

**UNITED NATIONS COMMISSION ON SCIENCE AND TECHNOLOGY
FOR DEVELOPMENT (CSTD)**

**Contribution to the CSTD ten-year review of the implementation of WSIS
outcomes**

Submitted by

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United Nations Commission on Science and Technology for Development (CSTD) Questionnaire for CSTD's 10 year review of WSIS implementation

Question 1

To what extent, in your experience, has the “people-centered inclusive and development-oriented information society”, envisaged in the opening paragraph of the WSIS Geneva Declaration of principles, developed in the ten years since WSIS?

In the past few years, Government of Pakistan has taken several initiatives for Information and Communication technologies in Pakistan which has been a great step towards “people-centered inclusive and development-oriented information society”. These steps are helpful in promoting e-learning, reducing digital divide in the current digital age, women empowerment through ICT, use of ICT in particularly software applications in hospitals to relief the patients from long queues, ICT capacity building in Government department, schools, colleges and promoting internet connectivity in rural and remote areas.

Question 2

How far do you consider the implementation of specific WSIS outcomes to have been achieved?

Several projects and services have been deployed in compliance with the agenda of WSIS. In this regard, different initiatives have already been taken:

i. E-Office application Suite

The application has been deployed with the aim to automate core business processes of the federal Ministries/Divisions. The roll out phase of the application is in process. This e-Government system will have a positive impact towards delivery of Government services to citizens and promote the concept of less paper environment.

ii. Use of ICT in Health Sector

MoIT is in the process to maximize the usage of ICT particularly software applications in Health Sector. In this regard, Federal Capital hospitals are being equipped with Management Information Systems (MIS). A pilot HMIS application has been developed and implemented in Shaikh Zayed Medical Complex, Lahore.

iii E-learning:

The Government initiated the project of e-learning through Virtual University of Pakistan. The university provides Bachelors and Masters Programs in Computer Science and Management across the country through distance learning.

iv. Women empowerment:

Government of Pakistan is working for women empowerment in ICT to remove gender inequality. In this regard, special quota in ICT vacancies for women has been reserved.

v. Other e-services initiatives

Other projects like Computerization of land record, e-commerce gateway, online tracking systems for railways and e-police are in progress to provide the services to the citizens at their door step.

Question 3

How has the implementation of WSIS outcomes contributed towards the development of a “people-centered inclusive and development-oriented Information Society”?

Following benefits can be obtained with the deployment of above mentioned projects/services:

- i. E-office application is offering smooth transition to a green computing by automating all standard business processes to promote less paper environment.
- ii. Advancement in e-crime projects will help to deal with cyber-crimes for effectively thus building the confidence of people in using ICT applications and will help in provision of justice to common people.
- iii. With the establishment of websites of all the major public departments and private companies, candidates can search for jobs over the web more efficiently and can also apply online through Federal Public Services Commission (FPSC) job portal. Moreover, a website www.forms.gov.pk has been developed to provide the citizens of Pakistan with Federal Government forms. The forms are available in various formats including PDF, MS Word, web links and Images etc., which may be viewed, printed and sent by regular e-mail. This forms repository contains the most current forms.
- iv. The positive impacts of Land Record system, HMIS and online tracking system will be evident in a short span of time.

Question 4

What are the challenges to the implementation of WSIS outcomes? What are the challenges that have inhibited the emergence of a “people-centered inclusive and development - oriented Information Society”?

Although technological advancements have been made since WSIS, Pakistan is still facing some challenges; some of them are listed below:

- i. End user resistance.
- ii. Low IT Literacy Rate
- iii. Lack of ownership from beneficiary organizations for the implementation of Information Systems.
- iv. Lack of financial resources.
- v. Lack of professional manpower.

Question 5

How are these challenges being addressed? What approaches have proved to be effective in your experience?

To address the aforementioned challenges, some efforts have been made so far:

- i. To overcome challenges of end user resistance and low IT literacy rate, PSEB and NITB both have launched awareness programs and taken initiatives for Capacity Building of the Government employees and general citizens in the area of ICT. For this purpose, workshops/seminars and internship programs have been initiated to build an ICT human resource of skilled and expert professionals. Furthermore, incentives have been declared to encourage government employees to use Information Systems.
- ii. The Government has emphasized all the beneficiary organizations to take the ownership of the relevant Information systems and thus the challenge of lack of ownership of the Information Systems is being addressed through the political will.
- iii. To address the issue of lack of professional manpower, PSEB in collaboration with ICT R&D Fund Co., has launched ICT Internship program for fresh ICT graduates in order to bring them up to the mark of rational professional skill.

