Internet and also learn online. Mobile e-Learning Classrooms have made the library environment more vibrant wherever they are brought in, and also encourage resource sharing for the under resourced libraries. The project is relevant to **SDGs 4, 5, 8, 9 and 17**.

In **South Africa**, **Good Work Foundation** – a South African not-for-profit – is addressing a need to improve access to education, personal development and the global stage in rural Africa, with a view to maximizing reach from independently managed hubs of digital education. The organization has been developing a model of locally-managed Digital Learning Campuses (or "hubs") that improve an individual's ability to operate the twenty-first century "languages of access" – digital, English and self-creativity.

The aim of each Digital Learning Campus is to

(a) create an access "bridge" between school and work, preparing rural adults for life in a global, connected world;

(b) become a hub of digital learning for public-sector elementary schools that can outsource their digital learning to the centre (The Open Learning Academy);

and (c) reduce the "digital divide", providing rural people with the opportunity to actively participate in today's online economy.

The project is relevant to **SDGs 1 and 4**.

In **South Africa**, **Afroes** began as a small start-up in South Africa with a mission to "gamify" Africa's twenty-first century learning needs. The digital enterprise has developed several mobile app games to raise awareness about social issues, including gender-based violence, child security and environmental protection. By 2014, Afroes had expanded its operations from South Africa to Kenya. To date, the company has launched five games and reached over 850 000 users. Along the way, it has won 13 awards and prizes, and se-cured at least 16 business contracts.

From the beginning, Afroes' games have been funded through organizations already involved in specific social issues. At the moment, they're working with the Rockefeller Foundation's Digital Jobs Africa, which aims to impact 1 million lives. Thus, they've developed a new game called Job Hunt, that aims to help young people learn about digital jobs. This will be their first game to be launched in Kenya, South Africa and Nigeria. They hope this will lead to other opportunities in West Africa as well. The project is relevant to **SDGs 4, 5 and 8**.

In **South Africa**, **Mobile Literacy in City of Johannesburg Library** is an initiative started in 2016. The City of Johannesburg's (CoJ) Libraries' eLearning Department (ELA) established a team consisting of library staff from all CoJ regions, mandated to initiate and implement eLearning programmes to the citizens of Johannesburg. Among many successful eLearning programmes implemented in libraries citywide, Mobile Literacy has been one of the most successful programmes with more than 3000 library users between ages 8 to 16 benefiting through planned and point of need intervention activities since 2018. City of Johannesburg libraries collaborated with Goethe-Institut Johannesburg in 2017 to train staff on the concept and in 2018 Mobile literacy programs were initiated with 30 donated tablets. This resulted in the introduction of Mobile Literacy as an eLearning program. Mobile Literacy programmes in libraries focus on productive use of using mobile devices such as smartphones, tablets and laptops for learning, creativity, leisure reading and other personal development needs. This program has helped address the issue of lack of sufficient computers or computer labs in libraries and allowing users to take ownership in accessing information services through their own devices.The project is relevant to **SDG1, SDG4, SDG5, SDG8, SDG9, SDG11, SDG12, SDG16**.

In **Uganda**, **Assure Uganda** is a girl-led organization currently with a membership of 464 girls and 58 boys, who all work as volunteers. Assure Uganda works in Kabale Municipality in south-western Uganda. The organization targets youths but particularly adolescent girls and young women below 27 years of age. If a member goes beyond 27, she becomes a promoter and/or senior adviser, and ceases to have voting rights, but can be appointed to represent the organization anywhere. Assure

Uganda works to achieve the following objectives: (a) engage young people in health, policy and advocacy issues; (b) create HIV prevention awareness among girls in and out of school; (c) contribute towards the reduction of school dropout levels among young people in Uganda; (d) provide professional peer education services to young people in Kabale Municipality; (e) contribute towards a reduction in all forms of violence against girls and young women in Uganda; (f) equip girls with digital knowledge and gainful employable skills; and (g) empower generations to make informed decisions. The project is relevant to **SDGs 4 and 5**.

