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Facilitating National Information and Communication Technology Development Strategies

July 8, 9 and 10, 2002

Niue National Workshop Report

This report documents the discussions and outcomes of the workshop held at the Hotel Niue in Alofi, Niue on July 8, 9 and 10, 2002. While explanatory notes have been included on the process used at the workshop and the objectives of information and communications strategy development, the findings of the workshop are presented as much as possible as they were at the workshop to avoid the authors misinterpreting the results.

Summary of Workshop Results

Three Task Groups targeting specific areas have agreed to carry forward the vision developed during the Workshop. They are:

Policy. Right policy for the 21rst Century. Legislation needs to be adapted to current need. Need to review specific legislation as it relates to ICT: Communication Act 1989 (with ITU); Amendment Act 2000 which will deal with the domain name; Education and Health ICT policy; equipment standards; copyright legislation; criminal code, etc.

Awareness Task Group. Inform and educate the public about ICT. Activities might include: meetings, advertising, TV, radio, school visits, village meetings, circulars Public consultation to build awareness. They will partner with other vested interests to carry out these activities.

Training and Education Task Group: identifying by way of a training needs analysis to determine what training is needed. Community consultation will be conducted. Review the feasibility of an ICT centre where people can come to learn about ICT.

The Objective of ICT Strategies

Information and communications technology (ICT) strategies can achieve a number of specific objectives. Specifically:

- Strategies identify common goals and practical ways to achieve them. The underlying concept is very simple: the more people have the same goals and targets, the more likely it is that those goals and targets can be achieved.

- Often there are "pockets" of ICT activity but no real continuity. An ICT strategy can bring this continuity.

- An ICT strategy provides a framework for ensuring that as much as possible initiatives are target to a common goal (something to rally around).

- An ICT strategy can help sort out project priorities by identifying the common goals of most importance to the country.

- ICT strategies are also instrumental in building awareness among society.

- A national ICT strategy also tells outsiders, foreign investors and trading partners for instance, that the country has a common goal and a plan to achieve that goal.

The important characteristics of a successful national ICT strategy are:

- A champion: someone who is vocal and has authority and respectability within the community

- Strategies need to be revisited and revised. Typically ICT strategies start out general but become more refined and focused over time. Some country examples of ICT strategies include:
  India, software, back office functions,
  Ireland, software services,
  Singapore, use IT to become the business centre of Asia,
  Canada, connectivity,
  South Africa, using ICT as an enabler of social development
  A strategy should be a living document that can be adapted as circumstance change.

- A group of multiple stakeholders to oversee implementation and revisions to the strategy.

How the National ICT strategy fits with other strategies

The Pacific regional ICT strategy, Pacific Islands Information and Communication Technologies Policy and Strategic Plan (PIIPS) provides a framework for regional development. There are regional initiatives, particularly on the policy side, that aim to achieve the objectives outlined in that strategy. There are regional projects (University of the South Pacific, Fiji School of Medicine, possible telecentres) that also adhere to the principles and objectives outlined in the regional strategy.

It is likely that National ICT strategies will be more focused and concentrate on what individual country strengths are. Some of the policies, principles and action items in the regional strategy will resonate more strongly with some countries than with others. In a sense, the National Strategies will be a further refinement of the regional strategy. In fact, one of the action items in the regional strategy is to develop national strategies.

Individual companies and government departments can again have specific ICT strategies that reflect their requirements. There is no conflict between these strategies rather they are drilling down into the individual requirements of organizations that are all part of the community/nation.

The Future Search Process used in e-Pacifika National Workshops

"Future Search" is a strategic planning methodology that has been developed over the past twenty years by a number of researchers from around the world. The process has been used in a variety of circumstances, in the private sector, governments and non-government organizations in developed and developing countries. This methodology was chosen for e-Pacifika because of its' emphasis on collaborative action planning. Workshops involving presentations and lectures are common in the Pacific region but often it is difficult to use these sessions to initiate activity without regular and ongoing follow-up and support. The scope of the e-Pacifika project does not allow for sustained support in each country so the workshops must both define the priority activities as well as get them started. Future Search is designed to do exactly that.

