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World Summit on the Information Society (WSIS)
WSIS Stocktaking Process



WSIS STOCKTAKING SUCCESS STORIES 2017



Information and
Knowledge Societies for
Sustainable Development Goals
www.wsis.org



World Summit
on the Information Society
Turning targets into action
Geneva 2003 | Tunis 2005 | New York 2015



WSIS Stocktaking: Success Stories 2017

Zero Draft

Acknowledgement

The WSIS team would like to acknowledge the tremendous contributions from governments, international organizations, private sector, civil society and other stakeholders in providing information on ongoing projects and initiatives to the WSIS Stocktaking Platform. The WSIS Success Stories 2017 Report is based on the contributions provided by 18 WSIS Prizewinners (18 success stories) together with 72 brief project descriptions from the newly introduced WSIS Prize Champions category.

The report benefited from the contributions and insights of ITU staff :

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Executive Summary

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

The International Telecommunication Union (ITU) has announced the top-90 winning Information and Communication Technology for Development (ICT4D) initiatives from around the world competing for prestigious WSIS Prizes 2017, from which will emerge one top Winner and four Champions in each of the 18 prize categories. These 18 category Winners will be announced and presented with their awards, and Champions honoured, on 13 June at the WSIS Prizes 2017 ceremony to be held at the Geneva International Conference Centre during WSIS Forum 2017. WSIS Prizes honour outstanding projects that leverage the power of ICT to accelerate socio-economic development around the globe.

The WSIS Prizes contest is open to all stakeholders: governments, businesses, civil society, international organizations, academia and others. The contest comprises 18 categories directly linked to the WSIS Action Lines outlined in the Geneva Plan of Action. This year's final list of 345 nominated projects represented a wide range of stakeholders.

This includes, by region: 42 from Africa (12.17%), 45 from the Americas (13.04%), 66 from the Arab region (19.13%), 104 from Asia and the Pacific (30.14%), 41 from the CIS (11.88%), 42 from Europe (12.2%), and five international projects (1.4%); and by sector: 145 from governments (41.7%), 78 from businesses (22.4%), 56 from civil society (16.1%), 22 from international organizations (6.3%), and 47 from other entities (13.5%).

The **WSIS Prize Champions** category recognizes those contenders having emerged from the online voting phase with 1.1 million 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. The 18 success stories together with the descriptions of the 72 champions' projects thus constitute the body of this report.

More than 60,000 new members of the WSIS stakeholder community voted this year, and with this, ITU is proud to announce that the WSIS Stocktaking Platform has increased to 300,000 registered stakeholders. This sets a new high for the level of global multi-stakeholder engagement, and implementation of WSIS Action Lines in support of the United Nations Sustainable Development Goals.

Building on the outcomes of the United Nations General Assembly (UNGA) Overall Review on WSIS, as well as on the 2030 Agenda for Sustainable Development, **WSIS Prizes 2017** kept reflecting on the linkages between the projects and the **SDGs**. ICTs are enablers for sustainable development, and reporting on ICT success stories to best showcase the possible achievement of **SDGs**, through the implementation of projects related to the WSIS Action Lines, is the new objective of the WSIS Stocktaking process, including WSIS Prizes. We invite you learn how ICT projects submitted for WSIS Prizes 2017 are enabling the advancement of the SDGs.

Introduction

The contest comprises 18 categories which are linked to the 11 WSIS Action Lines outlined in the Geneva Plan of Action and SDGs. A record-breaking 1.1 million votes were cast from 30 March to 30 April in the online voting process that resulted in these 90 exceptional ICT initiatives being selected for the sixth edition of the WSIS Prize contest. Voters selected from a list of 345 ICT success stories nominated through a comprehensive review by the WSIS Prizes Expert Group from 467 submitted projects. And this year, we have 90 champions out of hundreds of projects from all over the world, and 18 winners out of the 90 champions.