In **Dem. Rep. of the Congo, the Week of Science and Technologies** is an activity organized every year since 2014. Every year, the non-profit association Investing in People with the Ministry of Primary, Secondary and Professional Education and the Ministry of Scientific Research and Technology organize The Week of Science and Technologies in Kinshasa, D. R. Congo. This event was created in order to develop a culture of science and technology among young people and girls in particular, to promote knowledge and know-how in these fields, and to encourage vocations. It is structured in four activities - scientific animations, conferences, exhibitions and a national competition.   The event is open to elementary and high school students, graduate students and academics, as well as the general public. The project is relevant **to SDG5, SDG16**.

In South Africa, **Loxion science STEMI camps for girls and boys/Loxion science fair and expo** is conducted in service to the previously disadvantaged African young learners in the public schooling sector at no cost. This affords them the opportunity to engage and interact with the field of Science physically and helps put the classroom curriculum in perspective relative to socio-economic challenges faced in the various communities. With the initiative, the organization aims to spread the knowledge, excitement and interest of Science, Technology, Engineering, and Mathematics and Innovation   (STEMI) to spark innovation and develop young black scientists who are able to identify a problem in their community, analyse data, find solutions and be able to communicate their findings effectively. It aims to engage the public in a celebration of our local Science community, and the way STEMI helps us to better understand our and improve our world. It gives emphasis to hands-on, enquiry-based activities, and participation in field experiences. It also offers the industry the opportunity to interact and connect with our future scientists by showcasing various exhibitions, specialists conducting demonstrations /experiments, and speakers from various fields talking about relevant scientific topics to the community. This flagship project takes Science from leaders in the STEMI industry in the form of laboratories, universities and research institutions and places it in the heart of township and rural communities in South Africa.   The project is relevant to **SDG5, SDG16**.


Actionline 8

In **Ghana**, **Leti Arts** is an interactive media studio with offices in Ghana and Kenya that develops cross-platform games and apps which are influenced by African history, folklore, and culture. Our current in-house project, Africa's Legends is a superhero franchise which has characters from all over the continent fighting crime in 21st century Africa. The goal of creating these digital comics and games around our history and culture is to present Africa to the younger generation in a way that would make them genuinely excited. We also build games and apps for third-party clients.

Leti Arts, formerly Leti Games was founded in 2009 by two friends Eyram Tawia (Ghana) and Wesley Kirinya (Kenya). Leti was

formed out of the passion to create a unique game studio in Africa that leveraged local talent while building quality games that could compete on the world market. Over the years, we realized the need broaden our scope to cover other African themed content instead of just games as the available content was just not cutting it. These include digital comics and interactive applications that were targeted at mobile devices. This brought about the need to rebrand from Leti Games to Leti Arts in 2013 to throw more light on our vision and the new direction the company had taken. With funding and the passion for creativity and innovation, Leti arts is now spear-heading the game industry in Sub Saharan Africa with a core team of ten.

The project is related to **SDG4** and **SDG16**.
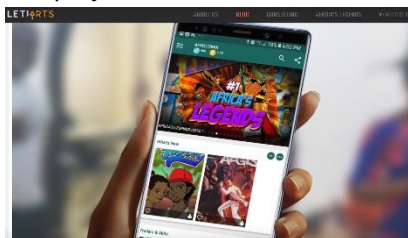
In **Ghana**, **Unlocking Women in Technology (UWAT)** project's primary aim is to harness the use of technology in mobilising women and to utilise the skills of the Diaspora community in reaching this goal. This initiative is funded by Comic Relief and led by iSpace Foundation (GH) working in partnership with Ghana Code Club, Mobile Web Ghana, and The Radical Leap Company (UK). Offering programs and courses that include Coding, Business Management, Entrepreneurship, Professional Networking and Pitching {for Funding}, Mentorship.   UWAT aims to create the type of ecosystem that offers training and the right support for women to thrive professionally.   UWAT Targets women between the ages of 18-35 years from diverse background who have the passion to make an impact, gain new skill and kickstart her business. Our project is about the social impact of technology and entrepreneurship therefore our target group had to be members of the public who lacked access to funding, training, and general resources.