Future Search is a planning process that:

- Leads stakeholders to create and act upon a shared future vision for the nation,

- Enables all stakeholders to discover shared intentions and take responsibility for their own plans, and
- Helps people implement a shared vision that already exits.

It is not a substitute for rational planning procedures, rather it is an umbrella for building commitment. It is not a conflict resolution or problem solving event. It is a forum that allows people to work through the dynamic issues that stand in the way of implementing anything.

The workshop is an encounter with the whole - self, community and world. It sets up a situation that involves the whole person on many levels. It asks people to share the work, move around, make their wishes visible, live with uncertainty. In a future search people experience a different version of "reality" than the one they are used to. They talk over issues they have not raised before with people they have never met. They dramatize ideal futures as if they have actually happened, thus anchoring them in first hand experience. They identify what they really want. It is common for people to voluntarily commit to actions made possible only because of the other people in the room. These workshops lead to: participants taking personal responsibility; fast implementation of action plans, and; lasting relationships across key sectors of the community.

Workshop Participants

The process starts with the planning of the event and ensuring that the "whole system" is in the same room. This means any stakeholder, or potential stakeholder, of the issue is invited. Guidelines suggest that the group should be no larger than 64. Too small a group (less than 24) may have too much "group think" and not enough diversity. Any larger than 64 it becomes unwieldy for the process to work effectively. The basic premise is that everyone has some knowledge of the issue and can provide meaningful input. It is premised on the understanding that what exists is not working and the people with the knowledge and the power to make changes are within the room.

Over seventy people from all sectors of society were invited to the workshop. Thirty-five people attended the workshop.

Official Opening

The Honourable Toke Talagi, Minister of Finance opened the workshop with the following words of encouragement:

> Niue today has the technology to enable Niue to move ahead with our national objectives. Niue has radio, television and telephone services to almost every occupied household. In addition, Niue also has e-mail and Internet services available. This is phenomenal when we compare our country to our Pacific Island neighbors. Whilst this is true, we need to utilize these technologies to gain maximum benefits with respect to developing and achieving our national priorities such as education and health.
>
> The "buzz" word today is access to e-mail and Internet services in the outer villages. Whilst this is easy to say, we need to consider our financial and infrastructure resources.

How successful will we be in achieving our national priorities if we go ahead and purchase and implement replacement technology to what we have today.

Our mission here today is to develop an ICT strategy and implementation plan that will guide us for the next three years. This plan will take into consideration what we need to do based on our existing strengths, our existing resources. We know what resources we have available. What we need to know, is how we can improve and achieve our national objectives utilizing the technology that we have today. You are here today because of your experience, your knowledge and your involvement in working with the community at large: whether it is in the public sector, private sector business, civil society and at home. Your experience will be valuable in the workshop.

I believe this workshop is different, as it will involve more participating sessions, hands-on planning and sharing of ideas, ideals instead of presentations. This hands-on approach is important and relevant because we know what we need. It is planning of how we can achieve these needs, these national priorities that we need to address. I am confident that the outcome of this ICT workshop will help us map out our ICT strategies for the future in order to help us achieve our national goals and priorities.

Workshop Session Results

Most of the effort in the workshop is done in small, self-managed groups, of no more than eight. The workshop strives to find "common ground". It does this by reviewing the past, the past that everyone shares. This past is reviewed from a personal, global, and national issue perspective. Once we have identified the past we acknowledge our common history and learn from past mistakes. Everyone is heard and all views are valid.

The Niue National History recorded below is copied directly off of the large sheets of paper on which participants were asked to write down their recollection of the history of information and communications technology in Niue. Some people recorded dates, others notable events or technologies.

Pre 1990

GPS introduced
Broadcast and Cable Niue using satellite
Telephone system is manual , Morse code is used
Photocopiers, telex, telegraph and Gestener machines are in use
1967 Radio Sunshine –reel to reel, turntables and cassette decks
Tohi Tala Niue newspaper radio widely available
1989 BCN TV officially launched
1976 USP satellite facilities installed and is using Peacesat
Telecom Niue using Satellite Communications which replaced HF communications. Computerized billing being used.

