Solomon Islands Government

MINISTRY OF COMMUNICATION AND AVIATION | 2017

NATIONAL ICT POLICY

CONTENTS:

FOREWARD

This National Information and Communications Technology Policy (National ICT Policy) is proposed by the Ministry of Communications and Aviation (MCA). It is based on the 2015report of the ICT Policy Technical Advisor, Dr. Andrew Simpson, updated by MCA to reflect changes in circumstances occurring since 2015. The present draft National ICT Policy should be read together with the Legislative Reforms for Implementation of the National ICT Policy; the National Broadcasting Policy; and Legislative Reforms for Implementation of the National Broadcasting Policy proposed by the ICT Policy Technical Advisor.

EXECUTIVE SUMMARY

1. This National ICT Policy sets out the policy of Solomon Islands Government with respect to meeting the information and communications technology (**ICT**) needs of Solomon Islands people.
2. The aim of this National ICT Policy is to provide policy to direct changes that benefit people and organizations in Solomon Islands, which:
   - Can in practice be implemented to yield tangible benefits for Solomon Islands;
     and
   - Can be monitored, evaluated and improved on, consistent with the methods favoured by the Solomon Islands Government and its principal development partners.

3. The National ICT Policy is structured in three Parts. **PART ONE** comprises:

   - Vision and Mission – stating the national Vision and Mission for ICT in the life of Solomon Islands, consistent with the DCCG vision of a "Peaceful, United and Progressive Country of Solomon Islands."[1]
   - Background – describing the importance of ICT and ICT policy for Solomon Islands and the current state of ICT availability and use.
   - Policy Principles – setting out the principles which have guided the Government in determining this National ICT Policy are set out, to assist in its interpretation and in making the many choices that will be required in its implementation, including as to priorities among ICT Strategies, the action plans to put ICT Strategies into

[1] Democratic Coalition for Change Government *Policy Statement* (Office of the Prime Minister and Cabinet, January 2015) para 5.0.

effect, and the indicators to measure the degree to which success is achieved.

4. PART TWO sets out the Government's ICT Objectives, together with its strategies for achieving those objectives. These ICT Objectives and ICT Strategies are at the heart of the National ICT Policy. The nine ICT objectives are:

   - Accessible ICT: "Provide an environment conducive to investment in ICT infrastructure and services to make ICT communications accessible and affordable for the people of Solomon Islands."
   - Legal Environment for ICT: "Enact or amend laws, and establish or reform administrative and enforcement bodies, to create an environment that supports the secure, cost-effective and productive deployment and use of ICT in Solomon Islands."
   - ICT for Good Governance: "Utilize ICT at all levels of government to promote good governance and facilitate the efficient administration of government and delivery of public services throughout Solomon Islands."
   - ICT for Peace and Unity: "Promote reconciliation, national unity, peace, law and order, and access to justice throughout Solomon Islands by innovative use of ICT."
   - ICT for Health: "Improve healthcare and health service delivery throughout Solomon Islands by innovative use of ICT and promote healthy ICT working conditions and practices."
   - ICT for Learning: "Improve the availability and quality of education throughout Solomon Islands by innovative use of ICT and develop ICT know-how in the workforce and public generally."
   - ICT for Business: "Promote the availability, affordability and use of ICT to support economic growth, private sector development and employment creation in Solomon Islands."
   - ICT for the Environment: "Utilize ICT to manage and protect Solomon Islands' natural resources and environment, to respond effectively to climate change and natural disasters, and ensure ICT use and disposal practices minimize adverse impact on our environment."
   - ICT for Equity: "Promote access to and use of ICT in Solomon Islands to further the goals of gender equality, women's empowerment, and inclusive development."

5. **PART THREE** provides for the implementation, review and improvement of the *National ICT Policy* over time:

   - Implementation of the National ICT Policy – The Government intends the *National ICT Policy* will be implemented in accordance with specific action plans, and that implementation will be properly monitored and reported. The international collaborations in which Solomon Islands is already involved in relation to ICT will continue to be supported. The commitment of financial resources will be necessary and this section outlines how the funding and budget requirements of the National ICT Policy will be addressed.
   - **Review and Development of the *National ICT Policy*** – Qualitative and quantitative monitoring of implementation, consistent with the "logical framework" approach endorsed by Government, will enable independent review of the impacts of this *National ICT Policy* and fine-tuning of it in subsequent iterations.

6. The approach taken in preparing this *National ICT Policy* has involved identifying the development needs and preferences of Solomon Islanders and developing ICT Objectives and Strategies that will contribute to fulfilling those needs and preferences, having regard to relevant context provided by:

   - The DCCG's Policy Statement (2015);
   - The DCCG's Policy Strategy and Translation (2015);
   - Solomon Islands objectives for development, particularly as expressed in the National Development Strategy;
   - The framework for investment defined by the National Infrastructure Investment Plan;
   - Existing laws and institutions in Solomon Islands;
   - Multilateral commitments previously entered into by Solomon Islands; and
   - The "Logical Framework" approach for sector and programme planning.

7. This is the first explicit National ICT Policy adopted by the Solomon Islands Government but the Government intends that it will not be the last. As economic growth and technological development proceed it will be necessary

to review and update national policy for ICT to ensure it continues to be relevant and appropriate to meet the needs of Solomon Islands.

8. MCA proposes that responsibility for the implementation of this National ICT Policy will be vested in the Minister of the MCA. The Minister will be supported by national ICT stakeholders and ICT development committees that will be appointed by the Minister for specific specialised roles. The major support to implementing ICT policy shall be provided by the Department of Communication, Telecommunication Commission Solomon Islands, and ICTSU.

9. MCA proposes that initiatives identified during the process of project implementation that require public funds shall be funded through normal government stakeholders (including government Ministries, Departments, and Constitutional and Statutory entities). The government may also venture into financial arrangement with international stakeholders or aid donors to support implementation of this policy when the national government decided appropriate and suitable.

PART ONE

A. Vision and Mission

1. The Solomon Islands Government has the following ICT Vision for Solomon Islands

ICT Vision:
A peaceful, united and progressive Solomon Islands communicating and informed by technologies open to all

2. This vision reflects a view of ICT as contributing to achievement of the Government's Policy Strategy and Translation and national development goals for Solomon Islands. In particular, the Government identifies in this National ICT Policy ICT Objectives that are key to the DCCG Policy Statement vision of a " **Peaceful, United and Progressive Country of Solomon Islands**."[2]

3. The Solomon Islands Government adopts as its Mission in relation to ICT:

ICT Mission:
To make information and communications technologies available, affordable and accessible to all in Solomon Islands, **To enable equal participation by all in the social, cultural, economic and Political life of Solomon Islands.**

4. This National ICT Policy is premised on the twin themes of access to ICT and participation in the life of the nation.

[2] Democratic Coalition for Change Government Policy Statement (Office of the Prime Minister and Cabinet, January 2015) para 5.0.

B. Background

5. Many opportunities exist for the wider availability and use of ICT to contribute to Solomon Islands' further development and the improvement of its people's welfare. A variety of challenges must be overcome, however, in order for ICT to become widely available and used. The challenges to expanding the use of ICT often are mutually reinforcing.

The Importance of ICT

6. The power of information and communications technologies (" ICT ")[3] to promote freedom of expression, economic growth and development, social interaction, cultural development and good governance is now recognized globally. The crucial importance of ICT for Pacific islands countries was summed up in the 2010 *Framework for Action on ICT for Development in the Pacific:*[4]

> Information underpins empowerment. Empowerment underpins people-centered sustainable development. ICT provides a platform to achieve the Millennium Development Goals (MDGs) through the implementation of locally appropriate national development strategies. It is essential that the full potential of ICT is harnessed for the benefit of all Pacific people, and in particular the marginalised or disadvantaged groups.

7. Solomon Islands faces and is working to overcome a variety of challenges in order to achieve the national vision of a "Peaceful, United and Progressive Country of Solomon Islands."[5] This *National ICT Policy* is premised on the conviction that the increased availability, accessibility and affordability of ICT, and increased use of ICT in virtually all spheres of life, will contribute positively toward achieving the national vision. The *National ICT Policy* is intended by Government to plot its future course of action in relation to ICT and will contribute to the context for future decision making[6] in relation to ICT issues.

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[3] Information and Communication Technologies (ICT): Consists of the hardware, software, networks, and media for the collection, storage, processing, transmission and presentation of information (voice, data, text, images), as well as related services." – *World Bank ICT Glossary Guide* (web.worldbank.org).
[4] Framework for Action on ICT for Development in the Pacific (2010) p 6.
[5] Democratic Coalition for Change Government *Policy Statement* (Office of the Prime Minister and Cabinet, January 2015) para 5.0.
[6] "[P]olicy is essentially a stance which, once articulated, contributes to the context within which a succession of future decisions will be made." Friend JK, Power JM and Yewlett CJL Public *Planning: The Inter-Corporate Dimension* (London: Tavistock, 1974) p 40.

8. Together with the governments of other Pacific islands countries and territories, the Government of Solomon Islands has contributed to, and made commitments to, a number of regional and international collaborations in respect of ICT. By identifying and implementing ICT policy measures that will deliver tangible benefits for the people of Solomon Islands the Government will fulfill both national and regional responsibilities.

9. It is fundamental that the *National ICT Policy* must also support the economic and social goals of the Solomon Islands. With this in mind, the *National ICT Policy* is designed to be consistent with the Government's Policy Strategy and Translation and with the strategy for national development. It is clear that many decisions will need to be made by the Government on ICT issues as time goes by. So, too, will many issues arise for decision by businesses, faith-based organizations, schools, families, and communities.

The Role of ICT Policy

10. The *National ICT* Policy is intended to direct future Government activity in relation to the ICT sector, for the further achievement of national goals. Implementation machinery will be established, to translate the policy into action. The *National ICT Policy* will in some cases require the enactment of legislation.

11. Where new laws are enacted to give effect to policy, there may be a need to appoint a person or body to oversee compliance with those laws and enforce them. The telecommunications sector already has such a regulator, in the Telecommunications Commission. The Government is concerned that any new laws must be complied with or enforced but recognises that expert regulatory staffs are scarce and staffing and operating regulatory agencies is costly. The Government is also concerned that policy, law and regulation should not impose unnecessary costs on businesses. A fundamental concern of the *National ICT Policy*, therefore, is to minimise the compliance burden on regulated businesses and the administrative overhead that Government must bear.

12. The *National ICT Policy* will work together with other policies, laws and regulations to support the adoption and use of ICT in Solomon Islands. The Solomon Islands

National Broadcasting Policy addresses broadcasting matters, including regulation, spectrum management, and broadcasting content. Despite the process of "convergence," driven by the ubiquity of Internet Protocol encoding of content, it is still practical to make policy, law and regulation for traditional broadcast media separately from ICT and online media[7]. The *National Broadcasting Policy* will provide over-arching policy guidance for the Government in relation to future decision-making and legislation for the broadcasting sector, and for broadcasters and regulators in complying with or giving effect to legislation or regulations. The *National ICT Policy* will operate alongside the *National Broadcasting Policy* and should be read together with it.

Information on ICT in Solomon Islands

13. In developing and implementing policy for the ICT sector it is highly desirable to have data regarding current circumstances that are accurate, comprehensive, and up-to-date. In this respect, the Solomon Islands faces a significant challenge: data relevant to investment in, deployment of, and use of ICT are scarce.

14. Information about the systems and hardware already in use in Solomon Islands, including in Government offices, is incomplete. Several valuable IT audits have been carried out by the ICT Support Unit ("ICTSU") within the Ministry of Finance. ICTSU has also begun to catalogue equipment and systems as Ministries begin migrating to the SIGConnect platform administered by ICTSU. A comprehensive picture of Government's ICT use is not available at this time. Nor is much information available about access to, spending on, or use of ICT by businesses or the public.

15. At the present time, however, it is possible to draw on data relating to ICT that are disclosed in a small number of Solomon Islands studies; data gathered by regulators including the Telecommunications Commission; and data collated by regional and global comparative studies. Such data are cited where relevant, in the following pages.

[7] One way of characterizing the difference between broadcast and other media is as follows: "Pull media are passive, there if you want them. Examples are the traditional media, such as radio and television, over which you have control to pull in a message. You can turn them on or off. You can pick up a newspaper, magazine or book and put it down. You can go to a movie or not. By contrast, push media propel messages at you whether invited or not. An example would be a recorded voice in a grocery store aisle that encourages you to buy a certain brand of cornflakes, as you pass by the cereals. Push media are always on." <http://www.uvm.edu/~tpatters/pcom/pullpush.html>.

The Government has also had regard to general economic and development metrics that illuminate the context in which Solomon Islands people and organizations are endeavouring to acquire and use ICT. (These are cited at relevant points.)

Availability of telecommunications services

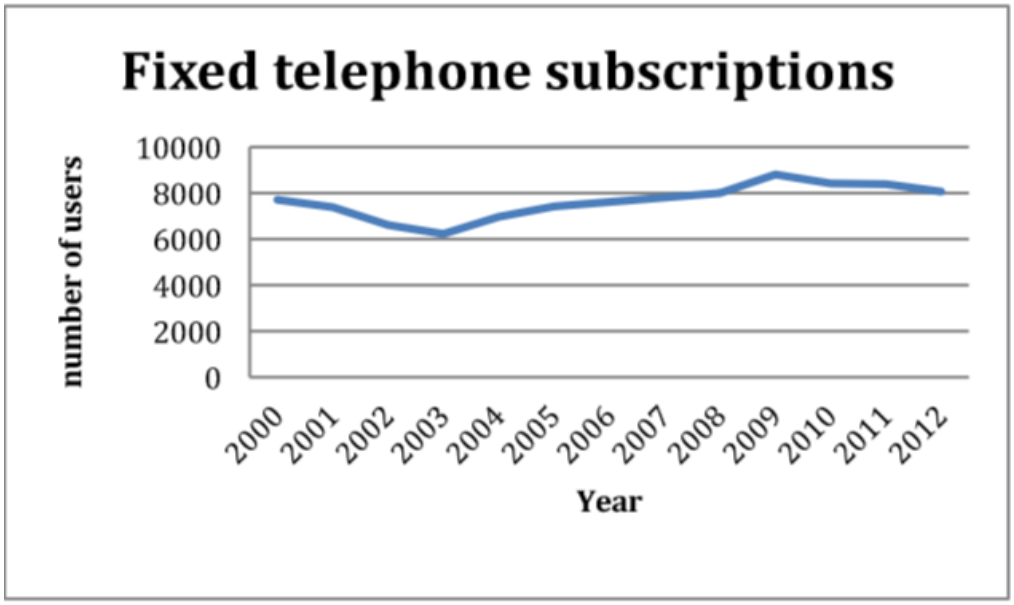
16. In Solomon Islands, telecommunications sector policy since 2008 has required the removal of barriers to investment and competition in telecommunications and the light- handed administration of regulation. The Telecommunications Act 2009 is premised on a policy of presenting minimal barriers to entry, facilitating interconnection and access, and proscribing anti-competitive forms of conduct. The Act includes provisions for price control and universal access funding to service providers, neither of which it has been desirable to invoke. Entry by prospective telecommunications service providers is not limited by any cap on licence numbers and a broad "class licensing" regime is now in effect.

17. According to TCSI statistics:
    - mobile subscriber numbers have grown from 57,000 in 2009, to 323,105 in 2013 and 333,159 by June 2014;
    - mobile penetration has increased from 11% in 2009, to 58% in 2013 and 60% by June 2014;
    - mobile coverage (based on population of villages served) has expanded from under 20% in 2009, to 80% in 2013 and 83% by June 2014;
    - mobile internet subscriptions have grown from 8,205 in 2010 to 44,935 in 2013and 49,038 by June 2014;
    - fixed lines in service have declined from 8,801 in 2009 to 7,618 in 2013 and 7,516 by June 2014;
    - mobile internet penetration reached 6.5% in 2012, 8.1% in 2013 and 8.9% by June 2014; and

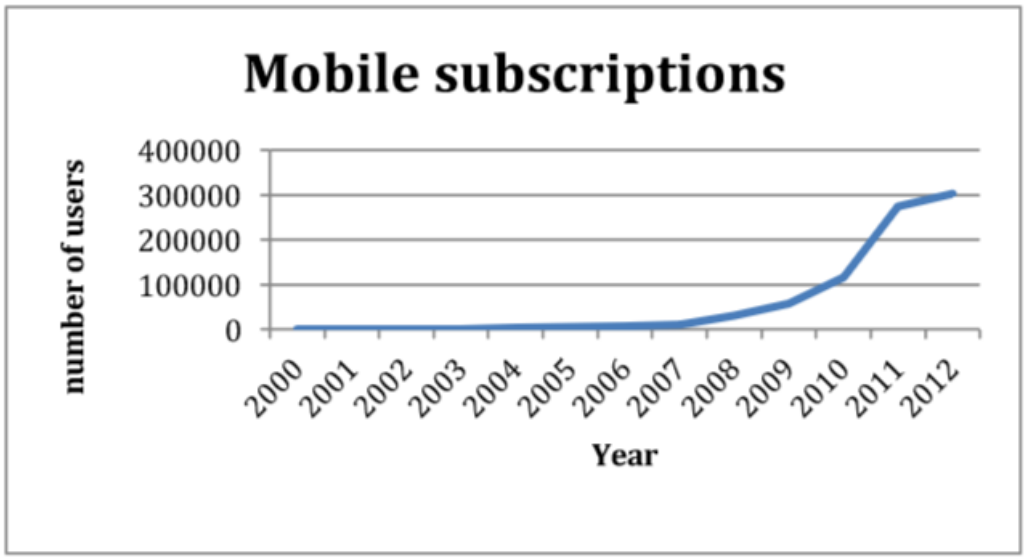
- wireline internet penetration has been static at 0.02% since 2009.[8]

18. While fixed telephone penetration has barely increased, and begun to decline since 2009, mobile telephone penetration has increased dramatically since 2009.

