

ISLAND COMMUNITY PORTAL

BUSINESS PLAN
SUSTAINABILITY REPORT

FINAL REPORT

SUBMITTED FOR PERUSAL AND RECOMMENDATIONS AS PER TERMS CONTRACT

DATED: SATURDAY, NOVEMBER 06, 2004

PREPARED BY: ENNDOT CONSULTING AND SERVICES
www.enndot.com.my

PREPARED FOR: MINISTRY OF COMMUNICATION SCIENCE AND TECHNOLOGY

EXECUTIVE SUMMARY	4
AIM & OBJECTS	5
OPERATIONAL OBJECTIVES	6
TECHNICAL OBJECTIVES.....	6
HUMAN RESURCE OBJECTIVES	7
SCOPE	8
CONSULTATION, COMMUNICATION AND PARTNERSHIPS	8
PEOPLE FIRST... THEN TECHNOLOGY	9
ACCESS, AWARENESS AND DIFFUSION	9
STATE OF THE “MARKET” NOT “STATE OF THE ART” TECHNOLOGIES	10
EXISTING OPERATIONAL NETWORKS	10
ADDING VALUE	11
INNOVATIVE, INTERACTIVE AND INTERNATIONAL	12
SERVICES	13
“ADOPTION” MODEL ICP SERVICES	13
“COMMUNITY” MODEL SERVICES	14
ONLINE SHOP: AN E-COMMERCE PILOT PROJECT	15
ATOLL NEWS NETWORK.....	16
ATOLL GALLERY/MEDIA.....	16
THE ATOLL INTRANET	17
OPERATION AND MANAGEMENT	17
GOVERNANCE STRUCTURE	18
GOVERNANCE	19
PARTNERSHIPS	21
PARTNERS ROLES	21
REPORTING PROJECT OUTCOME.....	21
PORTAL DEVELOPMENT TEAM, ENNDOT.	22
THE SUSTAINABILITY STRATEGY.....	23
ACCESS TO ICP	23
TRAINING, MENTORING AND SUPPORT	23
UTILIZATION, INNOVATION AND ACCESSIBILITY	24
COMMUNICATIONS, TRAINING AND FEEDBACK	24
BEYOND INITIAL FUNDING	25
FUTURE IMPACTS	26
IMPLEMENTING THE SUSTAINABILITY STRATEGY.....	27
NATIONAL AND INTERNATIONAL MARKETING	29
KEY INDICATORS	29
PERFORMANCE MEASUREMENT	31
KEY INDICATORS – QUANTITATIVE	32
KEY INDICATORS – QUALITATIVE.....	32
PARTNER BENEFITS	33
COMMUNITY BENEFITS.....	33
FAILURE ANALYSIS.....	34
BARRIERS.....	34
LOW IT IQ	34
LACK OF STANDARDS	34
DEARTH OF AFFORDABLE DATA SOURCES	34

LACK OF AFFORDABLE INTERNET CONNECTIVITY 34
ABSENCE OF FUNDING SOURCES 35
RISK ASSESSMENT 35
CONTINGENCY PLAN 36
REVENUE..... 37
MEMBERSHIP FEES 37
FINANCIAL COMMITMENTS 38
INITIAL COST 38
APPENDIX 1: INITIAL COST 39
SET-UP AND INSTALLATION COSTS 39
OPERATING COSTS 39

EXECUTIVE SUMMARY

The Island Community Portal, ICP project is aimed at the geographic, social, cultural and economic communities of Maldives initiated by the Ministry of Communication, Science & technology. All of the Maldivian communities, including the island communities and capital Malé, envision a common future that is linked to enhancing communications and new information services. These enabling technologies can be put up as a part of institution-building within the community. They can help to create an example of how a small group of islands scattered across the ocean, linked by various networks and technologies, can transform the challenges of distance and isolation into opportunities for a dramatically enhanced social and economic life.

The ICP initiative will enable new services in information exchange, entrainment, trade, possibly in e-commerce and community life. This will serve as a demonstration of how remoteness need only be a matter of geography. This will build and integrate the community's institutions and provide a new portal for Maldivians and its peoples to participate in the Information Economy.

The ICP project will builds and creates new partnerships among industry, business and local government. If “necessity is the mother of invention” then Maldives has the need and its people have the inventiveness to demonstrate how Technology can transform the future in the Maldives.

ICP is an effort that will include the building of an Atoll Community Web portal, initially for Gaafu Dhaalu and Dhaalu Atoll. ICP is all about connecting individual citizens and businesses with direct access to a variety of local and/or government services that the community is preparing to deliver online. Using custom developed web applications supported by Enndot Consulting and Services.