The project is relevant to **SDG4, SDG5**.

In **Ghana**, **Afrocomix** is a content hub for all Afrocentric creative work made by Africans on the continent to provide a one stop shop for people all over the world who love African content while focusing on monetization, social integration and fixing the issue of fragmentation among the African creative industry. Since we launched in December 2017, we have been able to source for content from over 50 creatives across the continent and delivered it all over the world. One of our greatest achievements with this app includes publishing the Karmzah comic which has a superhero with cerebral palsy as its star. This is the first superhero ever created with this condition and has generated a lot of conversation about the disabled community which we are proud to pioneer.

The project is relevant to **SDG4, SDG8, SDG9, SDG17**.

In **Mali**, **Lenal**i specializes in the development of mobile applications adapted to the social, cultural and economic realities of African nations. In March 2017, Lenali launched its mobile social network application, the first in the world to be fully vocal and to speak local languages. The platform provides voice guides in local languages, offers the possibility of creating vocal profiles and allows users to post vocal pictures and vocal comments. Today, Lenali has around 60 000 users around the world and is preparing to launch its marketplace LenaMarket, a vocal digital social market which offers everyone, literate or not, the opportunity to sell and promote their products and/or services to a growing community. With its partners, LenaMarket will vocalize existing mobile payment services to facilitate financial transactions, which will help to address problems in Africa.

The project is relevant to **SDGs 4, 8 and 9**.

In **Mauritius**, the project **E-Archives** System involves the establishment of a digital repository for documents, which can be viewed online and printed by users, and for the digitization of historical documents. Launched by the national government, the E-Archives System aims to provide long-term access to electronic records for current and future generations, as historical documents are deteriorating and at risk of being lost. It aims to: provide round-the-clock public access to electronic documents from anywhere in the world via internet browser; allow public users to access the same document at the same time; facilitate storage of large amounts of information economically and efficiently; and to enable offsite storage of electronic documents, thereby mitigating the risk of loss, theft etc. Since the roll-out of the E-Archives System, the public has responded positively, and many international researchers have accessed the database. Furthermore, this project provides great impetus for the digitization of existing collections of old, rare and historical documents dating back to the early settlement of the island and region. The project is relevant to **SDG 11**.

In **Nigeria**, Africa Centre for Citizens Orientation (ACCO) is a registered Nigeria NGO in special consultative status with United Nations Economic and Social Council since 2010 with a mission to engage and equip children, youths, women and persons with disabilities with the right information and requisite skills to actively participate in public life, promote human rights and contribute meaningful to developmental processes for common good of all [**Improving ICT Access for Women and Girls in Nigeria**]. ACCO is out to promote the good and welfare of Africans, most especially women, young people including girls and persons with disabilities based on the principles of freedom, equality and justice, and for the purpose of consolidating the unity and culture of our people. African Centre for Citizens Orientation is a coalition of five community and grassroots organizations namely Women Initiatives Nigeria (WIN), Youth Alliance on ICT for Development, Youth for Youth in Support of Peaceful Elections, Secure Africa - Africa Regional Youth Crime Prevention & Development Conference and Youth Crime Watch Nigeria. ACCO focus on Citizenship Education; Women's Rights & Gender-Based Violence; Young People's Rights & Access to Information; Community Safety; Human Rights; and ICT for Development & Digital Inclusion. ACCO objectives include but not limited to empower women and girls, persons with disabilities, children and youth, with educational and economic opportunities to enable them contribute actively to sustainable development; to promote gender equality and women empowerment at all level and to instill positive values, foster good citizenship and build self-confidence in our young people. We have used Information and Communication Technology tools to empower communities, schools and organizations with beneficiaries include women, girls, students, educators, community leaders and entrepreneurs.
The project is relevant to **SDG4, SDG5, SDG9, SDG16**.