[8] Telecommunications Commission of Solomon Islands, Telecommunications Sector Key Indicators for Year 2013; Telecommunications Commission data

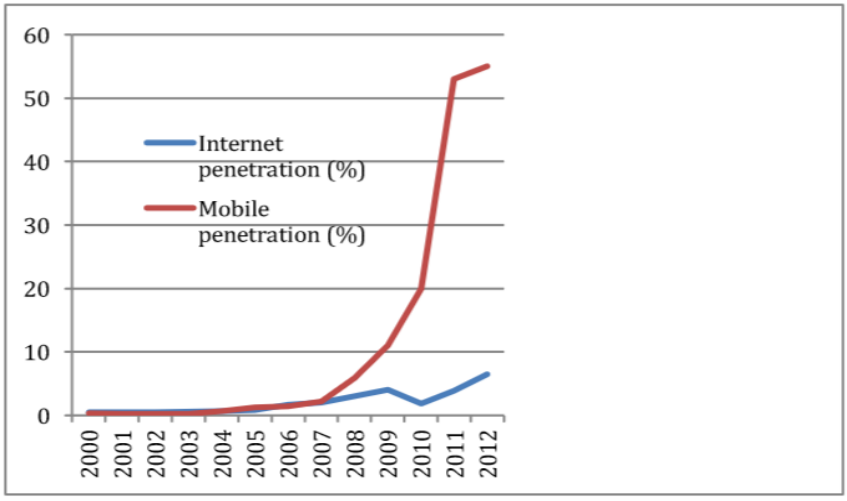


Sources: ITU data 2000-2009; Telecommunications Commission data 2009-2012.



Sources: ITU data 2000-2009; Telecommunications Commission data 2009-2012.

19. Mobile penetration is growing very rapidly and, with it, mobile data penetration. With low fixed line subscriptions and limited electric grid coverage, data use in Solomon Islands is principally by means of handheld devices: particularly, smartphones.



Sources: ITU data 2000-2009; Telecommunications Commission data 2009-2012.[9]

20. The National Development Strategy recorded in 2011 that:[10]

> ICT is under-prioritized, and amongst the poorest in the Pacific region. Current communications development focuses on telecommunication services whilst media developments are under prioritized and regulatory enforcement is lacking. The Telecommunications Act 2009, which requires increased capacity for enforcement, seeks to increase competition by having extra mobile services whilst there is still no competition in internet and landline services, which remain exclusively with Our Telekom. Internet services are growing and a local NGO (PFnet) operates a total of 24 email stations in the provinces.

21. The policy conclusion in respect of ICT under the National Development Strategy is: "Telecommunications needs better, more efficient and cost effective services with a wider coverage."[11] Two strategies are indicated for telecommunications:[12]

- Review of legislation and regulations to promote competition and consumer choice and promote competition to improve services and pricing in the telecommunications market.
- Implement progressive and enlightened measures that ensure and allow the best technology to be utilized in a competitive commercial environment.

[9] N.b. Apparent dip in internet penetration in 2010 reflects a disparity between ITU and TCSI data.
[10] Solomon Islands Government National Development Strategy 2011 to 2020 (2011) p 33.
[11] Ibid.
[12] Ibid, p 35.

22. The 2013 National Infrastructure Investment Plan proposed universal access to ICT as a strategy to address what it identified as significant ICT gaps:

Sub-sector	Issues	Strategies
ICT	▪ There is a gap of 20% that needs to be covered in terms of ICT coverage nationwide. This relates specifically to remote rural scattered communities. ▪ Internet access gap is 96%. ▪ Fixed line gap is 98.4% ▪ Expensive fixed and wireless broadband costs due to limited competition and spread and remoteness of some communities. ▪ Monopoly over fixed lines by Solomon Telekom. ▪ Shortage in skilled ICT personnel. ▪ High upfront investment and transaction costs. ▪ Foregone economic opportunities.	▪ ICT universal access for all. ▪ Support for extension of ICT services into remote uneconomic areas

23. Proposals in respect of the possible future form of "universal access" support are set out below (paras. 90 – 96).

International connectivity

24. At present, Solomon Islands relies entirely on satellite transponder capacity for international connectivity to the rest of the world. Satellite capacity is expensive, relative to fibre optic cable capacity. Satellite services also have much higher latency[13] than fibre services, which makes satellite capacity unsuitable, or inferior, for time- sensitive applications. A fibre optic submarine cable landing in Solomon Islands was previously proposed by the Solomons Oceanic Cable Company[14]("SOCC"), with domestic cable links to Auki (in Malaita) and Noro (in Western Province) and the possibility of further connections into cable systems landing in other locations, such as Port Moresby.

25. Government services, businesses and private users would benefit greatly from the availability of fast, reliable and cheaper international connectivity. Businesses' operating costs should fall and Internet service become affordable to more customers than previously. As a further benefit of submarine cable access, it is expected that satellite broadband capacity currently used by Telekom and Bemobile

[13] Signals take just over one tenth of a second to reach a satellite in geostationary orbit approximately 36,000km above the Earth, and another tenth of a second to earth again. Even at the speed of light this introduces a delay of at least 440 milliseconds into any satellite connection.

[14] SOCC is 51% owned by the National Provident Fund of Solomon Islands and 49% by Solomon Telecommunication Company Limited.

for service to Honiara, Malaita and New Georgia could be released and made available for other locations not directly served by the proposed cable.

Domestic connectivity

26. Considered at the network level, constraints to widespread availability of ICT currently exist in relation to international connectivity, domestic backbone and switching, and customer access networks. Various policy options have been used to encourage increased network investment, as summarized in the table below:[15]

Create an enabling environment for competition in infrastructure and services	Stimulate rollout in underserved areas
Remove regulatory obstacles to investment and competition	**Share infrastructure**
Remove limits on the number of network licenses	Give operators incentives to cooperate in developing backbone infrastructure in areas where infrastructure competition is not commercially viable
Encourage the entry of alternative infrastructure providers	
Remove constraints on the market for backbone services	**Provide competitive subsidies**
Improve regulation of backbone networks	Give operators subsidies to build and operate backbone networks in underserved areas, with services provided on a nondiscriminatory basis
Reduce investment costs	
Facilitate access to passive infrastructure	**Reduce taxes and levies**
Promote infrastructure sharing	Give operators incentives to build networks in underserved areas by lowering sector levies or contributions to universal service funds
Reduce political and commercial risks	
Provide risk guarantees and political risk insurance	
Aggregate demand	
Promote competition in the downstream market	
Promote downstream competition through effective regulation	

27. Possible policy options include demand-side strategies, which may also serve to stimulate and attract infrastructure investment. Where customer demand for services exists, profit-seeking service providers will endeavour to supply services. For this reason, the Telecommunications Commission has so far considered it inadvisable to impose levies and redistribute funds raised in the form of "universal access subsidies" to operators. (Among other concerns, such redistributions would inevitably bias competition among operators, contrary to the steadfast policy of the Government.) Operators have continued to construct network to provide services to previously unserved areas, without universal service payments being made to any operator.

[15] Williams, MDJ "Advancing the Development of Backbone Networks in Sub-Saharan Africa" in *Information and Communications for Development 2009: Extending Reach and Increasing Impact* (World Bank, 2009).

28. While customer demand for mobile services has been sufficient to drive mobile network roll-out to give coverage to more than 80% of the population of Solomon Islands already, it will be necessary in future to consider whether there are areas in which, or services for which, demand will be insufficient to attract investment. In relation to such areas or services, it may be desirable to adopt measures to support customers' demand, rather than the conventional approach of funding operators to build network assets.

29. A key driver of demand is that locally relevant content is available.[16] An important empirical study by the Internet Society, OECD and UNESCO has investigated the connections between local content, infrastructure and access prices:

> The empirical analysis in this paper shows a strong correlation between local content, infrastructure development and access prices but it is not able to positively determine the direction of causality due to data constraints and complex mutual dependencies. What is most likely is that the three elements are connected and feed into each other in a virtuous circle. The inter-linkages between the different elements lead to three key lines of policy considerations evolving out of this research: fostering content development, expanding connectivity and promoting Internet access competition.[17]

30. The key implication of these findings is that funding operators to construct facilities is not the only way to promote network roll-out: promoting local content will drive demand for services, and operators will respond to that greater demand by building more infrastructures.

Access to locally relevant content

31. Ensuring the preservation and vitality of the national culture is an important goal for any country. In Solomon Islands, the Government has previously underlined the importance of preservation and development of Solomon Islands arts and culture. A key national development strategy is to: "preserve, protect, promote and manage cultural assets to enhance and mainstream cultural activities."[18] The Nasinol Policy

[16] "The content that is most important to people is typically in their own language and is relevant to the communities in which they live and work." ISOC, OECD and UNESCO "The Relationship between Local Content, Internet Development and Access Prices: Main Findings and Conclusions" (2012) p 1.
[17] Ibid p 2.
[18] Solomon Islands Government National Development Strategy 2011 to 2020 (2011) p 12.

Framework blong Kalsa19[19] aims at reversing the loss of culture, revitalizing the national culture, making the culture sector more visible, and fostering development of its socio- economic potential.

32. ICT can assist in supporting strategies for the revitalization and development of national culture – and a vital national culture can generate locally relevant content that will, in turn, be in demand by consumers and attract ICT investment.

33. The Tebbutt survey of Solomon Islands broadcasting audiences reported in 2010 that:[20]

> [P]eople love to see themselves and enjoy looking at news from their own country. They are enthusiastic about the concept and accept the product is in its early days of development. They would like longer news, greater coverage, especially including the provinces. They definitely wish to see more local content on TV, not just news.

34. Solomon Islands broadcasting audiences also desire to see programming about matters of daily relevance, including health, farming, food production, and youth issues.21[21] A similar pattern of user desires can be expected in relation to digital content online.

35. The Nasinol Policy Framework blong Kalsa enumerates a set of strategies to support revitalization of national culture. ICT and national culture can be mutually reinforcing: growth in one can support growth in the other. It is not access to ICT by itself that brings benefits; it is access to content and services by means of ICT that is beneficial.

Access to devices

36. The greater availability and use of ICT depends not only on the availability and affordability of network infrastructure and services but also on the availability and affordability of user devices, to enable end-users to access those services. For example, unless a customer has access to a mobile phone handset, she cannot make

[19] Available online: <www.spc.int>.
[20] Tebbutt Research "Audience Market Research in Solomon Islands: Qualitative and Quantitative Research Report" (2010) p 49.
[21] Ibid, p 91.

use of mobile telephone service. Unless a Ministry has appropriate servers, firewalls, desktop computers, printers, et cetera, it won't be able to participate fully and responsibly in e- Government.

37. The limited coverage of the electricity grid in Solomon Islands is a significant constraint on private access to ICT. At the time of the 2009 national census, the main source of energy for lighting in the Solomon Islands was the kerosene lamp, used by 75% of all households. Only 12% of all households were connected to the electricity main grid: 52% of urban and 4% of rural households. A further 9% got their energy from using solar panels.

Indicator (%)	Solomon Islands	Urban	Rural	Choisuel	Malaita	Guadalcanal	Western
Population		19.8	80.2	3.1	3.7	16.5	12.7
With grid electricity	12	52	4	4	3	8	12
With radio	44	57	41	43	44	44	40
With T.V.	21	68	11	6	11	19	22

Source: 2009 Population and Housing Census. (Selected Provinces only.)

38. In areas covered by the electricity grid, the power supply is not yet of high quality. Given these constraints, hand-held devices, which have a much lower power requirement, are practical where desktop machines, which require mains power, are not.

39. Apart from the availability, cost and quality of mains power, the cost of ICT equipment remains a factor for many users. Businesspeople and public servants report that the affordability of equipment has been a factor constraining ICT use. In these circumstances, the Government is concerned to improve the affordability of ICT equipment.

Literacy and ICT skills

40. Literacy is not essential to all ICT use, as not all ICT content is in text form and not all applications require users to enter text. Some applications (e.g. in the public health field) are designed to be used by people who do not read. Nevertheless, basic literacy generally is necessary for ICT use and the level of ICT use is likely to be

substantially lower among non-readers. Access to ICT may also play an important role in improving literacy.

41. In Solomon Islands, literacy rates are improving. According to the 2009 census:[22]
    - 80% of the 10-14 year old (school age) population were literate
    - 90% the 15-19 year old population were literate
    - 80% of the population aged 45-49 were literate
    - 60% of the population 70 years and older were literate
    - in urban areas almost 90% of the population 5 years and older was literate
    - in rural areas only 74% of the population 5 years and older was literate.
42. While ICT have a part to play in developing literacy, these data also suggest a possible need for applications for seniors that do not require the ability to read.

43. Among technical staff, rather than users, much higher ICT skills are needed. Businesses and Government Departments are concerned that few trained IT professionals are available in Solomon Islands. The Government will explore opportunities for ensuring the public and private sectors are in future able to draw on a sufficient pool of ICT talent. The Government will also seek to create opportunities for young people in Solomon Islands to train and qualify as IT professionals.

44. The Government, private sector and universities may be able to coordinate efforts to provide suitable training in Solomon Islands and scholarship programmes for young people to study IT overseas. Such measures will help to ensure that Solomon Islands will have the IT professionals it will in future require.

Objectionable content and behaviour, cybercrime, privacy and security

45. Regrettably, the powers that ICT provide, to store, transmit and process large volumes of information at low cost, are used by some for objectionable or criminal purposes. As ICT use grows around the world, so does ICT misuse, including for criminal purposes. The Government must take appropriate steps to protect the public against possible malevolent misuse of ICT. It is essential that, as a

[22] These data reflect persons self-reporting as literate, in response to the question: "Can you read and write a simple sentence in one or more of the following languages: English, Pidgin, Local language, or Other language?".

community, Solomon Islands is prepared to respond to the risks that ICT presents as well as to exploit the opportunities that it provides.

46. Risks of various kinds accompany increased availability and use of ICT. Some risks can be mitigated by laws: for example, the risk that a person might try to break into a Government database and steal information should be addressed by a law to make unauthorized access to a third party's system a criminal offense. Other kinds of risks may be managed by raising awareness among members of the community: for example, the risks posed by "phishing" emails and online scams. Still other kinds of risks are best handled by parents and care-givers: for example the risk that children may use social media (e.g. "Facebook") to bully other children. For some kinds of risks, a combination of approaches may be best.

Consumer protection in e-commerce

47. Where consumer transactions may be carried out online, consumers need to have the benefit of legal protection that is equivalent to that which they enjoy when entering transactions offline, in shops or face-to-face. In respect of online consumer transactions, some additional consumer protections may be justified to address risks that do not normally arise in face-to-face dealings.

C. ICT Policy Principles

48. Many choices must be made in the formulation and implementation of *ICT policy*, including as to the Vision to be pursued, the Objectives to be accomplished, the Strategies to achieve those objectives, the actions to put Strategies into effect, and the indicators to measure success or failure. This section identifies the policy principles by which the *National ICT Policy* is guided.

49. The following policy principles inform this *National ICT Policy* and are material to its implementation:

- Development orientation § Build the foundations first
- Shared national participation
- Multilateral engagement
- Bringing ICT into daily life
- Pro-competitive business conditions

- Technology neutrality, Technology aptness
- Evaluation to drive improvement

Development orientation

50. As Solomon Islands is a developing country, its people, businesses and Government face many challenges. It is considered that greater availability and use of ICT must play a central role in overcoming challenges and achieving development. The importance of ICT in development is recognized in the *Millenium Development Goals*, which include: 23 [23]

> "In cooperation with the private sector, make available the benefits of new technologies, especially information and communications."

51. In respect of development, this *National ICT Policy* takes as a starting-point the objectives determined by the Government pursuant to the 2015 *Policy Strategy and Translation*. Regard is also had to the National Development Strategy 2011 to 2020 and the 2013 *National Infrastructure Investment Plan*. It is intended that the *National ICT Policy* and related plans and programmes for ICT should align with the *National Development Strategy* and *National Infrastructure Investment Plan.*

52. The extensive consultation process that informed development of the National Development Strategy included every Province, as well as Honiara city, resulting in national objectives reflecting the People's priorities.[24] Because the *National Development Strategy* represents a comprehensive approach to the needs of Solomon Islanders throughout the country, it provides a useful point of departure for consideration of the issues and opportunities that arise in connection with ICT, which potentially reach into the lives and livelihoods of virtually all citizens.

53. Eight development objectives have been identified, under an overarching focus of building better lives for all Solomon Islanders:

1: Alleviate poverty and improve the lives of Solomon Islanders

2: To support the vulnerable

[23] Millenium Development Goals, target 8.F.
[24] Solomon Islands Government National Development Strategy 2011 – 2020 (2011) p 1.

3: Ensure all Solomon Islanders have access to quality health Care and combat malaria, HIV, non-communicable and other diseases

4: Ensure all Solomon Islanders can access quality education and the nation's manpower needs are sustainably met

5: Increase economic growth and equitably distribute employment and income benefits

6: Develop physical infrastructure and utilities to ensure all Solomon Islanders have access to essential services and markets

7: Effectively respond to climate change and manage the environment and risks of natural disasters

8: Improve governance and order at National, Provincial and Community levels and strengthen links at all levels

54. Greater availability and use of ICT will contribute to achieving each of the eight development objectives. Where increased ICT use is likely to support particular development strategies that are already in place to achieve development objectives, those development strategies have been taken into account in this *National ICT Policy*, for the formulation of ICT Objectives.

Building the foundations first

55. While the potential benefits of increased ICT use are compelling, it is essential not to let the desire to commence new ICT projects run ahead of the capacity to support and maintain them.

56. ICT equipment and services do not run themselves. Hardware, software and systems break down. They require constant and expert maintenance.

57. Users of ICT systems – people publishing information and people consuming information, alike – need to be able to access the system and know how to do so, in order for it to provide value. There must also be useful content available via the system, to attract users to take advantage of access.

58. ICT projects should therefore be sequenced carefully, so that as many as possible of the elements that will be essential in order for the project to work are put in place before the project is rolled out.

59. As examples of this principle:

- It will normally be necessary to invest in capacity building, to ensure people have the skills to use an ICT facility, and technical staff are available to maintain it, before the equipment is installed.
- Laws to support the safety and confidence of the public when using ICT should be enacted, before ICT-based services are rolled out to the public.
- At least some relevant content must be developed or procured (though much more is likely to be generated after the system is launched).

Shared national participation

60. Fundamental objectives of the Government, in building a "Peaceful, United and Progressive Country of Solomon Islands" are to [25]

> Pursue meaningful reconciliation between our people at all levels of our society based on our traditional norms of peaceful coexistence that would lead to national reconciliation and foster natural healing process.
>
> Foster a greater sense of national unity whilst maintaining our varying cultural identity.
>
> Promote national consciousness and ownership of the country by all Solomon Islanders.

61. In connection with this vitally important aim, ICT have the potential to contribute greatly. The simple ability for Solomon Islanders to talk cheaply to one another, regardless of which island they live on, will contribute to national unity and a sustainable peace. The ability of ICT to preserve, disseminate and promote local art, culture and content will also make an important contribution.
62. The Government therefore considers that ICT policy for Solomon Islands must be guided by "shared national participation" as a policy principle.

