POLICY DIRECTIONS AND STRATEGIES FOR THE

DEVELOPMENT AND GROWTH OF INFORMATION AND COMMUNICATION TECHNOLOGY

FIJI INFORMATION TECHNOLOGY DEVELOPMENT POLICY

e-FIJI the future online

"Creating Information Economy for Fiji"

Policy Objectives

The scenario for Fiji is such that from a policy perspective, the objective is to provide the necessary impetus for the development of the information economy. What will be key in this drive is the creation and tasking of an effective delivery structure in an entity to be called the ICT Development Unit to ensure that the following strategic outcomes are achieved:

Government on-line;

e-enabled businesses; and

e-empowered community

For the information economy the objectives include the following:

Unleashing the potential and use of ICT utilizing world best practice;

Improving the quality of life, education and work for the people of Fiji with particular emphasis on bridging the "digital divide";

Joining the world scene;

Strategizing for indigenous Fijians in business and special interest groups for private sector investment via strategic partnerships and new alliances; and

Maximizing economic gains and niche market opportunities.

Vision

The vision for Fiji's information economy is" to harness Fiji's ideal geographic location, competent workforce and world-class information technology infrastructure to promote Fiji's international competitiveness and create a dynamic, vibrant and well connected e-society."

What is envisaged in this vision is a Fiji where:

Every village, community and school is provided access to communication and the Internet.

All communities are able to access on-line information, public services delivered by Government such as health and education, entertainment, and procure on-line goods and services from within and outside Fiji.

Information and communication technology has transformed the traditional processes of work, commerce, learning, social interaction and Government.

Investment in information and communication technology development and growth contribute to Fiji's economy through revenue generation, job creation, and administrative and operational efficiencies.

The indigenous Fijian culture and arts along with the diverse cultures in Fiji are showcased on-line and accessible to the global community.

An environment exists and the conditions are conducive to attracting innovators and creativity into our shores.

The sector environment encourages, supports and sustains the development and growth of a dynamic information economy.

The fact that it is an essential element to facilitate in the development and growth in Fiji's social and economic fabric, information and communications technology, as an aspect, will be incorporated in the national vision. Special focus will be made in the national agenda to the use of information and communication technology across the cross section of our society. Everyone should share in this vision, the Government, members of every sector, the communities and every citizen. And everyone should cooperate in implementing the national IT development Action Plan.

Executive Summary

Government's awareness of the opportunity to creating a new industry in information and communication technology, has prompted it to establish a focused policy initiative as it takes a lead role in launching its policy directions to encourage, facilitate and support the development and growth of this industry for the economic well being of our society.

In spearheading this initiative, Government notes that in our case we already have several of the fundamentally essential ingredients to spawn and grow our information and communication technology industry. Amongst these ingredients are:

A world-class international connectivity via the Southern Cross Cable Network (SCCN);

Our friendly and attractive investment window via the FTIB;

Our pro-business and pro-consumer policies and legislations under the purview of the Ministry of Commerce...;

A well-trained customer friendly and flexible workforce;

An ideal geographic location – time zone "where the day begins and ends"; and We have a good English speaking populace.

Government is aware of the benefits that information and communication technology extends to societies of today. Amongst the benefits that Government desires to be passed on to our peoples are;

Improvement of the quality of life;

Creation of new investment opportunities; and

Maximisation of economic gain; and

Contribution to increased GDP and creation of new skills based employment

From Government's perspective, desirably, the outcome of information and communication technology development is the realization of "e-Fiji, the future on-line". This realization will enable for our people three key functionalities (possibilities), namely, e-Government or Government on-line, e-Business or business on-line and e-Community or community e-empowered.

And the related focal points and strategies in these three areas are:

For e-Government –

Encouraging the delivery of on-line Public Services (G to C);

Promoting e-Government growth via improved processes using world best practice in ICT utilisation(G to B);

Improving productivity in Government via on-line intergovernmental communications (G to G); and

Creation of a secure national information infrastructure (NII) that engenders confidence in etransactions.

For e-Business -

Facilitation of knowledge-transfer program;

Introduction of more competition in the telecommunications markets;

Attracting more investment in the information and communications technology industry;

Creating incremental e-Commerce transactions; and

Promoting innovations by private sector.

