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AMERICAS

REGIONAL WSIS STOCKTAKING REPORT 2016 ICT PROJECTS AND WSIS ACTION LINE RELATED ACTIVITIES IN AMERICAS

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Turning targets into action
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WSIS STOCKTAKING REPORT IN THE AMERICAS

2014 – 2016

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Since October 2004, the WSIS Stocktaking Platform has served as a global repository for collecting and reporting on ICT-related projects that implement the WSIS Outcomes in accordance with the WSIS Action Lines. It has also proved to be an efficient mechanism for sharing best practices towards advancing development goals, a role that I am confident will add additional value by highlighting the linkages between the WSIS Action lines and the United Nations' Sustainable Development Goals (SDGs), the hallmark for global growth since 2015.

The outcome document of the UN General Assembly High-Level Meeting on the Overall Review of the Implementation of the Outcomes of WSIS recognized the importance of reporting and sharing of best

practices for the implementation of the WSIS outcomes by all stakeholders beyond 2015 and towards 2025, and thereby recognizing the WSIS Forum as a key platform for doing so. Moreover, the WSIS Overall Review called for close alignment between the WSIS process and the United Nations 2030 Agenda for Sustainable Development, highlighting the crosscutting contribution of ICTs to the SDGs.

During the WSIS Forum 2016, while noting United Nations Economic and Social Council (ECOSOC) Resolution 2015/26, the WSIS multi-stakeholder community expressed the need for customized regional WSIS Stocktaking reports highlighting the efforts made towards implementation of the WSIS Action lines at the regional level.

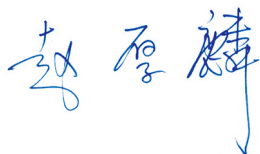
The WSIS Stocktaking Regional Reports of ICT Projects and Activities for the Period 2014-2016 for Africa, the Americas, Arab States, Asia and Pacific, CIS, and Europe are being diligently prepared. Continuing the collection of projects reflecting the linkages between WSIS Action Lines and SDGs, the WSIS Stocktaking Regional Reports showcase the impact these projects have on the ground at the regional level.

Until 2016, the global WSIS Stocktaking Reports reviewed more than 8,000 entries from around the world. In past reports one entry may have consisted of one or many actions carried out by international organizations, governments, the private sector, civil society or other stakeholders. I am pleased to note that the WSIS Stocktaking community now includes more than 200,000 stakeholders.

Through the WSIS Prizes contest, which has now been an integral part of the WSIS Stocktaking for the fifth year in a row, WSIS recognizes outstanding success stories from around the world for their part in building an inclusive information society. It is my pleasure to recognize the WSIS Prize 2014-2016 winners and champions from the Americas Region, and to applaud their dedication and commitment to the implementation of the WSIS Outcomes, while also honoring and awarding outstanding projects from the international WSIS community.

Since 2014, hundred and sixty-two entries (162) were submitted from the Americas Region to the WSIS Stocktaking platform while twenty-five (25) entities from this region have been awarded WSIS Prizes as winners and champions. I use this opportunity to congratulate them again on their achievements and their ongoing dedication to the WSIS process. It is also with pleasure that I recognize the commitment of this region to the implementation of the WSIS Outcomes, including the commitment made to share best practices regarding the use of ICTs to help advance the SDGs.

I invite all stakeholders to fully use the WSIS Stocktaking platform and align the various ICT-related local, national and regional databases with our WSIS Stocktaking database for the world's mutual benefit. Your projects and initiatives will continue to be promoted at the regional and global level in a common endeavour to achieve the goals set out by global leaders at WSIS and taken forward in the WSIS Beyond 2015 and Sustainable Development Agenda 2030.



Houlin Zhao
ITU Secretary-General

Introduction

On the occasion of the World Telecommunication Development Conference (WTDC) 2017, special edition of the WSIS Stocktaking Report for the ITU Americas Region for the period 2014-2016 was produced as the information document for the Regional Preparatory Meeting taking place from 1 to 3 March 2017 in Asuncion, Paraguay.

The World Summit on the Information Society (WSIS), which was held in Geneva in 2003 and in Tunis in 2005, drew up an action plan to bridge the digital divide and build an inclusive, people-oriented information society. World leaders committed themselves to regularly review and follow up progress in implementing the action lines outlined in the WSIS Outcomes.

The United Nations Economic and Social Council (ECOSOC) resolution 2015/26 "Assessment of the progress made in the implementation of- and follow up to the outcomes of the World Summit on the Information Society", that reiterates the importance of sharing best practices at the global level, and, while recognizing excellence in the implementation of the projects and initiatives that further the goals of the World Summit, encourages all stakeholders to nominate their projects for the annual WSIS Prizes, as an integral part of the WSIS Stocktaking process, while noting the report on the WSIS success stories.

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

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

In the period 2014-2016, WSIS Stocktaking Reports have reviewed 162 ICT-related projects and activities carried out by international organizations, governments, the private sector, civil society and other stakeholders in the Americas Region, with those in 2016 highlighting the efforts deployed by stakeholders involved in implementation of the SDGs. WSIS Stocktaking reports are based on the multistakeholder approach, including input from stakeholders from all over the world responding to ITU's official call for stocktaking updates and new entries. The inputs from WSIS action line facilitators and co-facilitators also contribute to the reports.

Most of one hundred and sixty-two projects listed in this Report were also nominated for the WSIS Prizes contests in the period 2014-2016, while twenty-five (highlighted in the gray boxes) were awarded with the WSIS Prize Winner or WSIS Prize Champion recognition. WSIS Prize is a unique global recognition for excellence in the implementation of WSIS outcomes. The contest is open to all WSIS stakeholders.

The WSIS Stocktaking community comprises of more than 200.000 stakeholders who are eager to contribute to the WSIS Process year after year. By identifying trends in implementing WSIS Outcomes, the WSIS Stocktaking Process makes a significant contribution towards building an inclusive Information Society.

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

The WSIS action lines break down into 18 categories:

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

17 Sustainable development goals (SDGs):

- Goal 1. End poverty in all its forms everywhere
- Goal 2. End hunger, achieve food security and improved nutrition and promote sustainable agriculture
- Goal 3. Ensure healthy lives and promote well-being for all at all ages
- Goal 4. Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all
- Goal 5. Achieve gender equality and empower all women and girls
- Goal 6. Ensure availability and sustainable management of water and sanitation for all
- Goal 7. Ensure access to affordable, reliable, sustainable and modern energy for all
- Goal 8. Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all
- Goal 9. Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation
- Goal 10. Reduce inequality within and among countries
- Goal 11. Make cities and human settlements inclusive, safe, resilient and sustainable
- Goal 12. Ensure sustainable consumption and production patterns
- Goal 13. Take urgent action to combat climate change and its impacts
- Goal 14. Conserve and sustainably use the oceans, seas and marine resources for sustainable development

Goal 15. Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss

Goal 16. Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels

Goal 17. Strengthen the means of implementation and revitalize the global partnership for sustainable development

We take this opportunity to extend sincere gratitude to all of the stakeholders from the CIS region who have been engaged in the WSIS Process, sharing their national advances on implementation of the WSIS outcomes since 2004. We would also like to invite all ITU Member States and Sector Members of the CIS region to continue engaging with the WSIS Stocktaking process by submitting projects relevant to WSIS Action Lines and the newly established SDGs, promote the WSIS Stocktaking process within their communities, and follow new developments of the WSIS Prizes 2017 contest.

The role of ITU in WSIS implementation

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

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

Countries in the Americas Region

- Antigua and Barbuda
- Argentina Republic
- Bahamas (Commonwealth of the)
- Barbados
- Belize
- Bolivia (Plurinational State of)
- Brazil (Federative Republic of)
- Ecuador
- El Salvador (Republic of)
- Canada
- Chile
- Colombia (Republic of)
- Costa Rica
- Cuba
- Dominica (Commonwealth of)
- Dominican Republic
- Paraguay (Republic of)
- Peru

- Grenada
- Guatemala (Republic of)
- Guyana
- Haiti (Republic of)
- Honduras (Republic of)
- Jamaica
- Mexico
- Nicaragua Panama (Republic of)
- Saint Kitts and Nevis (Federation of)
- Saint Lucia
- Saint Vincent and the Grenadines
- Suriname (Republic of)
- Trinidad and Tobago
- United States of America
- Uruguay (Eastern Republic of)
- Venezuela (Bolivarian Republic of)

ITU contribution to the implementation of the WSIS outcomes: 2014

As at July 2014, over 6 000 updated entries had been registered in the WSIS Stocktaking Database, reflecting innovative activities including projects, programmes, WSIS thematic meetings, conferences, publications, training initiatives, guidelines and toolkits. Entries may contain information on more than one project.

The sixth edition of the WSIS Stocktaking Report was officially released during the WSIS+10 High-level Event in June 2014. The 2014 report reflects more than 500 WSIS-related activities submitted to the WSIS Stocktaking process for the period May 2013- April 2014, each highlighting the efforts deployed by stakeholders involved in implementing the WSIS goals.

In 2014, the WSIS Stocktaking Platform encompassed 33 000 stakeholders representing governments, the private sector, international organizations, civil society and others, and continued to constitute a major ICT for development (ICT4D) online platform.

One innovative component was the “World Café”, which provided an opportunity to promote the winning projects of the WSIS Project Prizes 2014 contest at the international level, share best practices and discuss the purpose and impact of the projects recognized for their excellence in the implementation of WSIS outcomes. Stakeholders highly appreciated the contest’s multistakeholder approach and highlighted the importance of continuing the platform as a mechanism for granting recognition to stakeholders for their efforts to implement WSIS outcomes.

ITU contribution to the implementation of the WSIS outcomes: 2015

In 2015, the WSIS Stocktaking Platform has seen the biggest increase in new entries, including the number of stakeholders registered, reaching a total of more than 100 000 stakeholders representing governments, the private sector, international organizations, civil society and others. This has strengthened its position as the major ICT for development (ICT4D) online platform. As at April 2015, over 7 000 updated entries are registered in the WSIS Stocktaking Database, reflecting all manner of innovative WSIS-related activities.

The seventh edition of the WSIS Stocktaking Report will be officially released during the WSIS Forum 2015 (25 to 29 May 2015, in Geneva, Switzerland). It should reflect the more than 1 000 WSIS-related activities that were submitted to the WSIS Stocktaking process for the period April 2014- March 2015.

In addition, more than 300 international projects have been competing in the prestigious WSIS Project Prizes contest and are also to be included in the 2015 Stocktaking report. This marks an increase of 114 per cent in project nominations since 2014. The WSIS Project Prizes contest is part of the WSIS Stocktaking Process, and is a unique way of recognizing excellence in the implementation of WSIS outcomes.

More than half of the projects submitted this year were government initiatives, while 12 per cent originated from civil society, 11 per cent from the business sector, 10 per cent from international organizations, and another 12 per cent from other, mainly academic, entities. As regards geographic distribution, 31 per cent of the projects in 2015 were submitted by Arab States, 18 per cent were from Europe, 16 per cent each from the Asia-Pacific Region and the Americas, 12 per cent from Africa, and 4 per cent from the CIS, while 3 per cent came from international organizations and international NGOs.

The WSIS multistakeholder community was invited to participate and cast its vote for one project in each of 18 categories. The deadline for votes was 1 May 2015. The list of the 18 most appreciated/voted projects was identified and winning projects were announced officially to the public during the prize ceremony held during the WSIS Forum 2015. The success stories showcased examples of projects on the implementation of WSIS outcomes, emphasizing the achievements of stakeholders working towards achievement of WSIS goals, transferring experience and knowledge at the global level, and spreading and fostering WSIS values.

ITU contribution to the implementation of the WSIS outcomes: 2016

As at April 2016, almost 8 000 updated entries are registered in the WSIS Stocktaking Database, reflecting all manner of innovative WSIS-related activities.

The eighth edition of the WSIS Stocktaking Report and the fifth edition of Success Stories 2016 will be officially released during the WSIS Forum 2016 (2 to 6 May 2016, in Geneva, Switzerland). It should reflect activities which were submitted to the WSIS Stocktaking process for the period March 2015 - March 2016.

While last year's contest was already a record-breaker in terms of the number of projects submitted, the **WSIS Prizes 2016** contest has hit a new high with a 15 per cent increase in submissions. Following a comprehensive review of the projects submitted, the ITU Expert Group nominated more than 300 projects and posted them online for public appreciation. The 311 nominated projects break down into 179 projects from the government sector, 41 from the business sector, 31 from civil society, 14 from international organizations and 46 from other entities (mostly academic). As regards regional distribution, 86 projects are from the Arab region, 73 from the Asia and Pacific region, 53 from the Americas region, 36 from the Europe region, 31 from the CIS region and 27 from the Africa region, while five nominated projects come from international organizations.

The members of the WSIS multistakeholder community were invited to participate and cast their votes for one project in each of 18 categories. The deadline for voting was 10 March 2016. The list of the 18 most appreciated/voted projects will be identified and winning projects will be announced officially to the public during the prize ceremony to be held during the WSIS Forum 2016. The success stories will showcase examples of projects for implementation of WSIS outcomes, emphasizing the achievements of stakeholders working towards the achievement of WSIS goals and SDGs, transferring experience and knowledge at the global level, and spreading and fostering WSIS values. Besides the 18 winners, an innovation in this year's **WSIS Prizes** contest is the **WSIS Prize Champions** category, which recognizes those contenders having emerged from the online voting phase with at least 245 000 votes from the WSIS community. Their projects are among those having received the highest number of votes and having gained the best reviews by the members of the Expert Group. Among the five projects selected in each of the 18 categories, one will be the Winner and the runners-up will be WSIS Prize Champions.

C1. The role of public governance authorities and all stakeholders in the promotion of ICTs for development

In **Argentina**, a new project entitled *Fostering integration of Argentine academia in the activities of ITU* was created by ENACOM (Ente Nacional de Comunicaciones). The goal of this project is to build human capacity with a high level of specialization in telecommunications and ICT. To this end, all national universities and other associated research institutions (including those focusing on electronic engineering, industrial engineering, IT, medicine, law and economics) with an interest in the work of ITU were invited to participate.

This project gives prominence to a large number of SDGs related to the promotion of ICTs for development. More specifically, *ENACOM* is involved in **SDGs 1, 3, 4, 7, 8, 9, 10, 11, 13, 16 and 17** as it promotes and seeks to ensure healthy, sustainable and secure lifestyles in all social domains, including learning, business, science, environment, agriculture, government, etc., as well as revitalization of the global partnership for sustainable development.



In **Canada**, an initiative seeks to increase trade and private investment in the countries of the Association of Southeast Asian Nations (ASEAN) in order to create more jobs and reduce poverty (**SDGs 1, 10, and 17**). The initiative supports greater regional connectivity, including physical connectivity through infrastructure development and institutional connectivity through effective institutions, mechanisms and processes. The project aims to support public-private partnership projects to finance Southeast Asia's pressing infrastructure needs. As national economies become more interconnected, regional cooperation and integration help to accelerate economic growth, reduce poverty and economic disparity, raise productivity and employment, and strengthen institutions. *The ASEAN Infrastructure*

Centre of Excellence aims to provide expert support and technical assistance to help member countries identify and prepare viable, bankable, and high-impact regional public-private partnership projects to develop infrastructure.

In **Colombia**, the Ministry of ICT set up *Redvolución* to empower youth through use of the Internet. *Redvolución* seeks to reduce the digital divide by expanding knowledge of new technologies and the Internet, for members of communities which for various reasons have not yet entered the digital age, thus contributing to **SDGs 5, 10, and 17**. In practice, the strategy is implemented under the compulsory social service (CSO) scheme for all schoolchildren aged 10 and 11.

In 2010 in **Colombia**, the Ministry of Information and Communication Technologies launched the *Vive Digital* plan, a country-wide public policy plan aimed at reducing poverty and creating jobs through increased Internet use across all segments of the Colombian population, with a special focus on lower-income segments (**SDGs 1, 10, and 17**). The Plan advanced Colombia's digital ecosystem in its four core components: Infrastructure and Services (supply side) and Applications and Users (demand side). For the period 2014- 2018, *Vive Digital* is focusing on:

- Becoming a world leader in the development of applications with social impact for lower-income segments
- Increasing efficiency and transparency in government through the use of ICTs
- Multiplying by three the number of broadband connections, from 8.8 million in 2014 to 26 million by 2018
- Increasing household Internet penetration, from 50 per cent in 2014 to 63 per cent by 2018
- Increasing the Internet penetration of small to medium-sized businesses (SMBs), from 60 per cent to 70 per cent by 2018

Reaching every municipality in Colombia with 4G technology and free public WiFi.

The Ministry of Telecommunications and Information Society (MINTEL) of **Ecuador** came up with a national strategy, *E-money*, which fosters financial inclusion by facilitating access to lower-cost financial services for citizens, thereby improving their quality of life and reducing poverty indicators. Among other benefits, it enables the government to grant nanocredits and focus subsidies. The E-money system, managed by the Banco Central del Ecuador (BCE), is a payment method that allows citizens to make secure and reliable online transactions, using cellphones, without the need for Internet access or a bank account. Under its national legislation, Ecuador must move towards the sustainable consolidation of social solidarity and a reliable economic system, while at the same time developing an efficient alternative payment system. This will help to achieve economic and social inclusion and the well-being of millions of citizens, as well as stronger public finances and a better-regulated economic system. In this context, BCE developed a new mechanism to strengthen the use of electronic and alternative payments.

The project thus relates directly to the promotion of sustained and inclusive economic growth, and achievement of full and productive employment and decent work for all, thereby reflecting **SDG 8** and its relevant targets.

In **Colombia**, the Ministry of Information Communications and Technologies and Procolombia launched the *Agreement to Strengthen and Consolidate the Commercial Capacity and Support the*

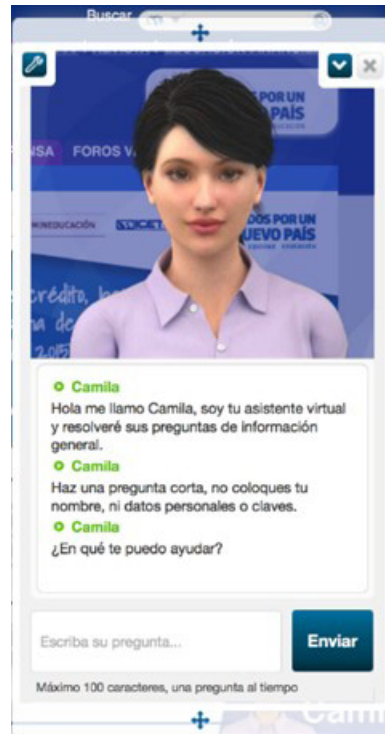
International Promotion of Mipymes [SMEs] in the IT and Digital Content Industries project. The ministry has, since 2012, been developing strategies to strengthen and consolidate the commercial capacity and support the international promotion of SMEs in the IT and digital content industries, thereby contributing to the increase of sales in the sector, in accordance with the Vive Digital plan. From 2012 until March 2015, a total of 931 IT and digital content companies have benefited from this agreement, exporting to more than 50 countries in Europe, the Americas and Asia, for a total value of USD 166 523 099. This synergy also enabled the launch of the “Colombia Bring IT On” campaign to promote the industry abroad. The project clearly highlights the impact that the ICT and digital content industries can have in achieving the SDGs.

In particular, **SDGs 8** and **9** focus on the promotion of sustained, inclusive and sustainable economic growth, achievement of employment and decent work for all, as well as on the building of resilient infrastructure, promotion of sustainable industrialization and innovation fostering.



Camila Virtual Assistant with Artificial Intelligence is another project in **Colombia**, created by smart companies (empresas inteligentes), which takes the form of a guidance tool directed towards the promotion of ICTs for development. In compliance with the Colombian Government’s Manual of Procedures for Government Entities, and in order to maximize the number of student loans and facilitate access for blind people, ICETEX implemented a virtual assistant on its website to respond to frequently asked questions, with an avatar that reads the responses and co-navigates with the user to guide him or her through the website. The project emphasizes the linkage between ICTs and certain SDGs.

In particular, Camila Virtual Assistant seeks to ensure inclusive and equitable quality education and promote lifelong learning opportunities for all (**SDG 4**), achieve gender equality and empower all women and girls (**SDG 5**), promote peaceful and inclusive societies (**SDG 16**), and revitalize the global partnership for sustainable development (**SDG 17**).