Multilateral engagement

63. The Solomon Islands is not alone in the challenges it faces in promoting the increased availability and use of ICT. Already the Solomon Islands engages regionally and internationally with the governments of supportive and neighbouring countries, international standards bodies, aid partners, and others. The Government is committed to maintaining its participation in, and contribution to, these multilateral engagements and will seek, where appropriate, to participate in further multilateral engagements.

[25] Democratic Coalition for Change GovernmentPolicy Statement (Office of the Prime Minister and Cabinet, January 2015) para 1.4.

Bringing ICT into daily life

64. The benefits of ICT are best realized when ICT are in regular use. The Government considers that "bringing ICT into daily life" must be a principle of ICT policy, so that businesspeople, teachers, public servants, students, the elderly, politicians, farmers, children, and Solomon Islanders from all walks of life can communicate and use information as part of their day-to-day lives.

Pro-competitive business conditions

65. Competition in the telecommunications sector, particularly among mobile network operators, has so far proved very beneficial to Solomon Islands. Competition among other ICT services may be expected to prove similarly beneficial.

66. The Government considers that *ICT policy* must promote pro-competitive conditions for ICT business in the Solomon Islands, in the expectation that competition will lead to market efficiency, driving providers of ICT goods and services to strive to win customers by better meeting their needs and reducing costs of supply.

Technology neutrality, Technology aptness

67. Very commonly, policies concerning technology insist on "technological neutrality." This expression is "a sweeping statement that can be put to many uses". 26 [26]It may refer to the effect of regulation or the wording of regulation. It may require online and offline conduct to be treated alike. It may require regulation not of technology itself but of the use of technology. It may require that particular technologies not be favoured over other technologies.

68. Aiming for any of these objects is unobjectionable. But "technological neutrality" will seldom provide strong guidance on many policy choices. To the extent that it requires one kind of technology not to be given favourable, or different, treatment relative to another, it must be qualified. While the near-ubiquity of the Internet Protocol means that virtually any content may be reduced to similar form and transmitted "digitally", this does not necessitate that all content and all media be treated alike. Different kinds of content, different kinds of media, and different

[26] Koops B, "Should ICT Regulation be Technology Neutral?" in Koops B, Lips M, Prins C and Schellekens (eds) Starting Points for ICT Regulation: Deconstructing Prevalent Policy One-Liners (Asser Press, 2006) at 103.

transmission infrastructure have very different social implications, different economics, and require to be regulated in different ways.

69. For the purposes of the *National ICT Policy*, it is considered that policy and regulation should be "technologically apt", foremost, and "technologically neutral" to the extent that is possible. Policy and regulation are "technologically apt" when they are appropriate to achieving the ends that are sought for, in relation to the technology or technologies concerned. To be apt, sometimes policy and regulation must be non- neutral, as between technologies.

Evaluation to drive improvement

70. The needs of the community may alter over time. Technology is certain to change, perhaps radically. And the Government, ICT service providers, and users of ICT will all accumulate experience over time. The processes of monitoring and evaluating the implementation of the policy should feed into consideration of how the *National ICT Policy* can be improved in future. The Government will commission an independent review of the *National ICT Policy*, within a fixed period after it has taken effect, to consider any adjustments it may be desirable to incorporate. The objective of this will be to improve the *National ICT Policy*, in light of developing experience with it.

PART TWO

Objectives and Strategies

71. The Government has adopted nine ICT Objectives, derived from consultations with Solomon Islands businesses, educators and ICT users; from objectives determined through the *National Development Strategy* process; consideration of the constraints and challenges to increased ICT use in Solomon Islands; and consideration of the opportunities for ICT to benefit Solomon Islands.

72. In order to accomplish the Government's nine ICT objectives, a range of strategies must be adopted and carried out. The *National ICT Policy* sets out proposed strategies for achieving each objective.

73. It is not feasible to implement all of these strategies at once. The ICT Strategies adopted as part of the *National ICT Policy* will subsequently be elaborated in more detail in action plans, which will set out specific action items, timelines, and parties responsible for each.

D. Accessible ICT

74. In order for the substantial benefits that are offered by increased use of ICT to be realised in daily life, it is essential that users can in fact have access to those ICT. A web of factors drive ICT accessibility, including infrastructure investment, content creation, and training for users.

ICT Objective 1
Create an environment conducive to investment in ICT infrastructure, content and services in order to improve the availability, accessibility and affordability of ICT for the people of Solomon Islands.
Profaed an enfaeronment conduisif to infestmen in ict infrastrukja an serfisis fo mekem ict serfisis aksesibol an afodabol fo pipol blo Solomon aelens.

Issues

75. Perhaps the most fundamental challenge confronting Solomon Islands as it endeavours to take full advantage of ICT is that for many individuals and organizations ICT are at present difficult and expensive to access. In order for ICT to be able to contribute to poverty alleviation, support economic development, and provide other benefits that are expected from them, ICT must be available, accessible and affordable to users.

76. Improving the accessibility of ICT is closely connected to achieving key national development objectives, in particular:

- 1: Alleviate poverty and improve the lives of Solomon Islanders in a peaceful and stable society.
- 5: Increase economic growth and equitably distribute employment and income benefits.

- 6: Develop physical infrastructure and utilities to ensure all Solomon Islanders have access to essential services and markets.

77. The alleviation of poverty in Solomon Islands is one of the Government's very highest priorities. The importance of the role that ICT can play in economic development is now widely accepted: [27]

> The role of ICTs as a key development enabler is widely recognized. While the ICT sector itself can be a major source of growth, diffusion of ICTs in the economy has been found to facilitate macroeconomic performance and business growth by increasing labour productivity, enlarging enterprises' market reach, reducing costs and favouring innovation. Access to new technologies is important to ensure full participation by all people in new opportunities related to employment, education, health, governance or peacebuilding, thus accelerating progress towards the achievement of other development goals.

78. In a widely-quoted estimate, one World Bank paper has suggested that a 10% increase in broadband penetration is statistically associated with a 1.38% boost to GDP in developing nations.[28]Although the magnitude of the boost to GDP probably depends on a host of factors, [29]the same paper reports: "The main conclusion is that broadband has a significant impact on growth and deserves a central role in country development and competitiveness strategies.[30]

79. Expansion in the accessibility and use of ICT would potentially support existing strategies for poverty alleviation, peace and stability, including the following development strategies:[31]

- Strengthening agricultural support services.
- Building farmer-to-farmer support and improving access to inputs and markets.

[27] Report of the Partnership on Measuring Information and Communication Technology for Development (2014) para 3, available at: <http://unstats.un.org/unsd/statcom/doc14/2014-8-ICT-E.pdf>. (The Partnership comprises the International Telecommunications Union (ITU), Organization for Economic Cooperation and Development(OECD), United Nations Conference on Trade and Development (UNCTAD), and several other multinational bodies.)

[28] Qiang CZ, Rossotto CM and Kimura K "Economic Impacts of Broadband" in World Bank Information and Communications for Development 2009: Extending Reach and Increasing Impact (2000) at 45.

[29] Whether this estimate, based on average broadband penetration for middle- and low-income countries between 1980 and 2006, holds true for any particular country will depend on a variety of factors, including whether complementary investments or policies are in place in other sectors to utilize the benefits of broadband: see Williams MDJ "Advancing the Development of Backbone Networks in Sub-Saharan Africa" in Information and Communications for Development 2009: Extending Reach and Increasing Impact (World Bank, 2009)

[30] Qiang, op cit. (Emphasis added.)

[31] Solomon Islands Government National Development Strategy 2011 - 2020 (2011) pp 10 – 13.

- Providing advice and training on small scale business development.
- Improving collection, analysis and use of population and development data.
- Preserving, protecting and managing cultural assets.
- Facilitating young people's creative and innovative expression through various arts creating unity amongst people in the country to speak, think and act as Solomon Islanders.

80. The Government aims to ensure that the power of ICT to contribute to poverty alleviation, peace, and stability in the Solomon Islanders is harnessed as fully as possible. At present, Solomon Islands cannot be regarded as scoring highly on ICT accessibility, though improvement has been seen in recent years, in respect of access to mobile voice and mobile data technologies:

- mobile subscriber numbers have grown from 57,000 in 2009, to 323,105 in 2013 and 333,159 by June 2014;
- mobile penetration has increased from 11% in 2009, to 58% in 2013 and 60% by June 2014;
- mobile coverage (based on population of villages served) has expanded from under 20% in 2009, to 80% in 2013 and 83% by June 2014;
- mobile internet subscriptions have grown from 8,205 in 2010 to 44,935 in 2013 and 49,038 by June 2014;
- fixed lines in service have declined from 8,801 in 2009, to 7,618in 2013 and 7,516 by June 2014;
- mobile internet penetration reached 6.5% in 2012, 8.1% in 2013 and 8.9% by June 2014; and
- wireline internet penetration has been static at 0.02% since 2009.[32]

81. According to the 2013 National Infrastructure Investment Plan:[33]

> [P]rices for fixed and wireless broadband have remained expensive mainly due to limited choices for international connectivity and lack of competition. The remoteness, spread of population (low population concentration), and population

[32] Telecommunications Commission of Solomon Islands, Telecommunications Sector Key Indicators for Year 2013; Telecommunications Commission data.
[33] Solomon Islands Government National Infrastructure Investment Plan (2013) p 53.

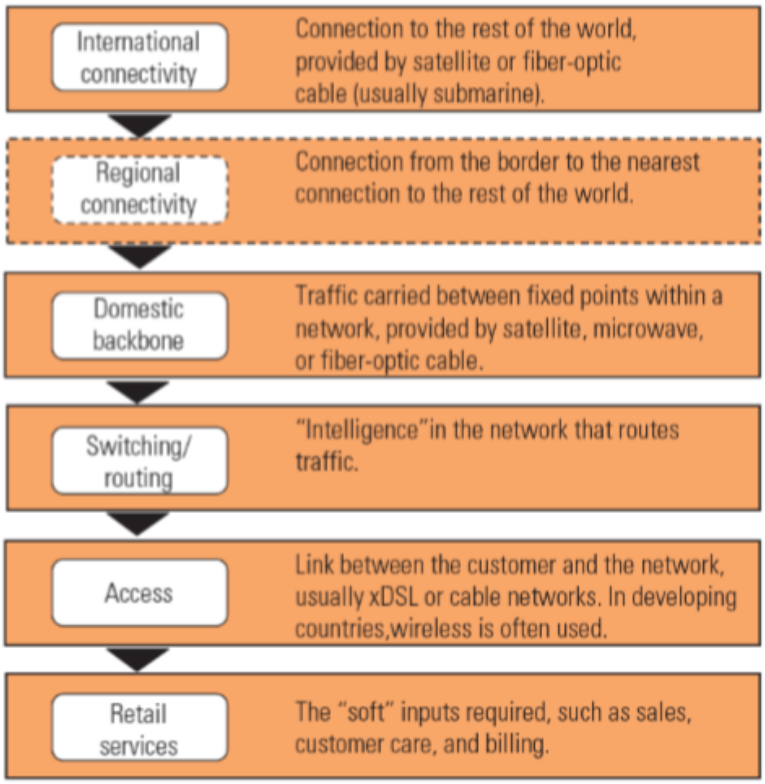
living on multiple island locations means the cost of construction and operations is very expensive and a significant constraint.

82. Since liberalization in 2008, investment in physical telecommunications infrastructure has increased dramatically, and many more Solomon Islanders have access to 2G and (in some areas) 3G mobile communications services. Fixed telecommunications network infrastructure remains limited, however, and very few homes or businesses have fixed broadband connectivity.

83. Currently, fixed broadband services have very low, and falling, penetration in Solomon Islands. The high prices of broadband services relative to *per capita* income are undoubtedly a very significant factor in low rates of fixed broadband penetration. Even if prices were significantly lower, however, the limited availability and unreliable quality of grid electricity supplied to homes and business premises is a significant constraint on expanding access to ICT, at least in relation to non-mobile technologies. The physical infrastructure supporting grid electricity in Solomon Islands must improve for fixed network ICT to achieve significant penetration.

84. International bandwidth currently is confined to satellite-based services, though satellite bandwidth pricing is facing increased competition and SISCC is working to progress a proposed Sydney-Solomon Islands submarine cable investment.

85. Solomon Islands confronts significant obstacles to ICT becoming ubiquitously available, accessible and affordable. Considered at the network level, constraints currently exist in relation to international connectivity, domestic backbone and switching, and customer access networks. Issues with grid electricity supply are likely to impact retail access, and shortages of skilled ICT technical staff possibly constrains activity at all levels.



Source: Williams MDJ "Advancing the Development of Backbone Networks in Sub-Saharan Africa" in *Information and Communications for Development 2009: Extending Reach and Increasing Impact* (World Bank, 2009).

86. The enabling environment created by the *Telecommunications Act* has seen significant network investment, since the Act commenced in September 2009. Investment has been concentrated, however, in 2G and 3G mobile network infrastructure. An important policy issue arises as to whether (and, if so, how) to provide financial support to encourage or to fund the construction of infrastructure and delivery of services to areas in which operators do not perceive demand that is sufficient to justify the investment required (i.e. where there are communities that operators perceive as being "uneconomic" to serve). The traditional approach to providing such support is for a government agency to impose a levy on all telecommunications operators, and transfer an allocation from the funds raised to whichever operator actually builds network to serve such "uneconomic" areas. Part 6 of the *Telecommunications Act 2009* authorises these kind of arrangements.

87. At the same time that it is vitally important for ICT to become more accessible, available and affordable in Solomon Islands, the malicious or negligent misuse of

ICT can be very harmful. International experience suggests some will misuse ICT to (for example) invade others' privacy, engage in fraud and extortion, market pornography, or spread undesirable or offensive material, or promote malevolent notions. The *Tonga Declaration* of 2010 recognised that there are growing threats to cyber-security, which cooperation and coordination on a regional basis can assist to address.[34] There is no single or simple solution to these risks. The Government must do what it can, however, to protect the community from harm. Some forms of harm can be addressed by legislation; others are best addressed by educating the community and using ICT themselves (e.g. filtering software) to mitigate the threat.

Strategies

88. At the present stage of market development the Government is not in favour of funding service providers' construction of facilities. The Telecommunications Commission has found it inadvisable to intervene in the market in this way. The mobile operators are continuing to construct new network in rural areas, at this time. The possibility of universal access support might in future need to be considered again, if the operators cease network construction while some communities still don't have network coverage of an adequate standard.

89. Although the Government owns some network, it has been the Government's policy not to participate in the telecommunications market, except as a customer. The Government must refrain from offering network or services on a commercial basis. Experience around the world has shown that governments make poor telecommunications operators. The Solomon Islands Government has shown a clear resolve in exiting from the telecommunications market, which is a positive example to other countries. If the Government were to re-enter the market as a telecommunications provider, in competition with commercial networks and service providers, that would gravely undermine all the Government has accomplished by liberalizing the industry and exiting from the market. Further investment would be very seriously threatened.

90. Rather than pay an operator to build network in an "uneconomic" location, or deliver services using state-owned network, the Government proposes to adopt strategies to promote demand among users. It is the Government's policy, first, to

[34] Pacific ICT Ministerial Forum 2009: Connecting the Unconnected Nuku'alofa, Kingdom of Tonga, 19-20 February 2009.

adopt strategies *to stimulate demand among users*, so that they are willing to pay for services, in order that areas will not be considered "uneconomic" by operators. Secondly, if user demand in one or more particular areas really does not support network roll-out, to redistribute funds *to support under-served groups of users*, rather than to support operators.

91. The Government's demand-side strategies are designed to promote:
    - Availability of ICT – in all inhabited areas;
    - Accessibility of ICT – to all regardless of gender, disability or educational attainment; and
    - Affordability of ICT – for all citizens.

92. Encourage user demand is also based on developing locally relevant content so that there is material available that people are eager to use, and building people's skills so that they know how to access material once they get the chance. Strategies to implement ICT Objective 1 must include promoting the creation of locally relevant content and capacity-building for both content-producers and content-users, including for those in rural areas.

93. In order to promote the creation of locally relevant content, various measures might be adopted. These include legal (as well as informal) measures to protect the rights of groups to the traditional styles, methods and works of which they are the custodians. Conventional intellectual property laws might or might not be ideal in this setting – further consideration must be given to this issue.

94. Providing financial support to under-served users rather than to operators, requires amendment of the *Telecommunications Act*. While legal stability is a vitally important consideration for investment, amendment of the universal access provisions is unlikely to adversely affect investment. Providing service to a universal access area is (or should be) revenue-neutral for an operator, and carried out as a public service rather than as a profit opportunity. Consideration must be given to the form of assistance that might be provided to under-served users: cash payments might not be used to purchase ICT services. Vouchers that are redeemable for service or direct credits to a local service provider might be superior. Consideration must also be given to the best source of funding for such a system. The *Telecommunications Act* currently empowers the Telecommunications

Commission to impose a levy on licensees to fund universal access. Consideration should be given to levying purchasers (e.g. perhaps calculated as a fraction of the fee payable for topping-up a service account).

95. The Government will reexamine its approaches to duties and tariffs (e.g. the goods tax) on imported ICT equipment. While reducing or eliminating duties and tariffs would appear to reduce revenue to the Government, the stimulus that increased ICT use would give to economic activity is likely to more than offset that reduction, increasing the overall tax take in the longer term.

96. Consistent with its policy of cooperation in ICT with other Pacific countries, the Government will also explore opportunities for joint and bulk purchasing of ICT hardware and software.[35] It is possible that significant savings might be realized if Pacific countries were able to coordinate their procurement efforts to deal jointly with ICT vendors.

