



Republic of Vanuatu

National Information and Communication Technology Policy

DECEMBER 2013

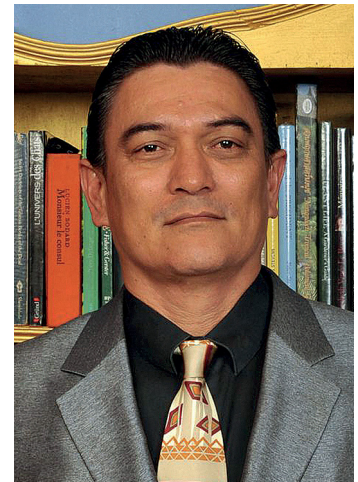
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Foreword

I have the pleasure to present to you this National Information and Communication Technology (ICT) Policy. This Policy expresses a firm commitment of the Government to maximise the contribution, efficiency and effectiveness of information and communication technologies in achieving the National Vision of “A Just, Educated, Healthy and Wealthy Vanuatu”, thereby empowering and benefiting every citizen and resident of Vanuatu.

This Government’s commitment will first of all be expressed through actions in a number of priority areas. Access to ICTs in schools in particular, and also for Vanuatu citizens and residents in general, will be radically expanded. ICTs will transform government services and public administration, as well as supercharge advance in all areas related to the socio-economic develop-



Hon. Moana Carcasses Katokai Kalosil,
Prime Minister of the Republic of Vanuatu



Access to ICTs in schools in particular, and also for Vanuatu citizens and residents in general, will be radically expanded. ICTs will transform government services and public administration, as well as supercharge advance in all areas related to the socio-economic development”

ment of the country. Importantly, the Policy also recognises risks and downsides of the increased utilisation of and dependence on ICTs and provides an impetus for their mitigation, especially through empowerment of users of respective tools and services. Furthermore, the Policy will enhance relevance of ICTs for the Vanuatu population by promoting availability of locally relevant content, as well as our ability to develop and utilise ICTs through capacity building programmes. Finally, the Policy unleashes creative collaboration and action of various public and private entities, academia, civil society and the public in general by setting up a platform for multi-stakeholder and multi-sector coordination and collaboration. This will ensure that the development kick-started by this Policy will extend much further than the Government’s actions alone could reach. Furthermore, this will significantly increase the value, effectiveness and efficiency of initiatives of

individual stakeholders due to synergies and cost savings achieved through joint efforts.

This Policy is neither the beginning nor the conclusion of the national ICT development. Market liberalisation has already expanded availability of ICTs, especially mobile communications, to virtually everyone in Vanuatu. A significant part of our population can have access to the Internet. A submarine fibre cable project, which will provide a high-speed reliable link for Vanuatu to the World, is well underway. National infrastructure has been further strengthened by launching the first Internet Exchange Point in the Pacific. The high-quality Government Broadband Network, connecting all the provinces, has brought the Government much closer to everyone across Vanuatu. ICTs are already transforming public administration. Multiple public and private services can be accessed via mobile phones or online, and the public debate has been significantly enhanced by social networks. Sector institutions, specifically the multi-stakeholder National ICT Development Committee, the Office of the Government Chief Information Officer and the Telecommunications and Radiocommunications Regulator, provide a best-practice foundation for further development of the sector.

In our work we have enjoyed support of our friends in a multitude of international and regional organisations, as well as our development partners. I would like to express a special thanks to the Australian Government, which has consistently supported the institutional and policy development in the ICT area in Vanuatu in general, and this policy process in particular.

A lot has been achieved. However, a lot is yet to be done. ICTs have a strong potential to transform education of our children, expand and improve government services, make us more resilient in the face of natural disasters, preserve and promote our culture, as well as provide new business opportunities, and generally enhance our livelihoods. They will bring us closer together and strengthen our connection to the World. In short, expansion and utilisation of ICTs will cre-



ICTs have a strong potential to transform education of our children, expand and improve government services, make us more resilient in the face of natural disasters, preserve and promote our culture”

ate jobs, provide economic growth and enrich our social lives. I believe that this Policy will provide a good platform for such further developments. However, actual benefits depend on all of us working together—the Government, businesses, academia, users, civil society, and, ultimately, every citizen and resident. Only together can we transform this potential into reality that we will feel every day.

I am especially proud that this is truly a Vanuatu policy. We have learned from other countries and taken advice from international and regional experts and documents. However, experience and insights from all of us here in Vanuatu made this document into what it is today. Numerous stakeholder consultations, an industry roundtable, input from multiple stakeholders through the National ICT Development Committee, as well as obtaining public views through an unprecedented Call for Public Input formed the basis of this Policy.

I am pleased that our efforts have been recognised by various stakeholders

and observers. The Pacific Chapter of the Internet Society suggested that our process for the development of this Policy “offer a model of practice that will be very helpful to other Pacific nations who may wish to redevelop their own ICT policies”. A submission from an international stakeholder, received through the Call-for-Public-Input process, went even further by stating that “Vanuatu is poised to take the region by storm in setting an example for the Pacific in accelerating ICT. It has all the relevant ingredients to succeed. There is political will, commitment, energy and drive to ensure the vision of a vibrant nation will emerge.” We all should take this praise as a push to do even more.

I am calling on all stakeholders to embrace this Policy, which is a result of our joint efforts to date, and work together to develop our country and harness the power of ICTs in these efforts.

Moana CARCASSES KATOKAI KALOSIL
Prime Minister

Executive Summary

This Policy expresses a commitment of the Government of Vanuatu to maximise the contribution, efficiency and effectiveness of information and communication technologies (ICTs) in achieving the National Vision of “A Just, Educated, Healthy and Wealthy Vanuatu” thereby empowering and benefiting every citizen and resident of Vanuatu. This document will serve as a tool for an effective coordination of efforts of all of the various stakeholders towards achieving this commitment.

The Government has identified the following priority areas for this National ICT Policy:

- 1 Access to ICTs in Education;
- 2 Access to ICT Infrastructure and Devices;
- 3 E-Government;
- 4 Integration of ICTs into Sectoral Policies;
- 5 Building Trust (Mitigating Risks and Threats related to the ICT Development);
- 6 Locally Relevant Content;
- 7 Capacity Building; and
- 8 Platform for Multi-Stakeholder and Multi-Sector Coordination and Collaboration.

The Government has also outlined a set of approaches and principles, which, in its opinion, should enhance success of achieving individual Priorities as well as the overall objective of this Policy, in particular by: (a) facilitating synergies among different strategies to achieve Priorities set out in this document as well as other national developmental objectives; (b) building on previous achievements; and (c) employing most affordable, efficient and effective solutions. Such approaches and principles specifically include:

- 1 Multi-Stakeholder and Multi-Sector Collaboration;
- 2 Pragmatic Approach;
- 3 Private, in particular Locally-Based, Sector Driven Development;
- 4 Sustainable Best Practice ICT Sector Governance;
- 5 Fair and Effective Competition and Enhancement of Economies of Scale;
- 6 “Squeezing-the-Assets” and “Thinking-of-a-Greater-Good”;
- 7 Kick-Starting Sustainable Development;
- 8 Subsidiarity and Stakeholder Ownership and Drive;
- 9 Policy as a Process;
- 10 Integration into the Work as Usual;
- 11 Socially Inclusive and Equitable Development;

-
- 12 Being a Responsible Member of the International and Regional Community;
 - 13 Prioritising the Priorities; and
 - 14 Utilisation of Appropriate Tools.

Implementation of this Policy will fall into the remit of the Honourable Prime Minister, as the Minister responsible for ICT and Telecommunications. He/she will be supported by the multi-stakeholder National ICT Development Committee, which shall have the primary responsibility for the further development and implementation of this Policy. Overarching support will also be provided by the Office of the Government Chief Information Officer (OGCIO) and the Telecommunications and Radiocommunications Regulator (TRR). Ministries, Government Departments, Constitutional and Statutory Entities will be responsible for the implementation of this Policy in their respective areas.

This Policy will be implemented through a programmatic approach, based on the principles of results-based-management, and supported by a consolidated list of strategies¹, implementation plan, issue- and sector-specific policies and/or strategies, corporate and business plans as well as expenditure frameworks and budgets of respective stakeholders. Initiatives under this Policy, requiring public funding, will be funded from regular funds of respective stakeholders (including regular budgets of respective Ministries, Government Departments, Constitutional and Statutory Entities), as well as the ICT Development Fund and Universal Access Policy Fund. The Government will seek to partner with development partners, international and regional organisations as well as local and international public, private and non-profit and volunteer organisations, including multinational corporations as well as international and regional civil society organisations, in implementing this Policy.

An implementation plan for the initial consolidated list of strategies shall be approved within 3 months from the adoption of this Policy. The Government envisages that this plan will cover a 5 year period.

The implementation will be supported by an effective monitoring and evaluation framework. The National ICT Development Committee will report on the implementation of this Policy on an annual basis.

The Government will seek to ensure that the National ICT Policy stays sufficiently up-to-date, and will generally aim to review and, where appropriate, revise this Policy within 5 years from its adoption.

¹ Initial list is attached to the Policy as Annex C.

Information and Communication Technologies (ICTs) and Their Contribution to the National Development

The United Nations Development Programme (UNDP) defines² information and communication technologies (ICTs) as “basically information handling tools—a varied set of goods, applications and services that are used to produce, store, process, distribute and exchange information. They include the ‘old’ ICTs of radio, television and telephone, and the ‘new’ ICTs of computers, satellite and wireless technology and the internet.” ICTs also include various applications and services provided using computing devices, including office productivity software (such as MS Office), electronic mail, databases, news sites, electronic entertainment (such as video and audio content), social networking applications (such as Facebook), voice-over-internet applications (e.g., Skype), video games etc.

ICTs contribute to the social and economic development by enabling access to and exchange of information and services anywhere and anytime, together with rapid processing and vast storage of such information. Thereby ICTs make the provision of public and private services, including education and professional development, health information and services, government services, entertainment, information services, professional services and commerce in general, much more effective, efficient, accessible and affordable. They



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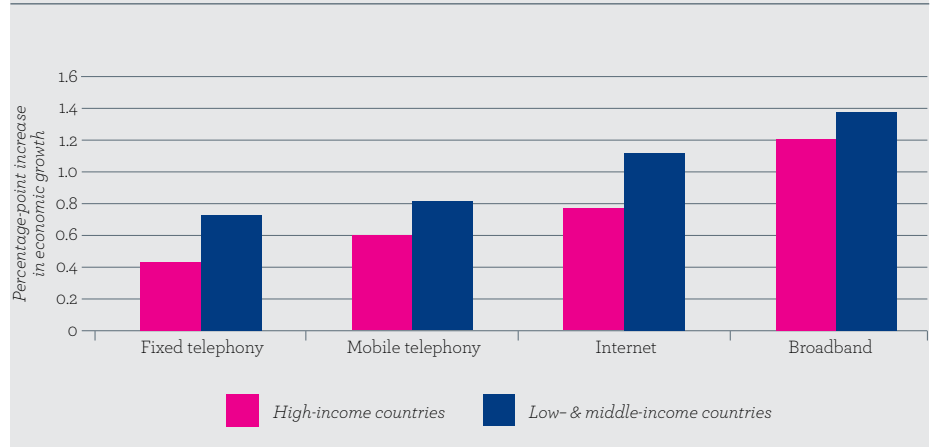
also enhance access to markets, disaster management, as well as democratic participation. ICTs also provide more cost efficient and effective ways to preserve and promote local culture. Costs of economic and social activities are decreased, when ICTs replace transport and postal services. Furthermore, they open new previously non-existent business opportunities (such as ICT services, business process outsourcing, and content-related businesses).

ICTs’ contribution to the national development has been a subject of numerous studies. A widely cited research³, represented in the graph below, demonstrates that ICTs, in particular fast access to the Internet, accelerates economic growth, especially in less developed countries.

² UNDP Evaluation Office (2011). *UNDP Essentials No. 5*.

³ Qiang (2009) as referred to in World Bank (2009). *Information and Communications for Development 2009*.

Figure 1. ICTs and Growth: impact of 10 percentage-point increase in penetration of ICTs



Overall Objective and Purpose of the Policy

In the context above, the Government of Vanuatu shares the recognition, set out in Resolution 67/195 of 2012 of the United Nations General Assembly, “that information and communications technologies have the potential to provide new solutions to development challenges, particularly in the context of globalization, and can foster sustained, inclusive and equitable economic growth and sustainable development, competitiveness, access to information and knowledge, poverty eradication and social inclusion that will help to expedite the integration of all countries, especially developing countries, in particular the least developed countries, into the global economy”. The Government embraces the statement of the Pacific ICT Minister’s Wellington Declaration of 2006 that “information and communications technologies (ICTs), while not an end in themselves, have a key role as a basis for economic development, while also promoting and enhancing social cohesion, cultural enrichment and environmental conservation”.

The regional framework for ICT development provides a context for national objectives. The vision set out in the Framework for Action on ICT for Development in the Pacific (FAIDP), as endorsed by the Pacific ICT Ministers’ Tonga Declaration of 2010, is “Improved livelihood of the Pacific communities through effective utilisation of ICT”. Main goals of the FAIDP are: “(1) Access



ICTs... can foster sustained, inclusive and equitable economic growth and sustainable development, competitiveness, access to information and knowledge, poverty eradication and social inclusion”

to affordable ICT; (2) Efficient and effective utilisation of ICT for sustainable development; and (3) Adoption of ICT as a national priority in PICTs”. Its’ sought outcome is defined as “Enhanced social and economic sustainable development, good governance and security through better access and use of ICT”.

In line with the global and regional objectives set out above, the Government believes that an effective use of ICTs is a must and is indispensable in achieving the National Vision of “A Just, Educated, Healthy and Wealthy Vanuatu”. ICTs have a potential to significantly contribute to (or be a part of) all the strategic priorities, defined in the Priorities and Action Agenda, namely:

- 1 Private Sector Development and Employment Creation;
- 2 Macroeconomic Stability and Equitable Growth;
- 3 Good Governance and Public Sector Reform;

-
- 4 Primary Sector Development, Environment, Climate Change, and Disaster Risk Management;
 - 5 Provision of Better Basic Services, especially in Rural Areas ;
 - 6 Education and Human Resource Development;
 - 7 Economic Infrastructure and Support Services.

In the context above, the overall objective of the National ICT Policy is to maximise the contribution, efficiency and effectiveness of ICTs in achieving the National Vision, thereby empowering and benefiting every citizen and resident of Vanuatu. The Government considers this objective to be a national priority.

By aiming for the objective above and having regard to approaches and principles below, this Policy will directly contribute to the achievement of the Millennium Development Goals, in particular by implementing their Target 8.F that aims to “[i]n cooperation with the private sector, make available the benefits of new technologies, especially information and communications”. The Government considers that this target and goals of the FAIDP are not ultimate objectives, but rather instruments appropriate in achieving the overall objective above (and the Millennium Development Goals in general). It has accordingly embedded such an approach into this Policy.

Pacific Energy, ICT and Transport Ministers in their meeting in Noumea in 2011 “recognized that national ICT policies are essential for effective multi-stakeholder coordination and partnerships to fully utilise ICT as a tool for development and to ensure that national development priorities are addressed”. Therefore the meeting “encouraged [...] governments to adopt a more coordinated and planned approach to developing ICT as a key tool for sustainable development”.

In this regard, the purpose of the National ICT policy is to serve as a framework and tool for an effective coordination of efforts of various stakeholders towards achieving the overall objective above.

Current Situation and Challenges

Current Situation

In the recent years the Vanuatu ICT sector has witnessed a major transformation. The telecommunications sector reform, which entailed a full liberalisation of the telecommunications market, has attracted new market players. Telecom Vanuatu Limited (TVL) was joined by such new entrants like Digicel, Telsat and Can'L. This led to a remarkable increase in the availability of and access to telecommunications services, especially mobile telephony. The Pacific Institute of Public Policy (PIPP) reports that currently 99.4% of households surveyed use and 95.5% own a mobile phone (making a mobile phone the most common electrical appliance in Vanuatu homes). 4 out of 5 respondents have their own mobile phone.⁴

Achievements of the liberalisation are safeguarded and further enhanced by a strong, competent and independent regulator—the Telecommunications and Radiocommunications Regulator (TRR). To provide further impetus to the sector development process, the ICT (including telecommunications) policy portfolio has been consolidated under the Honourable Prime Minister, who is currently also the Minister responsible for ICT and Telecommunications. The Office of the Government Chief Information Officer (OGCIO) has been tasked to support the Honourable Prime Minister in relation to the policy development and coordination of its implementation.

In addition to the above, the Honourable Prime Minister has set up the multi-stakeholder National ICT Development Committee, chaired by him. That Committee has developed this Policy. It is envisaged that it will also play a leading role in the implementation and further development of this Policy.

Vanuatu has a rather elaborate ICT-related legal framework in place. This framework includes:

- 1 Laws governing the telecommunications sector—specifically:
- 2 Telecommunications and Radiocommunications Regulation Act No. 30 of 2009;
- 3 Telecommunications Act [CAP 206]; and
- 4 Wireless Telegraph (Ships) Act [CAP 5];
- 5 Electronic Transactions Act No. 24 of 2000 (as amended by the Statute Law (Miscellaneous) Provisions Act No. 2 of 2010), which governs electronic transactions and related matters, including legal recognition of and requirements for electronic records, formation and validity of electronic contracts as well as other communication of electronic records,

⁴ Pacific Institute of Public Policy (2011). *Net Effects: Social and economic impacts of telecommunications and internet in Vanuatu*.

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- 6 E-Business Act No. 25 of 2000 (as amended by the E-Business (Amendment) Act No. 17 of 2007), which aims to “provide a robust and sustainable environment for the development and growth of electronic business in or that is associated with Vanuatu and to regulate such electronic business” (section 2 (1) of the E-Business Act);
 - 7 Broadcasting and Television Act [CAP 214], which governs radio and television broadcasting activities.

Private and public sector stakeholders have been implementing projects that have further enhanced the ICT sector or have a strong potential to do so in the near future. Such projects include the deployment of the first Vanuatu’s international submarine cable, which will significantly enhance international connectivity for Vanuatu and is due to be ready for service by early 2014. Furthermore, telecommunications infrastructure has been strengthened by a recently launched national internet exchange point, which is the first of its kind in the Pacific.

The Government has deployed the Government Broadband Network (GBN), connecting all the provinces. The Ministry of Health is also implementing a separate programme to connect hospitals and major health centres. Some Government agencies, notably the Vanuatu Meteorology and Geohazards Department, provide current and highly useful online information to residents. The Government has launched the Integrated Government (iGov) initiative and adopted the E-Government Strategic Roadmap to drive further utilisation of ICTs in public administration. These recent achievements establish a solid foundation for Vanuatu to achieve a significant progress from the relatively low current levels of e-government development.

Access to the Internet in lower-income as well as remote communities is expanded by various Government and private initiatives, including the Rensarie Telecenter, a Wan Smolbag computer classroom as well as commercial or community-run public Internet access points available in Lakatoro (Malakula), Loltong (North Pentecost) and other localities.