In **Nigeria**, Tech ME is a nonprofit social enterprise leveraging technology to solve social issues. The organization's activities stand on a tripod of STEM education, entrepreneurship, and civic engagement. Established in December 2016, Tech ME began as a project to bridge the technology gender gap in Nigeria. Tech ME was borne out of a passion for technology and impactful social work. Tech ME target group are youth, girls and women. Since inception, the organization has taught coding to 380 girls attending low-income schools. Tech ME also runs mentorship programs for at-risk teenagers. The organization's coding program, **She Makes A Revolution using Technology (SMART) Girls**, is an afterschool program aimed at developing the interest of girls in computer science by teaching coding and programming classes designed to be hands-on, supportive, enriching and most importantly – fun! Classes are designed to stimulate design, creativity, problem-solving, inventiveness, and learning in participants. The organization assists girls in secondary schools to create Tech Girls Clubs. The club serves as a safe space for girls to learn to code with peers. By having girl students as part of the leadership of the clubs, it gives them a sense of ownership. Tech ME has also implemented ICT entrepreneurship projects to train women and youth living in disadvantaged communities. ORGANIZATION OBJECTIVES. To empower women and youth economically by equipping them with relevant skills and resources to achieve financial independence. Improved literacy levels among the girls using innovative technology. To ensure higher participation and leadership of women in the STEM field. Bridge technology gender gap in Nigeria.

The project is relevant to **SDG1, SDG4, SDG5**.

In **South Africa**, **the Bashumi Street Law Show and Bashumi Business Shows** were created in 2016 after a woman shared her story of murders and forced evictions and illegal selling of inherited properties at a women's conference which I had attended. In one instance, a woman had been slaughtered for attempting to challenge her land ownership rights as enshrined in the Constitution. Another woman was forced to marry her deceased husband's brother in order for her and her children to remain in the family home that she and her deceased husband had built together. In the final story, a woman had inherited land from her father. However, this land was taken away from her by her brother and the village chief; and used for economic gains without remunerating her.   These stories moved me to do something! I then founded. The Bashumi shows which is a feminist podcast radio show aimed at empowering the most vulnerable African women (rural women or women subjected to customary marriages) with knowledge in order to challenge the status quo. On one hand, the Bashumi Street Law Show aims to teach the law of inheritance/succession and ownership rights so that women can challenge inheritances being taken away from them or their children. And, on the other hand, the Bashumi Business Show teaches women how to start their own businesses by teaching them how to draft a comprehensive business plan.   African women who had been excluded from inheritance, ownership and the economy could now use their newly found knowledge to come together and to defend their integrity. The Bashumi Shows were not just about empowering individuals, it was about the whole community being empowered so that the whole community could stand together to fight injustice.   The project is relevant to **SDG4, SDG5, SDG8**.

In **South Africa**, **Africa Teen Geeks** has taught 49000 children from disadvantaged communities with 23000 of those being girls. December 2018 it entered into a partnership with the department of basic education to develop and implement a coding and robotics curriculum to be taught from Grade R-9 to public schools which will reach 9 million learners every year. This means that every child in SA irrespective of gender, race & socioeconomic background will have access to tech education and create a pipeline of girls and people of color closing the gender gap and bring racial parity in tech. The project is relevant to **SDG1, SDG16**.
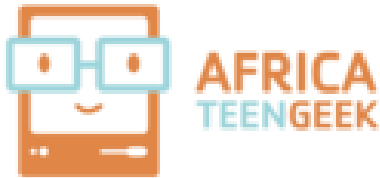
In **Uganda**, **Uganda Computer Aid** is a remarkable initiative of the Musabe Foundation in the field of information and communication technology for the remote and disadvantaged region of the Rwenzori Mountains, bordering the rainforests of Democratic Republic of Congo. Being a developing country, Uganda suffers from limited technology, high digital illiteracy rates, gender technology inequality and technological discrimination of disabled (blind and deaf) children. Consequently, Uganda Computer Aid saw the need to impart ICT skills to all Ugandans, and in particular the project's major target groups of girls, women and persons and children with disabilities (the blind and the deaf). The project is relevant to **SDGs 1, 4** and **16.**