97. The following table summarises the strategies and actions for achieving ICT Objective 1:

ICT Objective 1		
Reference	ICT Strategy	Actions
1.1	Promote the creation, recording, preservation and enjoyment by means of ICT of locally relevant content.	▪ Develop programme to support the use of ICT to preserve, promote and sustain Solomon Islands art and culture. ▪ Support and promote the production of electronic content that reflects the values of Solomon Islands society. ▪ Support the development of 'virtual libraries' of Solomon Islands content, with appropriate protection for rights owners. ▪ Complete the National IP Strategy project currently underway. ▪ Reform intellectual property legislation to ensure it is effective in relation to electronic content and electronic delivery. ▪ Investigate new approaches for giving protection to traditional owners and custodians of traditional cultural works, styles and artifacts.
1.2	Enhance protection for ICT users in their	▪ Reform consumer protection safeguards to ensure they are effective for online transactions (refer

[35] Subject to compliance with national competition laws.

	online dealings.	Strategy 2.2, below). ▪ Undertake public education regarding scams, spam and means of avoiding undesirable content. ▪ Promote awareness of, and access to, open source software and free online tools. ▪ Make guidance, information and tools available for families, teachers and child caregivers regarding means of protecting children from harmful online content (including parental control software).
1.3	Develop mechanisms for providing financial support for accessing ICT to under-served groups in Solomon Islands.	▪ Reform the universal access regime under Part 6 of the *Telecommunications Act* to permit demand-side financial support to under-served groups of users. ▪ Reform the universal access regime under Part 6 of the *Telecommunications Act* to permit funding of universal access otherwise than by levies on licensees.
1.4	Investigate measures for making ICT devices and services more affordable in Solomon Islands.	▪ Examine the impacts of waivers of duties, taxes and levies on software and ICT hardware, including for use by schools, students, hospitals, clinics and people in under-served areas. ▪ Investigate the existence of, and reduction or removal of, any trade barriers, duties or taxes that limit the volume or increase the price of imported software or ICT hardware (e.g. mobile handsets, personal computers, tablet computers, servers, cabling, memory, storage media, power supplies, etc.) ▪ Government will also explore opportunities for joint and bulk purchasing of ICT hardware and software. ▪ Incorporate into the planning process for construction of roads, bridges and other public rights of way a requirement to consider installation of fibre or cabling suitable for backhaul services. ▪ Explore possibilities for developing, or assisting to fund, domestic content hosting services in Solomon Islands. ▪ Explore with regional partners and aid partners the feasibility of establishing an Internet Exchange Point within or close to Solomon Islands.
1.5	Promote access to and use of ICT in rural and remote areas.	▪ Collaborate with schools, libraries, local authorities to develop methods for after-hours sharing of ICT resources with local people at low cost. ▪ Collaborate with schools, libraries, women's groups and community groups to support them in raising their members' awareness of ICT and providing opportunities for gaining experience with ICT. ▪ Explore possibilities for development of multi-purpose ICT telecentres to provide ICT access for under-served communities and vulnerable groups.

E. Legal Environment for ICT

98. The importance of legal certainty for business investment is confirmed both by formal studies and by recent Solomon Islands experience. Moreover, a sound system of laws for the use of ICT is essential for the protection of users

ICT Objective 2
Enact or amend laws, and establish or reform administrative and enforcement bodies, to create an environment that supports the secure, cost-effective and productive deployment and use of ICT in Solomon Islands.
Enakt or amend loas an mekem or rifom administretif an enfosment bodis fo hemi krietim enfaeronment wea sapotim sef, kost effektif an prodaktif diploement and ius lo ict insaed Solomon aelens.

Issues

99. Since 2009 it has been the policy of the Government, expressed in the Telecommunications Act 2009, to remove barriers to entry to the telecommunications market and create an enabling legal environment in which operators compete to win customers' business. Telecommunications operators report that certainty, predictability and stability in the regulatory regime under which they operate has been a significant and positive factor in their decisions for investment in Solomon Islands.

100. The legal framework will also have relevance for revitalization of national culture. The Policy Framework recognizes this, and includes as a policy goal: "The cultural and legal rights of customary owners and producers of cultural products are protected within and outside Solomon Islands."[36] The best means of protecting the rights of customary cultural owners and producers must be investigated with open minds regarding the possible approaches, as orthodox intellectual property rights

[36] Ministry of Culture and Tourism Nasinol Policy Framework blong Kalsa(2012), policy goal 12.1, p 10.

may not be satisfactory.[37] Novel legal solutions may be necessary and communities might require a "toolkit" of protections for intangible cultural heritage.

101. The legal environment for ICT must give both suppliers and customers' confidence to transact business. Without confidence in the legal framework (e.g. from predictable industry regulation), operators will not invest in entering the market. Without confidence in the legal framework (e.g. from effective consumer protection and privacy laws), customers will not subscribe to services or enter into transactions.

102. It is important that such laws must have the characteristics of:

- Legal certainty, predictability;
- Pro-competitive regulatory and legal settings; and
- "Technological neutrality" (so far as that is feasible) but Technological aptness first and foremost.

103. Extensive personal information about each of us is stored in electronic form, in our own files, Government records, and records of the transactions we make, for example. Privacy has different aspects. People often will be concerned to protect the privacy of:

- Individual persona – to exclude misuse of a person's name, image, identity, etc.
- Data about a person – to exclude misuse of official or commercial records about a person, such as his or her medical history, criminal record, or spending habits.
- Personal communications – to exclude monitoring or disclosure of a person's conversations, or email.
- Anonymity – to have the ability to remain anonymous online (at least, for lawful purposes).

104. The Government has roles to play in upholding citizens' privacy, by enacting privacy legislation; protecting the privacy of information that it holds and manages; and by educating the public about safe online practices and privacy protections they may use.

105. Data security requires the protection of data against destruction, or unauthorized access or use. In some countries, data security laws require firms and government agencies to protect the security of data, including by ensuring that: personal data is accessible to the person it concerns; inaccuracies can be corrected by the person

[37] Farah PD and Tremolada R "Desirability of Commodification of Intangible Cultural Heritage: The Unsatisfying Role of Intellectual Property Rights" (2014) 11 Transnational Dispute Management, Special Issue at 5.

concerned; and only persons with legitimate reasons can have access to it. The Government should consider a data security law for Solomon Islands.

106. Often, children and young people will be the ones most at risk from objectionable content (e.g. pornographic material) or objectionable behaviour (e.g. bullying) that is spread online.

107. Parents, teachers, church leaders and others who care for or provide leadership for children and young people must work actively to protect children from online risks. In the Information Age, children must be protected from bullies online as well as in the school ground. Many parents and teachers may feel they do not know how to protect children from online risks. The Government has a role in supporting parents and caregivers in this. The Government should make guidance available for parents and caregivers, regarding ways to protect children's safety online.[38]

108. While the Government has a role in supporting and informing them, parents and care- givers must be the first line of defence for their children, against online risks.

109. The expression "cybercrime" refers, broadly, to any crime involving a computer and a network. The UN Comprehensive Study on Cybercrime considers cybercrimes comprise three categories:[39]

1. Acts against the confidentiality, integrity and availability of computer data or systems
    - Illegal access to a computer system
    - Illegal access, interception or acquisition of computer data
    - Illegal interference with a computer system or computer data
    - Production, distribution or possession of computer misuse tools
    - Breach of privacy or data protection measures
2. Computer-related acts for personal or financial gain or harm
    - Computer-related fraud or forgery
    - Computer-related identity offences
    - Computer-related copyright or trademark offences
    - Sending or controlling sending of Spam
    - Computer-related acts causing personal harm
    - Computer-related solicitation or 'grooming' of children
3. Computer content-related acts
    - Computer-related acts involving hate speech
    - Computer-related production, distribution or possession of child pornography
    - Computer-related acts in support of terrorism offences

[38] A set of materials may be prepared for parents, in local languages, containing information for parents: e.g.: the "Be Netwise Parents' Handbook", by the Hong Kong Federation of Youth Groups and Office of the Government Chief Information Officer: < http://www.be-netwise.hk/download/parent_edu_kit_eng.pdf>.
[39] Government Chief Information Officer: <http://www.benetwise.hk/download/parent_edu_kit_eng.pdf>. UN Comprehensive Study on Cybercrime (2013) p 16.

110. The Government must ensure the legal framework is apt to deter and punish cybercrimes, and must supplement legal measures with enforcement capability and public education. Legal measures may include criminalizing certain behaviours, prescribing standards for admissibility of electronic evidence, enabling electronic evidence gathering, and providing for international assistance and cooperation. User education may include raising awareness about the risks associated with certain conduct, and about security precautions which users can take.

111. It is also important that the Government take steps to protect national security from possible threats posed by ICT. Governments around the world have adopted widely- different measures with the aim of protecting national cyber-security. In cooperation with its regional and international partners, Solomon Islands should explore approaches to cyber-security it would be appropriate to implement.

112. Where consumer transactions may be carried out online, consumers need to have the benefit of legal protection that is equivalent to that which they enjoy when entering transactions offline, in shops or face-to-face. In respect of online consumer transactions, some additional consumer protections may be justified to address risks that do not normally arise in face-to-face dealings:

- Consumers should have sufficient information about whether and how to make a purchase – they should not be misled about the identity of the vendor, nature of the goods or services, terms and conditions, or pricing.
- Consumers' transactions should be reasonably secure and vendors should respect the privacy of purchasers' information.
- Consumers should be able to access affordable, effective and timely means for resolving disputes with vendors.
- Vendors should not send commercial email (e.g. advertising or "spam") without consumers' consent.

Strategies

113. In accordance with the policy principle of "building foundations first," it is essential to put in place the laws that will support investment in ICT equipment and infrastructure, and give users the confidence to make use of ICT.
114. Elements of a legal environment to support growth in ICT use, and that it will be necessary to establish, include:

- Consumer protection laws;
- Data security and data privacy laws;
- Legal support for online (electronic) payments;
- Legal recognition of electronic records;
- Legal recognition of digital signatures; and

- Cyber-security laws.

115. The *Consumer Protection Act (Cap. 63)* has been in force in Solomon Islands since the mid-1990s. It would be timely to review this Act to ascertain whether and how effectively it applies in the context of online transactions using ICT. The legislation should be reviewed to determine how appropriate it is in relation to e-commerce; enforcement resources should be examined to consider whether the Act can be effectively enforced to protect online transactions; and attention should be directed to consumers' awareness and understanding of their rights under the Act.

116. For Solomon Islands, consumer online transactions ("B2C") mainly involve online purchases of goods or services from overseas vendors; and online offers and sales of services (e.g. hotel reservations) to overseas purchasers. Legislating for strenuous consumer protection obligations in this setting is unlikely materially to assist Solomon Islands consumers to enforce their rights. A light-handed approach might nevertheless be warranted which ensures:

- Existing *Consumer Protection Act* safeguards are applicable to online transactions; and
- Suppliers in Solomon Islands who invite consumers to enter into transactions online must disclose certain minimum required information.

117. Additionally, online vendors in Solomon Islands might be encouraged to adopt their own Code of Practice in respect of online sales to encourage consumers' confidence, for example in the tourism sector.

118. For ICT investors, laws must be certain, stable, and not subject to discretionary interpretation or application. The merit of a legal framework that is certain and stable has been amply demonstrated in Solomon Islands in the telecommunications sector since 2009. A light-handed, pro-competitive *Telecommunications Act* has been administered by the Telecommunications Commission without recourse to the courts or heavy-handed intervention in the market. This approach has seen impressive levels of investment in mobile telecommunications infrastructure, accompanied by rapid adoption of services by the public. This provides an important example for the ICT sector generally, and for other sectors.

119. The independence of the Telecommunications Commission in Solomon Islands provides another valuable precedent. Operators' decisions regarding investment must necessarily contemplate a long time-frame: infrastructure cannot be uplifted

and relocated if the regulatory climate becomes less favourable (or only at near-total loss). In order to achieve the regulatory stability over time that operators need to see, it is essential for regulatory decision makers similarly to be able to take a long-term perspective regarding the interests of the public and the industry. For this reason, regulatory officials must have security of tenure (except in circumstances of incapacity or misfeasance) and agency funding must not be vulnerable to reduction.

120. In relation to Internet domain administration, specific provision is made in the existing *Telecommunications Act.* The registration of domain names under the ".sb" ccTLD is the responsibility of the Telecommunications Commission or of one or more persons nominated by it (*Telecommunications Act s 84*). The Telecommunications Commission must monitor the compliance of any "nominated person" with the Act and must comply with agreements with the Internet Assigned Numbers Authority. Solomon Telekom Company Limited currently administers the ".sb" country code top-level domain (TLD).[40] Section 135 of the Telecommunications Act requires Solomon Telekom to cooperate with the Telecommunications Commission to transfer the registry and registration and allocation processes to the Commission or its nominee.

121. In a number of nations, including Pacific islands countries, a commercial organization serves as the designated manager of the TLD. The Internet Domain Name System Structure and Delegation (ICP-1) document states: "The major concern in selecting a designated manager for a domain is that it be able to carry out the necessary responsibilities and [have] the ability to do an equitable, just, honest and competent job."

122. Historically, Registry and Registrar functions were provided by the same organization but more recently these functions have been split, to permit competition in registration services. It is doubtful whether the gains from competition in domain registration would warrant this in Solomon Islands. It is probably appropriate for STCL to continue as the .sb designated manager, but the Telecommunications Commission should continue to provide oversight of that function and monitor STCL to ensure it continues to do an "equitable, just, honest and competent job".

[40] Internet Assigned Numbers Authority, Delegation Record for .sb, available online at: <http://www.iana.org/domains/root/db/sb.html

123. The following table summarises the strategies and actions for achieving ICT Objective 2:

ICT Objective 2		
Reference	**ICT Strategy**	**Actions**
2.1	Maintain regulatory stability in the framework of telecommunications regulation generally.	▪ Uphold the 2009 post strategy of light-handed, pro-competitive regulation of telecommunications. ▪ Continue to monitor the adequacy of the *Telecommunications Act* to support increasing competition in the sector.
2.2	Ensure appropriate legal protection for consumers and businesspeople who participate in transactions online.	▪ Review and amend existing consumer protection laws to ensure consumers are adequately protected when engaging in online transactions. ▪ Review and amend existing intellectual property laws to ensure protections are appropriate for growth in ICT use and protection of Solomon Islands' intangible cultural heritage. ▪ Enact legislation to ensure legal certainty regarding the status of electronic documents. Enact legislation to support online contract formation. ▪ Enact legislation to provide for recognition of electronic signatures. ▪ Enact legislation to support electronic payments. ▪ Enact legislation to provide for data retention and freedom of information. ▪ Enact legislation to protect privacy and data security.
2.3	Ensure appropriate legal protection for the community at large from potential ICT-related risks.	▪ Enact legislation to protect the community against cybercrime. ▪ Enact legislation to ensure the cyber-security of Solomon Islands. ▪ Periodically review the legislative framework to address new developments in emerging technologies and ensure continued compliance with evolving international standards.
2.4	Ensure regulatory, law enforcement and judicial personnel have the skills and resources required to administer and enforce ICT laws effectively.	▪ Build National capacity to ensure regulation, civil law and laws against cybercrimes can be effectively administered and enforced
2.5	Participate actively and effectively in regional and international fora on ICT law and law enforcement.	▪ Collaborate internationally to ensure regulation, civil law and laws against cybercrimes can be effectively enforced. ▪ Consider subscribing to the WIPO Convention, Berne Convention, and Paris Convention.

F. ICT for Good Governance

124. The efficient administration of government is a high priority for the Government. The greater use of ICT offers a significant opportunity to enhance governance, including through the introduction of systems for online access to Government information, services and goods.

ICT Objective 3
Utilize ICT at all levels of government to promote good governance and facilitate the efficient administration of government and delivery of public services throughout Solomon Islands.
Iusim ict lo ol lefol gavman fo hem promotim gud gavanens an fasilitetim gud administretin blo gavman and dilifam oketa sefisis evriwea lo Solomon aelens.

Issues

125. The eighth development objective under the National Development Strategy is to "improve governance and order at national, provincial and community levels, and strengthen links at all levels." Governance is defined by the World Bank as "the exercise of political authority and the use of institutional resources to manage society's problems and affairs." In the present setting, "good governance" is considered as embracing the efficient and effective performance of all functions of government, including the maintenance of law and order, and the efficient administration of justice. The use of ICT in providing public services not only improves transparency and governance, but can also generate economic benefits, for example by improving tax administration and collection.[41] (The government of Singapore estimates that its use of ICT returns USD2.70 for every USD1.00 invested.[42])

126. Solomon Islands continues to grapple with governance issues, including:

- Slowness and low efficiency in Government responses to citizens' requests and needs;

[41] World Bank "ICT and MDGs: A World Bank Group Perspective" (2003) p 31.
[42] Kenny C "The Internet and Economic Growth in LDCs – A Case of Managing Expectations?" WIDER Discussion Paper No 2002/75.

- Lack of databases providing access to centralized and certain Government information;
- Scarcity of trained IT staff in public institutions; and
- Law and order and the efficient administration of justice.

127. Similar to private sector organizations, the Government faces significant challenges in increasing its use of ICT. These include budgetary issues (availability of funding for ongoing maintenance and development of systems, as well as initial setup costs); hardware issues (aging and below-specification PCs, poor server accommodation, poor quality cabling); software issues (poor anti-virus protection, poor or ineffective backup, lack of disaster recovery); and manpower issues related to the scarcity of skilled IT personnel. Nevertheless, the Government is committed to finding solutions to these challenges, in order to improve governance in future.

128. ICT have a significant role to play in supporting fulfillment of these development needs.

Strategies

129. A range of development strategies target the maintenance of law and order, elimination of corruption, and improvement in public administration. Existing development objectives to which ICTs may lend support include:[43]

- Improving the efficiency of government accounting services.
- Implementing human resource management processes and training.
- Enhancing the capacity of the Electoral Commission to maintain accurate electoral registers.
- Developing bottom-up processes for participation in the preparation of Provincial Plans.
- Improving provincial administrations' service delivery by providing an enabling environment for delivery of goods and services.
- Improving government service delivery nation-wide by establishing information sharing systems with provincial administrations.
- Improving provincial administrations' service delivery by providing an enabling environment for delivery of goods and services.
- Improving government service delivery nation-wide by establishing information sharing systems with provincial administrations.

[43] Solomon Islands Government National Development Strategy 2011 to 2020 (2011).

130. The ICT Support Unit ("**ICTSU**") within Ministry of Finance is making significant progress toward mitigating the above issues. The "SIGCONNECT" wireless metropolitan area network rolled out by ICTSU in 2013 promises to substantially improve and speed up connections and communication between Government departments and offices. The immediate challenge is to complete migration of Ministries to the network and connection to SIG-Connect. Further challenges centre on leveraging the connectivity and centralization provided by SIGCONNECT to enhance G2G, G2C and G2B performance.

131. In light of the extensively cross-cutting nature of ICT and of the contemplated ICT Objectives and ICT Strategies, the Government proposes to task a single agency with responsibility for *National ICT Policy* implementation. This leadership role will involve determining in cooperation with Ministries and departments the content of ICT action plans, project-managing the execution of action plans, and coordinating the efforts of the various Ministries, departments, aid partners, and private sector bodies involved.

