Cook Islands

National Information and Communication Technology Policy

July 2015 - 2020

Foreword

Information and communication technologies (ICTs) are universally accepted as a critical tool to enhance social and economic development. As has been noted by the United Nations General Assembly (in Resolution 64/187 on 21 December 2009), ICT has the potential to provide new solutions to national development challenges, particularly in the context of globalization. They can foster access to information and knowledge, economic growth, social inclusion, competitiveness, and poverty eradication and help all countries integrate into the global economy.

Affordable and equitable access to ICT reduces the gaps experienced by the people of Cook Islands of high costs of access and usage of ICTs and in particular, mobile and fixed telephone costs, as well as Internet cost. The Cook Islands Government is convinced that ICTs are fundamentally important to this nation as a means of bridging the disadvantages of distance. It is therefore committed to a strategy of utilizing ICTs a the tool to achieve social and economic development including affordable communication, improved access to markets and services, improved access to education and health services, and better access to information and knowledge. It has been proven in many countries that ICT has the potential to transform completely the way government, business and consumers communicate and interact.

The Government is therefore committed to promote the expansion and utilisation of ICT by both the public and private sectors. This National ICT Policy sets out the Government's over-arching goals for ICT-based development over the next five years. It is intended to provide a framework by which the ICT needs and priorities of citizens and all industry sectors can be addressed in a coordinated and harmonious manner.

I would like to thank the many people who have contributed to the development of this National ICT Policy. To the Asian Development Bank (ADB), thank you for your assistance in facilitating relevance of this policy to the National Sustainable Development Plan. I would also like to thank the International Telecommunications Union (ITU) which, through the ITU-EC project for the Pacific Island countries (ICB4PAC), provided assistance to the Office of the Prime Minister in finalizing this policy.

I invite all stakeholders to work with Government to help implement this policy and achieve our common goals.

Thank you

Hon. Minister, Henry Puna

Prime Minister and Minister for Information and Communication Technology

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Purpose of the Policy

The focus of the National ICT Policy is to provide an ICT strategic framework to facilitate socio-economic development of the Cook Islands and to enable Cook Islanders to participate effectively in the local and global economy. Citizens will be able to exploit the potential of the digital world to foster entrepreneurship, creativity and innovation, and to seek out the best ideas and solutions on offer from the rest of the world, consequently increasing productivity across the economy. This policy will serve as the primary tool for an effective coordination of efforts of various stakeholders towards achieving the policy objectives identified below.

National Policy Context

Information and communication technologies (ICT) are powerful tools that have the potential to facilitate sustainable economic growths, social development, strengthen good governance structures, promote cultural legacies and protect our environment. The National Sustainable Development Plan (NSDP) 2011-2015 recognizes the imperative to utilize ICTs to achieve our national development goals, and has identified several key strategies and actions to strengthen telecommunications infrastructure, increase quality and speed telecommunications services, and strengthen information systems for better informed decision making. This National ICT policy will inform future national sector policies, legislations, and mid to long term strategies which in turn will be used to inform Business Plan and appropriations for Government.
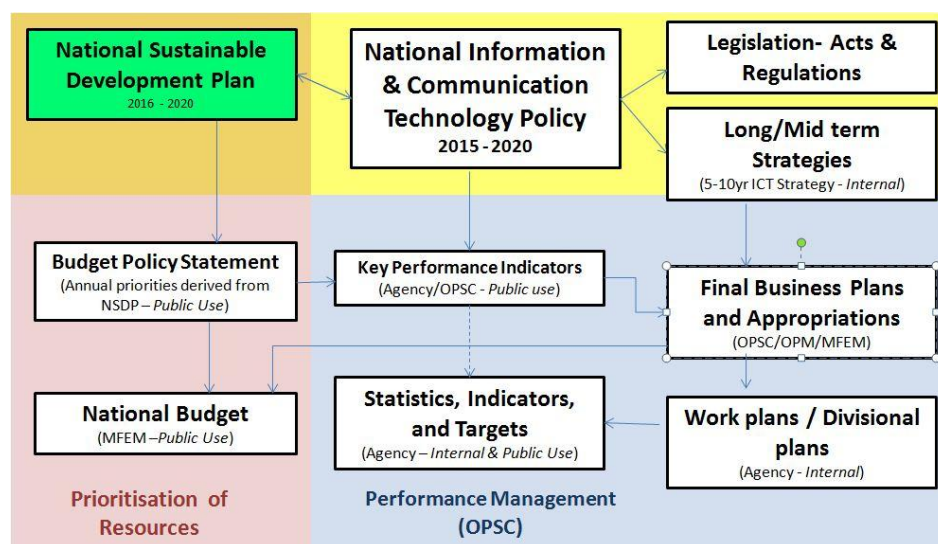

