

WSIS Stocktaking Success Stories 2020



Information and
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World Summit
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6-12 Dec 2025 | 17-19 Dec 2025 | 19-21 Dec 2025



WSIS Stocktaking Success Stories 2020

(Zero Draft)



Acknowledgement

The content for this document was coordinated and shaped by Vladimir Stankovic, Program Officer, ITU, under the overall supervision of Catalin Marinescu, Head of Strategy and Planning Division, ITU, and Gitanjali Sah, Strategy and Policy Coordinator, ITU.

In addition, the report benefited from the contributions and insights of ITU staff: Vera Akosah, Karin Valverde, Naiqian Zhang, Ahone Njume Ebong-Barry and Aram Melikyan.

The WSIS team would like to acknowledge the tremendous contributions from governments, international organizations, the private sector, civil society and other stakeholders in providing information on ongoing projects and initiatives to the WSIS Stocktaking Platform. The WSIS Success Stories 2020 report is based on the contributions provided by 18 WSIS Prize winners (18 success stories).

Disclaimer

The information contained in this publication is provided by the multiple stakeholders that contributed to the WSIS Stocktaking process and does not engage ITU. Denominations and classifications employed in this publication do not imply any opinion on the part of the International Telecommunication Union concerning the legal or other status of any territory or any endorsement or acceptance of any boundary. Where the designation “country” appears in this publication, it covers countries and territories. The views expressed in this paper are those of the authors and do not necessarily reflect the opinions of ITU or its membership.

Table of Contents

Executive Summary	5
Introduction	8
C1: The role of governments and all stakeholders in the promotion of ICTs for development	9
C2: Information and communication infrastructure: An essential foundation for the information society	15
C3: Access to information and knowledge	20
C4: Capacity building	23
C5: Building confidence and security in the use of ICTs	28
C6: Enabling environment	36
C7: ICT Applications: e-government	39
C7: ICT Applications: e-learning	46
C7: ICT Applications: e-health	50
C7: ICT Applications: e-employment	56
C7: ICT Applications: e-environment	62
C7: ICT Applications: e-agriculture	67
C7: ICT Applications: e-science	75
C8: ICT Applications: Cultural diversity and identity, linguistic diversity and local content	82
C9: Media	87
C10: Ethical Dimension of the Information Society	90
C11: International and Regional Cooperation	93
Conclusion	100

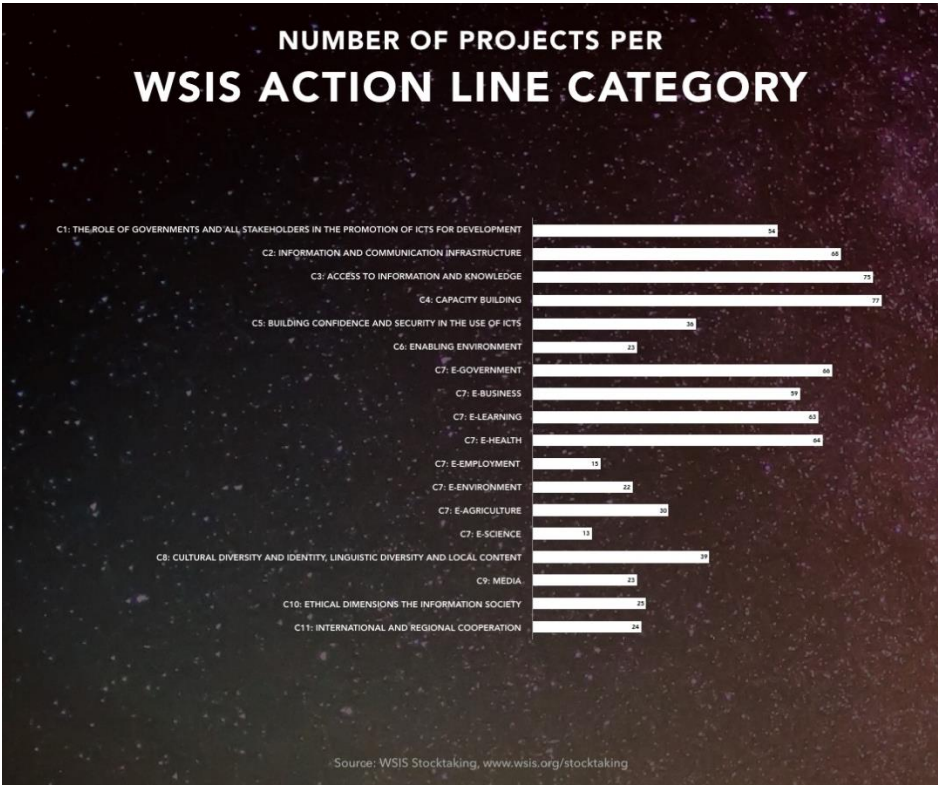
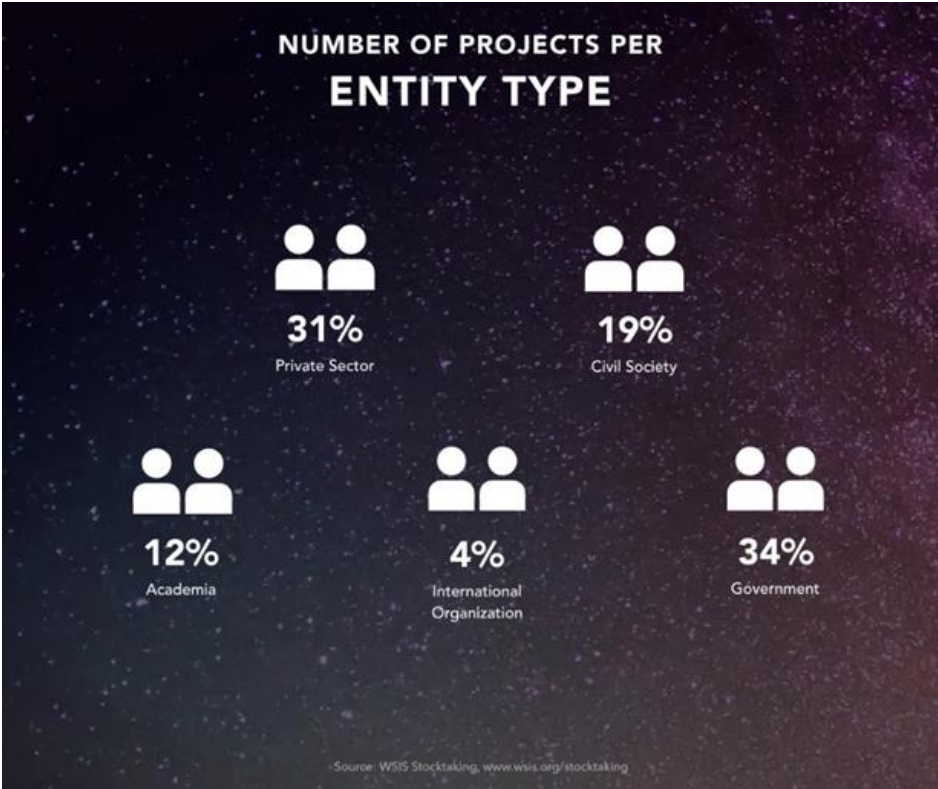
Executive Summary

Each year during the WSIS Forum 18 stakeholders are awarded **WSIS Prizes** as a unique mark of global recognition for excellence in the implementation of the WSIS outcomes. To this end, 18 projects are selected as the most successful stories worldwide, under each **WSIS Action Line category**, to serve as best-practice models to be replicated by other stakeholders interested in information and communication technologies (ICTs) for development. These projects brilliantly demonstrate how the **Sustainable Development Goals (SDGs)** can be achieved with concrete actions and inspire other stakeholders all over the world to follow their success.

The WSIS Prizes contest is open to all stakeholders: governments, businesses, civil society, international organizations, academia and others. The contest comprises 18 categories directly linked to the WSIS Action Lines outlined in the Geneva Plan of Action. This year's final list of **776 nominated projects** represented a wide range of stakeholders.



This includes, by region: 97 from Latin America and the Caribbean, 165 from Western Europe and North America, 133 from Africa, 28 from Eastern Europe and 353 from Asia and the Pacific; and by sector: 34% from governments, 31% from private sector, 19% from civil society, 12% from academia and 4% from international organisations.



Building on the outcomes of the United Nations General Assembly (UNGA) Overall Review on WSIS, as well as on the 2030 Agenda for Sustainable Development, WSIS Prizes 2020 kept reflecting on the linkages between the projects and the SDGs. ICTs are enablers for sustainable development and the objective of the WSIS Stocktaking process, including the WSIS Prizes, is to report on ICT success stories to best showcase the possible achievement of SDGs through the implementation of projects related to the WSIS Action Lines.



The International Telecommunication Union (ITU) announced the top-90 winning Information and Communication Technology for Development (ICT4D) initiatives from around the world competing in the prestigious WSIS Prizes 2020 contest (more information on the WSIS Prizes champions is available [here](#)).

Out of the **90 champions**, **18 category Winners** were announced and honored during the WSIS Prizes Award Ceremony held virtually on the 7th of September 2020. The WSIS Prizes celebrate the outstanding projects that leverage the power of ICTs to accelerate socio-economic development around the globe.

We invite you to learn how ICT projects submitted for WSIS Prizes 2020 are enabling the advancement of the **SDGs**. Moreover, we encourage all stakeholders to submit their outstanding ICT project for the WSIS Prizes 2021 edition, before the 25th of January 2021 - all you have to do is complete the submission form online at www.wsis.org/prizes.

Introduction

Since 2012, WSIS Prizes has been celebrating the remarkable efforts made by entities and organisations that focus on accelerating socio-economic progress of the whole world as a community. [The United Nations Economic and Social Council \(ECOSOC\) resolution 2019/24](#) and the [ECOSOC Resolution 2020/12](#) reiterate the importance of recognizing excellence in the implementation of the projects and initiatives that further the WSIS Action Lines and encourages all stakeholders to nominate their ICT-related projects for the annual WSIS Prizes contest as an integral part of the WSIS Stocktaking process (www.wsis.org/stocktaking).

The submission phase for the [WSIS Prizes 2020](#) was launched on 22 July 2019 and finished on 29 November 2019 (the first deadline 22 November 2019 was extended based on large number of requests from the WSIS community). We received a record number of 807 project submissions, out of which, 776 exceptional projects were shortlisted for the Nomination Phase. Thirty-three submissions were rejected based on Rules and Guidelines.

During the Selection Phase, 25 January – 7 February 2020, the Expert Group made an in-depth analysis of the five most voted projects per category and selected one winning project per category, considering the scale and impact of the project with respect to the implementation of the WSIS outcomes and its contribution to sustainable development. The Expert Group then proceeded to select the eighteen winning projects for the ninth edition of the WSIS Prizes contest. The WSIS Prizes 2020 Awards Ceremony took place during the final week of the Forum and the winners were virtually applauded for their success in leveraging the power of ICTs to advance sustainable development ([WSIS Prizes 2020 virtual Awards Ceremony](#)). Other sessions were organized throughout the Forum to provide an opportunity for the WSIS Prizes 2020 Winners and Champions to promote their achievements and for participants to meet them and learn more about their innovative projects.



The *WSIS Stocktaking: Success Stories 2020* publication offers an in-depth look at the winning projects of the WSIS Prizes 2020. This report contains information about the winners of each WSIS Action Line Category, providing a description of the project and their activities. It also explores the linkages between the WSIS Action Line the project was awarded for and the SDGs it helped advance. In addition, it provides highlights of the project's partnership activities, the social, economic and environmental impact of the project as well as the challenges they face and future perspectives. It also elucidates on the winner's views on the WSIS Stocktaking and Prizes contest, including its relevance to SDGs.

Should you have any questions or want to learn more about the WSIS Prizes contest, please do not hesitate to contact the WSIS Team at wsis-prizes@itu.int.



C1: The role of governments and all stakeholders in the promotion of ICTs for development

Project name:	Digital Clinic
Organization:	Infocomm Media Development Authority
Country:	Singapore

Basic information about the winner

The Info-communications Media Development Authority (IMDA) leads Singapore's digital transformation by developing a dynamic digital economy and a cohesive digital society.

As Singapore transforms digitally, there is an urgent need to ensure that everyone is digitally ready, with no one is left behind. This includes the more vulnerable segments of the population such as seniors, low-income families and people-with-disabilities. With COVID-19 changing the way most of us lead our lives, going digital is now more important than ever.

Project's description (activity description)

To ensure that every Singaporean is able to seize the benefits and opportunities of a digital society, the Digital Clinic was curated to provide one-on-one assistance. This makes it easier for Singaporeans to adopt technology so that non-digital natives can become more confident in using technology to participate in digital activities. The Digital Clinic was organised by the government in collaboration with corporate and community partners as well as volunteers, all of whom are known as the SG:D Friends, who contribute their time to give one-on-one assistance to anyone with queries on how to use mobile devices.

The COVID-19 situation has given Singapore the push to accelerate digital adoption nation-wide. IMDA has launched the "Seniors Go Digital") initiative, a whole of nation movement to accelerate Singapore's digitalisation by ramping up existing efforts to equip seniors with digital skills, so that they can participate meaningfully in the digital society.

Although the percentage of Internet Users in Singapore is generally high at 89%¹, the percentage for seniors is significantly lower. One in two seniors (60 years old and above) are not Internet Users², with the key reason cited being the lack of knowledge and skills. As such, seniors could potentially be isolated if they are not granted the necessary digital access and literacy to be connected to their families and the communities through online means.

¹Proportion of Internet Users by Age Group, 2017 – 2019 (Extracted from: https://www.imda.gov.sg/-/media/Imda/Files/Infocomm-Media-Landscape/Research-and-Statistics/Survey-Report/2019-HH-Public-Report_09032020.pdf?la=en)

²Proportion of Internet Users by Age Group, 2017 – 2019 (Extracted from: https://www.imda.gov.sg/-/media/Imda/Files/Infocomm-Media-Landscape/Research-and-Statistics/Survey-Report/2019-HH-Public-Report_09032020.pdf?la=en)

Recognising the urgency to equip seniors with digital skills, the initiatives under Seniors Go Digital adopt the concept of the Digital Clinic initiative and multiply their reach by engaging the nation to help seniors connect to a digital society. It is a concerted effort by the government, corporate partners, volunteers, and community organisations, to help seniors pick up digital skills through one-to-one personalised learning. To educate and encourage all seniors to go digital, IMDA has deployed 1,000 Digital Ambassadors and volunteers to help seniors along their personalised digital journey.



In collaboration with industry and community partners, IMDA has identified public libraries, community clubs, and senior activity centres to set up community hubs. Digital Ambassadors and volunteers could be stationed daily at these Community Hubs to give seniors easy access to dedicated one-on-one concierge-type assistance on the use of smartphones. The learning programme for each senior will be tiered according to their digital needs and seniors will be guided through 3 tiers of digital skills:

Tier 1 – Communication Skills	Seniors will learn basic communication tools such as messaging, video calling and cybersecurity tips
Tier 2 – Government Digital Services	Seniors will learn how to transact digitally with the government via government apps
Tier 3 – E-payment tools	Seniors will learn how to use e-payment tools, banking apps and cybersecurity tips.

For more information on the Seniors Go Digital initiative, please visit go.gov.sg/seniorsgodigital

Examples of linkages between the WSIS Action Line your project was awarded for with each of the Sustainable Development Goals it helped to advance.

AL C1: The role of governments and all stakeholders in the promotion of ICTs for development

Providing one-on-one assistance to help Singaporeans adopt technology to participate in the Digital Economy is a national commitment.

IMDA in collaboration with its industry/ community partners and volunteers, has set up community hubs island-wide in community spaces as part of the Seniors Go Digital movement. At the localized community hub, Digital Ambassadors/volunteers offer one-to-one personalised guidance by to equip seniors with digital skills and resolve queries on their smartphones. IMDA's digital efforts also continue to proliferate through partnerships, reaching out to more people who need assistance to participate in our Digital Economy and Society.

To engage the seniors, IMDA works in strong partnership with the industry, academia and the community, to deliver the initiatives under Seniors Go Digital in various formats : (1) Community Hubs – with Digital Ambassadors providing one-to-one help; (2) Digital Learning Circles, (3) Virtual Digital Clinic and (4) Online webinars.

Social, economic, and environmental impact of the project

The initiatives under Seniors Go Digital aims to promote the WSIS values of equality, solidarity and shared responsibility.

The Seniors Go Digital movement is designed to provide seniors with one-on-one assistance to make it easy for Singaporeans to adopt technology, especially for those who find it challenging to adapt to the rapidly digitalising environment. This enables them to participate meaningfully in basic digital activities, and ultimately, reap greater benefits in using technology. By having the relevant skills, everyone will have equal opportunities to enjoy the benefits of a digital society and will not be left behind as Singapore journeys towards its Smart Nation vision.

It is a national effort to ensure that everyone, including seniors, is digitally ready. To reach out to as many seniors as possible, community hubs that provide one-to-one assistance are available island-wide for seniors that require such assistance. Materials provided to the participants are available in Singapore's vernacular languages (i.e. English, Mandarin, Malay, Tamil) to ensure that all seniors, regardless of race or language, have **equal access** to learning basic digital skills.

IMDA also engages corporate volunteers, community and government groups, tech partners/association and corporate donors, who all have a role and **share the responsibility** of providing help to vulnerable segments of the population so that Singapore can be a digitally inclusive society.

To date, IMDA is collaborating with more than 100 corporate partners towards building a digitally inclusive society. Some of these collaborations include providing volunteers to help seniors with their mobile phones through the Seniors Go Digital platforms, promoting campaign messages under Seniors Go Digital, donations in cash or in kind so that the vulnerable segments of our society can gain access to devices.

Through these collaborations, society comes together to build social bonds and solidarity, bridging the digital divide and preventing social isolation amongst the seniors.

[Highlight of the project's partnership activities](#)

The Seniors Go Digital movement engages relevant stakeholders to scale our outreach in different platforms:

1. Localized community hubs

IMDA works in strong partnership with more than 20 community clubs, public libraries and senior activity centres, stationing our Digital Ambassadors within community spaces to give seniors easy access to one-on-one concierge assistance on the use of their smartphones. Seniors can make appointments or walk into the community hubs for a 30-minute consultation on the 3 tiers of digital learning.

2. Digital Learning Circles (DLC)

To support seniors who could have difficulties travelling to the community hubs, IMDA, together with youth volunteers from Youth Corps Singapore and corporate volunteers, will bring the concierge services to Senior Activity Centres near the homes of seniors. The DLC aims to bring these vulnerable seniors through a 4-week training curriculum to equip them with basic digital skills and get them started on their smartphones. The training will be done through dedicated assistance provided by volunteers, who will also befriend the seniors to ensure that they are able to learn comfortably and at their own pace.

3. Virtual Digital Clinic

Seniors who are more digitally savvy can join IMDA's Virtual Digital Clinic, where they will connect with our volunteers in a virtual manner. Encouraged by the Covid-19 pandemic which has socially isolated many seniors, volunteers have worked together with IMDA to create a platform that reaches out to seniors and helps them with queries on their smartphones, all from the comfort of their own homes. This initiative is supported by corporate volunteers from HPE, Cognizant, PwC Singapore, Barclays, Microsoft, etc.

4. Online Webinars – Digital Pods

Digital Pods are a series of free online interactive classes specially curated for seniors to pick up digital skills from their homes. The content is specially designed to enhance their digital lifestyle, and seniors can also learn a new topic each week. Topics covered include mobile lifestyle applications such as iOS accessibility, ride-hailing apps, e-payments, video calling apps, etc. Corporate partners that have stepped forward to deliver such classes are Salesforce, Microsoft, GRAB, Google, Zoom and more.

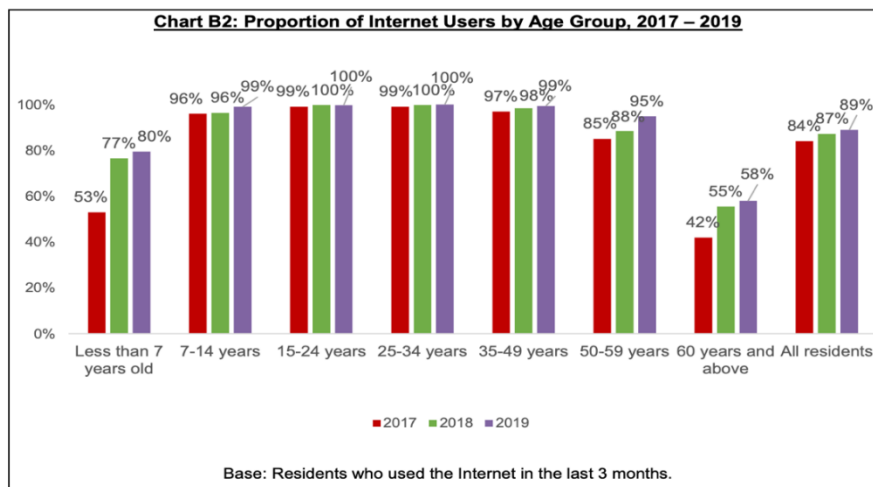
Challenges and Project's future perspectives

In November 2014, Singapore Prime Minister Lee Hsien Loong announced the country's vision to transform itself into a Smart Nation, tapping on the potential of infocomm and media to bring about economic growth, social cohesion, and better living for the people. This vision will propel and accelerate the adoption of technology across all sectors, including the Government's provision of critical daily services to its people. This has become more significant with the Covid-19 situation.

While developing a Smart Nation requires the update of hardware like devices and sensors, the heart of Singapore’s Smart Nation vision is also about “making Singapore a great place to live, work and play, powered by technology, for everyone” (MCI, 2018). However, like many developed countries, Singapore’s population is also ageing rapidly. By 2030, Singapore’s silver population is projected to grow to 900,000 (SNDGO, 2014) and seniors will form a large group consisting of those who could potentially be left behind in the digital era if the intervention to bridge the digital divide is not put in place in a rapid manner.

While there was a significant 16% increase in internet usage among seniors 60 years old and above between 2017 and 2019, internet usage among this group remains significantly low at 58% (Figure 1).