In addition, ICP and its supporting technologies will serve as a foundation upon which other stakeholders — both public and private — can readily launch interactive applications in a way that permits a homogenous, easily navigated gateway to government and business in the Maldives.

AIM & OBJECTS

The vision for an ICP is a community that is wise in its use of new information and internet technologies, nimble in the navigation from a resource to a knowledge-based economy, connected more successfully among the diverse regions and peoples and building the economy, communities and cultural identity.

The Maldivian community is comprised of 199 inhabited islands divided into 20 Atolls for administrative purposes. The official language is Dhivehi, though English is widely used. The Indian Ocean occupies the 99% of the countries 34,740 square miles; while the 1 percent is scattered across the vast sea as 1199 islands. Little information is available on the ancient people and their way of life of Maldives. It is argued that the earliest settlers migrated from Arabia, eastern Africa and the Indian subcontinent among other places. This mixed race settlements that make up the Maldivian community are populated less than 300,000 people.

Most of the islands in the Maldivian community are separated by sea with no alternative means of access to one another. Much of the existing access consists of sea transport. Maldivians relies upon marine transport to carry goods and people from one place to another. During bad weather conditions travel between islands is halted. We want to link the islands with a robust, internet capability that integrates the community and builds the economy. So much of the life in the Maldivian community depends upon “weather permitting” travel by sea. The time and cost of services in this context is compelling. We assume the ICP will pave the way to dramatically change information flow in those circumstances.

Despite these geographic and climactic challenges and after many, many years of working together, we have institutions and shared infrastructures in governance, education, the economy and politics. Maldivian has a secondary education system with access points in every atoll. The local governance is coordinated by a ‘Katheeb’ or the Island Chief, who is in charge of the day to day affairs of the island and its development. The ‘Katheeb’ reports to the “Atoll Chief’ or ‘Atholhuverin’ who is in charge of all the activities of all the islands in an atoll. The Atoll Chief resides in the atoll’s capital island where matters related to the atoll are directed from the Atoll Office.

The ICP has to build upon the strength of these institutional and infrastructure developments. With the help of the separated education and health centres, Maldivian can use the enabling impact of information, communications and education technologies to enhance collaboration and partnerships and build shared educational programs and health services over distance.

Information and media is distributed to Maldives from the capital, Malé. Recognizing this, the various atolls have a need to create their own media service. Inspired by this, the ICP can build a sustainable Atoll News Network information service both on the Internet and in the communities. The first pilot launch of the portal can bring information about local events, weather, people and business to the residents and to the world.

The vision of an ICP is to deploy, diffuse and excel in the tools of information and network technologies so that all Maldivians can become better connected both to one another and to the rest of the world. We want this to happen through the common institutions which we have worked so hard to create and through the new virtual relationships, which the ICP will enable.

The Maldivian tourism market is famous throughout the world, the fish industry reach the European markets and visitors from around the world come to Maldives at the beauty of the land and underwater majesty. We are a worldly people with a strong sense of place.

We aim the ICP to strengthen these elements of the character and be well known and contribute to the development of the nation.

OPERATIONAL OBJECTIVES

The operational and organizational vision is for community and small business to share the access and the costs of these community-based services throughout the Maldivian community so that we are both Sustainable and Realistic. The overall vision is a Maldivian community that uses new Technology!

Accordingly, the major suggested operational objectives of the ICP include:

- The completion of programs for awareness, access, diffusion and training in the application of ICP.
- The development, demonstration, delivery and sustainable management of enhanced services in small business, local governance and cultural expression through the application of ICP.
- The establishment and/or identification of an operational, planning and coordinating authority that will manage the ICP as well as sustain and expand upon the project into the future.

TECHNICAL OBJECTIVES

The technical vision is based on the current establishment of the internet services by local telecommunication service providers. However, there is a necessity to implement an internet access that is both affordable and sustainable with an up and down link capability in every community where

terrestrial systems preclude Internet access. One such possibility is the satellite internet and this service is already provided by the local service providers. These services as custom community-based telecommunications capabilities can be integrated with a public switched network or cable TV network.

Accordingly, the suggested technical objectives of the ICP include:

- ICP to be able to adapt to and deliver local planning, installation, operations and management of any new services in any region of the Maldivian community that will be financially sustainable.
- Development of the portal in the scope of intra-community or intra-atoll linkages to the new local capability that integrates all segments of the community into any new necessary services.
- Provision of local technical and operational support for ICP in each region of the Maldivian community and the completion of sustainable plans to operate these services into the future.