For e-Community -

Enabling access for all;

Developing knowledge base through education; and

Creating info-tech talent capital through employment

Success in the realization of these "desirables" of Government will be achieved when a focussed and committed agency is dedicated towards the implementation of the IT development action plan for Fiji. In view of this, Government will

therefore establish an ICT Development Unit (ICTDU) within the Ministry of Information, Communication & Media Relations, whose primary role is to steer IT development and growth in Fiji towards along specified goals and milestones in creating an information economy for Fiji and measure and publicise progress in this important national development.

Introduction

Advances in information technology have enabled the facilitation of the migrating of societies to an information and communication platform from where they are able to interact socially and commercially. In addition the harnessing of the potential in the information technology is contributing to growth in new markets, creation of employment and poverty alleviation, generation of small businesses, creation of an environment conducive to new innovations and creativity and an added boost and prosperity to the economy. Fiji must capitalize on this potential in information and communication technology if it is to realize these tangible outcomes. What will be critically essential to successfully realizing these outcomes however is that the joint cooperative efforts of all towards the development and growth of information and communications technology is coordinated at all levels of Government, the private sector and the public.

This document, therefore, defines the direction Fiji should take towards a future where growth, prosperity and benefits in our social and economic fabrics are attained. In relation to information technology development, the document addresses the following:

The current status of the industry

Current industry structure

Policy objectives

Vision

The stakeholders

Challenges

Strategic outcomes

Strategies/Action plan

Implementation

Benchmarking

There will be reviews and enhancements made to the substance of this document owing to the dynamism in information and communication technology and in order to keep abreast with the rapid changes in this market and the imperatives that ensue from these changes.

The major focus of this policy document, however, is the Government policy direction for the development and growth of information and communication technology and the associated strategies and actions proposed by Government in order to create an information economy for Fiji.

Background

Government established the IT Advisory Council (ITAC) in 2001 under the mandate of the Minister responsible for Communications as provided in Section 28 of the Posts and Telecommunications Decree 1989.

ITAC's role to advise the Minister on any matter in respect of which any of the Ministers functions in respect of telecommunications (in this case information technology [IT]) is exercisable. In addition ITAC is to offer advice on any matter that is referred to it by the Minister or on which it considers it should offer advice.

In February 2002 the Cabinet Sub-Committee on Investment decided that a policy statement of Government for information technology development be compiled to set the direction for this important development. In its efforts to take

the lead role in setting this direction, Government has identified specific strategies and actions that will ensure the achievement of benefits to our peoples.

A national ICT strategy workshop was held in 10,11 June 2002, co-organised with the Ministry of Communications by and through the assistance of the UNDP/UNOPDS. Representatives from Government, the private sector and educational institutions attended the two-day workshop. From the workshop, the participants were able to form their shared vision for Fiji and to take responsibility for the plan of actions they did arrive at for the realisation of their shared vision.

Amongst the related principles and values that the participants identified in the workshop were:

Committed leadership and champion of ICT Development;

Effectiveness of Government policies and services;

Ownership/partnership in development of ICT Policies and their implementation;

Equity/equality of access to ICT;

Universal access to education;

Diversity/choice through competition;

Accountability – personal, society, Government;

Transparency within Government and within and between enterprises and Government;

Decentralisation of Government services;

Efficiency of delivery of Government services; and

Tolerance and respect.

At its conclusion the participants had identified and agreed to the following six projects:

Policy Issue;

Educational curriculum reform;

e-Government;

Nationwide Awareness of what the Internet is all about;

Recycling PCs, Awareness, expansion of existing Rotary program; and

Rural Telecommunications Development and Telecentres.

Current Industry Status

In formulating a national vision for the ICT industry, Government recognizes that there is potential for more development and growth in ICT and knowledge-based industries. Government has therefore commissioned the preparation of a comprehensive national ICT strategy in view of this. Government also notes the outcomes that will emanate from the activities of the Fiji Audio Visual Commission as an added dimension to this scenario.

The existing telecommunications infrastructure contains the major basic requirements to migrate our communities and people towards becoming an information society. The national infrastructure is now 99.9% digitalized. Fiji is an integral component of a state of the art international fibre optic network the Southern Cross Cable Network (SCCN) that provides direct connectivities with Australia, New Zealand and the United States of America. An alternate route for international connections is provided via the Intelsat Pacific Ocean Regional (POR) satellite.

Whilst the industry is partially privatized, and now undergoing further divestments of Government shares for private ownership, there is still a high degree of monopoly particularly in the provision of services. Current telecommunications pricing structure has not changed since the introduction of corporatisation in 1990. The existing regulatory framework needs to be restructured to be able to handle new and emerging markets and the restructured industry. And there are still about 700 villages that do not have access to the basic telecommunications services.