Figure 1: Proportion of Internet Users by Age Group, 2017 – 2019³



Among those who have never used the internet before, an alarming 60% cited the lack of knowledge, skills and confidence as the main reason for not using the internet (Figure 2). There is therefore an urgent need to put in place strategies and programmes to equip seniors with digital knowledge and skills to enable them to better access, integrate and participate in Singapore’s digital future.

³ Proportion of Internet Users by Age Group, 2017 – 2019 (Extracted from: https://www.imda.gov.sg/-/media/Imda/Files/Infocomm-Media-Landscape/Research-and-Statistics/Survey-Report/2019-HH-Public-Report_09032020.pdf?la=en)

Table B1: Main Reason for not using Internet, 2017 – 2019

No.	Main Reason	2017	2018	2019
1	Lack of knowledge /skills / confidence	77%	60%	55%
	Do not know how to use computer, internet-enabled feature phone	47%	53%	46%
	Do not know how to use the internet	23%	-	-
	Lack of confidence	2%	3%	3%
	Language skills are inadequate	5%	3%	7%
2	Too old to learn	14%	8%	12%
3	Not interested / No need to use	9%	27%	29%
4	Concerns about costs and risks of use	-	5%	3%

Note: "Do not know how to use the internet" was removed in 2018; "Concerns about costs and risks of use" was newly added in 2018

Base: Residents who had never used the internet before

Fig 3: Main reason for not using internet, 2017 – 2019⁴

The common barriers to a digitalised world include the lack of skills to go digital, illiteracy, language barriers (as most mobile applications are in English whereas the elderly population in Singapore is more familiar with vernacular languages), old age, and cybersecurity concerns.

IMDA together with its industry and community partners will work closely to establish initiatives to address these challenges by reaching out to non-digital natives to help bridge the digital divide. Providing Singaporeans with one-on-one assistance to adopt technology is a national commitment and the Seniors Go Digital movement will continue to expand through our stakeholders, reaching out to seniors who need assistance.

Views on WSIS Stocktaking and WSIS Prizes contest, including its relevance to development

We are honoured that the Digital Clinic initiative in Singapore has been selected as the winning project in the category of "the role of governments and all stakeholders in the promotion of ICTs for development" of the WSIS 2020 Prizes. We are glad that our work is recognised in this international platform and IMDA will continue its work in reaching out to all seniors so that they can lead enriching lives in the digital world.

⁴ Main Reason for not using internet, 2017 – 2019 (Extracted from: https://www.imda.gov.sg/-/media/Imda/Files/Infocomm-Media-Landscape/Research-and-Statistics/Survey-Report/2019-HH-Public-Report_09032020.pdf?la=en)



C2: Information and communication infrastructure: An essential foundation for the information society

Project name:	Digital inclusion- Free WIFI
Organization	Agencia Digital de Innovación Pública
Country	Mexico

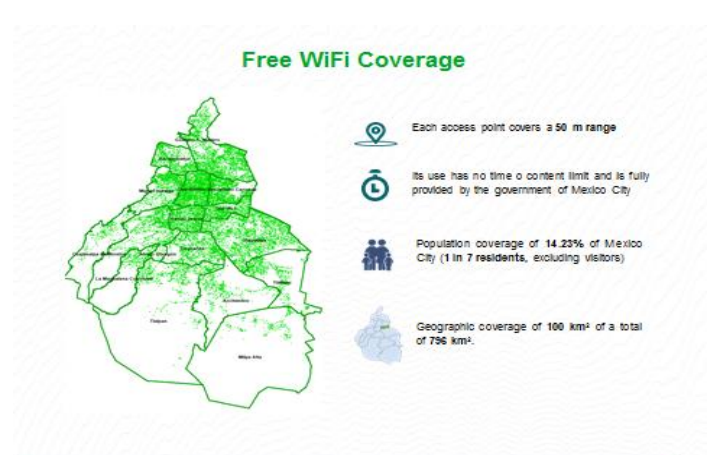
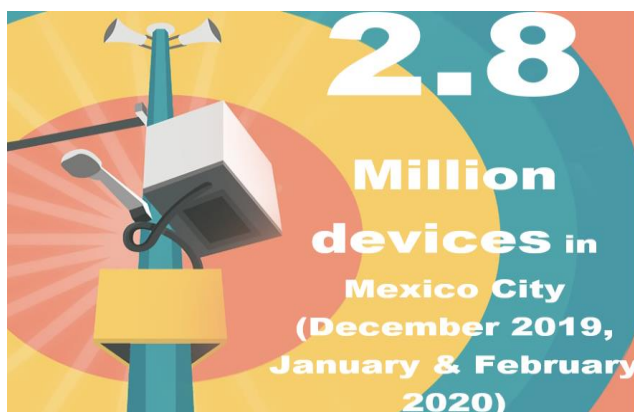
Basic information about the winner

ADIP is the agency within Mexico City's government in charge of conducting, designing and promoting the implementation of policies related to data management, open government, digital government, technological governance and governance of the technological infrastructure of the city.

One of ADIP's main projects from the very start was to bring citizens and government closer together by providing free internet access throughout the city, in parallel with the digitization of government services and information.

Project's description (activity description)

During its first year of operation, one of the signature projects of ADIP was the Digital Inclusion - Free WIFI project, directed to all residents and visitors to the city. The project, which was designed and implemented in less than a year, aimed to level the playing field for all city residents and visitors in terms of internet access, with no restrictions on time or content, under the same terms and technical conditions for all users. This was achieved by using existing passive infrastructure to host the equipment needed to grant connectivity. Such infrastructure consists of 13,964 access hotspots already used for security cameras, equipment for providing WIFI service at 150 PILARES and 96 public hotspots in the city's 16 municipalities.



The 13,694 free WIFI hotspots were installed using the existing infrastructure managed by the Centre of Command, Control, Computation, Communications and Citizen Contact of Mexico City (C5). The C5 is the entity in charge of monitoring and managing the network of more than 13,000 security cameras located all around the city.

The PILARES are spaces that provide communities with access to cultural workshops, sports, and computers, among other activities. The point is to grant access to education and training to residents of neighbourhoods with low levels of social development, those which are densely populated, and those with higher rates of educational desertion and violence. The PILARES are intended to strengthen the city's most vulnerable communities and improve access to cultural rights. The PILARES promote connectivity and free WIFI as a means of achieving all these goals, regardless of any resident's location or socioeconomic level.

Finally, the 96 public hotspots included museums, hospitals, and public parks, among others. The project was made possible due to collaboration between the government and the telecom service provider. The project benefit was in-kind and so it required no new public resources allotment. Unlike similar projects, this one did not include publicity, terms nor forms for use, nor limitations on use or content. This makes it an innovative project and positions the city as a world leader in free publicly provided WIFI access.

Since the actions described above have been put into place, Mexico City offers the second largest free internet coverage area in the world. The implementation of the free WIFI service in the city has resulted in increased connectivity for city residents and has contributed greatly to reducing the digital gap by levelling the playing field for all city residents. The service grants the same access conditions to everyone, and impact assessments rely on indicators based on information provided by the telecom service provider.

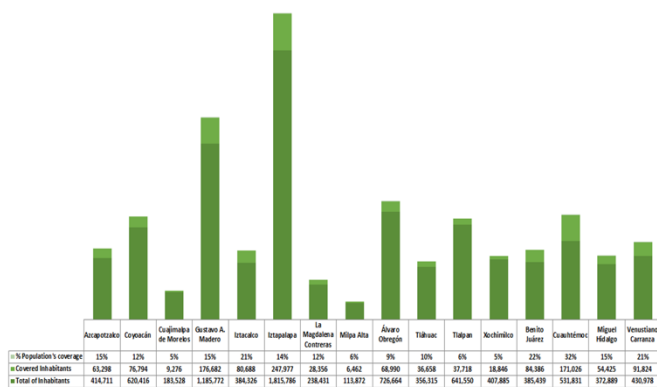
Some of the indicators are:

1. Average users per hotspot
2. Average users per municipality
3. Average users per day
4. Average users per month

According to these indicators, 3.8 million connections were made at free WIFI hotspots between

September and November 2019. Last December, about 331,190 connections were made in the municipality with the most connections, and 9,559 connections in the municipality with the fewest connections. On average, 44.5 connections were made per day in each municipality, at about 5.01 connections per hotspot. Around 11.5 million connections have been made in the city since the implementation of the program.

Population covered by borough



MUNICIPALITIES OF MEXICO CITY	PERIOD
	DEC 2019, JAN & FEB 2020
	DEVICES CONNECTED
ÁLVARO OBREGÓN	164,261.00
AZCAPOTZALCO	122,691.00
BENITO JUÁREZ	210,914.00
COYOACÁN	220,037.00
CUAJIMALPA	43,407.00
CUAUHTÉMOC	486,189.00
GUSTAVO A. MADERO	281,796.00
IZTACALCO	128,236.00
IZTAPALAPA	290,579.00
MAGDALENA CONTRERAS	51,279.00
MIGUEL HIDALGO	215,733.00
MILPA ALTA	46,934.00
TLÁHUAC	87,309.00
TLALPAN	156,921.00
VENUSTIANO CARRANZA	197,969.00
XOCHIMILCO	100,791
TOTAL	2,805,046.00

Challenges

The project was challenging since its inception. For instance, the work of conceiving, managing, preparing, coordinating, and planning the project were all carried out in about a month, record time in the local public administration. Another challenge the Agency faced was to adequately assess the dimension and potential complications in the implementation derived from the sheer number of hotspots being configured.

The first task was to learn the location and conditions of the C5 infrastructure in the first place, in order to draw conclusions out of that analysis and design the logistics to fully install and equip the passive infrastructure to enable the service. Additionally, the minimum speed of 20 Mbps made necessary the replacement of copper wire with fibre-optic cable, and this too was carried out in a very short time, using the previous analysis as a planning tool.

The project was successful in a number of ways. Due to the contract signed with the telecom provider, the city's government saved around 103 million pesos (more than 5 million USD). The implementation of the program did not require the investment of any further public resources as it was covered by a contract signed between the government authorities and the telecommunications service supplier. The implementation made it necessary to use existing infrastructure, managed by the Centre of Command, Control, Computation, Communications and Citizen Contact of Mexico City (C5). It was necessary to coordinate the efforts of the telecom provider and the C5 in order to make it possible to deploy the equipment.

Examples of linkages between the WSIS Action Line the project was awarded for with each of the Sustainable Development Goals (SDGs) it helps advance

The WIFI project contributes to meeting the goals of the current government (2018-2024), in which the need to unify its actions results in the implementation of public policies that have led to the improvement of citizens' rights coverage. The promotion of universal WIFI access also encourages a connectivity ecosystem supporting the emergence of an intelligent city.

The project helps advance three Sustainable Development Goals related to sustainability, inclusion and innovation. Goal 8, "Promote inclusive and sustainable economic growth, employment and decent work for all", is attained by granting free internet access for all and making sure this human right is delivered to all residents and visitors of Mexico City, as well as the millions who work in the city but live in the neighbouring state of Mexico. Developing the free WIFI service contributes to better connectivity in terms of primary services for the citizens, that is, it allows them to have the same probabilities as well as the same and better conditions of access to technological services, besides the social work that it is implemented in the PILARES.

Goal 9, "Build resilient infrastructure, promote sustainable industrialization and foster innovation", is attained by using the existing passive infrastructure for a new purpose, in this case enabling free WIFI access for both residents and visitors of the city, thus making the most out of public investment and cutting down on costs.

Finally, Goal 11, "Make cities inclusive, safe, resilient and sustainable", is attained by granting access to free WIFI to everybody using a smart device, without any restriction on time or content, regardless of their location, as long as they are standing near one of the 13,694 hotspots, 150 PILARES and 96 public sites available in the 16 municipalities of Mexico City.

Project's future perspectives

This project is the first achievement of many the Agency aims to have during the next 5 years. Now that internet access is a reality for a significant percentage of the city's population, the future steps of the project seek to increase the coverage and quality of the service provided. Since no public resources have been invested in this particular project but were part of the resources allocated beforehand to the Digital Agency, its continuity is expected to be maintained and even expanded, both in coverage and in connection speed, for the population's benefit.

The speed in the 13,694 hotspots increased from the original 20 Mbps to 100 Mbps in every access point during 2020. Likewise, the WIFI network was enabled for emergency situations for the City, with a speed of 100 Mbps per access point.

Now that the project has not only been implemented but also improved, the next goal is to increase the number of PILARES with a WIFI connection from 150 to 185. Also, 3,000 new hotspots will be added to the connectivity network, with a particular emphasis in public hospitals.

Winner's views on WSIS Stocktaking and Prizes contest, including its relevance to SDGs

The WSIS Stocktaking and the Prizes contest are great opportunities for the dissemination of the projects developed by the Digital Agency for Public Innovation in matters related to telecom and internet access. WSIS has been a critical platform to spread the scope of our work. The Digital Inclusion- Free WIFI project will widely benefit from the orientation and opportunities granted by WSIS. We are confident that the impact of this initiative will be known and applied far from the geographical limits of Mexico City. Closing the digital gap is a priority to all cities that intend to become more global, and our project represents the first step towards inclusiveness and innovation. We believe WSIS will continue to be an important ally for our future projects, providing visibility to our initiatives and therefore potential allies.



C3: Access to information and knowledge

Project name:	UAE Infrastructure Geo-Spatial Platform
Organization	Ministry of Infrastructure Development
Country	United Arab Emirates

Basic information about the winner

Ministry of Energy & Infrastructure (MOEI) core business is the Development of balanced infrastructure capable to compete through organizing, planning, constructing and maintaining infrastructure projects and organizing the federal housing sector in accordance with the world's best standards and specifications through optimal investment of resources and in partnership with the relevant authorities. A sustainable and integrated infrastructure that supports the country's global competitiveness.



Project's description (activity description)

UAE Infrastructure Geospatial Platform is A “one-stop shop” to deliver trusted, nationally consistent geospatial data and services. It provides a suite of well-managed, highly available, and trusted geospatial data, services, and applications for use by the government's agencies and citizens. major purposes of the platform are to:

1. Enable Federal agencies and their partners to publish and catalogue interoperable web services for all geospatial data, including data identified as “nationally significant”
2. Enable Federal agencies and their partners to develop and share geospatial services and applications through the use of shared application hosting infrastructure and source code sharing capabilities;

3. Offer a mechanism through which Federal agencies can access and/or procure commercially licensed geospatial data and tools by leveraging shared infrastructure and common procurement mechanisms; and
4. Empower a new generation of geospatial collaboration by enabling users of all types to develop and share maps and services with data from trusted content along with user-contributed data.

To enable these different capabilities fully in the site, a range of user accounts with varying privileges and access rights will be implemented. Additionally, policies and procedures to support the provisioning and use of these accounts should be established and implemented.

Examples of linkages between the WSIS Action Line your project was awarded for with each of the Sustainable Development Goals it helps to advance

UAE Infrastructure Geospatial Platform categorized in AL C3. Access to information and knowledge WSIS Action Line. The Project Enhances the Following Sustainable Development Goals:

- Goal 9: Industry, innovation and infrastructure
- Goal 11: Sustainable cities and communities
- Goal 13: Climate action
- Goal 17: Partnerships for the goals

The UAE Platform has an essential role in enhancing Society, Economy and Environment in various ways:

1. Society and Economy: The Geospatial Platform helps elevating both Social and economic level by developing the infrastructure of UAE depending on an accurate Master plan that eases coming up with best development Decisions.
2. Society: The Platform offered Open Data Access to Audience to all MOID Federal Projects (Educational, Health, Roads and etc..) in one place where other entities and students can have access and use for the data available.
3. Environment: One Environmental amazing step the platform took is to stop all paper works related to Projects life Cycle and transferred to electronic systems.

Highlights of project's partnership activities

The ministry of the energy and infrastructure has a partnership with all of the federal entities, the ministry of the energy and infrastructure is the executive arm to implement the federal projects in all of the UAE. The MOEI partners are ministry of health, ministry of education, and all of the other federal entities.

Challenges and project's future perspectives

Large projects related to modern technology are usually faces challenges. Challenges are the basis for success in the project. The first of these is the rapid and continuous change in technologies. Another challenge is the licenses and software needed for the project. Moreover, Measuring the impacts of implementing the project since it took three years to gain its results.

The platform project was divided into phases and covered the requirements of the spatial data partners in the ministry and external strategic partners in the future plan of the platform, including:

- Applications of artificial intelligence in the infrastructure project management system

- Creating an application in the system's mobile phone and displaying all reports, facilitating the process of entering data and feeding reports by engineers
- Create a platform for engineering tenders that includes a database for contractors and consultants at the state level and link it with any other systems related to contracting or registering and classifying suppliers
- Linking and integrating with concerned strategic partners and following up infrastructure projects through the system
- Cooperation and harnessing capabilities, innovation, and many experiments and scientific research to try to overcome crises

[View on WSIS Stocktaking and WSIS Prizes contest, including its relevance to development](#)

WSIS Stocktaking and WSIS Prizes contest is an opportunity to share our success with the world. Moreover, the sessions involved is the WSIS really helped to get an insight of the ICT projects worldwide and their impact on achieving the SDGs goals. We are urged to participate again in this prize in the different categories and our colleagues from other entities in UAE are encouraged to participate and be part of this prize in the upcoming round 2021.



C4: Capacity building

Project name:	Siberkreasi (Indonesia's National Movement for Digital Literacy)
Organization	Siberkreasi
Country	Indonesia

Basic information about the Winner

The emergence of technology and digitalization has brought the world in to new places and into a new era. The emergence of new technologies has also increased with its negative impacts, such as hoaxes, fake news, and other information disorders, continues to threaten the citizens of Indonesia. In order to tackle those threats, a group of people, with a common heart and vision to promote better internet for all, initiated a national movement for digital literacy called Siberkreasi.

Siberkreasi is based on collaboration between various stakeholders ranging from the private sectors, the government, technical community, civil society organizations, and academia. The partnership among various stakeholders has provided us a solid harmonious movement. This collaboration aligned with the vision to balance between opportunity and challenge due to the emergence of technology and digitalization as a communal effort is an essential issue. This national movement was initiated in 2017, and ever since, we have 108 partners that is actively moving and advocating in various field, not only in digital technology, but in human empowerment and capacity building as well.



Project description (activity description)

Our project is a National Movement aims to spread awareness of digital literacy through disseminations, collaborations, and empowerment. In order to enhance and strengthen positive

impact of technology, we pursue them with these 4Cs that are manifested in our ground-breaking digital literacy project:

- Curriculum development

We initiate Pandu Digital (<http://pandudigital.id/>) or Digital Scout, which is designed to pave the way for digital literacy education. To complement Pandu Digital, we compile reference/syllabus and provide digital literacy teaching & learning materials which are collected from our network/partners available on <http://literasidigital.id>.

Furthermore, we also initiate *School of Influencers* which aims to encourage youths in order to make and spread positive contents as a content creator. This program implemented in workshop and seminars all over Indonesia.

Moreover, we also initiate Kreator Nongkrong or the League of Creators is a platform where content creators gathered and share their experiences and knowledge to wider audiences. We aim to encourage younger generation to be involved in donating positive content to the Internet.

- Collaborative engagement

We bring together various groups who have contributed to the sustainability of digital literacy campaign. For example, we join forces with fact-checking organizations and establish a website called StopHoax.id (<http://stophoax.id>); to combat the spread of hoaxes and to clarify false information circulated on the Internet.

- Community empowerment

In addition to building a strong cooperation with existing communities, we develop a batik-producing village called Desa Manding, near Yogyakarta. We name it Kampung Batik Siberkreasi/Siberkreasi Batik Village (<http://batiksiberkreasi.id>). The community is taught to use technology for selling their craft and to use batik as a medium for digital literacy campaign.

- Cyber Governance

We took a substantial part in the national ID-IGF this November. We co-hosted the Indonesian Open Forum at the Global IGF the following week. We also appointed an Ambassador of Youth Cyber Governance.

For the last 2 years, Siberkreasi has conveyed disseminations in the form of workshop and seminars. From the programs above, we also have generated more than 700 content creators (beginner and intermediate level). Since the initiations in 2017 until now, we have achieved:

- 106 partners from multi-stakeholders
- 462 locations that have been reached on activities
- 194.000 active participants
- 182.000 eBooks that has been downloaded in literasidigital.id
- 75 million of Indonesian netizens that have received education and outreach through mainstream media and social media.

In reaching those numbers, there are plenty necessary means and strategy to be taken. Thus, for long, we cluster our project in to 2: **onsite public dissemination projects and online public education projects**. Onsite dissemination projects include Pandu Digital (Digital Scouts), School of Influencer, and Siberkreasi Netizen Fair. While online public education projects are conveyed through our Social Medias and websites. All projects from Siberkreasi are replicable because we provide an open and comprehensive reference/syllabus online.

Moreover, our projects are always inclusive as we involve our partners and various parties in preparation phase, execution phase, to evaluation phase. Siberkreasi is also committed to support entities who want to do digital literacy activities in the respective region/cities.

Onsite dissemination projects:

Pandu Digital (or translated in English as Digital Scout)

Pandu Digital is a tiered model of digital literacy training presented by Siberkreasi. It covers many topics needed to survive in digital era, namely: Digital Parenting, Digital Economy, Positive Content Creation, Negative Content Handling, Digital Governance, and Digital Lifestyle. All of the substances, syllabus, and materials can be accessed in pandudigital.id.

Pandu Digital was established to carry out 2 of our 4 main tasks: community empowerment and collaborative engagement. Pandu Digital facilitate and empower existing communities, volunteers, and creators, to keep massively spreading knowledge of digital ethics and matters on the Internet in an interesting and popular approach.

Since mid-2018, this program is adopted by the government (the Ministry of Communication and Information Technology) as one of the nationwide programs. For more information about the achievements of this adopted project, everyone can check it out in <https://pandu.kominfo.go.id/>.

School of Influencer

Another project from Siberkreasi is School of Influencer. This project is implemented in workshop and seminars with approximately 100 participants in each of the workshop and seminars which is held in all over Indonesia. Notwithstanding, this project is mainly focused on positive content creating and sharing.