1990-96

Telecom Niue – Automatic Exchange, IDD Services, network is computerized.
Broadcast cartridge machines and 8 track, CD players.
USP Peacesat replaced by HF communications.
Introduction of IBM/Microsoft/Apple software
Dishwashers (helps promote domestic communications)
Cellular phones, cordless phone, faxes and DVD introduced
ISO Office (government IT) set up to train in the use of computers
Fibre optics and satellite communications in use

Since 1996

.nu domain assigned
Controversy over .nu domain name rights
E-mail and Internet is introduced
Telecom is digitized for international service (SCPC replaced by IDR)
USPnet commissioned distance education using teleconferencing, e-mail and Internet.
Scanners and bar coding are introduced
Telehealth in use. An ultrasound scanner is installed at the hospital.
Computer literacy is improving and being taught in primary school, at high school and in workplaces.
First national ICT workshop takes place in July 2001.
Telecom using satellite telephone service (Iridium).
The National Information Technology Committee (NITC) is established. A draft National ICT Strategy is written and distributed to prompt discussion.
Digital cameras are introduced.
Broadcast facilities are computerized.
Niue experiences the impact of the Worldcom scandal.

Present Trends and the "Mind Map"

Once the group reviewed the past we then look at the present. We mutually discover the trends that are now impacting the issue. In this case what trends are affecting the achievement of further ICT development in Niue This tends to be a messy "mind map" that the workshop then analyzes and attempts to make sense of what has been stated.

The trends identified on the "mind map" included the following (in no order of priority). The list is long because every comment was put on the "mind map". Participants were then given eight "dots" to stick on the trends that they feel were most important. This process led to the establishment of priority trends by votes. The top trends are in **bold.**

Trend	**Implications, impacts and or examples**
Cultural	Reluctance to change, religious beliefs
Sustainability	**Upgrading equipment and maintenance**
Human resources	**Education, knowledge economy skills (knowing how to use IT),**

	training
Financial resources	**Affordability**
Information overload	
Priorities	Over commitment of resources
Accessibility	**Connectivity**
Political will and approvals	**Policies, regulation**
Regional cooperation	With regional organizations and suppliers
Lack of awareness	
Ergonomics	Need for proper computer related equipment (desks, screens, etc.)
Employment opportunities	**Website designers, programmers and technicians.**
Small Economy	
Informal communications	Dissemination, advertising, two-way dialogue
Environmental conditions	Humidity ruins equipment
Globalization	Business, market training
Isolation	
Infrastructure development	**Fibre optic cables, networking.**

Analysis of the Mindmap

The stakeholder groups were asked to review the mindmap and make sense of the trends and implications then present their results back to the whole group.

Social Services Group
Human resources development is one of the primary trends: overseas training is being provided but the knowledge gained is not usually disseminated once the person returns. This needs to be revised to allow more transfer of information knowledge and skills. Financial resources: sources of income are limited. ICT could help increase employment and income as well as help with environmental issues. Training: needs to be provided to villagers not just white-collar workers.

Telecom Infrastructure Group
Political will is dictated by the Government through setting the policies and regulation and provides the financing. Technology is a corner of the triangle with the third corner being the stakeholders. All of these corners are connected. Technology is connected to stakeholders by applying the technology that users want. Stakeholders are impacted by awareness and training, accessibility and marketing. The triangle can be viewed as a pendulum with the Government at the apex.

Private Sector Group
The most important factor is the small economy, which dictates that government and financing are the two major influences. For the future they want to see continuation of involving the

private sector in open forums, involvement in workshops and training opportunities. The group recommends tax holidays, improved utilities, set-up grants and better financing arrangements.

Governance Group
Governance and political involvement (including policies and regulation) is pictured in the middle surrounded by infrastructure development, human resources (education, knowledge skills, quality building), financial resources, environmental factors, accessibility (everyone have connections), employment, environment (physical and health), information (communications to people, awareness, and information dissemination) sustainability (equipment and the economy) and globalization.