Figure 1 Linkages between the National ICT Policy, mid-long term planning

Telecommunications services have become a basic necessity in what is now the Information Age. This is particularly true for small developing Pacific Island nations who struggle to access basic essential goods and services due to large distance, isolation, small dispersed populations, and small scale. ICTs provide opportunities for Government to deliver Health and Education services efficiently to the underserved citizens living in the Pa Enua, potential to connect business to regional and international markets and to improve productivity, allows civil society to better engage with service users and development partners, to empower and connect people to information, services and communities.

To achieve these outcomes requires commitment, collaboration and partnership between key stakeholders in Government, private sector, civil society, and local communities. A collaborative approach will ensure success and sustainability in ICT development initiatives through the shared use of resources, shared commitment to the vision, belief in the benefits ICTs offer all. The Cook Islands Government will establish an enabling environment for sustainable ICT-led growth, the private sector will invest in infrastructure and develop innovative applications, non-government organizations can empower communities through various initiatives, and communities can effectively utilize ICTs achieve their aspirations.

The Cook Islands are in a position to leverage ICTs for sustainable development across all sectors; however availability, accessibility and affordability of ICT remain key challenges hindering our progress. Development, implementation and maintenance of innovative applications and solutions are also limited by our diminishing pool of IT professionals (brain drain), limited technical and institutional capacity.

We must also acknowledge that our growing reliance on technology to will raise new threats, challenges and risks to our safety; cyber crimes, cyber bullying, e-waste and security concerns are only some of the social, legal and environment issues that will need to be addressed if we are to maximize its benefits and mitigate the social, economic, and environment costs.

Current status of ICT and telecommunications in Cook Islands

While services have expanded and improved in quality over the years, connectivity, cost, speed and capacity continue to be cited as key impediments to the implementation of ICT-based solutions throughout government as well as elsewhere. Telecom Cook Islands (TCI), the sole provider for internet, mobile and fixed telephony for the country, signed with O3b Networks in June 2010 to deliver internet service via their MEO satellite service. This high speed, low latency service was launched in December 2013 and has since resulted in significantly better service, better speeds, and reduced cost, however connectivity to the Pa Enua is slower compared to the main island, due to the additional satellite hops. Connectivity within Rarotonga is reasonable considering TCI owns an optical fibre ring around the island; however there are plans to improve services by establishing more 'last-mile' links and access points.

ICT Applications in Government Agencies

The ICT related issues observed among government agencies are consistent and, in most cases, apply across government albeit to varying degrees. Most of these have been installed and developed by individual agencies, as needs or opportunities arose, without much coordination or standardisation between them. The cost and speed (data-rates) of communications services are a constraint to the adoption of many current ICT-based solutions that could improve the efficiency and effectiveness of these agencies. Budget constraints remain one of the key challenges faced by agencies in implementing ICT solutions.

The government agencies that are heavy ICT users each have a few skilled staff in-house addressing their specific technical support needs (the Ministries of Education, Health and Justice are examples). Taken together, this constitutes a good pool of skills. However, there is huge potential for consolidating human, technical and financial resources to streamline work processes, and improve overall productivity.