132. It is clear from international experience that an ICT leadership function within government is crucial. Absent a central coordination mechanism, Ministries will tend to each set up their own information systems, leading to duplication and weak sharing of information, uneven development across Ministries, and missed opportunities to realize economies of scale.[44]

133. The complexity of implementing ICT policy across multiple Ministries, and the specialist knowledge and experience required, makes establishment of an independent office essential. This is particularly the case where e-Government initiatives are underway, which involve not just advanced technical competency but also process re- engineering and change management expertise. Many countries now have a NIO or equivalent office headed by a National CIO, including both developing and developed countries with deep experience in public-sector ICT deployment.[45]

[44] Ibid, p 92.

[45] Kenya has a Directorate of e-Government, located in the Cabinet Office, under the Office of the President. In Mexico, the President's Office for Government Innovation sets the direction for e-government and coordinates e-government activities. Bulgaria, Ireland, the Republic of Korea, and Singapore have adopted variations of the central ICT agency model. In the United Kingdom, an E-Government Unit is set up within the Cabinet Office, supported by a CIO Council. Australia, Canada, and the USA each have 'councils' of CIOs to coordinate collaboration on ICT issues across their federal jurisdictions. See, NK Hanna, CZ Qiang, K Kimura and CK Siou "National E-Government Institutions: Functions, Models and Trends" in World Bank

134. MCA recommends that the Communication Department within MCA should have responsibility for coordinating the ICT efforts of all relevant Ministries. This is likely to involve:

- Strengthening of the Communications Division of MCA;
- Appointment of deputies to the Director of Communications, across the policy, stakeholder engagement, and e-governance functions;
- Provision of administrative support; and
- Increase in the financial support to the Communications Division.

135. The Director of Communications would have four main functions:

- Reporting – reporting to SIG on issues relating to ICT development, national ICT issues, and National ICT Policy implementation. (Reporting to the Minister of Communications and Aviation, through the Permanent Secretary MCA).

- SIG Information policy – including strategic functions relating to information management and ensuring maximum coordination, efficiency and transparency in SIG's information policy and practice.

- Freedom of information – protecting the public's right of access to documents under proposed freedom of information legislation and reviewing decisions made by agencies and ministers under that legislation.

- Privacy – ensuring proper handling of personal information in accordance with privacy safeguards.

136. Despite strengthening of the Communications Division within MCA, it is not proposed to change the roles of either the ICT Support Unit or the Telecommunications Commission. Both organizations are functioning well and making a strong contribution to ICT development in Solomon Islands. The Telecommunications Commission should remain an independent regulator, responsible for telecommunications under the *Telecommunications Act*. It would be highly undesirable to vary this. The ICT Support Unit should continue to be

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Information and Communications for Development 2009: Extending Reach and Increasing Impact (2000) at 83 – 102.

responsible for, essentially, the technical aspects of the Government's ICT needs. MCA recommends relocation of ICTSU to the MCA.

137. Upon strengthening of the Communications Division, the Division will be tasked with developing a National e-Government Strategy, in collaboration with development partners, to:

- improve communications between branches and offices of the Government;
- enhance availability of public information through electronic means; and
- improve speed and efficiency of delivery of services to citizens and businesses.

138. In particular, it is envisaged that the National e-Government Strategy will encompass: A preliminary e-Government readiness assessment (including of the legal and regulatory framework);

- Capacity building (at leadership, public officeholder and IT staff levels)
- Establishment of partnerships;
- Pilot project selection and oversight;
- Infrastructure development, deployment and ongoing operation for service delivery;
- Public awareness, testing and rollout;
- Pilot project evaluation and strategy review.

139. The following table summarises the strategies and actions for achieving ICT Objective 3:

ICT Objective 3		
Reference	**ICT Strategy**	**Actions**
3.1	Strengthen, support and develop the Communications Department within MCA	▪ Increase human resource and encourage ICT human resource development within the communication Department. ▪ Increase budget and resources for the division. ▪ Relocate ICTSU to communication department of MCA.
3.2	Maintain and support the provision of ICT support by ICTSU to the whole of Government	▪ Centralize IT support for the whole of Government, and management of IT infrastructure. ▪ Complete roll-out of "GovNet" wireless metropolitan area network for Government, in Honiara and (in future) other regions.

		▪ Connect remaining Ministries to SIG-Connect internet access network. ▪ Establish the National Data Centre and disaster recovery capability.
3.3	Establish a SIG ICT Policy Committee	▪ Establish a SIG ICT recommending committee to recommend ICT policies. ▪ Identify staff from SIG to be appointed as members of the committee. ▪ Committee to recommend SIG policy for ICT.
3.4	Integrate ICT into the work of the Government.	▪ Develop a protocol to ensure the integration of ICT issues and considerations into sectoral planning and policy processes, and Ministry corporate plans. ▪ Define standards for recognition of ICT capacity among public servants. ▪ Develop and coordinate ICT capacity building for members of Parliament, and policy and regulatory staff. ▪ Develop and coordinate ICT capacity building for Provincial government members and staff. ▪ Develop means of making Provincial and National governments' information available to the public in order to improve transparency, accountability and rule of law. ▪ Develop means of enabling community- based involvement in political decision making.
3.5	Develop a National e-Government Strategy.	▪ Task the Communications Division with responsibility for coordinating National e-Government Strategy in Solomon Islands. ▪ Identify means of funding and supporting e-Government programmes. ▪ Enact legislation as outlined above (refer strategy 2.2, above) to support online transactions and encourage users' and investors' confidence. ▪ Build ICT capacity at all levels of Government, including at Cabinet-level, among policy and procurement staff, and line staff. Establishment of partnerships. ▪ Pilot project selection and oversight. ▪ Infrastructure development, deployment and

		ongoing operation for service delivery. ▪ Public awareness, testing and rollout. ▪ Pilot project evaluation and strategy review.

G. ICT for Peace and Unity

140. The Government perceives a vital role for ICT to support the reconciliation, sense of national unity, peace, and law and order to which the Government is committed.

ICT Objective 4
Promote reconciliation, national unity, peace, law and order, and access to justice throughout Solomon Islands by innovative use of ICT.
Promotim rekonsiliation, nasinol uniti, pis, loa an oda, an akses go lo jestis eniwea lo Solomon aelans bae iusim ict.

Issues

141. Within the Fundamental Reform Programme set out by the Government in the Policy Strategy and Translation, a specific policy objective is "pursue peaceful co-existence, national unity, reconciliation and other acceptance programmes."[46] The *National Development Strategy* identifies the rule of law and justice as "basic human rights and fundamental preconditions for a well-functioning market economy,"[47] and aims to eliminate violence against women,[48] and "reduc[e] crime and the fear of crime through improved management," among other strategies.[49]

142. The Government foresees that ICT have an important role to play in promoting reconciliation, national unity, peace, law and order and access to justice. The power of ICT to facilitate fast and low-cost communication throughout Solomon Islands, bringing Solomon Islanders into closer contact and communication, is strongly conducive to reconciliation, national unity and peace. In addition, ICT have a vital role to play in protecting, preserving and promoting music and the creative arts, which can in turn empower communities across Solomon Islands.

[46] Democratic Coalition for Change Government Policy Strategy and Translation (Office of the Prime Minister and Cabinet, 2015) p 12.
[47] Solomon Islands Government National Development Strategy 2011 - 2020 p 42.
[48] Ibid, p 16.
[49] Ibid, p 45.

143. As the Government has stressed in its Policy Statement, the Government will: "Cherish and respect the diverse cultural traditions, worthy customs and Christian values within Solomon Islands to build a peaceful, united and progressive country".[50] The objectives of the Government include to "sustain [the] peace process and law and order, to ensure that the nation attains sustainable peace and harmonious coexistence."[51]

Strategies

144. A broad range of strategies are indicated to achieve the objective of promoting reconciliation, national unity, peace, law and order, and access to justice. This *National ICT Policy* articulates strategies and actions utilising ICT to give effect to the Government's *Policy Statement* and *Policy Strategy* and *Translation.*

145. In relation to Solomon Islands culture and creative arts, the following objectives and strategic actions have been identified:[52]

- Strengthen and support music development and creative arts to empower all communities;
- Strengthen and support music development and creative arts to empower women and youths;
- Analyse and implement the Intellectual Property Strategy in relation to copyright, trademarks and industrial designs;
- Facilitate a legislation for preservation of our tradition and cultures; and
- Protect and preserve the diversity of our organic tradition and culture in Solomon Islands.

146. In relation to law and order, and access to justice, the Government has committed to "put special attention to combat lawlessness and end all shapes and forms of crimes committed in the country."[53] The following strategies and strategic actions are material:[54]

- Establish and support cooperation between law enforcement agencies in Solomon Islands;

[50] Democratic Coalition for Change Government Policy Statement (Office of the Prime Minister and Cabinet, January 2015) para 1.3.
[51] Ibid, para 1.4.
[52] Democratic Coalition for Change Government Policy Strategy and Translation (Office of the Prime Minister and Cabinet, 2015) pp 119, 153, 169, 170.
[53] Democratic Coalition for Change Government Policy Statement (Office of the Prime Minister and Cabinet, January 2015) para 4.2.4.7.
[54] Ibid, paras 4.2.4.7 and 4.2.4.8.

- Develop and establish a community policing and crime prevention model relevant to Solomon Islands recognizing traditional systems and working in partnership with all levels of the community;
- Strengthen and support the operational and corporate functions of the RSIPF to ensure the effective and efficient provision of policing services;
- Develop the operations capabilities of the RSIPF to ensure that it has the ability to respond to and manage the security or serious criminal threat to the Solomon Islands, including transnational crime and terrorism;
- Strengthen and support the operational and corporate functions of the Correctional Services of Solomon Islands (CSSI) to ensure the effective and efficient provision of correctional services;
- Strengthen and support capacity building within the justice and legal fraternity; and
- Strengthen national judicial and legal system and apparatus in the country.

147. A crucial aspect of ICT policy for law and order relates to ensuring laws are in place to prohibit unacceptable or harmful behaviours online or in relation to ICT, sanctioning infringements of those laws, and ensuring the RSIPF and courts have the capability to enforce those laws. This aspect is addressed under ICT Objective 2, above.

148. ICT may greatly assist the efficacy of law enforcement generally, for example by improving communications between law enforcement offices within Solomon Islands and internationally, and may also reinforce outreach and communication between law enforcement and communities. Better availability of secure ICT can also contribute greatly to improving the operational and corporate functions of RSIPF, CSSI and the national judicial system.

149. The following table summarises the strategies and actions for achieving ICT Objective 4:

ICT Objective 4		
Reference	**ICT Strategy**	**Actions**
4.1	Promote peace and reconciliation by supporting the greater availability and	(Refer Strategies 1.1, 1.3, 1.4, 1.5, 9.1, 9.2, 9.3.)

	accessibility of ICT, the ability of all in the Solomon Islands to communicate, and the development of music and creative arts.	
4.2	Utilize ICT in support of effective policing and enforcement.	▪ Incorporate within the proposed National Security Policy provision for national ICT security. ▪ Develop a plan to incorporate ICT into RSIPF communications with the public and communities in order to build community confidence in the RSIPF. ▪ Develop a plan for building and maintaining RSIPF's ICT forensic capability and infrastructure. ▪ Incorporate within training for law enforcement personnel on transnational crime training relevant to cybercrime and digital evidence. ▪ Include in routine training programmes training in ICT that is appropriate to the roles of justice and law enforcement personnel.
4.3	Utilize ICT to improve public access to laws and legal processes.	▪ Improve the web-based availability of Acts, Regulations, judicial system information (court dates, etc.) to the public. ▪ Investigate ICT-based approaches for enabling citizens' easy and equitable access to legal and judicial services and personnel.
4.4	Utilize ICT to improve law enforcement processes.	▪ Implement an ICT-based case management solution.

H. ICT for Health

150. The use of ICT can have a profound effect in the health sector, including by assisting in spreading health information to communities, training health care workers, supporting diagnosis and treatment, and improving health system administration.

ICT Objective 5
Improve healthcare and health service delivery throughout Solomon Islands by innovative use of ICTs and promote healthy ICT working conditions and practices

Imprufim heltkea an helt sefisis truaot Solomon aelans bae inofetif ius lo ict an promotim helti ict wokin kondisins and praktisis.

Issues

151. Improvements in health are among the targets of the Millennium Development Goals: the fourth of which is to 'reduce child mortality'; the fifth 'to reduce maternal mortality' and the sixth 'to combat HIV/AIDS, Malaria and other Disease".[55] Within existing Solomon Islands policy, *National Development Strategy* Objective 3 is to "ensure all Solomon Islanders have access to quality health care and combat malaria, HIV, non-communicable and other diseases."

152. The Government's strategy for development in respect of health care recognizes that women in rural areas have particularly poor access to health and family planning services and that infant mortality and child mortality rates are high.[56]

153. Development strategies to which greater use of ICT could make a contribution include:[57]

- Ensuring hospitals and clinics maintain adequate stocks of medical supplies.
- Raising awareness on specific health issues and promoting awareness of healthful living.
- Promoting good infant and young child feeding practices.
- Promoting healthy diets by strengthening social marketing and awareness raising.
- Providing reproductive health and family planning information and counseling.

154. The *National Health Strategic Plan* includes, as one of fourteen organizational policies of the Ministry of Health and Medical Services, "[d]evelop & better integrate Information & Communication Technology (ICT) systems" – though that and six other policies are ranked at the lowest level of priority.[58] *The National*

[55] United Nations "Millenium Declaration", Millenium Summit (2000).
[56] See, Solomon Islands Government 2009 Population and Housing Census (undated) pp 49 – 57.
[57] Solomon Islands Government National Development Strategy 2011 - 2020 (2011) pp 18 – 19.
[58] Solomon Islands Ministry of Health and Medical Services National Health Strategic Plan 2011 – 2015 (2011) page 27.

Health Strategic Plan also defines the following objectives, activities, indictors and resources required to put the ICT organizational policy into practice:[59]

Develop & better integrate Information & Communication Technology (ICT) systems				
Strategy	**Objective**	**Activities**	**Indicator**	**Resources**
Do Better ICT	Improve the ability of all staff to "connect" to and communicate with the rest of MHMS and outside health organizations	Develop a MHMS ICT master plan for 5 years & approve; add hardware & software according to plan; train staff as needed; maintain system	95 % of staff can access and operate the ICT services relevant to them 80% of the time. HIS is fully operational by 2012	By 2015 these costs should become close to 5% of total budget

155. The ability of ICT to be 'always on' and cross distant points at speed and low cost means they have much to contribute to delivery of health services. ICT can make it possible for health workers to:

- consult patients and provide diagnoses remotely;
- collaborate with colleagues without the delay and expense of travel;
- access medical information or expertise virtually anywhere in the world; and
- further their knowledge and training through online courses and seminars.

156. The Government is also concerned that, as access to ICTs improves and ICT usage increases, the people of Solomon Islands should not suffer adverse health effects from the use or misuse of those technologies.

Strategies

157. A range of objectives, strategies and actions identified within the National Health Strategic Plan can be implemented more effectively within an operational setting in which appropriate ICT are available. These include:

[59] Solomon Islands Ministry of Health and Medical Services National Health Strategic Plan 2011 – 2015 (2011) page 36.

- Give MHMS staff training or continuing education materials to increase their awareness of various basic health topics including NCD risk factors & priority diseases.
- Provide health promoting school /child friendly school initiatives.
- Prepare and distribute IEC materials to promote breastfeeding.
- Provide expanded family planning & other services, particularly for adolescents;
- Provide home based therapy (for community-based rehabilitation).
- Define training needs, develop training, conduct most (80%) training in provinces; evaluate training.
- Complete installation and training of staff in MYOB; supervise the submission of provincial and program acquittals; continue to make audit more rigorous.
- Revise NMS procurement systems to make more cost-effective purchases & delivery.

158. Greater access to ICT can also help to improve communities' knowledge of health-related matters, give patients in remote areas faster access to a nurse or doctor, and allow recovering patients to stay in contact from home with their medical professionals.

159. The following table summarises the strategies and actions for achieving ICT Objective 5:

ICT Objective 5		
Reference	**ICT Strategy**	**Actions**
5.1	Investigate means of better utilizing ICT in the management of health information and records.	▪ Review the performance of the District Health Information System operated by Ministry of Health and identify lessons from experience in its operation and options for improving on or supplementing it, to enhance the administration of health services generally. ▪ Enhance the collection and management of birth and death records data. ▪ Implement a cost effective Electronic Health Record system to improve clinical care. ▪ Improve the ability of clinics, hospitals and health service providers within Solomon Islands to exchange health information.
5.2	Enhance ICT capability within the Ministry and health sector generally.	▪ Develop ICT training programmes for Ministry policy and health professionals. ▪ Provide ICT facilities in all public health facilities.
5.3	Utilise ICT for better dissemination of health information nationally.	▪ Develop plans for ICT systems to support public dissemination (in appropriate languages) of health information (e.g. information on prevention of infectious and contagious diseases, notification of immunization campaigns, information on disease outbreaks).
5.4	Utilise ICT for better delivery of health services nationally.	▪ Develop plans for ICT systems to support the delivery of health services (e.g. for clinical and diagnostic support, maintenance of inventories of medical supplies at hospitals and clinics).

I. ICT for Learning

160. The use of ICT in education offers great benefits not only for children in classrooms and adult learners at home, but also for teachers seeking up-to-date material, and for principals and administrators responsible for managing people and resources.

ICT Objective 6

Improve the availability and quality of education throughout Solomon Islands by innovative use of ICT and develop ICT know-how in the workforce and public generally.

Imprufim afeilibiliti an quality of edukesin truaot Solomon aelens by inofetif ius of ict nd defelopim fo safe hao fo iusim ict insaed lo wokples an public ples tu.

Issues

161. Objective 4 of the National Development Strategy is to "ensure all Solomon Islanders can access quality education and the nation's manpower needs are sustainably met." To achieve this goal, the National Education Policy states the following vision:[60]

> Our vision is that all Solomon Islanders will develop as individuals and possess the knowledge, skills and attitudes needed to earn a living and to live in harmony with other people and their environment. We envisage a united and progressive society in which all can live in peace and harmony with fair and equitable opportunities for a better life. We envision an education and training system responsive to its clients and efficiently managed by its stakeholders and clients.

162. The policy on human resources development and employment is to: [61]

> Ensure that the education and training system supports economic and social development so that Solomon Islanders with the required skills and attitudes will be available to satisfy local and international labour market demand.