In **Costa Rica**, the *Telecommunications Development National Plan (Plan Nacional de Desarrollo de las Telecomunicaciones (PNDT)) "Costa Rica: A connected society"* aims to boost the growth of and access to ICT and pave the way for the creation of a favourable environment for the fair and proper social and economic development of democratic societies. The strategic paths focus on reduction of the digital divide, efficient use of spectrum and universal and affordable access to broadband. This holistic plan promotes broadband, social inclusion, empowerment of the people, and open and transparent e-government. With two public consultations and some 45 workshops having been conducted, this is an effort on the part of some 50 institutions in the public, private, education and civil society sectors to create value using ICTs.

This national public policy ties in with **most of the SDGs** as it covers all important aspects of sustainable development.

In **Mexico**, the Sinaloa State Government introduced the *Sistema de Evaluación y Seguimiento a las Metas del Plan Estatal de Desarrollo (SISEPSIN)*, a tool supporting **SDGs 10, 16, and 17** and by which society and the media can follow the commitments made by the governor in the State Development Plan, thereby serving as an incentive to openness and transparency. The webpage itemizes all the targets, categorized under three main headings:

- Political
- Human
- Material

Each and every goal is supported by documents, images, videos, graphics, geo-references and statistics signed by the top officials in the department concerned. This is a key element in order to build confidence on the part of society and instil responsibility on the part of government employees with respect to the information they publish. Furthermore, SISEPSIN is enabled with social media so as to promote discussion and engagement with each goal, resulting in the creation of an open innovation space in which citizens can add value to proposals and generate new ways of solving challenges. Open government is a global trend to reduce corruption and maximize citizen participation.

In **Mexico**, the Office of the President of Mexico has launched five projects.

The *Agentes de Innovación* project responds to the desire of the Coordination for the National Digital Strategy (CEDN) to contribute to the goals of the National Development Plan and demonstrate a different way of developing open government projects, with rapid functional prototypes, multidisciplinary teams and agile collaboration between government and citizens to create a sense of co-responsibility. The project seeks to build teams among the major innovators and entrepreneurs both inside and outside government, and help them create tangible technology-based, high-impact projects. In its first generation, the programme has facilitated the development of five projects that address a range of issues including maternal health, civic collaboration to improve public safety, effective opportunities for entrepreneurs, social programme design improvement through beneficiary feedback loops and improving school dropout rates (**SDGs 1, 3, 10, and 16**).

The *gob.mx* portal is a unique website where citizens will find all the relevant procedures, information and communications from the Government of the Republic. The website informs citizens about government services and provides all the information needed to access and use them, with the possibility to download forms and make online payments (**SDGs 10 and 16**). By serving as a single communication structure for the entire Federal Public Administration, *gob.mx* will enable citizens to access all information about public policies and the programmes on which the ministries and the various agencies are working.

On 8 May 2014, the *ICT Policy* was published in the Official Gazette of the Federation. The objective of this Agreement is to lay down the policies and orders for the National Digital Strategy relating to ICTs and security of information, as well as to establish the Administrative Manual of General Application in these domains (**SDGs 10 and 16**). It establishes the regulations that the agencies of the Federal Public Administration and the Office of the Mexican Attorney-General (PGR) shall comply with in determining their operating processes related to ICTs and security, and the standardization of processes to align them with the National Digital Strategy, thus optimizing management within the agencies and PGR.

As part of the *Vertical Integration* pilot programme, which provides for the integration of procedures and services at the state and municipal level in Mexico, on 19 March and 26 April 2014 the Digital Government Unit signed coordination and collaboration agreements with the states of Colima and Jalisco to establish the "Pilot Programme of the National One-Stop Shop for government procedures and services" (**SDG 16**). The pilot project aims to increase the competitiveness and efficiency of states through the digitization of procedures and services, based on three indicators that the World Bank establishes in the subnational "Doing Business" ranking, which advocates digitizing and optimizing the processes involved in the following areas: i) starting a business; ii) obtaining building permits; iii) registration of property; and iv) enforcing contracts. In Colima, a Digitization Pilot Project is being developed encompassing 30 procedures and services from the state and five services for each of its ten municipalities. As a result of the Pilot Programme in the State of Jalisco, four Guidelines to Standardize, Optimize and Digitize Procedures for Doing Business were elaborated in order to facilitate the procedures for starting a business, obtaining construction permits, registering property and enforcing contracts, with the participation of 19 municipalities.

The *Digital Inclusion and Literacy* pilot programme began by bringing together various stakeholders in the IT industry and education sector to present solutions that would take into account the digital ecosystem (connectivity, training, content, assessment, support and infrastructure) necessary for the effective implementation of tablets in selected public schools of three Mexican states (**SDGs 10 and 17**). The tablets and supporting infrastructure were donated by various industry participants without cost to the government and were given to students and teachers in fifth and sixth grades. The pilot had two main objectives:

1. Develop digital capabilities to promote:
 - collaboration
 - critical thinking
 - communication skills

- self-management, etc.
2. Development of generate indicators and models that contribute to digital inclusion and public literacy policy.

Open Data is one of the five main enablers of the National Digital Strategy of Mexico. Its primary objective is releasing open data to create an ecosystem of co-creation of public services, triggering innovation, entrepreneurship and economic growth, driving transparency and reducing corruption in the country (**SDGs 1, 10, and 16**). To leverage this enabler, the Government of Mexico is implementing an Open Data Policy, which mandates all federal agencies to follow an ‘open by default’ standard for all their public data. Furthermore, CEDN is working on projects to drive the use of open data across all sectors of society, such as:

- *Data for Development*, to gather data from different sources to drive data-based policy-making and decision-taking in government;
- *OD100MX* (opendata500.com/mx), which is the first study to map Mexican companies that use open government data to generate new business, develop new products and services and generate economic and social value.

In **Mexico**, government policies should favour assistance to, and the growth of, SMMEs (small, medium and micro-sized enterprises) in the ICT industry, as well as their entry into e-business, in order to stimulate economic growth and job creation as part of a strategy for poverty reduction through wealth creation. *Retos Públicos* (*Public Challenges*), the Mexican Government’s platform for challenge and prize competitions, is for the first time opening up public contracting of SMMEs in the ICT industry. In this spirit, it promotes inclusive and sustainable economic growth, employment and decent work for all. Since 2014, 11 federal ministries have engaged with over 1 500 participants to create 75 prototypes for 15 open-source solutions for citizen engagement, efficiency, transparency and participation at less than 10 per cent of the normal cost. Winners have the opportunity to provide technology for a market that was previously closed to them and are incentivized to formalize their operations to become well-established, high-impact companies. In its new phase, Retos is expanding in 2016 to become “Reto México”, the largest innovation model for both the public and private sectors.



In **Peru**, the project *Mujer Peru* is based on the assumption that Peru is a country which enjoys a diversity of culture, cuisine, geography and raw material resources, and whose Inca looms are highly prized abroad. On the other hand, it is also a country that is becoming aware of what it means to live in an inclusive society in which there is a need to inform people and raise their awareness about issues relating to social inclusion. Children and young people, and adults with physical or intellectual disabilities, may experience discrimination, a lack of respect for their rights and limited social prospects. *Mujer Peru* provides employment opportunities to women with varying skills who wish to start their own business, involving them in making jewellery with silver and Inca designs, and designing different types of low-cost women's accessories that are simple to prepare (**SDGs 1, 3, 5, and 10**).

In **Trinidad and Tobago**, the Ministry of Science and Technology's *SmarTT* project, under the National ICT Plan for 2014-2018, approved in 2013, encompasses five thematic areas:

1. Innovation and human capital development
2. Access and digital inclusion
3. E-business and ICT sector development
4. Infrastructure development
5. E-government.

Under these thematic areas, some 56 programmes and 156 development projects have been identified, of which 116 projects are being tracked across government (**SDGs 1, 10, 16, and 17**).

The National Broadband Plan, established as a component of *SmarTT* (Theme 4), recognizes the importance of broadband as a critical success factor in promoting economic development and establishing a knowledge economy. The World Bank Group has been engaged to elaborate a Broadband Strategy and Action Plan to accelerate access to broadband services within the country. This engagement is currently in its second phase, pursuing the following actions:

Demand side:

- IT/ITES strategy and location readiness index
- National open data

Strategy: sensitization workshops to be conducted with stakeholders in February/March 2015

Supply side:

- Establishing an alternative submarine cable landing station using a PPP model.

In the **United States**, the Ark Earth Foundation Data Revolution (AEF) is promoting the transition forward by creating a knowledge economy trade through which its products and services constitute a sustainable civilization progression. The *Ark Earth Foundation 21st Century Sustainable Civilization Progression* scale moves forward as the Semantic Intelligence Web deploys. The deployment begins with modelling of open governance using Web 3 Intelligent Agent softwares which enable fast-track trade that favours the rapid deployment of sustainable innovations and substantial capital investment. The AEF project is a work-in-progress "data revolution" targeting **all the 17 SDGs** and is intended for implementation in the Digital state of Cumberland, United States.

In **Uruguay**, the Agency for E-Government and Information Society (AGESIC) implemented the *Digital Agenda Uruguay* (Uruguay's digital policy) as it relates to **SDGs 5 and 10**. Thanks to sustained and continuous efforts through several versions (2007-2008, 2008-2010, 2011-2015), this multistakeholder commitment has attained its objectives. Uruguay is the regional leader in ICT access. Outstanding plans are offered by government such as 1 GB broadband with no monthly fee. All students in public schools have their own PC. The PC access gap between lower-income and upper-income households

has been cut to 10 per cent. Moreover, no child need walk more than 300 metres from home to access the Internet.¹

In **Uruguay**, the Agency for e-Government and Information Society (AGESIC) boosted the *Digital Agenda Uruguay* (Uruguay's digital policy) project, which reflects a sustained and continuous effort through several versions: 2007-2008, 2008-2010 and 2011-2015. It does not constitute a governmental or technology plan, but rather a multistakeholder commitment and social inclusion agenda. The Digital Agenda highlights are:

- Regional leader in ICT access
- Outstanding plans offered by government such as 1GB broadband with no monthly fee
- First country in which all public school students have their own PC
- Reducing the PC access gap between lower-income and upper-income households to only 10 per cent
- No child should have to walk more than 300m from home to access the Internet
- Main software exporter per capita
- First country with 100 per cent livestock traceability.

These key points connect the Digital Agenda to **SDGs 1, 3, 4, 9, 10** and **17** by focusing on healthy lives and the ending of poverty in all its forms everywhere, building of resilient infrastructure, promotion of sustainable industrialization and fostering of innovation.

¹ Project nominated for a WSIS Project Prize 2014

C2. Information and communication infrastructure

In **Canada**, the ultimate aim of the *NEPAD-Infrastructure Preparation Facility* is to enhance regional economic development and integration through the increased implementation of regional infrastructure projects (**SDGs 8, 9, and 11**). The purpose of the New Partnership for Africa's Development-Infrastructure Project Preparation Facility- Phase II (NEPAD IPPF II) is to provide support to Regional Economic Communities (RECs) and their specialized regional institutions (such as the West African Power Pool) for the preparation of 'bankable' infrastructure projects in the energy, transport and telecommunication sectors in Africa. 'Bankable' projects are those that have gone through high-quality project preparation processes which include support for feasibility and engineering studies, environmental impact assessments, structured financing plans, legal analysis and financial transaction plans. NEPAD-IPPF is also working with the RECs to increase their capacities to cooperate in complex public-private partnerships. These efforts help sustain progress towards meeting Africa's infrastructure financing needs.

In **Colombia**, the Ministry of Information Technologies and Communications is implementing the *National High-Speed Connectivity* project, an initiative that seeks to deploy alternative infrastructure in 47 municipalities where it is not possible to lay optical fibre. This will facilitate national coverage of the information highway, thus contributing to **SDGs 8, 9, and 11**.

In **Colombia**, *Kioscos Vive Digital* are community Internet centres located in rural and remote areas. Through them, children, teenagers and adults from 6 548 remote towns with more than 100 inhabitants have access to telecommunication services such as telephone and Internet. The infrastructure installed under this project enables the development of appropriation strategies that promote the use of ICTs for the benefit of the community's economic, social and cultural activities (**SDGs 1, 8, 9, and 11**). Kioscos Vive Digital have driven economic and social development in rural areas, improving the living standards of many Colombians in need.²

The *REDONATE* project seeks to make private institutions and government entities aware that the computers and other items of technology they replace every few years can be re-used in low-income schools that do not have any other effective means of accessing ICTs (**SDGs 1, 8, and 11**). This idea includes creating lounges and supplying them with the equipment donated by such institutions. The project seeks the support not only of educational institutions such as universities, but also of companies wishing to be part of the campaign. Its aim is to create a balance in education, where, despite the very important role now played by technology, not everyone has the wherewithal to acquire a computer.³

The Ministry of Technology, Information and Communication of **Colombia** launched the *Kioscos Vive Digital* programme, whereby community Internet centres are set up in the country's rural and remote areas. Through these centres, children, teenagers and adults in 6 548 remote towns with more than 100 inhabitants have access to telecommunication services such as the telephone and Internet. The infrastructure installed under this project enables the development of appropriation strategies that promote the use of ICTs for the benefit of the community's economic, social and cultural activities, in line with **SDGs 1, 4, 5, 8 and 9** – fighting against poverty, ensuring inclusive and equitable quality education, promoting inclusive and sustainable economic growth and building reliable and resilient infrastructure. The Kioscos Vive Digital programme has driven economic and social development in rural areas, improving the living standards of many Colombians in need.

² Project nominated for a WSIS Project Prize 2015

³ Project nominated for a WSIS Project Prize 2015



In the current context of education in **Cuba**, ICT use is seen as a vital means of developing- aside from general intellectual skills- a culture that puts pupils in the context of their time and is consistent with their individual characteristics and needs. The *creation of digital material for Cuba's schools* is a government programme that aims essentially to raise the quality of the learning process. This has involved equipping schools with over 92 000 computers and training all the necessary teaching staff (**SDGs 9 and 11**). Pupils and teachers have produced scholastic software platforms for all teaching levels, covering the entire range of subjects in the curriculum. The content has been generated for use in all the country's schools, regardless of their degree of connectivity or the availability of independent workstations or virtual laboratories, in the context of the national education portal. It is generated in cooperative environments applying the principles of cloud learning and using game-based learning, with open content and on a variety of media, and involving significant development of learning analytics. The whole undertaking is supported by ongoing teacher training via open online courses delivered on various platforms.

Launched by the Ministry of Construction, AICROS in **Cuba**, *Building with Intelligence: Technological infrastructure of Internet access and other services in the construction sector* is a project to automate the construction sector in Cuba by implementing a technology infrastructure as a private cloud, interconnecting over 300 companies and almost 222 000 employees, 34 per cent of whom are engineers and architects. This opening up to global connectivity and visibility will make for the availability of constructive high-class solutions using tools based on free software, with minimal investment and high levels of security and confidentiality.

The proposed infrastructure can be replicated in national entities or agencies in all ministries of Cuba, and internationally in developing countries, by achieving a high degree of technological independence, thereby reducing inequality within and among countries (**SDG 10**).

In **Mexico**, *México Conectado* is a federal programme of the Ministry of Communications and Transportation that coordinates the federal, state and municipal governments to define the broadband requirements of schools, hospitals, government offices and other public places in each state (**SDGs 1 and 11**). Its objectives are:

- To improve the quality of public services through the use of ICTs otherwise unavailable without Internet access
- To contribute to closing the digital divide in Mexico by providing free Internet access to the general population

To achieve better economies of scale by aggregating, in public tenders, the demand for Internet services of the three levels of government.¹

¹ Project nominated for a WSIS Project Prize 2015



The project *Indigenous cellular network infrastructure* focuses on the development of local cellular networks owned, operated and managed by indigenous communities which have thus far had no cellular infrastructure and rely on a point-to-point ISP to deliver Internet service to the village (**SDGs 1, 8, and 11**). The project has to date installed infrastructure in 17 localities in the states of Oaxaca and Puebla and plans to begin nationwide coverage during the second half of 2015 through an indigenous telecom cooperative.⁴

In **Trinidad and Tobago**, the *National Internet Exchange Point (IXP)*, *TTIX* was established in October 2014 in order to benefit from the significant cost and performance gains to be realized from routing data traffic between domestic ISPs. The IXP is viewed as a critical component of the broadband infrastructure that is necessary for establishing a knowledge-based society in keeping with national development objectives (**SDGs 9 and 11**). It is expected to improve robustness and end-user privacy, encourage ICT adoption and locally-hosted applications and provide improved quality of Internet access to local consumers.

⁴ Project nominated for a WSIS Project Prize 2015

The **Trinidad and Tobago National Research and Education Network (TTRENT)**, established in 2012, is a high-performance communications network that interconnects local campus networks, as well as with other research and education networks at the global level (**SDG 11**). It connects three national tertiary level institutions (University of the West Indies, University of Trinidad and Tobago and the College of Science, Technology and Applied Arts of Trinidad and Tobago), and also the University of the Southern Caribbean, which has its campus in Trinidad. TTRENT is part of the C@ribnet regional network. At the level of the Caribbean Community (CARICOM), it was agreed that the region should have a regional research and education network (REN) in order to enjoy the benefits achieved through global REN collaborations. The implementing agency for the Caribbean REN, C@ribNET, is the Caribbean Knowledge and Learning Network (CKLN), which is headquartered in Grenada. Any CARICOM country wishing to connect to C@ribNET is required to have a national REN or suitable point for connection.

The value proposition for Trinidad and Tobago included:

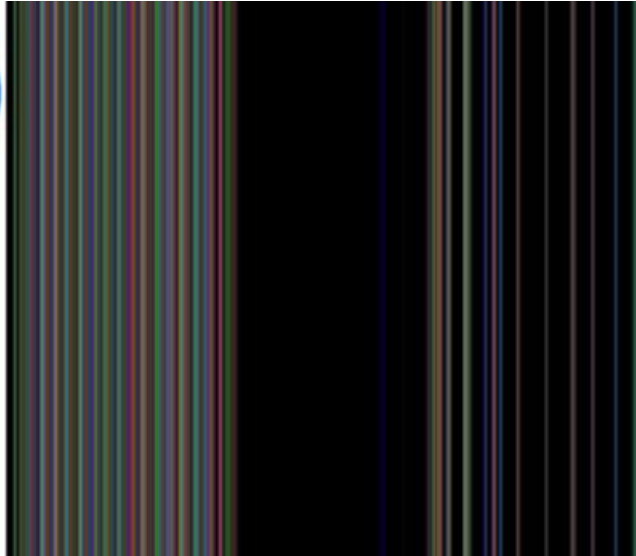
- expanding support for network-based research and education
- increased access to tertiary education through distance-learning technologies
- promotion of collaboration and sharing among local and international institutions, enabling students, educators and researchers to work with and on cutting-edge developments
- promotion of training for the next generation of digitally competent, naturally collaborative students who will take up careers in knowledge generation and business
- provision to the ministry of important data that can support informed policy.

In April 2014, TTRENT successfully applied to the Latin American and Caribbean Internet Addresses Registry (LACNIC) for an Autonomous System Number and IPv4 & IPv6 blocks of addresses, and assigned them. In July 2014, technical support was contracted for eduroam (education roaming) roll-out to TTRENT institutions. Eduroam is the secure, worldwide roaming access service developed for the international research and education community (**SDG 9 and 11**); it has gained momentum throughout that community and is now available in 70 territories.

Important next steps include addressing the issues of leadership and governance of TTRENT (including membership models) and sustainability.