School of Influencer as an initiative program between Siberkreasi and partners, aims to encourage the youths to build positive content in the internet. This project covers many topics, includes “how to be a positive content creator” until “Creator Generations”. In every workshop and seminar, we collaborate with content creators where they will convey materials and explanations about content creating. As in the end, there will be workshop and competition between participants. The substance in this project’s focused on the positive content creating and personal branding.

This program also aims to empower youths to consistently and productively create and share positive contents. Moreover, we also encourage youths to utilize the social media in a positive way, such as make a business through social medias, how to make a good personal branding on the internet, etc.

Siberkreasi Netizen Fair

Moreover, Siberkreasi also has one big annual event which consists of 3 main programs: digi-workshop, digi-conference, and music performance. This one-full-day event usually invites ministers, governors, artists, public figures, and ICT practitioners as the keynote speakers.

This event has been held for 3 times since we initiate Siberkreasi on 2017. Basically, Siberkreasi Netizen Fair is the full-pack edition of other projects that we have. In this event, there are also booths from all of our partners where they will deliver information project that they have, merchandise, and workshops in mini stage.

Siberkreasi Netizen Fair 2019 managed to bring in more than 7000 come-and-go visitors and participant in a day.

Online Public Education Projects:

In addition to the on-site projects that we held, we also held dissemination through the social media. We actively sharing infographic, tips and tricks, news about digitalization, etc. As long, the netizens are quite interested in this kind of dissemination. This can be seen by the growing audiences and followers that we have for more than 2000 followers (in Instagram) the last 3 months with the engagement for more than 20%.

Furthermore, Siberkreasi provide materials (books, videos, infographics) for independent teaching and learning on <http://literalsidigital.id>, all marked with Creative Commons (CC) license. Thus, it is safe to say that the project has the quality of being able to be reproduced for a sustained educational and development of people in the digital era.

The Manifestation of Capacity Building in Siberkreasi Project and Its Challenges

In discussing about digital literacy in Indonesia, we have to consider 272 million of its population who are scattered in 17.000 islands and are speaking 740 languages. It is impossible to reach them without involving local talents. Thus, we map out a plan of action by decentralizing resources, by building mutual cooperation and partnership among the stakeholders.

As our objective is to empower and educate the people, we believe, it aligns with WSIS Action Lines category 4 where by 2030, we aim to substantially increase the number of youth and adults who have relevant skills, including technical and vocational skills, for employment and entrepreneurship. We also focus our program on development and promotion to eradicate illiteracy using ICTs at national, regional and international levels, with the aim of increasing the number of people with relevant ICT skills. This objective is based on the rapid development of digital technology has grown into the life of Indonesian people. Internet users contributes 64% of the total population, at least 175 million Indonesians are on the internet.

The Ministry of Communication and Information Technology (MCIT) has acknowledged the issue and are committed to provide equal access of telecommunication through the establishment of “Palapa Ring” which will connect 440 cities/municipalities throughout Indonesia. Indonesia’s telecommunication infrastructure is projected to be able in sustaining “The Digital Energy of Asia”, a long-term vision from President Joko Widodo. In particular, it is highly related to the empowerment of online MSMEs and local start-up companies, as well as digital literacy education—which is now considered a primary focus of the MCIT.

Social, Economic, and Environmental Impact to Development

Social, economic, and environmental is an essential issue for development. Our movement touches many individuals and communities, as we encourage them to do the same to their circles and surroundings. Through Pandu Digital, we would like to imitate and refine the pyramid scheme strategy often used in marketing. While with School of Influencer and Siberkreasi Netizen Fair, we would like to encourage youth to create and produce positive contents, and to spread positivity through the internet in order to overcome both information disorders and negative contents which now massively spread. The sustainability of the project is also guaranteed by the abundance of teaching and learning materials available for free on <http://literalsidigital.id>.

Through our flagship programs, we attempt to educate, empower, and provide high quality information which are aligned with WSIS values category 4: Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all. We keenly promote online protection

(safeguard), fulfilment of rights, and people empowerment; in which incorporated in Indonesia Digital Literacy Framework. Based on the framework, we would like to provide an understanding of personal risks and online safety; to help ensuring that all Internet users are able to enjoy equal rights and freedom; as well as to enable citizens with entrepreneurship, journalism, and information ethics in order to thrive and survive on the Internet era. Moreover, Siberkreasi is also focusing on promoting technological innovation for better economy. We conduct training and workshops for emerging MSMEs and people who aspire to be digital entrepreneurs.

WSIS Stocktaking and Its Relevance to Development

To date, there are more than 7.79 billion people in this world, and 59% of them are connected to the internet. In Indonesia, there are more than 64% internet users to its total population. Thus, there is the need to join hands in developing the human resource and the country's infrastructure.

WSIS Stocktaking and its contest has become one agenda for almost all parties in joining their hands to build the world's population to be aligned with the development of the ICT. It has successfully brought government, communities and other parties all across the world in taking parts on handing out ideas and solutions to the more complicated problem that everyone faces with technology. By joining WSIS Stocktaking and its contest, we could understand further the differences of ICT development issues and its solution all across the world, nonetheless, it also could give us more notions on the innovations and methods that we can adopt to our own country and communities in it. Furthermore, this summit also managed to align its principals and categories of its contest to the SDGs. We believe, this very kind of objectives, which involved remarkable parties, would contribute to the escalation of human resource and ICT development.



C5: Building confidence and security in the use of ICTs

Project name:	Siberkreasi (Indonesia's National Movement for Digital Literacy)
Organization	Cybersecurity Malaysia
Country	Malaysia

Basic information about the Winner

- Cybersecurity Malaysia is the national cyber security specialist agency under the purview of the Ministry of Communications and Multimedia Malaysia (MCMC). Our vision is to be a “World-class cyber security specialist agency” with mission to lead the development of a safer and more resilient cyber ecosystem to enhance national security, economic prosperity and social harmony. through:
 1. Provision of quality and impactful services;
 2. Frontier-expanding cyber knowledge and technical supremacy; and
 3. Continuous nurturing of talent and expertise.
- Cybersecurity Malaysia provides a broad range of cybersecurity innovation-led services, programs and initiatives to help reduce the vulnerability of digital systems, and at the same time strengthen Malaysia's self-reliance in cyberspace. Some of these services are as follows:
 1. Cyber Security Responsive Services
 2. Cyber Security Proactive Services
 3. Outreach and Capacity Building
 4. Strategic Study and Engagement
 5. Industry and Research Development
- Cybersecurity Malaysia has more than 20 years of capacity building experience and assisted Malaysia to be ranked as one of the top ten (10) most committed countries in the ITU Global Cyber Security Index for year 2016 and 2018 with Capacity Building Category scores among the highest.

Project's description (activity's description)

- The Global ACE Scheme defines the holistic competencies expected of skilled personnel in the cybersecurity area. It describes the knowledge, skills and attitudes needed to perform in a particular occupation with emphasis on enhancing related skillsets.
- The Global ACE Scheme is developed in tandem with ISO/IEC17024, ISO/IEC27001 and ISO/IEC9000 standards. It outlines the overall approach, requirements of independent assessments, impartiality of examinations, competencies of trainers, classification of

cybersecurity domains, requirements of professional memberships and the continuous development action plans.

- The Scheme is developed in collaboration with the government agencies, industry partners and academic institutions and supported by the Organization of Islamic Cooperation, Computer Emergency Response Team (OIC-CERT).
- In Malaysia, the Global ACE Scheme is used to certify cybersecurity professionals at the national level. These professionals are recognised by the Malaysia Board of Technologists (MBOT) through the Malaysia ACT 768 as a Professional Technologist or Certified Technician that carries the prefix Ts. or Tc. before their name. The Department of Skills Development Malaysia through the Malaysia Act 652 has incorporated the Global ACE Scheme's syllabuses for the development of National Occupational Skills Standards (NOSS). About 60% of public universities have started aligning cybersecurity academic modules with the Global ACE Scheme to incorporate professional credentials.
- The Global ACE Scheme Centre of Excellence (CoE) project is a primary deliverable under the Global ACE Scheme. It establishes a single converging platform for cybersecurity capacity building and lifelong learning within the region that allows individuals to develop capabilities at their own pace and permit continual enhancement through the lifelong learning pathways.
- The Global ACE Scheme CoE project empowers professionals to share knowledge, expertise and skillsets, instil the ability to continually identify up-to-date cyber threats and mitigation methods. It infuses cybersecurity capabilities from members of participating countries, engaging them and stimulate shareable cognitive actions. Objectives are to support the continuous development of individuals in mitigating cyber-related threats, build effective cyber defenders within their social-economic sphere and establish inclusive and equitable quality programs for all.
- The Global ACE Scheme CoE project has set following objectives:
 1. To establish a professional certification program that is recognized globally;
 2. To create world class competent workforce in cyber security;
 3. To provide cyber security professionals with the right Knowledge, Skills, Attitude (KSA) and Experience;
 4. To be the global cyber security training program providers;
 5. To promote the development of cyber security professional program globally; and
 6. To ensure accredited personnel has been independently assessed and committed to a consistent and high-quality service level.

Internationally, 13 countries have shown interest in the project as Country Chapter. They are Azerbaijan, Oman, Indonesia, Iran, Brunei, Nigeria, Egypt, UAE, Kazakhstan, Bangladesh, Pakistan, Sudan and Turkmenistan.

Achievement

- Some of the success stories include the number of KSA Descriptors produced, the steady increase in the number of cyber security professionals certified, the number of training programs aligned to the KSA Descriptors, the recognition by relevant regulatory bodies, the

number of collaborations with higher learning institutions, and the interest shown by OIC member countries to set up country chapters using the Malaysian model.

- The Global ACE Scheme attained its approval from the Organisation of the Islamic Cooperation – Computer Emergency Response Team (OIC-CERT) during the 8th OIC-CERT Annual General Meeting on 13th December 2016 at Jeddah Saudi Arabia.
- To date, the project has produced twenty KSA Descriptors covering a broad range of cybersecurity topics including Digital Forensic, Penetration Testing, Secure Application Development, Information Security Awareness, and Information Security Management. The KSA Descriptors were developed in collaboration with industry experts, academicians and government representatives in the relevant fields.
- Each KSA Descriptor mentioned has its own corresponding examination being offered to candidates who wish to be certified in the subject that they choose. We have seen a steady year-on-year increase in the number of certification exam takers as well as the number of certified people. In addition to the examinations conducted in Malaysia, we have had our first overseas examination conducted in Islamabad, Pakistan in January 2019. We are confident that more such authorized examination centres will be set up in other OIC member countries in the future.
- It is also encouraging to see the number of training organizations who have aligned their training programs to the KSA Descriptors so that prospective certification candidates can attend the training to prepare for the examination. This is evidence that the Global ACE Scheme is gaining traction amongst the local training providers.
- A total of nine (9) certification training have been established with not less than 600 participants since it started. 186 participants have passed the Global ACE Scheme examinations and have been certified under the scheme to date.
- The Malaysia Board of Technologists (MBOT) which is a body that gives professional recognition to technologists and technicians in related technology and technical fields has approved cybersecurity as a new technology field in their list of recognized fields. We are pleased to report that MBOT has adopted the Global ACE Scheme as the pathway for cybersecurity professional certification.
- Another regulatory body that has recognized the Global ACE Scheme is the Department of Skills Development (DSD) under the Ministry of Human Resources of Malaysia. One significant achievement is the establishment of a National Occupational Skills Standard (NOSS) document that was developed based on the Global ACE Scheme KSA Descriptors for Penetration Testing. This NOSS is a document that identifies the competency level required of a penetration tester employed in Malaysia. It also defines the level of employment and the path of skill acquirement necessary to achieve said competency.
- Together with DSD, we have developed the modular TVET (Technical and Vocational Education and Training) certification pathway to enable a candidate to earn a Malaysian Skills Certificate by passing a specific set of Global ACE Scheme examinations. This is especially attractive for working people who cannot be away from their job for extended periods of time such as when enrolling in a formal educational program.

- Higher learning institutions have also started to align their degree and master's programs to the Global ACE Scheme. This is seen as a value add to their academic degrees where students will also get industry recognized certificates upon graduation. The Global ACE Scheme is involved both in drafting new academic courses as well as in aligning existing courses so that they prepare the students to sit for the corresponding certification examinations. To date we have one on-going master in cybersecurity and management and a few others in development.
- Internationally, we have 13 OIC member countries interested to join as country chapters of the Global ACE Scheme. Based on discussions they are keen to use the Malaysian model to be used in their respective countries. The Global ACE Scheme is looking forward to assist and share our experience with them.

Examples of linkages between the WSIS Action Line your project was awarded for with each of the Sustainable Development Goals it helps to advance.

- This project will contribute to the implementation of the selected WSIS Action Lines and Sustainable Development Goals as below:
 1. AL C5: Building confidence and security in use of ICTs
 2. Goal 4: Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all
 3. Goal 10: Reduce inequality within and among countries
 4. Goal 17: Revitalize the global partnership for sustainable development
- Global ACE Scheme CoE ensures inclusive and equitable quality education and promote lifelong learning opportunities for all.
- The scheme imposes a structured methodology to build, sustain and implement quality cybersecurity education congruent with local requirements and the global aspirations. Only personnel who passed the examinations and met the required standards will be certified.
- Certified personnel will be able to perform the job in cybersecurity with confidence and commit to a consistent and high-quality service level.
- The project produces as its output affordable cybersecurity technical courses that are of good quality which takes into account the consensus amongst practitioners from the industry, government and academia.
- It is the goal of the project to make this information available to all people in the developing countries who may not be able to pay for costly cybersecurity technical courses offered elsewhere.
- By doing this, the project ensures that every country will have equal access to quality cybersecurity education for its peoples.
- Furthermore, the project promotes continuous learning through the Continuing Professional Development (CPD) requirement for certified personnel.
- Through its information-sharing platform, cybersecurity professionals from member countries can share expertise, exchange views and collaborate towards a common cybersecurity goal.

- Such activities help to promote and uphold the cybersecurity profession amongst members and contribute to capacity building for the much-needed cybersecurity professionals.

Social, economic and environmental impact of the project

- Cybersecurity is becoming more and more important to ensure economic and societal well-being. The very nature of cybersecurity makes this project likely to continue well into the future.
- Thus the need to continuously train and certify new and existing cybersecurity professionals will remain in the foreseeable future. The field of cybersecurity cuts across all facets of today's world and will be more crucial as the world embraces the fourth industrial revolution.
- By regionalising the project as Country Chapters that share a similar structure, methodology and philosophy with other participating countries, it will empower the local authorities to continually develop, enhance and improve the operations which will grow organically.
- Local communities will be able to access quality and standardise cybersecurity education programs while local developers will be able to consistently improve their technical capabilities and enhance the contents towards international standards' aspirations.
- For the local business partners, the Scheme's products and services shall be able to optimise for commercial purposes, enabling financial sustainability in the long run.

Highlights of the project's partnership activities

- The Global ACE Scheme CoE realises a common platform to share the latest knowledge, promote the exchange of cybersecurity best practices, contribute expert know-how and make cybersecurity education affordable to all.
- Experts will be able to interact and collaborate more effectively in improving contents and curriculum development while enabling quality training in local languages. This project also offers an avenue for self-learning and self-development for the community.
- It empowers country chapters to articulate the horizontal alignment of the Scheme's recognition and operation, ensuring inclusive and equitable quality cybersecurity education while improving the cybersecurity workforce mobility.
- All country chapters are mutually recognised under the project. This will enable the seamless recognition of all professional training programs, trainers, professional workforce, cybersecurity products and services aligned under the project.
- Additionally, this project will encourage authorities and local partnered institutions to work together more closely while ensuring cybersecurity education is holistically integrated, instructors are mutually assessable and lifelong learning activities are jointly established.
- This project fosters closer cooperation of regional and international entities to enhance the cybersecurity capacity-building activities.
- **13 countries** have shown interest to join the scheme as country chapters. Azerbaijan, Oman, Indonesia, Iran, Brunei, Nigeria, Egypt, UAE, Kazakhstan, Pakistan, Bangladesh, Sudan and

Turkmenistan. Azerbaijan is in the process of establishing its country chapter Board of Governance.

- Higher Learning institutions have started the alignment processes with Global ACE Scheme by integrating their education programs with certified credentials.

Challenges

- Main foreseeable challenges are in the acceptance of communities on the perceived program quality and the effective implementation in chapter countries.
- Supports from local authorities are critical while the cost of operation is also a significant factor.
- The process of nurturing, gathering and making local experts to be committed is also a major concern and cannot be neglected.
- In terms of business sustainability, the Global ACE Scheme CoE requires significant participation from the business entities and continuous financial supports until the project be self-funded.
- Lastly, competition from existing professional cybersecurity programs from the United States and Europe may bring the project to a halt if not managed properly.

Project's Future Perspectives

- Certified cybersecurity professionals from member countries are mutually recognized. Hence, it will open job opportunities between the countries.
- The project aims to create certified cybersecurity professionals of superior quality who can command good salary which will directly impact the economic situation of those individuals.
- Through close cooperation and collaboration amongst the cybersecurity professionals in member countries, more dialogues and lines of communication will be established.
- All these will contribute to the societal well-being of the member countries.

Views on WSIS Stocktaking and WSIS Prizes contest, including its relevance to development

WSIS Stocktaking and WSIS Prizes contest are an excellence platform to promote all SDGs and Action Lines. This is the avenue for all societies to access impartial and quality information and as well as to enable strategic development within their locality way forward.

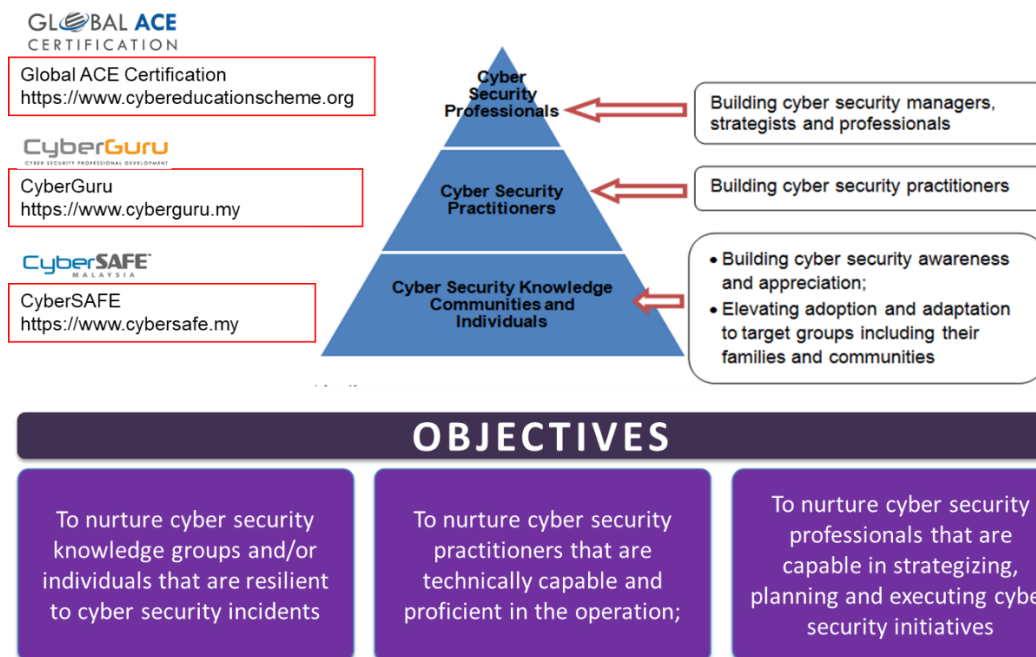
A. ITU GLOBAL CYBER SECURITY INDEX 2018

- Malaysia is 8th. in Global Ranking

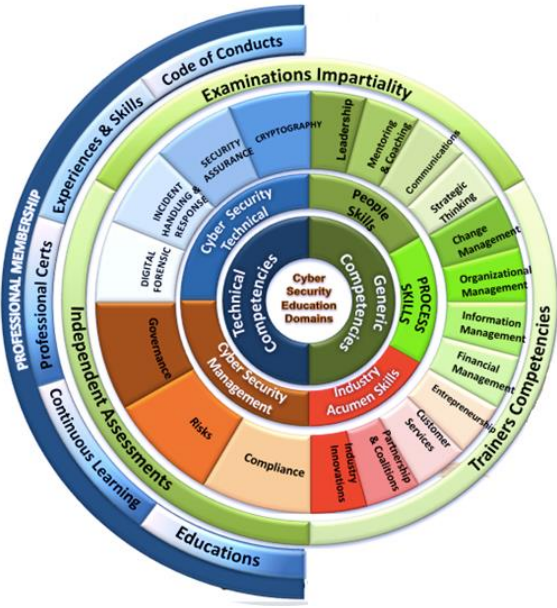
Table 5.1: GCI top ten most committed countries globally in 2018 (normalized score)

rank	Member States	GCI Score	Legal	Technical	Organizational	Capacity building	Cooperation
1	United Kingdom	0.931	0.200	0.191	0.200	0.189	0.151
2	United States of America	0.926	0.200	0.184	0.200	0.191	0.151
3	France	0.918	0.200	0.193	0.200	0.186	0.139
4	Lithuania	0.908	0.200	0.168	0.200	0.185	0.155
5	Estonia	0.905	0.200	0.195	0.186	0.170	0.153
6	Singapore	0.898	0.200	0.186	0.192	0.195	0.125
7	Spain	0.896	0.200	0.180	0.200	0.168	0.148
8	Malaysia	0.893	0.179	0.196	0.200	0.198	0.120
9	Norway	0.892	0.191	0.196	0.177	0.185	0.143
9	Canada	0.892	0.195	0.189	0.200	0.172	0.137
10	Australia	0.890	0.200	0.174	0.200	0.176	0.139

B. CYBERSECURITY CAPACITY BUILDING FRAMEWORK



C. GLOBAL ACCREDITED CYBERSECURITY EDUCATION SCHEME (GLOBAL ACE SCHEME)





C6: Enabling environment

Project name:	Startup Tunisia
Organization	Ministry of communication technologies and digital economy
Country	Tunisia

Brief information of the winner

The Ministry of Communication Technologies and Digital Transformation has established a National Strategic Plan for the period 2016-2020, entitled "Tunisia Digital 2020", with the vision to make ICT an important driver for national socio-economic development.