Although access to ICTs in schools remains very low⁵, where such access is available, it produces remarkable results. For example, a 55% increase in students’ pass rate from year 12 to year 13 was reported in Rensarie following provision of the Internet to Rensarie College. Importantly, virtually all relevant stakeholders, including the Ministry of Education, school administrations, provincial education officers and community representatives, are in a broad agreement that schools are well placed to serve community needs for access to ICTs by becoming Community Learning, Information and Communication Centres. In recognition of the importance of ICTs in the education sector and a role that this sector could play in serving ICT needs of the population, the OGCIO and the Ministry of Education signed a Memorandum of Understanding, outlining a comprehensive framework for collaboration in this regard.

⁵ A recent study conducted by the Office of the Government Chief Information Officer (OGCIO), Ministry of Education (MoE) and Telecommunications and Radiocommunications Regulator (TRR) suggests that only about 5% of students have access to ICTs and only about 6% of schools nationwide have access to the Internet. OGCIO, MoE and TRR (2013). *The First Survey of ICT Usage in the Vanuatu Schools*.

The private sector has started leveraging the ICT infrastructure for provision of its services. For example, tourism and travel services could be procured online or via phone, Internet banking is available to residents and businesses, and the network of ATMs is expanding. Even such traditional product as ready-for-consumption kava is available for ordering online⁶. Similarly, Vanuatu National Providence Fund provides a host of services, enabling its members to manage their accounts via ICT tools, including SMS and online.

Vanuatu has a number of information technology companies. They play an important role in supporting the use of ICTs in the public and private sectors.

Use of ICT tools by the local population has been enhanced by Bislama-adapted ICT tools, including a dictionary and a spelling tool, produced by community/non-governmental initiatives⁷.

ICTs play an increasingly important role in a democratic participation and dialogue. The first ever nationwide Leaders' Face-to-Face discussion, which connected the Honourable Prime Minister and the Honourable Leader of the Opposition with communities in all provinces via video-conference links, was held in 2012. Traditional media is discovering the Internet, which can already be used to access daily newspapers and local radio, as well as distributing news via SMS. Online-only media, such as the Vanuatu Daily Digest and the Pacific Politics Blog of the Pacific Institute of Public Policy, is emerging and becoming an increasingly important source of information. An increasing number of Facebook groups enhance the social and economic conversation. The largest of such groups (Yumi Toktok Stret) has more than 10,000 members. Currently around 9,000 Vanuatu residents (around 4% of the population) use Facebook⁸.

The Government also pays a significant attention to ICT-related awareness and education of the public and specific stakeholders. A tradition to celebrate the World Telecommunication and Information Society Day with a host of public events commenced in 2012. Furthermore, a number of ICT-related workshops were



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organized to enhance capabilities of ICT professionals.

Civil society, including such organizations and groups as the Pacific Institute of Public Policy, the Vanuatu IT Users Society, ViewPex and the Pacific Islands Chapter of the Internet Society (PICISOC), is playing an increasingly important role in promoting and facilitating development and utilisation of ICTs. Local communities are also actively seeking to avail themselves of ICT-driven opportunities⁹.

⁶ <http://www.enakamal.com.vu>

⁷ See <http://www.swtech.com.au/bislama/index.html>

⁸ <http://www.socialbakers.com>, April 2013.

⁹ E.g., Women from Nguna Island organized themselves and, with help from the United States Peace Corps, obtained computers and relevant training.

Vanuatu's efforts to develop its ICT sector have been strongly supported by a number of development partners as well as international and regional organizations, including the Australian Agency for International Development (AusAID), World Bank, International Telecommunication Union (ITU), Asia-Pacific Telecommunity (APT), Export-Import Bank of China (China Exim Bank), Secretariat of the Pacific Community (SPC), Asia-Pacific Network Information Centre (APNIC), United States Peace Corps, Japan International Cooperation Agency (JICA) and Technical Centre for Agricultural and Rural Cooperation (CTA). The Government has been discussing opportunities for collaboration with other public and private partners.

Achievements to date have established a solid foundation for further development of the sector and its enhanced contribution to the socio-economic development of the country in general. A lot is yet to be done, however—as evidenced by the still very low level of use of Internet services¹⁰. Furthermore, the availability of radio broadcasting, which still is the most used and most trusted mass medium, is far from universal—especially in rural areas and more remote provinces¹¹. Increased access to such services will open up a lot of opportunities for the ICT-supported socio-economic development. Furthermore, currently widely available services¹² (including mobile voice and SMS) could be further leveraged for delivery of public and private services.

Importantly, the environment seems to be ripe for further development. For example, only 10.9% of the population (including those, who never seen or used the Internet) do not perceive any benefit of using the Internet¹³. Therefore it is clear that efforts of the Government and other stakeholders to further develop the ICT sector will find a fertile ground.

Challenges

Despite a lot of potential that ICTs could bring in terms of the socio-economic development of Vanuatu, the country faces certain serious challenges to the sector development. It is not unique in this regard—the Pacific ICT Ministers in the Wellington Declaration of 2006 noted that “[t]he Pacific region faces a number of obstacles to the effective deployment of communications and other infrastructure”. Such challenges relate to all elements of the ICT ecosystem, including infrastructure, devices, users, as well as content and applications.

In terms of infrastructure deployment, primary challenges are presented by geography and topography of Vanuatu. First of all, distance to points-of-presence of submarine-fibre-based international connectivity means that, even if (when) Vanuatu is connected to international communications networks via a submarine cable, costs of such connectivity might restrict the extent to which such connections could translate into lower prices for end users. A study commissioned

¹⁰ The Pacific Institute of Public Policy (PIPP) reports that 72% of the general and 79% of the rural population have never used or seen the Internet. PIPP (2011). *Net Effects: Social and economic impacts of telecommunications and internet in Vanuatu*.

¹¹ InterMedia (2013). *Citizen Access to Information in Vanuatu*. Study supported by ABC International Development and AusAID.

¹² Admittedly, quality of such services may still need to be improved.

¹³ PIPP (2011). *Net Effects: Social and economic impacts of telecommunications and internet in Vanuatu*.

by the World Bank and conducted by Polyconseil suggested that international connectivity could cost as much as US\$1310 per Mbps per month^{14,15}. This is hundreds of times more expensive than IP Transit in developed markets—e.g., in New York a comparable price is US\$3.50 per Mbps per month, with pricing for short-term promotions and high capacities below US\$1.00 per Mbps¹⁶ (i.e., 374-1310 times cheaper). Assuming a 1:20 contention ratio, the wholesale IP Transit costs would translate into US\$65.5 per Mbps per month for retail users, or US\$6,550 for 100 Mbps package per month (not including national infrastructure). The context for this could be provided by the United Nations Broadband Commission’s recommendation for the broadband price not to exceed 5% of average monthly income¹⁷—in Vanuatu this would be US\$11¹⁸. Thus the costs and resulting prices are likely to remain a significant obstacle to an aggressive expansion of the broadband Internet use, as affordability of such services remains an issue.

In addition to the international connectivity costs, topography and the current level of supportive infrastructure make deployment, operation and maintenance of national networks challenging and costly as well. First of all, 234,023 residents of Vanuatu¹⁹ inhabit 60 islands (out of 83 in total). These islands are dispersed in a rather large ocean territory (around 1300 km from north to south). Only 25% of the total population live in the two urban centres. Furthermore, the road infrastructure outside main areas of Efate and Espiritu Santo is not well developed. Grid power is provided only in 4 islands, and even where it is available it is rather costly. 25.5% of all households and 32% of rural ones have no access to electricity²⁰—this makes powering ICT devices, including end-user equipment, rather challenging. Furthermore, climatic conditions (including humidity) as well as prevalence of small generators as a source of power makes for an unfavourable environment for the use of laptops and other ICT devices.

Development and operation of ICT and supportive infrastructures are made more challenging by the Vanuatu’s vulnerability to tropical cyclones and



In addition to the international connectivity costs, topography and the current level of supportive infrastructure make deployment, operation and maintenance of national networks challenging and costly as well.”

¹⁴ \$1000 for the Vanuatu-Fiji segment, \$250 for a backhaul from Fiji to Sydney and \$60 for IP transit from Sydney. Polyconseil (2011). *Technical, Economic and Financial Connectivity Study for Vanuatu*. World Bank.

¹⁵ Even if increased utilisation of the submarine cable could drive the costs lower, OGCIO’s assessments suggest that it is unlikely for the wholesale costs to go below US\$300-500 per Mbps per month (depending on scenarios). This is without prejudice to a possible assessment of costs that could be conducted by the TRR as per its functions. TRR has not contributed to the cost assessment referred to in this document.

¹⁶ Telegeography (2012). IP transit price declines steepen. *CommsUpdate*. 2 August 2012.

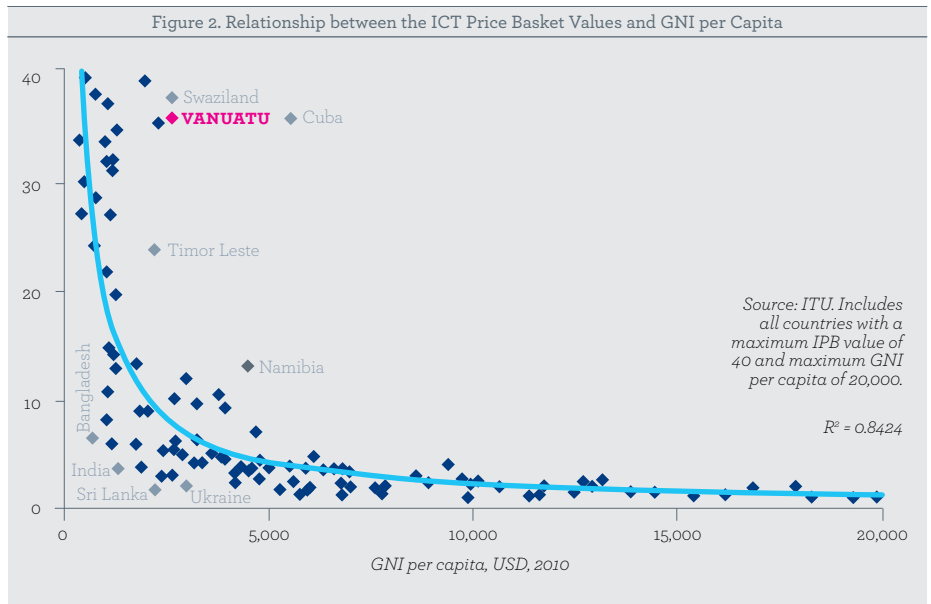
¹⁷ Broadband Commission for Digital Development (2011). *Broadband Targets for 2015*. Target 2.

¹⁸ The calculation is based on the Vanuatu’s Gross National Income (current US\$) per capita in 2010—US\$2640 (World Bank (2012). World Development Indicators).

¹⁹ 2009Census.

²⁰ Pacific Institute of Public Policy (2011). *Net Effects: Social and economic impacts of telecommunications and internet in Vanuatu*.

Figure 2. Relationship between the ICT Price Basket Values and GNI per Capita



severe storms, as well as earthquakes, tsunamis and volcanic activity due to the country’s geography and proximity to the Pacific “Ring of Fire”. In 2012, a report commissioned by the United Nations University ranked Vanuatu the most at risk country in the World to natural disasters.²¹

In terms of user-related challenges, the primary challenge is a limited buying power of residents, arising from high costs of ICTs coupled with low incomes. This seriously impacts affordability of ICT services and products.

Further to the affordability-related concerns above, the extent of the challenge



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is demonstrated by a fact that in 2012 the ITU ranked²² Vanuatu 143 out of 161 countries in terms of ICT prices. Moreover, as demonstrated in the figure below, ICT prices in Vanuatu seem to be much higher than the average for countries with similar incomes (measured as Gross National Income (GNI) per capita).

Gross Domestic Product per capita in Vanuatu (adjusted for the purchasing power parity; current international US\$) in 2010 was US\$4449.73²³. Furthermore, Vanuatu has dramatic rural-urban income inequalities—over 80% of the population depends on agriculture for their livelihood, yet the rural sector contributes only

²¹ Submission to the National ICT Policy from the National Disaster Management Office and Vanuatu Meteorology and Geo-Hazards Department, 15 May 2013.

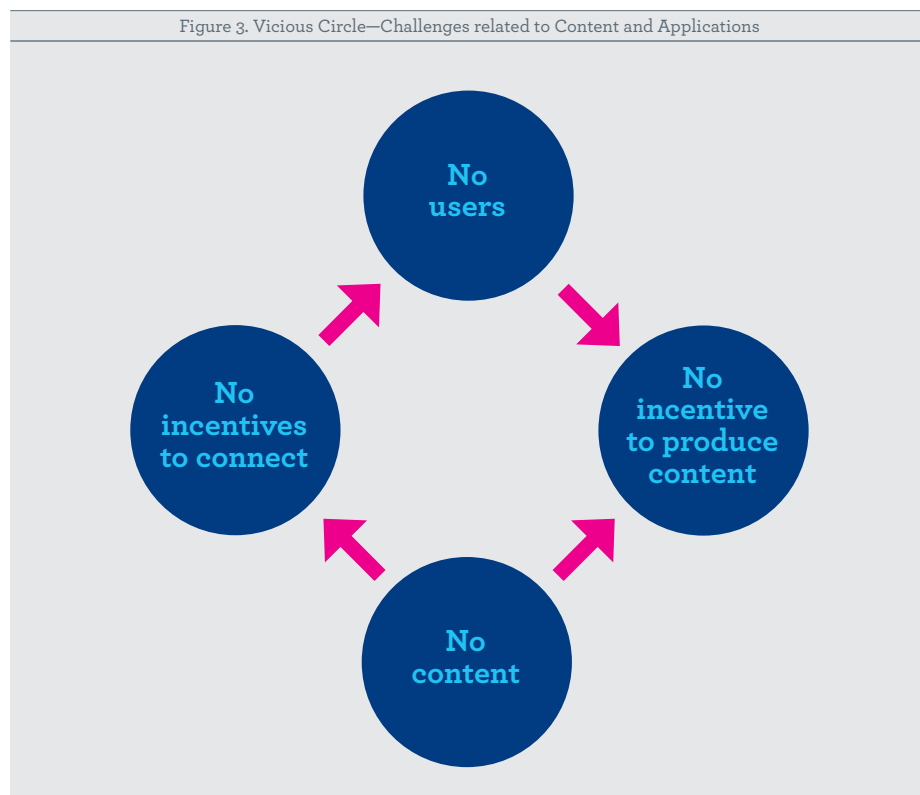
²² International Telecommunication Union (ITU) (2012). *Measuring the Information Society 2012*.

²³ World Bank (2012). *World Development Indicators*.

8% of Gross Domestic Product. 15.9% of the people live in poverty (on less than US\$1.25 a day), and further 22% are estimated to be vulnerable to experiencing poverty (i.e., from food or fuel price increases), as they are close to the poverty threshold²⁴.

Development of digital skills will likely be constrained by the lack of basic literacy and skills. As per the World Bank data, 82% of adults in Vanuatu are

Figure 3. Vicious Circle—Challenges related to Content and Applications



literate²⁵. Local studies, however, present an even more pessimistic picture. A recent survey suggested that the literacy rate in Shefa province was only 27.6% of the population²⁶. Data from the Ministry of Education indicates very high rates of “critical underachievement” in basic literacy and numeracy—namely 59% in Anglophone and 65% in Francophone literacy, and 66% in Anglophone and 61% in Francophone numeracy²⁷. A similarly bleak picture is presented by school enrolment rates—gross secondary school enrolment currently stands at 54.69%²⁸.

In encouraging the development of content and applications, a vicious circle

²⁴ Government of Vanuatu (2012). *Vanuatu Education Sector Public Expenditure Review*. Report.

²⁵ Literacy Rate, Adult Total (% of people ages 15 and above), 2009. World Bank (2012). *World Development Indicators*.

²⁶ ‘Survey shows only 27.6% literacy in Shefa population’. *Vanuatu Daily Post*. September 21, 2012.

²⁷ Vanuatu Ministry of Education (2012). *Education For All*.

²⁸ School enrolment, Secondary (% gross), 2010. World Bank (2012). *World Development Indicators*.

(depicted below), caused by a low-level of consumption, content (applications) and infrastructure availability, will need to be broken.

Development of e-Government is also constrained by a number of specific challenges, including:

- 1 Operational challenges with current non-electronic processes;
- 2 Wide-ranging levels of readiness, including capacity and preparedness, of various Ministries and Government Departments;
- 3 Financial constraints, in particular in relation to recurrent operational expenditures;
- 4 Many competing priorities;
- 5 Difficulties in recruiting and retaining qualified ICT staff.

Successful development of the ICT sector will have to take into account and, to the extent possible, mitigate the challenges outlined above. However, many of such challenges, constraining ICT development, especially in its early stages, also strengthen a business case for it. Challenges of a similar nature are faced by other solutions for public and private service delivery in Vanuatu (especially when transport, postal or similar services are required). ICTs provide a more effective and cost-efficient way to overcome them, including by enabling:

- 1 Savings in transport and postal services as information could be transmitted using ICT networks;
- 2 Much easier distribution and storage of educational material²⁹;
- 3 Opportunities to strengthen education and make it more engaging³⁰;
- 4 More effective and cost-efficient public services;
- 5 Cost-efficient way to distribute content;
- 6 Better mitigation, preparation for, response to and recovery from disasters and other emergencies³¹.

Therefore the successful development of the ICT sector will offer clear rewards to the Government and the public of Vanuatu. It will enable kick-starting of a self-reinforcing virtuous circle, which will ensure more effective and cost-efficient provision of public and private services by increasing utilisation of ICT services and tools, which will in turn open up further demand and free up funds for even more products and services provided by the sector³². This will not only make the ICT development much easier and more self-supporting, but will also enable the Government to support the general socio-economic development in an increasingly sustainable, effective and cost-efficient manner.

²⁹ As noted in a joint submission to the National ICT Policy from various entities under the Ministry of Education—i.e., the Curriculum Development Unit, Vanuatu Institute of Teacher Education, In-Service Training Unit, Education Assessment Unit, and Joint EPublications and Security Course Committee, 16 May 2013.

³⁰ A joint submission to the National ICT Policy from various entities under the Ministry of Education noted: “Young people all over the world are taking to ICT in a way that has never been seen before inside education. The technology appears to address many different learning styles and has an intrinsic fascination for most people, especially the young”, *ibid*.

³¹ Submission to the National ICT Policy from the National Disaster Management Office and Vanuatu Meteorology and Geo-Hazards Department, 15 May 2013.