In the **United States**, the *Microsoft 4Afrika Initiative* is working with global partners in the private and public sectors to deliver affordable connectivity to the 89 per cent of African households currently not accessing the Internet by deploying wireless broadband networks leveraging so-called TV white space (TVWS) technologies (**SDG 1 and 11**). TV white spaces are the unused or otherwise unassigned portions of UHF and VHF spectrum. In Botswana, Ghana, Kenya, Namibia, South Africa and Tanzania, the 4Afrika ISP partner broadband network deployments combine 2.4 and 5 GHz wireless connections with wireless broadband access technologies leveraging TVWS spectrum. TVWS signals travel over longer distances and penetrate obstacles better than higher frequency transmissions, while minimizing power consumption. This makes TVWS technology uniquely suitable for delivering broadband Internet access to hard-to-reach populations, including those living without electricity.⁵

⁵ Project nominated for a WSIS Project Prize 2015



In **Uruguay**, the National Telecommunication Administration (ANTEL) is implementing the *Fibre-to-the-Home (FTTH)* project. ANTEL's objective is to provide comprehensive telecommunication services via optical fibre, by connecting all households through FTTH (**SDGs 8 and 9**). This means that the entire span, from ANTEL's switch to the customer's premises, is connected via optical fibre.⁶

⁶ Project nominated for a WSIS Project Prize 2014

C3. Access to information and knowledge

In **Canada**, Foreign Affairs, Trade and Development Canada has been running four projects. The *Strengthening Distance Education in the Caribbean* project includes (**SDGs 4, 8, and 9**): (i) designing, developing and delivering demand-driven, gender and environmentally sensitive post-secondary distance education programmes to students across the Caribbean; (ii) training faculty, instructors and tutors in gender and environmentally sensitive course design, development and delivery; (iii) conducting a comprehensive analysis of programme requirements to better respond to labour market needs; and (iv) setting up new virtual library services (online) that can be accessed by all Open Campus learning sites throughout the Caribbean.

The *Techno-links for Improved Access and Income* project aims to help local businesses develop financial and technology-related products and services so that they can better respond to the needs of smallholder farmers and enterprises in Zambia, Nicaragua and Peru (**SDGs 5, 8, 12, and 17**). The programme has two components: 1) Technology Links for Financial Services: Mennonite Economic Development Associates of Canada (MEDA) works with MiCredito, a microfinance institution in Nicaragua, and with Mobile Transaction Zambia Limited (MTZL), a mobile transaction company in Zambia, to develop mobile transaction and mobile banking services to support increased savings among smallholder farmers; 2) Technology Links for Agriculture: MEDA supports an Agriculture Technology Matching Grant Fund in Peru and Nicaragua with the Inter-American Development Bank. The Fund provides grant funding to local private-sector firms to develop agricultural technologies that address the needs of small farmers. CIDA's contribution supports technical assistance related to the management and administration of the Fund.

The expected intermediate outcomes for this project include: rural households, enterprises and farmers, including women, demonstrating increased usage of new technologies and financial services to increase their productivity, build assets and/or mitigate risk; enhanced capacity of local partners (private-sector providers of financial or agriculture support services) to provide appropriate and more diversified products and services to rural households, enterprises and farmers, including women; and technology-based products and services being integrated into competitive agricultural value chains, with results, methodologies and lessons learned being shared with a range of audiences.

The *Engaging the Private Sector for Small and Medium-Sized Farm Business Development* project is testing new farming methods and providing training, coaching and innovative tools in three areas: (1) sustainable farm management and crop-growing practices using modern information and communication technologies; (2) marketing by enabling farmers to meet the requirements of the retail and export markets; and (3) access to financing (**SDGs 8, 12, and 15**). The project is being implemented in partnership with commercial agricultural input suppliers, banks, grocery chains and agriculture extension service providers.

Last Mile Mobile Solutions (LMMS) is looking to increase the effectiveness and efficiency of humanitarian assistance and enable greater accountability for the assistance delivered. LMMS is mobile technology, developed by World Vision Canada designed to make the delivery of humanitarian aid quicker and easier. It uses a hand-held device that works even in remote areas to register people affected by crises. By means of the device, aid workers can gather basic information about each person and issue registration cards, which are then used to improve the speed and efficiency of aid distribution (**SDGs 8 and 10**). The data gathered can also be analysed quickly and used to plan additional assistance, as well as monitor and report on the assistance provided.

In **Colombia**, *CONVERTIC* is the national strategy that envisages measures to promote the social, economic and employment inclusion of people with visual impairment (**SDGs 1, 4, 8, 9, and 10**). By facilitating the purchase of an unlimited four-year licence for screen-reader and screen-magnifier software that can be downloaded anywhere in the country, the ICT ministry plans to improve quality of life, empower the population, develop skills and foster the digital inclusion of people with disabilities, specifically those with visual impairment. The digital divide will be diminished only through the

creation of strategies that allow the entire population to make full use of technology and make it part of their daily lives.

In **Colombia**, *Convertic* is a project designed to enable visually impaired people to have autonomous access to information and knowledge, education, job opportunities and entertainment through the use of ICTs (**SDGs 3, 4, 8, and 10**). By means of this project, blind and visually impaired people are provided, free of charge, with the best screen reader and magnification software, enabling them to have independent access to computers, commonly used Office applications, music and video players and the Internet. Since a single licence for the software is not affordable for an ordinary Colombian under normal circumstances, *Convertic* provides an economy-of-scale model that enables the State to offer this vital tool to every single one of the country's 1.2 million visually impaired citizens, for free.⁷

In **Costa Rica**, the Presidential Social Council created the *Connected Homes Program*, which is a joint initiative among different state institutions, including the Vice Presidency, the Rector and the Regulator for Telecommunications, implemented by telecommunication companies and supported by NGOs and other institutions. It is one of the wider private-public initiatives in Costa Rica. Being part of the "Bridge to Development Strategy", the main goal is to combat poverty and inequity and to promote job creation and economic growth through increasing access to information technology for vulnerable groups, in line with the **majority of established SDGs**. The objective is to provide subsidies of up to 80 per cent for computers and broadband to almost 150 000 low-income families.



In **Cuba**, the *Integrated and progressive teaching aids system* was launched. This is a programme in which every academic subject has an associated set of teaching aids that, in addition to printed matter and audiovisual facilities, also include a multimedia application and a slot on the education platform. It contributes to **SDGs 4 and 10** and provides students with aids on various media within a coherent, rational and constantly updated environment. Each of the aids included in the system has

⁷ Project nominated for a WSIS Project Prize 2015

a number of cognitive benefits for the user, fostering the development of specific cognitive abilities and exploiting the potential of each aid.

Cuba has for some years been applying a set of strategies aimed at the *adoption of open source* at national level within the shortest possible time-frame. These strategies involve searching for possible alternatives for each of the systems currently in operation and, given the risks associated with radical change, seek a gradual transition to open-source alternatives. The University of Computing Sciences is the primary technical support for the migration process, and has developed Cuban distribution for the Nova operating system, which is being disseminated nationwide. Cedrux, another system developed by the university, is a candidate for the Cuban ERP (enterprise resource planning) system, which is designed initially to cover the accounting domain, moving on in the short- to medium-term to modules for other areas of management in government departments and agencies as well as Cuban business organizations. *Nova* is an operating system that uses the Linux kernel and includes certain software application packages to satisfy the needs of migration to open-source platform that Cuba is undergoing as part of the process of applying ICTs to build the information society.⁸ This project supports **SDGs 4, 8, 9, and 17**.

In **Cuba**, the *National University Network* links universities and research centres attached to the Ministry of Higher Education. It provides the following services: repositories and digitized scientific journals; digital library; videoconferencing; corporate chat system; free Ubuntu, openSUSE and Debian software repository; media library of cultural and educational resources (videos, classical music, films); and an art gallery (painting, sculpture and historical photographs). The network supports **SDGs 4, 8, and 10**.

The National University Network provides:

- Hosting of portals of interest to the institution
- Downloading of materials of various kinds
- Hosting of virtual machines for end users (software as a service)
- Databases of scientific references on the Internet
- Resource-search system
- Access to the open courses platform
- Access to the university observatories network
- Access to the EcuRed mirror and Wikipedia
- Hosting of a private corporate social network.

More than 90 per cent of university libraries in Cuba have a webpage on the local intranet. A substantial digitization exercise produced over 89 000 electronic documents. All the libraries operate the ABCD library-management software, and around 50 per cent of catalogue entries have been digitized to date. Over the last ten years, the libraries have accessed 12 EBSCO databases.

In **Cuba**, *Infomed* is the name of the first electronic health information network, which emerged as part of a project of the Cuban National Center of Information on Health Sciences to facilitate the electronic exchange of information between a set of libraries, information centres and other entities that make up the National Information System of Medical Sciences in the Ministry of Health (**SDGs 3, 4, 8, 10, and 16**). An important aim of the project is to design a national strategy to improve Cuba's health information services and consolidate an information and knowledge system supported by a network of institutions and individuals involved in its construction. Part of that aim involves enhancing the quality of the sources, information products and services, ensuring universal access, developing lifelong learning and health research, as well as continuously improving the technical,

⁸ Project nominated for a WSIS Project Prize 2014

logistical and organizational infrastructure and ensuring its efficient and safe use, while at the same time strengthening interaction between the system and other national and international networks.⁹

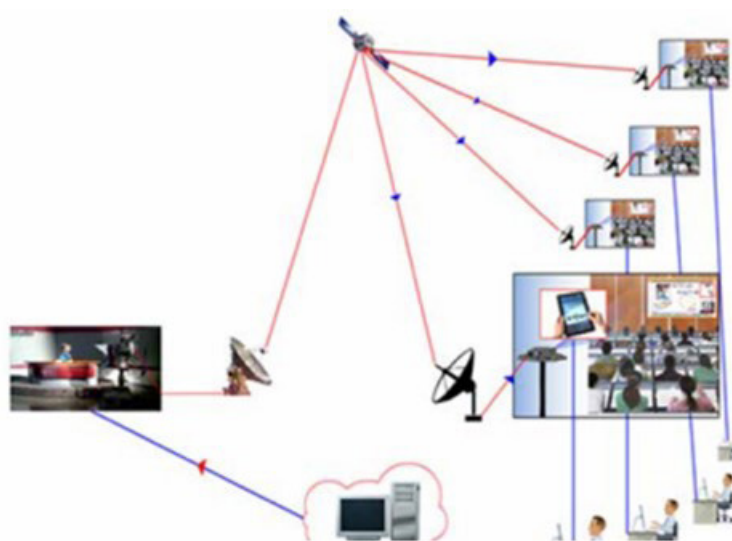
In **Panama**, the *Terralnova* project by Terralnova Org. has been developing a digital platform to promote and support entrepreneurship in smallholder farming across the region (**SDGs 1 and 8**), with the focus on market access, associative arrangements, the value chain and financial instrument innovation. The initiative, started in 2014 and set to run until 2019, also falls under the e-business and e-employment categories, and under the action lines on building confidence and security in the use of ICTs and enabling environment.

The Ministry of Science and Technology of **Trinidad and Tobago** initiated the *Star.TT Access Centres* project in order to bridge the digital divide in Trinidad and Tobago. A considerable part of the country does not have ready and free access to the Internet. These centres therefore offer training as well as an outdoor patio for the community to bring their own devices or an indoor cybercafe. Kids, teenagers and adults are now exposed to the world through these free centres throughout the country and government services can be accessed right there in the community through a feature called ttconnect.

Thus, the project contributes to **SDGs 4, 10 and 16**, reducing citizens' inequality, and offering lifelong learning opportunities and free information access to the population.

In the **United States**, *WorldWideScience.org* provides a simultaneous search of 100 national scientific databases from more than 70 countries around the world, enabling users to find the precise information they need, via a single search, without having to know the scope of any particular national scientific database (**SDGs 4 and 9**). Offering multilingual translations of both queries and search results in ten different languages, *WorldWideScience.org*'s coverage includes textual and multimedia materials, along with scientific and numeric databases. The WorldWideScience Alliance provides the multilateral governance structure, and the Alliance membership comprises *WorldWideScience.org* source owners and sponsors.

In the **United States**, *COMPRENDE "A digital Accessible Media Library"* (www.eCOMPRENDE.com) is emerging as a solution to the limited availability of accessible educational media for children with visual and/or hearing disabilities (**SDGs 3, 4, and 10**). *COMPRENDE* has been designed taking into account the concept of universal design and the existing evidence on the benefits of subtitles and audio description as supporting tools in the literacy of deaf, blind and deaf-blind students in the United States (Brann, 2011), (Packer, 1996).



⁹ Project nominated for a WSIS Project Prize 2015

C4. Capacity building

In **Bolivia**, the non-governmental organization Ayni Bolivia is implementing the *ch@ski* programme in order to integrate the country into the digital age (**SDG 4**). This programme has several aims: it provides training at all levels to both teachers and students, especially in areas underserved in terms of basic and advanced education; it provides capacity building by generating contextualized educational software for primary and secondary schools and for both computers and phones; and it implements an online learning platform where teachers share materials generated so they can be widely used both nationally and internationally.¹⁰

In **Bolivia**, the digital divide and social inequality have decreased with application of the Chaski programme. Students in the country's suburban and rural areas without access to education and technology were trained on ICT by the Ayni team. The goal of *ICT for digital inclusion* is to improve ICT learning in the community while ensuring the financial, technical and pedagogical sustainability of each telecentre implemented, making the Chaski a programme of structural intervention (**SDGs 1, 4, and 9**). Ayni has reduced the digital divide and dropout rates in rural areas, improving the self-esteem of students, increasing their employment opportunities and facilitating their options for the pursuit of higher studies.¹¹

In **Colombia**, the Ministry of Information Technologies and Communications has launched the *Soy TIC* project to create basic face-to-face and virtual learning spaces (**SDG 4**). The target population comprises low-income people, victims of violence, persons with disabilities, community leaders and ethnic communities (**SDG 1**). Soy TIC is an integrated web-based platform that allows all the adoption processes taking place in Colombia to be followed up. It comprises a statistical database, a complete virtual learning environment and a training material library open to all, with a view to the transfer of knowledge in a digital community within a new network-based society.¹²

In **Colombia**, *BiblioTICando* is a programme that promotes social, economic and cultural development through the use of ICTs in libraries and related institutions, thereby contributing to lifelong learning opportunities, inclusive and sustainable economic growth and employment (**SDGs 4 and 8**). It is led by the EPM Foundation's Library Network in partnership with the Pontificia Bolivariana University in the department of Antioquia, Colombia. BiblioTICando has been implemented over five years in 59 libraries belonging to the network, having provided training to 8 300 users comprising children, young people, adults, senior citizens and library staff. As a result, people are able to use technology in their daily lives, having developed digital skills that enable them to create content, search for information and be participatory citizens.

¹⁰ Project nominated for a WSIS Project Prize 2014

¹¹ Project nominated for a WSIS Project Prize 2015

¹² Project nominated for a WSIS Project Prize 2014



In **Cuba**, the *Computing and Electronics Youth Club* provides ICT-related services to foster the population's computer culture, the priority being children and young people (**SDG 4**). The club consists of a network of 600 facilities present all over the country, including in rural zones (138) and mountainous areas (38). It is supported by a team of over 5 000 employees, 48 per cent of whom are college graduates, 691 have a master's degree in science and one has a doctorate in science. More than 4 million people have taken the different types of courses run by the Youth Club: face-to-face, blended learning and distance learning. Among the graduates are children, young people, seniors and people with disabilities.¹³

In **Cuba**, the Ministry of Higher Education has launched the *education technology training strategy*, which is aimed primarily at ensuring the efficient use of ICTs in education (**SDG 4**). Initiatives launched under the strategy range from technological support to teacher training. The strategy includes one programme for producing and distributing high-quality teaching materials for the undergraduate and postgraduate national curricula, and another for devising methodological guidelines for assessing and certifying quality in the employment of educational technology.

In **Cuba**, the University of Computer Sciences (UCI), a higher-education institution providing free training for highly skilled professionals and developing computer products and services, has an *innovative training regime* encompassing teaching, research and software development, and involving intensive application of ICTs to the teaching/learning process (**SDGs 1, 4, and 17**). Founded in 2002, UCI's role includes supporting the Cuban software industry. It is one of the Cuban State's most far-reaching initiatives in the development of the knowledge economy and information society. In 10 years, it has trained over 11 000 professionals (of which over half of Cuba's engineers in this field) and developed and conducted over 200 computerization and ICT application projects – local and national – based on sustainable development principles. It also exports products and services to various countries, making a sustained contribution to the national economy. It boasts three Capability Maturity Model Integration (CMMI) Level 2 certified development centres and an international postgraduate centre. It maintains academic and commercial relations with institutions in over 10 countries.¹⁴

Another *ICT personnel training and development* programme has been initiated in **Cuba** for undergraduates, master's level and doctorate level students. There are now 282 students studying for a PhD and 3 990 studying for an MSc in 65 centre programmes; thus contributing to **SDG 4**.

¹³ Project nominated for a WSIS Project Prize 2014

¹⁴ Project nominated for a WSIS Project Prize 2014

In **Mexico**, private assistance institutions have launched a project to establish an *innovation and education centre* (CIE) project under an innovative model created to promote training for children, young people and anyone wishing to learn or innovate through ICTs (**SDG 4 and 17**). The centre is a non-profit organization that develops art, education and innovation programmes involving civil-society stakeholders such as volunteers and entrepreneurs. For the past five years, the centre has been growing and promoting the role of technology in enhancing the learning experience for society, especially rural communities.¹⁵

In **Mexico**, the *Training Digital Leaders* programme seeks to strengthen and professionalize digital community centre staff and promote social and economic development through ICTs (**SDG 4**). In 2013, more than 850 digital leaders were trained based on a standard that is recognized by the Ministry of Public Education. The training certification includes social promotion, digital skills and digital centre management. Digital leaders around the country will become community activists who promote ICT literacy in digital community centres. The online training of over 6 000 digital leaders will be consolidated via the website www.promotoresdigitales.mx, where they will be able to share knowledge and experiences and build identity.¹⁶

Bridging the digital divide requires connectivity, equipment, and the skills necessary to use ICT tools. This knowledge sometimes has to be transferred outside classrooms, in real-life settings. *Youth for a Digital Mexico* was born within this context, with the goals of creating awareness about the use of ICTs, closing the digital divide, and capturing public opinion via surveys, with a view to improving the website *gob.mx* and the provision of services in **Mexico (SDGs 1 and 4)**.

The initiative took advantage of the enthusiasm of young people by inviting them to be part of this transformation. Young adults aged between 18 and 29 from colleges and universities nationwide were invited to participate, and were then hand-picked from a large pool of 2 743. They were trained to be knowledgeable in the online services offered by an early version of the *gob.mx* website, so that they could assist citizens who visited the government offices to which they were assigned. Within a period of three months, participants helped to complete 5 244 online services and apply 636 surveys related to digital services. Most importantly, they were able to convey to the public the message that the Government is interested in reaching out to its citizens, and that it will be there for them during its transformation.¹⁷

The Ministry of Communications and Transportation's project *Puntos México Conectado: Digital innovation and education community centres* is based on locally based educational centres focusing on digital literacy and innovation. The centres' objectives are: to help to reduce the digital divide among the population through training in digital skills; to provide additional educational opportunities for children based on technology (robotics and programming courses); and to promote entrepreneurship and provide tools for young people to enable them to develop technology-based projects (**SDGs 1, 4, and 8**). The network includes 32 *Puntos México Conectado*, one per state, located in cities with more than 40 000 inhabitants and in areas with low-income populations identified with high delinquency rates.¹⁸

Commitment and family involvement are also very important in the education of children. It is thought that this responsibility falls only to teachers or schools; however, principles and values are inculcated at home, within the family. Today's children need parents. It would be ideal if there were a school where people were taught to be parents, but the reality is that one learns "on the fly". In this context, a project has been implemented in the Victoria Dorantes Library, in the community of Atotonilco, Tlaxco, Tlaxcala in Mexico (**SDGs 4, 12, and 16**). *Back to school because you learn better family: Back to school because family learns best* is a project run in collaboration with the Ministry of Education of Tlaxcala and Tec de Monterrey.¹⁹

¹⁵ Project nominated for a WSIS Project Prize 2014

¹⁶ Project nominated for a WSIS Project Prize 2014

¹⁷ Project nominated for a WSIS Project Prize 2015

¹⁸ Project nominated for a WSIS Project Prize 2015

¹⁹ Project nominated for a WSIS Project Prize 2015

Mexico proposed three projects in order to improve the ICT literacy of its population.



The Ministry of Communications and Transportation created the *Puntos México Conectado*, a network of centres for digital inclusion and technology whose main objective is to promote the use of new technologies for the development of digital skills, innovation and entrepreneurship. Within each of these centres, courses, lectures and presentations are held to bring about greater digital inclusion and better informed and more involved citizens, while at the same time contributing to the creation of more efficient and productive micro, small and medium enterprises.