HUMAN RESOURCE OBJECTIVES

The people vision is to blend the digital skills of the youth with the wisdom and traditional knowledge of the elders. When the telephone was first introduced into the community it was the young people who learned how to use it and then demonstrated its use to their parents and elders. Adopting a similar approach, the ICP can help us move from the analog century to the digital age. People need to develop a fluency in the use of digital tools which reflects the ingenuity they have demonstrated in the use of economic technologies at sea, on land and within the industrial sectors of the community. ICP is aimed at building the digital skills of the people and increase their access to robust and capable and possibilities of ICP.

Accordingly, the suggested human resource objectives of the ICP include:

- The completion of a “train the trainer” program in the use of ICP as such that, at least, one lead “champion” is identified and trained to provide support, foster participation and coordinate the ICP services and business plan in every atoll.
- The development and integration of, at least, one Internet based education program if not all, the host atoll’s educational institutions at the secondary levels.
- The training and development of a lead “champion” for ICP in every major health facility in the Maldives.
- The annual hosting of an ICP workshop which: (a) reports on the progress of the business plan; (b) demonstrates and showcases the new technical mastery which members of the Maldivian community have developed, and; (c) provides access to new technologies and digital ICP tools.

- Once the facilities and means are available, establishment of a Maldivian e-commerce facility and services for small business and completion of a small business awareness and diffusion event in each atoll of the Maldivian community.
- The establishment and continued management of ICP training program which will be delivered with the help of train the trainer programs, telecentres and possibly in the secondary institutions and made available in every region of the Maldivian community.
- A collaborative effort to develop and implement special awareness and diffusion campaigns in the application of ICP that relate to the social, economic and cultural life of Maldivian's aboriginal people.

SCOPE

Maldivians can work as a community and we do have a proven history in building shared infrastructure, institutions as well as in organizing special social, cultural and economic events. Likewise each island has their "*island development committee*" and/or "*women development committee*". It is important for these committees to collaborate to help promote information technology, rather than fragmenting the efforts into separate individual parts. This can be achieved by agreeing to create a community-based, not-for-profit working bases that will serve their community. Such a decision will recognize the special status as a community and further strengthen the history of developing collaborative approaches and skills.

Over many decades people have become well aware that, in order to make progress, we must make progress together. We have to develop consensual and broadly understood approaches to ensuring that all elements of the cultural, social and geographic community contribute to and benefit from the progress which we seek to accomplish. This common recognition applies to all aspects of the social, cultural and community life.

CONSULTATION, COMMUNICATION AND PARTNERSHIPS

Through the years of developing institutions for the community that reflect the social, cultural and geographic realities reflect many lessons. First and foremost, the need to take the time to consult, communicate and form partnerships. The ICP will dramatically transform the capability to continue in this tradition. It will also accelerate the progress that we can make together through the application of ICP services in the social, cultural and economic lives.

In the Information Economy, successful economies have to be fast societies where access to information and communications is accelerated through the use of the ICP. The implementation of the

ICP will transform the ability to consult, communicate and form partnerships through the diffusion of skills, collaborative capacities and network systems based on information sharing and new communications capabilities.

Likewise regular consultation, communication and partnership are a vital aspect of the sustainability of the portal. Hence, we suggest the following in this business plan:

- Consult widely with the hosting communities with the help of workshops, interviews and meetings in the implementation of the ICP and specifications for the ICP Services;
- Communicate broadly about the project using the ICP portal itself, Government Ministry websites, and using numerous other campaigns and communications approaches;
- Partner with all the key stakeholders in the Maldivian community as well as with the internet service providers. We also have to form regional collaborations with organizations in other atolls.

PEOPLE FIRST... THEN TECHNOLOGY

The most important outcome of the ICP will be the new skills and collaborative capacities that are developed in the people as they use and apply digital technologies. The ICP does not subscribe to the “field of dreams” approach to technology development where the “build it and they will come” principle is applied.

We believe that there has to be a close relationship between the skills of people and the development of technologies to help provide new solutions. We have to accordingly, plan for an equivalent investment in the business plan among the development of new organizational, human resource and technological capacity.

ACCESS, AWARENESS AND DIFFUSION

The innovation experiences with technology have taught that there are very different types of responses to new technology opportunities. For the innovators and early adopters, providing access to new systems and technology solutions is often enough to ensure the optimal use of the new services and products. In reality, however, it takes much more to reach out to the majority of people who require both access to new technologies and programs of awareness which help them understand how they can take advantage of the new technologies in their everyday personal and economic lives.