Question 6

What do you consider the most important emerging trends in technology and other aspects of ICTs which have affected implementation of WSIS outcomes since the Summit? What has been their impact?

i. Provision of cheap and fast internet connectivity:

Pakistan has recently performed **3G/4G auction** which will provide cheap and steady internet connection to the citizens. Huge opportunities will be opened for investors in Pakistan. It will help to generate millions of direct and indirect jobs; it will provide global internet access to users through smart phones which will boost growth in sectors like education, banking, media, retailing and health.

ii. E-Commerce Gateway:

Government of Pakistan is in the process of establishing E-commerce Gateway through discussions and deliberations with the relevant stakeholders. Introduction of E-commerce Gateway will serve the goal of documenting the economy as all the transactions will be mainly through our own gateway and exact figures will be on the finger tips.

iii. Broadband penetration:

According to the Broadband Commission, a joint body of the United Nations Educational, Scientific and Cultural Organization (UNESCO) and the International Telecommunication Union (ITU), every 10 percent increase in broadband penetration results in additional growth of 1.3 percent in national gross domestic product (GDP).

In this regard, Universal Service Fund is laying Optical Fiber Network in un-served and under-served rural areas of Pakistan in order to promote development of telecommunication services and to make available and affordable the voice telephony and basic data services throughout the length and breadth of the country.

iv. Adoption of Cloud computing

The adoption of cloud computing in the federal Government is in the progress. In the current financial year, a project on e-Government has been approved. In the said project, G-cloud is the major component. It will help to reduce the overall cost which is continuously being spent by all the said departments to procure high specification servers to store their data independently.

Question 7

What should be the priorities for stakeholders seeking to achieve WSIS outcomes and progress towards the Information Society, taking into account emerging trends?

For the development and advancement of information society following areas to be considered as high priority:

- i. Investment in ICT infrastructure:**
Efforts are required to be made at national and regional level in broadening ICT infrastructure in remote areas.
- ii. E-education and IT Capacity Building:**
Necessary training programs need to be conducted on the usage of ICT applications.
- iii. To encourage researchers at National and International level:**
Efforts must be made to facilitate researchers through funds to encourage them in the development of ICT to explore new dimensions of technology and new emerging trends in ICT.
- iv. Development and enhancement of Cyber security strategies and plans:**
Cybercrime strategies must be developed and enhanced to prevent the abusive use of ICTs and to protect data and network integrity.
- v. Certification and Accreditation:**
Certification and Accreditation bodies should be established for the implementation of quality software products which meet International standards and provide security to its users.
- vi. Enhancement in Legal and regulatory framework:**
Establishment and enhancement in legal and regulatory framework for data access and preservation should be encouraged.

Question 8

What role should information and communication play in the implementation of the post-2015 development agenda?

Information and communication technologies must play a key role in implementation of following post 2015 development agenda items:

- Through e-Learning programs, education can be provided to those people who are living in remote areas having no access to schools, colleges and universities.
- Through e-Government programs, efficiency would be achieved in business processes which will help to build confidence between Government and its citizens.
- Through e-Health programs, awareness and medical assistance can be provided in remote and underserved areas.
- Through certification of IT industry, quality of software products can be assured which will help to meet the international standards.

Question 9

Please add any other comments that you wish to make on the subject of the review that you believe would be helpful.

- i. Today, World has globalized but on the basis of ICTs we are still divided, efforts are required to promote universal access and assistance in implementation of ICTs. In this regard, it is recommended that Global Repository of ICT/ software applications may be developed to share good practices in ICTs at international level.
- ii. While organizing Awareness programs at international and national level for the development of ICTs, more emphasis should be done on highlighting the ethical dimensions of using ICT applications. Users, while accessing information should respect individual's privacy.
- iii. Awareness programs to be conducted globally to increase awareness among youth how they can fully participate in ICT development through learners, contributors and decision makers in the society. Moreover, case studies must be conducted, young researchers must be provided with funds to encourage them in the field of Research and Development.
- iv. Efforts should be made to deal with critical factors including cultural environment and change management which may become obstacles in the development and emergence of new trends in ICT.