Administration/IT Users
The key trends are:

- finance (heavy reliance on foreign aid, sustainability and affordability, need cost-benefit analysis to ensure that there is not a high social cost);
- human resources (what are we going to do with the technology and how will we get there, education, training and awareness);
- infrastructure (accessibility particularly in rural areas, also includes the sustainability issues related to maintenance);
- political will essential for good governance (also need policy and awareness);
- employment opportunities are limited but can exploit global opportunities but this also is influenced by the availability of working equipment.

Satisfactions and Regrets

To come to terms with events of the past to go on to the future, the participants are asked to review "satisfactions", things or events of which they are proud and "regrets", things or events of which they are sorry. Some of the "satisfactions" include: reasonable infrastructure, including access to e-mail and Internet; human resources development including workshop/training opportunities, and; access to telehealth.

Some of the "regrets" include: the inability to keep up with technological developments in network infrastructure, hardware and software; lack of immediate availability of parts; poor quality of service and high costs, and; the lack of finances for ICT related projects and equipment.

Future Scenarios

With a foundation of where we have come from and where we are now, we then dream and define where we want to go. The various groups create a future scenario that they consider is feasible, desirable, and motivating.

A summary of the presentations by the groups follows.

Group 1: Pacific Way 2020 Documentary

Niue is now using windmill and solar power and is the first country deriving power from wind. The population has reached 6,000. Have access to submarine cables and offer broadband access to Internet. Broadcasting to other countries. Advanced technology spurred advanced training and now has consultants working in other countries. Leisure accounts for 75% of the time and work accounts for 25%.

Group 2: Niue 2020
Communication infrastructure is all fibre optics and broadband is available to the home. Teleconferencing is widely used and networking improves effectiveness. In education, children have their own laptops and education is available online. Business transactions are cashless and employment opportunities are available. In agriculture, IT is being used to grow more and better crops all organically. Transportation overseas is via NiueJet. Increases have been realized in eco-tourism. In health, telemedicine is widely used. The major barriers to achieving this objective are finance, human resources and the population decline.

Group 3: Niue 2020
Population is 10,000. New industry is mining. Honey is in production again. Tourism is up and new hotels are being built. Distance education and telemedicine increasing quality of life. E-commerce is promoting business. New entertainment is available for children. Niue has their own airline. Power is being generated by wind turbines and solar power. Preservation of clean and healthy environment has been the drive behind energy production. Network connections allow working from other countries (submarine cables connecting Niue to the rest of the world).

Group 4: Niue 2020
Able to work from different countries because network connections allow easy communications. Telephone communication includes video. Not many jobs. Mobile phones and computers are owned by most of the population. In health, technology has increased stress and resulted in specialized ICT treatment. Interaction between people is a problem because they spend all of their time with their computers.

Common Ground

After considering the past, present, and future, the workshop then proceeds to find the “common ground”. This is where everyone at the workshop finds agreement on basic concepts and identifies projects to achieve and/or support them. The “common ground” should be principles and values that: relate to ICT development, and: can stand the “test of time” (they will be understood tomorrow or next year).

The principles and values identified by the group include:

Universal accessibility to communications; reliable and efficient communications; access to current information; sustainability; self sufficiency; environmentally friendly; equitable distribution of resources – sharing; sustainable culture- identity, language, traditions; lifelong learning; healthy lifestyle; Christianity; individual privacy; security of information; accountability- political and corporate; transparency; enabling commercial environment; good governance; culture of cooperation

The common qualities of the future that the group identified:

Improved quality of life (living and not leaving the community).
Good governance, leadership (political will), accountability, transparency, appropriate legislation and policy.
Human resources, education and training at all levels, specialized training and short-term attachments.
Technology, up to date, reliable, cost-effective, fast, sustainable and efficient.
Renewable energy that is environmentally friendly, cost effective and sustainable.
Population is increasing, there are more professionals and investors.
Transportation is reliable, regular, cost-effective and sustainable.

This common ground can serve as a "filter" for future ICT projects. That is, if a project is being considered it should promote one or more of these principles and values.

Projects and Big Ideas

The projects and ideas that were identified by participants again formed a long list because all ideas were recorded whether they overlapped with others or not. It was from this long-list that participants identified the projects that should be pursued and that they wanted to work on.