The main objectives underpinning Tunisia Digital 2020 include:

- Bridging the digital divide for an inclusive society by having adequate ICT infrastructure while guaranteeing equitable access to ICT for all;
- Implementing digital culture by mainstreaming the use of ICTs and digitizing content;
- Evolving towards transparent, efficient user-oriented administration and smart use of the administration assets;
- Supporting startups and innovation driven businesses;
- Promoting skills development and offshoring in ICT Field; and
- Building trust and confidence in the use of digital economy.

The program Startup Tunisia is one of the major achievements for the country. It aims to put in a place a regulatory environment supportive of digital innovation and ICT startups growth, in one hand, and to make Tunisia, in the other hand, a preferred regional destination for the creation and attraction of startups.



Project's description (activity's description)

Startup Tunisia is an incentive framework for the creation and development of Startups. The main objective of Startup Tunisia is to enable the emergence of more than 1,000 startups within 5 years, of which at least one Tunisian Unicorn.

The program is composed of 4 main components:

- (1) the legal framework, which is dematerialized by the Startup Act,
- (2) the Fund of Funds, it is the instrument of support and financing of the ecosystem of startups,
- (3) the training and support of young talents people, and
- (4) the integration of different Tunisian regions in this process.

The Startup Act is materialized mainly by: (i) Law No. 2018-20 of 17 April 2018 on Startups; (ii) Decree No. 2018-840 of 11 October 2018 laying down the conditions, procedures and deadlines for granting and withdrawing the start-up label and the benefits for Startups and the organizations, the operating procedures of the labeling committee; and (iii) Circulars of the Central Bank of Tunisia N ° 2019-01 and 2019-02.

The Startup Act is structured around a Label of Merit and a series of measures for the benefits of Entrepreneurs, Investors and Startups. This framework is designed to facilitate the creation and the growth of Startups in Tunisia. So far, the MTCTD has granted for about 130 Labels for the benefit of startups.

Examples of linkages between the WSIS Action Line the project was awarded for with each of the Sustainable Development Goals (SDGs) it helps advance

As ICT creates an enabling environment for the public good, public policy in turn provides an enabling environment for the adoption of ICT-based solutions that help achieve the SDGs in key sectors Tunisia Startup promotes the WSIS values by contributing to employment growth and regional and fair development in Tunisia.

the project was awarded for with each of the Sustainable Development Goals (SDGs) it helps advance
SDG 2 (Zero Hunger): to end hunger, achieve food security and improved nutrition and promote sustainable agriculture. SDG 3 (Good Health and Well-being): to ensure healthy lives and promote well-being for all at all ages. SDG 8 (Decent work and economic growth): to promote inclusive and sustainable economic growth, employment and decent work for all. 24 WSIS STOCKTAKING: SUCCESS STORIES 2019 SDG 10 (Reducing inequality): requires transformative change. Greater efforts are needed to eradicate extreme poverty and hunger, and invest more in health, education, social protection and decent jobs especially for young people, migrants and other vulnerable communities. SDG 12 (Ensure sustainable consumption and production patterns). SDG 15 (To sustainably and manage forests, combat desertification, halt and reverse land degradation, and halt biodiversity loss).

Challenges and project's future perspectives

The challenges that we met through the implementation of the program and the ones likely to occur include but not limited to through the operation of these e-services:

- Categorization the licenses and unify the business process workflow
- Integration with other government entities
- the mechanism to follow up the performance of startups which obtained the Label of Merit startup labels
- the establishment of the talent pool program

Winner's views on WSIS Stocktaking and Prizes contest, including its relevance to SDGs

The WSIS Stocktaking and Prizes contest is a valuable opportunity for ICT actors, including policy makers, industrials and researchers to leverage ICT as an enabling environment for the adoption of ICT-based solutions that help achieve the SDGs in key sectors. ICT-based delivery systems for public healthcare, education and infrastructure

It is to help the entities to be aligned with very important targets that included in the SDG's through building the digital solutions.

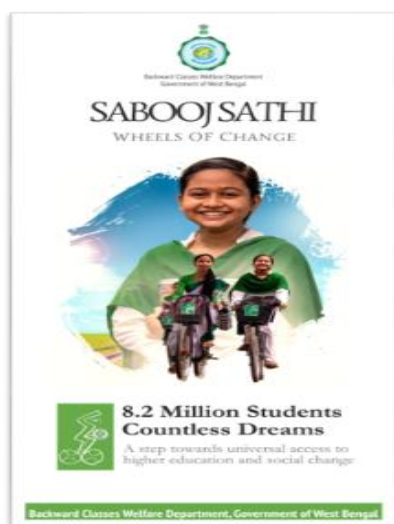


C7: ICT Applications: e-government

Project name:	Sabooj Sathi online 3.0
Organization	Backward Classes Welfare Development
Country	India

Brief information of the winner

The Sabooj - Sathi Scheme was an idea of Hon'ble Chief Minister of West Bengal Mamata Banerjee. She flagged off the scheme on 29th October 2015. Around 8.20 million students have received bicycles in last five years. The students are receiving bicycles immediately on admission in class IX.



Project's description (activity's description)

According to Pratichi (India) Trust, the Scheme has achieved - "Apart from its immediate goal of ensuring accessibility to high schools the scheme has had a huge societal impact by enhancing the general mobility of the population and that of the girls in particular. The bicycles distributed among the students are not only used for schooling but also for several other Domestic and Social utilities.

Not only in enrollment or retention, overall social impact of the scheme may be assessed from random responses taken in the field by the Pratichi (India) Trust:

1. "Sumi Sutradhar", a student of class X studying at Labpur Satyanarayan Siksha Niketan, Birbhum: Her father is a carpenter; mother works seasonally as an agricultural labourer. Sumi is the youngest of the three siblings - two sisters and one brother. Her elder sister was forced to discontinue her studies while she was in Class-VIII as her parents married her off. She also wanted to study, but the high school was five kilometers away and it was difficult for her to commute to school. She asked my father to buy her a bicycle. But my father is a very poor and could manage to procure loan from relatives and employers to buy only one bicycle for my brother...when there

is only one bicycle it naturally goes to the son...I would have also discontinued studies. But thanks to Sabooj-Sathi, I have got a bicycle...You know what happened after I have got the bicycle? [laugh]

2. That the bicycle has a different meaning for the girls was reiterated by several others. For example, "Hasina Khatun", a student of class XI of Haral United Madrasah, Hugli, in her words, "Without the bicycle [received under the scheme] I could not at all come to school. My father is a street vendor and earns not more than a hundred rupees a day. how can he buy a bicycle for me? But I want to study. My parents are also eager to see me continuing my education. The school is six kilometers away, and apart from distance, I also had to face other challenges, namely eve teasing. Now we come in a group, with relatively free mind. "
3. The scheme seems to have received high appreciation not only by the students but also by parents, especially mothers. In a group meeting at Mastul village, women were unequivocally eloquent about the Sabooj-Sathi. As "Lata Bauri" lamented, had there been any such supportive scheme she would also have attended the high school. She had to discontinue owing to the distance and poverty.
4. Large numbers of boys attending public schools belonging to stressed economic strata spoke highly of the scheme. As "Rahim Seikh" of Nanoor, Birbhum, described, "I am a daily wage earner. availability of work is limited, as one gets it during sowing and harvesting seasons. Rest of the months I try to find employment in the market or elsewhere. How can I buy a cycle for my son? He had been fretting for a bicycle so that he could attend his classes regularly. He was often scolded by his teachers for being late or being absent. It was hard for him to walk down to school two hours a day. I tried to arrange some loan but failed. The bicycle he has received from school [under the scheme] is a real gift. It is primarily being used by him to go to school, but it has also made our life much easier in other ways: going to market to buy things, taking patients to health centres or doctors, and so on".
5. Given the vulnerability of the majority of the rural population, the decision of universal distribution of bicycle has seemingly been proved to be a real help for the helpless. Of course, there are students among the recipients - both boys and girls - who could afford buying a bicycle for their wards. But, firstly, the number of such affluent parents is few and secondly, and perhaps most importantly, inclusion of this section into the fold of the scheme has made the balance tilt towards benefits over the cost. From a head teacher's account, we find two distinct but interconnected values of universalization of the Sabooj-Sathi scheme: first, its intrinsic value, and second, its instrumental effectiveness. In her words: Universalization has many benefits. First of all, it gives a sense of equality among the students. Of course, they come from different socio-economic background. But school is the place which is meant for abolishing the subjective differences - education is intrinsically involved with the goal of equality. So, a public programme inside the school campus should not make any discrimination - be it caste or gender or economic criteria.
6. Secondly, the programme aimed to serve select population is bound to carry within a congenital danger of failure - partial or even total. Such selections for providing assistance are generally made on the basis of certain capability deficiency - being poor, or women, or low caste. Now, the select groups, owing to informational lacking and fragility of voice, cannot make much difference to the actual delivery of the programme. They generally cannot make any noise or register protest. Any section that can do something effective keeps itself indifferent, since the programme does not serve their interest. What I am seeing in executing the bicycle scheme is amazing: even a small problem in the distribution does not go unnoticed. Immediately some or other parents would come and argue. What I meant to say is that universalization of public programme creates an

automatic mechanism of Community Audit. The 10 rupees you spend, to make the scheme universal, saves your 15 rupees on account of monitoring. Most importantly, it ensures the delivery.

7. Some of the students said that now they can afford more time on studies since they have got bicycles to attend school. Some other said "whatever pocket money our parent used to spare was earlier spent for transport, now we could save. "
8. The nineteenth century women's rights activist "Susan B. Anthony" thought that the bicycle, 'has done more to emancipate women than anything else in the world. It gives women a feeling of freedom and self-reliance.' She stood and rejoiced every time she saw 'a woman ride by on a wheel...the picture of free, untrammelled womanhood'. Two centuries have passed and yet, the bicycle is still a symbol of freedom for a large part of humanity, standing at the receiving end of discrimination owing to their gender identity.

According to study by Pratichi (India) Trust, founded by Nobel Laureate "Dr. Amartya Sen," these bicycles are breaking many boundaries.

Sabooj-Sathi has increased retention in high schools, inculcated sense of confidence amongst the girls and promoted environment-friendly healthy means of transportation. These outcomes are in conformity with four Sustainable Goals of agenda 2030- SDG3: Good Health & Well-being, SDG4: Quality Education, SDG5: Gender Equality and SDG13: Climate actions.

The model designed was success as it was effortlessly replicated for 5 consecutive years without many complications.

The Scheme effectively used the Sabooj Sathi Online 3.0 (www.wbsaboojsathi.gov.in) e-Governance mechanism with end-to-end ICT for entire process including procurement and Direct benefit transfer to individual beneficiaries, it also withstood the test of Transparency and Accuracy of deliverables.

The entire process was kept in Public Domain. Around 190 million numbers of Website Hits have been recorded till date.

As per Pratichi, in last five years' enrolment of Students has shown an increase by 1F2 % in class IX in 2016-2017 and subsequently by 6% on average per year thereafter. It was also witnessed that 9.18% more Girl examinees vis-à-vis the Boy appearing in Board exams.

Students in rural areas, particularly the girls are now attending the schools regularly, thus reducing the absentees.

Girls were getting married at early age. The % of early marriage was around 47% among the Girl student which has reduced considerably.

These bicycles are being used for attending various domestic, cultural and other social purposes as well.

The e-Governance for Sabooj-Sathi was developed entirely inhouse by the Department of Backward Classes Welfare (State Government) with technical assistance of National Informatics Centre (NIC), without any outsourcing, therefore the management of implementation was within control and the administrative cost was kept less than 0.5% of project cost.

The entire capacity building was done virtually at all the levels including Schools, Government offices and for the students.

Sabooj Sathi is first of its kind in India which has provided equal opportunity of Education to all Children irrespective of Caste, Creed, Religion and Gender. (All-inclusiveness)

The bicycles at the disposal of the disadvantaged students has wielded a neutralizing effect by allowing them comparatively easy access to the facilities required for the competition.

The "Sabooj Sathi" Scheme is very popular and every year immediately after getting admission to Class IX Students look forward to receiving the Bi-Cycles.



C7: ICT Applications: e-business

Project name:	Business digital transformation centres
Organization	Ministry of Information and Communications Technology
Country	Columbia

Brief information of the winner

The Ministry of Information and Communication Technologies, according to Law 1341 or ICT Law, is the entity in charge of designing, adopting and promoting the policies, plans, programs and projects of the Information and Communication Technologies sector. Among its functions is to increase and facilitate the access of all the inhabitants of the national territory to the Information and Communication Technologies and their benefits.

Project's description (activity's description)

The Digital Business Transformation Centers are an initiative of the MinTIC, in alliance with iNNpulsa Colombia and the main chambers of commerce and unions in the country, which aims to accompany companies in their process of tactical appropriation of technologies as a long-term strategy that will enable them to improve their productivity and competitiveness, and in which flexibility prevails so that companies can achieve early victories by continuously adapting to market developments and new customer demands. In the Digital Business Transformation Centers, companies find technical assistance and advice necessary to develop a successful transformation path.



The process begins with a diagnosis of the digital state of the business, where the degree of technology adoption and the organizational capacity to manage the transformation are measured. From this

diagnosis, a transformation route is formulated and implemented, which articulates actions associated with the development of organizational enabling capabilities, as well as the implementation of technological tools that enhance the business structure.

The main document of the CTDE strategy is the Maturity Model for Digital Transformation, whose objective is to be the base document for the implementation of the strategy and to give the guidelines so that the executors of the strategy respond to a single objective.

The Maturity Model for Digital Transformation seeks to identify the level of digitalization of the internal business processes of a micro-SME and to promote the use of technological solutions that will help companies, in a gradual and organized way, to increase their productivity and competitiveness.

Examples of linkages between the WSIS Action Line your project was awarded for with each of the Sustainable Development Goals it helps advance

The CTDE are related to the following ODS:

- 4. Quality Education: a component or phase of the attention to the companies refers to training in ICT issues for the use and appropriation of these in business
- 5. Gender Equality: the terms of reference include an obligation to impact a significant number of women entrepreneurs.
- 8. Decent work and economic growth: the aim of the strategy is to accompany companies in their digital transformation to become more productive and competitive through the use and appropriation of ICTs in their processes and that this in turn impacts on the reactivation and economic growth of the country's regions.

Social, economic, and environmental impact of the project

From the Digital Transformation Centers, it has been possible to improve the processes of the micro and SME's, through the strategic use of technologies. They have been able to achieve more productive businesses, more efficient processes, which translates into more successful businesses with higher sales, wider market reach, simpler processes, and lower production costs, among others.

In the environmental component, with the digital transformation of some of the operating processes of companies, it has been possible to reduce the number of prints by having digital solutions to manage business

Highlights of the project's partnership activities

The CTDE initiative is implemented through an alliance with the chambers of commerce and trade associations, which are the entities that are most aware of the needs and challenges of the business fabric in each of the country's regions. Additionally, these partners have their own strategies that complement the CTDE, offering different services in their portfolio, which allow companies to improve their operational processes.

With these alliances, a great coverage of the initiative is achieved allowing to reach regions that are little impacted with the social strategies of the state.

Challenges and project's future perspectives

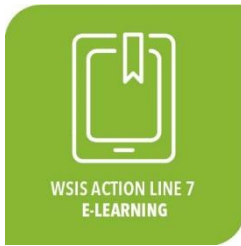
The greatest challenge presented by the project is to attract these chambers of commerce and unions to continue the initiative and ensure that the efforts are sustained over time and are technically and

economically leveraged by them, taking into account that the state's resources to finance these strategies are limited and must constantly evolve.

Taking into account that the basis of the strategy is the maturity model for digital transformation and the operational manual, which write the methodology in a structural way that facilitates the transfer of knowledge to other entities, it is easily replicable and these can help any consultant or company (MSMEs) to solve problems related to the optimization of productive processes in the value chain.

Winner's views on WSIS Stocktaking and WSIS Prizes contest, including its relevance to development

These recognitions are very important because they highlight the importance of the use of technologies in society and how they can change lives. Connectivity is a development tool that opens a window to opportunities in education, culture, services and business development. From the ICT ministry we work to connect all Colombians, but connect them well, provide them with tools that allow them to take advantage of access to the network and close social and economic gaps.



C7: ICT Applications: e-learning

Project name:	The first international Cyberschool of the future for the new IT generation KIBERone
Organization	KIBERone Cyberschool
Country	Russian Federation

Brief information of the winner

The first international cyber School of the future for the new IT generation KIBERone is a project for additional training of children aged 6-14 years in the field of digital technologies. The project was created in order to replace the useless pastime of children in gadgets with useful ones, to save children from gambling addiction and turn their interest in computers and smartphones into motivation to study digital technologies and create their own projects. The company is represented in 17 countries and more than 120 cities.

Project's description (activity description)

The project participants focus on several important tasks:

1. to provide the young generation with modern digital skills that are not taught in secondary schools, but are in demand in the era of global informatization;
2. teach children to use various gadgets for the benefit of learning and development and make them full-fledged members of the information society.

The project contributes to the early professional orientation of children and, in the long term, to the reduction of the deficit of qualified IT specialists, which is currently observed around the world.

For this purpose, a long-term integrated development program is being developed within the project, which includes teaching popular programming languages (Python, Java, JavaScript, etc.), developing computer games, artificial intelligence and virtual reality technologies, blockchain, web development, cybersecurity, and much more.



The curriculum contains more than 50 areas, and this is the largest number among all the curricula on the market. In the classroom, children get acquainted with innovative technologies, learn what programming is and why it is interesting and exciting, become developers of their own digital projects. The program is developed by existing employees of large IT companies who have experience in creating innovative IT products, and tutors are practicing IT specialists who are able to pass their experience and knowledge to the younger generation in an accessible language. The total period of study at the CyberSchool is up to 9 years.

Examples of linkages between the WSIS Action Line your project was awarded for with each of the Sustainable Development Goals it helps advance

The CyberSchool KIBERone considers the popularization of children's education in the field of digital technologies throughout the world, introducing the young generation to the development and meaningful use of ICT, training in the necessary digital skills and thereby forming full-fledged members of the modern information society, focused on continuous development and activities in the interests of all mankind to be the main goals of our activity. This is consistent with one of the main goals of the WSIS and Action line C3 – Access to information and knowledge, as well as the goals of sustainable development.

Our own deep conviction is that human capital is one of the most important components of the information society. Therefore, we are developing a modern educational program, which is based on the use of ICT (educational online platforms and applications) and helps to increase literacy in this area. We strive to develop the project and introduce teaching methods on the national and international levels so that children in different countries of the world have the opportunity to get access to the most modern and relevant knowledge that is in demand now and will be in demand in the future. This is consistent with the WSIS Action line C4 – Capacity Building, as well as Action line C7 – ICT Applications.

In addition, we strive to eliminate the gender barrier and break the stereotype that programming and ICT are for men only. Girls are actively involved in training in the project (their share is 30% of the total number of students in the project), which potentially contributes to the increase in the number of women in the field of ICT and also corresponds to the WSIS Action line C4 – Capacity Building.

We believe that access to the educational process and the acquisition of new knowledge should be available to all children, without exception. Therefore, the project's promising areas of activity include providing quality inclusive education – working with children with disabilities (developing new teaching methods, adapting learning spaces and the curriculum to special educational needs) and children from low-income families (providing educational opportunities on favorable terms or on free basis).

Social, economic, and environmental impact of the project

The social effect of the project is expressed by the following indicators:

1. Improving the digital literacy of the younger generation. The CyberSchool training program includes not only the study of narrow areas and training on specialized platforms, but also training in general computer literacy, security of work on the Internet and on various digital devices.
2. Meeting the growing consumer demand for high-quality education of children in the field of digital technologies and attracting to development in the IT industry. In the process of learning, children acquire the most advanced digital skills, which affects the choice of a future profession, contributes to the formation of the IT community and, as a result, reduces the deficit of qualified IT specialists both in individual countries and in the world as a whole.

The economic effect of the project is expressed by the following indicators:

1. Business development and, as a result, improvement of the economic situation in a particular city/town, region or country;
2. Creation of new jobs, which helps to increase employment and, as a result, the welfare of the population. The staff in each division of the company assumes the presence of at least 4 people.
3. Making tax payments in the budget system of the country in which the project is being implemented.

The project does not have any harmful impact on the environment.

Highlights of the project's partnership activities

KIBERone project partners are large Russian and international companies.

Such a partnership is important for the project, because it provides an opportunity to expand the territory of presence and increase recognition, constantly exchange experience and developments in the field of education, expand one's own capabilities (attract new clients, introduce additional types of services) due to the capacities of partner companies.

Challenges and project's future perspectives

Among the main problems that the company faces during the implementation of the project are the following:

1. A complex procedure for obtaining grants and subsidies for the development of the project;
2. A small number of equipped computer rooms for classes with children.

In the future, the project plans to work in the following promising areas:

1. Development of a strategy for interaction with kindergartens with the aim of expanding the audience of the project and attracting children of 4-5 to digital skills training;
2. Development and implementation of an international hackathon project for young children of 6-11.

Winner's views on WSIS stocktaking and WSIS prizes contest, including its relevance to development

WSIS Prizes is a significant international event. The contest provides an opportunity to learn about the latest trends in the development of the ICT industry and the information society, get information about interesting projects, declare their achievements, share experiences and find partners.

We are very pleased that we have the opportunity to contribute to the development of the ICT sector and the information society at the global level, and to contribute to the achievement of Sustainable Development Goals. Recognition of our project at the WSIS Prizes contest is an indicator that we are creating a high-quality and popular product in the field of ICT, which means that we are moving in the right direction.



C7: ICT Applications: e-health

Project name:	Early diagnosis of breast cancer using artificial intelligence (AI)
Organization	Ministry of health
Country	Oman

Brief information of the winner

As The Ministry of Health (MOH) in Oman, we are responsible for ensuring the availability of health care to the people of Oman. MOH is also the principal provider of preventive, promotive and rehabilitative services. Drug control, bulk procurement and distribution of drugs are managed by MOH.