Each agency is currently free to follow its policies and standards in respect of users as well as ICT services. In practice there are few, if any, formal policies. This creates risks in several areas. Users often unwittingly introduce viruses and malware. In the absence of documented security policies, network configurations etc., quality assurance of contractors and service providers cannot be implemented. All of these factors result in additional technical support issues and call for deeper technical skills in support staff that may have to work from first principles in many cases.

Guiding Principles

The Cook Islands Government is committed to ensure that all people living in the Cook Islands have universal access to affordable, equitable information and communication technologies, and that any services offered meet acceptable quality standards. The policies in this document will be implemented under the following guiding principles.

1. Coordination, collaboration and multi-stakeholder partnership

To maximize the benefits of ICT and achieve our vision, a coordinated multi-stakeholder approach between business, industry leaders, non-government organizations, communities, and government is needed. This will ensure the sustainability of new technologies or systems, and related national development initiatives, minimize duplication of efforts, and maximize the return on investment. This policy recognizes the importance of engaging with partners in the region, and strengthening networks is essential to maintaining positive relations and opportunities for information sharing.

2. Universal Service Access

Affordable and accessible ICT reduces inequality amongst Cook Islands citizens thus enhancing economic opportunities through improved access to information, markets and services. Government will ensure that affordable and quality telecommunications and internet services are available to all citizens, particularly those living in the Pa Enua. Universal service access remains one of the core principles that will ensure all citizens take full advantage of the benefits on offer, and can be achieved through resilient and secure ICT Infrastructure, strengthened legal and regulatory frameworks.

3. Transparency and Accountability

This policy recognizes that transparency and accountability are essential for optimizing policy outcomes, improving quality decision-making, and enabling innovation. Government will ensure timely access to information that can be used by citizens, and all stakeholders to measure our progress and hold government accountable for its actions. Keeping stakeholders informed and engaged will improve Government effectiveness in successful policy implementation, strengthen collaboration and result in greater public confidence. .

4. Equity and Inclusiveness

This policy recognizes the different perspectives of stakeholders and will actively engage with under-represented, minority groups through robust consultations to ensure fairness, inclusiveness, and strong ownership of the policy. Government will ensure all stakeholders have the opportunity to participate in the implementation of the ICT strategy.

Policy Implementation and Review

The Cook Islands Government is committed to the successful implementation of this national ICT policy, and anticipates working in partnership with the private sector and civil society to accomplish these core policy objectives. Government also recognizes that a collaborative effort can only be achieved through the shared values expressed through the principles of good governance; accountability, transparency, equity and inclusiveness, and universal access.

The accompanying ICT Strategic Plan will guide key stakeholders in the implementation of each policy objective. Government will develop appropriate ICT Indicators to monitor the impact of these policies on social and economic development. This Policy will be reviewed on an annual, and a final evaluation of the effectiveness of the policy and strategy will be carried out at the end of the five year period in 2020.

Vision

With this vision we aim to empower citizens of Cook Islands through providing ICT services to all, enhanced democratic values, and promote social and economic development. The expansion, diversification and effective application of ICT will establish a transparent, responsive and accountable government. We will develop skilled human resources, enhance social equity, ensure cost-effective delivery of services through public-private partnerships and provide enhanced opportunities for social services, and enable a knowledge based society to secure a brighter future for all. Our vision is that all Cook Island citizens, business, and non-government organizations recognize and utilize ICT as an essential tool for sustainable social development, economic growth, environmental protection, and good governance

"ICT will be effectively utilized to achieve sustainable improvements in social, economic, cultural, and good governance thus improving the quality of life of all Cook Island citizens"