163. While improvements have been achieved in primary school net enrolment rates and adult literacy, further progress remains to be achieved, particularly in relation to girls' and women's access to education and particularly in rural areas:[62]

> School attendance, educational attainment, and literacy rates are much lower in the rural than in the urban areas, which is the result of the disparities of the educational systems in the urban and rural areas where schools lack resources and qualified teachers.

164. More accessible ICT have the potential to contribute substantially to education in Solomon Islands, including by extending access to education into rural areas.

165. Improved access to, and use of, ICT could potentially contribute to the following development objectives for education and manpower development:[63]

[60] Ministry of Education and Human Resources Development National Education Action Plan 2007-2009 p 12
[61] Solomon Islands Government National Development Strategy (2011) p 21.
[62] Solomon Islands Government 2009 Population and Housing Census (undated) p 204.
[63] Solomon Islands Government National Development Strategy (2011) pp 20 – 22.

- Increasing the quality of education and access to all levels of education for boys and girls, including in remote locations and those with special needs.
- Implementing an improved and harmonized grants system.
- Monitoring and controlling teacher absenteeism.
- Identifying human resource development priorities through systematic, reliable and timely data collection and analysis.
- Developing mechanisms to market labour and manage labour migration.
- Devising innovative non-formal education to provide skills training to those who cannot continue with formal education.
- Supporting skills training schools focused on employment and targeted at skill relevant to each province's needs, strengths and comparative advantage.

166. Given the deficiencies of transportation infrastructure and limited numbers of skilled teachers, ICT provide an important mechanism for transmitting educational content and connecting expert teachers with students. ICT-in-education policies and funding for underserved populations offer the possibility for bridging the divide that restricts opportunities for rural students.

Strategies

167. ICT can assist to narrow differences in educational opportunities between people in different locations and improve the quality and quantity of educational content that is available to people of all ages. Five main opportunities are evident, for which strategies may be designed:[64]

- ICT can "…bring educational options to those who have historically been excluded, including populations in rural areas without schools, women facing social barriers that limit their access to education, students with disabilities or with specific vocational training needs."
- ICT can support the creation of knowledge networks for students, making it possible to share information and collaborate on work of all kinds.
- "ICT provides opportunities to complement [workers'] on-the-job training, and to provide continuing education for teachers." It also allows networking among teachers.
- ICT expand the range of quality educational materials available to teachers. "[O]nline resources offer teachers access to diverse educational

[64] World Bank "ICT and MDGs: A World Bank Group Perspective" (2003) pp 15-16.

materials, which enables teachers and non-formal education facilitators to design curricula that best meet the needs of their students."

- "ICT provide support not only for classroom activities but for administrative activities as well. … ICT can help improve the process and quality of administrative activities through management software and computer networks, including human resource management, student registration, and monitoring of student enrolment and achievement."

168. For education policy, there is a need to formulate long time vision, engaging cross-sectoral actors for budgeting beyond the Ministry of Education. Provision of technology alone will not facilitate the deep structural changes necessary to achieve education goals.

169. To realize its full potential, ICT should operate as a lever for complementary changes to the education system. Consideration must be given to improving mechanisms for professional development, student assessment, and school organization.

170. The following table summarises the strategies and actions for achieving ICT Objective 6:

ICT Objective 6		
Reference	**ICT Strategy**	**Actions**
6.1	Enable schools to make effective use of ICT in teaching.	▪ Ensure schools have affordable access to computers or other ICT devices suitable for local conditions. ▪ Ensure schools have affordable access to broadband service.
6.2	Enable teachers to make effective use of ICT in teaching.	▪ Build teachers' capacity to ensure they have the skills and confidence to teach about and use ICT in lessons. ▪ Establish a platform for information-sharing and support among educators, vendors, Ministry personnel and parents regarding ICT in education. ▪ Establish networks for the sharing of e-learning resources.
6.3	Review curricula to incorporate teaching and learning about ICT.	▪ Facilitate collaboration between educators and industry to align curricula with market needs.

		▪ Integrate teaching about ICT and use of ICT into school curricula.
6.4	Build capacity within the Ministry of Education to utilize ICT in education and to improve education administration.	▪ Build capacity in the Ministry of Education regarding ICT for educational purposes. ▪ Develop plans for ICT systems to support the delivery of education services.
6.5	Utilize ICT to promote adult learning in Solomon Islands.	▪ Explore opportunities for utilizing ICT in improvement of adult literacy rates. ▪ Explore opportunities for utilizing ICT in distance learning programmes. Establish e-learning platforms to extend teaching to learners who otherwise do not have ready access to education. ▪ Extend teaching about ICT and use of ICT into vocational training programmes, informal education and lifelong learning.
6.6	Establish training support, standards and certification for ICT technical personnel.	▪ Work with regional partners to develop regional ICT skills standards and certification. ▪ Undertake a national skills audit to ascertain existing and needed ICT skills in Solomon Islands. ▪ Work with businesses to develop training programs for ICT technical skills, to ensure the availability of trained personnel. ▪ Investigate the feasibility of providing financial assistance to ICT professionals for skills development and incentives for investment in ICT by industry.

J. ICT for Business

171. Recognising private sector development as key to economic growth and job creation, the Government is committed to encouraging increased utilization of ICT in the business sector.

ICT Objective 7
Promote the availability, affordability and use of ICT to support economic growth, private sector development and employment creation in Solomon Islands
Promotim afailibiliti, afodabiliti, ius of ict fo sapotim ekonomik groud, praivet sekta defelopment an emploement kriesin lo Solomon aelens.

Issue

172. Objective 5 of the National Development Strategy is to "increase economic growth and equitably distribute employment and income benefits".[65]

173. There are three policy groups to achieve the above objective: an enabling environment for private sector led growth (including by increasing opportunities for trade, and increasing opportunities for employment); development of economic growth centres (including measures to increase rural areas' share in development); and development of natural resource based sectors.[66] As discussed in relation to Objective 1, enhanced ICT use has the potential to contribute positively to economic growth, particularly through private sector led growth.

174. Government strategies for economic growth which are likely to benefit from enhanced ICT access and use include the following:[67]

- Reducing the operating costs of the private sector and facilitating efficient provision of goods and services.
- Developing programmes to provide support to entrepreneurs in the small, medium and micro-enterprise sectors, covering services in technical training, entrepreneurial training and business planning.
- Improving performance, governance, oversight and accountability of SOEs.
- Coordinating with stakeholders to strengthen national processes for trade data collection and analysis.
- Identifying opportunities for labour mobility overseas.
- Promoting the sustainable use of natural resources.
- Providing information on potential commercial crops and on downstream processing and value adding.
- Promoting family-based reforestation and providing technical advice and information to growers.
- Improving infrastructure and telecommunications services for tourism.

Strategies

175. Businesses in very many countries have demonstrated the ability of ICT to drive economic growth and job creation:

[65] Solomon Islands Government National Development Strategy 2011 – 2020 (2011) pp 23.
[66] Solomon Islands Government National Development Strategy 2011 to 2020 (2011) p 27.
[67] Solomon Islands Government National Development Strategy 2011 to 2020 (2011) pp 26 – 31.

> …ICT can play an important part by providing new and more efficient methods of production, bringing previously unattainable markets within the reach of the poor, improving the delivery of government services, and facilitating management and transfer of knowledge, a key factor in reaching the [Millenium Development Goals].[68]

176. The contribution of ICT to achievement of development goals arises through (among other factors) the increase in capital stock per worker and increase in productivity across the economy.[69]

177. The following table summarises the strategies and actions for achieving ICT Objective 7:

ICT Objective 7		
Reference	**ICT Strategy**	**Actions**
1.0	Improve consumers' and businesses' access to ICT.	(Refer Strategies 1.1 – 1.5, above.)
2.2	Reform Solomon Islands legislation to ensure businesspeople and customers can enter into transactions with confidence.	(Refer Strategies 2.2, above.)
3.0	Utilize ICT to support good governance in Solomon Islands.	(Refer Strategies 3.1 – 3.4, above.)
6.6	Establish training support, standards and certification for ICT technical personnel.	(Refer Strategies 6.6, above.)
7.1	Develop infrastructure to support electronic payments.	• Work with financial institutions to identify payment systems capable of supporting e-commerce transactions by users who are not credit cardholders. • Provide support for utilization of ICT nationwide for increased automation of operations and management information systems.
7.2	Develop mechanisms to support businesses in key sectors of Solomon Islands' economy.	• Support tourism operators in providing Solomon Islands tourist information online. • Develop systems to provide accurate and timely information on commercial fisheries for all stakeholders, including the private sector and regional organizations. • Develop a network for coordination between national, provincial and community levels to facilitate sustainable development of inshore

[68] World Bank "ICT and MDGs: A World Bank Group Perspective" (2003) p 8.
[69] See, Organisation for Economic Cooperation and Development "Good Practice Paper on ICTs for Economic Growth and Poverty Reduction" (2005); World Bank Group "ICT and MDGs: A World Bank Group Perspective" (2003).

		fisheries and shift from "open access" to "managed" fisheries in partnership with resource owners and fishing communities. • Develop a network to share information and promote community-based, small-scale producer activities by providing access to markets and fisheries infrastructure. • Develop a network to share information and support agribusiness and alternative livelihoods. • Strengthen communications to encourage cooperation between government, provinces and mining resource owners on prospective developments in their areas to facilitate exploration and exploitation of mineral and hydrocarbon resources.

K. ICT for the Environment

178. The Government is concerned that increased utilization of ICT in Solomon Islands should not have an adverse impact on our environment but rather should make a positive contribution to the safety and sustainability of life in Solomon Islands.

ICT Objective 8
Utilize ICT to manage and protect Solomon Islands' natural resources and environment, to respond effectively to climate change and natural disasters, and ensure ICT use and disposal practices minimize adverse impact on our environment.
Utalaesim ict for managim an protektim Solomon aelens natural risosis an enfaeronment to repon efectifly tu claemet change an natural disastas an ensue ict ius fo disposal praktisis fo minimaesim problem lo enfaeronment.

179. The biodiversity, pristine habitats and rich natural resources of Solomon Islands are among its greatest assets but Solomon Islands is also vulnerable to the effects of climate change, extreme weather events, and pollution.

180. Consequently, the needs of Solomon Islands include effective responses to climate change; meteorological capacity to forecast and give early warning of adverse or dangerous weather conditions; effective management of water resources, land resources and coastal and marine resources; effective management of wastes and control of pollution; and improved disaster warning, communications, and response coordination. Objective 7 of the National

Development Strategy is to: "Effectively respond to climate change and manage the environment and risks of natural disasters".[70]

181. Increased utilization of ICT can reinforce existing development strategies for responding to climate change, protecting the environment and managing natural disaster risks, including:[71]

- Raising awareness among policymakers and the public about climate change and building consensus for plans and policies.
- Improving Meteorological Service capability, including forecasting and warnings.
- Sensitizing the population to the dangers of environmental degradation, through awareness campaigns in urban and rural communities.
- Increasing disaster awareness, including by 'risk maps' showing types of risk in each location.
- Developing early warning, monitoring and surveillance systems to support planning and decision making in response to natural disasters.

182. By contributing to greater efficiency in the operation of other systems, using fewer materials and less energy, ICT can also contribute to a reduction of human impact on our environment.

Strategies

183. ICT can contribute in multiple ways to environmental sustainability, including through:

- Enabling environmental data to be gathered, stored, and used.
- Circulating material that improve's people's understanding of environmental issues.
- Educating a new generation about environmental matters.
- Improving monitoring and prediction of environmental changes.
- Improving the efficiency of manufacturing and productive processes, so they consume less materials and energy, and produce less waste.
- Enabling participation by the public in environmental decisions and programmes.

184. The following table summarises the strategies and actions for achieving ICT Objective 8:

[70] Solomon Islands Government National Development Strategy 2011 to 2020 (2011)p36.
[71] Solomon Islands Government National Development Strategy 2011 to 2020 (2011)pp 38 – 41.

ICT Objective 8		
Reference	**ICT Strategy**	**Actions**
8.1	Develop means of enabling online access by businesses, officials and members of the public to information on the environment and ecology of Solomon Islands.	▪ Promote the online exchange of information regarding wild animals, plants and habitats that are at risk, good land management, and good conservation practices. ▪ Develop a platform to make available to the public information that is based on Geographic Information Systems, to make better information about Solomon Islands available to support business, agriculture and industry. ▪ Develop a platform to make available to the public, and enable sharing of information, regarding deforestation, reef damage, and other forms of environmental damage. ▪ Investigate means of using ICT to enable greater participation by the public in decision-making in relation to environmental issues.
8.2	Develop means of enabling online access by businesses, officials and members of the public to weather information for Solomon Islands.	▪ Develop a modern electronic weather advisory system, enabling faster dissemination of weather information including alerts about extreme weather.
8.3	Utilize ICT in support of improved disaster management and recovery.	▪ Integrate ICT into disaster management and recovery practices.
8.4	Promote safe and 'environmentally friendly' ways of using and disposing of ICT in Solomon Islands.	▪ Adopt internationally accepted standards for 'environmentally friendly' and energy efficient ICT. ▪ Develop and publicize policy and standards for e-waste disposal.

L. ICT for Equity

185. The Government is committed to achieving gender equality, empowerment of women, and inclusive development, and believes that enhanced access to and use of ICT has an important role to play in furthering these goals.

ICT Objective 9
Promote access to and use of ICT in Solomon Islands in order to promote gender equality, empowerment of women, and inclusive development.
Promotim akses an ius of ict insaed Solomon aelen fo oketa mere, pikinini, man, lem man or mere fo iusim.

Issues

186. The goals of gender equality, empowerment of women, and inclusive development have the following attributes:

- "Gender equality refers to the equal rights, responsibilities and opportunities of women and men and girls and boys. Equality does not mean that women and men will become the same but that women's and men's rights, responsibilities and opportunities will not depend on whether they are born male or female. Gender equality implies that the interests, needs and priorities of both women and men are taken into consideration—recognizing the diversity of different groups of women and men."[72]
- "Women's empowerment has five components: women's sense of self-worth; their right to have and to determine choices; their right to have access to opportunities and resources; their right to have the power to control their own lives, both within and outside the home; and their ability to influence the direction of social change to create a more just social and economic order, nationally and internationally."[73]
- "Inclusive development": "Many people are excluded from development because of their gender, ethnicity, age, sexual orientation, disability or poverty. […] Development can be inclusive - and reduce poverty - only if all groups of people contribute to creating opportunities, share the benefits of development and participate in decision-making."[74]

187. The Government has previously committed to achieving these goals,[75] including by the second and sixth objectives of the *National Development Strategy*:
    - To support the vulnerable (NDS Objective 2)
    - Develop physical infrastructure and utilities to ensure all Solomon Islanders have access to essential services and markets (NDS Objective 6)

[72] Office of the Special Advisor on Gender Issues and the Advancement of Women "Gender Mainstreaming: Strategy for Promoting Gender Equality" http://www.undp.org/content/undp/en/home/ourwork/povertyreduction/focus_areas/focus_inclusive_developme nt/
[73] Millennium Project Task Force on Education and Gender Equality "Taking action: achieving gender equality and empowering women" (2005). Available online at: < http://www.unmillenniumproject.org/documents/Gender-complete.pdf >.
[74] UNDP "Focus Areas: Inclusive Development" <http://www.undp.org/content/undp/en/home/ourwork/povertyreduction/focus_areas/focus_inclusive_developm ent/>.
[75] Solomon Islands is a signatory to the "Pacific Leaders' Gender Equality Declaration" 30 August 2012, Rarotonga, Cook Island

Strategies

188. The Government is committed to ensuring that all Solomon Islanders have the opportunity to participate fully and as equals in all aspects of the life of the nation. In particular, the Government is concerned about the needs of young people, women, and disabled people in Solomon Islands, particularly those in rural areas.

189. A range of challenges arise in relation to vulnerable members of Solomon Islands society. These include women's and children's health, low participation by women in the formal economy and in leadership roles, and the difficulties faced by disabled people in participating in education and employment.

190. The second objective of the National Development Strategy concerns the need to provide support for women and children and other vulnerable groups. The 2009 Population and Housing Census revealed 5,300 people reporting a serious disability, in Solomon Islands.[76] The needs of youth are identified as needing to be addressed.[77]

191. The Government envisages that the enhanced accessibility and use of ICT would serve to support several of the existing development strategies for better supporting vulnerable members of the community, for example:[78]

- Improving access to education for boys and girls with disabilities.
- Strengthening support for parents, families and teachers of the disabled, including by disseminating information.
- § Increasing agriculture, livestock and fisheries productivity, to improve the livelihoods of rural and urban communities.
- § Strengthening mechanisms that help our children and young people to participate in our nation's development efforts.
- Improving young women's and young men's access to education, training, and employment.
- Increasing equal opportunities for young women and young men to participate in decision-making and leadership.
- Empowering youths to make informed decisions about their lives which ensure a healthy and safe generation.
- Improving economic status of women through access to and share of productive resources.

[76] Solomon Islands Government 2009 Population and Housing Census (undated) p p 202.
[77] Solomon Islands Government National Development Strategy 2011 to 2020 (2011) p p 13.
[78] Ibid pp 14 – 17.

- Improving capacity for gender reporting.
- Equalizing participation of women and men in decision making and leadership.
- Promoting equal participation of women with disabilities.

192. Objectives addressing the needs of the vulnerable often overlap with health and education objectives, and are further discussed under those headings.

Gender equality

193. Objectives in respect of women's equality are key features of the Millenium Development Goals; the Beijing Platform for Action;[79] the Revised Pacific Platform for Action on Advancement of Women and Gender Equality;[80] the 2004 Pacific Plan (and 2013 Review); the 2012 Pacific Leaders' Gender Equality Declaration;[81] and the Commonwealth Plan of Action for Gender Equality 2005-2015. The Solomon Islands *Constitution* guarantees equal rights to all citizens, without regard to sex.[82] Solomon Islands adopted its first National Women's Policy in 1998 and ratified the Convention on the Elimination of All Forms of Discrimination against Women in 2002. In 2010 the Government adopted its *Gender Equality and Women's Development Policy*.

194. While some progress has been made -- including improvement in girls' access to education and maternal mortality -- gender inequality continues to be a serious issue for Solomon Islands. This is indicated by data from the 2009 national Census.

195. Data from the 2009 Census indicate higher educational attainment by males than females, and higher participation in paid employment by males than by females:[83]

- 21% of females 11% of males had never been to school or only attended preschool.
- 21% of males and 16% of females had secondary education.
- 6% of males and 3% of females aged 15 and older had a tertiary level education.
- 89% males and 79% females were literate, in the population 15 years and older.