For the “late-majority” on the innovation curve, however, much more intensive programs of diffusion are required. This involves much more mentoring, training, coaching and support. We recognize this and

emphasize to provide them in the implementation of the ICP for access to transformative internet in every region of the community by;

- Awareness campaigns within the community sectors along with ICP showcase and demonstration workshops that will build people's knowledge, understanding and confidence in applying ICP services.
- Diffusion and support programs for ongoing coordination in every atoll along with special campaigns of diffusion with the aboriginal and small business sectors of the Maldivian community.

STATE OF THE "MARKET" NOT "STATE OF THE ART" TECHNOLOGIES

While all of the ICP Services included are innovative, they have to be tested and proven their effectiveness. Likewise the portal services need to pass through at least a year of trial period where by it will grow and become mature as per the demands of the communities. The custom developed portal is tested in the lab and is in working as intended even in a networked environment. However this is not enough to prove its effectiveness in a live environment. Beyond the first year the portal can be commercialized and left to grow in a profit oriented environment.

We recognize the need for continued research and development and an ongoing openness to technology innovation. Hence there is a need to develop partnerships with organizations to help accomplish this. While we have to be intending to expand and build the culture of ICP services innovation in the Maldivian community, we will have to want the systems to be robust, reliable and technically effective.

SETUP

EXISTING OPERATIONAL NETWORKS

At present Dhiraagu, a privatized joint venture between the Government of Maldives (55%) and Cable & Wireless (45%) provides all telecommunications services, except Internet access. A second internet service provider (ISP), Focus, was licensed to provide Internet access in 2003. Work is also underway to choose a second mobile phone service provider. Prior to 1995 telephone service was available only to a few islands. However, by the year 2000, all inhabited islands had access to communication by telephone. In addition, GSM mobile services are available in the capital and to a large part of the population. Internet access is available throughout the country, mainly in the form of dialup. Leased, ISDN and ADSL access is also available.

Currently, there are 1,112 registered Internet subscribers in the country of which 61 are connected via leased lines, 185 via ISDN and 220 via ADSL. Nevertheless the Maldivian community's access to network services is both underdeveloped and, in some regions, undeveloped. Compounding the problem of speed of transmission and dialing to the Internet, the discounted leased line connection to the internet have become so popular that they are often used to capacity.

The two Internet Service providers do provide Satellite Internet connection as an option; this can be used to connect the remote island communities to the Internet. Some islands are undergoing the cable network services to the households, this network along with a satellite internet can be used to deliver the Internet to the households. This system can provide internet services to most of the islands over the next three years and should create the possibility of greater local access to the Internet. The speeds of transmission, however, will remain a major barrier to the development of ICP services for the foreseeable future. The ICP do create the 'need' for such a transform.

Some atolls can be connected through local wireless connections among cultural and economic development agencies. This will provide distributed, high-speed telecom access based on an affordable Bandwidth-on-Demand (BOD) platform to key ICP stakeholders in each of these atolls. With such a setup, high-speed data transmission can not only be possible, it can readily be a reality.

In some atolls of the Maldivian community, this type of wireless, satellite facility can be a medium-term (3-5 years) solution as other developments can accelerate the deployment of higher speed telecom access. For most of the atolls in the Maldivian community, this type of shared, multiple-use service can be the only viable solution available for high-speed data access into the future. It is also the type of solution that has direct relevance to many other rural communities as well as to the entire developing world which is only now dealing with the technology choices associated with entry into the Information Economy.

ADDING VALUE

The ICP Services program will add value to the future similar projects, notably the e-government project, in three important ways:

- The lessons learned from the R&D phase of this novel ICP will already be known in Maldives. The "mistakes" will be well known and it can be eliminated.

- The ICP Services that will be developed will help to build the market for the sustainability of these innovations in remote community Internet access. As more community institutions in small business and local government come to rely upon internet, rather than expensive and time consuming travel, the ICP Services will “make the market” for digital services in all of these sectors. This will be accomplished with an entry-cost that is accessible and affordable.

- The “people” skills that will be developed through the ICP Services will lead to the creation of small IT-based firms that will develop new services in the Maldivian community and, importantly, assist other sectors of the local economy in extending their reach to markets in Maldives and the world.

INNOVATIVE, INTERACTIVE AND INTERNATIONAL

The ICP Services plan is innovative & interactive. What we are building through the ICP is directly transferable to other remote and environments that have similar Internet and bandwidth access challenges. As the pilot project is initiated only in Dhaalu and Gaafu Dhaalu Atoll the lessons learned can be used in the implementation of the portal in other atolls.