The 18 categories are as follows:

- 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

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

The WSIS Prizes contest, first held in 2012 and rapidly gaining recognition and popularity within the ICT for Development (ICT4D) community, is seen as the platform for identifying and showcasing the success stories across the WSIS Action Lines defined in the Geneva Plan of Action and SDGs. It also provides us with models that can be replicated in the interests of empowering the community at the local level, providing everyone with an opportunity to participate in the contest and, most importantly, recognizing the efforts made by stakeholders to contribute to the development of society and their commitment to achievement of both the WSIS goals and SDGs. The WSIS Prizes contest is an integral part of the WSIS stocktaking process (www.wsis.org/stocktaking) set up in 2004 to assist WSIS implementation and follow-up.

WSIS Prizes is a unique international contest developed in response to calls from WSIS stakeholders for the creation of an effective mechanism for identifying and recognizing individuals, governments, civil society, local, regional and international agencies, research institutions and private-sector companies having achieved outstanding success in implementing development-oriented strategies that leverage the power of ICTs as an enabler of the SDGs. The WSIS Project Prizes contest is open to all stakeholders: governments, private sector, civil society, international organizations, academic institutions and others. All stakeholders are urged to encourage their networks to join the WSIS Prizes process, including the multistakeholder consultations at the WSIS Forum.

C7.3: ICT Applications: e-learning

Project name:	E-Learning and Virtual Classroom
Organization:	Kuwait University (Dr Salah Alnajem)
Country:	State of Kuwait

Basic information about your entity

This project was implemented by Dr Salah Alnajem, Associate Professor of Computational Linguistics and Natural Language Processing at Kuwait University. Kuwait University was established in October 1966, under Act No. 29/1966. It is the state's first public institution of higher education and research. The university aims to preserve and transmit knowledge through scholarship, and encourage innovation and development in arts and sciences. It comprises 17 colleges offering 76 undergraduate and 71 graduate programmes.

Project's description (activity's description)

The *E-Learning and Virtual Classroom* website is a learning-management system (LMS) integrated with a virtual classroom functionality using advanced e-collaboration and videoconferencing technology.

The virtual classroom functionality allows students and other users to join live and recorded lectures/webinars delivered by Dr Salah Alnajem at Kuwait University. The system allows students to participate and interact online in university lectures using videoconferencing and e-collaboration technology, through real-time HD audio and video.

This means that users can watch in real time anything written, drawn or shown on the virtual whiteboard during the virtual classroom (live webinar) session; and interact synchronously with the lecturer and with other students attending the lecture through voice, chat and screen-sharing. In addition, the application allows students to access HD video archives of recorded live lectures delivered in previous terms, which are classified and tagged by course and date.

Managing and tracking students' attendance at virtual classes (live webinars) is achieved electronically by the LMS, which is integrated with the virtual classroom functionality. The LMS is integrated with the API of the videoconferencing and e-collaboration system used to deliver the virtual classes (GoToTraining). This integration makes it possible to track when the student logged into the virtual classroom session and how long he/she spent there (time in session). Students log in to the learning management system using a single sign-on authentication, then they log in automatically to the virtual classroom session without the need to re-enter their username or password or use multiple usernames and passwords.

The LMS further allows students to access PowerPoint presentations and PDF documents related to the course curriculum, as well as lecture note annotations and virtual whiteboard annotations, which are available to them as shared Microsoft One Note notebooks. Microsoft One Drive cloud storage is used for storing, syncing and sharing the One Note notebooks, which allows for instant update and synchronization of the contents of the shared notebooks.

As regards performance management, the LMS allows students to track their attendance and their grades electronically, and discuss course issues with the lecturer and with other students through an integrated electronic forum. In addition, using the learning management system students can take electronic self-assessment exams to measure their performance and comprehension. These exams

are randomly generated from electronic test banks customized by the lecturer. They also serve to enable the lecturer to recognize skills gaps among students.

The LMS is designed as a responsive (mobile-friendly) website, and students can access the system from any desktop or smart device. The integrated virtual classroom functionality is accessible through a desktop web browser or through a dedicated native mobile app (GoToTraining mobile app) which is available for iOS and Android platforms.