[79] Fourth World Conference on Women: Declaration and Platform for Action (1995) <http://www.un.org/womenwatch/daw/beijing/platform/>.
[80] Available online at: < http://www.pacificwomen.org/>.
[81] Annex 1 to the Forum Communique of the 43rd Pacific Islands Forum, Rarotonga, Cook Islands, 28-30 August 2012.
[82] The Constitution of the Solomon Islands, clause 3.
[83] Solomon Islands Government 2009 Population and Housing Census(undated) pp xxix, 203 – 205.

- 30% of males and 10% of females 12 years and older were economically active (in the labor force) and received a regular paid income.

196. Increasing the availability and use of ICT would assist to achieve many of the Government's existing development strategies in respect of women's equality:[84]
    - Improved and equitable health and education for girls and boys, women and men.
    - Improved economic status of women through access to and share of productive resources.
    - Equal participation of women and men in decision making and leadership.
    - Elimination of violence against women through strengthened legislation and enforcement, treatment and rehabilitation of perpetrators, and preventive approaches and provision of support services.
    - Promote and enhance women's empowerment based on human rights of women in the public and private spheres and at all levels by developing capacity of women and encouraging gender equality.
    - Promote gender-balanced energy programs to ensure that energy needs are addressed for both women and men, including raising awareness of the benefits of energy technologies in households.
    - Promotion of equal participation of women with disabilities and mainstream their issues.
    - Human Resources Development is implemented across the whole of the Public Service in the context of gender-sensitive policies and guidelines for employment and recruitment.
197. Anecdotal evidence suggests that the rapid growth since 2009 of mobile telecommunications in Solomon Islands has contributed to the entry of women into small business. Small-scale distribution channels for the mobile networks ("top-up shops") have proliferated. A substantial majority of these are owned and operated by women.

Young people

198. In relation to the young people of Solomon Islands, greater ICT use may support many of the National Development Strategy aims:[85]

[84] Solomon Islands Government National Development Strategy 2011 - 2020 (2011) pp 16 – 17.
[85] Solomon Islands Government *National Development Strategy 2011 to 2020* (2011) p 13, 16.

- Improved and equitable access to education, training and employment for young women and men.
- Increased equal opportunities for young women and men to participate in decision-making and leadership.
- Increased number of young people participating in activities that promote peace building and conflict prevention.
- Increased participation of young people promoting sustainable development.
- Recognize young males and females as a basis of community and optimize their potential to participate in and contribute to the socio-economic and cultural growth of the Province.
- Increased and improved support for youths in the context of legislation and policies conducive to youth development and empower youths to make informed decisions about their lives which ensure a healthy an safe generation able to engage in productive employment.
- Instil critical awareness among young people of the cross-cultural and ethnic considerations that promote understanding, toleration and tolerance.
- Establish or develop mechanisms at national and community levels that help prevent conflict and help rehabilitate those young people who have violated the law.
- Complement peace and reconciliation, respect and understanding activities by facilitating young people's creative and innovative expression through various arts.
- Encourage church based youth groups so that youths are recognised and their role in communities is promoted and respected.

199. Young people are particularly at risk from exposure through ICT to unsuitable content or offensive or dangerous behaviours. The Government will support families, church groups, communities, and young persons' groups to provide young people with the guidance they need in order to use ICTs safely.

Disabled Solomon Islanders

200. More than a billion people live with some form of disability, and 80% of the disabled live in developing countries. Disability is both a cause and a consequence of poverty. The widespread adoption of the *United Nations Convention on the*

Rights of the Persons with Disabilities (UNCRPD) in 2006 advanced the inclusion of persons with disabilities, making socio-economic exclusion a human rights issue.

201. Removing barriers to access to ICT by persons with disabilities is of paramount importance: exclusion from ICT means exclusion not only from the information society but also from accessing many public services, and the opportunity of living an independent life.

202. The circulation of information to raise people's awareness and alter people's attitudes may be greatly assisted by ICT, to positively influence public opinions. ICT can help women and marginalized groups to know their rights, learn about public issues, and participate in public discussions and democratic processes. ICT can also help women to participate in economic activity, without necessarily interacting face-to-face with men, help to reduce transaction costs, and expand market coverage.[86]

203. The following table summarises the strategies and actions for achieving ICT Objective 9:

ICT Objective 9		
Reference	**ICT Strategy**	**Actions**
9.1	Promote access to ICT by women and young people.	▪ Set up programmes for training and qualification of women and young people in mastery of ICT. ▪ Raise awareness among persons with disabilities of what ICT can do to facilitate their economic and social inclusion.
9.2	Promote access to ICT by disabled and special-needs users.	▪ Raise awareness among policy makers of accessibility barriers. ▪ Incorporate accessibility requirements in ICT procurement policies. ▪ Set up programmes, working with network operators and ISPs, to provide assistance and support to special-needs users, for accessing ICT, including training to use accessible devices and services. ▪ Monitor and evaluate, at regional and international levels, new ICT-enabled solutions for persons with disabilities. ▪ Reform universal access fund provisions of the Telecommunications Act to allow for subsidizing the cost of assistive technologies and accessibility-

[86] World Bank "ICT and MDGs: A World Bank Group Perspective" (2003) p 19.

		related initiatives.
9.3	Utilize ICT to support the creation and development of opportunities for women, young people, the disabled and special needs users to participate in the economic, social and political life of Solomon Islands.	▪ Develop a programme to utilize ICT to facilitate access by women and young people to business opportunities, employment, and self-employment. ▪ Develop a platform for information-sharing and support to women, the young, disabled people and vulnerable members of the community. ▪ Develop a programme to utilize ICT to integrate women and young people in planning and decision making at all levels. ▪ Support the creation of networks and websites for organizations active in advancing the interests of women, the young, disabled people, and vulnerable groups in society.
9.4	Gather better data on access to and use of ICT by women, young people, the disabled and special- needs users.	▪ Collect data on gender-related core ICT indicators and indicators of ICT use by the young, disabled people, and vulnerable groups in society, to support future decision-making and policy formulation.

PART THREE

M. Implementation of the National ICT Policy

204. The Government is committed to the implementation of its ICT Objectives and ICT Strategies. The Government considers that successful implementation of the National ICT Policy will depend on:

- Effective leadership of ICT policy implementation;
- Effective participation in regional and international collaborations on ICT; and
- Adequate funding of work to action the ICT Strategies.

Leadership of National ICT Policy implementation

205. The many challenges ahead in successful implementation of the *National ICT Policy* require a strongly coordinated effort by the Government. Accordingly, the strengthening of the Department of Communication is significant to the success of implementation (refer to ICT Objective 3, above).

International Engagement on ICT

206. The Solomon Islands Government is also committed to maintaining effective engagement in its existing international collaborations on ICT matters and, where

desirable for the purposes of implementing the *National ICT Policy*, extending those.

207. The Government also acknowledges the call in the Pacific ICT Ministerial Forum 2009 for Pacific states to adopt a regionally coordinated approach to ICT development.[87]

208. International agreements to which Solomon Islands is (or may become) a party are vitally important to intellectual property protection, which is of direct relevance to ICT policy. Solomon Islands is a World Trade Organization member and, hence, a signatory to the TRIPS Agreement (i.e. *the Agreement on Trade-Related Aspects of Intellectual Property Rights*). Solomon Islands should also consider becoming a signatory to the *WIPO Convention, Berne Convention for the protection of Literary and Artistic Works, and Paris Convention for the Protection of Industrial Property.*

209. Solomon Islands will also continue to be an active participant in the many regional and international fora on global and regional ICT issues.

210. Solomon Islands is an International Telecommunications Union (ITU) member state. The Telecommunications Commission undertakes regular liaison with the ITU and performs its spectrum management function in accordance with the requirements of ITU-R.[88] The ITU shares information, software and instruction to support spectrum management.

211. The Government also acknowledges the call in the Pacific ICT Ministerial Forum 2009 for Pacific states to take a regionally coordinated approach to ICT development.[89]

212. International agreements to which Solomon Islands is (or may become) a party are important to intellectual property protection, which is of direct relevance to ICT policy. Solomon Islands is a World Trade Organization member and, hence, a signatory to the TRIPS Agreement (i.e. the Agreement on Trade-Related Aspects

[87] The Pacific ICT Ministerial Forum: Connecting the Unconnected, convened by ITU in Tonga during 19-20 February 2009(aka "Tonga Declaration").

[88] The Radiocommunications Sector of the International Telecommunications Union: "The mission of the ITU Radiocommunication Sector is, inter alia, to ensure rational, equitable, efficient and economical use of the radiofrequency spectrum by all radiocommunication services, including those using satellite orbits, and to carry out studies and adopt recommendations on radiocommunication matters. This mission lies within the broaderframework of the purposes of ITU, as defined in Article 1 of the ITU Constitution". See, <http://www.itu.int/en/ITU-R/about/Pages/default.aspx>

[89] Pacific ICT Ministerial Forum 2009: Connecting the Unconnected Nuku'alofa, Kingdom of Tonga, 19-20 February 2009.

of Intellectual Property Rights). Solomon Islands Government will also consider becoming a signatory to the WIPO Convention, Berne Convention for the protection of Literary and Artistic Works, and Paris Convention for the Protection of Industrial Property.

Funding and Budget

213. The benefits of greater ICT use are extensively cross-cutting and the efforts required to achieve greater ICT use will also be extensively cross-cutting. Potentially, every branch of Government may be involved. This means that the *National ICT Policy* could have budgetary implications for every branch of Government. It is not practical for the Government to undertake all of the ICT Strategies at one time. Those ICT Strategies that offer the greatest promise of the greatest benefit must be selected and priorities determined among them.

214. The best approach to funding implementation of the *National ICT Policy* will depend on the particular ICT Strategies that are identified to achieve the ICT Objectives, and the action plans that are determined to put those ICT Strategies into effect. While those outcomes will determine where the burdens of implementation will lie, the Government foresees that implementation work will be funded partly out of general budget allocations to Ministries and partly by grants from Solomon Islands' aid partners. The Government will work with its aid partners to agree the optimal approach to matters of implementation.

N. Review and Development of the National ICT Policy

215. The Government is cognizant of its commitments under the *Paris Declaration on Aid Effectiveness*, as successful implementation of the ICT Objectives is likely to require significant support from its aid partners. These commitments include to:

> Endeavour to establish results-oriented reporting and assessment frameworks that monitor progress against key dimensions of the national and sector development strategies; and that these frameworks should track a manageable number of indicators for which data are cost-effectively available.[90]

216. The Government therefore intends that the *National ICT Policy* shall be implemented in accordance with explicit action plans and that particular projects must detail performance indicators allowing qualitative and quantitative monitoring

[90] Paris Declaration on Aid Effectiveness(2005), Clause 44

of implementation, consistent with the "Logical Framework" approach endorsed by the Government, and consonant with *Paris Declaration* commitments.

217. Data gathered by monitoring indicators under action plans, and (in future) the Core ICT Indicators, will be made available to aid partners as well as being used to evaluate and fine-tune the National ICT Policy and the various measures by which it is implemented.

Information on ICT in Solomon Islands

218. As noted above (see para 13), the Solomon Islands faces a significant challenge: data relevant to investment in, deployment, and use of ICT are relatively scarce.

219. Solomon Islands has previously committed to the *Framework for Action on ICT for Development in the Pacific*.[91] Under that Framework, ICT data collection was identified as a responsibility that must be led at national level:

> Collection of ICT data required for analyses and decisions, and making the data available to analysts (within the constraints imposed by statistical regulations), is a national responsibility. [Pacific islands countries and territories] should make resources available for the routine collection of data, including resourcing institutions adequately to do so.[92]

220. In compliance with this national responsibility, and to support future ICT policymaking and sectoral policymaking in Solomon Islands, the Government considers that the National ICT Policy should provide for work to be undertaken to improve the collection in Solomon Islands of data relating to ICT, in the interests of supporting the implementation, monitoring and evaluation of the National ICT Policy and its future revision and improvement, supporting donors' programme assessment activities, and participating fully in regional development commitments.

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[91] Formulated in response to the call by Pacific Leaders at the 40th Pacific Islands Forum in Cairns (August 2009) for the Pacific Plan Digital Strategy to be reviewed and updated.

[92] *Framework for Action on ICT for Development in the Pacific* (2010) p 24

221. The kinds of data that would have value for ICT policy design are indicated by the list of "Core ICT Indicators," established and updated by the Partnership on Measuring Information and Communication Technology for Development.[93] The "Core ICT Indicators" provide an authoritative set of metrics for data that are internationally comparable and are reinforced by the Partnership's manuals, training materials and capacity development work. The Core ICT Indicators include measurements relating to:

- ICT infrastructure and access;
- access to, and use of, ICT by households and individuals;
- use of ICT by businesses;
- trade in ICT goods;
- ICT in education; and
- ICT in government.

222. For the purposes of monitoring the implementation and effectiveness of this National ICT Policy, and to support the formulation of future ICT policy for Solomon Islands, the Government will task the National Information Office with leading the development of plans for gathering information of the kinds described by the Core ICT Indicators.

[93] See, Annex to Report of the Partnership on Measuring Information and Communication Technology for Development (2014), available at: <http://unstats.un.org/unsd/statcom/doc14/2014-8-ICT-E.pdf>.

Annex A

Time Table for Action

ST = Short Term; MT = Medium Term; LT = Long term

Ref.	ICT Strategy	Actions	Proposed priority
1.1	Promote the creation, recording, preservation and enjoyment by means of ICT of locally relevant content.	▪ Develop programme to support the use of ICT to preserve, promote and sustain Solomon Islands art and culture. ▪ Support and promote the production of electronic content that reflects the values of Solomon Islands society. ▪ Support the development of 'virtual libraries' of Solomon Islands content, with appropriate protection for rights owners. ▪ Complete the National IP Strategy project currently underway. ▪ Reform intellectual property legislation to ensure it is effective in relation to electronic content and electronic delivery. ▪ Investigate new approaches for giving protection to traditional owners and custodians of traditional cultural works, styles and artifacts.	ST
1.2	Enhance protection for ICT users in their online dealings.	▪ Reform consumer protection safeguards to ensure they are effective for online transactions (refer Strategy 2.2). ▪ Undertake public education regarding scams, spam and means of avoiding undesirable content. ▪ Promote awareness of, and access to, open source software and free online tools. ▪ Make guidance, information and tools available for families, teachers and child caregivers regarding means of protecting children from harmful online content (including parental control software).	ST
1.3	Develop mechanisms for providing financial support for accessing ICT to under-served groups in Solomon Islands.	▪ Reform the universal access regime under Part 6 of the *Telecommunications Act* to permit demand-side financial support to under-served groups of users. ▪ Reform the universal access regime under Part 6 of the *Telecommunications Act* to permit funding of universal access otherwise than by levies on licensees.	MT
1.4	Investigate measures for making ICT devices and services more affordable in Solomon Islands.	▪ Examine the impacts of waivers of duties, taxes and levies on software and ICT hardware, including for use by schools, students, hospitals, clinics and people in under-served areas. ▪ Investigate the existence of, and reduction or removal of, any trade barriers, duties or taxes that limit the volume or increase the price of imported software or ICT hardware (e.g. mobile handsets, personal computers, tablet computers, servers, cabling, memory, storage media, power supplies, etc.) ▪ Government will also explore opportunities for joint and bulk purchasing of ICT hardware and software. ▪ Incorporate into the planning process for construction of roads, bridges and other public rights of way a requirement to consider installation of fibre or cabling suitable for backhaul services. ▪ Explore possibilities for developing, or assisting to fund, domestic content hosting services in Solomon Islands.	ST

Ref.	ICT Strategy	Actions	Proposed priority
		▪ Explore with regional partners and aid partners the feasibility of establishing an Internet Exchange Point within or close to Solomon Islands.	
1.5	Promote access to and use of ICT in rural and remote areas.	▪ Collaborate with schools, libraries, local authorities to develop methods for after-hours sharing of ICT resources with local people at low cost. ▪ Collaborate with schools, libraries, women's groups and community groups to support them in raising their members' awareness of ICT and providing opportunities for gaining experience with ICT. ▪ Explore possibilities for development of multi-purpose ICT telecentres to provide ICT access for under-served communities and vulnerable groups.	MT
2.1	Maintain regulatory stability in the framework of telecommunications regulation generally.	▪ Uphold the post-2009 strategy of light-handed, pro-competitive regulation of telecommunications. ▪ Continue to monitor the adequacy of the *Telecommunications Act* to support increasing competition in the sector.	LT
2.2	Ensure appropriate legal protection for consumers and businesspeople who participate in transactions online.	▪ Review and amend existing consumer protection laws to ensure consumers are adequately protected when engaging in online transactions. ▪ Review and amend existing intellectual property laws to ensure protections are appropriate for growing use of ICT and future protection of Solomon Islands' intangible cultural heritage. ▪ Enact legislation to ensure legal certainty regarding the status of electronic documents. ▪ Enact legislation to support online contract formation. ▪ Enact legislation to provide for recognition of electronic signatures. ▪ Enact legislation to support electronic payments. ▪ Enact legislation to provide for data retention and freedom of information. ▪ Enact legislation to protect privacy and data security.	LT
2.3	Ensure appropriate legal protection for the community at large from potential ICT-related risks.	▪ Enact legislation to protect the community against "cybercrime". ▪ Enact legislation to ensure the cyber-security of Solomon Islands. ▪ Periodically review the legislative framework to address new developments in emerging technologies and ensure continued compliance with evolving international standards.	ST
2.4	Ensure regulatory, law enforcement and judicial personnel have the skills and resources required to administer and enforce ICT laws effectively.	▪ Build national capacity to ensure regulation, civil law and laws against cybercrimes can be effectively administered and enforced.	MT
2.5	Participate actively and effectively in regional and international fora on ICT law and law enforcement.	▪ Collaborate internationally to ensure regulation, civil law and laws against cybercrimes can be effectively enforced. ▪ Consider subscribing to the WIPO Convention, Berne Convention, and Paris Convention.	MT
3.1	Strengthen, support and develop the Communications Division within MCA	-Increase Human resource and encourage development within Communication Department -Increase budget and resources to the Department -Relocate ICTSU to Communication Department of MCA	