Project's description (activity's description)

As a Directorate General under the Under-Secretary of Planning of MOH, Directorate General Information Technology (DGIT) is responsible for the implementation of all IT related infrastructure, policies and guidelines. Since 1998, it has developed an in-house Hospital Information System called AlShifa. This system is now running in more than 200 institutes of MOH and some other Non-MOH Government institutes. It is the main source of all data produced for analysis for the MOH as well as defining the workflow and documenting the patient's data.

The project is aimed at aiding the radiologist in the early detection of Breast Cancer by analyzing mammograms using AI thereby saving the patient's life and reducing the costs associated with treatment of cancer. In addition, because there are fewer qualified experts in this field in MOH, Oman, this also would aid in processing more no. of patients than currently possible.

More information can be sought from our website <https://www.moh.gov.om/>

Examples of linkages between the WSIS Action Line your project was awarded for with each of the Sustainable Development Goals it helps advance

As winning in action line C7-eHealth, especially in points 1 and 5:

1. Promote collaborative efforts of governments, planners, health professionals, and other agencies along with the participation of international organizations for creating a reliable, timely, high quality and affordable health care and health information systems and for promoting continuous medical training, education, and research through the use of ICTs, while respecting and protecting citizens' right to privacy.
2. Encourage the adoption of ICTs to improve and extend health care and health information systems to remote and underserved areas and vulnerable populations, recognizing women's roles as health providers in their families and communities.

It especially links to SDGs number 9.

Social, economic, and environmental impact of the project

You don't have cancer" OR "You Have cancer"

While on a breast screening visit, a woman, wishes to hear the first sentence of four words and dreads to hear the second sentence of three words. Mammography is an effective screening tool for detecting cancer, but what many women may not know is that breast screening programs produce a high level of false positive results, particularly after multiple years of screening. In other words, women informed they might have cancer when in fact they do not. This is particularly true in countries where each study generally read by a single, expert radiologist. Many times the ratio of expert radiologists to patients might be highly skewed towards the patients. This will lead to delays in interpretation, which might lead to higher costs and less chances of treatment.

Early detection of breast cancer means less cost for treatment, a better probability of curing and stopping it. In our society, the woman is the pivot of the house. In such an environment, it is quite natural that not only the patient but also the whole family benefits with this early detection and treatment of breast cancer.

The anxiety and trauma of going for a scan and finding out and later going for treatment could leave mental, physical, financial and social scars on the patient and her family. Many times, the families have to travel outside their home village for such purposes and these would involve costs of providing for those left behind in terms of food, travelling, medical, companionship etc... Some might even wish to go out of the country for such treatment entailing additional costs of travelling etc... On reaching their destination, they would have to stay in hotels and eat outside, etc ... Sometimes the neighbours would unknowingly or knowingly say or do things, which might force a family itself to relocate from their familiar surroundings or change their current job.

There would be additional hidden cost and time savings achieved. The patient, if working, need not take additional and unnecessary sick leaves. The patient's working relatives, esp. the husband or father, need not take leave from his work to be with the patient.

Interpreting mammograms is a complex job. Even the most highly trained radiologists may struggle to confidentiality rule out the possibility of cancer in difficult cases. This frequently results in a large percentage of women, up to 30% in some settings, being re-called or asked to return for further imaging studies or even a biopsy. In fact, it been noticed after 10 years of annual screening, more than half of women will receive at least one false-positive recall. Although the system designed to improve accuracy, the high numbers of recalled patients, most of whom do not have cancer, may lead to unnecessary anxiety, additional radiation exposure and invasive procedures for many women. It also contributes to extra healthcare costs.

Artificial intelligence (AI) is a ubiquitous term in healthcare that has aroused both promise and suspicion. In radiology, AI investigated as a solution to enable radiologists to improve cancer detection more efficiently and effectively. AI with its deep learning-based software has proven to be an effective solution to this detection. In many clinical trials, AI based analysis has shown promise to be as effective as manual interpretation.

The major impacts of the project as follow:

1. Foremost is the reduction of the turnaround time in reporting. A manual reading by the Radiologist might take anywhere between 20 mins to 1 hour depending upon capability,

training and experience to report 1 mammogram. AI could technically do it in LESS than 3 minutes.

2. The reduction in the need of multiple qualified experts. In MOH, Oman the number of specialized mammogram radiologists at the current time is 3 to 4. This will be a huge pressure on them to report in a time bound fashion, and would likely to induce errors, thereby adding to the cost of treatment and maybe even litigations. If the number of cases increase, MOH would be forced to get more trained personnel thereby adding to the cost of the treatment.
3. The interactive decision support workflow and interactive querying of suspicious regions can aid the radiologists to diagnose accurately the patient and not to miss certain areas. Anything, which can aid the radiologists in this endeavor, is a step in the positive direction.
4. The reduction in false positives would be one of the most positive outcomes of this project as it deals with not only the patient's life but also those surrounding the patient. It also saves on the huge cost and time spent on treating false positive cases. Litigations costs can be avoided by the reduction of such cases.
5. The reduction in errors due to fatigue would be an added advantage thereby reducing the costs from litigations. Due to the increase in the number of screenings being done as the awareness in the community grows, means more load on the qualified radiologists. This could lead to natural fatigue, which could induce mistakes on the reading of the mammograms. Anything aiding them to find the correct areas would be a great aid to them. This is where AI can truly help.
6. The overall reduction in healthcare costs. A full treatment of a patient diagnosed in the third stage, by some estimates, could cost anywhere between R.O. 25000 to R.O. 50000. Treatment of a patient diagnosed in the first stage, by estimates, could cost anywhere between R.O. 5000 to R.O. 10000. Even if we take the lower figure that is a saving of 80% which is a huge reduction. If we have 5000 cases at this rate, the savings could be in the tune of 100000000 (One Hundred million) or thereabouts. AI would help us in diagnosing early thus giving us this huge reduction in healthcare costs both to the center and to the patient and their family.

Highlights of the project's partnership activities

- ❖ The partnership between Ministry of Technology and Communications (MTC), Ministry of Health (MOH) and Directorate General Information Technology (DGIT) in MOH has a great impact on the project. The effective cooperation and coordination of all the parties involved is required for the success of the project.
- ❖ MTC has been a great partner in coordinating and supervising the whole project right from inception to closure. Without their support, coordination with other external service providers would not have been possible to achieve in a timely manner.
- ❖ The end users in MOH, mainly the radiologists, have been a great support for the implementation and design of the project. Without their technical inputs related to their medical field, this project would not have achieved anything.
- ❖ DGIT Team comprising of Architects, Developers, Testers, Network Engineers, Server Engineers, Security Specialists and Hospital IT Technicians worked in tandem for the project development, integration, implementation, installation, testing and troubleshooting of the

entire project. A Special mention would be for the management of DGIT involving the Director General, Director and Section heads in order to coordinate and guide the project.

- ❖ Screen Point Medical is the provider of the AI Software and the Decision Support Viewer. Their support in implementing and helping in the troubleshooting of the application and its integration is valuable.

Challenges and project's future perspectives

The main challenges in this project are as follows:

- a. Convincing the radiologists about the accuracy of the AI system to detect breast cancer is one of the biggest challenges of the project.
- b. Having data needed to train and validate Ais deep learning.
- c. To make sure that the proper medical imaging infrastructure is in place for acquiring images in a particular format.
- d. Another challenge is the IT infrastructure especially the speed of the network, which has to cater to huge images as data.
- e. Another challenge was to ensure that the correct workflow is adopted.
- f. To reduce the turnaround time of the report
- g. Final challenge is to reassure the radiologists that the AI system is to aid them and not to replace them.

The projects future perspective are as follows:

- a. Breast cancer is the leading cause of cancer-related diagnosis and deaths in women globally. Earlier detection could have a positive impact on decreasing mortality, as this could offer more options for successful intervention and therapies when the disease is still in its early stages.
- b. Improving the early detection ratios further by feeding in more and more data for the AI system to improve itself.
- c. Ability to predict the possibility of the patient to have cancer later in life.
- d. More prediction that is accurate could hold the potential to reduce the number of women sent for unnecessary tests.
- e. Combining clinical data with imaging information could offer the potential to more accurately validate initial results.
- f. CAD or clinical decision support systems, in the future, might be able to provide more information on a suspicious finding than they do now. They might, for example, define the

tumor and make therapy recommendations – which would mean biopsies would no longer needed. This would clearly revolutionize workflow and procedures in mammography screening.

Views on WSIS stocktaking and WSIS Prizes contest, including its relevance to development

The WSIS Stocktaking and Prizes contest evaluate projects and activities effectively and elaborate powerful information and communication technologies to advance sustainable development. We have seen very innovative and interesting projects which can be replicated or improved or which generate new ideas. We hope that our proposals are of equal interest to other entities or governments. This distinction is very important, since it is an acknowledgment of the work done and that is framed within the Sustainable Development objectives proposed by the WSIS.

The WSIS Award can promote the project's visibility and extend the possibility of others learning from our experiences and vice versa. It can also boost credibility and local support regarding the relevance and importance of the work.

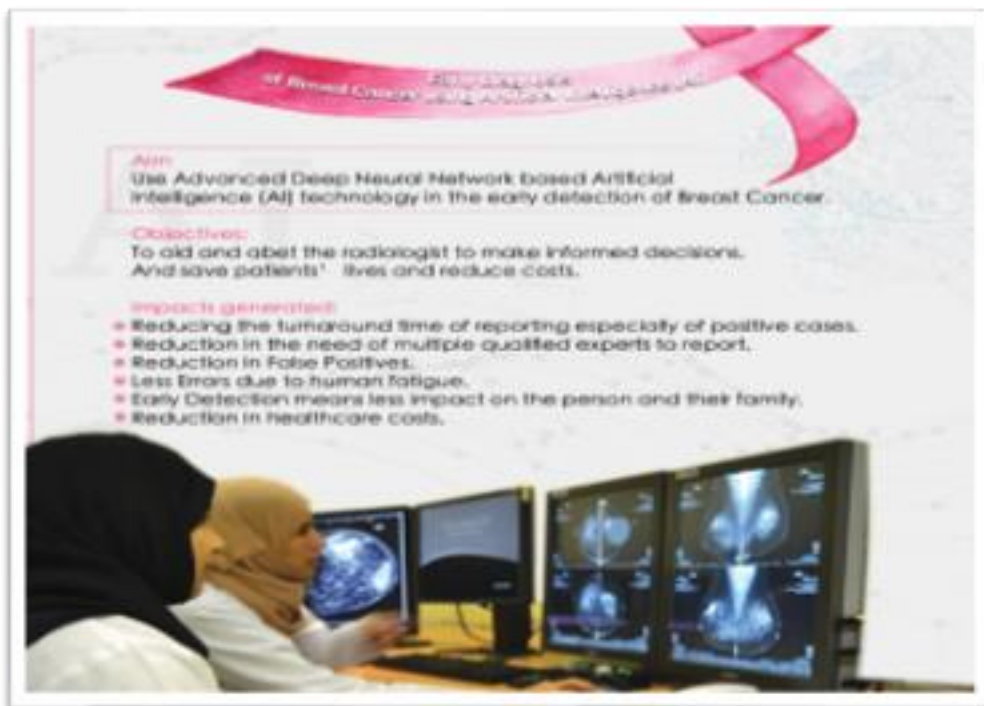


Figure 1: Image of a patient having breast cancer with score of 10



Figure 2: Image of a patient not having cancer



Current Screened Statistics: -

	Patients Screened	AI Score =10	AI Score = 9/8	AI Score <8
Total (currently 3 hospitals) is being expanded to more	1544	448	381	715



C7: ICT Applications: e-employment

Project name:	Recruitment process management as a shared service for government agencies of Bangladesh
Organization	Bangladesh Computer Council
Country	Bangladesh

Brief information of the winner

Bangladesh Computer Council (BCC) is a statutory body under the Ministry of Posts, Telecommunications and Information Technology, Government of Bangladesh (GOB). It was established by Act No IX of 1990 passed by the Parliament. The main objectives of BCC are including but not limited to: encouraging and providing support for ICT related activities in Government domain, formulating national ICT strategy, policy and ensure adoption, creating standards for ICT and specifications of ICT tools for government organizations, developing human resource in ICT sector. Over the recent years, BCC has established National Data Center (NDC) for hosting all the government websites, e-mail services and web applications. In the near r future, NDC is envisioned to be the only Gateway to access internet services for all of the government organizations.

BCC in its endeavor to further progress on its ambitious objective had established Bangladesh National Digital Architecture (BNDA). The aim for this initiative was to create a digital ecosystem within the Government of Bangladesh that provide digital services:

- Seamlessly
- Integrated
- Digitally inclusive
- Strategically Aligned

Project's description (activity's description)

The concept of shared platform/services to facilitate citizen service delivery utilizing emerging technologies is a crucial part of Bangladesh National Digital Architecture. It ensures cost reduction and optimization is achieved while improving process, information systems and technology support in a disciplined manner. Bangladesh Computer Council established this System as a shared service for all govt agencies. It enables the Govt agencies to accomplish end-to-end recruitment process and related tasks through increased interoperability, enhanced security measures, reduced risk and lower procurement costs.



It is a web based secure system to process recruitment management activities electronically. It covers activities from Job posting to shortlisting of candidates. There is facility to manage Question Bank and online exam. It contains Provision of Online transaction verification with Bank. It is integrated with DLS platform (a private Blockchain infra) for storing admit card info. It has 3 modules – e-Recruitment module, Exam Controller module and Online Exam module

Results achieved:

This Recruitment Management System is a successful project based on implementation achievements. It has been used by 25+ Govt agencies/projects. Recruitment of 1900+ applicants is already completed! It has processed 1,70,000+ online job applications against 70+ posts of 60+ different recruitment notices in last 2.5+ years. Several entities have used this system multiple times. 3-2 new agencies are in pipeline.

Impact:

ICT ministry has decided to launch National Govt Jobs Portal based on this shared service. It has helped agencies to process large number of job applications within shortest time & effort and enable agencies to focus on their core functionalities. We are seeing impressive response from govt organizations and applicants. It's saving govt expenditure to a great extent as they no longer need to procure similar system. Job applicants from rural areas are now able to apply with ease and relieving them from standing in queue in bank branch. It is creating positive impression among applicants about govt services.

Examples of linkages between the WSIS Action Line your project was awarded for with each of the Sustainable Development Goals it helps advance

WSIS Action Line	Sustainable Development Goals	Project Benefits Realized
e-Employment		The shared Recruitment management Service is enabling Government agencies to deliver integrated citizen services to all classes of citizens : Rural, Semi-Urban and Urban. Also it's enabling poor people to apply for govt jobs from home using mobile
		BNDA and e-GIF compliant Shared Recruitment management Service is enabling transparent recruitment for Government of Bangladesh.
		The Shared service for recruitment process management is enabling poor and rural people to apply for govt jobs with a fair opportunity to be selected (if found competent).
		The shared service for recruitment process management has provision of applying job application and taking exam online, thereby alleviating usage of paper and conserving environment.

Social, economic, and environmental impact of the project

Social Impact:

Recruitment Management System has some social impact also. Online exam facility ensures fair judgment, fair competition and impartial behavior, thereby creating social values. Again Blockchain enabled Admit card prevents forgery and collusive practices, hence ensuring social norms.

Economic Impact:

It provides huge savings (max 90%) in effort spent for scrutinizing job applications and shortlisting candidates based on criteria. Also, it helps govt organizations to expend less in recruitment management activities by utilizing this shared service. BCC has already provided services equivalent of several Crore BDT to govt agencies.

Environmental Impact:

This citizen service has direct impact on environment. It is in-line with 'Go Green' initiative. In manual recruitment process, an applicant has to submit piles of papers, documents, copies of certificates, recommendation letters and so on. Our recruitment management system is enabling applicants to submit job applications electronically. Also, it has provision of taking exam online, instead of pen and paper based exam, with automatic result processing facility. So it's removing use of paper and printing to a great extent. And thereby having positive impact on environment.

Highlights of the project's partnership activities

SL No#	Department/ Ministries	Role	Mode of Interaction
1	ICT Division	<ul style="list-style-type: none"> • Guide and Monitor Project progress • Assistance to get coordination/response from line ministries 	Periodic
2	Bangladesh Computer Council	<ul style="list-style-type: none"> • Provide strategic and tactical support to continue the system operation • Provide hosting space and deployment infrastructure • Provide Support to solve technical issues • Facilitating approval of all the technical documents like <ul style="list-style-type: none"> ○ Functional Requirement Specification ○ System Requirement Specification 	As and when required
3	Ministry of Public Administration	Provide Recruitment related rules, regulations, form, template etc	As and when required

Challenges and project's future perspectives

Challenges:

1. Regular review of Question bank: The question bank was established in collaboration with academic institutions. However, the question bank needs a regular review and update mechanism to cope with contemporary issues. Otherwise, it may negate the advantages already gained by usage of the service.
2. Security of question bank: The question bank is maintained electronically as part of the system. There is always risk of hacking and cracking activities with the question bank by vested quarter to get unsolicited privileges.
3. Online Exam in large scale: The system has provision for taking online exam. However, it will require large exam center with many computers & internet facilities. As a result, conducting online exam in large scale is a great challenge in our country.

Future Perspective:

ICT ministry has decided to launch National Govt Jobs Portal based on this shared service. Talks going on with Public service commission (bpsc.gov.bd) to utilize the shared service. BNDA team is also trying to improve system scalability, User experience, security features and so on. ICT Ministry is developing GRP (Government resource Planning) software to be used by govt agencies. This recruitment management service will be integrated with HR module of GRP software – such type of decision is already taken by BCC. We have plan to introduce insights and analytics in the system. We have plan

to incorporate SMS sending feature with the portal. Again to improve User Experience BCC is planning to employ ML (Machine Learning) technique in the system. The system will utilize ML technique to find closest matches with the qualifications & experiences mentioned in recruitment notice and notify those job seekers about new opportunities. The recruitment management service will be integrated with more mBanking service provider so that applicants can do the payment with his favorite mBanking service provider. We hope it will act as one stop solution for any type of Government recruitments in future.

Winner's views on WSIS Stocktaking and WSIS Prizes contest, including its relevance to development

BCC assumes WSIS Stocktaking and WSIS Prizes contest as an effective one to promote any gov't/non-gov't organization's development aspects. It's also enables creating healthy competition among gov't/non-gov't organizations of same country in terms of innovation, excellence and citizen service delivery. We wish every success of WSIS Stocktaking and WSIS Prizes contest.

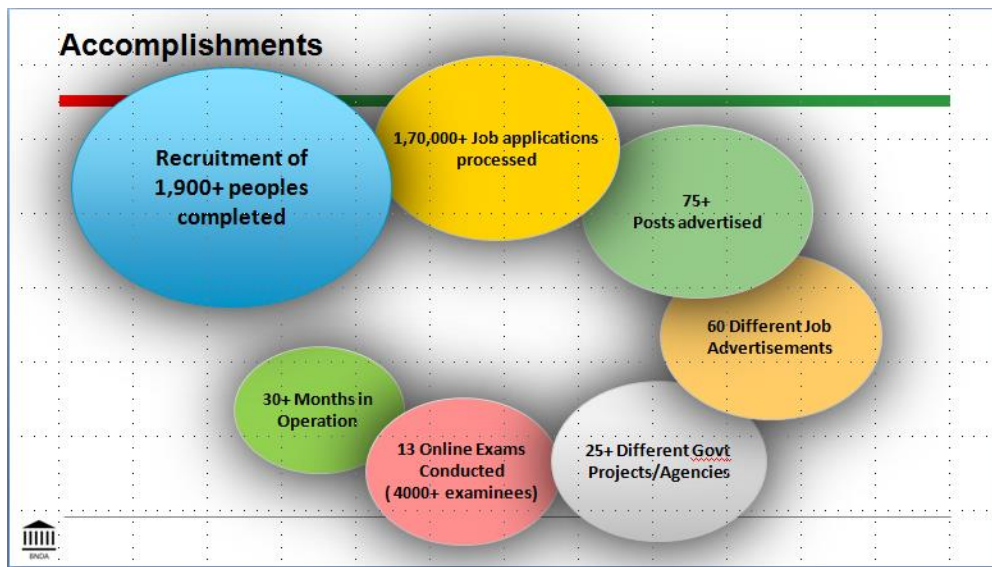


Figure 3: Usage Statistics of Shared Recruitment Management Service



Figure 4: The Open Group PRESIDENT AWARD 2019 is being handed over to Hon'ble Prime Minister



Figure 5: Close-up pic of The Open Group Award 2019 for eRecruitment System



Figure 6: BCC receives The Open Group Award for Innovation and Excellence 2019 in category of 'Architecture Enabled Govt



C7: ICT Applications: e-environment

Project name:	China Unicom “Smart Blue” Public Service Big Data Platform
Organization	China Unicom Research Institute
Country	China

Brief information of the winner

China Unicom is one of the world's largest telecom operators. China Unicom provides services to billions of mobile subscribers worldwide, and our mission is "Connect the world to innovate and share a good smart living". China Unicom Network Technology Research Institute (merged into China Unicom Research Institute on late 2020) is a professional network technology support organization established by China Unicom in 2013. The institute conducts world-class innovation research and new technology validation and implementation. In addition, the institute vigorously integrates 5G, big data, AI, and other emerging technologies with various industries to provide a new perspective for social and economic development and change the society. The Institute has promoted a series of projects to serve urban construction, environment protection, and people's life, including this ITU WSIS 2020 Winner project -- China Unicom “Smart Blue” public service big data platform.

Project’s description (activity’s description)

China Unicom “Smart Blue” public service big data platform is a cross-industry integration platform for environmental protection. This platform integrates telecom big data with air quality data, population data, and behavior data to achieve the refined air quality prediction and pollution traceability. Aiming at the polluted areas, the platform can realize the functions of people flow and vehicle disintegration early warning so as to alleviate the air pollution impact. The platform can also track pollution discharges, assess the impact on residents and enterprises, and provide support and reference for government guidance and decision-making. The platform has been proved to have the transplant capability, which can be applied in other fields as it provides a universal technical model and architecture. Project’s members include: Mr. Xinzhou Cheng, Ms. Kun Chao, Mr. Lexi Xu, Mr. Jie Gao, Ms. Yuwei Jia, Ms. Qingqing Zhang, Ms. Lijuan Cao, Ms. Chen Cheng, Ms. Xin He, Ms. Tianyi Wang, Ms. Yunyun Wang, Mr. Heng Zhang, Mr. Xiaodong Cao, Mr. Jian Guan, Mr. Chuntao Song, Mr. Yuhui Han, Mr. Yang Wu, Mr. Fan Zhang, Mr. Tao Zhang, Ms. Runsha Dong, Ms. Bingyuan Wen, Ms. Rui Xia, Ms. Ruoqing Hao, Ms. Yuxuan Wu, Ms. Yanan Zhang, Ms. Zhenqiao Zhao, etc.