³² Source for this insight is in this OECD/UNESCO/ISOC Report: <http://www.internetsociety.org/news/clear-correlation-between-local-content-internet-development-and-access-prices>

Priorities

Criteria for Selecting Priorities

The Government acknowledges that the successful development of modern ICTs needs to involve all interconnected elements of the ICT ecosystem, including infrastructure, content and applications, devices and users. Many potentially useful policy interventions could be identified. However, in light of limited financial and human resources, it is important to choose priorities by identifying areas where policy interventions would:

- 1 Give impetus to the socio-economic development that would not be achieved otherwise.** The Government believes that it shall only intervene, where and to the extent it adds a significant value. If favourable outcomes are or can be achieved by the private sector, communities, civil society, citizens or other stakeholders, without a need of action from the Government, such development should be left to the respective stakeholders.
- 2 Produce a significant impact in terms of both the matters addressed, but also for the broader socio-economic development as sought by the Priorities and Action Agenda** (i.e., have strong positive externalities). Attention should be first paid to matters that have a potential to kick-start a virtuous circle of ICT development, which could later be taken over and continued by activities of non-Government actors, or integrated into standard day-to-day Government operations or sector-specific policies.
- 3 Have relatively lower complexity and reliance on inputs from multiple stakeholders.** Higher programme and project management complexity decreases the probability of successfully realizing planned outcomes of policy interventions—especially in light of rather limited programme and project capacity, as well as wide-ranging levels of capacity and preparedness of various stakeholders. This takes into consideration that the cost of failure for such initiatives should be kept low and is tailored to Vanuatu’s unique needs.
- 4 Rely, as much as possible, on the ready demand as well as existing models of ICT development and readily available implementation capacity.** In a number of areas awareness of potential benefits of ICTs in Vanuatu is very high. Furthermore, private sector players and other stakeholders have already employed various models of extending benefits of ICTs to various communities in Vanuatu (such as providing schools with computers and Internet facilities, as well as setting up Internet Cafes). Building on such awareness, existing models and capacity significantly increases stakeholder buy-in (and reduces

change-management related challenges), ability to implement policy interventions using local resources, and ultimate sustainability of results.

The most successful ICT-related policy intervention in Vanuatu to date—the liberalization of the telecommunications market—met all of the criteria above. Therefore the Government intends to build on this positive experience when pursuing further initiatives.

The Government will apply the criteria above not only when selecting specific priorities, but also when choosing and designing strategies meant to implement such priorities.

Specific Priorities

Having regard to the above, The Government has identified the following priorities for this National ICT Policy³³:

- 1 Access to ICTs in Education:** Providing educational institutions with access to ICT infrastructure and related services (especially, the Internet) and equipment adequate to support the educational process, providing students with access to ICT devices, as well as providing appropriate ICT-based educational content.
- 2 Access to ICT Infrastructure and Devices:** Enhancing general access to as well as availability and affordability of the reliable ICT infrastructure (including, wireless voice, voice-related services, and the Internet, but also radio), related services and devices, with an emphasis on demand side measures, enhancing overall resiliency of the national infrastructure, and lowering costs of services and devices as they are delivered to end-users.
- 3 E-Government:** Enhancing effective and cost-efficient use of ICTs (including wireless communications) in Government operations, in particular in terms of internal administration; and promoting ICT-enabled interaction between the Government and other stakeholders, including citizens³⁴.
- 4 Integration of ICTs into Sectoral Policies:** Recognising an enabling and transforming potential of ICTs for every sector and policy area, in particular such key areas as education, health, productive sectors, transport (especially maritime), trade and attraction of foreign investment, gender equality, social equity, democratic participation, preservation and promotion of local culture (including arts), protection of environment³⁵ as well as disaster management; and achieving a strong direction towards realising such potential through the development and subsequent implementation of appropriate sectoral policies.
- 5 Building Trust (Mitigating Risks and Threats related to the ICT Development):** Recognizing that alongside numerous benefits, ICTs also bring various dangers, including an exposure to harmful information;

³³ See Annex A for an explanation on how these Priorities meet the respective selection criteria.

³⁴ Developing tools for enhanced subject-specific interactions will, however, generally be addressed under Priority 4.

³⁵ Potential of a negative impact of ICT tools on the environment (e.g., in terms of electronic waste, energy consumption) needs to be recognized as well, and appropriately mitigated.

new avenues for criminal, including fraudulent, activities; new threats for protection of confidential information and important infrastructure; as well as new risks of disruption of social and economic life; and ensuring that those dangers are properly addressed and managed, in particular through appropriate preparedness, education and awareness building. Individual privacy should be maintained throughout.

- 6 **Locally Relevant Content:** Increasing availability of locally relevant sustainably supported content, especially by making global content accessible in local languages.
- 7 **Capacity Building:** Enhancing skills necessary to utilize and develop ICTs, especially in the public service.
- 8 **Platform for Multi-Stakeholder and Multi-Sector Coordination and Collaboration:** Recognizing that any pre-established policy cannot foresee every initiative that could benefit the development of the ICT sector, neither any one central agency can envisage and direct all of them; and therefore setting up a platform for expertise, knowledge and skills to be shared among various stakeholders and sectors, duplications to be eliminated and potential synergies exploited, thereby enabling a substantially self-organizing (although enabled and coordinated) ICT development process.

Annex B sets out anticipated results (in terms of outcomes and impacts) that the Government expects to achieve by addressing the Priorities above.

General Considerations

The Government acknowledges that the Priorities above do not include immediate and ambitious agenda in certain important areas, including health and productive sectors as well as disaster management. The Government considers, however, that the effective utilisation of ICTs in such areas requires strengthening of the preparedness of respective institutions first, and applying an appropriate process of strategic planning. This is needed to ensure that the promotion of ICTs does not become a standalone isolated activity, but that it meaningfully contributes to the operation and development of the respective sectors. This will be achieved by implementing strategies under Priorities 4 and 7.

Importantly, implementation of strategies under the Priorities above, in particular Priorities 1, 2, 3 and 5, will prepare the ground and provide a platform for initiatives in other areas. Implementation of Priority 8 will facilitate utilisation of ICTs across all areas important for socio-economic development, by enabling cross-pollination of experiences and more effective cross-utilization of resources and platforms.

Approaches and Principles

In working towards Priorities of this Policy, the Government intends to apply a set of approaches and principles, set out below. These approaches and principles should enhance success of achieving individual Priorities as well as the overall objective, in particular by: (a) facilitating synergies among different strategies to achieve Priorities set out in this document as well as other national developmental objectives; (b) building on previous achievements; and (c) employing most affordable, efficient and effective solutions (rather than “coolest” or most marketed).

Multi-Stakeholder and Multi-Sector Collaboration

The Government recognizes that it is not possible to achieve the overall objective and Priorities of this Policy through Government actions alone. Therefore the Government accepts an approach of multi-stakeholder collaboration as endorsed by outcomes of the World Summit of the Information Society, in particular the Geneva Plan of Action of 2003, as well as Resolution 67/195 of 2012 of the United Nations General Assembly and the FAIDP. The Government acknowledges of key stakeholders such as ICANN, IANA, APNIC, ISOC, PICISOC, W3C, IETF and other regional and global partners in internet governance and standards definition.

The framework of multi-stakeholder collaboration, in particular as enshrined in Paragraph 3 of the Geneva Plan of Action³⁶ and the FAIDP, provides for specific roles for various stakeholders, namely:

- 1 “Governments have a leading role in developing and implementing comprehensive, forward-looking and sustainable national e-strategies. The private sector and civil society, in dialogue with governments, have an important consultative role to play in devising national e-strategies.”
- 2 “The commitment of the private sector is important in developing and diffusing information and communication technologies (ICTs), for infrastructure, content and applications. The private sector is not only a market player, but also plays a role in a wider sustainable development context.”
- 3 “The commitment and involvement of civil society is equally important in creating an equitable Information Society, and in implementing ICT-related initiatives for development.” As per the FAIDP, the civil society has an important role in working with communities.

³⁶ Quotes below are from the Geneva Plan of Action.

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- 4 The FAIDP also recognizes a role for communities to own and drive initiatives.
 - 5 “International and regional institutions, including international financial institutions, have a key role in integrating the use of ICTs in the development process and making available necessary resources for building the Information Society and for the evaluation of the progress made.”

In addition to the specific stakeholders mentioned above, the Government notes the significance of such stakeholders as development partners, academia and users. The Government further recognises the importance of such locally relevant stakeholders as churches and custom chiefs, which work closely with the civil society and communities on the socio-economic development, in particular in relation to social and cultural aspects of such development.

Ultimately and importantly, success of any developmental effort relies on the input of every citizen and resident of Vanuatu. The Government will therefore make efforts to engage the public-at-large in the policy development and implementation process, and, on the other hand, will expect an active participation of every citizen and resident in this undertaking.

Furthermore, the Government recognizes that ICTs both enable development of other sectors, and are dependent (especially in relation to the energy sector) on them. The ICT development needs to recognize such interlinkages. Pacific ICT Ministers in their Tonga meeting of 2009 also acknowledged “the need for a strategic approach to the development and use of these technologies that recognizes the important role of the private sector and the value of building synergies with developments in other sectors, including health, education and energy”. Therefore the Government endorses a multi-sector approach in the development of ICTs.



Ultimately and importantly, success of any developmental effort relies on the input of every citizen and resident of Vanuatu. The Government will therefore make efforts to engage the public-at-large.”

The multi-stakeholder (and multi-sector) approach has been instrumental in the development of the Vanuatu’s ICT sector so far. The Government reaffirms its commitment to such an approach. It fully accepts “the concept of ‘many partners, one team’ in progressing a more coordinated and coherent approach to ICT development”, as endorsed by the Pacific ICT Ministers’ Tonga Declaration of 2010.

The Government believes that an effective implementation of its role in this framework of a multi-stakeholder cooperation requires the Government to generally follow best-practice procedural principles, including: (a) transparency; (b) stakeholder involvement; (c) clear procedures; (d) planning; and (e) accountability. Therefore it will, wherever feasible, conduct public consultations and actively seek input from relevant stakeholders. It will also aim to base its activities on, preferably, rolling multi-annual, work plans; measure them against

pre-established key performance indicators; and produce annual reports. It will also seek to formalize its procedures, including procedures for interaction with stakeholders. Where appropriate, the Government will also consider special arrangements enabling and encouraging effective participation of all stakeholders, including stakeholder groups that face specific barriers to such participation³⁷.

The approach, described in this section, should be applied both in implementing strategies under Priorities 1-7, as well as in identifying, defining, developing and implementing new initiatives under Priority 8. Importantly, such an approach should be employed not only when implementing initiatives falling directly under this National Policy, but also when developing and, subsequently, implementing sectoral ICT policies under Priority 4. This should be done by, in particular: (a) involving relevant stakeholders; (b) recognising synergies with other sectors, and purposefully seeking for opportunities beyond traditional remits of respective organizations through exploiting potential for positive externalities outside narrowly defined sectors; (c) employing coordination mechanisms set out in and established for the implementation of this Policy; and (d) following best-practice procedural principles.

Pragmatic Approach

The Government believes in the importance of an ambitious, but pragmatic approach in achieving the overarching objective of this Policy. In following this approach, the Government intends (and will encourage other stakeholders) to:

- 1 **Make use of most appropriate, affordable, efficient and effective technologies, business and operational models and services**, having due regard to technologies, models and services that:
 - a are already prevalent and could be further utilised;
 - b are offered or are included in plans of service providers;
 - c could be rolled-out relatively easily using existing infrastructure and having due regard to local circumstances.

In this context, the Government specifically notes the widespread availability³⁸ of 2.5G mobile communications services in Vanuatu, as well as nearly universal³⁹ use of such services, especially basic mobile voice and SMS. The Government also acknowledges that service providers have commenced deployment of 3.5G mobile communications services. Availability (especially of 3.5G services) and, in particular, quality of such services still needs to be enhanced and improved, and the Government intends to encourage this. The Government will also encourage further upgrade of such infrastructure.

Nevertheless, the Government intends to encourage utilisation of infrastructure and services deployed, in particular by recognizing

³⁷ e.g. people with disabilities.

³⁸ Reportedly such services cover more than 90% of population.

³⁹ Pacific Institute of Public Policy (PIPP) in its study *Net Effects: Social and Economic Impacts of Telecommunications and Internet in Vanuatu* (2011) reports that 99.4% of households use mobile phones, 95.5% of households own one (making a mobile phone the most common electrical appliance in Vanuatu homes), and 4 out of 5 persons surveyed have their own mobile phone.

the potential of and promoting mobile applications, including M-Government, in achieving Priorities of this Policy.

The Government recognises that in many cases achievement of Priorities under this Policy entails expanded access to specific services—namely the relatively high-speed Internet. Furthermore, as demonstrated above, access to the broadband Internet generally delivers much greater economic impact than access to other telecommunications services. Therefore the Government will not shy away from promoting expanded access to the high-speed Internet as an important tool in achieving the overall objective of this Policy and especially Priorities 1 and 2. Specific characteristics of such high-speed Internet will generally be determined in the context of specific priorities, strategies and/or projects, having regard to the local needs, requirements associated with specific uses of such Internet and pragmatically attainable levels of service at specific locations.

Nevertheless, taking into account market developments, including those referred to above, the Government considers that high-speed Internet services should be universally available at speeds attributable to at least 3.5G mobile communications technologies, having regard to: (a) that 2.5G mobile communications technologies may be used in the interim, while infrastructure capable of delivering higher speeds is deployed; and (b) potential of shared use of services as described below.

The Government will, however, expect for certain areas to benefit from higher speed broadband Internet, including based on optical fibre, in particular in urban centres, especially in Port Vila and Luganville, where government offices and businesses that rely or would greatly benefit from such services are concentrated.

In any case, the Government notes that the ICT sector is characterised by very rapid innovation and improvements. Therefore it expects that speeds and quality of telecommunications services will be constantly upgraded to reflect capabilities of current technologies as well as changing needs of users.

The Government also recognises that services at the access network level need to be supported by appropriate backhaul networks as well as international connectivity. Therefore, whenever promoting infrastructure development, the Government will take an end-to-end network approach. In this regard it will aim to identify bottlenecks or obstacles to the development of such infrastructure. Where appropriate, regulatory or policy interventions will be designed and implemented to address such bottlenecks and obstacles. Specifically the Government acknowledges its role in facilitating appropriate solutions for reliable cost-efficient high-capacity and high-quality international connectivity, as well as solutions reducing reliance on such connectivity (such as a well-developed internet exchange point).

Importantly, references to specific technologies in this Policy should only be considered as a manner to refer to specific functionality of services. The Government will by no means limit implementation of this Policy to specific technologies and, to the extent feasible, will not prescribe any specific technologies in its instruments. It will also

encourage all parties to take a technologically neutral approach. The Government generally prefers decisions on specific technologies and solutions to be taken by users and providers of such solutions, unless a choice of specific technologies is justified by public interest imperatives, such as significant reductions in costs resulting from harmonized approaches to the provision or procurement of services or other solutions.

The Government also recognises the continuing importance of ‘old’ ICTs, in particular traditional terrestrial radio⁴⁰, for achieving the overall objective of this Policy. Television could potentially also serve important needs of residents. However, costs and benefits of expanding television services would need to be further evaluated, especially in light of convergence of technologies, networks and services leading to a potential to provide television-like services over Internet-type networks.

The Government also acknowledges that models of shared and common use of ICT services, such as Public Internet Access Points (including Internet Cafes) and, more traditionally, communal use of radio and television⁴¹, have found their acceptance in Vanuatu.

While ensuring that it remains vendor-neutral, the Government will generally promote use of devices that are suitable for specific conditions of use, in particular when respective ICT solutions are implemented in outer islands⁴². However, regard should always be had to the considerations outlined in point 2 below. In this context, for example, durability of devices should be weighed against easiness and affordability of replacement as well as initial acquisition barriers.

The Government will also take a pragmatic approach when selecting software platforms, tools and solutions to use. It will make decisions on whether to use Free and Open Source Software or commercial products on a case-by-case basis, having regard to total costs of ownership, capabilities of available human resources and other relevant factors.

2 Have reasonable expectations for the appropriate level of access to ICTs and their reliability, quality and sophistication provided and utilised in the context of specific solutions.

The ultimate goal of this Policy, in particular as sought via Priority 2, is to provide residents with individualised access to ICTs, which they could use to maximise their personal utility. However, the Government acknowledges that this may not be immediately feasible. Therefore it considers shared access to ICTs, including via use of ICTs in shared (common) facilities or sharing access to telecommunications services via wireless or other similar networks covering specific localities, to be an

⁴⁰ As demonstrated by the findings of InterMedia (2013). *Citizen Access to Information in Vanuatu*. Study supported by ABC International Development and AusAID.

⁴¹ InterMedia (2013). *Citizen Access to Information in Vanuatu*. Study supported by ABC International Development and AusAID.

⁴² e.g. in many circumstances mobile devices, which would be more resilient to elements (including sun and rain) and powered by a battery, which ideally could be charged using solar or small-generator-based power sources, might be better suited for use in outer islands than stationary devices requiring an uninterrupted external power source.

appropriate tool to come closer to achieving objectives of this Policy. As referred to above, such a manner of using similar services is rather prevalent and accepted in Vanuatu.

The Government also accepts that an incremental reliability of ICT services (including the reliability of power supply) as well as their incremental accessibility (e.g., specific hours of operation) comes at an incremental cost. This may be particularly significant in places where supportive infrastructure (including transport and energy infrastructure) is weak or non-existent. Such considerations similarly apply to quality, including reliability, and comprehensiveness of solutions addressing various Priorities of this Policy.

The Government will have regard to realistic requirements for solutions that would be appropriate to local circumstances, locally relevant levels of utility and expectations; and will encourage other parties to do the same. Maximum flexibility should be afforded to implementers of projects to decide on operational arrangements.

Moreover, when deciding on a required level of comprehensiveness and sophistication of specific solutions, the benefits of such solutions shall be assessed realistically. Such assessment should not be based on an optimistic evaluation of the maximum utility that could possibly be derived from respective solutions, but on a reasonably expected level of a long-term utility, having regard to available capabilities to make use of such solutions, as well as the capacity to support and maintain such solutions over time.

3 Adopt and encourage an add-on approach to developing ICT infrastructure and related facilities.

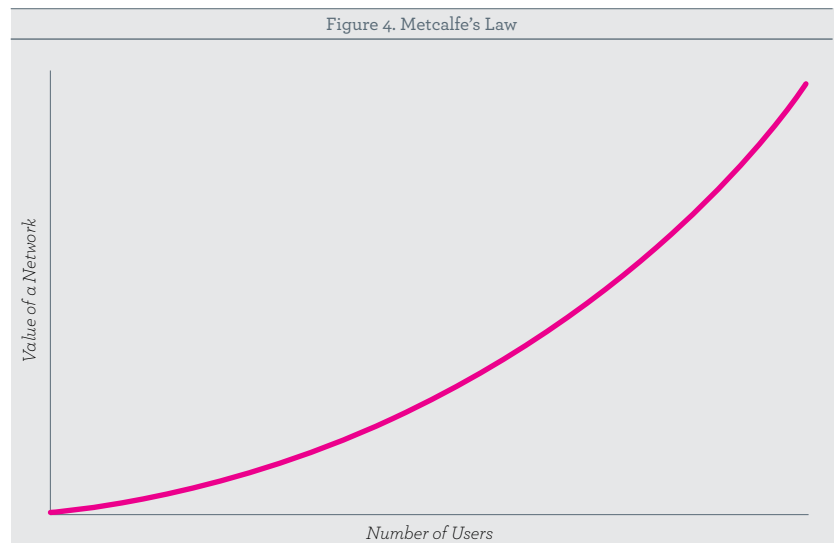
The Government recognises the importance of supportive infrastructures and facilities, especially energy infrastructure and appropriate premises for shared (common) use of ICTs, for the development of ICT infrastructure and related facilities and extending access to ICTs. As much as possible, ICT infrastructure should not be developed on a standalone basis, but, to maximise cost-efficiencies, as an add-on to the existing infrastructure or facilities and/or as follow-on projects to the development of such supportive infrastructure. In exceptional situations, where it is necessary to establish such supportive infrastructure to enable provision of ICTs, due regard should be given to an ability to re-use such infrastructure to support general needs of respective communities or organisations, even if such re-use could marginally increase costs of such facilities.