Action Line 9

In Nigeria, **Robotics4Kids STEAM education project** was initiated by BIGT Infotech Solutions Limited to solve the challenges created by the dearth in technological innovation in Nigeria and Africa. The mission is to ignite the passion for ICT and Technology in pupils as young as 4 to give them technology insight from an early age. This would secure Africa's next generation. The pupils learn innovative skills, Digital skills and taught to have an entrepreneurial and leadership mindset. The focus is to reach elementary, Junior Secondary and Senior secondary schools with the initiative and training programs. This sets the pace and engineers other activities that re-aligns the pupils to think in an innovative manner solving Africa's problems with skills the learn from the classrooms. Activities of the initiative includes integrating STEAM skills and programs into their regular curriculum, creating a competitive idea driven environment where they can experiment using critical thinking and problem-solving analytical skills. Research has proven that children who are exposed to STEM Education at an early age will be prepared to understand STEM concepts in their latter and academic career. As the world focus shifts towards

STEM, government policy makers and educators have realized that by providing the right tools to the child to succeed in STEM, it is providing them a big advantage in their future.

The project is related to **SDG9** and **SDG16**.

In **South Africa**, **Visceral Podcast** is aimed at promoting women in science, technology, engineering and mathematics, in Africa. We interview women who are pioneers in the sciences and ask what drives them to be the best in their careers. We promote women in STEM subjects across Africa. These women are pioneering scientific advancement on the continent and are at the heart of our work. Our goal is to promote strong examples of women in STEM and inspire young African women to pursue lifelong career goals in the STEM disciplines.

Visceral Podcast is changing the narrative about women in STEM. We broadcast our message through thought-provoking podcasts, engaging news on STEM, and intelligent profiles highlight-ing accomplishments of women in the STEM dis-ciplines. The project is relevant to **SDG 5**.

In **Zimbabwe**, **Girls Speak Out** is a youth-led media initiative that aims to develop the media, advocacy and coding literacy skills of young women between the ages of 14-24 living in Zimbabwe's under-served communities through journalism, advocacy and code training, combined with civic leadership mentoring, designed to trigger community activism and bring about social change. Girls Speak Out offers free training to such women living in low income, high-density suburbs in Zimbabwe, helping to bridge the digital gap between the poor and the rich, and the gender divide in computer science, particularly ICT.

The organization is working to create safe spaces of learning for girls who want to learn ICT and coding, and to encourage girls to use their technological skills as tools for advocacy to address issues of concern in their local communities and spark social change. The project is relevant to **SDGs 4, 5** and **16**.

Action Line 10

In **Ghana**, the Internet and ICT has become embedded in every aspect of our day- to-day lives and the way we interact with

others. Notwithstanding the positive impact of the internet and ICT on people's lives, it is also being negatively used for bigotry, racism, exclusion, xenophobia and discriminatory thoughts and values.   Fake news, misinformation, deception, hoaxes, propaganda and satire are used to package false information as authentic to influence the youth to radical ideology and violent motives. In Ghana, about 87.1% (Ahiabenu, 2018) of newsrooms report their stories from social media or user-generated content, this makes the media houses more susceptible to fake news.   We believe that the Internet is the one of the platforms the youth are recruited because it is used as a tool for both active and passive communication and outreach. Attacking or pulling down their sites could be a temporary solution, but not a permanent one. To counter those radical activities and violent promoting sites, **Ghana Investment Fund for Electronic Communications (GIFEC)** believes that one should start from the bottom; Education, Media and Information Literacy (MIL) and empowerment of young people to do it by themselves, which will be the most efficient tool to counter and fight such extreme ideologies and radical narratives. This project aims at countering the propaganda of the radical groups and their ideology by providing counter narratives to diminish their extremism ideas and cut the road on increase on negative societal peer influence.