The Multipurpose Community Telecentres (MCT) project would help in the sustainability of the ICP with the introduction of internet access points in the atolls. In the light of the diseconomies of scale and the severe logistical constraints that exist in the provision of internet services, the MCTs will facilitate the provision and expansion of important services using ICT to the island communities at a sustainable and affordable cost. The MCT concept involves the creation of an island location, where a variety of ICT services such as telephones, fax, voice mail, Internet, TV and radio for information and recreation will be provided to the island communities at an affordable cost.

In addition to the provision of the services stated above, MCTs would also provide in-service training in word-processing and in the use of the Internet, other information technology applications and this can include the portal training. In the longer term (when higher bandwidth becomes available nationwide), as teleconferencing becomes increasingly available, it would become a key part of the successful operation of an MCT. It can be used by the government for good governance. Teleconferencing can be used in different sectors to enhance the services delivered.

Additionally, the ICP will assist our hospitality, resource and service sectors to extend their “reach” through greater Internet and email marketing programs that can be included in the e-commerce ICP Services.

SERVICES

The initial ICP will consist of (4) four Services to the community, Online Shop, Atoll Intranet, Atoll Gallery/Media & Atoll News Networks. These four services can be incubated through the ICP program to become stand-alone, self-sustaining commercial services by the end of the project. Additional (3) three services can be incorporated using the “Adoption Model” of sustainability, atoll communities can work with the stakeholder organizations in health, education, local administration and government to develop, test, market and “hand-over” three (3) of these services.

“ADOPTION” MODEL ICP SERVICES

- Telehealth: The deployment of telehealth diagnostic, data transfer and consultative services from both the IGMH, ADK and among various Health Centres of Maldives with full community deployment and internet based health consultation. This will enable broad public access to health information and advice; a Maldivian Health Online service can be incorporate in the ICP Plan.

As the existing service linkages between Islands and Malé mature, other services like video conferencing can be included. At start, the principal services which can be captured are health professional’s consultation time and booking services along with the participation of nurses in continuing training and professional development.

The Ministry of Health can be approached to provide funding to support the hiring of Technical Coordinators in each of the health centres where the new service can become available.

By the conclusion of the ICP, the health “train the trainer” program can be packaged and marketed via the Internet to other health professionals operating in geographically remote regions of Maldives and possibly other international markets. The enabled telehealth services that are facilitated by the ICP plan can be “adopted” by both Health Ministry as part of their ongoing service provision.

- Government Information: Though this is an island community portal, this can become an important feature to share government and community based information to both the public and government agencies. However it is left to the community to initiate and take ownership. Likewise this can include statistics and information of different islands, related to fisheries, agriculture and tourism in the region. Even now all of this information is transferred through various other means.

- Distance education and WWW can be accelerated with the implementation of the ICP. In the early stages the ICP “train the trainer” program can be developed over the Internet with the cooperation of

Education Institutes. ICP program can recruit volunteer coordinators in each atoll. In return for their volunteer coordination of the ICP program in each atoll, they can be provided with:

- Free training in the “train the trainer” program;
- Play as ICP brokers to facilitate others in the online shop;
- Annual participation in the ICP showcase and demonstration workshop where they will report on ICP developments in their area.

The ICP program can also work with the major schools and Atoll School and other Education Institute to identify and assist in the development of an Internet based course in the secondary curricula. This can be accompanied by the development of more Maldivian-based educational resources in digital format within the entire school.

The entire ICP program can be based on building a critical mass of users in the health, education, local administration, small business and general public markets. Through the recruitment and appointment of lead users in the health and education sectors, we can envision the related services to be “adopted” as operating programs within each of these sectors by the end of the project.

These are some initial adaptation services that can be incorporated with the ICP, this is not a complete list and there can be many similar services, making sky as the limit of the potential use of ICP.

“COMMUNITY” MODEL SERVICES

Through the “Community” model of ICP Services and related diffusion programs in the community and small business sectors, we can build the critical mass of users to generate sufficient subscription, advertising and investment revenue to maintain and “grow” the services.

- Online Shop can be an e-commerce project for Maldivian cultural, hospitality, crafts and related projects to reach national and world markets.

- Atoll News Network can provide weather, community events, environmental reports, discussion forums, job listing, Maldivian links and other local news and reports which are unavailable through existing media.

- Atoll Gallery/Media can become a digital showcase for Maldivian’s cultural legacy.

- Atoll Intranet can provide a digital communications system linking all atolls and be a transitional technology and communications medium for Maldivians.