The project's objectives are strongly linked to such problematic issues as poverty, quality education and gender equality, as covered by **SDGs 1, 4 and 5**.

Impacting and Improving Education for Youth in High Poverty Areas is the initiative developed by UNETE (Unión de Empresarios para la Tecnología en la Educación). UNETE's mission is to promote educational quality and equity in Mexico. To this end, it seeks to improve the social-emotional and academic learning process of students attending public schools in high-poverty areas of **Mexico**. The project accomplishes its aims through the effective use of technology in learning and intensive teacher training and support, as well as through the provision of educational content to those for whom such resources are typically unavailable.

The UNETE goals are reflected in a number of SDGs dealing with poverty, quality education, gender equality, reduction of inequality and promotion of inclusive societies (**SDGs 1, 2, 3, 4, 5, 9, 10 and 16**).



Web Accessibility Points by HearColors is a programme for persons with disabilities, many of whom are unable to use the Internet because nine out of ten websites are not accessible. Web Content Accessibility Standards have been developed to ensure that websites and their content are accessible to the assistive technologies mainly used by persons with visual, hearing and cognitive disabilities. The project's objective is to give students the capabilities needed to develop and design inclusive websites. Through Web Accessibility Points, students monitor the content accessibility of government

webpages, providing governments with a low-priced assessment of that accessibility while at the same time learning accessibility concepts.

The programme encompasses such issues as equitable quality education, economic growth and ensuring healthy lives (SDGs 3, 4, 8 and 16).



In **Mexico**, the goal of the *Capacity Building Program in Regulatory and Normativity issues (PFPT)* was to create a programme with national impact to renew established and incumbent "peritos" by creating a new "perito" with an updated and clear vision of the current national and global telecommunications scenario. The idea was to increase the number of individuals licensed to support society, industry and the government in actions, projects, disputes and controversies regarding telecommunication matters. The PFPT programme has the potential to be replicated in other developing countries and emerging economies in order to contribute to the establishment and development of a solid and updated telecommunications regulatory and normative environment.

Thus, the programme contributes to **SDGs 4, 8, 9 and 16** on the promotion of lifelong learning opportunities, economic growth, sustainable industrialization and peaceful and inclusive societies.

In **Mexico**, the National Digital Strategy launched the *Open Mexico Network (Red México Abierto)*, an intergovernmental partnership for the exchange of knowledge, best practices, technical and methodological tools and resources in order to promote open data at the local level and strengthen technological capacities at the subnational level. It comprises 12 states, 15 municipalities and three autonomous agencies, and aims to include the 32 state governments and their capital cities in 2016. It is supported by Data Squad, a project supported by the Open Data Institute and World Bank in 2012, to promote capacity building and knowledge transfer between government institutions, as well as peaceful and inclusive societies (SDG 16).



MIEMBROS

La Red México Abierto está compuesta por representantes y servidores públicos de gobiernos municipales, estatales, delegacionales o del Distrito Federal dirigiendo sus iniciativas de datos abiertos.

Los miembros de la Red México Abierto seguirán una Guía de Implementación dividida en 4 pasos que los acompañará en su proceso de apertura de información pública.

Planea



Publica



Perfecciona



Promueve



In **Trinidad and Tobago**, the *Caribbean ICT Roadshow* initiative is designed to raise awareness, educate, and demonstrate how ICTs can transform every sphere of endeavour in government, the private sector and civil society (**SDGs 4, 12, and 16**). The initiative addresses all citizens in Caribbean countries, explaining the technologies in audience-appropriate language and demonstrating their effective use in every sector. It emphasizes the need for innovation, fosters entrepreneurship and encourages the beneficial use of the Internet and its resources by young people. The Roadshow is customized for each country it visits and seeds activities in each country that will yield tangible benefits to its citizens.

In Trinidad and Tobago we also find other two remarkable projects from the Ministry of Science and Technology.

The first, *ICT for Seniors*, focuses on the contemporary challenges Trinidad and Tobago is to face in the elderly population. The ICT for Seniors programme was launched in 2014 through a collaborative effort between the Ministry of Science and Technology and the Ministry of the People and Social Development. It is aimed at ensuring the digital inclusion of senior citizens, as they comprise a group that is usually excluded from information society activities (**SDGs 4, 16, and 17**). The programme, which is in its consultative phase, comprises national consultations and outreach to senior citizens to raise awareness of the initiative and to solicit their views so that their needs can be better addressed. Seniors are exposed to basic information on ICTs, including being safe online, and are assisted with setting up email accounts and establishing a social media presence, if required. Three consultations were held in major geographical areas (the East, West and Central Regions of Trinidad) in 2014. Consultations are to be held in the sister isle of Tobago and in the Southern Region of Trinidad. Start Community ICT Access Centers are also being used to advance the initiative, as seniors can secure access and training through these centres in their communities.

The second project is *Women and Girls in ICT Forum: In recognition of a continuing “gender digital divide”*, initiated by the Ministry of Science and Technology 2013 (**SDGs 1, 4, and 5**). The annual Women and Girls in ICT Forum marks the ITU’s International Girls in ICT Day, as already mentioned in the introduction of this Report. The Forum seeks to influence girls and young women to consider careers in ICTs, a field in which women are under-represented globally. Despite the excellent academic performance of girls generally in Trinidad and Tobago, the global phenomenon of under-representation in the ICT sector is replicated nationally. The Forum therefore seeks to raise awareness among women and girls of the potential of ICTs as a catalyst for development and to encourage them to consider ICTs as an avenue for employment/entrepreneurship that can contribute to building a vibrant digital economy. The Forum was held in May 2014 and the third iteration is scheduled for May 2015.

In the **United States**, the *Empowering with Digital Literacy – Intel® Learn Easy Steps Program* addresses the needs of adults and young people around the world who seek to learn basic digital literacy skills. Its simple, instructional approach teaches basic computer literacy, which is a key twenty-first century skill, enabling enhanced social and economic self-sufficiency (**SDG 4**). Programme content is simple, practical and relevant, and is based on adult learning research. It can be delivered in formal or informal education settings. Participants acquire basic computer skills that are locally appropriate and support multiple hardware–software solutions. Intel provides the content free of charge to governments and non-governmental organizations, which manage local implementation.²⁰

²⁰ Project nominated for a WSIS Project Prize 2015



Flor de Ceibo, Building Capacity for Development, is a project of the University of the Republic of **Uruguay** that works throughout the country to promote the social appropriation of technology through socio-educational processes. Since 2008, Flor de Ceibo has developed projects with vulnerable populations aimed at the democratization of knowledge, contributing to the linkage between capacity building, technological development and social problems within the country (**SDGs 4, 5, 10 and 16**). This project seeks to facilitate local production and social use of knowledge by coordinating different actors in the field of ICT.

C5. Building confidence and security in the use of ICTs

In **Argentina**, *Amigos Conectados* is a digital literacy programme developed by The Walt Disney Company Latin America and the non-governmental organization Chicos.net to raise awareness of digital citizenship, online safety and responsible Internet use, offering: training sessions for teachers, at which experts present information on trends in children's digital citizenship and discuss challenges, tips and tools; training kits with exercises and worksheets to use in classrooms; websites featuring fun educational content for children, parents and teachers; contests encouraging children to explore websites; funded research into children's use of technology; and pilot projects for students on how to apply creativity skills through coding (**SDGs 4, 8, and 11**).²¹

The Ministry of Information and Communication Technologies of **Colombia** is managing *En TIC Confío*, a Colombian Government programme created to generate trust and security in the use of the Internet and other ICTs (**SDGs 4, 11, 16, and 17**). The goal is to define, analyse, research and prevent risky behaviours that, as in everyday life, also exist in the virtual world. Attention is especially focused on child pornography, sexting, grooming, cyberbullying, cyberdependence and electronic fraud. The programme works in three main areas: the use of ICTs; ways to use ICTs in a safe, responsible, respectful and healthy manner; and zero tolerance of child exploitation through electronic networks.²²



The Digital Government Unit of the Ministry of Public Administration of **Mexico** works together with the Taxpayer Administration Service of the Ministry of Finance and Public Credit, the Ministry of Economy and the National Digital Strategy Coordinator in the Office of the President on diverse activities concerning the *use of electronic signatures as a means of electronic identification for the present administration* (**SDGs 11, 16, and 17**). It has collaborated in issuing regulations on electronic signatures and acted as liaison between the states and municipalities of Mexico for the recognition of electronic signature certificates. It has also worked on revising and approving the agreement by which the Ministry of Economy of Mexico is to stop issuing digital certificates and instead recognize the ones issued by the Taxation Administration Service (SAT).²³

Another remarkable Project is *Equipo de Respuesta a Incidentes de Seguridad en Chihuahua*. CSIRT Estatal Chihuahua provides services in the event of computer security incidents for the Chihuahua community, including educational institutions, businesses, governments and society. It serves as a

²¹ Project nominated for a WSIS Project Prize 2015

²² Project nominated for a WSIS Project Prize 2015

²³ Project nominated for a WSIS Project Prize 2015

single point of contact for reporting incidents across the state and provides a means of communicating and sharing important relevant information and tools to facilitate the management of security within any organization (**SDGs 8 and 17**). This collaboration is the first of its kind in Mexico, involving a public education institution and a judicial body.²⁴

Mexico also has the *Electronic Field Logbook and Conservation Earth* project. The Electronic Field Logbook (BEM) software is designed for recording geo-referenced agronomic and socioeconomic data in plots, replacing note-taking. The system generates customized field logbooks depending on the specific conditions of each farmer and allows data collection from research modules and extension/impact areas, thereby offering free comparable nationwide databases and automatic reports (e.g. production costs per plot, net earnings, agronomic yield, best practices and technology usage comparison). The information BEM captures is then integrated into Conservation Earth, a geographic information system that allows geo-referenced information to be overlaid and viewed in one map (**SDGs 8 and 9**). It offers a public service through which users can access general data and the approximate location of research modules or extension/impact areas, as well as a private service with comparative statistics and detailed information.

For the last five years, Internet users in the **United States** have been increasingly vocal about Internet policy. Leadership on Internet policy issues has not emerged from everyday users. Corporations and media figures led these calls to action. The power and effectiveness of these movements clearly demonstrate that the public has opinions. However, these opinions should more properly develop and emerge among users themselves. That is the reason for the founding of the *Association of Internet Users (AIU)*, which will provide information and develop and advocate user-selected policy. Three primary functions of AIU are:

- To provide a reliable educational resource for users interested in learning more about Internet policy issues
- To serve as a civil public square enabling interested users to discuss and debate Internet policy
- To advocate Internet policy based upon user preference.

The programme thus contributes to certain SDGs by providing free access for the expression of ideas, protecting fundamental freedoms, etc. (**SDG 16**).

In **Uruguay**, Federico Monteverde introduced the campaign *Tus datos valen. Cuidalos!* (Your data are valuable. Take care of them!). It makes a fundamental contribution to ensuring that children, their families and educators know and learn how to take proper care of both their own personal data and that of other people (**SDGs 4 and 16**). The project aims to alert and train children in the 6th year of school, their teachers and their families regarding the importance of taking care of and protecting personal data.²⁵

Also in **Uruguay**, the Agency for e-Government and Information Society (AGESIC) has set up *CERTuy*. CERTuy is the Uruguayan computer emergency response team. It is responsible for receiving, analysing and responding to information security incidents (**SDGs 9 and 17**). It acts as focal point in the country coordinating actions, organizations and other incident response teams.²⁶

²⁴ Project nominated for a WSIS Project Prize 2015

²⁵ Project nominated for a WSIS Project Prize 2014

²⁶ Project nominated for a WSIS Project Prize 2014

C6. Enabling environment

The *Internet Civil Rights Framework* (Federal Law 12.965/2014) was approved in **Brazil** in April 2014. The document sets out the foundations, principles, guarantees, rights and obligations for the use of the Internet in Brazil (**SDGs 11 and 16**). The Framework is notable for its multistakeholder and participatory elaboration process, which involved open public sessions and the use of an Internet website, to which all interested parties could send their contributions. The online consultation platform enabled interested parties to comment freely and to suggest changes to the articles of the draft law. The Law establishes multistakeholder, transparent, collaborative and democratic governance mechanisms, with the participation of government, the business sector, civil society and the academic community; recognizes the global scale of the network; and provides that, in the interpretation of its provisions, consideration should be given not only to the principles and objectives set out therein, the nature of the Internet, and its uses and particular customs, but also to their importance for the promotion of human, economic, social and cultural development.

Apps.co is a digital entrepreneurship initiative by the Ministry of Information and Communication Technologies of **Colombia**. It is based on the Vive Digital plan, which aims to generate economic and social advancement with the use and appropriation of ICTs. *Apps.co* is an initiative by the Ministry aimed at promoting the creation of new ICT businesses, focusing on mobile/web applications, software and digital content (**SDGs 4, 8, 9, and 17**). The aim of the initiative is to transform entrepreneurs and ideas into sustainable and profitable businesses. It is the largest entrepreneurship community in Colombia with over 70 000 members. More than 40 000 people have accessed our online training programmes, with completion rates above 50 per cent. Of these, more than 6 000 had no previous programming experience. Since 2012, our mentoring and advisory programmes have contributed to the creation and consolidation of more than 1 000 startups across the country.²⁷

In **Mexico**, the National Digital Strategy (NDS) promotes actions to transform government into an open entity. It is citizen oriented and focuses on simplifying and facilitating processes, procedures and services. A major outcome of NDS is the *ICT Policy for the Federal Public Administration*, published on May 2014, which will enable federal agencies to consolidate and streamline ICT infrastructure, resources, goods and services (**SDGs 8 and 16**). It strategically manages the ICT budget (1 per cent of GDP) to meet NDS objectives. Since its release, the Federal Government has for the first time digitized ICT procurement processes using digital signatures, creating efficiencies amounting to more than the 13 per cent of the ICT budget¹.

¹ Project nominated for a WSIS Project Prize 2015

The Office of the President of **Mexico** manages *TICGOB shop*, a website on which all the content offered in their financial proposals by each one of the suppliers that are part of the framework contract can be displayed quickly and easily. The website allows agile searches by functionality or supplier (**SDGs 8, 10, 16, and 17**). Similarly, the Digital Government Unit has served as liaison between the states and municipalities of Mexico for the recognition of *advanced electronic signatures*. It has also worked on the revision and approval of the agreement by which the Ministry of Economy of Mexico is to stop issuing digital certificates and instead recognize the ones issued by the Taxation Administration Service.²⁸

Mexico has initiated three programmes aimed at promoting peaceful societies, sustainable industrialization and secure access to information (**SDGs 9 and 16**).

²⁷ Project nominated for a WSIS Project Prize 2015

²⁸ Project nominated for a WSIS Project Prize 2015

Elaborated by the Federal Institute of Telecommunications (IFT), the *Soy Usuario* system is an electronic tool that supports the reconciliation process between the user and the provider of a telecommunication service following a failure in that service or when a user right is violated. It enables the telecommunication services regulator and consumer protection agency to monitor the conciliation proceedings and advise users as to their rights. It is easy to use and has accessibility features for people with visual disabilities. It also generates reliable information about the service status of each company, enabling IFT to detect generalized service failures and recurrent abusive practices, thus constituting a timely monitoring and verification tool and allowing for the imposition of sanctions, where appropriate.



#SoyUsuario



In Mexico, the *Mobile Telephony Plans Comparator* is an online tool that makes it easy for users to compare the current mobile phone service packages on offer and find out specific contractual details regarding such things as monthly subscription charges, voice minutes, text messages, megabytes, characteristics, tariffs and options. It also offers valuable statistical and user habit information derived from its quality surveys. On the basis of user acceptance and participation, the Plans Comparator is constantly being updated with new data to facilitate decision-making, thereby positioning itself as the only tool of its kind in Mexico backed by a government institution.



Endorsed by the Mexican Presidency, the *ICT Policy for the Federal Public Administration* programme enables alignment of the ICT federal budget in order to guarantee fulfilment of the objectives of the National Digital Strategy. Furthermore, it promotes equality among government agencies of the

Federal Public Administration by democratizing access to cutting-edge technology. Agencies that are less developed in terms of ICT have the opportunity to make a technological leap, irrespective of their size, number of staff or general budget, resulting in the equitable acquisition of technology. This is the first time the Federal Government has digitized the ICT procurement processes, creating efficiencies in more than 12 per cent of the ICT budget.

In **Trinidad and Tobago**, the Exchequer and Audit Act was amended in 2014 to provide for *e-payments* within government (**SDGs 8 and 16**). Work is under way with the banking sector and other stakeholders with a view to extending e-payments to non-government transactions. This initiative by the Ministry of Science and Technology will run until the end of 2018. More information can be found at the following website: <http://www.scitech.gov.tt/index.php/projects/local-projects?start=4>.

C7. ICT Applications

E-government

Consumidor.gov.br is a web-based tool that enables direct communication between consumers and businesses in **Brazil**. It aims to solve consumer disputes via the Internet. Monitored by the National Secretariat for Consumers (Senacon) (Brazilian Ministry of Justice), Procons (prosecutors for consumer protection and defence), public defenders, prosecutors and society, the tool is based on principles of transparency and social control, making it possible to resolve consumer-related conflicts both rapidly and without undue bureaucracy. Currently, 80 per cent of complaints are resolved, with consumer demands being addressed within an average period of seven days. Officially launched on 27 June 2014, the platform has already registered more than 200 000 claims and has 180 000 registered users and 293 participating companies, including major telecommunication, banking, retail, manufacturing, air transport and health insurance corporations. The website promotes the rule of law at the national level and provides access to justice (**SDG 16**).



In **Colombia**, *MiMedellin* is an open innovation platform developed by government programmes. Its main goal is to encourage citizen participation in government issues and in current city problems through co-creation, feedback mechanisms and a dialogue of ideas (**SDGs 9 and 16**). The platform is an open venue where the public sector learns about citizen proposals, evaluates each proposal's potential applicability and determines whether the sum of the various ideas would make a bigger applicable project.²⁹

Also in **Colombia**, the Ministry of Information and Communication Technologies has co-created the *Vive Gobierno Móvil* event, which supports **SDGs 9 and 16**, and promotes the development of mobile applications that automate public transactions and services for anyone interested in using the open data submitted by the country's public institutions.³⁰

In **Colombia**, there are two remarkable e-government projects.³¹ Through a multi-channel platform comprising online media (such as website and social media profiles) and traditional media (such as radio and television), "*Urna de Cristal*", developed by the Ministry of Information and Communication Technologies, seeks to enable the largest number of citizens to interact with the national government, and actively monitor the progress of projects and policies (**SDG 16**). Since its launch in October 2010, this initiative has consolidated a strong network within the national entities (information and interaction channels) which has made it possible to reach nearly 20 million people. In addition, more

²⁹ Project nominated for a WSIS Project Prize 2014

³⁰ Project nominated for a WSIS Project Prize 2014

³¹ Projects nominated for a WSIS Project Prize 2015

than 2.5 million Colombians have visited the Urna de Cristal website since October 2011 and the site received over 2 million interactions through all its channels in 2014 alone. Finally, national government entities have given more than 40 000 answers and launched more than 300 initiatives involving citizens with results such as the *Decreto Antitrámite* (Anti-Procedures Decree), *Política Pública de Innovación Social* (Public Social Innovation Policy), and the *Plan Anticorrupción* (Anticorruption Plan), among others.