The current status of our telecommunications industry and the growing demand for the use of information and communication technology across the broad spectrum of our society evidently reveal that there is room to develop and grow the information technology market in Fiji. The following are proof of this:

Eight Internet (access) service provider (ISP) licences have already been issued and yet none of these has yet begun operating due to high bandwidth costs and absence of an appropriate interconnection framework.

Daily visitations trend to the few Internet cafes that are located in our major cities shows the increasing demand in Internet access.

There are only a few primary and secondary schools throughout Fiji that teach computer courses and have Internet access facilities for students.

More use of information technology in health and medical services is required today to improve in the application of preventative and curative health services.

There is demand now for on-line access to the public services that are delivered by Government departments.

Government has created an attractive investment climate through its facilitations in the following areas:

Investment allowance of 40% (for minimum investment value of F\$50,000 – until 2005) for IT industries;

Duty free importation for computers and telecommunication equipment; 100% deductability of all R&D expenditure;

corporate tax reduced to 32% in 2004;

newly setup back office processing centers by -

ANZ operations as QUEST (setup in 2003)

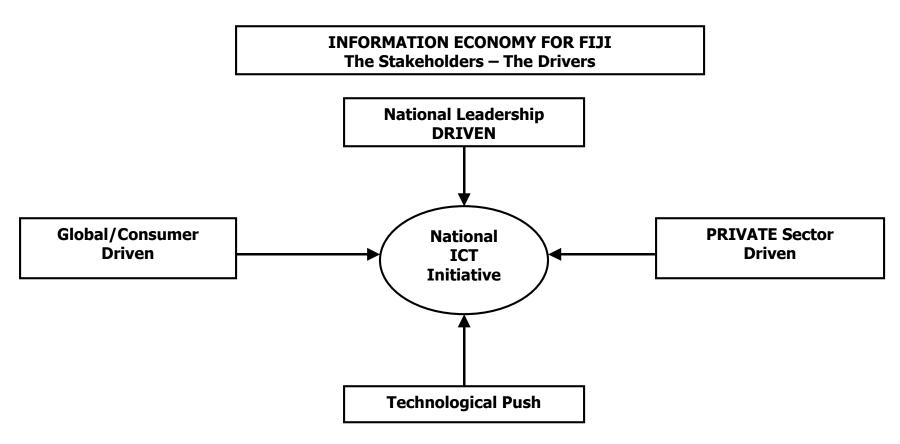
Affiliated computers services (ACS) of USA (2003)

It cannot be overstated that the human resource is a critical if not the most important component in ICT development and growth. In acknowledging this, Government is currently finalizing arrangements with the Government of Japan for bilateral assistance in the construction of an ICT training facilities within the USP administration. This project, which is estimated to cost \$25 million, is to be completed by 2005.

Whilst still at its infancy stage, there is potential for IT to impact more on the way businesses are being conducted. In view of this, Government will encourage and support initiatives in information and communications technology development that are aimed at creating and growing new markets in Fiji.

The Stakeholders

As illustrated below, fundamentally, the national ICT initiative for the Fiji information economy will be driven by four distinct stakeholders, namely the national leadership (Government), the private sector, the consumers and global trends and imperatives and technology.



And the identified associated rationale to engender dedication and determination in the ICT initiative for the information economy are illustrated in below.

Rationale for Dedicated & Determined ICT Initiative

GOVERNMENT

New Industry – positive impact on economy

Foreign Investment/Trade

New wealth creation

Social Impact

Reverse/Minimise brain drain

Shift to New economy (services orientated)

Introduce efficiencies through ICT

Nurture a business friendly attitude

CONSUMER/SOCIETY

Awareness of the power & opportunities of ICT Reducing cost of ICT

Internet – new dimension for knowledge acquisition Multimedia based education/medicine/lifestyle

Sense of being advanced

Quality of life

PRIVATE SECTOR

Globalisation of trade – increasing access to information

Investment opportunity

Conduct of business – transformational process Promote e-business/e-commerce for new wealth

creation

Innovation as the key for existence

TECHNOLOGY

ICT era * rapid rate of technological cxhange

* Digital economy * mobile computing

Enhanced access & connectivity – broadband/technological infrstructure – Southern Cross capabilities

National

ICT

Initiative

Increased revenue, return on investment, optimal utilisation

Challenges

The four corners to prop the e-Fiji platform are:

A pro-business and pro-consumer environment where –

the regulatory framework is clear and transparent and supports sustainable competition in the markets;

a business friendly policy framework exists creating the right environment for ICT industries and new innovations to flourish; and

the consumer interests, welfare and rights are secured.