ONLINE SHOP: AN E-COMMERCE PILOT PROJECT

Maldives is a unique destination with a unique combination of cultural influences. There are worldwide markets for our specialty sea-foods, traditional crafts and tourism destinations. Many of our small businesses do not have the capability to take advantage of those markets at the present time, and the online shop pilot project can bring the capability to all communities in Maldives. In fact, the Online Shop may be the only way for many businesses to reach a worldwide marketplace.

The Online Shop pilot project can retail Maldivian products and services with a particular emphasis on those products and services that illustrate Maldivian's unique natural and cultural heritage. As the project expands past the pilot it can be possible to include additional products and services. The Online Shop can link with the Atoll Gallery/Media as a marketing tool, a showcase for Maldivian's culture and heritage. The Online Shop can also include tourism information and tour packages and links to tourism sites.

Though it is not true e-commerce, the Online Shop can focus on the development and promotion of e-business as a tool for small business growth and economic development. This service can include proactive e-mail marketing, auction and online help services to small business. Additionally a database of e-mail addresses for Maldivians who have moved elsewhere can provide a mailing list with news of the region, including tourism events. By the conclusion of the initial launch of ICP, this service can become financially self-sustaining and can be operated by a Maldivian infopreneur once the market and business base for the service has been developed.

An important component of the e-commerce project will be an awareness and education program to inform businesses about how they can use e-commerce. This program can also address approaches to conducting business with a new international market and an expanded year-round operation. Many businesses in Maldives are seasonal. Craft producers, for example have a three month tourism season to sell their product. The education and awareness program will take into account the changes in production, meeting time and volume demands, shipping and marketing.

At the same time we cannot emphasize enough on the importance of developing strong partnerships for the development of this project.

ATOLL NEWS NETWORK

The Atoll News Network (ANN) can act as a public news & information service for all Maldivians and a primary communication tool for the ICP. It can draw atoll and national news into Maldivians, making it accessible to all residents, and disseminate Maldivian news throughout all regions, and ultimately the world. At present there is no news or information service for all regions of Maldives. Maldivian is served by numerous print and broadcast media – all of which reach only limited, atoll audiences in timely manner. More often than not, news is passed between regions of Maldives by word-of-mouth.

A primary purpose of ANN can be to provide a means of collecting and publishing Maldives news so that it is readily available to all Maldivians. The objective is to evolve from a simple and easily implemented and maintained system in the first year to a full-fledged on-line newspaper.

To start, Atoll News can consist of a series of moderated newsgroups or forums delivered over the Maldivian Intranet. One newsgroup can be created for each atoll. All Maldivian residents may freely read the contents of each newsgroup and submit news items for publication. Submissions can be directed to regional moderators – who will review and edit submissions much as a newspaper editor does. The volunteer ICP Community Champions in each Atoll have to assist in the diffusion of skills and applications for local people to develop a fluency in contributing to the Atoll News Network.

As participants gain technical skills and experience, Atoll News can move to a web-based format. Published initially as basic webpages incorporating text and graphics; Atoll News can grow to include dynamic multimedia content accessible in all atolls as the broadband technology become fully available and utilized.

As the quality and depth of content improves, the Atoll News network can provide a highly attractive advertising vehicle for Maldivian businesses and for outside companies doing business in Maldivian. Through advertising and subscriptions Atoll News can attain financial sustainability.

ATOLL GALLERY/MEDIA

The Atoll Gallery/media is a comprehensive website of Photos and Media files. It can showcase Maldivian's environment, social activities, culture and heritage. ICP can start as a simple photo gallery and build in more interactive and multimedia content as it go along. For example, the preservation of traditional crafts would start with text and photos on the website, and build to develop streaming audio

and video presentation. In time, is live video conferencing can be available for training purposes within Maldivian, and possibly it can link with outside research institutions.

THE ATOLL INTRANET

The Atoll Intranet will provide a digital communications system linking all Maldivian atolls and accessible to all Maldivians. This Intranet can allow web-based communications for businesses, government and individuals throughout Maldivian. The Intranet can have a three-fold purpose:

1. To provide the capability of bringing information from world-wide sources to the people of the Atolls;
2. To allow the sharing of information between all regions of Maldives
3. To provide a means of broadcasting high-quality information from Atolls to the world.

Information systems deployed on the Atoll Intranet – the Online Shop, Atoll Gallery, and Atoll News Network – here to designed to generate revenues through advertising, subscriptions and sales. As the continued success of these information systems depends upon the existence of the Atoll Intranet, funds can be drawn from these revenues for maintenance of the Intranet.