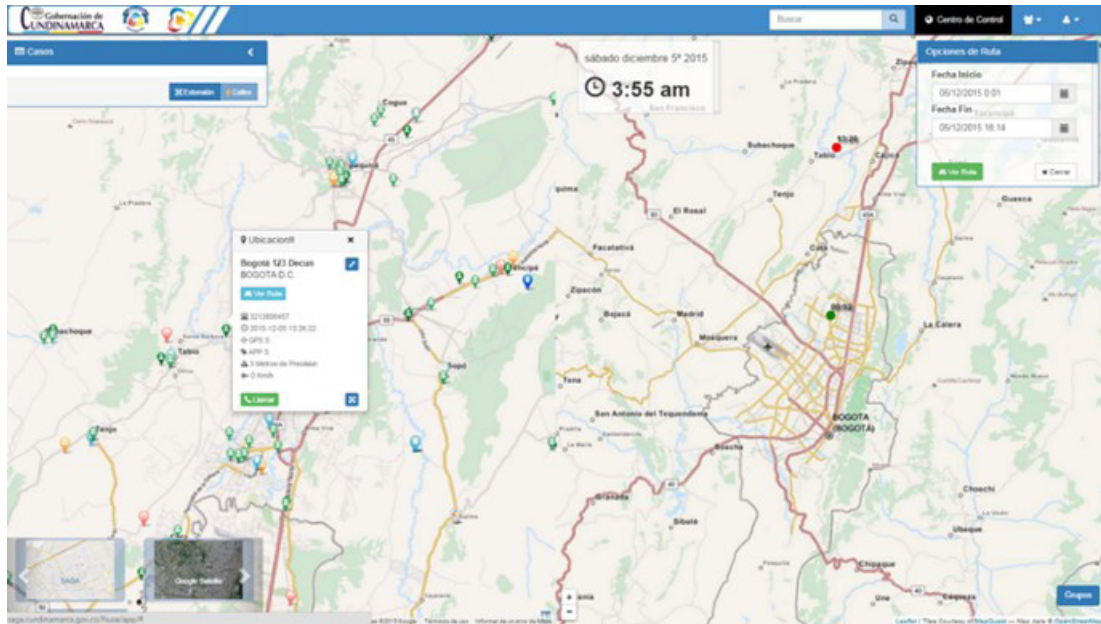
The second project, by PEP (Promoter of Personal Excellence), is entitled *Ciudadano Confiable: A Web Platform for Democratic Development*. When Colombian people vote, they do not always know clearly who the candidates are, especially when voting for the first time, live in small towns, have never before been involved with political activities, and have not received adequate political education. That situation is strongly related to corruption: where they do not even know the candidates, it is easier to manipulate them (**SDGs 10 and 16**). The idea is to create a web platform where people can easily obtain information about political parties, candidates and their campaigns, in a friendly and simple way.

The following four projects from **Colombia** relate to a number of SDGs, in particular those concerning safety of cities and promotion of peaceful societies (**SDGs 11 and 16**).

SUApp integrated application security (SUAPP) is a new platform in the form of a mobile and collaborative application that enables users to report incidents online and improves the police management service through the use and integration of technological tools (photography, videos, GPS, community alarms, radiotelephones, panic buttons, etc.), facilitating description of the facts and the identification of the persons involved. It enables both the administrator and citizens to be in constant interaction. SUAPP can be accessed remotely. Through the 123 hotline, the information is transferred to the police units nearest to the location of the incident. As a result, spatial information regarding the behaviour of the criminal(s) is displayed so that the units intervening can take appropriate routing and logistical decisions.

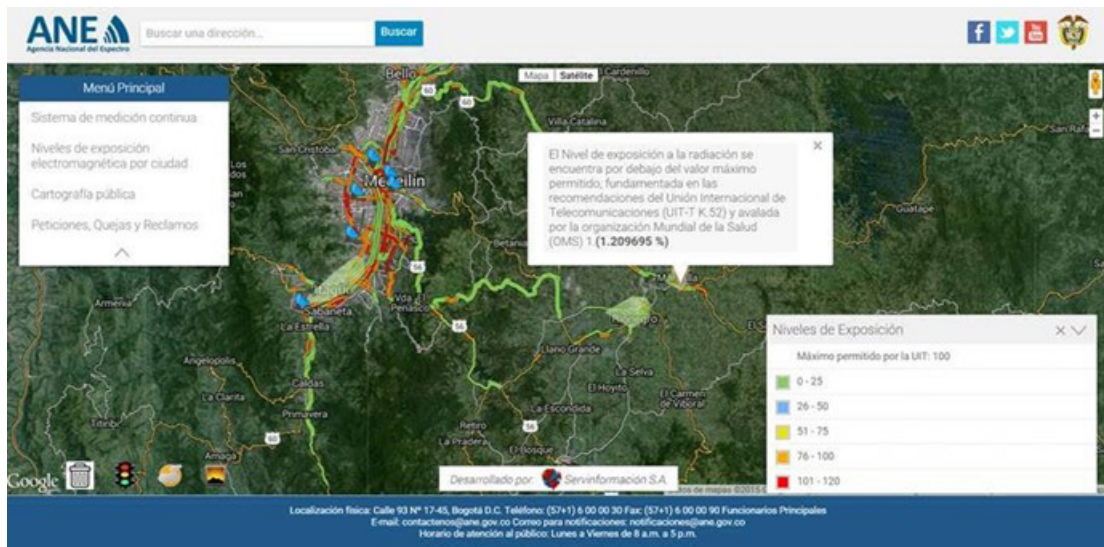


In order to improve emergency response times by means of a geographic and logistical support network, the Cundinamarca Department implemented the *System of Advanced Geographical Analysis (SAGA)* – a geographic platform that enhances emergency response procedures by pinpointing the location in question when an emergency call is received, or via a mobile app. Additionally, it coordinates the different members of the emergency network, reducing the response time from 15 to 4 minutes. In this way, it optimizes the resources deployed in order to save lives.



The National Spectrum Agency (Agencia Nacional del Espectro) (ANE) is the entity responsible for the planning, allocation, monitoring and control of radio spectrum in **Colombia**, providing technical advice for efficient spectrum management and promoting its knowledge. ANE has created the *Web Open National System of Monitoring of Electromagnetic Fields* project – a tool whereby citizens can consult, in real time, the results of the geo-referenced measurements made by ANE's network of sensors of the levels of the electromagnetic fields generated by telecommunication antennas, in the interests of alleviating the fears generated by the belief that those emissions could be harmful to health.

Besides the contribution to the safety of cities, the project seeks to ensure healthy lives, build resilient infrastructure and foster innovation (**SDGs 3, 9 and 11**).



The *Master Key* website is the main initiative for consolidating information relating to beneficiaries belonging to what the **Colombian** Government refers to as the inclusion and reconciliation sector. It enables government institutions to know the coverage history of each beneficiary and his/her family members. It also permits data analysis in order to create new coverage initiatives for unattended needs within the poor, extremely poor and vulnerable populations in Colombia. Master Key facilitates the implementation of a social public policy that requires the identification of populations in need and the creation of programmes based on those needs, before allowing the spending of public resources.

The website addresses the ending of poverty, food security, the achievement of gender equality and the reduction of inequality within the country (SDGs 1, 2, 5 and 10).



In **Mexico**, the *Lazos* project aims to strengthen socialization within communities in the Sinaloa region (SDG 9). Sinaloan families have access to innovative communication channels for technology, where they can see, call, send messages to and share with others, wherever they are, regardless of location or distance between them.³²

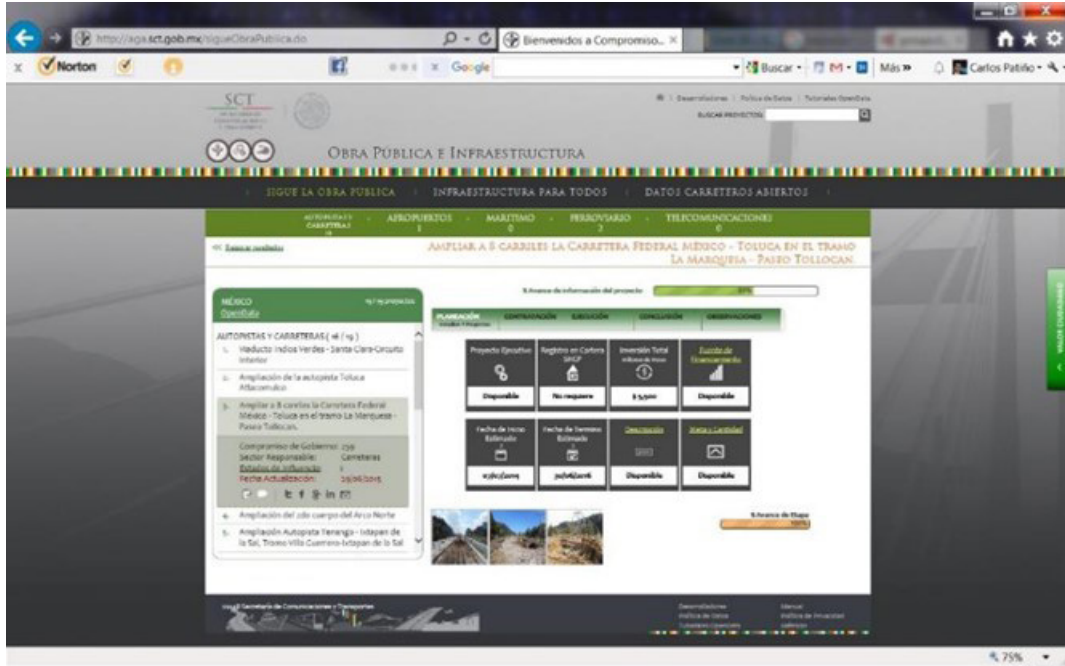
In **Mexico**, government transformation is one of the objectives of the National Digital Strategy (the action plan now being implemented by the Mexican Government to encourage the adoption and development of ICTs and integrate Mexico into the information and knowledge society). In this regard, the Mexican Government is building the government of the future: innovative, transparent, efficient, open, focused on the needs of society, and using technology to get closer to people (SDGs 9, 10, and 16). The National Digital Strategy Coordination of the Office of the President and a unit of the Ministry of Public Administration are therefore working together on the development and implementation of the *Digitization Strategy for Government Services* in order to effect a transition to the new generation of public services: digital services.³³ **Mexico** initiated two projects promoting an inclusive society for sustainable development.

The Ministry of Communications and Transportation is implementing a digital platform known as *Sigue la Obra Pública e Infraestructura*, the main objective of which is to provide citizens with the capacity to consult information about strategic infrastructure projects. Presently, the platform contains information on 223 national projects that are at different stages. This effort involved all areas of the ministry in order to ensure the correct publication and updating of project information by the officials in charge of them, giving first-hand information, promoting direct interaction between functionaries and citizens, and creating mechanisms to improve transparency, accountability and participation.

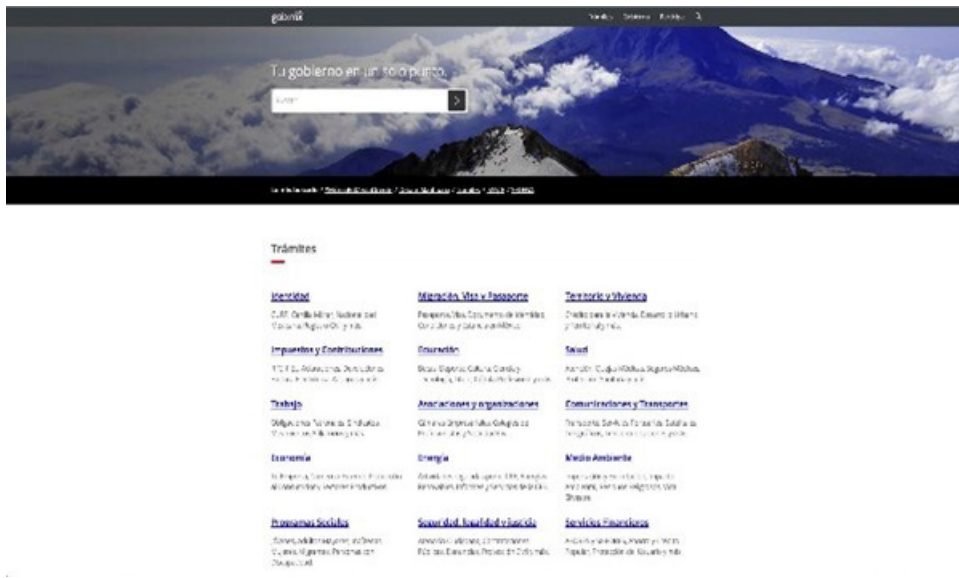
Thus, the project meets various SDGs, such as that of promoting peaceful and inclusive societies, ensuring access to information, etc. (SDG 16).

³² Project nominated for a WSIS Project Prize 2014

³³ Project nominated for a WSIS Project Prize 2015



The *National One Stop Shop gov.mx* is one of the most ambitious projects of the National Digital Strategy in **Mexico** aimed at transforming government to adopt a citizen-centred approach. It is a public policy that democratizes access to information, public services and citizen participation through use of ICT. By having access to government information and public services from any electronic device, citizens become equal and have the same development opportunities. Gov.mx fosters a more equal society, impacting fulfillment of the 2030 Agenda for Sustainable Development (**SDG 16**). Currently, it includes the most demanded services (digitized), as well as those from United Nations strategic sectors, such as health, social development, environment and education.



In the **United States**, the *Ark Earth Foundation* is a platform conducive to modeling, resourcing and deploying an e-governance system using semantic intelligent web technologies. Ark Earth offers to pilot the e-governance modeling of civilization and knowledge-based structures and gather data for large-scale semantic intelligent web deployments. The data gathered will better rationalize and maximize real social, economic and ecological impact analysis. The pilot demonstration would include the use of civilization and knowledge tooling capabilities that enable the rapid deployment of change in a world driven by content providers and the semantic intelligent web.

The *Ark Earth Foundation e-Governance for the Data Revolution* project relates to a number of SDGs through WSIS action lines.

In **Uruguay**, there are interesting governmental e-government projects.³⁴ The *International Trade One-Stop-Shop* (VUCE – *Ventanilla Única de Comercio Exterior*) is a mechanism developed to facilitate international trade, and to optimize and unify, through electronic means, information and documents at a single entry point for the purpose of fulfilling all import, export and transit processes (**SDGs 4 and 17**).

The main goal of the *Ibirapitá Plan* is to reduce the technological gap in regard to the elderly population of **Uruguay** and provide equal access and instruction on the use of technology and the Internet (**SDG 16**). It also aims at the delivery of 350,000 tablets to retirees with an income of less than \$24,416 (approximately USD 800) and at provision of a motivational workshop to encourage their use. The programme is projected to be completed by 2020. In addition to the main goal, secondary aims include:

- Reducing the double digital divide made up of potential Ibirapitá Plan beneficiaries
- Increasing access to and use of information technology
- Creating a space for sociability through the use of digital devices
- Ensuring that everything herein described contributes to the reduction of the technological divide of different socio-economic and age groups in Uruguay.

In 2015, a total of 30,000 tablets reached their users in eleven of the nineteen departments of Uruguay. The aforementioned eleven departments are part of rural Uruguay, and the project is working towards the objective of providing first for those areas of the country most cut off from the capital.



E-business

In **Canada**, the project *Improving Border Management to Reduce Trade Costs* aims to contribute to sustainable economic growth by reducing trade costs in East Africa (**SDGs 8 and 17**). The project seeks to reduce trade costs by speeding up and modernizing border and customs management systems within the East African Community (EAC). The project provides expertise, training and funding to help EAC member states and the EAC Secretariat speed up, integrate, streamline and improve the gender sensitivity of their border management systems. The project also works to streamline customs clearance and revenue-sharing procedures within and between countries.

³⁴ Projects nominated for a WSIS Project Prize 2015

The goal of the **Canadian Knowledge Gateway on Women's Economic Empowerment** project is to increase women's economic empowerment, and improve their lives and communities by providing them with access to information and networking opportunities through a knowledge gateway (**SDGs 1, 5, and 8**). The knowledge gateway is an online "one-stop service" giving women access to the latest and most up-to-date information, technical resources and best practices on business and economic opportunities, among other things. The gateway provides a mechanism for ongoing learning and exchange among users, including women entrepreneurs, practitioners and policy-makers, on issues that are critical to advancing women's economic empowerment.

MiPyme Vive Digital is an initiative that aims to encourage the incorporation of ICTs into micro, small and medium-sized enterprises (MSMEs) in **Colombia**, in order to improve their productivity and competitiveness (**SDGs 8 and 9**). This incorporation goes beyond simply connecting MSMEs to the Internet or providing them with ICT tools: the initiative has enabled the incorporation of ICTs within these companies by adding real strategic value and improving their businesses. The initiative consists of two strategies: the first strategic axis aims to provide MSMEs with awareness and training on the basics of Internet use. The second strategic axis aims to generate mechanisms to accompany the implementation of technology, particularly Internet solutions, in MSMEs. To achieve this, the Ministry of Information and Communication Technologies created an alliance with Bancóldex – iNNpulsa MiPyme to set in motion a public call for large private companies to propose projects that optimize their extended productivity chains, focusing on their interaction with those MSMEs that are part of their providers or suppliers, hence quickly reaching a large number of MSMEs and providing them with ICT tools that add real and tangible value to their daily activities. So far, 43 projects have been cofinanced, benefiting in the process more than 33 000 MSMEs directly and a similar number indirectly, totaling more than 66 000 MSMEs across the country.³⁵



Apps.co is the digital entrepreneurship initiative of the Ministry of Information and Communication Technologies of **Colombia**. It is framed as part of the "Vive Digital" plan which is aimed at generating economic and social advancement with ICT. *Apps.co* promotes the creation of ICT businesses, focusing on mobile/web applications and digital content. The objective is to transform entrepreneurs and ideas into sustainable and profitable businesses. The entrepreneurship community counts over 107,000 members. More than 50,000 people have accessed online training programmes, and mentoring programmes have contributed to the creation and consolidation of more than 1,000 start-ups across the country.

The programme deals with such problematic issues as poverty, quality education and gender equality (**SDGs 1, 4, 5**). It also contributes to economic growth and fosters innovation (**SDGs 8 and 9**).

³⁵ Project nominated for a WSIS Project Prize 2015



In **Cuba**, the *Comprehensive Customs Management System* (GINA) is designed to ensure that customs formalities comply with the requirements laid down by the World Customs Organization (WCO) in the revised Kyoto Convention, with the regulatory framework, and with WCO's electronic data model (**SDGs 9 and 17**). The system operates on the basis of advance information on cargos, international passengers and means of transport, in standard UNEDIFAC and XML formats, supporting customs facilitation and control operations at the borders based on a powerful risk-analysis system for selecting items to be checked. It also supports the provision of customs services to foreign trade operators at their offices. The system is endorsed by WCO and exchanges electronic information automatically with shipping companies, airlines, foreign trade operators, banks, couriers, central government agencies and customs authorities in other countries. It automates all the customs processes (clearance of merchandise, non-commercial goods, mailed packages, international travellers and means of transport). It is linked automatically with the personnel, finance, planning, document management, training administration and other non-customs processes, and to the x-ray scanners, radioactivity scanners, scales and other detection aids relating to the safety of international trade and passenger transport. The system is based on an open-source platform and a network of 1 700 PCs. The core of the system has been operating since 1 January 2001 and is under constant development by a team of specialists from the customs authority, the University of Computing Sciences and the José Antonio Echevarría Technical Institute.

The National Development Plan, the Innovative Development Programme of the Ministry of Economy and the National Digital Strategy of **Mexico** have taken the ICT sector as a priority in national planning. The National Digital Strategy, which is the action plan that the Mexican Government is implementing to encourage the adoption and development of ICTs and to insert Mexico into the information and knowledge society, has among its objectives the digital economy. The Mexican Government is triggering innovation and entrepreneurship ecosystems to foster a digital economy that encourages increased productivity and the development of new digital businesses, products and services (**SDGs 1, 8, 9, and 17**). In this context, the Mexican Government is working on the implementation of the *Tal Government Unit of the Ministry of Public Administration* project to foster and strengthen the IT industry in Mexico through the sectoral agenda for the development of IT in Mexico (PROSOFT 3.0) and the ICT Fund.³⁶

In the **United States**, Dimagi, Inc. has established *CommTrack*, which serves as an open-source, turnkey product designed to strengthen logistics management through the use of mobile technology (**SDGs 1, 8, 9, and 17**). Through a partnership with John Snow International (JSI), CommTrack is currently being used in **Tanzania** (ILSgateway), **Ghana** (early warning system), **Malawi** (cStock) and **Uganda** (mTrac). In Tanzania, the Ministry of Health and JSI are in the process of deploying this technology nationwide, with over 2 300 facilities currently reporting. In **Ghana**, CommTrack is being deployed to all antiretroviral therapy facilities and other health facilities in 18 districts. In **Malawi**, 1 500 community health workers are using CommTrack across more than half of the country's districts.