An infrastructure that is founded on competitive technology as is already evident in international connectivity to the global economy that is provided via the Southern Cross Cable Network;

There is an appropriate financial and investment climate that offers a comprehensive and attractive tax regime and where by international standards cost competitive and cost effective structures exist that impact favourably on –

The labour market;

Telecommunications tariff;

International air links; and

Building and lease costs.

A well-trained, friendly and flexible workforce and society that contains good and continuous supply of educated and motivated work force, evident in the availability of specialized vocational training to support the ICT industry and labour market policies that are flexible and employer friendly.

Success in the realization these related ideals for the e-Fiji platform that enumerated above will come about when identified impediments that are hindering development and growth in the sector and consequently ICT have been adequately addressed. And major amongst these impediments are:

Monopoly and the associated monopolist attitude of the operators;

Distorted telecommunications pricing structure evident in the low domestic access charges that creates the access deficit cost (ADC) necessitating cross subsidization for excessive international call charges to supplement the deficit;

Unsuitable regulatory framework for the partly liberalized sector and limited competition that already exists and inadequacy in necessary legislation and associated regulations to address privacy, secrecy, confidentiality, propriety rights, taxation and information security issues;

The telecommunications development gap between the urban and the rural and remote areas and the digital divide resulting in inequity in telecommunications access; and

High degree of ICT illiteracy

Government, with the close cooperation of the major telecommunications operators, will identify strategies and actions to address these impediments and to facilitate information technology development and growth. As evidently many companies are taking their businesses to other parts of the world where cost of doing business is cheaper, it is not only timely but also essential that appropriate actions are now.

Strategic Outcomes

Desirably, the intended outcomes for creating e-Fiji on-line include Government on-line, e-enabled business and an e-empowered community. As illustrated below the e-Fiji platform will facilitate in the realization of specific related results.

e-FIJI the future online

STRATEGIC OUTCOMES

Community groups and not-for-profit organizations understand the Internet and are able to use it to access information, government services and business products and services and to create dialogue and enhance civic awareness and action

Community e-empowered

e-FIJI the future

online

Business e-enabled

businesses using the Internet to open new markets, drive efficiencies and reduce costs, meet customer expectations and create a competitive advantage.

Government on line

government providing services online to improve uptake & access to services, create efficiencies and cost savings, shift emphasis from process to quality of Services and to enhance government policies and initiatives.

Strategies and Action Plan

Government will pursue the associated strategies and actions outlined in the tables below.

Government On-Line

| STRATEGY | KEY RESULT AREAS | ACTION ITEMS |
|---|--|--|
| 1) Encourage the delivery of online Public Services (Government to Consumers) | Identify and implement core e-services for wide range of government services and information e-Government development plan adopted in 2003 suitable Government services available on-line and through the Internet by 2005 | Make available government services electronically with specific delivery dates Core services to target as a starting point - e-Filing of Income Tax - Company office search/registration - Drivers Licence - Births, death & marriage registrations - Job Search - FNPF Enquiry - Immigration Promote the use of e-Government services within timeframes announced for phasing out of current practices |
| | Target 2004 – 5 applications 2005 – 10 applications 2006 – 25 applications | Improve accessibility of e-Government services via Community Centres/Libraries Smart Card – PKI Infrastructure |

Government On-Line Cont'd

| STRATEGY | KEY RESULT AREAS | ACTION ITEMS |
|--|--|--|
| 2) Promote e-Government growth | Develop and Implement a transparent and accountable new e-Procurement policy | Incentivise corporate who do business with government electronically |
| via on-line Government Procurement | for Government which leads to up to 50% of Government Purchase made | Create electronic process for government procurement and tender business |
| | on-line by 2007 | Government departments to issue and receive invitations to quote on-line, seeking items and services up to a prescribed value (say \$50,000) |
| | | Maintain a register of users and monitor transactions volume via e-Government and publicize same |
| | | |

Government On-Line Cont'd

| STRATEGY | KEY RESULT AREAS | ACTION ITEMS |
|---|---|---|
| 3) Improve productivity – efficiency in Government via improved processes using world best practice in ICT utilisation (Government to Government) | Establish priority areas for Government to Government e-transactions and set timelines for implementation Growth in on-line education Improved delivery of health services through increase use of Telehealth on-line | Implement FMIS immediately Incorporate on-line commitment based Purchase Order Processing System Land Policy/LTA/Immigration data Utilize technology for Telehealth Distance education Upgrade teachers' computer skills Identify and implement top 10 areas where major productivity gains can be made |