OPERATION AND MANAGEMENT

As the sponsoring organization, the MCST has to be actively committed to the development, implementation and evaluation of the ICP Initiative. However, there is a clear need to form an ICP Management Team (ICPMT) for the operation and management of the ICP initiative, not-for-profit organization with a cooperative development strategy. ICPMT can comprise the island committee members and/or officials from the MCST aimed at achieving the goals of:

- Increasing awareness of the benefits and potential of ICP
- Developing skilled population to meet the demands of the ICP
- Increasing development of ICP business opportunities and partnerships

The ICPMT will assume the governance, leadership and management role of the ICP and have to maintain the strong knowledgebase that can be developed in the implementation process.

GOVERNANCE STRUCTURE

ICPMT should be a not-for-profit incorporated company comprised of four levels of membership: community members, consortium members, stakeholder members, and partners.

Community members

Community members are typically small businesses and professional people who can pay a small annual membership that entitles them to discounted connections, access to minutes of Board meetings, access to the ICP Website, special pricing promotions by Partners, and special software and hardware pricing. Community members benefit from the aggregated buying power of the entire membership.

Consortium members

Consortium members are businesses and organizations that wish to be made more fully aware of the capabilities and development of ICP on a continuing basis. Consortium membership provides member organizations with representation at the annual membership meeting, access to minutes of board meetings, access to the ICP Web site, special pricing promotions by partners, special software pricing, and opportunities for future partnerships related to community and government funding initiatives. Consortium members will not have any decision-making authority for the corporation.

Stakeholder members

Stakeholder members can have all the benefits of consortium membership, plus each member can have connectivity to the ICP for research and development purposes. The costs of a Stakeholder membership can include internet connectivity for access to the portal at high speed, which can be shared to the community. Further, stakeholder members can benefit from the aggregated buying power of the group with partners and others.

Importantly, only Stakeholder members — as the "board of directors" — can make decisions regarding the strategic direction and development of ICP. A small group of professional staff can run the day-to-day operations of the organization with direction from the board.

Partners

Partnerships, which comprise the fourth level of ICP membership, can represent private sector interest and expertise. Partners can have the opportunity to become part of the solution subject to approved purchasing policies and guidelines. As ICP forges business alliances within atolls and across Maldives, these associations can lead to support and exchanges of information that will be beneficial to members.

Supporters

Supporters can be community based initiative funding organizations like UNDP, UNICEF, UNFPA & WHO. Additionally they can include national and international parties who are willing to fund the ICP in exchange to use the portal as a research bed. Other possible supporters can include Maldivian Tourism Board who can have an indirect benefit by being a part of the project. Other supporters can be voluntary supporters who are willing in to invest their time and energy to make the ICP a success by sharing their ideas, attending the meeting and by way of letters.

GOVERNANCE

As already indicated the ICPMT can be the sponsor of the ICP program and have to provide governance for the program throughout the implementation and beyond. Representatives from the MCST can function to provide direction and community accountability for the ICP.

To supplement its existing governance structure, the ICPMT can “adopt” an ongoing advisory capacity for the ICP development team, Enndot. Accordingly the ICPMT can consist of the following representatives:

ICPMT Leader

Leader should be qualified to ensure that the program fulfills all commitments and remains responsive to the dynamic nature of the community, stakeholder and partner interests and requirements.

Management Coordinator

Management Coordinator reporting to the Leader, the Management Coordinator’s principle functions can include:

- Managing the budget, timeline and program plans of ICP
- Managing staff and volunteers involved with ICP implementation
- Managing the ICP Services and Infrastructure

Operations Manager

Operation Manager reporting to the Leader can be responsible for all administrative and accounting/bookkeeping functions of the ICP program. As the private, public, community and non-governmental organization investments into the ICP program are both considerable and diverse; a full-time senior operational/administrative position will be required.

Technology Support

Given the technology-intensive nature of the ICP program, two (2) technical staff will be required to support the training, field operations and technology maintenance of the program. Atoll These two (2)

positions can report to the Management Coordinator. Enndot Consulting and Services will also provide ongoing technical guidance and support to the ICP technology deployment and management.

Field Operations

The ICP program is committed to a pervasive awareness and diffusion approach to the development of the Community. Accordingly, five (5) ICP Atoll Facilitators can be recruited and hired within the atoll to assist with the organization, monitoring and development of the ICP program for every atoll. The principal role of the Facilitators will be to work closely with the ICP Community Champions who serve as a volunteer for the ICP in every atoll.