³⁶ Project nominated for a WSIS Project Prize 2015

In the **United States**, *DIDXchange (DIDX)* enables wholesale communication service providers to trade available direct inward dialing (DID) numbers within one convenient online platform. The project places all communication providers and operators on an even keel, whether in the first, second or third world, when they come to expand market reach and offer phone numbers to other telephone companies quickly and efficiently. Each wholesale buyer or seller can save money and time, gain and retain users, increase sales, offer new and practical features, achieve geographical market expansion, outsource technical issues, billing and marketing at zero cost, and offer their users a “local virtual presence” via DID phone numbers traditionally exclusive to those outside their location (**SDGs 8 and 10**).



In **Uruguay**, the *Dirección General Impositiva (DGI)* has implemented *e-Factura - Comprobantes Fiscales Electrónicos (e-Invoice)*. DGI contributes to **SDGs 8, 9, and 17**, as it is responsible for administering Uruguay’s tax system and is committed to facilitating tax compliance in order to maximize voluntary compliance, to strengthening tax compliance control so as to minimize non-compliance, tax evasion and fraud, and to contributing to the country’s economic development by spearheading tax compliance initiatives designed to improve the modernization of the State, enhance e-government, increase taxpayer productivity, reduce the costs of compliance and increase fair competition between economic agents. Not only does e-Factura play a critical role in fulfilling that mission, it also contributes to the development of e-commerce in Uruguay.

In **Uruguay**, the *Information System of Consumer Prices (SIPC)* is a georeferenced database of prices for articles used every day by Uruguayan households, which is updated fortnightly and can be accessed from different devices (**SDGs 1, 8, 9, and 12**). Retail prices are collected nationwide and from neighbourhood fairs in Montevideo. The system is used by: (a) citizens, to make better purchasing decisions; (b) the Ministry of Finance, to decide price agreements with the private sector; (c) the media and researchers, to inform and study variation in prices; (d) apps developers; and (e) those in the same trades, for comparative analysis. Surveys have revealed satisfaction levels higher than 80 per cent among service users.¹

¹ Project nominated for a WSIS Project Prize 2015

E-health

In **Argentina**, the Iberoamerican Foundation of Telemedicine (FIT) is dedicated to the research, development and application of new ICTs in health for the benefit of society. Having regard to primary healthcare processes in Argentina, FIT has developed *Acuario Salud*, a form of digital medical records

software, to centralize patient information in a single medical record and provide citizens with better quality healthcare; contributing to **SDGs 3 and 17**. Acuario Salud is a web application that contains all the information needed for administrative and legal medical management. It avoids concentrations of patients in health centres, provides statistics and epidemiological alerts in real time for preventive purposes, and is flexible and simple to use. The Acuario Salud software is intended for public and private medicine; it can be accessed anytime, anywhere and with complete confidentiality. It leads to better quality and monitoring of patient care, generates immediate savings in health costs and helps protect the environment thanks to the paperless process.



In **Argentina**, the Facultad de Ciencias Médicas UNR- Área de Informática Médica y Telemedicina has been running the *Development and installation of a Telemedicine Mobile Station (SDGs 3, 9, and 11)*. This initiative arose in response to the fragility of the healthcare system in situations of emergency and natural disasters, and to the need for improved primary healthcare in remote locations and better access to medical consultations. Access to healthcare, one of the fundamental human rights and essential to ensuring decent living conditions for the population, is the responsibility of States and societies towards their citizens. There is a need to develop tools that allow implementation of health policies that promote efficient and high-quality medical care for geographically remote or socio-economically isolated populations, at affordable prices.³⁷

In **Canada**, three projects are run by the Department of Foreign Affairs, Trade and Development.

One of these, the *Nigeria Evidence-Based Health Systems Initiative* has achieved a number of results since July 2014 (**SDGs 3, 4, 10, and 17**). These include:

- 1) Assisting two state governments to make the transition from paper health data collection forms to using mobile technology, thereby improving the turnaround time for analysis, referral and reporting
- 2) Informing more than 10 000 people on maternal health through an evidence-based docudrama, including discussions on what pregnant women and their families can do to ensure a healthy pregnancy

³⁷ Project nominated for a WSIS Project Prize 2015

- 3) Holding advocacy and sensitization meetings with nearly 1 400 community leaders to integrate the data collected into existing health and information systems for actionable change to policy and practice
- 4) Supporting a youth version of the docudrama developed in collaboration with young people, and holding discussions on maternal health issues in which 602 young people participated
- 5) Informing more than 28 000 women and men through docudramas focused on child health measures, including prevention of childhood illnesses and key corrective actions
- 6) Improving women's use of maternal health services (by identifying 24 253 women of childbearing age and registering 5 501 pregnant women for monitoring)
- 7) Identifying 39 426 households where mothers are at risk of ill health, 22 745 pregnant women and 3 264 newborns, with a view to scheduling prenatal and post-natal visits
- 8) Increasing the use of evidence in planning and budgeting for health services by providing training on the subject to 764 female state and local government employees in Cross River and Bauchi, and by collecting accurate health data.

A second project is *Implementing the Recommendations of the UN Accountability Commission (SDG 17)*. At the global level, implementation efforts include: establishment of the independent Expert Review Group, including its secretariat; creation of a global digital health strategy to accelerate the integration and use of information and telecommunication technologies and other innovative approaches into countries' monitoring and evaluation systems; ongoing outreach and engagement to promote the implementation of the Commission's recommendations in other forums; analysis and reporting of country-specific information on results and resources; and dissemination, interpretation and use of data.

Lastly, a very remarkable initiative is the project *Improving the well-being of Tanzanians - A birth certificate for every child in Tanzania (SDGs 3, 10, and 17)*. In July 2013, the Tanzania Registration, Insolvency and Trusteeship Agency (RITA), with the support of a Cuso International volunteer, launched the first mass birth registration programme in Tanzania in order to address the country's extremely low registration and certification rates. In less than one year, more than 130 000 children in one region have been registered and given birth certificates through an innovative initiative using mobile phone technology. Funded by the Canadian Department of Foreign Affairs, Trade and Development and supported by UNICEF, TIGO, VSO Tanzania and Cuso International, this success story is just the beginning.

In **Cuba**, the *Medical Genetics Information System* is used to centralize, monitor and update the following clinical information (**SDGs 3 and 9**) on the genetic make-up of Cuba's population:

- a) information on genetic case histories;
- b) information on genetic diseases;
- c) information on congenital deformities;
- d) information on mental disabilities;
- e) information on physical disabilities;
- f) system for remote case conferencing (teleconsultation).

Cuba has also established the *international sanitary control management system* in order to prevent and detect new and recurring exotic diseases, keep them from spreading in Cuba, and adopt appropriate mechanisms for providing feedback to the various levels of the national public health system; thus supporting **SDGs 3, 11, and 17**. The system comprises two major subsystems:

- environmental health, for the management of information related to hygiene standards for imported food (international sanitary control with the internal chain of ports);

- epidemiology, for the management of Cuba's epidemiological information, focusing initially on passenger epidemiological surveillance and control of dengue patients and also international sanitary control of aircraft arriving from abroad.

Also in **Cuba**, *INFOMED* was the first and largest Cuban medical information network. It emerged from a project undertaken by the National Centre for Medical Science Information (CNICM) to facilitate the electronic exchange of information in a community consisting of the libraries, information centres and other departments constituting the National System of Medical Science Information (SNICM), which is attached to the Ministry of Public Health (**SDGs 3 and 17**). The associated plans include enhancing the quality of sources, services and information products, ensuring universal access for healthcare personnel and the public at large, developing permanent functions for medical teaching and research, continuously improving the technical, logistic and organizational infrastructure to ensure its efficient and secure use, and enhancing the network's interaction with other national and international networks. *INFOMED* represents an important experience in the design of a national strategy to improve medical information services nationally, aimed at consolidating an information and knowledge system based on a network of institutions and individuals that participate in its construction.

Still in **Cuba**, the *Public Health Information System (SiSalud)* was developed as part of the Ministry of Public Health's computerization strategy (**SDGs 3 and 9**). This comprehensive solution is designed to create a single platform for the administration, processing and transmission of information within the national public health system. It is used to manage information for decision-making across the country at all levels. The associated programme operates a nationwide network and equipment infrastructure.

In **Cuba**, the *National Blood Programme*, part of the free Cuban health service, was at the origin of the requirement for a register of donors and computerization of the country's blood banks, with a view to ensuring a supply of safe blood and thereby avoiding the transmission of disease (**SDGs 3, 9, and 11**). The results include resource savings and immediate identification of the blood distributed to the country's various hospitals and industries. The project involves establishing a centralized register of donors for effective management of both donors and the distribution of blood and blood components, as well as the introduction of the Galen blood bank system in all blood banks. The system is directly linked to the central register module, enabling automated exchanges of information between blood banks, based on local management at each bank. Current work includes stepping up the replication of blood banks within the central register of donors in the *INFOMED* medical network.

Also in **Cuba**, the *Nephrology Network* manages nephrology services, initially focusing on chronic cases of kidney disease within the dialysis and transplant programme and the design of a donor/recipient compatibility process in the various areas of the national nephrology service. It also facilitates management of transplants, using real-time identification of compatibility of deceased donors with the characteristics required by a given recipient, thus relating to **SDGs 3, 4, and 10**. Other benefits include enabling the nephrologists in the national nephrology service to monitor chronic cases efficiently, through simple management of all the information on the patient concerned. The network also supports management of the status of all the nephrology services in Cuba and of information on the studies to be carried out on transplant recipients and donors (in the case of living donors).

Informatization of the Public Health System in Cuba contributes to the needs of a developing country in accordance with the government's policy to create a high-efficiency information system, responding to the healthcare requirements of citizens with high-quality and reliable health information. It promotes medical training, education and research through the use of ICT, the development of human capacities, and protection of the privacy of citizens (**SDGs 3, 5, 6 and 10**). The project has been developed over 15 years, allowing management of the health system at all levels, focusing on the early detection of diseases and promoting transparency in public administrations, and strengthening relations with citizens (**SDGs 11, 16 and 17**).

The National Digital Strategy from **Mexico** launched the *Prospera Digital* project that uses mobile technologies to promote digital inclusion and improve health outcomes for 7 million beneficiaries of the world's second largest conditional cash-transfer programme. With the generation of direct automated bidirectional SMS communication, Prospera Digital sends timely, personalized and targeted information to low-income pregnant women, promoting better-informed decisions to improve their behaviour and amplify social development. Prospera Digital enables beneficiaries to participate in five Mexican states in order to:

- receive relevant information about particular socio-demographic and health needs,
- provide follow-up
- reinforce the programme's required health co-responsibilities
- evaluate the quality of the health services received as part of the programme.

The website meets certain SDGs as it ensures quality healthcare services, achieves gender equality and reduces inequality in the country (**SDGs 3, 5 and 10**).



In **Peru**, infectious diseases can be contracted in places where invasive procedures are often performed without adequate precautions. The purpose of the *e-Prevention in LAC* initiative is to describe the achievements and impact of research training of the Alexander von Humboldt Institute of Tropical Medicine (UPCH), which has served as an incentive, motivation and guide for professionals requiring knowledge and dialogue skills to reflect on problems of e-health (**SDGs 3 and 4**). Furthermore, the project also describes how this knowledge generates a multiplying effect in scientific committees, online organization of courses and the creation and development of research lines, which generate publications by leaders. It also narrates didactic contents and strategies and concludes with practical applications of this training for teaching, research and institutional development. The experience of incorporating knowledge and skills can be used later in teaching and institutional work, as well as research in this discipline. The training received was reflected in various ways, but above all in a new form of doctor-patient relationship using technology.³⁸

³⁸ Project nominated for a WSIS Project Prize 2015



In the **United States**, Vecna has created *CliniPAK 360*, a simplified electronic medical record system that connects community, clinic and tertiary care with longitudinal patient records, case reviews and referrals, reporting and adherence tracking (**SDG 3**).

In the **United States**, the National Healthy Mothers, Healthy Babies Coalition has launched *Text4baby*, which is the only free mobile information service in the United States designed to promote maternal and child health (**SDGs 3 and 5**). Women who text "BABY" (or "BEBE" in Spanish) to 511411 receive three free text messages a week, timed to coincide with their due date or their baby's birthday, through pregnancy and up until the baby's first birthday. The messages address topics such as immunization, nutrition, birth defect prevention, safe sleep, and developmental milestones.

The **United States** company Dimagi Inc. developed *CommCare* to deliver better community health to millions throughout **India** (**SDGs 3, 9, and 17**). Dimagi is currently deploying mobile solutions to over 50 development organizations in the country. CommCare is an innovative health platform for community health workers that tracks and supports clients. It is the most widely adopted, technically advanced and evidence-based mobile platform in its field. To date, six of the organizations have scaled up their activities to over 600 community health workers serving over 42 000 beneficiaries.

In the **United States**, the project *Neurological disorders*, developed by Cognizant Technology Solutions, focuses on some of the leading causes of disability, few of which are curable and some of which lead to progressive deterioration (**SDGs 3 and 17**). Neurological disorders are an important cause of mortality and constitute 12 per cent of all deaths globally. According to current figures the cost of diagnosis of neurological disorders has been growing at an unsustainable rate. Prompt diagnosis at the onset of neurological disorders can expedite treatment, thereby aiding the neurologist. In view of the current rise in the numbers of individuals suffering from neurological disorders, a mobile-based Cloud application entitled "Fahaanda" has been created. Patients, doctors and hospitals can use Fahaanda to record videos of an individual's disability (depressive expressions, gait abnormalities, tremors, and so on) and then seamlessly upload the recording to the Cloud, while the analysis of the video uploaded to the Cloud can be conveyed by SMS. This reduces the cost and time required for initial diagnosis. Fahaanda also alerts its end users, using improvements to ICTs, and exploits ICTs to improve and extend healthcare and health information systems to remote and under served areas and vulnerable populations.³⁹

³⁹ Project nominated for a WSIS Project Prize 2015

A second project from the **United States** is the *Mobile Health Information System (MHIS)*, which delivers standard treatment guidelines and operating procedures, new protocols mandated by the South African Eastern Cape Department of Health, updates to existing clinical guidelines and other materials needed by health workers, via smartphones and tablets. Easy access to current, locally relevant, evidence-based information has helped clinicians to improve diagnosis, treatment and care (**SDGs 1 and 3**). The project is implemented by FHI 360 in collaboration with public, private, academic and civil institutions. The FHI 360 mission is to improve lives in lasting ways by advancing integrated, locally-driven solutions for human development.¹

¹ Project nominated for a WSIS Project Prize 2015



In the **United States**, *Jio Health* is a mobile platform that empowers consumers to track and manage their chronic conditions, connect with their care providers in meaningful ways and care for the ones they love. The goal of Jio Health is to provide consumers with seamless and open access to healthcare and care providers with a platform to manage larger patient populations with lower costs and better clinical outcomes, thus meeting **SDG 3** – achievement of health coverage, access to quality essential healthcare services, etc.

In **Uruguay**, 99 per cent of children receive their *Electronic Born-Alive Certificate* with a unique identification number right after they are born (**SDGs 3 and 9**). An online application has been designed to issue electronic born-alive and death certificates, generating a vital statistics database. When the professional attending the delivery signs the certificate electronically, the system connects to the National Directorate of Civil Identification (DNIC) and sends information on the mother and child; the DNIC assigns a unique child identification number, which is shared with the Civil Registry to issue the birth certificate. The child's medical history is opened with that identification number. The improved opportunities for and quality of children's clinical records, along with safe and early universal access to a unique legal identity, have resulted in great progress towards achieving the MDGs.⁴⁰

Since 2011, some 99 per cent of children born in **Uruguay** have an electronic “born alive certificate” with a unique identification number right after they are born. An online access application designed to create electronic medical live-birth and death certificates generates a vital statistics database and

⁴⁰ Project nominated for a WSIS Project Prize 2014

is named “*Interconnection and Modernization Programme for the Registration and Civil Identification of Physical People and Generation of Information for Vital Statistics in Uruguay*” (SDGs 3). When the professional who attends a delivery signs the certificate electronically, the system connects to the National Directorate of Civil Identification (DNIC) and sends the mother’s and child’s information, receiving from the DNIC a unique child identification number which is shared with the Civil Registry to create the birth certificate. The child’s medical history is opened with that identification number.⁴¹

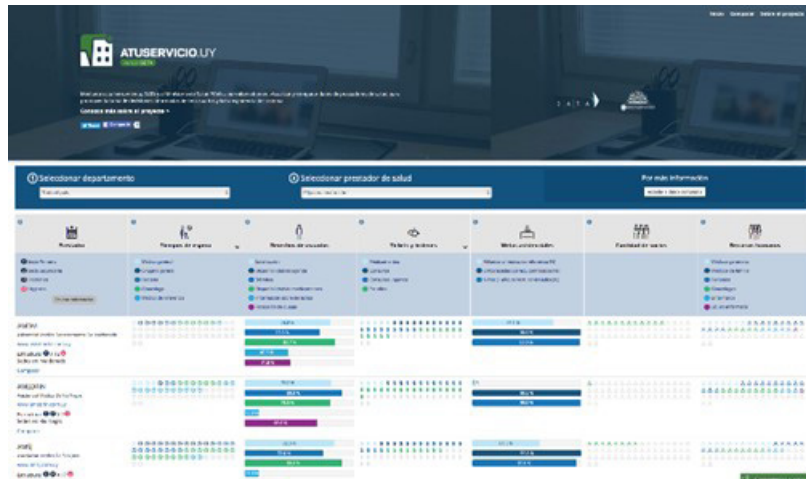
In **Uruguay**, *Connectus Medical* is a global network platform for the coordination of hemodialysis centre sessions for patients with CKD (chronic kidney disease). Connectus includes nephrology medical charts already incorporated in the database. It gives patients travelling abroad the possibility to choose freely the centre at which they want to have their hemodialysis effected. Besides indicating the centres in different countries, Connectus also coordinates the hemodialysis, providing direct access to the best hemodialysis centres covering the costs of the treatment through various prepaid plans. The platform also has different prepaid plans for patients requiring hemodialysis, offering them more accessible fees.

Relating to international implementation, the website contributes to ensuring healthy lives and equitable quality education, as well as reducing inequality within and among countries (SDGs 3, 4 and 10).



Another project from **Uruguay**, relating to **SDG 3**, provides the possibility to compare different health service providers. With the *ATuServicio.uy* (*At Your Service*) website, offering a visualization and comparison tool, the number of people accessing the performance indicator data increased by 6.8 per cent. It was very well received by the public, and spawned several small investigations in the local papers and public debate on health data, with the participation of politicians, press and government authorities. Broad accessibility identified errors and improved data quality, with health providers showing concern for the first time regarding the quality of their data.