Figure. Key Team Members of China Unicom “Smart Blue” public service big data platform

Examples of linkages between the WSIS Action Line your project was awarded for with each of the Sustainable Development Goals it helps advance

China Unicom “Smart Blue” public service big data platform can protect the environment, and better implement ITU WSIS Action Lines as well the WSIS values promotion in the society. This platform has strong linkages together with a series of ITU WSIS Sustainable Development Goals (SDG), including SDG 3, 5, 8, 9, 11, 13:

- SDG 8 and 9: As a microcosm of new industries and information/communication technologies, China Unicom “Smart Blue” public service big data platform has applied new technologies, including AI and big data, in order to solve environmental problems. Polluting companies/factories can be automatically discovered, and then government can take the reasonable capacity planning and governance immediately. In addition, decent jobs can be provided, and energy efficiency can be promoted. Therefore, this platform can promote sustained economic growth, higher levels of productivity and technological innovation, which is consistent with SDG 8 and 9.
- SDG 3 and 5: The climate and the environment are impacted by a series of factors, including the widening economic and social inequalities, rapid urbanization etc. This platform considers above-mentioned challenges and tries to make some progress against several air pollution and help good health for people. Supplementary, climate change and disasters have a disproportionate effect on women and children, this platform contributes to end discrimination against women and girls. In this respective, this “Smart Blue” platform helps achieve SDG 3 and 5.
- SDG 11 and 13: Rising populations and increasing migration results in the rapid growth of cities. Making cities sustainable indicates the need of green public spaces, improving urban planning and management in participatory and inclusive ways. This “Smart Blue” platform can realize the intelligent supervision and capacity planning for the start-up of polluting enterprises and assist relevant departments to carry out environmental monitoring work, which is necessary to achieve SDG 11. From a global perspective, taking action to Dealing with climate warming directly contributes not only to Goal 13 but also to the other SDGs.

Social, economic, and environmental impact of the project

China Unicom “Smart Blue” platform jointly analyze the real-time monitoring and data prediction of air quality, together with the real-time location distribution information of China Unicom's massive

mobile users. Further, this platform can effectively realize the accurate assessment, prevention and decreasing air pollution's impact on people. This can assist government decision-making support, enterprise operation guidance, public awareness and protection, etc.

Social impact:

The project is dedicated to build a universal big data innovation product service platform, which integrates basic data and provides services and applications in the environment industry. This platform contributes to human and social development in a sustainable manner. With the expansion of industry application capabilities, the platform can provide integration and technical services to the society.

Economic impact:

In the China Unicom "Smart Blue" public service big data platform, the module of dynamic capacity planning and adjustment can be formulated rationally in time to assist the government in guiding the capacity planning of enterprises. Hence, this platform can reduce the cost of human and material resources, data acquisition, storage, and maintenance costs in various industries as well as maximize the economic benefits while protecting the environment. In addition, the platform can help governments identify pollution enterprises, reduce environmental protection expenditures, and increase expenditure utilization capabilities. Overall, this can benefit the whole society.

Environmental impact:

Employing the China Unicom "Smart Blue" public service big data platform, for the heavily polluted areas, users behavior of polluting enterprises can be modelled and forecasted. Therefore, this platform can realize the intelligent supervision of enterprises' stop and start-up, continuously track the pollution emission and air quality improvement, effectively improve the efficiency of environmental protection supervision. According to the tracing information of air pollutants, the pollutants' types and emissions that cause air pollution can be accurately identified. Therefore, this platform provides an intelligent and precise method to improve the efficiency of "Battle towards blue sky".



Figure. Homepage of China Unicom "Smart Blue" public service big data platform



Highlights of project's partnership activities

This project has been made possible by the collaborative effort from National Meteorological Center of China (NMC), which provides meteorological data such as air quality and fine particulate matter (PM2.5) concentration. Meteorological data is one of the key data sources of the China Unicom "Smart Blue" public service big data platform, and the integration of Meteorological data and telecom data empowering this platform the capability to provide more accurate and real-time analysis and service. In addition, the China Unicom "Smart Blue" public service big data platform was promoted with the general support of the Environmental Protection Departments of Hebei, Chongqing, Sichuan and Guizhou in China. Therefore, our project can be effectively applied to achieve the goals of technology promotion and environmental protection.

Challenges and project's future perspectives

Challenges:

There are three challenging issues of big data technology, which may impact China Unicom "Smart Blue" public service big data platform.

- 1) Data fusion is complicated. There are multi-source data in different types for this platform, which needs systematic integration. Currently, data and systems are tightly coupled, which leads to the data barriers, resulting in a weak data sharing among systems. Meanwhile, the standards of the collected data among different systems might be different, which causes an inconsistency of the same data.
- 2) There are massive data, effective platform methods to support the massive data storage, data parse, data analysis are in desperate needed.
- 3) In order to achieve the deep transformation of the telecom operator's roles (e.g., from the mobile network pipeline to the data operation), novel business cooperation modes between telecom operators and other industries are urgent to be explored and practiced.

Project's future perspective:

New technologies are catalysts for economic development and environmental protection. Big data technology provides strong support for environmental protection with its practicability and

efficiency. This is a major change and inevitable trend in the development of big data technology. China Unicom “Smart Blue” public service big data platform project is committed to promoting the big data technology to improve in-depth integration of big data technology and environmental protection industry to accelerate the level of environmental protection technology, providing references for the world and promoting the sustainable economic development and environmental protection goals of ITU WSIS. It has important strategic significance.



Figure. Sub-page of China Unicom “Smart Blue” public service big data platform

Views on WSIS Stocktaking and WSIS Prizes contest, including its relevance to development

WSIS Stocktaking provides us a high perspective to be aware of the world's outstanding ICT projects, expanding our horizons and motivating us to make more contributions to the development of information society.

The ITU WSIS Award is a prestigious global award. It is a recognition of our project and an opportunity to share our experiences and new ideas and make a network of friendship around the world. In addition, it will help provide more active ideas and more feasible plans for SDGs.

Last but not the least, it is our sincere expectation that our mission can get the attention of enterprises or governments, so we can work together to achieve SDGs in innovative ways.



C7: ICT Applications: e-agriculture

Project name:	Eyes in the sky, smart techs on the ground transforming Africa's agriculture
Organization	Technical centre for agriculture and rural cooperation
Country	Netherlands

Brief information of the winner

The mission of the Technical Centre for Agricultural and Rural Cooperation ([CTA](#)) is to advance food and nutritional security, increase prosperity and encourage sound natural resource management in African, Caribbean and Pacific (ACP) countries.

Africa Goes Digital ([AfGD](#)) Inc. is an industry association representing African enterprises that are providing digital services in the agriculture, forestry, fisheries, natural resource management, infrastructure, mining sectors and in the domains of surveying, engineering, inspection, disaster risk management, humanitarian work and research. Members leverage the power of digital technologies such as unmanned aerial systems, satellite imagery or geographical information systems to deliver quality services and high-end products.

With the end of the Cotonou Agreement between the ACP Group of States and the European Union (EU), the financial and legal framework that has supported CTA, expires at the end of 2020. However, although CTA will cease to exist, AfGD – a legal entity created in the framework of the *Eyes in the Sky, Smart Techs on the Ground* project – will continue to exist and prosper.



Project description (activity's description)

There is a consensus that smallholder farming needs to become more productive, more sustainable and more profitable. Unmanned Aerial Systems (UAS) – or drone-based systems⁵ – can contribute towards these goals by bringing some of the tools of precision agriculture to large and medium-scale farmers, and associations of small-scale farmers growing the same crop in contiguous areas. Typically, UAS services are provided by entrepreneurs who invest in the equipment, acquire the skills to use it, conduct or sub-contract data analysis, interpret the findings, and advise their customers.

UAS can inform a range of services, including mapping and surveying (e.g. farm boundary delineations, crop area calculations, elaboration of digital elevation models), crop inventory (e.g. count of tree crops, yield estimations), crop scouting (e.g. identification of location-specific crop stress, assessment of biomass development), pest control (e.g. early detection of infestations, identification of pests, spraying of crops), sanitation of open spaces via spraying like in the case of the COVID-19, crop damage assessment (e.g. for insurance purposes), crop management advice (e.g. nitrogen application on selected crops), infrastructure inspection (e.g. irrigation systems, roads), and increasing farmers' credit-worthiness via the integration of farmer profiles with high resolution images, crop diagnostics, and accurate and up-to-date georeferenced data sets. UAS can thus help increase returns to farmers and create new knowledge-intensive employment opportunities in rural areas, offering educated rural youth an alternative to migration.

Recognising the opportunities offered by UAS, CTA began to partner with leading private sector operators in 2016, and assisted ICT start-ups in Angola, Benin, Burkina Faso, Cameroon, Côte d'Ivoire, the Democratic Republic of Congo, Ethiopia, Gabon, Ghana, Jamaica, Kenya, Madagascar, Malawi, Morocco, Niger, Nigeria, Rwanda, Senegal, Tanzania, Togo, Uganda, Zambia and Zimbabwe in acquiring the capacity to deliver UAS services. CTA organised a series of activities including training in the operation of drones with multispectral sensors, understanding of safety and privacy principles and regulations, management and processing of remote sensed data, and development of business plans and networking opportunities. In addition, CTA provided some financial support for the acquisition of equipment and software, and onsite and remote coaching in business development, enterprise management and data processing. CTA supported UAS operators in sharing their experiences at international events and in showcasing their products and services during expos and fairs (Figure 7).

⁵ 'Drones' and drone-based systems is a commonly-used term, however it is more accurate to refer to 'UAS' which comprises: (i) the drone or unmanned aerial vehicle (UAV); (ii) the sensor(s) mounted on the drone; (iii) the controller used to command the UAV; (iv) the pilot; (v) the apps which are used for planning the flight path and for flying the UAV; (vi) the software used to process the (multispectral) imagery captured by the sensors and turn it into index maps; (vii) the data scientist which performs data analysis; and (viii) the computer which hosts the analytical software.



Figure 7 Young entrepreneurs supported by CTA promoted their services at the EXCO2019 in Rome, Italy

Since 2016, CTA has also played an active role in raising awareness on the potential of UAS in the domains of development and humanitarian assistance, especially among national and international bodies which define the rules and regulations under which unmanned aerial vehicles (UAVs) can be operated within national airspaces. In this context, the project played an important role in establishing an enabling environment for the technology. It supported the African Union's (AU) appointed High-Level African Panel on Emerging Technologies (APET) in selecting "drones for precision agriculture" as one of the most promising technologies which would foster Africa's development. On 26 January 2018, by issuing [Decision 987 \(XXXII\)](#), the AU's Executive Council recommended that all Member States harness the opportunities offered by drones for agriculture. A full report entitled "[Drones on the Horizon: Transforming Africa's Agriculture](#)" was launched at the Africa Innovation Summit in Kigali on 8 June 2018. Project implementers co-authored the report and have been advising national civil aviation authorities in some countries in developing regulations for the responsible use of drones. By embodying components like scientific research, proof of concept initiatives, capacity building, support to investment, enterprise and business development, networking, experience capitalisation and communication, the *Eyes in the Sky, Smart Techs on the Ground* project is contributing to the transformation of Africa's agriculture into a high-tech industry, with decisions being based on real-time gathering and processing of data, productivity and yields.

The establishment of 38 rapidly expanding, youth-led enterprises offering drone-based services in 21 African countries (Figure 8) – to farmers' organisations, agribusinesses, government, international development agencies, among others – represents a significant development for the continent and a tangible contribution to the UNECA-led African Information Society Initiative ([AISII](#)). A December 2019 survey confirmed that these enterprises have been recruiting staff, investing in new equipment, and increasing their turnover and client portfolio.

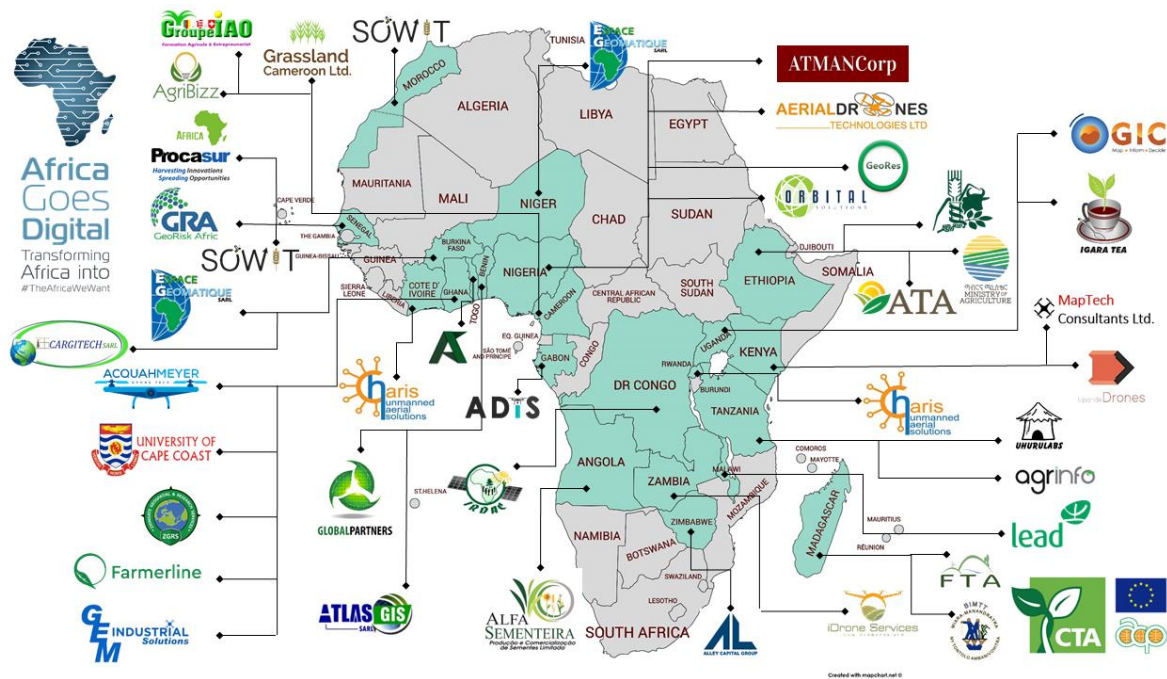


Figure 8 Location of drone operators, members of AfGD

To support further growth of the enterprises and enable members to group, offer diverse services and be more competitive, the industry association [AfGD Inc.](#) was established.

Examples of linkages between the WSIS Action Line your project was awarded for with each of the Sustainable Development Goals it helps advance

This project exemplifies how talented and educated African youth can build on innovative and disruptive technologies to launch start-up enterprises which can propel the continent into the digital age and serve producers and decision-makers at various levels with current, high resolution, location-specific and actionable remote-sensed information. Benefitting from an enabling environment – created by the Decision passed by the Executive Council of the AU – an increasing number of African countries have been developing and passing legislation governing the use of drones. Using diverse channels including social media, technical papers, articles and blogs on success stories, challenges posed by restrictive regulations, the cost-effectiveness of the technology and public perception of UAS technology in Africa, the project has raised global awareness of the potential of UAS for agriculture in ACP countries.

Capacity building (Action Line (AL) C4) has been provided for drone pilots (programming and flying drones) (Figure 9), data scientists (data processing and analysis), managers (enterprise development), marketing staff (business development) and media personnel (professional use of social media). The capacity building has also contributed to AL C5 or “Building confidence and security in the use of ICTs”. There is solid evidence that the project has generated employment, encouraging educated youth to provide digital services and make use of digital media (AL C7, e-employment), and promote digitalisation for agricultural transformation (AL C7, e-agriculture).



Figure 9 Training of drone pilots in Ghana, 2019

The project's strong focus on youth employment and retention of young people in rural areas via an exciting technology, advances SDG 8 (Decent Work and Economic Growth). Relevancy to SDG2 (Zero Hunger), SDG1 (No Poverty), and SDG13 (Climate Action) is linked to the services delivered directly or indirectly resulting from the deployment of the technology and ensuing improved crop yields and returns to investments for farmers.

Social, economic and environmental impacts

Some of the 38 enterprises have been so successful that they have begun to expand into other countries; Charis UAS, founded in Rwanda, is now operating a second office in Côte d' Ivoire, and Espace Géomatique, based in Burkina Faso, has opened a second office in Niger. Based on the December 2019 survey, most of the enterprises have recruited additional staff (72% aged between 18 and 35 years) and employed them for longer terms (> 2 years) (i.e. youth employment). Most (97%) of the respondents stated that offering UAS services improved the visibility and reputation of their business. In 2019, 32% of the 34 surveyed companies registered a turnover for projects including a drone component exceeding € 50,000 and 16% a turnover for project including a drone component exceeding € 100,000.

Agriculture (48%), and surveying and mapping (40%) were the service domains that the enterprises said yielded the highest volume of business, although the most successful enterprises had diversified to also serve other sectors such as engineering and construction, real estate, mining, insurance and security. As of December 2019, the surveyed enterprises were serving 347 farmers' organisations and agribusinesses, 79 government agencies and close to 27,200 farmers.

In terms of policymaking, 44% of respondents reported having contributed to the passing of national regulations governing the use of drones, 26% of whom reviewed or commented on draft regulations. The project has also funded research activities in Benin, Burkina Faso, Ghana and Rwanda aimed at determining the costs and benefits of the technology among farming communities and their willingness to pay for the service. Preliminary results point to increased yields and returns to farmers

acting on UAS-based recommendations, especially for those growing crops under irrigation. Farmers in Ghana, Rwanda and Benin, who benefitted from UAS-based advisory services, expressed their willingness to pay for such advice.

In Ghana, one AfGD member ([Acquahmeyer Drone Tech](#)) who could not meet the demand for crop spraying using its drones, entered into a venture with banks and other private sector operators, including with [Global Partners SARL](#), and another AfGD member, to launch a project which will train 500 youth (60% women) in 10 regions, and equip them with spraying drones on lease to start their own businesses. Acquahmeyer Drone Tech will act as the central hub for receiving service requests and will delegate the work. Demand is peaking for spraying maize against Fall Army Worm and pineapple, the latter being one of the major cash crops in the country.

The use of drones to spray crops is also having health benefits, as the technology substantially reduces the exposure of farm workers to pesticides.

Highlights of the project's partnership activities

Partnerships have been at the core of project implementation. CTA (the main funding agency) established partnerships with:

- private sector operators in the domains of robotics (i.e. Parrot Group), enterprise development (i.e. [EY's Ripples Project](#) and [TrustLaw](#), the Thomson Reuters Foundation's global pro bono legal programme);
- academia (Cape Coast University in Ghana, Wageningen University & Research in the Netherlands, and the School of Aviation of the Eastern Kentucky University in the US);
- government agencies (Ethiopian Agricultural Transformation Agency (ATA), Ethiopian Ministry of Agriculture (MoA) and Ethiopian institute for Agricultural Research (EIAR)); and
- emerging start-ups which benefitted from project support and registered a rapid growth in terms of digital services offered and customers served.

Various channels have been used to develop and cement these partnerships. Social media (Twitter and Facebook) are used to regularly share achievements and market services. A private WhatsApp group, including all UAS enterprises and CTA staff, is serving as the catalyst for developing new ideas, boosting initiatives, and addressing technology-related challenges.

To ensure sustainability of the results achieved, [AfGD](#) has been incorporated as a non-profit corporation in Delaware, USA. All project beneficiaries are currently members of AfGD Inc. (Figure 10) and work in partnership.



Figure 10 Members of AfGD gathered in Cotonou, Benin, for an experience capitalisation workshop in October 2019

Challenges and project's future perspectives

The main challenges experienced in project implementation have been linked to: (i) disabling regulatory frameworks (e.g. Uganda, where no framework is in place); (ii) Insufficient evidence on costs and benefits deriving to farmers acting upon UAS-generated advice; (iii) the need to develop a price structure for services; (iv) an initial lack of understanding of the potentials and pitfalls of the technology; (v) lack of access to capital for upscaling (in the initial phases of business development); (vi) difficulties in cloud data processing due to poor connectivity in some countries; (vii) a steep learning curve in using data processing software; and (ix) the lack of agronomic skills within most of the enterprises which had more a focus on ICTs, remote sensing and GIS. Over time, the challenges have been addressed either via the project or by the enterprises themselves; the establishment of an industry association and case-specific partnerships being good examples.

Lack of officially recognised institutions where to train drone pilots in Africa represents a continent-wide challenge. At present drone pilot schools are found only in Benin, Senegal, South Africa and Tanzania. The schools in Benin and Senegal were established in 2019 by Global Partners SARL, with support from the project and in partnership with the School of Aviation of the Eastern Kentucky University, US.

Artificial intelligence

UAS are evolving at breath-taking speed and are increasingly relying on artificial intelligence to feed decision support systems. At present, high-end UAS solutions provide real-time actionable information that is visualised (e.g. georeferenced index maps), which allow on the spot data point interpretation and action to be taken swiftly.

CTA supported the implementation of an initiative where UAS and on-the-ground data gathering were used to calibrate an existing algorithm to estimate the yield of wheat (with 80% accuracy) in diverse agro-ecological conditions in Ethiopia. Two additional crop seasons are necessary to fine-tune the algorithm and reach 95% accuracy. The local partner, the Ethiopian ATA plans to upscale the solution and tailor it for additional crops such as barley, maize, soya, teff and sesame. This kind of information – made accessible in real time – and extrapolated to the national level after linking high resolution UAS-generated data to satellite imagery, will be of strategic importance to the government of Ethiopia for e.g. mitigating food shortages in years of adverse climatic conditions.

