



Response to ITU

Open Consultation of the CWG-Internet on the
“Developmental Aspects of the Internet”

1 Objective

This document is a response to the “invitation to all stakeholders to participate in the Open Consultation of the CWG-Internet on the “Developmental Aspects of the Internet”” that sent by ITU focusing on the following basic questions:

- a. What are the developmental aspects of the Internet (for example, economic, social, regulatory and technical aspects), especially for developing countries?
- b. How can governments and other stakeholders promote the developmental aspects of the Internet?
- c. What are the challenges and opportunities?"

2 Introduction

The Communications and Information Technology Authority- CITRA of the State of Kuwait has been established on 2014 by Law No. (37), it is a Government organization responsible of regulating and monitoring the Telecommunication and Information Technology in the country. CITRA's organizational objectives are driven from its law, the major roles are as the following:

- Set the regulation and the policies of Telecommunications and IT services within Kuwait.
- Ensuring competence of Telecommunications and IT services throughout Kuwait, in the means of quality, transparency and variety.
- Resolving disputes between the licensed Telecommunication operators.
- Development and implementation of frameworks and policies for Telecommunication and Information Technology systems and services.
- Develop technical and operational requirements and specifications related to national security and must be adhered public and private sectors.

Definitely, utilizing the Internet as a social and economic driving force is one of the basic objectives and responsibilities of CITRA.

3 Response to Invitation

3.1 Development Aspects of the Internet

In Kuwait, we believe that technology is the way forward for societies, as the Internet along with its newest phenomenon, IOT, will shape our future. We also believe that the Internet space is yet to play major roles in various aspects of our society and country.

The following areas as stated in the invitation, we have identified the following domains along with challenges and opportunities of focus in Kuwait.

3.1.1 Economic

The government or Public Sector is the biggest wealth generator and biggest spender due to depending on oil as the basic source of national income. Almost all government agencies in Kuwait are connected with a high speed communication links and reasonably good Internet services. This paves the way to develop much more efficient business processes and get rid of a lot of costly manual operations either intra or inter government agencies.

Moreover, Internet technology is one of the basic means by which governments are trying to diversify their economy. Kuwait needs to diversify its revenue resources. The IOT, cloud, and globalization represent a genuine opportunity provided the country encourages innovation in its educational system and make use of the capabilities of young talent.

Currently, ICT contribution to GDP is ~2.3%, CITRA's target to increase it to 3.5% by 2020. While ICT- related jobs in the market is ~7000 jobs, and CITRA is working to increase these jobs to ~ 20,000 by 2020. Moreover, ~25% of small organization do have a company website, by implementing ICT strategy, CITRA is expecting ~70% of SMEs to have a web sites which consequently will increase B2C e-commerce by 2020.

3.1.2 Social

a. Education

Kuwait is investing serious financial and human resources to improve the quality of education. So far, Kuwait has done a good job to make technology resources available to its staff, academic staff, and students. However, relevant educational content required much more efforts. We also need to link that content to the outcome desired out of the educational process, we will work with the decision makers to build the necessary digital educational content that best suits Kuwait's objectives, and encourage the online education.

Currently, ~93% of the schools in Kuwait have broadband while 40% have narrowband. While, we're working to have a coverage of 100% by 2018.

b. Healthcare

Kuwait has embarked on an ambition plans to modernize their existing hospitals and build new ones. In addition to the widely spread primary healthcare centers, healthcare consumes a large amount of the country's annual budget. Automation and using advanced diagnostic and treatment methodologies, local and remote, can significantly improve services while saving money.

Technology should also be used to bring high level of awareness to the public with respect to healthy lifestyles and technology can play an effective role in education the public.

c. Quality of Life

People in Kuwait enjoy a high standard of life given the GDP(PPP) per Capita which is 70,165 that the country enjoys. Moreover, people of almost all age groups are technology savvy and do not lack owning all sorts of technology devices. By quality of life, we mean that government services need to make use of this phenomenon and develop widespread integrated government electronic services.

d. Involvement

Reach and openness are two of the most noticeable characteristics of the Internet. Though Kuwait is well known for its open door habits between people and leaders, technology can improve the efficiency of this bond by making it pervasive. E-referendum and e-voting can be an efficient tool to know what the people think of, their concerns, and their ambitions.

As Currently, 75% of Individuals in Kuwait are using Internet. By 2020, our target that ~90% of the rural population should be covered by broadband services.

3.1.3 Regulatory

On the regulatory side, Kuwait is building the legal base for Internet development and digital transformation. So far, the following has been achieved:

- a. The Electronic Transactions law.
- b. Individual's Identity management, where Kuwait established its own center for identifying individuals in the Internet using PKI technology.

While, CITRA currently working on National Cyber Security Strategy, National ICT Strategy and several by-laws that are necessary for Internet development which are expected to approved by 2017:

- Spectrum planning and regulation.
- Licensing ISPs and Telecom companies.
- Customer care.
- Telecommunication towers.
- CCTLD Internet management (done).
- ICT procurement.

In Kuwait, we're working currently to develop regulation of data ownership and privacy.

3.1.4 Technology

Achievements are represented by having a solid connectivity platform for both government agencies and private sector. Kuwait's government established network KIN (Kuwait Information Network) which is a government high speed networking fiber optic based backbone that connects around 60 government agencies. Each government agency enjoys one or more 1xGbit link(s) to the backbone. Expansion plans are in place as and when needed. So, the public sector is ready to utilize this connectivity to develop shared and integrated government e-services on a wide scale basis.

Kuwait has a well-developed ISP market with solid service providers. These have proven successful to support business needs of companies and individuals alike. However, we believe that the security services of these ISPs still require significant improvement by changing landscape of internal and external information security threats.

As currently, the fiber connections in Kuwait are ~30K plots with a coverage of <10%. We're working on achieving reach 100/50 Mbps with a coverage of ~150K plots by 2018. And to reach 10 Gbps with a coverage of 90% by 2020. While, for the accessibility of Mobile Internet, there are 8.4 m mobile subscribers as Kuwait is the 4th highest in Internet subscription globally, the coverage reaches 100%, while 4G LTE coverage is 97% currently. Our objective is to allocate 4.5G & 5G spectrum, and the coverage of 4.5G to reach 95% by 2018.

Moreover, a comprehensive national cyber security strategy is under development at the moment, and an IT Governance framework under implementation in order to streamline

digital transformation, major work is still required on both the corporate and IT governance areas. Partial implementation started in government sector, while we're targeting a comprehensive implementation the government framework by 2020.

4 Role of Governments and other Stakeholders

Government responsibility is mainly to make sure that Internet services are available, reliable, affordable, and secure. Basically, the following issues need to be addressed:

- a. Develop and implement a government wide corporate and IT governance framework. This is important to foster the necessary technology best practices that yield the desired results.
- b. Develop and implement a nationwide ICT security strategy to make sure that Kuwait's Internet services can provide a high level of security and resilience to support current and future business requirement. CITRA has accomplished many steps in this direction.
- c. Develop and instate missing legislative requirements that help Internet development and digital transformation initiatives including data privacy, ownership, and lifecycle management.
- d. Government cloud (cloud computing) is not yet implemented in government network. CITRA shall promote a plan to provide cloud services for ~30% government agencies by 2020.
- e. Government e-procurement system with limited functions, CITRA's target to develop the systems improving functions such as electronic bid submission, contracting and invoicing, and ensure agencies adoption for the new e-procurement.