Expected Outcomes

- All citizens will have Universal Service Access to affordable, reliable, resilient, secure ICT
- All citizens will have the necessary knowledge and skills to effectively utilize various technologies to access information and online services such as e-learning, telemedicine, e-commerce
- All citizens rights will be protected by appropriate cyber legislations and regulatory controls to ensure a safe and just society
- Government will utilize ICT to more effectively achieve our national sustainable development outcomes
- The Cook Islands will be a fully functioning Knowledge Society

Policy Objectives

In achieving this vision the following policy objectives are outlined below

1. Universal Service Access to ICTs
2. Improved Government service
3. Human Resource Development
4. Resilient and Green ICT Systems
5. Leveraging ICT for Sustainable Development

1. Universal Service Access

Policy Objective: *Equitable, Affordable and Non-Discriminatory Access to reliable quality ICT facilities and services for all*

To achieve this policy objective we will;

    1.1. **Develop appropriate pricing, policies and regulation to promote universal service access**

    1.2. **Promote fair competition in the telecommunication market that is conducive to achieving accessible and affordable communications for all**

    1.3. **Explore Regulatory mechanisms provide oversight and management of the ICT Sector**

For ICTs to deliver on their potential of economic and social development it is critical for the Cook Islands to strengthen the regulatory frameworks that support e-development, strengthens security, and ensures equitable, affordable, reliable, non-discriminatory, open access to ICT for all. We will develop mechanisms for increasing access to ICT by maximizing resources through shared use of facilities, subsidized ICT and decreasing the cost of ICT equipment and services for rural, underserved and public service sectors. Establishing a Universal Service Fund, also known as universal service obligation, is one way we can ensure this objective is achieved. It is also imperative that we consider the policy, legal, market and social opportunities and implications for ICT led growth. The Cook Islands Government will establish a Regulatory Authority to ensure the ICT sector development is in line with the goals and objectives of the National ICT Policy. This body will work with Government, Civil Society and the Private sector to enable ICT-led growth.

    1.4. **Improve ICT access to all citizens regardless of economic status, geographic location, education level, age, or gender to improve opportunities for all**

The Government will play a leading role in building a networked society where organizations and individuals have equitable access to ICT-enabled resources including people living in the Pa Enua. We will establish mechanisms for ensuring non-discriminatory access to ICT regardless of level of income, education, age, gender and people with special needs.

    1.5. **Improve ICT access for vulnerable groups to enhance their quality of life**

This policy objective promotes ICT inclusiveness by first acknowledging the digital divides that exist within our community, and secondly striving to identify and bridge the gaps in access for vulnerable groups, especially people living with disabilities. ICT's have the potential to make significant improvements in the lives of citizens living with some form of disability; sight, hearing, learning, by improving their social and economic integration in communities by enlarging the scope of activities and information available to them.

    1.6. **Improve ICT access and connectivity to people living in the Pa Enua to raise their standard of living**

This policy aims to raise standards of access to broadband service and connectivity to all citizens living in the Pa Enua, so that they may benefit from the same opportunities available in Rarotonga. Citizens living in the Pa Enua have the most to gain from having access to information and service online. To do this they must have improved access to computers and other digital devices, broadband, training and education.

2. Improved Government service

Policy Objective: *Enhancing the efficiency and effectiveness of Government operations and service delivery*

Government will support the use of ICT for the innovative, efficient delivery of information and services to all citizens. While Government Ministries are progressively centralizing networks in an attempt to improve the efficient exchange of data, the potential to improve productivity still exists and we will strive to capitalize on these gains.

To achieve this policy objective we will;

> **2.1. Deploy and use ICT systems to improve Government operations and service delivery**
>
> **2.2. Explore mechanisms for improving productivity, through the efficient use of ICT resources**

Government will establish minimum standards of ICT hardware, applications and services within Ministries in order to improve the delivery of e-government services to its citizens, and deliver on its promise to improve overall productivity. We will actively explore innovative technologies and practices to achieve this objective, and share these experiences and lessons learned with our Pacific neighbors. E-government will ensure public information will be made available in a timely manner, services will be accessible to the remote regions, and allow government agencies to share information efficiently. Government will explore ways to better utilize e-commerce to improve citizens experience accessing, and paying for, online services. Every effort will be made to ensure that ICT systems and processes are used to enhance government accountability, efficiency, effectiveness and transparency of delivering public services to all, and combat corruption.