Replicability

A study conducted by CTA in 2016, stated that the main bottleneck for widespread UAS adoption in Africa was related to the absence of national regulations governing the use of UAVs. The Decision EX. CL/Dec. 987 (XXXII) issued by the AU Executive Council has, however, stimulated governments to develop and enact adequate legislation. As of the end of 2019 about 60% of African countries now have regulations in place or have adjusted civil aviation laws to cover the safe use of UAVs.

As for all innovative technologies, scaling up and sustainability are key challenges. As per the latest statistics, South Africa (the first African country to pass UAS regulations in 2015) accounts for the highest number of licensed commercial drone operators across the continent: approximately 150. Rwanda has two licensed operators, and Ghana has a handful. In comparison, the UK Civil Aviation Authority, recorded a total of 5,848 approved [Small Unmanned Aircraft \(SUA\) operators](#) on 13 March 2020. Hence, with so little competition for UAS services, provided enabling regulations are in place, and additional training facilities are established, the industry is expected to flourish.

Lessons learned by the project indicate that diversification of services is key for the success of UAS businesses. Project beneficiaries are becoming so successful that they are expanding into other countries (e.g. Côte d'Ivoire and Niger), or deliver services beyond their respective national boundaries. The traction for UAS services is increasing exponentially, especially via large agribusinesses and demand from national government and development agencies.

Sustainability

The project has been successful in supporting the introduction, establishment and flourishing of a UAS-based service industry in 21 African countries. Based on regular monitoring and more specifically regular surveys, the latest carried out in February 2020, most enterprises have been recruiting staff (i.e. youth employment); investing in new and more advanced equipment and analytical software, and substantially increasing their business turnover.

During the year 2019, enterprises signed most of their service contracts with private companies (50%), national government agencies (23%) as opposed to donor agencies (16%), and the value of individual contracts increased compared to previous year. These are all indicators of the enterprises' sustainability. It is also significant that project beneficiaries have been teaming up to carry out assignments which need complementary skills, equipment and digital solutions.

Success is measured in both financial as well as reputational terms. Enterprises recruiting staff or opening branch offices in other countries are doing well. Talented entrepreneurs like Charis UAS (based in Rwanda and Côte d'Ivoire) and Sowit SAS (based in France, Morocco and Senegal) benefitted from external investment and are regularly invited to share their experience at high level international events.

Long-term sustainability is secured by the establishment of AfGD to represent African digital enterprises. AfGD assists its members in developing their enterprises, consolidating their reputation, running thriving businesses, acquiring contracts and excelling in delivering quality services. Members must meet a number of eligibility criteria and pay membership fees. AfGD provides a range of services to its members and sources funding to support its operations and the growth of its members.

[Winner's views on WSIS Stocktaking and WSIS Prizes contest, including its relevance to development](#)

The World Summit on the Information Society (WSIS) Stocktaking Process was established in 2004. It aims to record and document activities carried out by governments, international organisations, the business sector, civil society and other entities (i.e. WSIS stakeholders) to highlight progress made since the first UN-sponsored summit on the 'information society' in Geneva in 2003. The International Telecommunication Union (ITU) has been maintaining the WSIS Stocktaking database as a publicly-accessible resource on ICT-related initiatives and projects, with reference to the WSIS's 11 Action Lines. This initiative is of the utmost importance as it offers access to a documented timeline in the evolution of transformative ICT solutions and their adoption across the globe.

The WSIS Prizes contest offers a mechanism to evaluate and reward WSIS stakeholders for the success of their efforts in implementing development-oriented solutions that leverage the power of ICTs. There is no doubt that being nominated as a 'champion' or even better, as a 'winner' of a specific category, offers a unique recognition for excellence. This, in turn, triggers increased visibility, enhanced reputation and increases the likelihood of developing new partnerships. 'Champions' and 'winners' become role models for young innovators and drive positive change.



C7: ICT Applications: e-science

Project name:	Open data policy and portal
Organization	Ministry of transport and communications
Country	Qatar

Brief information of the winner

The Ministry of Transport and Communications (MOTC) is committed to hard and diligent work through the implementation of projects and programs aimed at building a land, maritime and aviation transportation system, founded on the latest technologies and best practices in the sector.

MOTC also performs a critical and far-reaching role in overseeing the development of the information and communications technology sector to make it more vibrant and advanced, and in creating a diversified economy that will benefit all the people of Qatar. The Ministry is, consequently, in constant coordination with the relevant private and public entities in the State of Qatar to maintain any progress and elevate their endeavors to the next level through effective policies and agreements.



Project's Description (activity's description)

Qatar Open Data Portal was launched in 2019 to provide a bilingual platform for government entities to share data, and make it available to the public, providing users with the ability to access open datasets and important statistical information released from government entities in a single window.

The Portal is a part of one of the key objectives of [Qatar Digital Government \(QDG\) Strategy 2020](#) to increase government openness and generate economic and political value by collaborating with customers on a co-design. Qatar has issued the [Open Data Policy](#), announced in 2014, to support this objective, instituting specific actions for government entities to expand public access to government data by making it available online. This comes in line with the commitment of the Government of

Qatar to publicly release the data it collects and produces so that businesses, researchers, and civil society members could take advantage of this data and reuse it in creative ways that are beneficial to the society.

Examples of linkages between the WSIS Action Line the project was awarded for with each of the Sustainable Development Goals (SDGs) it helps advance

- **Goal 1: No poverty**
 - Datasets on imports, exports, state budget and gross domestic product

- **Goal 4: Quality education**
 - Datasets on students, school facilities, school staff, adult learning and graduation details

- **Goal 7: Affordable and clean energy**
 - Datasets on daily sunshine hours, relative humidity and quantities of fertilizers

- **Goal 15: Life on land**
 - Datasets on Arabian Oryx, minimum and maximum temperatures, wind speed, daily sunshine hours, communicable diseases

- **Goal 17: Partnerships for the goals**
 - Dataset providers, such as the Ministry of Justice, the Ministry of Public Health, the Civil Aviation Authority, the Ministry of Municipality and Environment, the Ministry of Finance, the Ministry of Education and Higher Education

Social, Economic and Environmental Impacts

Qatar Open Data Portal enables government entities in Qatar to release, manage, and publish their datasets in an open format, and allows recipients to explore and make use of those datasets at a single place in the most efficient manner, thereby contributing to the achievement of the national goals, enabling people, institutions, and businesses to freely access the datasets that were previously not available, and creating an ecosystem where the society as a whole will be engaged and encouraged to participate in new and innovative ways to promote economic competitiveness measurable with results in the global knowledge society.

The Government of Qatar collects and produces a massive amount of statistical data about all aspects of life, such as population, weather and environment, education and training, transportation, finance and economy, health, security and jurisprudence, employment and labor, real estate and infrastructure, as well as many other categories. Users can easily navigate through the portal and search for the data they need.









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Discover Qatar Open Data

Explore the data published by government agencies and public bodies in Qatar on this portal. The portal aims at promoting transparency, citizen engagement, improved governance, inclusive economic development and innovation in Qatar.

Search datasets

For example, 'Energy' or 'Finance'

 <p>Population and Vital Statistics</p> <p>Population, births and deaths, marriage and divorce</p>	 <p>Environment and Weather</p> <p>Pollution, physical and climate features, water quality, agriculture, weather data</p>	 <p>Sports</p> <p>Sports federations, sports facilities, stadiums, sports activities</p>	 <p>Education and Training</p> <p>Educational facilities, school results, student statistics, training statistics</p>
 <p>Health</p> <p>Number of healthcare centers, reported diseases, vaccinations, patient statistics</p>	 <p>Social Affairs</p> <p>Births and deaths, marriages and divorces, households, social security, people with disabilities, retirement and pension, human rights</p>	 <p>Finance and Economy</p> <p>Budget and spend, tenders, exports and imports, gross domestic product</p>	 <p>Security and Jurisprudence</p> <p>Security and jurisprudence statistics covering crime, accidents, cases and prosecution statistics</p>

By releasing such information, businesses can make more informed decisions about the viability of upcoming ventures and the likely consumer base that they can attract. Academic researchers can also take advantage of this data and combine it with information privately collected or sourced from elsewhere to identify interesting trends and phenomena that can help figure out new solutions, draw effective plans and policies to address the challenges faced by the Qatari society.

COVID-19 Status in Qatar (Last Update: 2020-08-11)

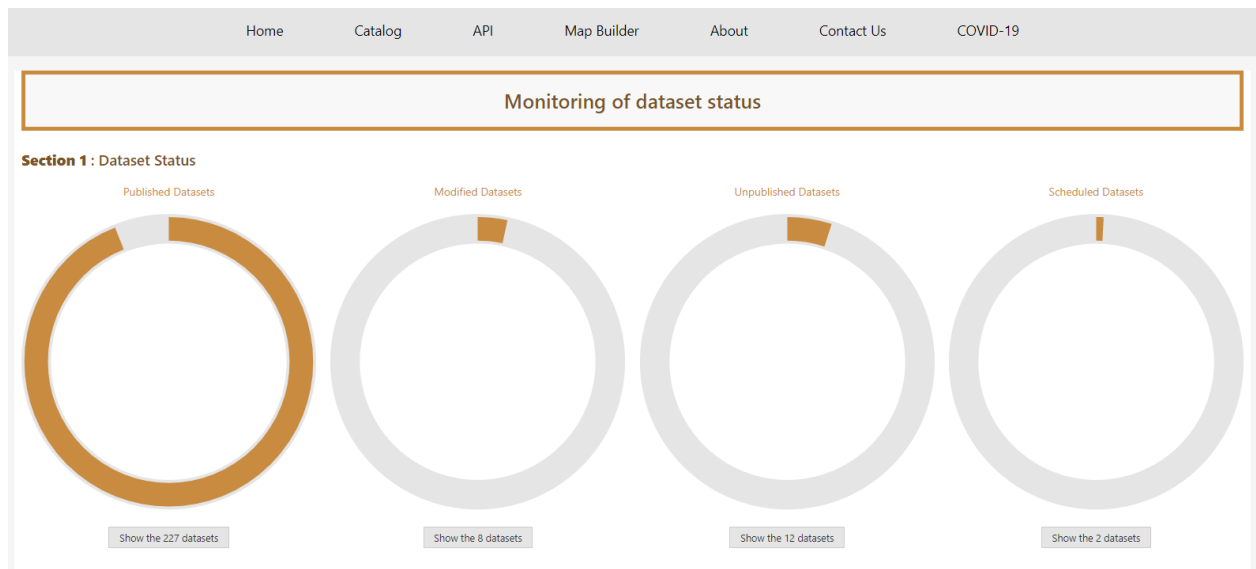


An Infographic of the daily updated COVID-19 Statistics

Highlights of the Project's Partnership Activities

Developing a bilingual platform as the Open Data Portal requires collective and concerted efforts of competent entities and key stakeholders in order to have a single repository with free and easy access to national datasets, in line with the national and international standards and regulations.

To achieve prolonged success in this long-term project and maintain the progress made so far, MOTC will be signing Memorandums of Understanding with all government entities in the State of Qatar in order to share their statistical data to be published on the Portal, unless this may result in any implications on public safety or national security. There will also be e-linkage with the entities in order to facilitate the process of uploading new datasets under the supervision of MOTC, in addition to assigning a focal point of contact with each of the entities for the sake of better and easier communication.



Challenges and project's future perspectives

As part of the project phases, there have been many challenges, and solutions are being worked out to overcome them to ensure that all related activities and processes of the Open Data Portal are up-to-date with minimum risks and issues.

Among the challenges are:

- Unclear understanding of the project requirements and how far dataset pages are quite different from web content pages.
- Receiving datasets in formats not supported by Qatar Open Data Portal.
- Getting processing errors as a result of not following specified guidelines.

Employees in Youth Institutions by Occupation, Type of Work, Nationality and Gender

Information Table Analyze Export API

This statistic contains information about employees in youth institutions by occupation, type of work, nationality and gender for 2018.

Dataset Identifier: employees-in-youth-institutions-by-occupation-type-of-work-nationality-and-gende

Themes: Sports, Employment and Labor

Keywords: youth institutions, nationality, gender, qatari employees, non-qatari employees, male employees, female employees, type of work, full time employees, part time employees, volunteers, qatar sports institutions

License: CC BY

Language: English

Modified: July 24, 2020 3:54 PM

Publisher: Ministry of Culture and Sports

Reference: <https://www.psa.gov.qa/en/statistics1/pages/topiclisting.aspx?parent=social&child=sport>

Follow:

By subscribing to this dataset, you can receive email notifications from the dataset's publisher if important changes happen.

Last processing:
 July 29, 2020 9:13 PM (metadata)
 July 29, 2020 7:14 PM (data)

Dataset schema: [Click to expand](#)

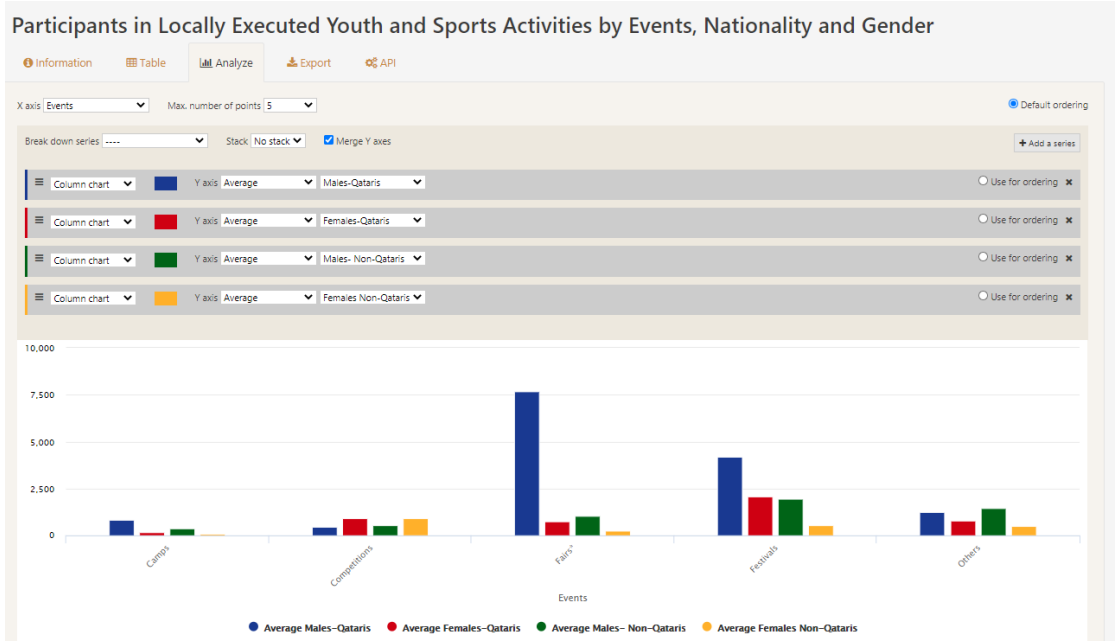
Reuses: [Click to collapse](#)

Submit a reuse: [Click to expand](#)

Example of how metadata is displayed on the Portal

MOTC is planning to take steps in the future to build on the current progress and on top of these are:

- Organizing workshops for better understanding of how datasets are provided and presented by each entity to pass through project requirements and regulations.
- Assigning focal points of contact for each entity who are thoroughly aware of the technicalities of the system and all necessary details on datasets, such as data types, metadata, file types and accepted formats, any potential risks or issues and what actions they should take.
- Providing training to all government entities on dataset uploading, modification and other required activities, then setting user permissions accordingly.
- Explaining the different workflow stages through which a dataset passes as well as the approval or rejection cycles.



Winner's views on WSIS Stocktaking and Prizes contest, including its relevance to SDGs

With participants from over 170 countries, the World Summit on the Information Society (WSIS) has been gaining worldwide recognition, being a multi-stakeholder platform where everyone can either access or share best practices towards addressing the issues raised by Information and Communication Technologies (ICTs), in line with the Sustainable Development Goals (SDGs) defined by the UN.

Within the same context, WSIS Stocktaking Platform has proved to be greatly efficient to stakeholders from all sectors; it comprises the best practices and trends that adopt the WSIS Outcomes, thus serving as a single inclusive repository or information society for those seeking to share their contributions with others, whether nationally or internationally, or learn from other stakeholders and see how they managed to overcome any challenges in order to achieve the SDGs.

The WSIS Stocktaking Platform also serves as a good opportunity for stakeholders that seek to have more visibility and better networking. The presence of such unique platform is important at present to bring together all those interested in achieving the SDG goals in ICT-related sectors wherever they are.

The WSIS Prizes contest is a good initiative to encourage all interested stakeholders to submit their projects and work out solutions to any challenges they might face in order to win the contest or, at least, get wide recognition on national, regional, local and international levels.

The five different stages of WSIS Prizes reflect the precise process adopted to select the champion, especially amid the huge number of participants and, consequently, the need to narrow the competition before reaching the fifth and last stage. Since everyone can have access to the WSIS projects to benefit from the available database and learn from the best practices, it is quite engaging to open voting before the public to evaluate the projects. As public voting is online to allow people worldwide to participate in this stage, such thing adds to the distinguishing aspects of WSIS Prizes, before an Expert Group from the International Communication Union (ICU) conducts the final evaluation to select the champion.



C8: ICT Applications: Cultural diversity and identity, linguistic diversity and local content

Project name:	Attaa Initiative
Organization	Ministry of communications and Information Technology
Country	Saudi Arabia

Brief information of the winner

Saudi Arabia is undertaking the largest and most ambitious economic reform and transformation program in its history, where digitization is key enablers of these wide-ranging reforms. One major challenge lies in building digital skills and addressing digital literacy among citizens where it is necessary to enable them with the proper use and utilization of technology, to improve the socio-economic impact.

Internet penetration has improved to reach 93% and our citizens spend on average 6:45 hours online where more than 70% of this time on social media. On the other hand, Arabic-speakers comprise 5.8% of the users on the internet while online Arabic content is less than 0.6%, compared to other languages such as German and Russian where users are less than 2% and online content is around 6%.

Thus, we came with the first specialized voluntary initiative in digital awareness for Arabic speaking, where more than 100 thousand specialized ICT volunteers has joined so far, and beneficiaries exceed 8 million in the first year, with the help of tech specialists who contribute and enrich Arabic technical content and spread the digital culture to bridge the technical knowledge gap of Arabic speakers around the world through different services.

Project's description (activity's description)

1. E-learning, A platform has been set up to train the members of the community on various technology subjects where online training contents gets created by experts and published for all Arabic speaking users to benefit from.
2. Conduct Training and hold technical events in all Kingdom's regions through volunteers (later on will be expand to some Arabic countries).
3. Content library where visitors can browse and download a number of topics published digital contents by bloggers and tech specialists.
4. Technical support for NGOs, the Initiative connects ICT specialists to the organization directly to help in any tech difficulties encountered such as need for new development or tech issue.
5. "Ask the expert" section where experts and specialists can answer technical questions published by users.

Attaa Initiative aims to:

- Enhance Arabic technical content
- Raise the level of technical capabilities and digital awareness among Arabic speakers around the world

- Support non-profit organizations in the technical field
- Spread digital culture among different segments of society.

Examples of linkages between the WSIS Action Line your project was awarded for with each of the Sustainable Development Goals it helps advance

Attaa's core value is to ensure inclusive and equitable quality digital awareness for all. Attaa provides access to training materials, online and in-class training materials as well as technical services to all communities without any fees, attaa targeted groups are people who have the knowledge to share and people who want to learn more about technology. Therefore, the initiative was launched to provide the trainers with all logistics, equipment and helping them giving back to their community. Trainers can be any individual or belong to tech group or any entity. One of many services attaa provides is totally-free LMS, with diverse technology fields.

We have team of volunteers who audits quality of content before it gets published as well as audit training and services after it gets conducted to ensure that we maintain high-quality standards.

Social, economic and environmental impact of the project

Attaa is a non-profit sustainable initiative, and its main objective is to improve digital awareness for Arabic speaking and improve online Arabic technical content spread the digital culture to bridge the technical knowledge gap of Arabic speakers around the world.

It also focus on building digital skills for Saudis through the strong ecosystem of volunteering in order to improve their quality of life using the technology and addressing digital literacy among citizens where it is necessary to enable them with the proper use and utilization of technology, to improve the socio-economic impact.

Attaa tangible results:

- Atta campaign (Kollana Atta كلنا عطاء) comes in partnership with the governmental, private, and non-profit sectors in order to bridge the gap that some members of society suffer from, which prevents them from obtaining sufficient knowledge because some technical tools are not available, the campaign collected more than 28K tablet/ computer devices and 110K SIM card.
- +114K registered ICT specialized volunteers.
- +8 million beneficiaries (from Attaa services).
- More than 500K beneficiaries from training.
- More than 1000 Arabic digital content published.
- Attaa campaign has reached more than 11M people and more than 1000 tech tweets published, +550 beneficiaries through several panels and workshops done by experts and technical celebrities.
- We have visited more than 21cities in Saudi Arabia.

Highlights of the project's partnership activities

The main purpose of the partnerships is to expand the reach of the program to almost all part of the kingdom. We managed to have strategic partners with multiple organizations, local and global. All of which are excited to participate in the overall objective of the initiative.

We have multiple partnership with large organizations, such as Google, Microsoft and Saudi Telecom Company (STC). Every partner facilitates by providing different services. Google executed a training programs in more than 15 locations around the kingdom. In addition to provided online trainings. The program focused on increasing awareness on google applications and digital marketing. Microsoft supported in creating an Arabic content on new technologies via Sangam platform. The platform is

free for the public. STC is a major contributor to the initiative by sponsoring the opening event. Also, the company will develop the mobile app of Attaa.

Challenges and project's future perspectives

One of the main challenges in attaa initiative is volunteer's commitment and sustainability, and since we cover all kingdom with reach to all Arabic speakers worldwide, quality assurance is another challenge.

Also, out-reach can be limited in rural communities and villages near the borders. That is why have built sustainable ecosystem to support the initiative such as establishing collaborative platform with strong team to operate, thousands of ICT specialized volunteers, locations kingdom-wide for training and events. Also, we are working on establishing Attaa association which will be an NGO that will manage the initiative and aims to create charitable endowment (waqf) to operate and fund all attaa services to ensure sustainable model and open new opportunities for future partnerships. Our charitable endowment will be investing in tech start-ups. Also, we have team of volunteers who audits quality of content before it gets published as well as audit training and services after it gets conducted to ensure that we maintain high-quality standards.