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

This project is relevant to two WSIS action lines namely **C7**: ICT Applications (E-Learning), and **C3**: Access to information and knowledge. The system represents an example of judicious use of ICT in the education process, expanding the channels by which educational knowledge and information can be accessed. The project exploits advances in virtual classroom applications, e-collaboration software, videoconferencing systems, learning management systems and virtual whiteboard applications. This helps in achieving an integrated, interactive, student-centric virtual learning environment that forges a strong bond between the student, on one hand, and the lecturer, course content and peer students, on the other.

Highlights of the project's partnership activities

N/A

Challenges and project's future perspectives

- 1) Need for a high Internet bandwidth to transmit and view live lectures, since they incorporate HD video and audio content in addition to synchronous desktop sharing.
- 2) Lack of IT literacy among some students.
- 3) Online synchronous and asynchronous collaboration with students using learning management systems and virtual classrooms calls for one-to-one collaboration between the lecturer and the students instead of the one-to-many collaboration that normally prevails in the traditional face-to-face teaching process. This requires the lecturer to devote more time and effort in the teaching process compared to the time and effort spent in traditional face-to-face classroom lectures.
- 4) Providing real-time videoconferencing and e-collaboration requires high-end servers and suitable network infrastructure with a high bandwidth to accommodate the speed and size of transferred data. Using an in-house server environment to achieve this goal is costly and requires dedicated IT personnel to operate, manage and support the environment. In addition, the environment needs to be highly reliable, scalable and available. To overcome this challenge, the project has utilized cloud computing through a cloud-based videoconferencing and e-collaboration service (GoToTraining) to deliver virtual classrooms (webinars). This type of cloud service is known in the industry as software-as-a-service (SaaS).
- 5) Storing and streaming recorded videos requires a computing environment with a large storage space and high scalability, availability, reliability and bandwidth. Using this type of environment is also costly and requires IT resources and dedicated IT personnel for operation and support. To overcome this, a cloud-based video storage and streaming service (YouTube channel) has been employed to store and stream video recordings of previous lectures. In this respect, the YouTube unlisted video playlists feature has been used and integrated with the system in order to provide a private storage and retrieval space for sharing course video content. By using YouTube, the system has succeeded in streaming recorded videos to users over a scalable, available, reliable and fast infrastructure that gives the user the speed, convenience and efficiency. This is

a crucial factor in terms of usability, since streaming HD video contents like reordered lectures requires speed and high bandwidth on the server side. Besides, the server(s) need to be able to scale up to accommodate increasing numbers of users. The server(s) must also cope with the bottleneck that may occur when multiple concurrent users request to view specific video content at the same time. With YouTube servers, this will not be an issue. In addition, the YouTube environment also provides flexibility in publishing, indexing, tagging and sharing the educational video content without the cost and effort of hosting and streaming the videos using an in-house server environment.

Your views on WSIS Stocktaking and Prizes contest, including its relevance to SDGs

The WSIS Stocktaking and Prizes contest is an essential and prestigious catalyst in encouraging WSIS stakeholders to benefit from ICT as an enabler to achieve sustained development in various fields, such as e-government, e-business and e-learning. It acts in parallel with the WSIS action lines, aiming to create and sustain an inclusive information society which harnesses the benefits of ICT in all aspects of life. In addition, the Stocktaking and Prizes contest encourages stakeholders to innovate in ICT utilization in a way that helps in bridging the digital divide and building confidence in ICT applications.

Conclusion

The sixth, 2017, edition of Success Stories contains the greatest success stories in the form of 18 winning projects from different countries of the world, together with the inputs from 72 Champion projects, i.e. those receiving the highest number of votes in each category.

These success stories showcase examples of projects related to the implementation of WSIS outcomes, emphasizing the achievements of stakeholders working towards achieving both WSIS goals and **SDGs**, transferring experience and knowledge at the global level, and spreading and fostering WSIS values.

We are also pleased to announce the imminent launch and official 2017-2018 call for updates and new entries relating to new ICT-related projects, via our WSIS Stocktaking platform. 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 and to 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. We urge all 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 and prizes contest.

We trust that readers will find this Success Stories 2017 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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