> **2.3. Establish and enforce Information security measures including technology, management processes, polices and standards that provide adequate levels of confidence in the security and reliability of Government information systems**

As Government relies more on information technology to manage official and confidential information, it is more imperative that the security measures in place are robust, resilient, and reliable. Government will prioritize systems security at all levels to ensure citizen's information is safe from unauthorized access, enhance resilience through vigorous back-up procedures, and provide awareness and training to government officials around cyber security, and the safe & ethical use of information technology. Security and privacy of information must be guaranteed users are to effectively adopt and utilize these information systems.

> **2.4. Enhance collaboration and coordination of ICT developments at the national, regional and international level**

We will work closely with key stakeholders to keep up to date with national, regional and international developments and opportunities in the area of ICT. We will coordinate ICT development efforts across the nation, and collaborate with partners to efficiently deliver services to all citizens. The Cook Islands will engage with the wider community to share experience, lessons learned, strengthen existing and develop new partnerships.

3. Human Resource Development Opportunities

Policy Objective: *Building Human Resource Capacity through education and skill development to improve the delivery, access and effective utilization of ICT based services*

ICTS are changing the way people live, work and communicate with one another, although where there are opportunities for ICTs to improve our quality of life, it is essential that people understand, appreciate, and recognize the potential benefits and risks posed by these services. Before e-government services such as e-health, e-learning, e-commerce, can be utilized citizens must have the necessary skills to access and utilize those services before they can realize any true benefits. Furthermore, we need to strengthen and increase our pool of qualified ICT professionals to ensure sustained and reliable delivery of quality services, and provide training to decision-makers to understand and appreciate the potential for ICTs to facilitate sustainable development. Therefore Government will develop the capacity of our people to create, maintain, and utilize ICT based services through community training programs that will increase citizens' information and computer literacy.

To achieve this policy objective we will;

3.1. Promote and support the training and development of qualified ICT professionals and explore ways to retain skilled ICT professionals in country

Through partnership and collaboration within government and with the private sector, tertiary and vocational training providers, and regional and international organizations, government will ensure a range of modalities and opportunities for ICT/IT professionals at all levels to develop and maintain currency of their technical knowledge, skills and abilities across the full range of IT systems and infrastructure.

Government will identify and support career pathways for IT professionals including training and employment opportunities for people entering the profession.

3.2. Support the transformative use of IT in education and develop information literacy in our young people

ICT is an enabling tool for achieving quality educational outcomes. This policy will support the education sector to establish and maintain the transformative use of ICT in learning through both infrastructural and pedagogical approaches. Young people are also one of the vulnerable groups identified in this policy, and efforts to educate and equip them with the relevant knowledge and skills to protect themselves against cyber bullying, online predators, phishing attacks and other online threats remains a priority.

3.3. Ensure all citizens have the opportunity to develop the necessary information and computer skills to effectively utilize ICTs, and promote the use of ICT in non-formal education and for lifelong learning

ICTs are essential to promoting lifelong learning as they enable people to access education in a flexible, and sometimes more affordable way. Government will promote, facilitate and deliver non-formal education programs to enable Cook Islanders, particularly out-of-school youth and adults, to effectively access and utilize e-government services and information.

4. Sustainable and Green ICT systems and infrastructure

Policy Objective: *Strengthening ICT resilience security to ensure the reliable delivery of services to citizens, protecting the environment, and safeguarding communities from exploitation*

In this Digital Age ICTs have altered the way we do business, deliver social services, and while the potential benefits are there to be realized, it is important to ensure these systems and services are protected against, and able to recover quickly from, natural and other disasters.