Government On-Line Cont'd

| STRATEGY | KEY RESULT AREAS | ACTION ITEMS |
|--|--|---|
| 4) Creation of secure National information, infrastructure (NII) to build confidence in e-transactions | Deploy NII technology for secure communications amongst Government agencies and network providers Completion of 98% of the National Infrastructure by the year 2005 | Provide secure internetworking environment using virtual private networks and encryptions Broadband infrastructure for Government Create Electronic Transactions Act to ensure relevant laws, taxation and accounting framework are in place to cater for electronic trade All ICT related legislation to be in place by 2005 A fully developed internationally compliant privacy system for the handling of information in the ICT sector in place by 2005 |

Business e-Enabled

| STRATEGY | KEY RESULT AREAS | ACTION ITEMS |
|---|--|---|
| 1) Facilitate formal knowledge-transfer program | Negotiate Key Strategic alliances and partnerships | Explore bilateral/multilateral relationships and agreements to enhance business opportunities for local business opportunities for local InfoTech industry and formal knowledge transfer program Target Governments * India * Singapore * Malaysia * Australia Establish specific ICT Investment officers in trade missions in India and China Leverage external resources and expertise to complement Fiji's core strengths |

| STRATEGY | KEY RESULT AREAS | ACTION ITEMS |
|---|---|---|
| 2) Liberalization of Telecommunication Market | Telecommunications Services Liberalization and Competition Increased competition with more Internet Service Providers (ISP) Quality standards comparable to the global market established by 2004 | Government in association with Telecom/ Industry to resolve liberation of the telecommunication services market Improve overall quality, efficiency and lower prices to consumers and increase choice Delivery of new services to stimulate economic growth in Fiji Introduction of new services and technology such as broad bank wireless and DSL to enhance service quality |
| | Tariff Rebalancing | New Telecommunication pricing framework to be implemented immediately Industry subsidisation for rural areas |
| | Establish a regulatory model that creates certainty, promotes investment and offers new services | To establish and/or update legislation and regulations for electronic commerce, privacy protection, on-line consumer protection and on-line content Update telecommunication policy and regulations |

| STRATEGY | KEY RESULT AREAS | ACTION ITEMS |
|--|---|---|
| 3) Attract more Investment in ICT industry | To establish Fiji with a reputation for ICT Investment destination country | Identify targeted Regional/International Organizations and aggressively market directly for their call centres/back office processing to be located in Fiji Negotiate and package broad bank and communication tariffs |
| | To establish a Technology Park to reduce Capital for potential investors. | Government/Private Sector/Telecom Industry to create Technology Park, comprising of building, equipment and telecommunication network, as a starting point for investors |
| | | Fiji Investment Corporation – initiate catalyst venture capital |
| | To promote ICT Industry as a strong area of investment for local investors | Identify offshore investors from new investment sources – e.g India and help create strategic partnership with local components |

| STRATEGY | KEY RESULT AREAS | ACTION ITEMS |
|--|--|---|
| 4) To stimulate the uptake of ICT via e-commerce | Create incremental e-Commerce transactions | Promote update of leading-edge ICT applications, including e-Commerce throughout the business community * electronic banking transactions - grow range of bill pay * Airline/travel tickets * Third party insurance * Selected Retail Markets |
| | | Implement the actions in the Government e-Commerce policy framework |

| STRATEGY | KEY RESULT AREAS | ACTION ITEMS |
|--|---|--|
| 5) Promote innovations by private sector | Promote access to R&D funding investment allowance worthwhile project | Facilitate stronger alliances between business, government and academic Make available R&D funding and establish Policy guidelines to support innovations initiatives |
| | Implementing Intellectual Property Act | |
| | Provide high quality business information, advisory and networking services | Provide support and mentoring process for SME's and local investors to help develop their business, |

Community e-Empowered

| STRATEGY | KEY RESULT AREAS | ACTION ITEMS |
|--------------------------|---|--|
| 1) Accessibility for all | Create widespread use of information technology | Create awareness among people Improve quality of life on the benefits of ICT * Trade Shows * Mobile Marketing * Media Stories / Advertisements Public Education Campaign — multi- organizational |
| | Increase access via physical connectivity | No. of Villages – at least 400 more villages by 2005 No. of Schools – an additional 10 schools per year with computers and Internet access Community – Library Centres |
| | Increase PC ownership & connections | Government/Employers/Unions/PC e-Easy Plan Second-hand computer – PC reuse scheme Multinational Corporations Local Corporations Community Based Groups |