In the context above, the Government will seek to coordinate ICT development initiatives with other developmental initiatives, such as the development of rural electricity. Furthermore, shared (common) access to ICTs could be best provided at premises that are already widely recognized as neutral community facilities (such as schools) and/or commonly frequented by the public (such as shops, postal offices or bank branches). General supportive infrastructure (including electricity) available at such facilities would normally also support provision of ICTs.

4 **Adopt a “push—don’t jump” approach in expanding availability of, access to and utilisation of ICTs.**

The Government recognises that expanding availability of, access to and utilisation of technologies in the developmental context should follow the same laws that apply to diffusion of technologies in general, and network-type technologies, including ICTs, in particular. An appropriate policy should not attempt to overcome such laws, but employ them to enhance effectiveness and sustainability of policy interventions.

The above includes such mutually reinforcing laws as: (a) Metcalfe’s law, which characterises network effects; and (b) the technology adoption

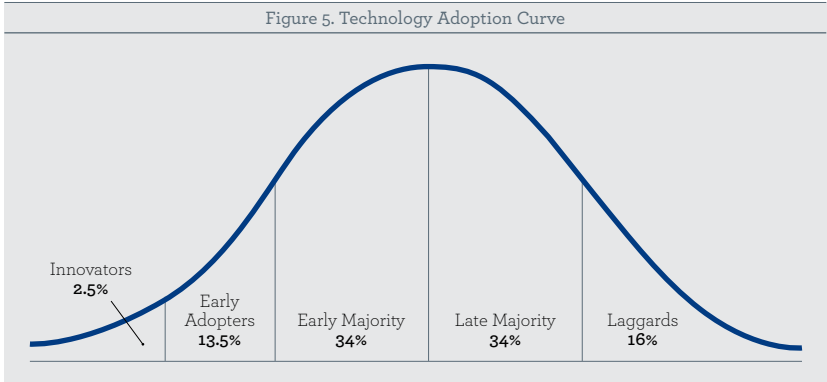


curve.

Metcalfe’s law states that the value of a network (whether physical, virtual or logical) is proportional to the square of users (or devices) connected to such a system. This is derived from the pattern of growth in potential links (bilateral connections and communication opportunities) as a number of users (or devices) increases. Metcalfe’s law, as represented in the graph below, explains why every new user will find, in an accelerating manner, it incrementally more valuable to use specific ICT services or applications, and how new additions increase the value to existing users.

The Technology Adoption Curve, as represented below, demonstrates how diffusion of a technology starts with a small number of innovators, who are followed by a larger number of early adopters, subsequently followed by a majority of users, until finally it is adopted by late comers. Naturally, encouraging adoption of a technology by innovators and early adopters is relatively easy and cheap, whereas adoption by late comers is dependent on them being able to derive a significant value from such a technology.

When put together, Metcalfe’s Law and the Technology Adoption Curve mean that the most reasonable way to encourage adoption of a



network-based technology in a sustainable and, potentially, self-reinforcing manner is to follow the logic of the Technology Adoption Curve. That way a relatively easy enticement of earlier adopters will increase the value of such a technology to later comers and will, in turn, make it easier to attract the latter and sustain their interest in the technology. At the same time, working against such laws hinders the reinforcing sustainable development and kick-starting of a virtuous circle of network-effects-based development, in which an increasing user base attracts new users, and new users make it more attractive for existing ones to stay connected. A simplified representation of those opposite approaches is shown in the graph on the next page⁴³.

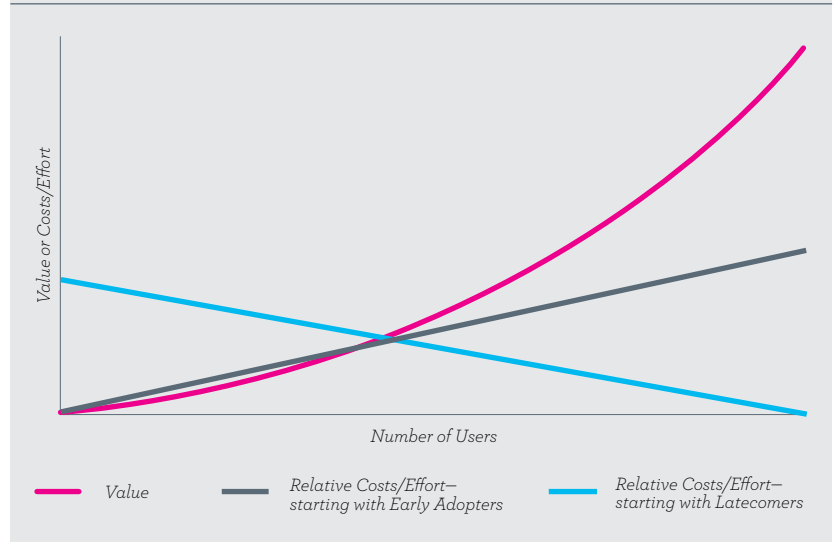
If ICTs, contrary to the preferred approach described above, were to be first provided to the most remote and most challenging areas to the people who need most support in using such tools and services, without such ICTs being available in less challenging areas, the beneficiar-

“The Government considers that its’ primary role should be to provide a direction to, enable, facilitate, and encourage development of the ICT sector, including via setting appropriate policies.”

ies of such initiatives would not derive much value from them. Such beneficiaries would not have anyone to communicate to using such tools and services, and not much content and applications to make such ICTs useful. Furthermore, in such a scenario there would be no indigenous support system that would ensure sustenance of implemented solutions and maintenance of infrastructure, facilities and devices. Isolated projects in very remote areas have small chances of success, and/or require very substantial recurrent resources leading to high costs for relatively moderate benefits.

⁴³ See the gap between the value and costs/effort for each of the two approaches.

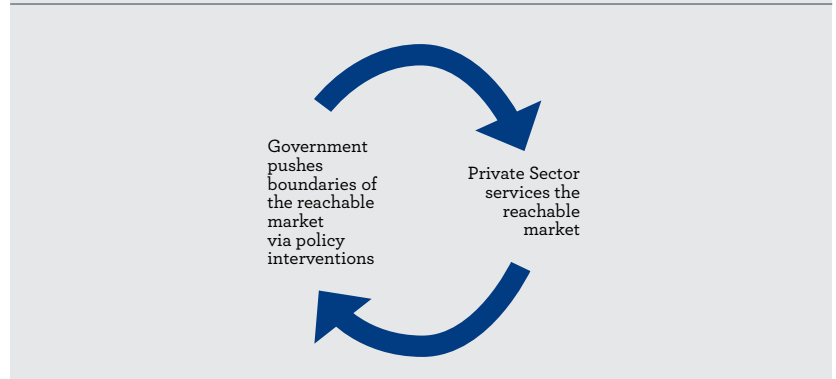
Figure 6. Value vs. Costs/Effort when Adopting Different Approaches to Technology Diffusion



A “pushing from the centre” approach naturally entices new users at the “edges” with relatively smaller efforts and costs, as well as provides a more sustainable support to such “edges”. Therefore, although alternative approaches may appear socially and politically more appealing, their overall benefit to the society (and, ultimately, even to disadvantaged areas) is likely to be much more limited than an “expanding-from-the-centre” approach.

The “push—don’t jump” approach, together with the below-described reliance on the private sector, means that the Government will aim to constantly push boundaries of a reachable market that the private sector could address by itself. The Government will then seek to enable the private sector to take over and serve the expanded market to an as sustainable extent as possible, leaving the Government to push such boundaries even further—as represented in the graph below.

Figure 7. ‘Push—Don’t Jump’



Private, in particular Locally-Based, Sector Driven Development

Importance of the private sector in developing ICTs has been, as noted above, recognised by Target 8.F of the Millennium Development Goals, the outcomes of the World Summit of Information Society as well as the Pacific ICT Ministers' Meeting in Tonga in 2009. In the Priorities and Action Agenda the Government also expressed its belief "that the role of Government is to promote inclusive economic growth, and that the private sector should be the engine of this growth".

The Government also notes the positive experience in Vanuatu where the private sector, unleashed by the liberalisation of the telecommunications market, tremendously expanded access to mobile communications. Furthermore, the vibrant local information technology sector has also contributed to the development of ICTs in Vanuatu.

The Government therefore considers that its' primary role should be to provide a direction to, enable, facilitate, and encourage development of the ICT sector, including via setting appropriate policies, establishing an appropriate legal framework, providing effective regulation, and, where appropriate, implementing initiatives that would expand and enhance the sector. Its interventions should be limited to cases (and extent), where the Government's actions would add a significant value in terms of the socio-economic development that would not happen otherwise. Generally, however, the deployment of infrastructure as well as the provision of services, content, applications and solutions should be left to the private sector. The Government believes that the private sector should be unleashed to play such a role in the most effective manner.

The Government considers that generally profit and private value motives provide an appropriate basis for sustainable solutions contributing to the achievement of the overall objective of this Policy. It, however, expects the private sector to take a long-term approach to value (including shared value⁴⁴) creation, rather than short-term profit maximisation, and to demonstrably and proactively seek to satisfy current and future ICT needs of businesses, residents and the public sector, in particular in relation to the overall objective and Priorities of this Policy. Without prejudice to the importance of sustainable competition, the Government also expects private sector players to collaborate among themselves in ensuring that ICT sector development needs are met in the most-cost efficient manner.

The Government recognises that the transparency and predictability of the business environment is important for the private sector to be able to take a long-term shared-value-creating approach. This Policy provides a degree of this. The Government is committed to further improve such transparency and predictability, including in such areas as tax and customs policies. The Government is also committed to provide a non-discriminatory environment, without undue favouritism, that would enable private sector players that serve

⁴⁴ Porter and Kramer (2011) describe creating shared value as creating economic value in a way that also creates value for society by addressing its needs and challenges. They further explain that "[t]he concept of shared value can be defined as policies and operating practices that enhance the competitiveness of a company while simultaneously advancing the economic and social conditions in the communities in which it operates. Shared value creation focuses on identifying and expanding the connections between societal and economic progress." Porter, M. E. and Kramer, M. R. (2011). 'Creating Shared Value'. *Harvard Business Review*. January 2011. Accessible at: <http://hbr.org/2011/01/the-big-idea-creating-shared-value>.

needs of the community best to succeed.

When creating an enabling environment attractive to private investments, the Government will pay significant attention to the sustainability of such environment. The Government considers that such sustainability requires for private investments to deliver demonstrably tangible value to the national socio-economic development. Therefore its policies aimed at attracting such investments and investor-targeting will consider both: (a) comparative attractiveness of Vanuatu; and (b) public value of such investments (in terms of jobs, public sector revenues and other factors).

The Government will also promote and, where appropriate, ensure that publicly or centrally controlled resources (such as radio spectrum, numbering, IP addresses, and national “.vu” domain names), necessary to support provision of infrastructure and services, contributing to the socio-economic development, are readily available and accessible in a transparent, fair, non-discriminatory and efficient manner as per swift procedures, based on objective and proportionate criteria, conditions and procedures, and are utilised in an efficient manner for the benefit of Vanuatu users, citizens and residents. A level of public control exercised over such resources should be minimum necessary to achieve the overall objective of this Policy.

Having regard to the above, the Government’s preference is for a Universal Access Policy (UAP) that would, where feasible, be implemented not by redistributing levies, collected from market players (“pay” approach), but by service providers directly undertaking and implementing commitments to expand the reach of telecommunications services beyond profitable areas (“play” approach).

In the context above, the Government generally considers that it is prudent to restrict provision of retail services of Government-owned or operated telecommunications networks (specifically the Government Broadband Network (GBN)) for the Government use only.

To the extent permitted by its international commitments, the Government will put a special emphasis on the development of the local ICT-related private sector and its participation in the implementation of this Policy. A sustainably vibrant local ICT sector is essential in significantly enhancing the sustainability of ICT sector development efforts. It ensures that resources and skills, needed to maintain and further develop ICT solutions, are readily available in a cost-efficient manner. Furthermore, development of such sector provides positive broader socio-economic externalities, including higher-skilled and higher-paid local jobs, greater economic multiplier effect of funds spent for ICT solutions, and fostering emergence and development of business activities needed to support the local ICT sector⁴⁵.

Therefore, when undertaking any actions related to this Policy or the ICT sector in general, the Government will seek for a deliberate externality—to foster the local ICT industry. Importantly, however, the Government considers that any

⁴⁵ Porter and Kramer (2011) note (specifically referring to firms that actively engage in shaping local business environment, especially by participating in developing local clusters) that “[w]hen a firm builds clusters in its key locations, it also amplifies the connection between its success and its communities’ success. A firm’s growth has multiplier effects, as jobs are created in supporting industries, new companies are seeded, and demand for ancillary services rises.” Ibid.

protectionist measures or special treatment of any specific companies would be counterproductive to achieving such objective and, in a longer term, would actually weaken the local sector by lowering standards and breeding complacency. Supportive measures would generally include (but may not necessarily be limited to):

- 1 Having due regard to an ability of the local industry to serve expanding local demand**, including the demand created or expanded by policy interventions, in a sustainable manner. In this context, the Government will aim to avoid inducing sudden increases in demand for ICT products and services, especially when it is likely for such increases to be followed by abrupt contractions of such demand. The Government favours a gradual and sustainable ramp-up of the private sector capacity. Where appropriate, the Government will aim to time policy interventions in a counter-cyclical manner;
- 2 Encouraging foreign suppliers and investors to collaborate with the local private sector**, as well as to contribute to upgrading of the local business environment;
- 3 Encouraging and, where appropriate, facilitating upgrading of the local ICT-related private sector**, including by supporting establishment and subsequent development of a local ICT industry association (or a respective group within the Vanuatu Chamber of Commerce and Industry) as well as stronger collaboration between the industry, the academia, other entities contributing to capacity development and other stakeholders.

Notwithstanding the above, the Government will not shy away from taking a more proactive role in developing the ICT sector (including, where necessary, by deploying or investing into telecommunications networks and/or redistributing



It is important that such guidance and influence are subject to limits that ensure that the regulator is not subjected to day-to-day political decision making, but only to appropriately developed and promulgated transparent policies.”

UAP-type levies) to meet the ultimate objective of this Policy, if the private sector will not prove capable to play the role envisaged in this Policy with a sufficient certainty. Where necessary, the Government will take appropriate actions to ensure that the national socio-economic development is not constrained by inadequate inputs from the private sector. However, even in such circumstances the Government will aim to limit its interventions to addressing the needs not met by the private sector only, and, where possible, will have an exit strategy allowing the market to take over, when its ability to do so is demonstrated.

Sustainable Best Practice ICT Sector Governance

The Government recognises that effective ICT sector development in general, and effective private sector participation in the socio-economic development in

particular are reliant on effective regulation and policy making. In this regard, it reaffirms its commitment to securing independence, impartiality as well as sufficient human and financial capacity of respective regulatory authorities, in particular the Telecommunications and Radiocommunications Regulator (TRR) or any successor to it, which should operate in a stable and predictable regulatory environment in an efficient, effective, transparent and non-discriminatory manner.

International commitments, specifically Section 5 of the Reference Paper included in the Vanuatu commitments undertaken in the context of acceding to the World Trade Organization, requires any regulatory body to be “separate from [...] any supplier of basic telecommunications services. The decisions of and the procedures used by regulators shall be impartial with respect to all market participants.” Further to this, the international best practice, which the Government accepts, requires independence and impartiality of regulatory entities in relation to market players, consumers, but also with regard to political influence⁴⁶.

Independence does not mean a disregard of interests of the above-mentioned groups. On the contrary, their interests are important and should be taken into account in the regulatory process. Therefore an appropriate definition of independence is “keeping equal distance from all involved parties”⁴⁷.

In terms of independence from political influence, in particular, it is important to recognize that no regulator can be absolutely independent. It will always be constrained by laws, political realities, public sentiments, budgets, license provisions, etc.⁴⁸ Absolute independence is neither possible, nor desirable. The international regulatory theory and practice also recognize that there is no requirement for a regulator to be independent from the Government’s long-term policy or its powers to formulate such policy—it is solely required to be independent from day-to-day undue interference⁴⁹. Furthermore, appropriate controls are necessary to ensure that a regulator is acting in the public interest.

Therefore it is important to achieve an appropriate degree of independence that would guarantee necessary freedom for a regulator to act for the long-term benefit of the society and implement long-term policy, without being distracted by short-term interests, while at the same time recognising the reality (and, to some extent, desirability) of various practical influences on the activities of the regulator⁵⁰.

In the context above, it is clear that the regulatory independence does not restrict the Government and the Minister responsible for a specific policy area,

⁴⁶ Smith, W. (1997). ‘Utility Regulators—The Independence Debate’. *Public Policy for the Private Sector*. Note No. 127, October 1997, Washington, World Bank Group; Lamanaukas, T. (2006). ‘The Key Features of Independence of National Telecommunication Regulatory Authorities and Securing them in Law’ *Teisé (Law)*. *Research Papers*. Vol. 61, 2006. P. 71-82.

⁴⁷ Karnitis E. (2004). ‘Multi-Sectoral Regulation for Services of General Interest: the Latvia’s experience’. International conference “Legal aspects of the liberalisation of public utilities: practical issues and future trends”, Vilnius.

⁴⁸ Jamison, M. A. (2004). *Survival Guide for the Independent Regulator*. Accessible at: <http://bear.cba.ufl.edu/centers/purc/documents/SurvivalGuidefortheIndependentRegulator.pdf>

⁴⁹ Melody, W. H., Ed. (2001). *Telecom Reform. Principles, Policies and Regulatory Practices*. Denmark, Schultz DocuCenter.

⁵⁰ Lamanaukas, T. (2006). ‘The Key Features of Independence of National Telecommunication Regulatory Authorities and Securing them in Law’. *Teisé (Law)*. *Research Papers*. Vol. 61, 2006. P. 71-82.

as representatives of citizens of the country, from providing a policy direction to the regulator and, in certain cases predefined in the primary legislation, resorting to even more prescriptive modes of influencing regulatory decisions. On the contrary, this may be important to ensure that the regulator acts as an integral part of the system of good governance, promoting socio-economic interests of the country. However, it is important that such guidance and influence are subject to limits that ensure that the regulator is not subjected to day-to-day political decision making, but only to appropriately developed and promulgated transparent policies, defining long-term objectives of the Government.