• 300 young leaders (50% women) have received training on active citizenship, ICT, technical Media know-how and researching techniques.

• 300 young leaders are equipped with the necessary technical and knowledge skills and able to launch online "No Hatred words campaign". The project is relevant to **SDG1, SDG4, SDG9, SDG16, SDG17**.

In **Kenya**, **WORD** is an initiative to improve the capacity of women-led initiatives to collect gen-der-disaggregated data. WORD works with organizations and government institutions in areas facing technology challenges, such as low Internet access and language barriers. In addition, it engages organizations addressing the challenges of harmful cultural practices against women and is devel-oping technology-based channels for communities to report cases of harmful cultural practices to authorities and organizations. WORD has developed a platform, WORD Voice, for voice data collection and visualization mechanisms for harmful cultural practice report cases. The WORD Voice platform is also used to train communities to report cases of harmful cultural practices.

The project is relevant to **SDGs 3, 5 and 10**.

In **South Africa**, **the iSchool Press Team programme** gives young people the opportunity to voice their opinions on issues and subjects important to them. It is a unique platform where recording devices can be used to learn, do and say more. Points of view can be captured in two-minute videos, with users able to brainstorm, script, film and edit their posts, which can then be shared through a multitude of platforms for the world to see. The key vehicle of iSchoolAfrica Educational Trust, used to invest in the lives of young people, is its successful iSchool Press Team programme (iSPT), which aims to give young South Africans a voice by allowing them to share opinions on critical issues affecting them so that they can become vehicles

of positive social change. For this reason, the project has partnered with the United Nations Children's Fund (UNICEF) South Africa to launch a campaign to give young people an impactful and inspirational platform on which to speak out and be the voice of children too afraid to speak out against gender-based violence. The project is relevant to **SDGs 4** and **16**.

In **Zambia**, **Digital Grassroots (DIGRA)** is a youth and female led initiative aimed at promoting internet governance awareness in order to promote digital inclusion in underserved communities. We work with young people between the ages of 14 and 29 through the Digital Grassroots Ambassadors program. The program enables young people to learn about digital rights and Internet governance issues and how they can be part of the solution. THE AMBASSADORS PROGRAM in 2018, we hosted three cohorts of the DIGRA Ambassadors program. The third cohort was hosted in French to reach to the Francophone youth. In 2018 alone, we reached over 1000 people in 40 communities, trained over 300 youth in digital literacy, mentored at least 100 young people by matching them to experts in Internet Governance. Through capacity building from our program, our ambassadors hosted at least 10 Internet Governance workshops/trainings with support from partners.   COMMUNITY LEADERS. In 2019, we created a Community Leaders program to train our Ambassadors on Community Leadership in Internet Governance. In our pilot cohort, we focused on countries where young people are facing digital rights abuses. This June, we are training more Ambassadors in cohort 4 of our program, where we received more than 800 applications for 100 slots. OBJECTIVES Digital grassroots responds to the existing gap of youth participation in issues related to Internet Governance. Through our Ambassadors program, we build the capacity of youth to be internet leaders in their communities.
Our activities include:
Digital Grassroots Ambassadors program (4 weeks internet literacy training. 4 weeks mentorship)
Community Leaders program (4 weeks leadership study and community engagement. 4-week mentorship)
Research and reports including Communique: Youth Resolutions In Internet Governance Edutainment Games including Digital Rights Monopoly
Youth in Internet Governance events including Schools of Internet Governance, and Youth Coalitions in Internet Governance. The project is relevant to **SDG5, SDG16**.

Action Line 11

In **Rwanda**, **MSGEEK Africa** competition that started 6 years ago as MS Geek Rwanda for 2 years then expanded to then 22 Smart Africa member states in partnership with its Secretariat located in Kigali, the capital city of Rwanda. MS Geek Africa 2019 brought girls from African Union member states with amazing ideas that solve community problems; the winner Josephine Ndeye had an application that helps reduce maternity death in her country Republic Democratic of Congo and Africa.   Organization targets every African girl with aim of inspiring girls to do sciences at school, use it as an enabler for every other domain of life and importantly consider careers in STEM. The project is relevant to **SDG4, SDG5, SDG9**.