⁴¹ Project nominated for a WSIS Project Prize 2015



The IMARK *Maximizing information and knowledge* by the Inter-American Institute for Cooperation in Agriculture for Development is an international initiative that increases competitiveness in the rural sector by improving the abilities of information managers and promoting knowledge sharing (**SDGs 1 and 17**). It offers free e-learning courses in ICT-related areas in order to increase the levels of skills and competences required for economic and social advancement of developing countries. Knowledge and information sharing approaches should be adopted as part of institutional strengthening, capacity development and use of ICT programs, with special attention to developing countries and especially LDCs with different levels of sustainable development. IMARK learning resources are provided free online and offline in different languages.⁴²

E-learning

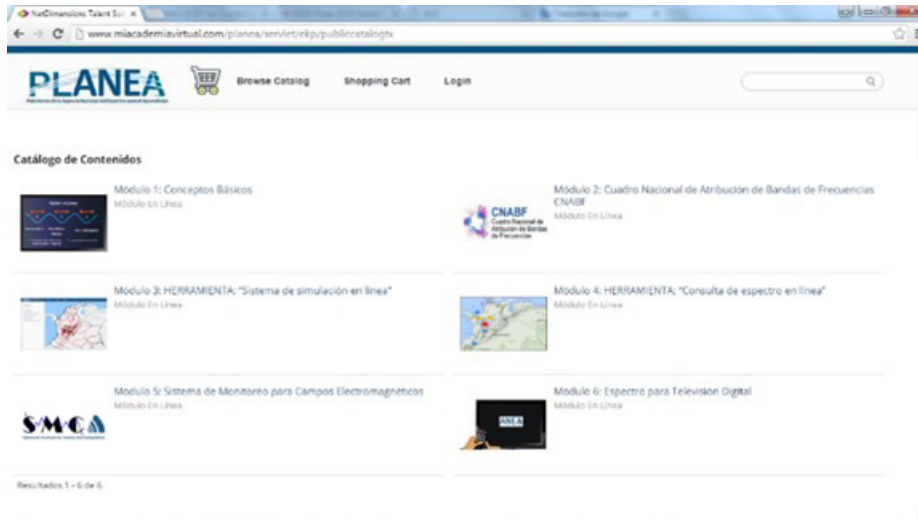
In **Canada**, the project *Youth-led Enterprise and Development*, developed by the Department of Foreign Affairs, Trade and Development, aims to support 88 000 young African women and men to lead economic change in order to create new enterprises, raise individual and family incomes, and augment access to business development services and capital in Ethiopia, Kenya, Rwanda, Tanzania and Uganda (**SDGs 4 and 8**). The project contributes to enhancing the employment skills of young women and men, increasing the number of emerging and developed community-based socio-economic enterprises; and enhancing the delivery of economic development and working-readiness programmes by the Digital Opportunity Trust’s (DOT) local partners and the community-based organizations with which they work in this project. DOT works in partnership with DOT Ethiopia, DOT Kenya, DOT Rwanda, DOT Tanzania and DOT Uganda. This project is implemented by DOT and co-financed by the MasterCard Foundation.⁴³

In **Colombia**, the *PLANEA spectrum e-learning platform* is a tool, launched and managed by the National Spectrum Agency (Agencia Nacional del Espectro – ANE), that allows people of all regions of the country (even more remote areas), and deaf people, to access knowledge about the spectrum – what it is, its impact on the lives of citizens – and to obtain information on the installation of antennas and electromagnetic fields. The courses on the platform were chosen according to demand on the part of citizens (based on polls and comments). The platform may be updated to include courses required by stakeholders in the future.

It provides equitable education and ensures access to knowledge (**SDG 4**).

⁴² Project nominated for a WSIS Project Prize 2015

⁴³ Project nominated for a WSIS Project Prize 2015



In **Cuba**, several stakeholders contributed to the development of e-learning tools **SDGs 4 and 10**:

- The *New university management system* (SIGENU) project was implemented in 2004 for the integrated development of basic process automation in higher education, aimed at raising the quality of university management. It comprises individual modules which are developed, commissioned and implemented by multidisciplinary groups of specialists from various universities. It includes systematic training of personnel involved in university processes and of senior managers. The project has enabled complete digitization of enrolment, recording of academic results, salaries, student-related organizational information and other processes. It provides decision-support information in the area of development policy to various national and local authorities, and even to other organizations.
- *Virtual laboratories* were created to serve as education platforms in every university. There are currently over 200 virtual laboratories, which support interactive simulations and virtual modelling of various processes and items of equipment. The laboratories are mainly used for courses such as technical science, psychology, chemistry and biology.
- The “*My Moodle Course*” programme was developed to support courses in the various disciplines, while also providing a platform for interacting, publicizing, assessing and enabling lecturers to monitor the performance of students and customize their approach.

The *Digital Inclusion and Literacy Pilot Program* in **Mexico** began by bringing together various stakeholders in the IT industry and education sector in order to present solutions that would take into account the digital ecosystem (connectivity, training, content, assessment, support and infrastructure) necessary for the effective introduction of tablets in selected public schools of three Mexican states (**SDGs 4, 9, 10, and 17**). The tablets and supporting infrastructure were donated by various industry participants without cost to the government and were then given to students and teachers in the fifth and sixth grades. The pilot programme had two main objectives:

1. The development of digital capabilities to promote competences including:
 - Collaboration
 - Critical thinking
 - Communication skills
 - Self-management.
2. The generation of indicators and models that contribute to digital inclusion and public literacy policy. As stated above, collaboration is the bedrock on which the pilot project has been built. In particular, it has brought together the Ministry of Education and the National Digital Strategy

Office on the government side with various representatives of the IT industry (both those providing hardware and those supplying content), as well as non-governmental organizations and various international organizations. Each of these sectors provided important insights and contributions during the pilot project.⁴⁴

The University program 3.0 - the impact of the immersive virtual reality and the information technologies on education and museums in Northern Mexico, also known as *University 3.0* initiative in **Mexico**, has shown convincingly that progress is being made with regard to one of the biggest current educational challenges and the new technology paradigms (**SDG 4**). The younger generations have considerably changed in recent years in terms of customs, time management, social interaction and communication processes. They are more visual, spend a good deal of time online, lose interest easily, and look principally for ways of having fun. A mixture of technology and education will be the way forward to the new ways of learning, but this process is experienced not only by students: teachers and institutions are also involved, and developing new ways of teaching is the major challenge for them.⁴⁵

Two projects from **Mexico** aim to offer quality education in the country (**SDG 4**).

The *MéxicoX platform of massive open online courses (MOOCs) programme* is an online platform led by the Ministry of Education and the National Digital Strategy. The main objective of this project is to offer free MOOCs and spread access to education to the entire Mexican population (**SDG 4.3**). The platform uses the Open EdX code developed by Harvard University and the Massachusetts Institute of Technology (MIT). The six major strategic lines covering the content of the courses are:

- Fundamental academic skills
- Specialized skills
- Teacher training skills
- National challenges
- Global challenges
- Promotion of art, culture, history, science and enjoyment of knowledge.



In 2012, high-school level education became compulsory in **Mexico**, but yearly drop-out rates are high on account of demographic, economic and social issues. The National High School Online Service (Servicio Nacional de Bachillerato en Línea) initiated the *Prepa en Línea-SEP* project, which is an officially recognized, inclusive, nationwide project which aims to provide a free virtual high school for everyone, allowing students to develop skills through the use of ICT. The programme currently

⁴⁴ Project nominated for a WSIS Project Prize 2015

⁴⁵ Project nominated for a WSIS Project Prize 2015

has 52 589 students from all states, of whom 2 507 have a disability. To attend the students, 1 500 facilitators and tutors are employed in order to offer a personalized service.



In the **United States**, the *Solar Powered Educational Learning Library (SolarSPELL)* is a digital library over an off-line Wi-Fi hotspot, designed to simulate an online experience. The goal is to increase literacy and support education in all subject areas by providing access to books, videos and other valuable educational content through an offline digital library, including content specifically curated for the Pacific Islands (**SDG 4**). Making use of open educational resources and ever-smaller and more efficient technology, SPELL provides an all-in-one, self-powered plug-and-play kit, ready to be deployed with absolute minimal training or maintenance required for start-up and continued operation.



In **Uruguay**, *Scratch MOOC 4 Teens (SM4T)* is a pioneering joint initiative launched by Universidad ORT Uruguay and Plan Ceibal (Uruguay's one laptop per child- and per teacher for public schools and high schools in the country- programme) to provide *massive open online courses (MOOCs)*, especially designed for teenager high school students. The project supports **SDGs 4 and 10**, and aims at promoting the development of procedural thinking and problem-solving skills through learning the basics of computer programming, and later at building applications (videogames) using the Scratch tool, a programming language designed for young people developed by MIT's Media Lab.⁴⁶

⁴⁶ Project nominated for a WSIS Project Prize 2014

In **Uruguay**, *Ceibal en Inglés* is an educational programme designed for teaching English to Uruguayan primary-school children (**SDG 4**). A new pedagogical model has been developed which consists of a blend of face-to-face and remote team teaching and adopts an innovative use of high definition videoconference technology that enables remote teaching in real time. The programme has been designed to tackle a problem in Uruguayan education – an acute shortage of English teachers. It is based on the conviction of primary school teachers that learning English will have a positive effect on the future of their students.⁴⁷ In **Uruguay**, the *Information System for the National Administration of Public Education (Sistema de información para la Administración Nacional de Educación Pública)* – *GURÍ* aims to implement an information system that allows the unified management of all records for the National Administration of Public Education (ANEP/CEIP). GURI allows ANEP to have a reliable database of children and teachers, enabling access to better information (**SDGs 1, 3, 4, 10 and 16**). In consequence, it makes it possible to:

- have statistics at national level and in real time
- achieve traceability of all the students in the country, their grades and their attendance
- reduce times and improve the response to information requests
- save time in administrative tasks carried out by teachers



E-agriculture

The FAO *disaster preparedness project* for the **Dominican Republic, Haiti and Jamaica** was launched in 2011 and completed in April 2013. The FAO Communication for Development team supported the project by designing and implementing communication strategies and local information and communication plans (ICP) for community-based agriculture disaster risk management (ADRM); thereby contributing to **SDGs 3, 4, 13, and 17**. ICPs were implemented to support, *inter alia*, participatory livelihood assessments and awareness raising, community-based early-warning systems for fishing communities, and documentation and sharing of ADRM practices. The whole process was documented in short videos and a photo series. Good practices were also recorded in video and community photo albums to be used to share experiences between farmers and fishermen. The main objective of the ICP activities is to support the design and implementation of community ADRM plans documenting location-specific good practices and technologies, and to facilitate local planning and knowledge sharing at the community level. The Dominican Republic in particular had a fruitful experience applying new ICTs to improve community-based early warning and to enhance knowledge exchange: SMS sent via mobile phone were used to provide timely alerts to fishing communities (see

⁴⁷ Project nominated for a WSIS Project Prize 2015

the project manual on the use of SMS at <http://taigüey.org/fao/Manual-SMS-GDRA.pdf>, available in Spanish only), and a web-based platform was launched for the exchange of knowledge and practices between communities at local level (<http://buenaspracticas.socialgo.com/>). Both ICT tools are still functioning in the six Dominican Republic communities that participated in the project.

In **Central America** and the **Caribbean**, FAO, in partnership with national governments and academic and research institutions, has started to implement an Internet-based *Forestry Education Platform* that will integrate private-sector research and academic and traditional knowledge in the field of forestry (**SDGs 3, 4, 8, and 17**). The platform will share online, free-of-charge forestry knowledge and information from Central America and the Caribbean.

In **Argentina**, the project *tambero.com* is a free tool that helps farmers to improve their livestock, dairy and crops with information on any digital device, including mobile phones and old computers (**SDGs 1, 3, 8, 12, and 17**). Farmers distributed in 150 countries receive customized alerts and recommendations of work, helping them to increase their production based on the application of data analytics, modern best practices and science.⁴⁸

In **Cuba**, the *Urban and Suburban Agricultural Portal* aims to provide an interactive tool to stimulate communication among producers (**SDGs 4 and 8**). The portal enables producers to report their results and researchers to publish scientific articles, manuals and other publications as a means of contributing, via this alternative route, to the training of national and international producers. Thanks to this tool, the situation in Cuba is advancing and Cuban urban and suburban farming is being promoted.

In **Cuba**, the *information system for integrated and sustainable management of land and soil* is a project that aims to create an integrated information system facilitating control of land use, conservation and soil improvement (**SDGs 2, 3, 4 and 13**). It is designed to contribute to decision-making in the fields of tenancy and sustainable land use and management. The system's basic data will provide general information about land (e.g. registration, territorial planning, vulnerability and risk) as well as details of the soils, nutritional status, coefficient of exploitation, conservation and improvement measures, water resources, tree coverage and areas with special characteristics. The system will support work relating to the balance between land use and tenancy, and controlling that balance; calculation of the land exploitation ratio; selection of land for specific agricultural purposes; categorization of soils according to various scales; and sustainable land management. It will ultimately be available across all of Cuba's municipalities, thereby ensuring that essential basic information is available to the entire small-farm sector, with a view to supporting sustainable food production nationwide.

In **Trinidad and Tobago**, with respect to developing a competitive, technologically advanced agriculture sector which is also integrated with other economic sectors, the University of the West Indies (St Augustine Campus, Trinidad and Tobago) has embarked on the *AgriNeTT project (SDG 2)*. This is a multidisciplinary collaborative effort undertaken by the Faculty of Science and Technology and the Faculty of Food and Agriculture at the University of the West Indies, together with farmers' representatives and the Ministry of Food Production and other stakeholders, with the aim of increasing food production through collaborative ICT research and development. The AgriNeTT team is currently building mobile apps and web-based applications that can assist farmers and policy-makers. With a view to addressing the data gap, an open data repository has been developed to house agriculture data on a national level. The repository will house different data sets from institutions and associations, including farm level production data, commodity prices and volumes, farm land spatial data, and data on soils, weather and pest and disease tracking. The open data platform is available at <http://data.tt> and <http://maps.tt> (for spatial data). The primary data sets on the site are daily commodity price data. An app called AgriExpenseTT is available for download on Google Play. The app assists farmers in recording crop expenses on the go and monitoring the cost of production per unit harvested.

⁴⁸ Project nominated for a WSIS Project Prize 2015

The University of the West Indies in **Trinidad and Tobago** developed the *Increasing Food Production through ICT Research and Development (AgriNeTT)* project, focused on the agricultural sector and addressing two major problems:

- Lack of data at the farm and national levels
- Lack of ICT tools for farmers and policy-makers.

Thus, the project aims to develop a tool-box of applications (mobile and desktop) for use by farmers and policy-makers. Four mobile applications have already been developed. In order to resolve the first problem, the project provides a solution that centres on two open data platforms. This distributed approach provides great flexibility in the publication and curation of data.

Hence, the project contributes to achievement of **SDG 2** by ensuring sustainable food production systems.



The **United States** Department of Agriculture (USDA) *integrated information system for the State Plant Health Service* is a project aimed at creating an integrated information system providing scientific/technical and methodological support to the State Plant Health Service, mainly in terms of plant-disease diagnosis, the introduction and production of biological agents, the introduction of integrated pest-management programmes and the monitoring of pesticide quality and residues (**SDGs 2, 3, 4, and 8**). The beneficiaries will be farmers in the various sectors of agrarian production, who will be helped to prevent and reduce losses caused by pests at the smallest possible risk to the environment and on a sustainable basis.

Climate change poses great risks to the well-being of communities by increasing the frequency and intensity of severe weather events such as droughts, floods and landslides. FHI 360, from the **United States**, is working in Uganda's "cattle corridor", a region prone to prolonged and severe droughts that lead to low water flows and diminishing groundwater levels, to minimize the negative impact of climate change (**SDGs 13 and 17**). In the cattle corridor, inadequate water for agriculture, animal husbandry and other domestic uses is the primary cause of reduced productivity, which can breed sociopolitical conflict among communities. The *Climate Change Adaptation and ICT* project is notable for using mobile and wireless technology to strengthen the capacity of individuals, communities and institutions in the cattle corridor to adapt to the water-related impact of climate change.⁴⁹

⁴⁹ Project nominated for a WSIS Project Prize 2015

In **Uruguay**, the objective of the *National System of Livestock Information* (SNIG) is to ensure the traceability of bovine livestock, as from the animal source (industry individual and group), in accordance with the provisions and regulations of the Ministry of Agriculture, Livestock and Fisheries (MGAP); therefore supporting **SDGs 3, 4, and 8**. One of SNIG's two key strategies is to improve the current system of group traceability of the Livestock Control Office (DICOSE), by incorporating new technologies. This process is part of the present regulations and involves no changes in current operations. The territorial distribution of the livestock population, and the details of their movements, is a fundamental factor from the health point of view. This is why SNIG has a fully integrated geographical information system that uses the information collected in the Annual Affidavits and Property Guides and Transit to locate each establishment registered with DICOSE on the map, and display the source and destination of each movement by date, species and category. This technology has rapidly shown good results for both operational and strategic decision-making.¹

¹ Project nominated for a WSIS Project Prize 2014

E-environment

Argentina advanced the *E-Basura/E-Waste: ecological approach to the digital age* project, which is a university extension project that transforms the problem of e-waste into a tool to serve the community, demonstrating the benefits that can be achieved educationally, socially, environmentally and economically. Refurbishing obsolete computer equipment and subsequently donating it to social institutions helps to reduce the digital divide, benefiting the environment by extending the lifecycle of electronic equipment. The project disseminates initiatives in the community that promote and encourage the development of green-ICT capabilities among university students and society in general, creating environmental awareness. It also contributes to reducing the social gap through its School of Crafts in Repairing PCs aimed at underprivileged citizens.

Thus, the project integrates research, teaching and university extension relating to **such SDGs as 4, 8, 10, and 13**.



In **Barbados**, ITU organized the forum on *Emergency Telecommunications and Climate Change* for the Caribbean region. The event brought together national agencies involved in disaster risk reduction and disaster management, private telecommunication entities, United Nations agencies and NGOs to share knowledge, discuss and exchange views on how to assist countries and communities to mitigate, respond to and cope with natural disasters⁵⁰; therefore supporting **SDGs 13, 15, and 17**.

The *Bogotá Environmental Observatory*, **Colombia**, is a space that allows citizens to ascertain, through environmental indicators, the state and quality of the environment in Bogotá, as well as the results of management on the part of various entities of the Capital District Environmental System (SIAC) in dealing with the environmental problems of the capital district. It is a tool for democratizing environmental information, as it integrates multidimensional indicators of development, resources and environmental management issues.

The project thus contributes to ensuring healthy lives for the Colombian people, and the economic development of the country (**SDGs 3, 8**). It also ensures sustainable consumption and production patterns, makes cities inclusive, safe and resilient, and takes urgent action to combat climate change and its impacts (**SDGs 11, 12, 13**).

⁵⁰ Ibid, p.63



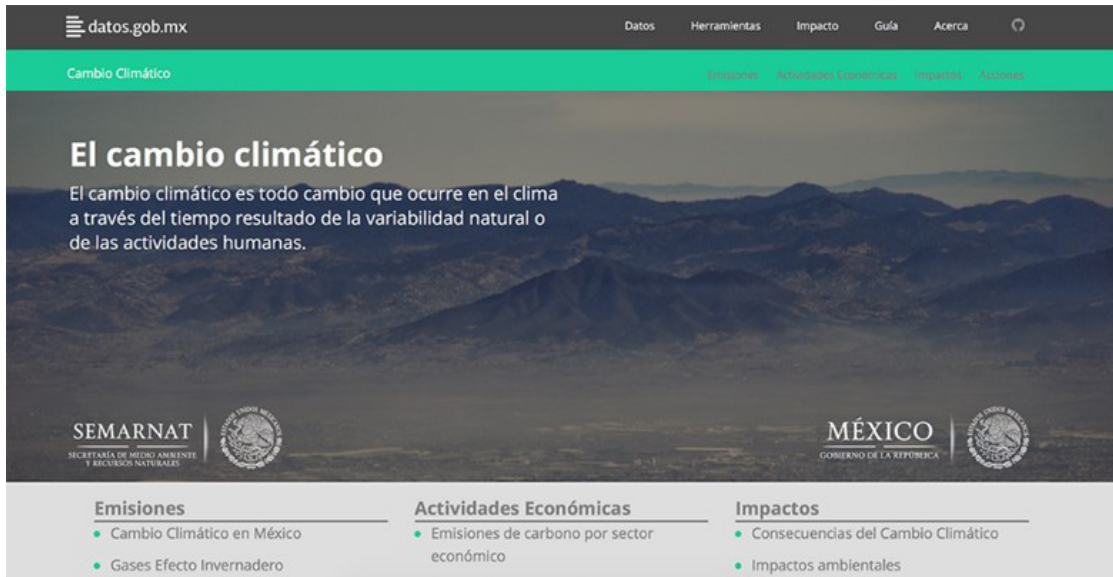
The first **Central American** workshop for *Capacity Building on Environmentally Responsible Management of Waste Electrical and Electronic Equipment (WEEE)* was organized by ITU, the United Nations Environment Programme (UNEP) (Secretariat of the Basel Convention for Central America and Mexico), the Partnership for Action on Computing Equipment (PACE), the Central American Commission for Environment and Development (CCAD) and the Ministry of Environment and Natural Resources (MARN) of **El Salvador**. The outcome of the event was the *Central American and Caribbean Agenda for Environmentally Sound Management of Waste Electrical and Electronic Equipment (WEEE)*⁵¹ (**SDG 13**).