The Government considers that independent, sufficient, sustainable and predictable financing of a regulatory authority is an important condition of its independence and its ability to effectively exercise its functions. In this regard, the Government continues to support the system, under which the regulator is funded through fees collected from market players. However, it is important for such a system to also include regulator's accountability for its use of funds collected, as well as results of regulatory activities. Furthermore, the Government believes that long-term sustainability of such a system can only be achieved, if costs of administering the regulatory framework, particularly recurrent costs, are kept within the means of the sector. Therefore the Government will encourage the regulator to gradually ensure that its recurrent costs are fully funded from reasonable fees collected locally, and reliance on external funding is gradually eliminated. One-off costs, related to investments that would significantly enhance the functioning of the regulatory framework and that would not be possible to make without an external support, are not covered by this approach.

The Government also believes that independent, efficient and swift judicial review of regulatory decisions, as the only avenue for formal review of such decisions, is an essential part of a well-functioning regulatory framework and will, in collaboration with the judicial system, work to support this.



A policy-making body will continue to play a leading role in areas that are closely linked to the general social policy of the country and may require politically-driven trade-offs between economic efficiencies and social objectives.”

Further to the above, the Government will continue to support such best-practice requirements for regulatory independence as transparent, impartial and merits-based selection of a head of the regulator; and a fixed-term in office for such a head, allowing early removal only on clear statutory predefined grounds and authority. Transparency and clear accountability of the regulatory authority for its work is another side of regulatory independence. However, the regulator should be primarily accountable for results, measured as per pre-defined performance criteria, rather than for day-to-day actions.

In addition to external safeguards, including those set out above, the Government also acknowledges importance of internal safeguards of regulatory independence and impartiality, preventing regulatory capture and conflicts of interests of the regulatory staff.

In the context above, the Government continues to be committed to the

best practice institutional setup for the ICT sector governance, in which the role of a policy maker is to set public and transparent policy and monitor its implementation, and the role for a regulator is to implement such policy within the confines of its remit and the legal framework, and at an arm's-length from day-to-day political decision making. The regulator, however, should be sufficiently accountable for its work and outcomes of such work. It is also important for the remit and responsibilities of each party to be clearly defined. Within such remit and responsibilities each party should have sufficient freedom to exercise its functions.

A policy-making body will continue to play a leading role in areas that are closely linked to the general social policy of the country and may require politically-driven trade-offs between economic efficiencies and social objectives (including in such areas as universal access and universal services). On the other hand, areas, where economic and technical considerations play a primary role (as contrary to the political balancing of social and economic objectives), will normally be left to the regulator to address with a considerable discretion.

The Government believes that it is important for the interaction between a policy maker and the regulator to comply with the following principles⁵¹:

- 1 In exercising its policy-making powers, a policy maker shall be bound by the respective legislation. Policy should be consistent with the purpose and objective of the law (including the legislative intent).
- 2 Direction from a policy maker to the regulator must be one that is possible for the regulator to follow in carrying out its duties under the legislation and it should not prohibit the regulator from carrying out her/his duties.
- 3 Policy is generally defined as “a course or principle of action”⁵². Policy should leave sufficient level of discretion to the regulator to implement its functions within the legislative and policy framework. Specific regulatory decisions should always be made on their merits.
- 4 In developing a policy the policy maker will follow procedural requirements set out by the law.

As the ICT sector is constantly changing, new needs for Government (in a broad sense) action may arise from time to time. Such new areas and responsibilities should be eventually reflected in the primary legislation. No coercive actions could be taken without appropriate powers being granted by such legislation. However, a naturally slow pace of the legislative process may not always be able to keep up with changing needs; and some useful actions could still be exercised without formal powers—especially, activities related to awareness and education. In addressing such areas, a policy maker and the regulator would comply with their general respective roles as outlined above. Generally a policy maker will take the lead responsibility for matters requiring a legislative or policy action, or where

⁵¹ These principles are primarily based on the foreign case law—specifically the Judgment of the UK Privy Council of 21 January 2010 in case No 0079 of 2009 in *Mossell (Jamaica) Limited (T/A Digicel) v Office of Utilities Regulation, Cable & Wireless Jamaica Limited and Centennial Jamaica Limited*; and the Judgment in the High Court of Justice of the British Virgin Islands BVIHCV2007/0095 of 18 and 25 May 2007 in *Digicel Limited v the Telecommunications Regulatory Commission*.

⁵² *The Concise Oxford Dictionary* 9th Edn.

coordination with international or foreign partners or other public stakeholders is needed. The regulator will primarily be responsible for matters closely related to its existing areas of responsibility, where addressing such matters needs substantial economic, technical and/or legal expertise in the ICT area, especially where the long-termism and sustainability of activities are important.

While the respective roles of different bodies must and will be respected, and due care will be exercised not to undermine independence and impartiality of the regulator, the Government will seek to ensure that overall consistency and effectiveness of the Government (in a broad sense) actions are achieved.

Importantly, the requirements set out above should apply not merely to the regulation of telecommunications, but with respect to any regulation of private sector activity (including radio and television broadcasting, electronic signatures etc.). In order to achieve this as well as to ensure maximum cost-efficiency and effective utilisation of regulatory expertise, the Government, in accordance with the multi-sector collaboration approach, intends to review the current regulatory structure for ICT and related sectors, including utility regulation, general competition protection and consumer protection.

The Government considers that requirements of impartiality with respect to market players and other stakeholders, applicable to regulatory bodies, should also apply to bodies involved in the policy making, especially the Minister responsible for ICT and Telecommunications and the Office of the Chief Government Information Officer (OGCIO). In this regard, such bodies will generally restrain from pursuing any activities that could potentially compete with private players in the ICT sector. This concerns ownership (including shareholding and board membership) functions in relation to telecommunications service providers and other ICT market players, as well as direct implementation of such projects (e.g., development of competing telecommunications networks). Where such functions are exercised by the Government, it will aim to do so at a sufficient “arm’s length”



The Government appreciates that the size of Vanuatu together with rather challenging market conditions... make it important to explore and implement ways to reduce costs of services by enhancing economies of scale.”

from the sector policy making bodies, or, at least, to design and implement appropriate safeguards to ensure that potential conflicts of interest would be avoided in practice and that stakeholders would be sufficiently assured of this. The main such safeguard is transparency—i.e., providing stakeholders with as much information as possible on the rationale of specific decisions. Administrative arrangements (e.g., involving appropriate third parties in decision making; conducting public consultations before decisions are made) are also useful.

The Government considers that efficient and effective policy making requires that a policy maker is sufficiently resourced and has appropriate expertise available to it. It will therefore appropriately strengthen the OGCIO as well as ICT-policy-related administrative capabilities in other Ministries and Government Departments.

Noteworthy, procurement of telecommunications and other ICT services and

products for the Government could also raise a potential for conflict of interests. It is therefore important that in exercising such functions the Government does not leverage its policy maker role to obtain, as a buyer, a special treatment from telecommunications service providers and other vendors.

Fair and Effective Competition and Enhancement of Economies of Scale

The Government remains committed to safeguarding sustainable, fair and effective competition as the market structure that ensures that market players satisfy needs of the local community to the maximum possible extent. Tremendous expansion of mobile communications in Vanuatu is a demonstration of the appropriateness of this approach.

In general, the Government believes that its any intervention should be structured in a way that would, to the maximum possible extent, avoid favouring specific market players, support competitive market forces and avoid a risk of undermining them. In this context, the Government will normally prefer demand-side interventions (i.e., supporting users) to supply-side interventions (i.e., supporting providers). The Government believes that generally such an approach would enhance competition, as private sector players would compete to satisfy the extra demand. It would also increase cost-efficiency of Government interventions, as they could be better directed to meet needs of specific social or other target groups (such as low income residents).

However, there might be situations, where, because of the nature and extent of specific market challenges, demand-side interventions might not provide a sufficient “pull” for the needed supply. This may, for example, happen if the end-user-generated demand is too distant from such market challenges (as it may be with respect to international connectivity). In any case, the Government will aim to base its supply-side interventions on a clear analysis of unfeasibility of demand-side approaches, limit such interventions to the extent necessary to achieve their objectives, and implement appropriate safeguards to avoid or minimise any impact on the competitive environment.

At the same time, the Government appreciates that the size of Vanuatu together with rather challenging market conditions, as described above in this document, make it important to explore and implement ways to reduce costs of services by enhancing economies of scale. In this regard the Government, while being careful not to undermine fair, sustainable and effective competition in the ICT sector, will encourage, promote and support:

- 1 minimization of market fragmentation, while avoiding counterproductive artificial protection of market players and barriers for entry, which could encourage complacency of current market players;
- 2 private (and public) sector collaboration to reduce costs, including by involving third parties to provide elements of infrastructure or shared services, and developing neutral facilities, such as an internet exchange point.

The Government believes that the objective to promote fair and effective competition and the objective to enhance economies of scale are not trade-offs, but, specifically in the Vanuatu context, reinforce each other—as competitive market entry

and expansion (at least where it is possible at all) are made more feasible and sustainable when the cost-base is reduced.

To the extent the Government participates in the ICT sector, especially by developing its own ICT infrastructure (in particular the Government Broadband Network (GBN)), it will follow the same approach as outlined above. In this regard, the Government is prepared to consider procurement of wholesale services provided by licensed service providers, as well as shared use of telecommunications facilities when further expanding, upgrading and strengthening its network.

The Government will also offer its facilities, infrastructure as well as associated services for the use, on a wholesale basis, by the private sector subject to demand and technical feasibility. It will also continue and enter into new reciprocal mutually beneficial arrangements aimed to strengthen the national infrastructure, such as exchanging redundant links to enhance resiliency of telecommunications networks. The Government will engage into and implement such arrangements in a fair and non-discriminatory manner.

Whenever Government's activities have a potential to interfere with the operation of the private sector, especially in case of its one-way wholesale activities, the Government will exercise due care not to undermine sustainable, fair and effective competition in the market. The Government will ensure that it: (a) conducts such activities in a formal, transparent, fair, non-discriminatory and competitively neutral manner; (b) adheres to the principle of cost-orientation with a reference not merely to its own costs, but to the costs attainable by efficient private-sector players; (c) sets its tariffs in a transparent manner; and (d) publishes criteria and procedures for obtaining access to such infrastructure, facilities and services. Outsourcing such activities to a third-party entity may also be considered as an additional safeguard. The Government considers that such safeguards will generally be sufficient to ensure that private-sector operations are not unduly



Although it may appear that embracing regionalisation may have a negative effect on local jobs and businesses, the Government does not believe that an artificial protection of local ICT sector players is an appropriate response.”

undermined. In any case, the Government will avoid implementing safeguards that would unduly favour or protect specific market players.

The cautious approach, including cost-based price setting, may not be applicable in cases where Government activities would not compete with private sector players—neither presently (e.g., no one provides a similar service), nor potentially (e.g., absent Government's investments private players would not invest into similar infrastructure). In such cases, the Government may decide to subsidise the development of the market, for example by subsidising wholesale services. The Government will seek, however, to ensure that such subsidy is explicit and transparent. Furthermore, such interventions would have to be reviewed from time-to-time as private sector investments and competition may be made more feasible, including by: (a) new technologies; and (b) success of Government's interventions. Therefore the Government will seek to conduct such

evaluations on timely basis in order to reduce the risk for an initially positive intervention to start stifling the market development.

The Government recognises that its procurement of ICT services, products and solutions has a potential to affect the operation of the private sector, especially having regard to the scale of such procurement. In this context, the Government expresses its commitment to act in this role as any other reasonable and prudent large buyer of respective goods or services, seeking to maximise the long-term value for its money. It believes that such best practice modes of procurement as competitive tendering are the best tools to achieve such objectives. In any case, the Government will avoid arbitrary assignment or distribution of its procurement to specific market players. Where appropriate and subject to other provisions of this Policy, the Government will also evaluate a potential of “build” versus “buy” options, similarly to any other rational user of similar services or buyer of goods.

The Government is mindful, however, that it should seek to conduct its procurement in a way that would avoid disrupt changes in market conditions (such as resulting from a change of a supplier of services that constitute a significant proportion of the market). Therefore it will investigate options to reduce an impact of its tendering on the market, while still supporting and benefiting from the market-force-driven operation of the sector.

The Government recognises that fair competition may, in certain cases, be negatively impacted by “cream skimming”⁵³. It considers, however, that direct or indirect barriers for market entry or expansion would be a counterproductive way to address such abuses, as they would enable complacency by existing market players. Negative effects of such practices could be addressed by such policy and regulatory instruments as coverage obligations, in particular associated with radio spectrum assignments, and an appropriate Universal Access Policy (UAP), especially the one formulated along the “pay or play” principles (i.e., requiring every licensee to participate in the delivery of services to less economically attractive users either by investing in the provision of such services or paying money into the fund subsidizing such provision).

The Government acknowledges a potential, but also challenges presented by internationalisation (and especially regionalisation) of ICT markets in enhancing economies of scale. Many developing regions have been facing such trends. The Pacific currently seems to be somewhat lagging behind in this process, but the potential that such developments represent, especially for private sector players, makes it likely that it will start catching up.

Internationalisation (in particular regionalisation) of ICT markets has a potential to bring access to international expertise, new technologies, innovative services and lower costs. Economies of scale, brought by this process, have a potential of enabling stronger and more resourceful regional competitors and enhancing competitive landscape by making national multiple-player markets more viable.

The Government, however, also recognises potential challenges presented by regionalisation and internationalisation of ICT markets, especially to national policy makers and regulators constrained by the boundaries of their jurisdictions. Local private sector players may also face challenges, if they do not find effective

⁵³ “Cream skimming” is a practice of serving only high-value low-cost customers, and avoiding investments needed to serve less profitable ones.

responses to greater capabilities and expertise as well as lower costs of regional players.

Although it may appear that embracing regionalisation may have a negative effect on local jobs and businesses, the Government does not believe that an artificial protection of local ICT sector players is an appropriate response. Such protection would increase prices, constrain innovation and limit offerings for ICT services and products, which are crucial inputs into the general socio-economic development. A protection-based approach would also be unsustainable, as regional counterparts embrace more open markets. Early and effective opening of the telecommunications market proved that Vanuatu stand to benefit from embracing, rather than resisting change. Therefore the Government intends to apply the same approach in relation to regionalisation and internationalisation of ICT markets.

The Government is therefore committed, especially via an enhanced collaboration with its counterparts regionally and internationally as well as regional and international organisations, to develop and implement effective solutions that would embrace benefits of regionalisation and internationalisation, at the same time offering appropriate responses to challenges presented by these processes.

“Squeezing-the-Assets” and “Thinking-of-a-Greater-Good”

Vanuatu’s challenging market conditions make it crucial to consider ways to minimise costs and maximise efficient utilisation of ICT investments—not only for individual stakeholders, but nationally. This is not just about marginal affordability of ICTs. In many cases, this is crucial to cross the feasibility threshold, and is a question of whether a significant part of the Vanuatu’s population will obtain access to ICTs at all.



The Government also believes that it is important to deliberately consider a potential of wider positive effects of ICT development projects that could originally be envisaged to meet rather narrow needs.”

In the context above, the Government recognises that access to ICTs could be significantly expanded by enhancing the use of existing infrastructure and facilities, including facilities originally deployed to service specific needs or entities (e.g., connecting specific educational institutions, or banks). The Government will therefore encourage, especially in more remote locations, replacing an exclusive use of ICT facilities with an “anchor tenant” approach, whereby an initial user of such facilities allow and, where appropriate, actively enable and participate in providing such facilities, infrastructure and services to satisfy other existing and future needs in such locations and communities. This will apply not only to the ICT infrastructure as such, but also to supportive infrastructure (e.g., electricity, including an ability to charge end-user devices).

The Government also believes that it is important to deliberately consider a potential of wider positive effects of ICT development projects that could

originally be envisaged to meet rather narrow needs. Cost-related challenges in Vanuatu make it unaffordable and wasteful to satisfy such needs separately without maximising cross-utilisation of ICT facilities.

For example, appropriate Government procurement policies, primary purpose of which may be to satisfy Government's ICT needs, can be an effective tool to encourage the private sector to deploy ICT infrastructure in areas, which the private sector would otherwise consider commercially unviable, but which could be attractive as part of a larger commercial opportunity.

Furthermore, projects, aimed at expanding ICTs to specific facilities in specific localities, should take into account a potential to serve broader needs of respective communities. In this context, the Government has specifically identified a potential for schools to also serve as Community Information, Learning and Communication Centres.

The Government acknowledges, however, that an approach outlined above may appear to increase costs of individual ICT deployment projects, if such projects are evaluated separately. Therefore it will strongly promote inclusion of considerations of "greater good", including a potential for ICT-related positive externalities, into evaluation of costs and benefits of different procurement approaches as well as specific programmes, projects and initiatives.

The Government will employ a multi-stakeholder and multi-sector framework to promote the above. It will specifically encourage development partners to support this approach.

Kick-Starting Sustainable Development

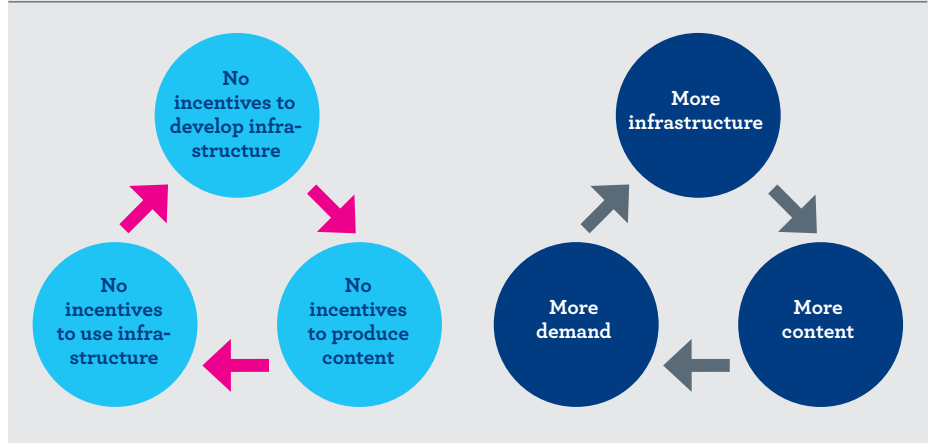
The Government, wherever possible, will aim for its policy interventions to be limited in time, and ICT-policy-specific resources to be primarily used for interventions that provide an impetus for development that could be taken over and continued by other stakeholders, particularly the private sector. It believes that such an approach is important in the context of constrained financial and human resources and a multitude of priorities. Generally, the Government will aim for its policy (especially ICT-policy-specific) interventions to be time-limited and with a clear exit-strategy.

The Government notes that such an approach is specifically fitting the ICT sector. Interdependent elements of the ICT ecosystem, specifically infrastructure, applications (content) and services, devices and users, make natural development extremely difficult initially, but, once kick-started, supports a self-generating growth and development. This is demonstrated by simplified negative and positive feedback loops below.