To achieve this policy objective we will;

4.1. Strengthen regulatory frameworks in order to protect citizens' rights relating to computer and cybercrime, right to information, intellectual property rights, and vulnerable groups from exploitation

To create a safe, secure, and enabling environment for ICT development we need to develop a multi-stakeholder, multi-disciplinary approach that engages professionals in legal and law enforcement to identify and implement innovative solutions relevant to our unique context. This policy will also address the need ensure citizens are protected from any possible threat of exploitation or abuse, and prevent us from becoming victims of any cyber-criminal activity. To achieve this, Government must strengthen regulatory and legal frameworks to enable the growth and development of the ICT sector, and work with partners to advocate and educate users about their rights relating to cyber-crime. To successfully manage and mitigate these risks, and reduce its impact on society we must collaborate with stakeholders to establish policies and frameworks that will effectively address these issues.

4.2. Promote and enable reliable, resilient, and secure ICT Infrastructure

4.3. Encourage and support the use of ICT to predict, monitor and respond to disasters, both natural and man-made, and in environmental management

In our quest for universal service access, we must ensure that any and all national ICT developments are built with these core criteria in mind. There must be no compromise when it comes to reliability; access to information and services online must be guaranteed, security; information must be secure from unauthorized access and cyber risks, and resilient; systems must be able to continue, or resume services immediately, in the case of a natural or man-made disasters. In turn, ICT can be effectively utilized as a key tool in responding to natural disasters. The national Geographic Information System (GIS) is a recent development that allows emergency service workers track and evacuate families living in high risk areas to safe zones.

4.4. Collaborate with private sector and industry leaders to encourage the continued development of the ICT Industry and strengthening ICT infrastructure

4.5. Advocate and promote the use of environmentally friendly products and practices

4.6. Promote the safe disposal of e-waste to ensure zero impact on the environment

Government ICT systems and Infrastructure must be properly planned, designed, developed and maintained with sustainability and resilience in mind to ensure that services are delivered in an efficient, reliable, and secure manner. It is also important that we consider the impact ICT products/digital devices have on our environment, health and wellbeing as they are consumed and discarded. Wise practices will ensure that e-waste will have minimal or zero impact on the vulnerable environment and greater ecosystem. Partnership, collaboration with private business, industry leaders, and retailers/recyclers of e-waste is necessary to achieving the overall outcomes of this policy objective.

5. Leveraging ICT for sustainable development

Policy Objective: *Leveraging ICT to achieve social, economic and environment outcomes*

ICT system requirements may vary across each sector, therefore Government will need to work closely with private business, civil society, and local professional experts to appropriately identify user's needs, develop and implement appropriate IT solutions; improve local network connectivity, upgrade software or hardware requirements, website or database design and development, implementing enterprise resource planning software, developing an information system (geographic, weather, accounting, transport, etc).

To achieve this policy objective we will;

5.1. Promote ICT utilization to maximize industry efforts in improving Energy, Tourism, Transportation, Agriculture, Marine Resource Management and Food Security

Government will promote ICT as an essential tool to enhance local business productivity, expand our reach to global markets, and improve economic growth. The collection, storage, analysis, and dissemination of data and information for decision makers is key to improving efficiency and competitive gains in any industry, and requires the development and better utilization of Information Systems.

5.2. Effectively utilize ICT to improve Climate change adaptation and efforts
5.3. Promote the use of ICT for Public Safety

ICTs are a critical tool used to monitor climate change activities, mitigating and adapting to its effects, and assisting in transitioning towards a green economy. Building our resilience to natural and man-made disasters (cyclones, drought, pandemics, fire, etc) is essential if we are to ensure the safety of our people, and mitigate the negative impact on our environment and economy. ICTs are a critical tool used in disaster risk reduction and disaster management that will ensure decision-makers have access to accurate, reliable, timely data for forecasting, to inform planning and implementation, and quickly respond in an emergency situation. This will include spatial mapping technologies, geographic and weather information systems, and more. Government will strive to raise awareness of the role of ICTs in addressing key challenges related with climate change and sustainable development, to ensure public safety.