In **Senegal**, **Wutiko** established a professional platform that connects people to the best business opportunities. Its matchmaking algorithms are proudly made with love from Africa. Wutiko, a professional network for Africa that lets anyone find jobs and jobseekers with their innovative machine learning technology, was a Seedstars World winner in Dakar. The Wutiko platform was launched in Senegal during a two-day forum, with the theme "Human Capital for an Emerging Senegal". It aims to facilitate meetings between recruiters and jobseekers.

Wutiko is a platform for business referencing and reception of CVs in a short time, and will serve employment and facilitate the linking of businesses with jobseekers. The Wutiko platform also consists of sharing useful business information and services online. The project is relevant to **SDG 8**.
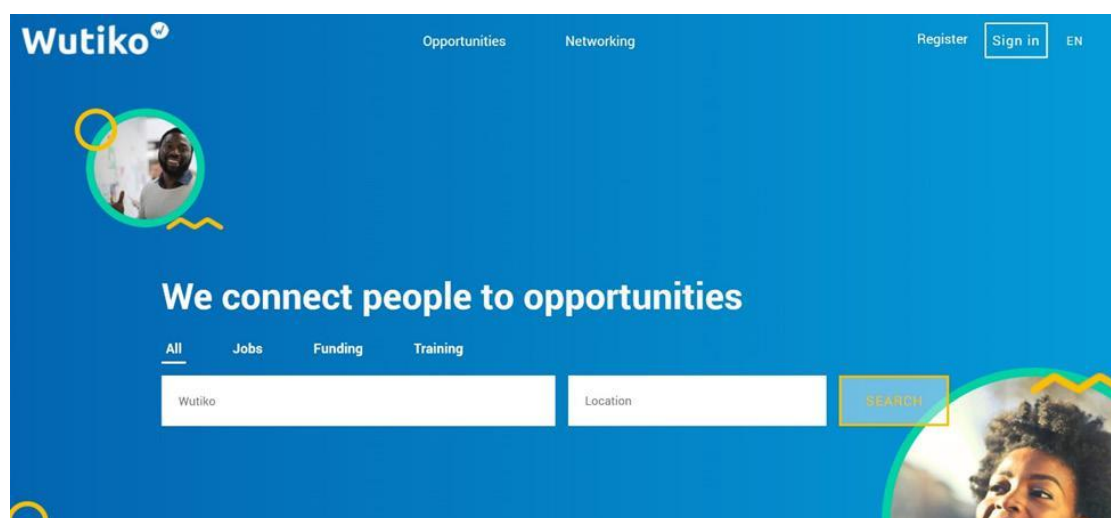
In **Senegal**, Book is the medium of transmission of knowledge par excellence as well as a vector of dissemination of information and culture. The availability of well-furnished libraries is a necessary component of access to knowledge and quality education.   In Africa, the majority of cities, schools and universities do not have enough libraries or have insufficient documentation, especially regarding African contents.   For the last 10 years, **African Digital Libraries to Enhance Access and the Safeguarding of African Scientific, Literary and Cultural Heritage** has been digitizing, saving and making accessible the African literary, scientific and cultural heritage for Africans and for the rest of the world, to ensure its transmission to future generations. More than 3,000 titles, in French and English, from more than 95 publishers on a variety of domains (literature, social sciences, law, youth, culture, etc.) are available.   The project is about providing digital libraries both online and offline with eReaders and mobile application. Digitization of African books and their regrouping into large digital libraries is the solution implemented by NENA to enhance access and the safeguarding of African scientific, literary and cultural heritage.

The project is relevant to **SDG4**.

In **South Africa**, the mission of **Rlabs** is to reconstruct communities through innovation, technology and education.