Subsidiarity and Stakeholder Ownership and Drive

The Government believes that, while a comprehensive national policy is needed to provide a direction to all stakeholders and coordinate their actions, it is the stakeholders who: (a) have direct expertise in specific subject-matter areas that ICTs would be enabling (line-stakeholders), and/or (b) are close (including geographically) to the matters addressed and people affected or will likely be the ones to feel the effect of specific actions (local-stakeholders),—that are best placed to identify the most appropriate actions, modalities and ways necessary to achieve policy

Figure 8. Negative Feedback Loop (l) /Positive Feedback Loop (r)



objectives and implement respective initiatives in a locally appropriate, effective and efficient manner⁵⁴. Therefore the Government believes that, wherever possible, such stakeholders should be the ones making decisions and taking actions needed to implement the Policy. Central authority should perform only those tasks that cannot be performed effectively at a more immediate or local level⁵⁵. More aggregated (including, national) level actions should only be taken, when they would add specific and substantial value (e.g., by enabling synergies via stakeholder coordination).

On the basis of local and international experience, the Government believes that successful implementation of policy interventions requires projects to be owned and driven by local and/or line stakeholders. To achieve this such stakeholders should: (a) have a clear stake in outcomes of respective policy interventions (including in terms of substantive as well as reputational outcomes (including the attribution of success)); (b) make a substantial contribution to the respective project (and, to a reasonable extent, take responsibility for project-related uncertainties); and (c) have substantial freedom and be able to exercise considerable discretion in taking actions.

Stakeholder ownership and drive is not an objective by itself. It is a tool to achieve objectives of this Policy in general and of specific policy interventions in particular. The Government considers that clear and meaningful outcome-oriented expectations for and/or commitments of implementing stakeholders is an appropriate mechanism to achieve an alignment between actions of stakeholders and policy objectives, at the same time providing an environment enabling stakeholder ownership and drive.

In the context of this section, the Government specifically notes the importance of local communities for implementation of projects at a local level. Demonstrable support of local communities is an important precondition for successful implementation of such projects. While local stakeholders are best placed to identify the best manner to attain and demonstrate such support, the

⁵⁴ An example of a specific area, where decisions will have to be made by most appropriate line and local stakeholders, is limits to electronic content available via ICT tools to students in schools.

⁵⁵ This is essentially how the Oxford English Dictionary defines 'subsidiarity'.

Government will encourage reliance on existing forms of community organisation, including the chiefly system, religious communities and school committees.

The Government acknowledges that, even if efforts are made to create an enabling environment as per the criteria above, not every stakeholder will exercise the same ownership and drive. Furthermore, the capacity of various stakeholders to implement specific projects would also differ. Therefore, especially in the context of plentiful opportunities for actions that would contribute to the overall objective of this Policy, the Government considers that actual levels of ownership and drive as well as stakeholder preparedness and capacity are important factors in deciding on priorities for initiatives. The Government will use appropriate mechanisms, including competitive application processes, for the purpose of identifying and evaluating such.

Reasonable requirements for stakeholders to demonstrate capacity (including appropriate external support) to implement specific initiatives before being entrusted such implementation would normally not be considered to be a violation of a requirement for such stakeholders to be afforded substantial freedom and discretion.

Notwithstanding the above, the Government considers that line and local stakeholders need to be appropriately supported in order for them to effectively exercise their role described in this section. Therefore the Government will establish, support and/or promote an appropriate supportive environment that would include such elements as peer-support networks (where appropriately, assisted by experts) and other forms of sharing of best practices; awareness, education and capacity building initiatives; guidance, mentorship and advice; coordination, central knowledge-base and, where appropriate, centralised services (such as marketing or a marketplace of solutions) that would enable appropriate synergies; as well as monitoring and evaluation as a basis for learning and feedback. In certain cases specific technical measures will have to be made available to support line or local decision making⁵⁶.

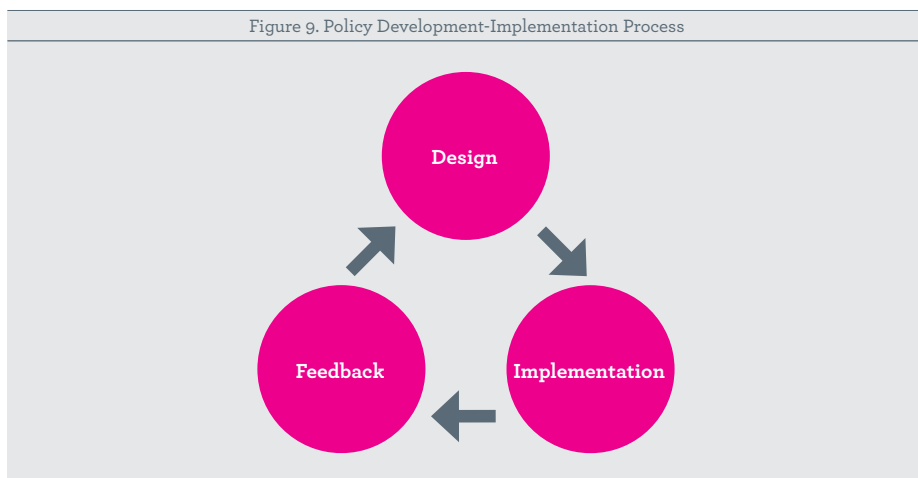
Policy as a Process

The Government notes that the policy development is not a one-off exercise. Complexity of systems affecting ICT development means that it is impossible to identify and address all the risks and other factors, affecting success of chosen policy tools and policy implementation, in advance. An invincibly future-proof policy design is an unattainable objective. Therefore the Government considers that it is important to put in place systems and processes that would ensure constant adaptability of the Policy. The way to achieve this is to ensure that policy design and implementation are not treated as standalone separated activities, but are integrated into one cohesive process with built-in feedback loops (as per the figure below).

The Government will integrate the approach above into the ICT development governance systems and processes. In this context, the Government recognises importance of a meaningful framework for monitoring and evaluation, which would be based on clear targets evaluated using “SMART” (i.e., specific;

⁵⁶ e.g., implementation of decisions on electronic content that should and could be accessible in schools may need to be supported by appropriate technical measures (e.g., appropriate content management systems).

Figure 9. Policy Development-Implementation Process



measurable; attainable; relevant; and time-bound⁵⁷) indicators, supported by an appropriate statistical and reporting framework, and would provide continuous feedback that would be used to improve progress towards achieving objectives of this Policy.

The Government recognises that not every policy intervention will be successful. It will use the policy development and implementation mechanism, as described above, to identify and accept failures, note lessons learned and discontinue support for unsuccessful policy interventions, unless there is a strong potential that a substantial redesign could provide significant improvements.

Integration into the Work as Usual

As noted above, the Government believes that ICTs should not be an end in themselves, but should support activities of stakeholders in all spheres of the socio-economic development. To achieve that, ICT-related policy development and implementation need to be an integral part of policy making and implementation in respective sector policy areas. ICT-related policies should not constitute standalone and isolated policy activities, detached from overall objectives in respective sectors. Similarly, ICT development activities, including policy development and implementation, should, wherever possible, utilise existing institutional, political, policy, public administration, custom-based, community, religious, civil society as well as similar frameworks and structures. Stakeholder and community engagement should, wherever possible, be conducted through existing community systems (e.g., chiefly system, religious communities and institutions, school committees), rather than creating ICT-specific frameworks.

In the context above, the Government will aim to ensure that ICT development objectives and activities are fully integrated into and support implementation of corporate and business plans of respective Ministries, Government Departments, Constitutional and Statutory Entities; are led by respective bodies, and are supported by their general budgets. The Government recognises that specific

⁵⁷ United Nations Joint Inspection Union (2004). Report: *Implementation of Results-Based Management in the United Nations Organizations*.

policies for development and utilisation of ICTs with respect to specific sectors⁵⁸ are a useful instrument to achieve objectives of this Policy. However, development of such sector-specific ICT policies should primarily be used as a tool to inform thinking of sector policy makers and implementers. Resulting objectives and strategies should be integrated into general sector policy planning and implementation frameworks (i.e., overarching policies, strategies, corporate and business plans, expenditure frameworks and budgets).

At times it may be justifiable or even desirable to design financial or similar incentive programmes specifically for ICT development initiatives. However, the Government will, wherever possible, primarily use such ICT-specific programmes and projects to investigate, demonstrate and/or trial appropriateness of certain approaches in achieving specific developmental objectives. Once concepts are proven, they, as a general principle, should be integrated into generic sector development programmes, administered by entities (Ministries, Government Departments, Constitutional and or Statutory Entities, Stated Owned Enterprises etc.) responsible for respective sectors.

The Government recognises the value of pilots, demonstration models and other similar initiatives, which could inform policy thinking, demonstrate potential of ICT tools to stakeholders and provide models and/or lessons for policy approaches that could be implemented on a broader scale. The Government will support such initiatives, as long as they fit within broad objectives of this Policy, are limited in time, scale and scope, involve all relevant stakeholders (in particular, Ministries and Government Departments responsible for respective sector policies), and include a strategy of how such initiatives would inform or be integrated into the general policy process. The Government will support establishing a mechanism (including a fund) for instigating and supporting such initiatives (as an addition to, and not a replacement of, general sector-based policy formulation, implementation, and funding instruments). In any case, strong



Vanuatu will, without prejudice to its sovereignty, seek to closely coordinate its actions and positions with its regional partners, especially within the Melanesian Region, but also the South Pacific and the Pacific in general.”

involvement of sector-specific policy makers and implementers (with them having a lead role, or at least a strong involvement, in the design and implementation of such initiatives) will be a requirement to proceed with such initiatives.

The OGCI will primarily programme-manage, coordinate, support and guide government ICT-related programmes, projects, initiatives or elements of such, without undermining stakeholder ownership and leadership. Where centralised design or implementation of such programmes, projects, or initiatives is required, it will still be important to ensure stakeholder engagement for utilising (and, possibly, maintaining) outcomes of such initiatives as well as to avoid undermining long term stakeholder ownership.

⁵⁸ e.g., [ICT in Health](#), [ICT in Agriculture and other similar policies](#).

Socially Inclusive and Equitable Development

It is important for the ICT-fuelled development to benefit all groups of the society, including, in particular, vulnerable groups, including women, children, lower income people, and people with disabilities. However, overall level of access to and utilisation of ICTs across all social groups is currently very low. Therefore the Government considers it pragmatic, especially at this stage, to primarily concentrate on programmes and initiatives supporting the contribution of ICTs to the general socio-economic development, rather than on specifically targeted programmes.

In the first instance, the Government intends to emphasise absolute gains from the increased ICT utilisation, rather than a specific focus on relative gains for specific social groups. Such general development would provide greatest socio-economic advances for the country as such, and would enable identification of developmental gaps, which could then be specifically addressed by more targeted approaches. This is also in line with international observations, recognizing that marginalised groups are most effectively served by “general, non-targeted interventions” rather than “targeted efforts”⁵⁹.

Notwithstanding the above, the Government is committed to remain vigilant in monitoring development outcomes for all groups in the society, so that gaps in the development could be identified and addressed before they result in significant developmental divides, which would seriously disadvantage certain social groups. Furthermore, the Government recognises importance of including all social groups as beneficiaries of generic developmental initiatives. Frequently more inclusive and equitable development outcomes can be achieved without significantly increasing costs or complexity of respective initiatives, but by simply ensuring that the design and manner of implementation of such initiatives give due regard to challenges faced by different groups⁶⁰. In this context, wherever appropriate, the Government will promote availability and use of universally designed ICT-related goods, services, equipment and facilities, as required by Article 4 (1) (f) of the Convention on the Rights of Persons with Disabilities⁶¹.

Being a Responsible Member of the International and Regional Community

The Government considers that, in achieving the objectives of this Policy, it is important for Vanuatu to have regard to its international and regional commitments, including its rights and duties as a member of such organisations as the International Telecommunication Union, Asia-Pacific Telecommunity, Commonwealth Telecommunications Organisation, World Trade Organization, World Intellectual Property Organization, and United Nations Educational,

⁵⁹ The Independent Evaluation Group/The World Bank Group (2011). *Capturing Technology for Development. An Evaluation of World Bank Group Activities in Information and Communication Technologies*.

⁶⁰ e.g., moving from an original male-only Rensarie Telecentre staff team to mixed-gender one significantly improved prospects of women and girls using services of the facility.

⁶¹ Article 2 of the United Nations Convention on the Rights of Persons with Disabilities defines universal design as “the design of products, environments, programmes and services to be usable by all people, to the greatest extent possible, without the need for adaptation or specialized design. “Universal design” shall not exclude assistive devices for particular groups of persons with disabilities where this is needed.”

Scientific and Cultural Organization, internet governance and technical standards entities. Vanuatu will not only aim to effectively implement its current obligations, but will also undertake and meet additional commitments, fitting to a responsible member of the international community.

To the extent feasible, Vanuatu will seek to be an active and constructive player in international and regional organisations, including the ones listed above, as well as international and regional forums and processes, such as the Internet Governance Forum, post-World Summit on the Information Society process, and Governmental Advisory Committee of the Internet Corporation of Assigned Names and Numbers. In deciding on priorities and extent of the international and regional involvement, the Government will give due regard to the national priorities, available human and financial resources, as well as costs and benefits of such participation.

In the context above, Vanuatu will, without prejudice to its sovereignty, seek to closely coordinate its actions and positions with its regional partners, especially within the Melanesian Region, but also the South Pacific and the Pacific in general, as well as its development partners.

Furthermore, the Government recognises the value in learning from experiences of other countries, especially countries that share similar characteristics. It also notes synergies and cost efficiencies that could be achieved in designing and implementing or advocating certain initiatives on a regional or international level. Therefore it will seek to actively collaborate with its regional and international partners, wherever such collaboration could contribute to the achievement of the overall objective of this Policy.

In undertaking and implementing international commitments, and otherwise exercising its rights and responsibilities, the Government will have due regard to the realistic ability, capacity and time needed for Vanuatu to meet such commitments in a sustainable manner without curtailing socio-economic development. Appropriate transition periods as well as understanding and support from development partners as well as other international partners will be sought for the implementation of such approach.

Prioritising the Priorities

Given the level of current availability and utilisation of ICTs and a potential for contribution to the socio-economic development from an increased adoption of ICTs, the Government could identify a very long list of important activities in this area. However, the Government also appreciates limitations with respect to financial and human resources as well as, importantly, its programme and project management capacity. Therefore the Government will seek to identify and work on a realistic number of priorities. Generally, criteria set out in Part IV of this Policy will be used to identify such priorities.

The Government recognises that an effective use of resources and achievement of tangible results requires consistency of efforts over time. Therefore it will seek to ensure stability of its priorities. However, due to an extremely dynamic nature of the ICT sector, a periodic reassessment of such priorities is appropriate.

The above, however, should not be interpreted as restricting other stakeholders from undertaking activities that contribute to the overall objective

of this Policy and comply with its principles. Moreover, where specific sector Ministries or Government Departments have resources to undertake initiatives, contributing to the overall objective of this Policy, without a need to rely on special central resources provided for the implementation of this Policy, this Policy shall not be interpreted as preventing such Ministries and Government Departments to undertake such initiatives. However, such Ministries and Government Departments shall ensure that their initiatives abide by principles of this Policy and do not contradict initiatives otherwise undertaken under it.

Utilisation of Appropriate Tools

The Government recognises that, in addition to such tools as laws, regulations and enforcement, which governments traditionally use to effect policy implementation, implementation of this Policy could also be achieved or influenced by:

- 1 informing and guiding stakeholders;
- 2 educating;
- 3 coordinating;
- 4 promoting, encouraging and facilitating;
- 5 inspiring;
- 6 using procurement policies and power;
- 7 designing and implementing taxation and customs frameworks;
- 8 investing into and financing entities and projects;
- 9 directly implementing specific initiatives and projects;
- 10 utilising other tools, which incentivise, enable or guide stakeholders to contribute to the overall objective of this Policy.

The Government also notes such approaches as self-regulation and co-regulation, and their potential to achieve objectives of this Policy in an effective and cost-efficient manner.

In implementing this Policy, the Government will utilise an appropriate set of tools, suitable to specific aims and initiatives, which would be least interventionist, most effective and cost-efficient, most sustainable, most fitting with the approaches set out in this Policy, and which would maximise long-term returns of respective initiatives.

Operationalizing Implementation of this Policy

Responsibility for the implementation of this Policy rests with:

- 1 The Honourable **Prime Minister** as the Minister responsible for ICT and Telecommunications;
- 2 The **multi-stakeholder National ICT Development Committee**, which has been established and is chaired by the Honourable Prime Minister. This Committee shall have the primary responsibility for the further development and coordinated implementation of this Policy. The Committee shall have a right to set up working and advisory groups to assist it in its work and take other appropriate actions that are necessary or useful in achieving objectives of this Policy;
- 3 The **Office of the Government Chief Information Officer (OGCIO)**, which shall support the Honourable Prime Minister, as the Minister responsible for ICT and Telecommunications, in her/his duties, as well as act as a secretariat to and otherwise facilitate the work of the Committee. The OGCIO will also support stakeholders in their efforts to implement this Policy;
- 4 The **Telecommunications and Radiocommunications Regulator (TRR)** shall act as the sector regulator as well as an implementing agency for specific ICT development initiatives, particularly where such implementation could not be more effectively done by a sector-specific Ministry or Government Department;
- 5 **Responsible Ministries, Government Departments, Constitutional and Statutory Entities and other stakeholders**, which are responsible for implementation of this Policy in their respective areas.

The Government envisages that this Policy will be implemented through a programmatic approach, based on the principles of results-based-management, and supported by:

- 1 **Consolidated list of strategies** for implementation of specific Priorities set out by this Policy, which would also specify responsible and supporting Ministries, Government Departments, Constitutional or Statutory Entities, and, where appropriate, other stakeholders. This list will be initially approved by the Council of Ministers. However, the National ICT Development Committee will have a power to update it;
- 2 **Implementation plan**, which will be based on the consolidated list of strategies and, based on submissions from and after consultation with stakeholders responsible for implementation of specific strategies, will also include specific activities, outputs and timelines for implementing such strategies, key performance indicators (including targets), as well as related risks and strategies for their mitigation. The implementation

plan shall be approved and updated by the National ICT Development Committee. The implementation plan for the initial consolidated list of strategies shall be approved within 3 months from the adoption of this Policy. The Government envisages that this plan will cover a 5 year period;

- 3 **Issue- and sector-specific policies and/or strategies**, which will address specific aspects of the implementation of this Policy⁶² in detail. These policies, to the extent they fall within the scope of this Policy, shall be endorsed by the National ICT Development Committee and, where required by specific laws, approved by the Council of Ministers;
- 4 **Corporate and business plans as well as expenditure frameworks and budgets** of sector Ministries and Government Departments, as well as similar plans and budgets of Constitutional and Statutory Entities and other stakeholders.