Last summer, the National Digital Strategy of **Mexico** partnered with the National Weather Agency to redesign public alert processes for extreme hydrological events in Mexico, of which there are more than 20 annually. The project *Leveraging web and mobile platforms to broadcast disaster alerts* has streamlined the meteorologists' workflow in order to generate and publish bulletins "automagically" in open formats following the Common Alerting Protocol, enabling third parties to broadcast alerts to a larger audience (**SDGs 9 and 11**). After a couple of months, a live test took place in September for Hurricane Odile, which received great feedback from citizens and quickly became a new paradigm for reaching out to the public in extreme weather events⁵².

The Government of **Mexico** developed an *Open Data Climate Change Tool*, fed by 50 priority datasets, in order to illustrate and put into context climate change, its consequences, and actions that can be taken by citizens and the government to reduce emissions (**SDG 13**). The tool will be complemented by a public challenge open to innovators and SMEs in Mexico, for the development of an application for the general public to count and reduce their emissions by promoting behavioural changes in their daily lives.

⁵¹ Tracking four years of achievements: Implementing the Hyderabad Action Plan, p.63: http://www.itu.int/en/ITU-D/Conferences/WTDC/WTDC14/Documents/BD_E__ITU%20HAP_report_inside.pdf

⁵² Project nominated for a WSIS Project Prize 2015



The CICESE Research Center in **Mexico** argues that the elements (subsystems) of a telecommunication system cannot be seen in isolation or be conceptualized only as infrastructure. Hence, a fragmented approach limits the effectiveness of telecommunication systems for disaster relief and recovery. The complexity of the disaster scenario makes it necessary to develop new strategies in order to respond efficiently and in a timely manner to humanitarian needs when disasters occur. The Center proposes a *Complexity Science Approach of Emergence Telecommunications for Managing Disasters* process as a socio-technical system in which the main agents of the ecosystem interact in such a way as to respond to disasters in a coordinated and orchestrated manner using telecommunication technology as an important enabler. Different Mexican government institutions have been contacted to work together in establishing a framework for responding in a timely and effective manner using telecommunication systems.

This project may contribute to sustainable development by providing support to municipal entities to cope with the issues involving the management of disasters and their associated implications and risks prior to, during and after the disaster occurs (**SDGs 3, 9 11, 13 and 17**).

E-science

In **Cuba**, since 2008, *education technology laboratories* have been established in 17 universities, with the space and technical resources needed for designing, producing and replicating local teaching materials, systematically assessing the quality of teaching aids being developed in the centre for other areas, and training lecturers to participate effectively in the development of teaching aids for the various subject areas. Therefore, this initiative contributes to **SDG 4**.

C8. Cultural diversity and identity

The “*Centro de Relevo*” (Relay Centre) in **Colombia** is an initiative designed to integrate hearing-impaired individuals within society, enabling them easily and independently to communicate and exchange information with others on a daily basis (**SDGs 8, 11, and 12**). The Centro de Relevo is based on an interactive online platform that works as a bridge to enable hearing-impaired citizens to contact hearing people or institutions.¹

¹ Project nominated for a WSIS Project Prize 2015

In **Colombia**, the Ministry of Information and Communication Technologies, together with the National Federation of Deaf People (FENASCOL), created the *Relay Centre (Centro de Relevo)* – an initiative designed to include deaf people in society by enabling them to easily and independently communicate and exchange information with hearing people on a daily basis. The Centre is based on an interactive online platform that works as a bridge to make it possible for deaf citizens to contact hearing people or institutions. Deaf citizens access the platform via the Internet, from computers or smartphones, and communicate with sign language interpreters who take the message in sign language and transform it into a spoken message for the hearing person on the telephone, and then sign back to the deaf user in order to complete the loop. Moreover, this service is free for users and operates from 6 am to 10 pm every day.

This solution enables deaf people not only to communicate with their friends or relatives, but also to have access to government services, book medical appointments, change flight bookings, coordinate meetings and have access to information, thus participating in building a sustainable society, promoting the economic development of the country and enhancing capacities for participatory and sustainable urbanization (**SDGs 11 and 16**).



The ECURED *Cuban Collaborative Encyclopedia Website* is an online, open-source encyclopaedia project in **Cuba** based on a MediaWiki engine (**SDG 8**). It is the Cuban website that receives the most visits- an average of 129 000 per day. It is open to collaboration by Cubans and foreigners. The website holds 108 000 articles on an extremely wide range of subjects, produced by its 14 000-plus contributors. With a view to facilitating access, there are offline portable versions for PC and mobile phones that do not require web access, and a TV course of 15 class hours has been staged.

Also in **Cuba**, the CUBARTE *Portal of Cuban culture* was created to promote and disseminate information about Cuban culture via the Internet (**SDG 4**). It constitutes a virtual reference centre, promoting and displaying, in Spanish, English and French, distinguishing elements of Cuba's cultural heritage as well as the latest expressions of traditional popular culture. It is organized by theme: music, visual arts, stage arts, the written word, film, heritage, community and the teaching of art. The portal provides a gateway to over 800 websites about Cuban culture. Among other functions, there is a news and information service, including directories, events, entertainment guides, downloads, galleries of photographs, audio clips and videos.

Literature for children and young people is a priority task in **Cuba**, and one which over the years, through various cultural facilities, has helped to develop an enjoyment of reading among children and young people, as well as developing individual creativity (**SDGs 4 8, and 12**). Cuban children enjoy reading as a recreational and informative task, and authors and books create bonds between them, with their needs and interests, and their library. The *José Martí National Library* works to help not only the country but the world in providing better care for this group, to complement their education, and greatly benefits education.⁵³

In **Mexico**, some 53.3 million people were living in poverty in 2012. That figure included 11.5 million in extreme poverty. Persistent inequality is reflected in various gaps between segments of the population. To meet these challenges, the government is implementing a new social policy that seeks to give effect to the social rights of all Mexicans. In this regard, and in the framework of building an open government, the government, with the aim of democratizing information access, presented the *Social Programmes' Guide for Inclusive Information Access to Social Programmes* (**SDGs 1, 10, and 16**), which presents detailed information on each social programme, in the following forms: 1) in 22 native languages; 2) in audios and videos for the 22 native languages; 3) in sign language; 4) in Braille. In Mexico, there are more than 2.7 million hearing- or visually-impaired people. In this regard, the project enabled the exercise of conscience, conviction and equity, to prevent discrimination and exclusion, reaffirming one of the decisions of President Enrique Peña Nieto to pursue the goal of achieving an Inclusive Mexico.⁵⁴

⁵³ Project nominated for a WSIS Project Prize 2015

⁵⁴ Project nominated for a WSIS Project Prize 2015

Bridge Africa is a non-profit organization based in the **United States** that launched the *Connectivity is Productivity* project in order to help communities in **Cameroon** create and access online content despite their digital barriers such as access to the Internet. Additionally, the programme reinforces their digital literacy through face-to-face direct educational training. There are 4.2 billion people who do not have access to the Internet, and who as a result create very little online content. The six-month pilot programme based in Yaoundé, Cameroon, helped people create websites and strengthen their ICT-based education. First, the bridgeafrica.com communications platform was set up to help people create websites and access information regardless of whether or not they have Internet access: see the video on text application, youtube.com/watch?v=bdntN3gcfwQ, as well as a demo: youtube.com/watch?v=wTyQHMBmRes. Additionally, Bridge Africa educated 5 000 people on how to utilize the platform and the Internet through face-to-face training. See the pilot: youtube.com/watch?v=Hy-kDuGrdX0.

The Connectivity is Productivity project fully meets **SDG1** as it ensures that all men and women in Africa, in particular the poor and vulnerable, have equal rights to ICTs and economic resources, access to basic services, etc. The project makes a significant contribution to ending poverty in all its forms in Africa.



C9. Media

In **Canada**, Accessible Media Inc. (AMI) launched *Described Video Best Practices* (DVBP) for the Canadian broadcasting industry (**SDGs 4 and 9**). The intent of these best practices, outlined in a series of artistic and technical guidelines, is to bring consistency to the provision of described video (DV) in Canada. The artistic guidelines divide major topics into relevant categories, with recommendations to provide direction to those writing DV descriptions. The technical guidelines provide direction to those creating the final product of post-production DV description, by detailing protocols to be followed. With input from industry, and through public consultation and community advocacy groups representing blind and low-vision Canadians, these best practices will work towards ensuring the availability of good quality DV description in Canada.⁵⁵

The project *Radio to Improve Production and Marketing for Farmers in Need*, developed by Radio Farm International and the Department of Foreign Affairs, Trade and Development of **Canada**, helps one million small-scale farmers in a number of African countries to raise their incomes and feed their families (**SDGs 8 and 9**). Small-scale African farmers are among the most vulnerable to hunger. Many factors contribute to this problem, but an important part of the solution is to share knowledge of how to increase profits from agriculture. This is achieved through radio programmes produced by community radio stations, with the participation of farmers and expert partners. By choosing the right planting materials, harvesting at the right time, processing and storing produce carefully, and negotiating with different buyers, farmers are able to earn more. The capacities of ten radio stations are enhanced to create programmes appealing to the farmers while sharing information that produces the greatest impact. Organizations involved in linking producers, buyers and national sector specialists, help to create relevant programmes. The local partner for the project is Farm Radio Malawi.¹

¹ Project nominated for a WSIS Project Prize 2015

Also from **Canada**, the project *Improving the Lives of Women and Children through Radio Dramas* contributes to improving maternal, newborn and child health, protecting children and preventing sexual and gender-based violence by supporting the production and nationwide broadcasting of radio serial dramas (**SDGs 5 and 12**). These dramas provide information, tools and resources to stimulate social change, raise awareness and improve the overall health and well-being of the audience. The dramas use characters and settings that reflect people's daily lives and current impressions of health and social issues. Produced in the most commonly spoken languages in the Democratic Republic of the Congo, these dramas use the country's most cost-effective and far-reaching mass media mechanism. The project promotes positive behavioral changes related to themes such as: immunization for all children and pregnant women; improving child nutrition; the proper use of treated bed nets to prevent malaria; child spacing and delaying marriage and childbearing to promote the health of mothers; birth registration; and positive behaviors for both women and men with regard to gender equality and HIV/AIDS prevention.

In **Colombia**, the Ministry of Information and Communication Technologies set up *Red Periodismo de Hoy*, an initiative to provide ICT training for journalists, which has become the biggest virtual journalism academy in the country; thus supporting **SDGs 4 and 8**. Through this technological platform, the ministry aims to promote freedom of expression, developing online training processes in the adequate use of technologies, for journalists all around the country seeking to build their capacities in order to enhance their journalistic output. *Periodismo de hoy* also promotes the responsible management

⁵⁵ Project nominated for a WSIS Project Prize 2014

of information in socially relevant domains, and constantly develops spaces in which discussions, forums, seminars, chats, hangouts and such like on aspects of journalism and digital convergence can take root.⁵⁶

In **Cuba**, the *CubaVa* web portal is designed to facilitate the exchange of knowledge among Cubans, using various computing products which support the production and management of content (**SDGs 4 and 12**). The facilities available to the *Joven Club* network's users include a blogging platform (*Reflejos*), a social network (*La Tendenedera*) and a noticeboard. In addition, a microblogging system (*Pitazo*) and an application to enable the exchange of personal videos and photographs are among other products and services under development.⁵⁷

Initiated in **Uruguay**, *Linguoo* is a smart and inclusive app for listening to narrated news and articles from the web through a global community. The community consists of narrators and developers in 58 countries, united in a global project to fight for more inclusive apps to access web content in a more humanized way than with text-to-speech. Linguoo is a multilingual platform functioning in decentralized mode whereby each narrator records articles from all over the world and uploads the audios to the platform. The articles are then available on smartphones through the Linguoo app.

The project fully meets a number of SDGs by providing the international community with quality information, providing the opportunity to study and develop inclusive societies, foster innovation, etc. (**SDGs 4, 9 and 16**).



⁵⁶ Project nominated for a WSIS Project Prize 2014

⁵⁷ Project nominated for a WSIS Project Prize 2014

C10. Ethics

Following the successful public consultation process that led to the approval of the Brazilian Internet Civil Rights Framework, the Government of **Brazil**, on 28 January 2015, launched an online open platform to discuss issues arising from that framework requiring further regulation, including net neutrality, custody of access logs, access data for purposes of criminal investigations and privacy issues. The open platform will also enable interested sectors to comment on the draft law on the protection of personal data, which is currently under consideration by the Brazilian Government (**SDGs 11, 16, and 17**). The process relating to *Public Debates on the regulation of the Brazilian Internet Civil Rights Framework and on the Draft Bill on Personal Data Protection* uses two distinct web portals through which all interested parties can submit their comments and suggestions. Social networks such as Twitter and Facebook are used to promote wide participation. The main objective of such public debates is to use a democratic and innovative process of compiling inputs from different sources to draw up legal documents that take into account the legitimate concerns of different segments of society.

Since 2011, *En TIC confío* – an initiative of the Ministry of ICT of **Colombia** – has promoted policies for the responsible use of the Internet among children and citizens, through digital and real environments. It confronts the enormous challenge of raising awareness and preventing risks on the web. The project has reached 100 per cent of Colombian towns through its website, its social media channels and more than 10 000 conferences open to the public at no cost.



Being widely spread, the programme achieves several SDGs related to ensuring healthy lives, inclusive and equitable quality education and the achievement of equality in the country and promotion of a peaceful society (**SDGs 3, 4, 5 and 16**).

In **Cuba**, *Estudios de Videojuegos y Materiales Audiovisuales* (EVIMA)- in English: Study of Video and Audiovisual Materials- is a Joven Club programme involving the development of video games with Cuban content that reflects ethical, cultural and historical values and extends to various technological media, including videogames for computers, consoles, tablets, cellphones and the web (**SDGs 3, 4, and 16**).

C11. International and regional cooperation

The *NETmundial* Global Multistakeholder Meeting on the Future of Internet Governance took place on 23 and 24 April 2014, in Sao Paulo, **Brazil (SDG 17)**. The meeting concluded by issuing the *NETmundial Multistakeholder Statement*, which is a bottom-up, non-binding outcome.⁵⁸

Launched by the Youth for Sustainable Development Foundation in **Canada**, the *Inspired Generations (IG)* programme aims to draw up a list of approved and certified projects being carried out by local stakeholders, including young people, in the interests of sustainable development. The IG programme initially mobilises all the local key stakeholders to make a diagnosis at the subnational level, then to establish a multistakeholder local committee for sustainable development (LCSD). This LCSD proposes a common long-term sustainable development strategy allowing for the certification of a list of projects that respond to the identified priorities, are accepted by civil society and will be supported during their implementation. This process also lays emphasis on project durability while facilitating the development of public-private partnerships for sustainable infrastructure projects.

Already established in Madagascar (three LCSDs), Comoros (two LCSDs), Seychelles (one LCSD) and Zanzibar (one LCSD), the project meets **all SDGs** related to the WSIS action lines, achieving them at the local level.



The eLAC2015 initiative from **Chile** is a long-term vision plan based on the Millennium Development Goals (now **SDGs 8, 10, and 17**) and WSIS objectives, according to which ICTs are instruments for economic development and social inclusion. The project was approved in November 2010 at the third Ministerial Conference on the Information Society in Latin America and the Caribbean, in Lima, Peru. During the fourth Ministerial Conference on the Information Society, held in April 2013 in Montevideo, Uruguay, governments of the region adopted the Montevideo Declaration and the 2013-2015 Work Plan for the eLAC2015 implementation of a *Plan of Action for the Information Society in Latin America and the Caribbean*.⁵⁹

The *Informatics International Convention and Fair* is held in Havana, **Cuba**, every two years. The purpose of the event is to stimulate exchange of experience and information between professionals, scientists, engineers, businesspersons, exhibitors, representatives of governments and international organizations and the general public, interested in researching, promoting, analysing and keeping abreast of advances in the fields of information technology, telecommunications, electronics, geomatics, medical technology, e-commerce and present-day automation (**SDGs 8 and 17**). The theme for the 2013 event encompassed regulation in the telecommunication and IT sectors, security

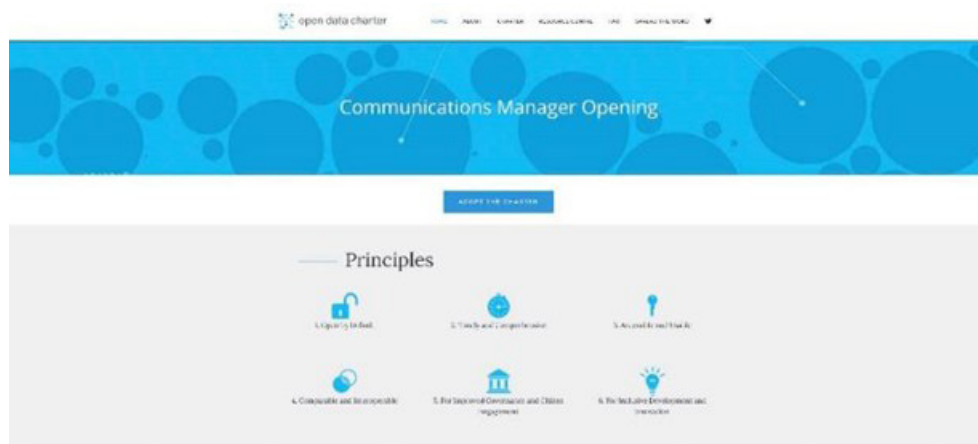
⁵⁸ <http://netmundial.br/netmundial-multistakeholder-statement/>

⁵⁹ Project nominated for a WSIS Project Prize 2015

of ICTs and open-source platforms and applications, energy and the environment in ICTs. The 2013 event was attended by 1 888 participants, of whom 1 350 were Cuban and 538 were foreign.

In **Cuba**, the *National Computing Competition* is held annually. Between 40 and 60 papers from Cuban universities are presented. The *National Forum of Technical Sciences Students*, of which there have been 20 sessions, is held twice a year and always includes a computing committee which reviews more than 40 papers. In addition, jointly with the Cuban Mathematics and Computation Society, students have for several years been encouraged to enter the *Association for Computing Machinery (ACM) - International Conference on Computing and Mission (ICCM)* competitions (**SDGs 4 and 17**).

In **Mexico**, the National Digital Strategy led a global consultation with experts from governments, civil society, multilateral organizations and the private sector to develop the *International Open Data Charter*, a set of fundamental principles for greater coherence and collaboration between open data initiatives around the globe. To date, 18 governments and 15 organizations have, respectively, adopted and endorsed it. Members of the Charter are working on an Anticorruption Open Data Package and a Climate Change Open Data Package that were released for public comment in the G20 and COP21, respectively, to identify key datasets and potential use cases to promote the creation of impact in these sectors, thereby establishing a linkage with **all SDGs** of the WSIS action lines.



Since 2008, the Government of **Trinidad and Tobago** and the eBusiness Roundtable, a private-sector-led public-private partnership (PPP), have been hosting the biennial ICT Business and Innovation Symposium, most recently in November 2014. It brings together international and regional ICT experts to discuss trends in ICT development (**SDGs 9 and 17**).

Conclusion

The International Telecommunication Union (ITU) remains committed to the World Summit on the Information Society (WSIS) process, and to implementation of the WSIS goals beyond 2016. ITU recognizes and highly appreciates the extremely valuable contributions made by stakeholders to enable the continuation of WSIS monitoring and reporting. There can be no doubt whatsoever that, in today's fast-moving world, innovation and efficiency are vital to success. Accordingly, the WSIS Stocktaking Report in the Americas Region 2014-2016 shares with you the most recent updates and success stories in the WSIS stocktaking process of this region.

The Web 2.0 WSIS Stocktaking Platform continues to foster implementation of the WSIS outcomes and to facilitate exchange of information among 200.000 members representing governments, the private sector, international organizations, civil society and other stakeholders. As the Web 2.0 platform continues to flourish, so does the promotion of social development and economic growth through ICTs. We continue to maintain and improve the WSIS Stocktaking Database, which contains around 8 000 entries this year. This encouraging outcome reinforces stakeholders' belief in and commitment to the WSIS Stocktaking process and their desire to share best practices.

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

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

ITU announces an official call for updates and new entries and urges these stakeholders, along with all Member States, international organizations, the private sector and civil society, to continue submitting such contributions in the future as WSIS pursues the ongoing stocktaking process. We trust that readers will find this report insightful, and sincerely hope that it will inspire them to participate in the construction of a broader and more inclusive information society for all.

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