As for our future plans, Attaa portal and services will support people with disabilities. Moreover, we aim to expand our reach wider audience in international countries starting regionally.

Winner's views on WSIS stocktaking and WSIS prizes contest, including its relevance to development

We would like to express our deepest appreciation for giving us the opportunity to show our people capabilities and contribution to their community.





Attaa Digital
The largest specialized initiative in digital field

Objectives

- Bridging the digital divide
- Screening digital readiness
- Supporting skills
- Raising digital capabilities

Services

- Digital Competencies
- Access Digital Content Library
- Digital Success for SMEs
- Digital Skills
- Digital Awareness

+9M Beneficiaries

+121k Volunteers

+500k Trainees

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C9: Media

Project name:	Voices of women media
Organization	Voices of women media
Country	Nepal (Republic of)

Brief information of the winner

Voices of Women Media aims to build feminist leadership and effect changes in society's treatment of girls & women* in order to create a just world without discrimination. VOW Media wants to contribute to a world where everyone enjoys their basic rights and live with dignity, equality, and justice. We are a non-profit organization that is committed to offering access and opportunities to media technology and different forms of art, so that girls & women* can voice their own lives – in order to raise hidden and silenced issues in our communities. Our work focuses specifically on access to media, arts and technology for girls and women*. We also run various campaigns which plays a role in contributing to cultural & social change in our communities. Telling one's own story—claiming one's voice—changes a person and a community in ways that support larger social change by building agency as well as both individual and collective power.

Project' description (activity's description)

VOW Techno Hub is an ongoing project where we work with young girls who are currently studying at the local government schools. The project aims to provide these young girls an opportunity where they not only learn basic computer skills but also build their confidence, develop leadership skills, and learn about various topics like: SRHR, human rights, feminism, women in technology, self-defence, human trafficking, photography, social media etc.

Examples of linkages between the WSIS Action Line your project was awarded for with each of the Sustainable Development Goals it helps advance

- 1. Barriers to access to technology education are decreased.** Our main focus was to work with young marginalized girls studying at low income and local government schools. We have focused on three very impoverished schools in our neighborhood where we have worked before. One of the schools, Paropakar School, specifically focuses on taking children without parents from all over Nepal and trying to give them good education for no money. We have a group of 9 young girls with no parents who live in the hostel of the school as part of the team. Until now, most of the students we are working with have had absolutely no access to technology education.
- 2. Young girls, teachers and caregivers have increased satisfaction with the training**
The girls are very regular at the class and they are very enthusiastic about learning new computer skills. The schoolteachers are also very happy. Since they themselves are unable to

provide these young girls with technical skills, they are very delighted about the fact that we are providing these such opportunities for them.

3. *Marginalised youth have improved and equal access to economic opportunities*
Our target has only been marginalised youth. First of all, we made sure we only work with local government schools. Secondly, even within these schools, the young participants given priority to belong to lower caste, economically poor backgrounds.

Challenges and project's future perspectives

Young people can act up, be irresponsible. Each girl has been assigned a 'secret friend' whom they have to take care of and are responsible for. Hence, each girl is made responsible to bring their friend to the class. Apart from this, we also call these girls regularly to make sure they don't miss the sessions.

Due to COVID-19, we are not able to complete the activities we had planned so instead of waiting until after September, after discussions with the school principals and analyzing the situation of our participants we decided to work internally on building our structures – both conceptual and physical.







C10: Ethical Dimension of the Information Society

Project name:	ICT and Media: efficient tools for youth to counter violent extremism
Organization	Ghana Investment Fund for Electronic communications
Country	Ghana

Brief information of the winner

The Ghana Investment Fund for Electronic Communications (GIFEC), a Universal Access and Service Fund is an agency under the supervision of the Ministry of Communications with the mandate to bridge the digital divide between the served and the unserved or underserved communities in Ghana. Through this mandate, GIFEC has rolled out the School Connectivity Programme, Smart Community Programme, Rural Telephony Programme, Coding for Kids and the ICT Skills for Entrepreneurial and Women Empowerment Programme as some of the initiatives implemented in unserved and underserved communities to spread the digital revolution.



Project's description (activity's description)

The Ghana Investment Fund for Electronic Communications in partnership with the United Nations, Educational, Scientific and Cultural Organization (UNESCO) has launched the ICT and Media: Efficient tools for the youth to counter violent extremism, with the sole objective to empower and develop the youth in Ghana to professionally use ICT and other digital media.

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. The activities to be implemented to educate the youth and curb the challenge above will be carried out through:

- Outreach awareness creation on occurrences in the neighbouring countries
- The use of rationale and logic that cares for human lives and well-being
- Online campaign on “No Hatred Words” which will act as a virtual platform for young people who have ideas to share on how to counter the extreme groups and radical techniques and diffuse their plans.
- Intensive professional training for the youth on how to take down any website, link or platform that promote hatred words and teach extreme ideology to the youth online.

Specific objectives of the project are to:

1. To empower and develop the youth in Ghana to professionally use ICT and other social media applications
2. To train the youth to become agents for change and community development by safeguarding human values, tolerance and countering negative behaviours.
3. To equip the youth with the necessary skills and know-how to counter radicalism in the cyberspace
4. To give the youth the tools to identify, formulate and express their views that counters the radical groups and individual arguments and extremist thoughts.

Examples of linkages between the WSIS Action Line your project was awarded for with each of the Sustainable Development Goals it helps advance

Goals 4, 12 and 16 have been identified as specific related goals which have directly been linked to WSIS Action Line 10

Goal 4 of the SDGs is realized through providing the youth with the requisite digital skills on how to use internet and other digital media in a more constructive way. Again, they are also equipped with requisite digital skills on how to discern harmful and negative messages online. Target 12. 8 of SDG Goal 12 is also been addressed, with the aim of ensuring that the youth have access to relevant information and are been sensitized to use internet and other digital media in a more constructive way. Secondly, they have the capacity to be able to discern harmful and negative messages online. The project also contributes to the attainment of Goal 16, specifically target 16.10, where they are educated on their rights, freedoms and responsibilities. Clearly, unemployment or poverty alone cannot be justified as the only push factors inciting and contributing to violent extremism. However, perceptions of injustice, human rights violation among others are also revealing factors lately.

Social, economic, and environmental impact of the project

On the economic front, a total of 300 young leaders have received training on active citizenship, ICT, Technical media knowhow and researching techniques. With respect to the social impact, there is more active citizenship among the youth on the subject matter and more public exposure to the consequences of destructive propaganda of the extreme and radical groups and ideologies. These groups of young leaders are equipped with the necessary technical and knowledge skills and able to launch online “No Hatred words campaign”.

Listing of dangerous sites, links, social engineering tips and other romance/chatroom links that promotes hatred and extremism has been one of the environmental impacts

Highlights of the project’s partnership activities

GIFEC partnered with the United Nations Educational, Scientific and Cultural Organization (UNESCO) to roll-out the programme dubbed; ICT and Media: Efficient tools for the youth to counter violent extremism. Specific contributions by UNESCO towards the success of the project have been outlined below:

1. Combining expertise for programme delivery through joint designing and implementation of activities
2. Direct financial contributions towards the execution of the project in beneficiary communities
3. Coordination and consultation on the expansion of the programme, development of policies, standard and practice.
4. Providing and receiving ICT technical assistance and advisory services

Challenges and project’s future perspectives

One key challenge has been the funding. The impact of the project in the first beneficiary communities has been phenomenal. Going forward we hope to expand the scope to cover several marginalized communities in Ghana among the youthful population.

Winner’s views on WSIS Stocktaking and WSIS Prizes contest, including its relevance to development

WSIS Stocktaking and WSIS prizes context represents a unique platform for consolidating and projecting all ICT projects across the country. It represents as an opportune platform that further hastens the smooth attainment of the Global SDGs, as several technological projects/solutions are birthed to solve societal problems.



C11: International and Regional Cooperation

Project name:	Innovactoras
Organization	University of Navarra
Country	Spain

Brief information of the winner

Innovactoras is scientifically supported by the **University of Navarre**, mainly through its **Enterprise and Humanism Institute** (<https://www.unav.edu/web/instituto-empresa-y-humanismo>) and the **Recent History Research Group** (<https://www.unav.edu/en/web/facultad-de-filosofia-y-letras/gihre>). The University of Navarre provides Innovactoras constant studies about women empowerment. Through the key role of this entity, Innovactoras has been the basis for creating, with the support of **CYTED⁶**, the **Red WINN** (Women Innovation Network) which is also scientifically supported by the University Siglo 21 (Argentina), University of Santa Cruz de la Sierra (Bolivia), University of La Sabana (Colombia), University Los Hemisferios (Ecuador), University Santo Toribio de Mogrovejo (Perú).



⁶ Ibero-American Program of Science and Technology for Development, created by the governments of Latin American countries to promote cooperation in science, technology and innovation for the harmonic development of Latin America

Project's description (activity's description)

The project started as a social responsibility initiative of an SME ecosystem. Today it is a platform of innovators women from different realities of the 21st century: science, technology, business, education and society. 63 North and South women referents from 17 countries are already inspiring innovation around the world. Innovactoras platform shows women innovators stories in accessible formats: website, videos, book and e-book (downloaded for free): testimonials, trajectories, tools, guidelines and innovative initiatives.

The project wants schools, universities, organizations and enterprises to have inspiring and current examples of women in STEAM careers, to encourage innovation in their environments.

Innovactoras' activity have three phases: (1) Search for innovators women all around the world through the international network that continue increasing, (2) Online publication and dissemination of inspiring stories, (3) Close work with schools, universities, organizations and enterprises to provide them training on SDG 5 and 9 through ICT Innovactoras materials.

Examples of linkages between the WSIS Action Line your project was awarded for with each of the Sustainable Development Goals it helps advance

Innovactoras gathers real examples of women who, in their day to day, implement and promote, with innovation as driver, the Sustainable Development Goals. The project incorporates the gender approach along the same lines as the 2030 Agenda. Indeed, when Resolution 70/1 was approved by the General Assembly of the United Nations, it was established that the empowerment of women should be a transversal axis in all the Sustainable Development Goals and not exclusively the task of SDG 5. For this reason, Innovactoras incorporates a chart that relates each of the women to those SDGs in which their work of social transformation is most important, with SDG 9 as a common point and SDG 5 as a cross-cutting axis. Innovactoras is disseminated in online and physical format in educational centers, sessions and talks. In the North and in the South. This promotes specifically target 9.c).

Moreover, the broad network of entities that integrates Innovactoras promotes the achievement of SDG 17, target 17.17: "Encourage and promote effective public, public-private and civil society partnerships, building on the experience and resourcing strategies of partnerships".

Social, economic, and environmental impact of the Project

Innovactoras wants to highlight the social, economic and environmental impact of real women all around the world. We can illustrate it with several examples:

Teresia Nyokabi, according to SDG 12 and SDG 13, she is an entrepreneur woman in garbage collection in Kenya. She has changed her community and created and a little enterprise that gather social, economic and environmental impact:

<https://innovactoras.eu/innovactora/teresia-nyokabi/>

María Rodríguez, according to SDG 13 and SDG 15, she has created a social enterprise in Guatemala called ByoEarth (<https://www.facebook.com/byoearth/>). Maria created ByoEarth, an enterprise that transforms degradable waste into organic fertilizer, in indigenous rural communities of Guatemala, thanks to earthworms. His company was born with the goal of generating an impact in the processes of socio-economic development and environmental improvement of Guatemala. To achieve this, they integrate communities of rural women in the production of organic products such as: vermicompost, red worms, organic vegetables, seeds and plants. <https://innovactoras.eu/innovactora/maria-rodriguez/>

Gloria González, according to SDG 3, has found a way to overcome a rare disease, Wilson's disease. Simplifying a lot to make her task understandable: DNA is a very stable molecule that can be manipulated, cut and pasted so that it is able to correct the lack of a gene. What Gloria does is to empty a virus of malignant content and introduce the "therapeutic DNA" so that it can take it to the nucleus of the cells. That therapy has already been approved as an orphan drug in the US and the UE. If all goes well, treatment may be available to patients in 2024.

<https://innovactoras.eu/innovactora/gloria-gonzalez/>

Bárbara de Aymerich, according to SDG4, is the creator and director of the Espiciencia School of Small Scientists. This school that has created in a small town of Burgos (Espinosa de los Monteros, hence its name), has 47 potential scientists between 4 and 12 years (among which are their children) who have won multiple awards for their inventions and participate in radio and television programs naturally. Espiciencia did not receive help and Barbara and her "assistant angel", Nerea, another very young Innovactora, voluntarily educate by only having the resources they get thanks to the awards of the inventions that their "apprentices" create. They are a demonstration that scarce resources and environmental difficulties are not a barrier when you want to innovate and promote science.

<https://innovactoras.eu/innovactora/barbara-de-aymerich/>

Blanca Rojas, according to SDG 10 and SDG 12, works wonders with hydrogels; from germinating tomato seeds, to creating "bandages" with gels derived from cassava starch, algae or those derived from the shell of the crab or shrimp so that doctors in Venezuela can administer medications with the means at their disposal. Your work is crucial when you live in a health crisis like the one your country is currently experiencing. If frugal innovation is the one made from various restrictions, what Blanca's team achieves is an example to be imitated in the immense world of new materials, because the limitations there are many.

<https://innovactoras.eu/innovactora/blanca-rojas/>

Daniella García, according to SDG 4 and SDG 8, promoted the Digital Heroes program, the first technological entrepreneurship contest in Bolivia for children and adolescents from 10 to 18 years. It consists of creating a mobile App that solves a problem in your community thus developing your entrepreneurial spirit, leadership and digital skills. That same year, in the «Startup Weekend Cochabamba», he won the contest with the Talented app "an application for professionals who want to grow in their career and achieve their goals. Daniella's dream is to innovate in Bolivian education and that for her, technology "is going to solve problems." That is why in 2016 he founded Elemental, an innovative technology school that prepares children and adolescents aged 7 to 18 for the jobs of the future. His motto? "Learning today builds the future."

<https://innovactoras.eu/innovactora/daniella-garcia/>

Highlights of the project's partnership activities

In June 2020, our website had received more than forty-four thousand visits from 60 different countries and thousand five hundred e-books were downloaded. A thousand students and workers were impacted by entities using Innovactoras to teach entrepreneurship, innovation and STEAM. Numerous Innovactoras came to schools and interacted with students. Books sales allowed to deliver a Junior Innovactora Award in 2018. We started 10 collaborative projects in 2018. We created a site for selling complements to obtain crowdfund incomes and we launched 15 events.

In January 2019, with the support of CYTED, the Winn Network of universities (Argentina, Bolivia, Colombia, Ecuador, Spain and Peru) began its activities to strengthen the impact of women on innovation ecosystems. It will carry out research, training, exchanges and publications until at least

2024. Among the objectives of the network for 2021 are: up to 100 women referents and new training resources to those who promote innovation and equality.

The Innovactoras 2020 Awards (Junior and Senior) have already been recognized and are sponsored by private entities.

Innovactoras is already a legally constituted association. We will collaborate with: foundations, educational centres, press, youth associations, public bodies and networks in each country to inspire youth and women around the world and to promote innovation.

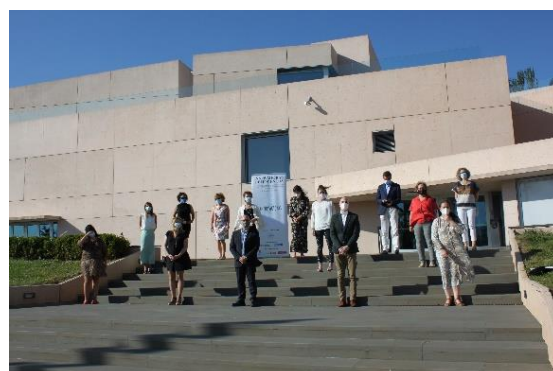
Challenges and project's future perspectives

- We expect to award a prize to a young Innovactora and a senior Innovactora every year.
- We will incorporate 100 inspiring Innovactoras of 25 countries by 2021 and at least one of each country in the world in 2024
- We are, and we will be sustainable with public private funds.
- Participation in projects and global networks.
- Latam Congress Innovactoras.
- New educational resources.
- International report on entrepreneurial skills of women and girls.
- 2,000 participants in face-to-face activities each year.
- 40,000 web and social networks visits each year.
- 50 articles and reports in media each year

Winner's views on WSIS Stocktaking and WSIS Prizes contest, including its relevance to development

The WSIS Prize contest 2020 has allowed the INNOVACTORAS project to increase its visibility and raise awareness among much more public than expected. Being one of the 5 nominees means that the INNOVACTORAS project has received more than 5.000 votes during the online phase and that is a great milestone for the whole team. Additionally, the WSIS Prize contest 2020 will allow INNOVACTORAS to network with other ICT related Projects that could be a strategical partner for future collaborations and further developments. Moreover, INNOVACTORAS is the only Spanish project nominee for this worldwide contest and we have been congratulated by National and Regional Public Administrations which implies an enormous increase of our trademark value due to the official recognition by Public entities.

CANDIDATAS Y GANADORAS PREMIOS 2020







INNOVACTORAS, innovación en femenino

Descubren qué las mujeres pueden hacer y de hecho innovar, basándose en que no es sólo una cuestión de género y poner sus planes a prueba y sus recursos al máximo posible, además de usar la tecnología como herramienta, también incluye sus habilidades que están de a pie en el proceso de adaptación a un mundo que empieza a llegar a todos los rincones del mundo.

LUIS ABELLÁN / E. A. / Agencias / Contraste 2016





EJEMPLOS EN FEMENINO

EL MENSAJE
 Después de haber estado en la final del Premio Mundial WSIS (World Summit on the Information Society Prizes) en Ginebra, el proyecto navarro Innovactoras, que evalúa proyectos y actividades que aprovechan el poder de las tecnologías de la información, ha sido reconocido por el Consejo de Innovación de Navarra.

NAVARRA PREMIADA
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El proyecto navarro Innovactoras, en la final del Premio Mundial WSIS

Innovactoras, plataforma de mujeres innovadoras referentes del siglo XXI, estará en la final del Premio Mundial WSIS (World Summit on the Information Society Prizes), los premios de la sociedad de la información, que evalúan proyectos y actividades que aprovechan el poder de las tecnologías de la información. El proyecto navarro es uno de los cinco seleccionados para participar en la final en la categoría cooperación internacional y regional. Los ganadores se conocerán durante la cumbre que se celebrará entre el 6 y el 9 de abril en Ginebra.

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Innovactoras para cerrar la brecha

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Una serie de actividades para generar y transferir conocimiento...

El segundo libro de Innovactoras incluye un ránking de mujeres referentes en innovación, esta vez de países de Latinoamérica y África. El proyecto es financiado por el Gobierno de Navarra.



Las Innovactoras viajan al sur



Conclusion

The ninth edition of **WSIS Stocktaking: Success Stories** contains the most appreciated and innovative stories in the form of 18 winning projects from the WSIS Prizes 2020 contest. These success stories provide examples of projects related to the implementation of WSIS outcomes, emphasizing on the accomplishments of stakeholders working towards achieving both **WSIS goals** and **SDGs**, transferring experience and knowledge at a global level all the while spreading WSIS values.

This year's virtual World Summit on the Information Society Forum commended the 18 prize winning projects for their pioneering work using information and communication technologies to improve lives, the environment, help promote sustainable development and reduce inequalities. Working towards an inclusive information society, the Forum's objective to connect people and facilitate the exchange of knowledge, emerging technologies and recent developments in the ICT sector became even more relevant during this difficult period.

The WSIS Prizes winners represent some of the most innovative and high impact projects from around the world that prove ICTs are key to achieving the United Nations' Sustainable Development Goals.

The WSIS Prizes is a unique international contest developed in response to requests from the WSIS community to create an effective mechanism to evaluate and recognize multistakeholder efforts to leverage the power of ICTs as an enabler of the development. As an integral part of the WSIS Stocktaking process that was set up in 2004 to assist WSIS implementation and follow-up, the WSIS Prizes contest was held for the first time in 2012, and rapidly gained attention and popularity within the ICT for Development community.

Since 2016, WSIS Prizes reflect close linkages with achieving the SDGs, and the contest grew into one of the most globally appreciated efforts for collecting and promoting ICT-related projects and initiatives that also enable progress towards achieving SDGs on a local, regional and global level.

We believe WSIS Prizes and WSIS Stocktaking, by providing examples from the ground and real stories of ICT power for development, support the evidence-based policy making of the future and can help shape strategies to achieve the SDGs.

Close to **60,000** new members of the WSIS stakeholder community voted this year with close to **one million** votes casted. Close to **300** members of both winners and champions delegations participated at this year's WSIS Prizes Winners and Champions workshops and ceremonies during the WSIS Forum that was held virtually from the 22nd of June to the 10th of September 2020.

ITU is proud to announce that the WSIS Stocktaking Platform has increased to **300,000** registered stakeholders, with close to **10,000** entries since 2004. Not a lot of international databases can match this numbers and we consider this as the recognition by the WSIS and ICT4D communities of our good work.

We are pleased to announce the official 2020-2021 call for updates and new entries relating to new ICT-related projects, via our WSIS Stocktaking platform - <https://www.itu.int/net4/wsis/stocktaking/>.

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 forge new partnerships by providing visibility and added value to ICT projects from around the world. The wide array of stakeholders who have implemented innovative projects and contributed to the success of the WSIS Stocktaking process deserve our sincere gratitude.

We urge all stakeholders, including all Member States, international organizations, the private sector, civil society and academia to continue submitting their contributions in the future as WSIS pursues the ongoing stocktaking process and prizes contest.

We trust that our readers will find this *WSIS Prizes Success Stories 2020* publication insightful, and sincerely hope that it will inspire them to partake in the construction of a broader and more inclusive information society for all.

Finally, we would like to invite all stakeholders to submit their outstanding ICT project for the WSIS Prizes 2021 edition, before the 25th of January 2021 - all you have to do is complete the submission form online at www.wsis.org/prizes.