To the extent public funding is required to implement this Policy, such funding will be provided from:

- 1 Funds of respective stakeholders, including regular budgets of respective Ministries, Government Departments, as well as Constitutional and Statutory Entities;
- 2 **ICT Development Fund**, which will primarily be used to provide seed funding for initiatives covered by this Policy, including piloting and testing policy approaches and establishing demonstration models, which could subsequently be integrated into generic programmes of sector Ministries and Government Departments. This fund may be managed as per the framework applicable to the Universal Access Policy Fund, without restrictions for using such funds set out in sections 17(1), 18(1) and 19(3) of the Telecommunications and Radiocommunications Regulation Act No. 30 of 2009;
- 3 **Universal Access Policy Fund**, set up and administered under section 19 of the Telecommunications and Radiocommunications Regulation Act No. 30 of 2009.

Support of development partners as well as international and regional organisations will be sought to fund the implementation of this Policy. Furthermore, in accordance with the principles of multi-stakeholder collaboration, the Government will seek to partner with local, regional and international public, private, non-profit and volunteer organisations, including multinational corporations as well as international and regional civil society organisations (such as the Pacific Islands Chapter of the Internet Society), in implementing this Policy. The Government will enable and facilitate such partnerships, including by accepting and encouraging contributions, including targeted ones, to the ICT Development Fund and Universal Access Policy Fund.

Where various organisations seek to design and/or implement their own programmes, projects or initiatives falling within the scope of this Policy, the Government will encourage and facilitate coordination of such design and implementation with activities under this Policy, as well as promote application

⁶² E.g. [Universal Access Policy](#), [Cybersecurity Policy](#) etc.

of principles and approaches of this Policy to such programmes, projects or initiatives.

The Government through the National ICT Development Committee will develop an effective monitoring and evaluation framework, based on the principles of results-based-management and supported by an adequate statistical and reporting framework, in order to track success of the implementation of this Policy, compare achievements with the progress in other similar jurisdictions, and to provide information necessary to adjust or revise this Policy or specific strategies under it.

The National ICT Development Committee shall prepare and submit to the Council of Ministers an annual report on the implementation of this Policy within 3 months from every anniversary of its adoption.

The Government, through the National ICT Development Committee and the OGCIO, will seek to ensure that international and local stakeholders, as well as the public at large, are well aware of this Policy, its benefits, the progress towards implementation of it, as well as opportunities to contribute to its further development and implementation. It will also seek to recognise and showcase sector development achievements. The Government will also encourage research relevant to further development and implementation of this Policy.

Where appropriate, the organizational structure for the implementation of this Policy will be supported by appropriate legislation, decisions of the Council of Ministers, Memoranda of Understanding and other appropriate instruments.

Final Provisions

Having regard to rapid developments in the ICT sector, the Government, assisted by the National ICT Development Committee, will seek to ensure that this Policy is sufficiently up-to-date. Generally, the Government will aim to review and, where appropriate, revise this Policy within 5 years from its adoption.

This Policy supersedes the Telecommunications Policy Statement of 2009.

Annex A

Selecting Policy Priorities

Impetus to the socio-economic development that would not be achieved otherwise

Impact in terms of both the matters addressed, but also for broader socio-economic development as sought by the Priorities and Action Agenda

1. Access to ICTs in Education

Currently very few students have access to and are able to use ICTs: 5% of students have access to ICTs, 4% of students are computer literate, number of students per computer is 205, and only about 6% of schools have access to the Internet with only about 1% of schools accessing broadband^{A1}. Interviews with stakeholders suggest that affordability is a major issue. A design of specific interventions aimed at expanding access to ICTs should ensure, however, that they would not extend beyond what is necessary to catalyse provision of such access, with a preference of private provision of such ICT tools and services. Furthermore, development and distribution of educational materials supporting the national curriculum has primarily been a function of the Ministry of Education.

As noted by the UNESCO Institute of Statistics, “[t]he use of ICTs in the context of information society hinges largely upon having a population that can use them, which implies that all will need to acquire the skills needed to use them”^{A2}.

Computer literacy and ICT knowledge rise substantially in schools with computer labs (and presumably with tablets or computing devices in the (future) classrooms)—up to 71% are computer-literate in such schools, compared to close to zero in schools with no student access to computers^{A3}. As demonstrated by Rensarie College, access to ICTs also has a significant impact on general educational achievement^{A4}. Furthermore, as noted in a joint submission to the National ICT Policy from various entities under the MoE^{A5} and MYDST: “Young people all over the world are taking to ICT in a way that has never been seen before inside education. The technology appears to address many different learning styles and has an intrinsic fascination for most people, especially the young.”^{A6} Young people in general and students specifically comprise a significant part of population. 47% of the population is 19 years or younger^{A7}. There are 18,064 secondary school students and 42,352 students at primary schools.^{A8} In addition to raising the level of education, as well as preparing the future work force (and thereby opening up business development and employment opportunities) and democratic participants of Vanuatu, providing access to ICTs to students has strong additional positive externalities, as there is a high likelihood that they would transfer such skills to their families, and assist such families in

^{A1} OGCIO, MoE and TRR (2013). *The First Survey of ICT Usage in the Vanuatu Schools*.

^{A2} UNESCO Institute of Statistics (2006). *ICTs and Education Indicators: (Suggested core indicators based on meta-analysis of selected International School Surveys)*.

^{A3} OGCIO, MoE and TRR (2013). *The First Survey of ICT Usage in the Vanuatu Schools*.

^{A4} 55% increase in students’ pass rate from year 12 to year 13.

^{A5} Ministry of Education

^{A6} A joint submission to the National ICT Policy from the Curriculum Development Unit, Vanuatu Institute of Teacher Education, In-Service Training Unit, Education Assessment Unit, and Joint EPublications and Security Course Committee, 16 May 2013.

^{A7} Data of 2009. UNICEF(2012). *Children in Vanuatu 2011: an Atlas of Social Indicators*.

^{A8} Ministry of Education of the Republic of Vanuatu (2012). *Annual Statistical Report 2010-11*.

obtaining benefits of the use of ICT (which would contribute to them being able to have a better access to business opportunities, government services, professional development opportunities etc.). Furthermore, it is envisaged that schools should become Community Learning, Information and Communication Centres—such a policy would extend benefits of ICTs to surrounding communities.

Lower complexity and reliance on inputs from multiple stakeholders

Although it is important to involve relevant experts in implementing projects under this Priority, relevant initiatives primarily need coordination only among the OGCIO^{A9}, TRR^{A10} and MoE. It is envisaged that schools will primarily (but not necessarily exclusively) receive support based on a competitive application process—this will allow collaboration with the most ready stakeholders. Furthermore, experience has demonstrated that even mere provision of ICT tools and services to students and teachers provides strong beneficial effects (that will be enhanced by providing additional specialised content and services, but do not depend on them). In terms of providing educational content, a joint submission to the National ICT Policy from various entities under the MoE^{A11} noted that a lot of suitable material that could be rather easily repurposed for ICT-based use already exists.

Ready demand, existing models of ICT development and available implementation capacity

A good number of school principals as well as the staff of the MoE, including provincial education officers, recognise a potential of ICTs. Local information technology companies have experience in providing schools with ICT tools and services (and maintaining them), and have reported requests from additional schools to support them in this regard. However, there is an affordability gap, which the Government support could assist in bridging. Furthermore, a joint submission to the National ICT Policy from various entities under the MoE^{A12} noted availability of appropriate materials that could be delivered via electronic means, as well as readiness and commitment of the Curriculum Development Unit and Vanuatu Institute of Teacher Education to develop appropriate ICT-based locally-relevant educational materials. The Curriculum Development Unit has already produced around 200 readers in both English and French for the early years in school and many teacher guides that are currently being upgraded. As per the submission, these materials can be turned into ebooks relatively easily. Furthermore, the Vanuatu Institute of Teacher Education is considering creating course materials for teachers, which can also be turned into ebooks and possibly further developed for long distance training for teachers in outlying regions. Moreover, Wan Smol Bag creates many educational materials along with Live and Learn and other Non-governmental Organizations.

Impetus to the socio-economic development that would not be achieved otherwise

Low level of access to the Internet, especially broadband, as well as sparse radio coverage, demonstrates a need for an action from the Government. Affordability challenges are demonstrated by a fact that in 2012 the ITU ranked^{A13} Vanuatu 143 out of 161 countries in terms of ICT prices. Moreover, ICT prices in Vanuatu seem to be much higher than the average for countries with similar incomes (measured as Gross National Income (GNI) per capita). Furthermore, despite generally good coverage of

^{A9} Office of the Government Chief Information Officer (Prime Minister's Office).

^{A10} Telecommunications and Radiocommunications Regulator.

^{A11} A joint submission to the National ICT Policy from the Curriculum Development Unit, Vanuatu Institute of Teacher Education, In-Service Training Unit, Education Assessment Unit, and Joint EPublications and Security Course Committee, 16 May 2013.

^{A12} *ibid.*

^{A13} International Telecommunication Union (ITU) (2012). *Measuring the Information Society 2012*.

Impact in terms of both the matters addressed, but also for broader socio-economic development as sought by the Priorities and Action Agenda

Lower complexity and reliance on inputs from multiple stakeholders

Ready demand, existing models of ICT development and available implementation capacity

mobile services, quality of wireless voice and voice-related services (including SMS) would clearly benefit from an improvement. In any case, specific interventions should address areas, which would not be addressed otherwise by other stakeholders, in the least interventionist and proportional manner.

Access to ICT infrastructure and devices establishes an enabling platform for the delivery of other private and public services, as well as for residents to seek for employment, business and professional development opportunities.

Generally coordinated action of the OGCIO, TRR and telecommunications service providers is sufficient. Collaboration from other stakeholders would add value to initiatives, but would not be a precondition for their success.

It is envisaged that policy interventions will primarily support, extend and strengthen deployment and operation of as well as provision of access to ICT infrastructure, deployment of which has already been started by private service providers (i.e., deployment of telecommunications networks) and other stakeholders (e.g., Internet Cafes, a number of which has already been established). An affordability gap could be bridged by the Government support and appropriate policies geared to lower costs of ICTs. Such policies will also facilitate making mass-market ICT devices more available to the public. Readiness of demand is also demonstrated by the fact that only 10.9% of the population do not know what they would use the Internet for^{A14}.

3. E-Government

Impetus to the socio-economic development that would not be achieved otherwise

Impact in terms of both the matters addressed, but also for broader socio-economic development as sought by the Priorities and Action Agenda

Lower complexity and reliance on inputs from multiple stakeholders

Ready demand, existing models of ICT development and available implementation capacity

E-Government services, as part of public administration, are direct responsibility of the Government.

Government services will be delivered in a much more effective, transparent and efficient way and will be made much more accessible to residents and businesses across Vanuatu, including in rural areas. Furthermore, E-Government services will strengthen demand for ICT tools and services in general, by providing a cost efficient way to satisfy specific day-to-day needs of residents and businesses.

Primary responsibility for such measures rests with the OGCIO. Specific applications will be prioritised based on the preparedness, buy-in and capacity of respective Ministries, Government Departments, Constitutional and Statutory Entities.

The OGCIO has already been coordinating, implementing and supporting initiatives, corresponding to this Priority, under the Integrated Government (iGov) initiative and on the basis of the E-Government Strategic Roadmap.

^{A14} PIPP (2011). *Net Effects: Social and economic impacts of telecommunications and internet in Vanuatu*.

4. Integration of ICTs into Sectoral Policies

Impetus to the socio-economic development that would not be achieved otherwise

Policy development and implementation is direct responsibility of the Government.

Impact in terms of both the matters addressed, but also for broader socio-economic development as sought by the Priorities and Action Agenda

Integration of ICTs into sectoral policies will enable enhanced utilisation of such tools across the broad spectrum of socio-economic activities with a transformative effect. The process of integration will enable sector Ministries, Government Departments, as well as Constitutional and Statutory Entities to fully discover potential of ICTs and obtain a necessary understanding of how such tools could contribute to the development of respective sectors.

Lower complexity and reliance on inputs from multiple stakeholders

The OGCIO will coordinate with respective sector Ministries, Government Departments, Constitutional and Statutory Entities on the one-to-one basis, having regard to the preparedness and buy-in of respective stakeholders. OGCIO will work with stakeholders and the CoM to develop (as directed by the PM) an agreed-upon reasonable target percentage for spending on ICTs, as a percent of total project budgets, for all major future and recently developed projects in all sectors, across the GoV. This target will tentatively be in the range of 3.0 to 5.0 percent to be spent on ICTs within each project.

Ready demand, existing models of ICT development and available implementation capacity

Existing policy development and implementation instruments, including sector policies, corporate and business plans, expenditure frameworks and budgets, will be utilised. The first meeting of the National ICT Development Committee demonstrated that various Ministries and Government Departments (as well as Constitutional and Statutory Entities) acknowledge a potential of ICT contributions to their specific areas. The process of integration will be designed so that to enable such entities to transform an abstract need into specific fully understood policy actions.

5. Building Trust

Impetus to the socio-economic development that would not be achieved otherwise

Achieving this Priority will likely require legislative measures, including adjustments to the Penal Code. Furthermore, such areas as protection of critical infrastructure specifically require attention of the Government, as disruption of such infrastructure would have serious consequences for the life of the country. The state is also well placed to kick-start other measures, including related to awareness and education. Whenever other stakeholders demonstrate readiness to take over specific responsibilities, e.g., in terms of raising awareness and levels of education, the need for a state action should be re-evaluated.

Impact in terms of both the matters addressed, but also for broader socio-economic development as sought by the Priorities and Action Agenda

This Priority enables mitigating risks associated with achieving other Priorities and the ICT development in general. A failure to address this priority could, with increased utilisation of ICTs, increase vulnerability of Vanuatu to various disruptions and even cause a backlash against the ICT development.

Lower complexity and reliance on inputs from multiple stakeholders

Ready demand, existing models of ICT development and available implementation capacity

Impetus to the socio-economic development that would not be achieved otherwise

Impact in terms of both the matters addressed, but also for broader socio-economic development as sought by the Priorities and Action Agenda

Lower complexity and reliance on inputs from multiple stakeholders

Ready demand, existing models of ICT development and available implementation capacity

The Government has already established the Cybersecurity Policy and Legislation Working Group. Specific policy interventions will be developed and implemented in the context of this group. A number of stakeholders, involved in specific interventions under this Priority, will be relatively limited (although an overall range of stakeholders affected is likely to be rather broad).

Activities will be undertaken in the context of existing structures, including the Cybersecurity Policy and Legislation Working Group. Furthermore, the TRR has already been undertaking initiatives in this area. Relevant policy interventions have already been supported by international partners—in particular, the International Telecommunication Union, but also the World Bank. This area is also one of the themes of the Framework for Action on ICT for Development in the Pacific (FAIDP).

6. Locally Relevant Content

Vanuatu is the World's most linguistically dense country—i.e., has the highest number of languages per population. Besides 2 official (English and French) and 1 national (Bislama) languages, Vanuatu also has more than 105 local languages^{A15} that are rather actively used. Currently content in such languages is virtually non-existent. The Government will primarily aim to kick-start the development of content in such languages, leaving the further process to relevant stakeholders, including, particularly, local communities. Furthermore, although commercially attractive part of the population has a good command of English and French (thereby reducing incentives to provide ICT tools in Bislama), expanding use of ICTs would be clearly facilitated by availability of ICT tools adapted to Bislama.

Studies demonstrate a strong link between local content and the development of network infrastructure^{A16}. Furthermore, this will enhance the community buy-in into the value of ICT tools. Access to electronic content in local languages will also expand professional development and education opportunities.

The Government will primarily engage in initiatives that require minimal stakeholder collaboration—e.g., by facilitating translation of existing content into Bislama and local languages; as well as making existing content available in electronic form (including online). Communities will be engaged on the basis of their commitments to make significant contributions (particularly, in terms of their effort) in this regard. Adaptation of ICT tools will rely on involving active and enthusiastic local community of ICT professionals.

Tools for translation of existing content into variety of languages are readily available. A number of communities have produced dictionaries for their languages or material in their languages (e.g., bibles), which could be utilised for the purposes of this Priority. Furthermore, various stakeholders, especially Ministries and Government Departments as well as media organisations, possess and constantly produce content that could be readily made available online. Moreover, community/non-governmental initiatives have produced useful Bislama-enabled ICT tools.^{A17}

^{A15} Government of Vanuatu (2012). *Vanuatu Education Sector Public Expenditure Review Report*.

^{A16} ISOC, UNESCO, OECD (2011). *The Relationship between Local Content, Internet Development and Access Prices*.

^{A17} e.g., see <http://www.swtech.com.au/bislama/index.html>

7. Capacity Building

Impetus to the socio-economic development that would not be achieved otherwise

As emphasis is put on the capacity in the public sector, this comes under the responsibility of the Government.

Impact in terms of both the matters addressed, but also for broader socio-economic development as sought by the Priorities and Action Agenda

ICT and related skills are needed to utilise platforms created under other Priorities (as well as to further develop such platforms). As more public servants obtain ICT and related skills, they will be able to more independently devise further ideas and policies for ICT utilisation, leading to a self-fuelling further development of ICT development initiatives. They will also contribute to provision of more efficient and effective Government services. Furthermore, such public servants will be able to increase awareness of ICT benefits in their families and communities.

Lower complexity and reliance on inputs from multiple stakeholders

With respect to the public service, primarily collaboration of the Public Service Commission and OG-CIO, where required supported by contractors, will be required.

Ready demand, existing models of ICT development and available implementation capacity

As E-Government facilities and services were being implemented for a while, this created a ready demand for public servants to obtain required skills to utilise opportunities, provided by such facilities and services. Various capacity building initiatives have been undertaken. Furthermore, Vanuatu has both public and private sector providers, capable to implement respective initiatives (e.g., the Vanuatu Institute of Technology and CNS).

8. Platform for Multi-Stakeholder and Multi-Sector Coordination and Collaboration

Impetus to the socio-economic development that would not be achieved otherwise

By the nature of its place in the society and its functions, the Government is well placed to facilitate such coordination and collaboration. Stakeholders have been naturally relying on the Government for such activities.

Impact in terms of both the matters addressed, but also for broader socio-economic development as sought by the Priorities and Action Agenda

This Priority will enable a multiplicity of stakeholders to undertake initiatives aimed at developing the ICT sector and enhancing its contribution to the socio-economic development, including initiatives that could neither be envisaged, nor, possibly, implemented by the Government alone. Thereby this will unleash creativity and actions of such stakeholders. Furthermore, this will significantly increase the value, effectiveness and efficiency of initiatives of individual stakeholders due to synergies and cost savings achieved through joint efforts with other stakeholders.

Lower complexity and reliance on inputs from multiple stakeholders

Participation in such a platform will largely be voluntary, especially for non-governmental stakeholders. Therefore establishment of it only requires actions from the OG-CIO, supported by the Honourable Prime Minister and the National ICT Development Committee, and willing stakeholders. Individual stakeholders will be able to choose their own pace and levels of involvement. Measures, encouraging enhanced involvement, will be developed, without, however, relying on such level of participation from specific stakeholders.