In 2008 RLabs was birthed in a marginalised community known as Bridgetown, Cape Town. Our passion is solely to create systems and environments where the lives of many can be impacted, where individuals may find empowerment and transformation can occur through hope, technology, innovation, training and economic opportunities. RLabs have provided consulting services to a variety of public and private sector organizations.

The project is **SDG8** and **SDG9**.

Conclusion

The International Telecommunication Union (ITU) remains committed to the World Summit on the Information Society (WSIS) process, and to implementation of the WSIS goals beyond 2020. ITU recognizes and highly appreciates the extremely valuable contributions made by stakeholders to enable the continuation of WSIS monitoring and reporting. There can be no doubt whatsoever that, in today's fast-moving world, innovation and efficiency are vital to success. Accordingly, the WSIS Stocktaking Report in Africa Region 2019-2020 shares with you the most recent updates and success stories in the WSIS stocktaking process of this region.

The WSIS Stocktaking Platform continues to foster implementation of the WSIS outcomes and to facilitate exchange of information among 300,000 members representing governments, the private sector, international organizations, civil society and other stakeholders. As the Web platform continues to flourish, so does the promotion of social development and economic growth through ICTs. We continue to maintain and improve the WSIS Stocktaking Database, which contains around 13,000 entries this year. This encouraging outcome reinforces stakeholders' belief in and commitment to the WSIS Stocktaking process and their desire to share best practices.

In addition, the WSIS Overall Review called for close alignment between the WSIS process and the 2030 Agenda for Sustainable Development, highlighting the crosscutting contribution of ICTs to the SDGs. In this context too, WSIS Stocktaking is evolving to become the unique global process for the collection of information on actions carried out within the framework of WSIS, while underlining their contribution to implementation of the 2030 Agenda for Sustainable Development.

We are also pleased to announce the recent launch of a new and innovative interface, which will make it easier to search all WSIS-related activities. All stakeholders benefit from the sharing of interesting case studies, as this undoubtedly facilitates the transfer of knowledge, experiences and models for project implementation. The WSIS platform helps to create partnerships, provide greater visibility and add value to ICT projects all around the world. The many and varied stakeholders who have implemented innovative projects and contributed to the success of the WSIS Stocktaking process deserve our sincere gratitude.

Secretary-General of ITU launched a new Call for Submissions for the WSIS Stocktaking 2021, inviting all stakeholders to contribute to the WSIS Stocktaking process undertaken in support of the WSIS Implementation and Follow-up.

Information and communication technologies continue to play a vital role and ITU is now more than ever committed to bringing the benefits of these technologies to people everywhere. The COVID-19 crisis has highlighted this critical role of ICTs for continued functioning of societies and I would like to thank you for your efforts in sharing your projects and initiatives reflected in a special report on Coronavirus (COVID-19) Response – ICT Case Repository.

The WSIS Stocktaking process has been maintained by ITU since 2004 as requested by the WSIS Outcomes (Tunis Agenda for the Information Society, Para 120). This **publicly accessible WSIS Stocktaking database** (www.wsis.org/stocktaking), currently with a growing community of more than 300,000 stakeholders, is a unique global tool for collecting information and regular reporting on information and communication technologies related initiatives and projects, carried out by governments, international organizations, the private sector, civil society, academia and other entities, in the context of 11 WSIS Action Lines.

In 2015, the UN General Assembly within the framework of the ten year review of the WSIS (Res. A/70/125) called for a close alignment between the WSIS process and the 2030 Agenda for Sustainable Development (Res. A/70/1). The WSIS Stocktaking process responded by highlighting the contribution of 11 WSIS Action Lines to the achievement of 17 Sustainable Development Goals (SDGs).

We are pleased to invite you to update and submit new entries online at the WSIS Stocktaking page https://www.itu.int/net4/wsis/stocktaking/Project/Projects/Submit. Submitted activities will be reflected in the **WSIS Stocktaking Report 2021**, which will be released at the WSIS Forum 2021. We look forward to receiving your responses by **25 January 2021**.