5.4. Effectively utilize ICT for delivery of Education

Access to ICT in education can help create a skilled workforce, and facilitate social mobility. Effectively integrating ICT into the education system can yield multiple benefits; enhancing student learning through online platforms and digital devices; providing opportunities for students living in rural areas, improving the capacity of teachers to utilize ICTs in the classroom, and improving the efficiency in which schools deliver education services. E-learning programmes will enable students and teachers living in rural areas to gain quick, easy access to education that would otherwise not be so economical. Government recognizes the potential of ICT to improve educational quality, enhance lifelong learning, and provide educational opportunities for all.

5.5. Effectively utilize ICT for delivery of Health services

There is potential to improve Information Systems for better informed decision-making in order to appropriately respond to health issues and needs, furthermore ICT will be utilized in various ways to assist in achieving our health outcomes. Government will also enhance the use of telemedicine for equitable quality health services for all.

5.6. Promote the use of ICT to digitize, store and preserve records

To improve accessibility to Cook Islands local knowledge, both traditional and modern, we need to promote the use of ICT to digitize, create, preserve and publish historical, cultural and other information is a safe and responsible manner.

5.7. Utilize ICT to strengthen and promote good governance

ICTs will be utilized by any organization to efficiently collect, manage, analyze, store and disseminate information for competitive advantage, quality decision making, and good governance. It is envisioned that this can be achieved by strengthening E-Government.

Appendix 1: Definitions

Information and Communication Technology (ICT)

ICT (information and communications technology - or technologies) is an umbrella term that includes any communication device or application, encompassing: radio, television, cellular phones, computer and network hardware and software, satellite systems and so on, as well as the various services and applications associated with them, such as videoconferencing and distance learning.

It is the integration of telecommunications networks, hardware (computers, mobile phones), and software, that enables users to access, store, transmit and manipulate information.

Often used interchangeably with the term Information Technology (IT), ICT focuses on communications, this include the internet, wireless networks, mobile phones and digital devices.

Examples of how the term ICT is used throughout this Policy document;

- **Hardware**; any digital device that connected to a network that enables users to access, store, send, receive and manipulate multi-media data
- **Software**; any program installed on a piece of hardware to facilitate the exchange of information. Examples can be server software or basic application software such as Microsoft Office Word
- **Network**; includes wired (fiber optic cables, copper wire) and wireless networks (Wi-Fi, Bluetooth, cell phone networks, microwave links) that allow devices to communicate
- **Applications**; the ways in which people use ICT Examples are instant messaging, Voice over IP (Skype) and video conferencing. It can also refer to the e-services (e-applications) that can be delivered; e-government, e-learning, e-business, e-commerce, and e-health. Any user of ICT must have a basic minimum computer and information literacy level to be able to effectively utilize these services.
- **ICT Professionals**; technical professionals working in the ICT/IT Sector tasked with the design, development, administration, maintenance and repairs of any ICT hardware, software and networks. Examples are system administrators, network administrators, developers, technicians, support desk, etc

Telecommunications

The term 'telecommunications' falls under the umbrella term ICT and specifically refers to any communication over a distance by cable, telegraph, telephone, or broadcasting.

Appendix 2: Relevant policies and legislations

- o 1989 Broadcasting Act; amendments 1997 - covers the provision of community and commercial broadcasting licenses
- o 1989 Telecommunication Act; amendments 1991, 1992, 1997 – tailored to TCI as the sole provider of telecoms service
- o 1969 Crimes Act; amendments 2011 to include cyber crimes
- o 2008 Official Information Act; amendments 2009
- o 2008 SPAM Act
- o 2011 Digital Registers Act
- o 2013 Telecommunications Industry Principles
- o 2013 Copyright Act