Ready demand, existing models
of ICT development and available
implementation capacity

International policy documents, including outcomes of the World Summit of Information Society, promote such models. Establishment of the multi-stakeholder National ICT Development Committee, which is the centre of such a platform, has been well received by stakeholders and has proven to be effective. The platform will be further developed from this foundation.

Annex B

Expected Results of the Policy: Outcomes and Impact

| Priority | Expected Outcomes | Expected Impact |
|---|--|---|
| 1. Access to ICTs in Education | Increased use of ICTs by students and teachers, including in the course of the educational process | Population better equipped with skills necessary to participate in the ICT-driven economy and society in general, and increase in educational participation and achievement in particular |
| 2. Access to ICT Infrastructure and Devices | Increased use of ICTs by residents and businesses, including to enhance their day-to-day social and business activities | New revenue generation opportunities and enhanced social welfare, enabled by ICTs |
| 3. E-Government | Pervasive use of ICTs in day-to-day public administration-related operations; Residents and business effectively accessing Government services remotely via ICT tools | Increased effectiveness, efficiency, speed and accessibility of Government services |
| 4. Integration of ICTs into Sectoral Policies | Increased utilisation of ICTs in the socio-economic development across all sectors | Boost in the sustainable development of all sectors of the society and economy, including health, education and productive sectors, supported by enhanced resiliency, including effective disaster management |
| 5. Building Trust | Stakeholders and the public aware of and prepared for challenges to the economic and social, including cultural, life presented by ICTs, and equipped (especially in terms of information) to meet such challenges; Legal and institutional frameworks in place to tackle risks, including criminal activities, presented by increased utilisation of and reliance on ICTs | Sustainable ICT-enabled development, without causing significant disruptions to the economic and social, including cultural, life in Vanuatu |

Priority

6. Locally Relevant Content

Expected Outcomes

Increased use of ICTs in the day-to-day economic and social life of residents and businesses; Increased relevance of local languages as effective tools of communication in the ICT-driven society

Expected Impact

Enhanced economic and social well-being due to access to the global as well as localised content; Cultural diversity and heritage preserved in the ICT-driven society

7. Capacity Building

Residents, in particular public servants, better equipped with ICT skills, necessary to utilise and promote development of ICTs, especially in relation to their work activities

Increasingly self-generating sustainable development of ICTs, contributing to the socio-economic development of Vanuatu

8. Platform for Multi-Stakeholder and Multi-Sector Coordination and Collaboration

Stakeholders are well aware of ICT development initiatives and their opportunities to benefit from and contribute to them; Stakeholders can easily and effectively forge links with potential partners, who could support ICT development efforts; Potential opportunities of synergies and cost-savings are translated into effective collaborative efforts

Self-generating increased utilisation of ICTs and development of the ICT sector, contributing to the socio-economic development of Vanuatu on the basis of multiplicity of distributed collaborative efforts

Annex C

List of Strategies for the Implementation of the National ICT Policy

(n.b. Initial Non-Exhaustive List)

| Priority | Strategy | Responsible |
|--------------------------------|---|--|
| 1. Access to ICTs in Education | 1.1 Ensuring availability of sustainable and cost-efficient basic ICT facilities (and services) in schools and other educational establishments, including Internet connectivity, via an applications-based competitive contributory grant programme | MoE ^{C1} (TRR ^{C2} , OGCIO ^{C3}) |
| | 1.2 Making cost-efficient devices (potentially, tablets), appropriate for local conditions, available to students and teachers | MoE (TRR, OGCIO) |
| | 1.3 Developing and making available ICT-based educational materials. One focus of this strategy should be on using ICT tools to increase basic literacy and numeracy, as well as increasing digital literacy, among school children, teachers and administrators. | MoE, MYDST, VEPAC |
| | 1.4 Piloting and showcasing models for providing ICT facilities, services, devices and content to schools and other educational facilities | MoE (TRR, OGCIO), MYDST |
| | 1.5 Guidebook for providing ICT facilities, services, devices and content to schools and other educational facilities | MoE (TRR, OGCIO), MYDST |
| | 1.6 Capacity building for schools, staff of the MoE, information technology companies and other vendors on providing and maintaining ICT facilities, services, devices and content to schools and other educational facilities | MoE (Vanuatu Institute of Technology, OGCIO), MYDST |
| | 1.7 Establishing a supporting platform, including setting up a peer support network and organising peer-support events, for sharing best practices, distributing information on tailored offers from specific vendors, and generally supporting availability and utilisation of ICTs in schools, out-of-school youths, and other educational facilities (especially for principals and headmasters) | MoE, MYDST, Vanuatu National Youth Council |

^{C1} Ministry of Education

^{C2} Telecommunications and Radiocommunications Regulator

^{C3} Office of the Government Chief Information Officer (Prime Minister's Office)

| Priority | Strategy | Responsible |
|--|--|--|
| 2. Access to ICT Infrastructure and Devices | 2.1 Deployment of at least one submarine cable | OGCIO (TRR, DSPAC ^{c4} , MFEM ^{c5}) |
| | 2.2 Exploring and facilitating implementation of options to enhance reliability of international connectivity | TRR (OGCIO) |
| | 2.3 Further development of the Vanuatu Internet Exchange Point | VIX ^{c6} Committee (OGCIO, TRR) |
| | 2.4 Enhancing awareness on migration to IPv6 | TRR |
| | 2.5 Ensuring that management “.vu” management serves the Vanuatu Internet community | TRR |
| | 2.6 Development of the Universal Access Policy | OGCIO (TRR) |
| | 2.7 Implementation of the Universal Access Policy | TRR (OGCIO) |
| | 2.8 Improving quality of telecommunications services, especially mobile communications | TRR |
| | 2.9 Making school ICT facilities, especially supported by contributory grants under Strategy 1.1, open to surrounding communities (as Community Information, Learning and Communication Centres) | MoE (OGCIO, TRR) |
| | 2.10 Increasing the number of sustainable cost-efficient Public Internet Access Points via an applications-based competitive contributory grant programme | TRR (OGCIO, Department of Cooperatives (MTTCNVB ^{c7})) |
| | 2.11 Guidebook for establishing and sustaining Public Internet Access Points | TRR (OGCIO) |
| | 2.12 Capacity building for current and potential managers and staff of Public Internet Access Points | TRR (TVET ^{c8} , Vanuatu Institute of Technology) |

^{c4} Department of Strategic Policy, Planning and Aid Coordination (Prime Minister's Office)

^{c5} Ministry of Finance and Economic Management

^{c6} Vanuatu Internet Exchange

^{c7} Ministry of Tourism, Trade, Commerce and Ni-Vanuatu Business

^{c8} Technical and Vocational Education and Training Centres

Priority

Strategy

Responsible

| | | |
|------|---|--|
| 2.13 | Establishing a supporting platform, including setting up a peer support network and organising peer-support events, for sharing best practices on and supporting provision of ICTs to the public, including via Public Internet Access Points; as well as distributing information on tailored offers from specific vendors | TRR (OGCIO) |
| 2.14 | Adjusting licensing framework to enable Public Internet Access Points and shared use of access to ICT services, including wirelessly and with commercial gain, as well as to enable heterogeneous networks, including where elements thereof are operated by persons other than telecommunications service providers | TRR |
| 2.15 | Study on deployment and utilisation of fixed networks, especially fibre-based ones | OGCIO (TRR) |
| 2.16 | Strategy and framework for allocation and assignment of radio spectrum, especially for wireless broadband services | TRR (OGCIO) |
| 2.17 | Radio and Television Broadcasting Policy (potentially implemented together with Strategy 6.3) | OGCIO (DSPPAC, TRR) |
| 2.18 | Implementation of the Radio and Television Broadcasting Policy | TRR ^{C9} (VBTC ^{C10}) |
| 2.19 | Policy and framework for planning, designing and constructing telecommunications facilities | Ministry of Internal Affairs (MIPU ^{C11} , TRR) |
| 2.20 | Promoting reduction of costs of ICT infrastructure and services through increased shared use (including with stakeholders other than telecommunications service providers) of infrastructure, works, and services without undermining the competitive environment | TRR |
| 2.21 | Framework and strategy for the availability of and access to wholesale services | TRR |
| 2.22 | Government Broadband Network Use, including Wholesale, Policy | OGCIO |

^{C9} Primary responsibility for this Strategy is preliminary assigned to the TRR, as currently there is no independent broadcasting regulator (VBTC exercises both regulatory and operational functions). Furthermore, the TRR's mandate already covers some of the relevant areas (especially with regard to management of radio spectrum) and, in any case, is closely related to the broadcasting area. However, the assignment of responsibilities related to the implementation of the Radio and Television Broadcasting Policy will have to be clarified in such a policy itself. Therefore, if necessary, a responsible entity may be changed following the adoption of such a policy.

^{C10} Vanuatu Broadcasting and Television Corporation

^{C11} Ministry of Infrastructure and Public Utilities

| Priority | Strategy | Responsible |
|--|--|--|
| 2. Access to ICT Infrastructure and Devices <i>(continued)</i> | 2.23 Establishment of and support to a multi-stakeholder and multi-sector infrastructure development and utilisation group | TRR (MIPU, URA ^{C12} , OGCIO) |
| | 2.24 Review of the legislation governing the telecommunications sector | OGCIO (SLO ^{C13} , DSPPAC, TRR) |
| | 2.25 Policy and framework for application of customs duties and taxes, in particular VAT, for ICT-related goods and services, as well as inputs into such services and products | MFEM (Department of Customs, OGCIO, TRR) |
| | 2.26 Support to Digital broadcasting, in terms of spectrum efficiency, higher video and audio quality and new business opportunities. It also offers the opportunity to allocate part of the broadcasting band to International Mobile Telecommunication (IMT) or LTE services and other applications or vice versa when connecting schools and community under UAP initiatives. | OGCIO, TRR, VBTC |
| 3. E-Government | 3.1 Continuing and enhancing the iGov Technical Advisory Group | OGCIO (Ministries and Government Departments) |
| | 3.2 Ensuring sufficiency of information technology related human resources in Ministries, Departments, Constitutional and Statutory Entities | Public Service Commission (OGCIO, MFEM, respective Ministries and Government Depts, Constitutional and Statutory Entities) |
| | 3.3 Framework for Coordination of Government ICT Investments | OGCIO |
| | 3.4 Framework for Government ICT Procurement | Central Tenders Board (OGCIO) |
| | 3.5 Implementing the Government-wide Standard Operating Environment | OGCIO (Ministries and Government Departments) |
| | 3.6 Comprehensive Government Telecommunications (including Radiocommunications) Strategy | OGCIO |

^{C12} Utilities Regulatory Authority

^{C13} State Law Office

| Priority | Strategy | Responsible |
|---|---|--|
| | 3.7 M-Government Strategy and Roadmap | OGCIO |
| | 3.8 Other Initiatives as per the E-Government Strategic Roadmap | OGCIO |
| 4. Integration of ICTs into Sectoral Policies | 4.1 Manual for the Sectoral ICT Policy Development and Integration into Sectoral Policy Documents | DSPPAC (OGCIO) |
| | 4.2 Comprehensive policy and strategy for enhancing the education and training sector with ICT | MoE, MYDST |
| | 4.3 Policy and strategy for enhancing the delivery of health services with ICT | Ministry of Health |
| | 4.4 Utilising ICTs in disaster management and climate change mitigation and adaptation, and reducing environmental impact of ICTs. In preparation for and response to disasters and emergencies, the GoV disaster planning and response agencies shall have potential to have free access to public and private network infrastructure and resources. | Ministry of Climate Change Adaptation, Geohazards, Meteorology and Energy; NDMO ^{C14} ; Vanuatu Meteorology and Geo-Hazards Department, TRR |
| | 4.5 E-Waste Policy and Strategy | Ministry of Climate Change Adaptation, Geohazards, Meteorology and Energy |
| | 4.6 Policy and strategy for enhancing the agriculture, trade, tourism, productive and related sectors and rural development with ICT | MALFFB ^{C15} , MTTCNVB |
| | 4.7 Policy and strategy for supporting industrial development with ICTs | MTTCNVB |
| | 4.8 Policy and strategy for supporting the services sector with ICTs | MTTCNVB |
| | 4.9 Enhancing financial inclusion by utilizing ICTs | Reserve Bank of Vanuatu |
| | 4.10 Policy and strategy for utilisation of ICTs in the maritime sector | Department of Ports and Harbour |

^{C14} National Disaster Management Office

^{C15} Ministry of Agriculture, Livestock, Forestry, Fisheries and Biosecurity

| Priority | Strategy | Responsible |
|--|---|--|
| 4. Integration of ICTs into Sectoral Policies <i>(continued)</i> | 4.11 Policy and strategy for attracting and supporting ICT-related and ICT-enabled businesses and investments | MTTCNVB (VCCI^{C16}) |
| | 4.12 Policy on trade-related aspects of ICTs, including intellectual property | MTTCNVB |
| | 4.13 Utilising ICTs in public safety, providing emergency services and law enforcement | Vanuatu Police Force (PMO^{C17}) |
| | 4.14 Policy and strategy for enhancing democratic participation with the utilisation of ICTs | DSPPAC (Electoral Office, OGCIO) |
| | 4.15 Policy and strategy for utilisation of ICTs to preserve and promote Vanuatu culture, including arts | Cultural Centre (Ministry of Internal Affairs) |
| | 4.16 Integration of ICTs into corporate and business plans, expenditure frameworks, and budgets | Respective Ministries and Government Departments, Constitutional and Statutory Entities (DSPPAC, MFEM, OGCIO) |
| | 4.17 Showcasing, piloting, and setting up demonstration models as well as supporting conferences and workshops to inform ICT-related policy making in respective sectors | OGCIO (TRR, respective Ministries, Government Departments, Constitutional and Statutory Entities) |
| 5. Building Trust (Mitigating Risks and Threats related to ICT Development) | 5.1 Cybersecurity Policy | Cybersecurity Policy and Legislation Working Group (OGCIO, TRR) |
| | 5.2 Effective disaster management plans for the telecommunications industry | TRR (OGCIO) |

^{C16} Vanuatu Chamber of Commerce and Industry

^{C17} Prime Minister's Office

| Priority | Strategy | Responsible |
|------------------------------------|--|--|
| | 5.3 Code of Practice for Online Content. The focus of this Code should include family protection, scam protection, and should discourage mis-use and waste of ICT resources (e.g. by civil servants playing games on line during work hours, children playing computer games during school hours, and similar abuses). | TRR (OGCIO, DSPPAC) |
| | 5.4 Child Online Protection Programme | TRR |
| | 5.5 Secure Identification, Authentication and Electronic Signature Policy | TRR (OGCIO) |
| | 5.6 Payments Act | Reserve Bank of Vanuatu |
| 6. Locally Relevant Content | 6.1 Facilitation of implementation of translation tools, enabling increased access to global Internet content in Bislama and local languages; and document and celebrate local languages and content | OGCIO (Ministry of Internal Affairs, TRR) |
| | 6.2 Encouragement and support of adaptation of ICT tools to Bislama | OGCIO (Ministry of Internal Affairs) |
| | 6.3 National Media Policy (potentially implemented together with Strategy 2.17) | DSPPAC (OGCIO, TRR) |
| | 6.4 Freedom of Information Act | DSPPAC (OGCIO) |
| | 6.5 Establish a Working Committee on standards of collecting and dissemination of information, to create consensus. | OGCIO (TRR, VBTC, MAV, VKS, NSO, VANGO, VNCW, RBV) |
| 7. Capacity Building | 7.1 Upgrading ICT and ICT-related skills of public servants, including skills related to content and information management | Public Service Commission (Vanuatu Institute of Public Administration) |
| | 7.2 Developing knowledge and skills for ICT policy development and implementation | OGCIO (DSPPAC, TRR) |
| | 7.3 Upgrading ICT and ICT-related skills in youth | MYDST, TRR, MOE |

Priority

8. Platform for Multi-Stakeholder Coordination and Collaboration

Strategy

Responsible

- | | | |
|-----|---|--|
| 8.1 | Continuing effective work and further development of the National ICT Development Committee and, where required, setting up sector/issue working groups | National ICT Development Committee (OGCIO) |
| 8.2 | Setting up a platform, including inventory of initiatives, for the coordination of support from public and private partners for ICT development and encouraging such support | OGCIO (DSPPAC, TRR) |
| 8.3 | Database on funding and partnering opportunities for ICT development initiatives | OGCIO (DSPPAC) |
| 8.4 | Awareness and outreach on the potential of ICTs for socio-economic development | OGCIO (TRR) |
| 8.5 | Reviewing institutional structure for market regulation, including in similar areas, such as utility regulation and competition protection, to ensure cost-efficient and effective regulation without undermining regulatory independence | DSPPAC (OGCIO, MTTCNVB, MIPU, MFEM) |
| 8.6 | Continuing and further developing the Business User Advisory Group and the Consumer Advisory Group, and enhancing a dialogue between those groups and the telecommunications industry | TRR |

Supportive

9. Operationalizing Policy Implementation

- | | | |
|-----|---|--|
| 9.1 | Implementation Plan for the National ICT Policy | National ICT Development Committee (OGCIO) |
| 9.2 | Manual for ICT Development Programme and Project Management | OGCIO |
| 9.3 | Formalising governance structure for the ICT sector | National ICT Development Committee (OGCIO) |
| 9.4 | Ensuring that the OGCIO has capacity to implement its duties as per the National ICT Policy | PMO (Public Service Commission, MFEM) |
| 9.5 | Guidelines for public consultations on ICT Policy-related initiatives | OGCIO |

Supportive

Strategy

Responsible

| | | |
|------|---|---|
| 9.6 | Developing, entering into and implementing Memoranda of Understanding between the OGCIO and implementing Ministries and Government Departments, in particular in the areas of education, health, productive sectors and disaster management | OGCIO and respective Ministries and Government Departments |
| 9.7 | Setting-up and enhancing the ICT Development Fund (possibly, as part of the Universal Access Policy Fund) | TRR (OGCIO, DSPPAC) |
| 9.8 | Annual World Telecommunication and Information Society Day events | OGCIO (TRR, implementing Ministries and Government Departments) |
| 9.9 | Annual awards for achievements in the ICT sector | OGCIO |
| 9.10 | Encourage research on the Vanuatu ICT sector | OGCIO (TRR, USP ^{C18}) |
| 9.11 | Strengthening international and regional coordination and collaboration in relation to the ICT sector development | OGCIO (TRR, MoFAET ^{C19} , MTTCNVB, TRR) |
| 9.12 | National ICT Policy Monitoring and Evaluation Framework | OGCIO (DSPPAC, TRR, VNSO ^{C20} , implementing Ministries and Government Departments) |
| 9.13 | Framework for International Reporting and Benchmarking | OGCIO (TRR, VNSO, MTTCNVB, MoFAET) |
| 9.14 | Annual report on the implementation of the Policy | National ICT Development Committee (OGCIO) |

^{C18} University of South Pacific

^{C19} Ministry of Foreign Affairs and External Trade

^{C20} Vanuatu National Statistics Office



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