<u>Civil society, education and health group</u>
Within the next 5 months:

Disseminate information: conduct workshops, media advertising (TV and radio talk shows)
Incorporate our new "vision", review policies.
Develop project proposals for upgrading systems.

Three year Action Plan:

Another workshop in three years to gage progress.
Look to our Pacific neighbors for examples rather than to developed countries.
Search through the archives for projects that were shelved.

<u>Governance group</u>
Capacity building project

1. Identify status of ICT development on Niue and assess funding requirements
2. Design a national strategy. Review policies, legislation and regulations.
3. Public awareness- meet with all sectors
4. Training opportunities.
5. Maintance: strategy for infrastructure and development. Monitor international development.

Human Resource Development Project

1. Training needs analysis: consultations, meetings, interviews at all levels. Determine what is available and what is needed.
2. SWOT analysis.

3. Produce report.
4. Review and evaluate the report.
5. Project formulation.
6. Seek government endorsement.
7. Seek funding.

Administration Group
1. Complete ICT project document by Oct 2002
2. Review legislation and policies by Nov 2002
3. Establish ICT centre for curriculum development, staff development and resource procurement by January 2004
4. Computer and hardware maintenance would be ongoing.
5. Provide user technical support on an ongoing basis.

Infrastructure Group
Financing and sustainability are critical to each of the scenarios below.

Immediate projects include infrastructure development (technological and financial); sourcing financial support; cost and tariff analysis; public awareness.

In the short-term, infrastructure development and technology renewal will continue and promote the drive for universal service.

In the mid to long term (3-10 years), universal service and accessibility to provide service support and advice to all sectors of society while at the same time generating a level of return that will enable the service provider to sustain all services and return dividends to the government.

Projects include: promoting universal access through fibre, cable, microwave and other wireless; increasing services including XDSL, value-added services (voice mail, paging, text) marketing and technical support; improving delivery by increasing accessibility to 24 hours per day, promoting cost-effectiveness, introducing business calling plans, prepaid services for the public sector.

Other projects identified included: trade and investment proposals to increase economic development; providing funding to attract investors, create a tax free and duty free haven, and; promoting renewable energy (wind and solar).

Once there is agreement on the common ground, there are volunteers willing and committed to carry out specific projects. The last tasks of the workshop are to volunteer for those tasks that excite the individual and determine the structure to go forward with implementation. The listing of common ground and the commitment to action are the real outcomes of the workshop.

Outcomes: Selected Tasks/Projects

Policy. Right policy for the 21rst Century. Legislation needs to be adapted to current need. Need to review specific legislation as it relates to ICT: Communication Act 1989 (with ITU);

Amendment Act 2000 which will deal with the domain name; Education and Health ICT policy; equipment standards; copyright legislation; criminal code, etc.

Members: Tutuli, Richard, Bradley, Norman, Sisikefu, Lofa, Maria, Kim Ray

Awareness Task Group. Inform and educate the public about ICT. Activities might include: meetings, advertising, TV, radio, school visits, village meetings, circulars Public consultation to build awareness. They will partner with other vested interests to carry out these activities.

Members: Fifita, Patrick, Mata, Nisi, David, Scan, Pat, Nogi, Carlos, Sunlou Livaie.

Training and Education Task Group: identifying by way of a training needs analysis to determine what training is needed. Community consultation will be conducted. Review the feasibility of an ICT centre where people can come to learn about ICT.

Members: Joe, Gaylene, Mary Anne, Prime, Trishia, Sanilou, Cherie, Latu, Sione, Loa

Coordination
Need new ICT Working Committee with terms of reference that specifically. One person from each of the three groups would be the coordinating committee. All key sectors must be represented on the Working Committee. This committee would be separate from the existing NITC. The ICT Working Group will consist of two members from each task group. The purpose of the group will be to coordinate the activities resulting from the ICT Workshop. Integrate additional comments into the workshop report and make recommendations. The Working Group will make recommendations for action to either or NITC or directly to Government.

Official Closing
The Honourable Premier closed the workshop by encouraging participants to carry on with the work of the workshop.