Community e-Empowered Cont'd

| STRATEGY | KEY RESULT AREAS | ACTION ITEMS |
|---------------------------------------|--|--|
| 2) Education — Develop Knowledge base | Develop and Implement National ICT Training Agenda | Determine an Information Training Framework Specialization ICT Professionals General Work Force National Literacy General Public Create and implement appropriate curriculum Upgrade Info tech Education at USP, FIT and all tertiary educational institutes |

Community e – Empowered Cont'd

| STRATEGY | KEY RESULT AREAS | ACTION ITEMS |
|----------|--|---|
| | Bridge the digital divide between: • Age groups • Income levels • Ethnic Backgrounds • Educational levels/qualifications | e-Ambassador program Community based education program National and regional libraries to be upgraded to centres of learning and e-business centres |
| | Attracting and Retaining Info Tech and e-business savvy talent Capital | establish Fiji as the regions premier e-learning hub Minimize/reverse brain-drain Review immigration laws to enable organization to have and process international talent easily Major annual conference |

Community e-Empowered Cont'd

| STRATEGY | KEY RESULT AREAS | ACTION ITEMS |
|---|---|--|
| | | |
| 3) Employment – Create Info Tech Talent Capital | Nurturing a information Technology SAVVY Work Force | Greater use of PC by Organisations in productivity-enhancing office applications /on-line transactions |
| | Enhancing the Capabilities of Info Tech Manpower | Benchmarking against acceptable Industry best practices |

Implementation

- Government to provide enabling environment and be the catalyst:
- Establish a dedicated and accountable Agency, the ICT Development Unit (ICTDU) to drive the development of

Information Economy in Fiji

(ICTDU will have a board representing Government, Business and Community representatives and staff of CEO and Project/Admin Officers)

- e-Fiji Ltd roles:
 - > To create Public/Private Partnership Programs
 - > To target market Fiji as a Technology Investment Destination
 - > To provide impetus for each of the 3 Strategic Outcomes
 - > To generate additional funding through donor-agencies for R&D, e-Government, Community online

(Additional funding will need to be set aside for specific e-Fiji projects incorporate rural telecommunications, computer education, e-Government etc.)

Government to allocate funds for 2004 and subsequent year budgets

| <u>Operating (</u> ICTDU) | | <u>Venture Capital</u> (FIC |
|---------------------------|-----------|-----------------------------|
| 2004 | \$650,000 | \$3 million |
| 2005 | \$750,000 | \$3 million |
| 2006 | \$850,000 | \$3 million |

(Operating Budget will cover Human Resources Costs, knowledge Transfer Program, Marketing & Promotion,

Benchmarking for Success

- Imperative to improve information base and reference data on the current and future trends and uptake of the ICT industry
- Develop internal and external benchmarks to monitor Fiji's ICT industry development and the level of economic and social impacts
- Publicize and Promote the benchmarking information on an annual basis

Conclusive Summary

This document is the outline of the national policy direction and strategic framework for the development and growth of information and communication technology in Fiji. The strategies contained therein will guide Fiji's transition towards becoming a well-connected information society in the region. By its substance, the document reveals a commitment to a future for Fiji where growth, prosperity and benefits in our social and economic fabrics are attained.

Whilst the private sector will take the lead role in developing ICT, Government will encourage and facilitate the contribution of all communities towards realizing our vision for Fiji. A higher degree of priority is placed on human resource development in the information and communication technology field and through training the acquiring of the basic skills to enable the individual to participate in ICT and increase the number of skilled personnel in the advanced areas of this field.

The strategic framework outlined in this document contains the important steps, from Fiji's perspective, that will create the basic platform and the environment where information and communication technology will incubate to consequently establish on-line e-Fiji. Government will continue to develop specific related plans of action to the strategies in this document and monitor and review progress. There will be regular review of this document to keep in pace with the dynamic nature of information and communication technology.

Next Steps

The following are related follow-on actions to this policy document:

- 1. ICT Development Policy approved and adopted by Government.
- 2. Provisioning funding allocations in the 2004 Budget.
- 3. Establishment of the ICT Development Unit (ICTDU).
- 4. ICTDU to develop detailed Action Plan outlining specific realistic and practical timelines and measurable outcomes.

Note: A preferred alternative to the ICTDU is the establishment of an entity to be registered as e-Fiji Limited.