Ref.	ICT Strategy	Actions	Proposed priority
		▪	
3.2	Maintain and support the provision of ICT support by ICTSU to the whole of Government	▪ Centralize IT support for the whole of Government, and management of IT infrastructure. ▪ Complete roll-out of "GovNet" wireless metropolitan area network for Government, in Honiara and (in future) other regions. ▪ Connect remaining Ministries to SIG-Connect internet access network. ▪ Establish the National Data Centre and disaster recovery capability.	ST
3.3	Establish a SIG ICT Policy Committee	▪ Establish a SIG ICT recommending committee to recommend ICT policies. ▪ Identify staff from SIG to be appointed as members of the committee. ▪ Committee to recommend SIG policy for ICT.	ST
3.4	Integrate ICT into the work of the Government.	▪ Develop a protocol to ensure the integration of ICT issues and considerations into sectoral planning and policy processes, and Ministry corporate plans. ▪ Define standards for recognition of ICT capacity among public servants. ▪ Develop and coordinate ICT capacity building for members of Parliament, and policy and regulatory staff. ▪ Develop and coordinate ICT capacity building for Provincial government members and staff. ▪ Develop means of making Provincial and National governments' information available to the public in order to improve transparency, accountability and rule of law. ▪ Develop means of enabling community-based involvement in political decision making.	MT
3.5	Develop a National e-Government Strategy.	▪ Task the Communications Department with responsibility for coordinating National e-Government Strategy in Solomon Islands. ▪ Identify means of funding and supporting e-Government programmes. ▪ Enact legislation as outlined above (refer strategy 2.2, above) to support online transactions and encourage users' and investors' confidence. ▪ Build ICT capacity at all levels of Government, including at Cabinet-level, among policy and procurement staff, and line staff. Establishment of partnerships. ▪ Pilot project selection and oversight. ▪ Infrastructure development, deployment and ongoing operation for service delivery. ▪ Public awareness, testing and rollout. ▪ Pilot project evaluation and strategy review.	MT
4.1	Promote peace and reconciliation by supporting the greater availability and accessibility of ICT, the ability of all in the Solomon Islands to communicate, and the development of music and creative arts.	(Refer Strategies 1.1, 1.2, 1.3, 1.4, 1.5, 9.1, 9.2, 9.3.)	LT
4.2	Utilize ICT in support of effective policing and enforcement.	▪ Incorporate within the proposed National Security Policy provision for national ICT security.	MT

Ref.	ICT Strategy	Actions	Proposed priority
		▪ Develop a plan to incorporate ICT into RSIPF communications with the public and communities in order to build community confidence in the RSIPF. ▪ Develop a plan for building and maintaining RSIPF's ICT forensic capability and infrastructure. ▪ Incorporate within training for law enforcement personnel on transnational crime training relevant to cybercrime and digital evidence. ▪ Include in routine training programmes training in ICT that is appropriate to the roles of justice and law enforcement personnel.	
4.3	Utilize ICT to improve public access to laws and legal processes.	▪ Improve the online availability of Acts, Regulations, judicial system information (court dates, etc.) to the public. ▪ Investigate ICT-based approaches for enabling citizens' easy and equitable access to legal and judicial services and personnel.	LT
4.4	Utilize ICT to improve law enforcement processes.	▪ Implement an ICT-based case management solution.	LT
5.1	Investigate means of better utilizing ICT in the management of health information and records.	▪ Review the performance of the District Health Information System operated by Ministry of Health and identify lessons from experience in its operation and options for improving on or supplementing it, to enhance the administration of health services generally. ▪ Enhance the collection and management of birth and death records data. ▪ Implement a cost effective Electronic Health Record system to improve clinical care. ▪ Improve the ability of clinics, hospitals and health service providers within Solomon Islands to exchange health information.	MT
5.2	Enhance ICT capability within the Ministry and health sector generally.	▪ Develop ICT training programmes for Ministry policy and health professionals. ▪ Provide ICT facilities in all public health facilities.	MT
5.3	Utilise ICT for better dissemination of health information nationally.	▪ Develop plans for ICT systems to support public dissemination (in appropriate languages) of health information (e.g. information on prevention of infectious and contagious diseases, notification of immunization campaigns, information on disease outbreaks).	MT
5.4	Utilise ICT for better delivery of health services nationally.	▪ Develop plans for ICT systems to support the delivery of health services (e.g. for clinical and diagnostic support, maintenance of inventories of medical supplies at hospitals and clinics).	LT
6.1	Enable schools to make effective use of ICT in teaching.	▪ Ensure schools have affordable access to computers or other ICT devices suitable for local conditions. ▪ Ensure schools have affordable access to broadband service.	MT
6.2	Enable teachers to make effective use of ICT in teaching.	▪ Build teachers' capacity to ensure they have the skills and confidence to teach about and use ICT in lessons. ▪ Establish a platform for information-sharing and support among educators, vendors, Ministry personnel and parents regarding ICT in education. ▪ Establish networks for the sharing of e-learning resources.	MT
6.3	Review curricula to incorporate teaching and learning about ICT.	▪ Facilitate collaboration between educators and industry to align curricula with market needs. ▪ Integrate teaching about ICT and use of ICT into school curricula.	MT

Ref.	ICT Strategy	Actions	Proposed priority
6.4	Build capacity within the Ministry of Education to utilize ICT in education and to improve education administration.	▪ Build capacity in the Ministry of Education regarding ICT for educational purposes. ▪ Develop plans for ICT systems to support the delivery of education services.	LT
6.5	Utilize ICT to promote adult learning in Solomon Islands.	▪ Explore opportunities for utilizing ICT in improvement of adult literacy rates. ▪ Undertake a national skills audit to ascertain existing and needed ICT skills in Solomon Islands. ▪ Build capacity among IT companies regarding ICT for educational purposes. ▪ Explore opportunities for utilizing ICT in distance learning programmes. Establish e-learning platforms to extend teaching to learners who otherwise do not have ready access to education. ▪ Extend teaching about ICT and use of ICT into vocational training programmes, informal education and lifelong learning.	LT
6.6	Establish training support, standards and certification for ICT technical personnel.	▪ Work with regional partners to develop regional ICT skills standards and certification. ▪ Work with businesses to develop training programs for ICT technical skills, to ensure the availability of trained personnel. ▪ Investigate the feasibility of providing financial assistance to ICT professionals for skills development and incentives for investment in ICT by industry.	MT
7.1	Develop infrastructure to support electronic payments.	▪ Work with financial institutions to identify payment systems capable of supporting e-commerce transactions by users who are not credit cardholders. ▪ Provide support for utilization of ICT nationwide for increased automation of operations and management information systems.	LT
7.2	Develop mechanisms to support businesses in key sectors of Solomon Islands' economy.	▪ Support tourism operators in providing Solomon Islands tourist information online. ▪ Develop systems to provide accurate and timely information on commercial fisheries for all stakeholders, including the private sector and regional organizations. ▪ Develop a network for coordination between national, provincial and community levels to facilitate sustainable development of inshore fisheries and shift from "open access" to "managed" fisheries in partnership with resource owners and fishing communities. ▪ Develop a network to share information and promote community-based, small-scale producer activities by providing access to markets and fisheries infrastructure. ▪ Develop a network to share information and support agribusiness and alternative livelihoods. ▪ Strengthen communications to encourage cooperation between government, provinces and mining resource owners on prospective developments in their areas to facilitate exploration and exploitation of mineral and hydrocarbon resources.	MT
8.1	Develop means of enabling online access by businesses, officials and members of the public to information on the environment and ecology of Solomon Islands.	▪ Promote the online exchange of information regarding wild animals, plants and habitats that are at risk, good land management, and good conservation practices. ▪ Develop a platform to make available to the public information that is based on Geographic Information Systems, to make better information	MT

Ref.	ICT Strategy	Actions	Proposed priority
		about Solomon Islands available to support business, agriculture and industry. ▪ Develop a platform to make available to the public, and enable sharing of information, regarding deforestation, reef damage, and other forms of environmental damage. ▪ Investigate means of using ICT to enable greater participation by the public in decision-making in relation to environmental issues.	
8.2	Develop means of enabling online access by businesses, officials and members of the public to weather information for Solomon Islands.	▪ Develop a modern electronic weather advisory system, enabling faster dissemination of weather information including alerts about extreme weather.	MT
8.3	Utilize ICT in support of improved disaster management and recovery.	▪ Integrate ICT into disaster management and recovery practices.	MT
8.4	Promote safe and 'environmentally friendly' ways of using and disposing of ICT in Solomon Islands.	▪ Adopt internationally accepted standards for 'environmentally friendly' and energy efficient ICT. ▪ Develop and publicize policy and standards for e-waste disposal.	MT
9.1	Promote access to ICT by women and young people.	▪ Set up programmes for training and qualification of women and young people in mastery of ICT. ▪ Raise awareness among persons with disabilities of what ICT can do to facilitate their economic and social inclusion.	ST
9.2	Promote access to ICT by disabled and special-needs users.	▪ Raise awareness among policy makers of accessibility barriers. ▪ Incorporate accessibility requirements in ICT procurement policies. ▪ Set up programmes, working with network operators and ISPs, to provide assistance and support to special-needs users, for accessing ICT, including training to use accessible devices and services. ▪ Monitor and evaluate, at regional and international levels, new ICT-enabled solutions for persons with disabilities. ▪ Reform universal access fund provisions of the *Telecommunications Act* to allow for subsidizing the cost of assistive technologies and accessibility-related initiatives.	ST
9.3	Utilize ICT to support the creation and development of opportunities for women, young people, the disabled and special needs users to participate in the economic, social and political life of Solomon Islands.	▪ Develop a programme to utilize ICT to facilitate access by women and young people to business opportunities, employment, and self-employment. ▪ Develop a platform for information-sharing and support to women, the young, disabled people and vulnerable members of the community. ▪ Develop a programme to utilize ICT to integrate women and young people in planning and decision making at all levels. ▪ Support the creation of networks and websites for organizations active in advancing the interests of women, the young, disabled people, and vulnerable groups in society.	ST
9.4	Gather better data on access to and use of ICT by women, young people, the disabled and special-needs users.	▪ Collect data on gender-related core ICT indicators and indicators of ICT use by the young, disabled people, and vulnerable groups in society, to support future decision-making and policy formulation.	MT
Implementation			

Ref.	ICT Strategy	Actions	Proposed priority
Implementation	Gather information relevant to ICT investment and use to support future policy development and implementation.	▪ Formulate a plan for collection of information on the Core ICT Indicators.	MT
Implementation	Review implementation of the National ICT Policy.	▪ Formulate a plan for a scheduled, independent review of National ICT Policy implementation.	MT

Annex B

Glossary of Terms and Abbreviations[94]

Backbone: The main line that ties networks, phone systems or computers together. It's like the human skeleton, with many small connections (called nodes or terminals), Branching off from the backbone. (Telecommons)

Bandwidth: The range of frequencies available to be occupied by signals. In analogue systems it is measured in terms of Hertz (Hz) and in digital systems in bit/s per second (bit/s). The higher the bandwidth, the greater the amount of information that can be transmitted in a given time. High bandwidth channels are referred to as broadband which typically means 1.5/2.0 Mbit/s or higher. (ITU)

Broadband: Transmission capacity with sufficient bandwidth to permit combined provision of voice, data and video. According to ITU report, it refers to DSL and cable modem services with band width greater than 128kbps in at least one direction. (ITU)

Competition: Refers to a situation in a market in which firms or sellers independently strive for the patronage of buyers in order to achieve a particular business objective, e.g., profits, sales and/or market share. (OECD)

Convergence: Refers to two different trends: - convergence between the broadcasting and telecommunications sectors. Advances in technology make it possible to use different media (cable networks, terrestrial and satellite radio relay systems, computer terminals and television sets) to carry and process all kinds of information and services, including sound, images and data. This type of convergence is due to a revolution in technology (digitisation). It has economic and regulatory implications. - fixed/mobile convergence. Increasingly similar technologies are used and services provided by fixed telephone and mobile telephone systems. This type of convergence opens up prospects for operators to propose the same services to all users, regardless of the technology or networks they use. (Autorie de regulation des telecommunications)

DCCG Democratic Coalition for Change Government.

Digital divide: "Refers to the gap between individuals, households, businesses and geographic areas at different socio-economic levels with regard to both their opportunities to access information and communication technologies (ICT) and to their use of the Internet for a wide variety of activities. The digital divide reflects various differences among and within countries. (OECD)

Download: To receive data from another computer into your computer. The opposite is called "Upload". (FCC)

E-Commerce: "Electronic commerce. Refers to commercial transactions occurring over open networks, such as the Internet. Both business-to-business and business-to-consumer transactions are included." (OECD)

[94] World Bank "ICT Glossary Guide" available at: <http://documents.worldbank.org/curated/en/docsearch/teratopic/644292>.

E-Government: Refers to the use of new information and communication technologies (ICT) by governments as applied to the full range of government functions. In particular, the networking potential offered by the Internet and related technologies has the potential to transform the structures and operation of government. (OECD)

Firewall: A hardware- and/or software-based system that is used as an interface between the internet and a computer system to monitor and filter incoming and outgoing communications. (OECD)

Geographical Information Systems (GIS): A geographical information system (GIS) can be seen as a system of hardware, software and procedures designed to support the capture, management, manipulation, analysis, modeling and display of spatially referenced data. (OECD)

ICT Information and Communication Technologies (ICT): Consists of the hardware, software, networks, and media for the collection, storage, processing, transmission and presentation of information (voice, data, text, images), as well as related services. ICT can be split into ICI and IT. (World Bank)

Information Technology (IT): Refers to the hardware and software of information collection, storage, processing, and presentation. (World Bank)

Interconnection: The physical connection of telecommunication networks owned by two different operators.

ISP: Internet Service Provider.

IXP: Internet Exchange Point.

Network: Combination of telecommunications resources, for example, exchanges, wire links (copper cable, optical fiber) and terrestrial or satellite radio transmission links. (Autorie de regulation des telecommunications)

Penetration: A measurement of access to telecommunications. It is usually calculated by dividing the number of subscribers by the population, and multiplying by 100. Also referred to as density. (TMG)

Server: A computer that has been set up to provide certain services to other computers (clients), for instance, a Web server is a central repository of data, software or client for the World Wide Web. (OECD)

Spectrum Management: The spectrum or range of radio frequencies available for communication, industrial, and other uses. Frequency bands or segments are assigned to various categories of users for specific purposes, such as commercial radio and television, terrestrial microwave links, satellites, and police. At the international level this is done by the International Frequency Registration Board (IFRB) of the International Telecommunication Union (ITU). Individual national regulatory agencies monitor the occupancy of the radio spectrum and allocate frequencies to individual users or a groups of users so as to enable a large number of services to operate within specified limits of interference. (WTO)

Universal Access: Refers to reasonable access to ICT for all. Includes universal service for those that can afford individual ICT service and widespread provision of ICT within a reasonable distance for others. Stastically measured as the percentage of the population covered by information and communication technologies. (ITU)

Universal Service: Refers to availability and widespread affordability of ICTs. The level of universal services is statistically measured as the percentage of households with ICT. (ITU)

Annex C

Core ICT Indicators

Revised core list of information and communications technology indicators of the Partnership on Measuring Information and Communication Technology for Development[a]

A1	Fixed telephone subscriptions per 100 inhabitants
A2	Mobile cellular telephone subscriptions per 100 inhabitants
A3	Fixed Internet subscriptions per 100 inhabitants
A4	Fixed broadband Internet subscriptions per 100 inhabitants
A5	Mobile broadband subscriptions per 100 inhabitants
A6	International Internet bandwidth per inhabitant (bits/second/inhabitant)
A7	Percentage of the population covered by a mobile cellular telephone network
A8	Fixed broadband Internet access prices
A9	Mobile cellular telephone prepaid prices
A10	Percentage of localities with public Internet access centres
HH1	Proportion of households with a radio
HH2	Proportion of households with a TV
HH3	Proportion of households with telephone
HH4	Proportion of households with a computer
HH5	Proportion of individuals using a computer
HH6	Proportion of households with Internet
HH7	Proportion of individuals using the Internet
HH8	Proportion of individuals using the Internet, by location
HH9	Proportion of individuals using the Internet, by type of activity
HH10	Proportion of individuals using a mobile cellular telephone
HH11	Proportion of households with Internet, by type of service
HH12	Proportion of individuals using the Internet, by frequency
HH13	Proportion of households with multichannel television, by type
HH14	Barriers to household Internet access
HH15	Individuals with ICT skills, by type of skills
HH16	Household expenditure on ICT
B1	Proportion of businesses using computers
B2	Proportion of persons employed routinely using computers
B3	Proportion of businesses using the Internet
B4	Proportion of persons employed routinely using the Internet
B5	Proportion of businesses with a web presence
B6	Proportion of businesses with an intranet
B7	Proportion of businesses receiving orders over the Internet

B8	Proportion of businesses placing orders over the Internet
B9	Proportion of businesses using the Internet by type of access
B10	Proportion of businesses with a local area network
B11	Proportion of businesses with an extranet
B12	Proportion of businesses using the Internet by type of activity
ICT1	Proportion of total business sector workforce involved in the ICT sector
ICT2	ICT sector share of gross value added
ICT3	ICT goods imports as a percentage of total imports
ICT4	ICT goods exports as a percentage of total exports
ED1	Proportion of schools with a radio used for educational purposes
ED2	Proportion of schools with a television used for educational purposes
ED3	Proportion of schools with a telephone communication facility
ED4	Learners-to-computer ratio in schools with computer-assisted instruction
ED5	Proportion of schools with Internet access by type of access
ED6	Proportion of learners who have access to the Internet at school
ED7	Proportion of learners enrolled at the post-secondary level in ICT-related fields
ED8	Proportion of ICT-qualified teachers in schools
EG1	Proportion of persons employed in central Government organizations routinely using computers
EG2	Proportion of persons employed in central Government organizations routinely using the Internet
EG3	Proportion of central Government organizations with a local area network
EG4	Proportion of central Government organizations with an intranet
EG5	Proportion of central Government organizations with Internet access, by type of access
EG6	Proportion of central Government organizations with a web presence
EG7	Selected Internet-based online services available to citizens, by level of sophistication of service

[a] Indicators A1 to A10 are under discussion by the ITU Expert Group on Telecommunication/ICT Indicators. A revised version is expected to be agreed upon during an Expert Group meeting to be held in Mexico City on 2 and 3 December 2013. The proposed revisions are as follows: delete indicators A3 and A10, present indicator A4 broken down by speed tiers, change indicator A5 to wireless-broadband subscriptions per 100 inhabitants, modify indicator A7 to percentage of the population covered by at least a 3G mobile network, and add two new indicators: mobile broadband Internet prices and television broadcasting subscriptions.