Community Champions

As already referenced in this Business Plan, volunteer ICP Community Champions can be recruited in every atoll. In return for volunteering their coordination, communication, and support roles to the ICP program they will receive train-the-trainer certification and will be invited to participate in each annual ICP Showcase Workshop.

Among the roles of the Community Champions can include;

- 1) Identifying local content needs and anticipated demand in order to determine the current and future requirements for the community;
- 2) Identifying and engaging local stakeholders (such as other communities, private and public sector partners) who are prepared to make a contribution to the project;
- 3) Consulting with neighboring communities to determine the combined demand for ICP services and partnering possibilities;
- 4) Preparing a financial analysis that provides the rationale for the operation of ICP Services and that details how the proposal would be sustainable;
- 5) Conducting an impartial (technologically and commercially neutral) request for proposal (RFP) process for the purpose of identifying the most suitable match between community needs and resources, and a private sector partners (where possible) which is capable of delivering those services in a sustainable manner (and which provides for third party access to the proposed services);
- 6) Identifying the potential economic, social and cultural benefits for the community;
- 7) Project management, monitoring, evaluation and reporting, as may be required for the operation of the ICP Program; and
- 8) Providing other relevant information that may be required for the successful operation of ICP Program.

The structure of the ICP Initiative has been developed to maximize effectiveness and communications within the ICP team and throughout the Maldivian community. The ICP management model ensures an effective approach to team work that will allow a workflow that is functional, geographical, as well as project oriented.

PARTNERSHIPS

The entire ICP Business Plan is built upon and will depend upon the partnerships with organizations and institutions in Maldives, the government, private sector and the world. We need to come up with a list that reflects willing partners from every sector of the Maldivian community.

At a first glance the possible partners can include organization and businesses like UN Agencies, Najah Art Palace, Theleseemia Center, Nacotics Controll Board, Gender Development Initiatives, Lily Store, Villa, Vadee Hardware, Sonee, BHM Traders, Dhiraagu, Focus, Rainbow, Muni Travel & Trade, Damas, Cement Fihaara and So on.

PARTNERS ROLES

ICPMT has to be established as a “not for profit” corporation managed by a Board of Directors, which can comprise of Stakeholder Members. The executive of the board can consist of a Chair, Vice-Chair, Secretary, and Treasurer. The Board of Directors should meet monthly.

Because of the nature of ICPMT composition, Stakeholder Members can come from different sectors and from various departments within the community, making for a very diverse combination of professionals. Whereas several members can represent the IT department, ICPMT also should have membership for Administration, Finance, and Planning departments. The Executive can be represented by IT Managers as well as a Chief Executive Officer. The Project Manager should have several years of management experience in both the private and public sector, specializing in the areas of Accounting and Information Technology. By utilizing the expansive technical knowledge of the Board of Directors, as well as the organizational and time management skills of the project manager, ICP should have the management and direction it requires to successfully complete this project in a timely manner.

REPORTING PROJECT OUTCOME

Reporting can be organized around a series of standardized events. The MCST, and the ICPMT Members and the applications can share a series of milestones:

- § Milestones
- § Hiring/appointing staff

- § Preparation of functional specifications and work plans
- § Purchasing equipment
- § Installation of equipment
- § Testing of equipment
- § Launch of network or application

The Member for each network application can report to the ICPMT Project Manager when he or she achieves one of these milestones. ICPMT aggregates these reports and submits them to MCST on a quarterly basis. The annual report of ICPMT and the financial audit results can also be distributed. The key result reporting areas could include: connectivity, applications development, portal usage and attitude, cost effectiveness, technology performance, economic self-reliance, economic impact, and human resources development.

The overall format of the project-results report can include the following items:

- § Report contents
- § Environmental scan — strengths, weaknesses, opportunities and threats for the period.
- § Status of project as compared to implementation plans and compared to other similar atolls.
- § Services and products delivered or developed.
- § Description of benchmarks achieved.
- § Strategic objectives for next period (6 months); report on last 6 month's objectives.
- § Consortium — Status of membership, geographical areas being served, operational report and financial report.
- § Projections for growth.
- § Evaluation plan results, plans to gauge opportunities and address weaknesses.
- § Copies of online communications, newsletters, media coverage, and other marketing information.

Working directly with Portal Development Team, the project manager can ensure the existing and developing portal applications reach their intended users in a timely and effective manner. The project manager should troubleshoot problems for the members and coordinate the necessary resources to achieve the results set out by each

PORTAL DEVELOPMENT TEAM, ENNDOT.

The project manager can report directly to the board of directors and be held accountable to the board. Each manager can report directly to the Project Manager and be accountable to the Project Manager for results. Functional areas of performance can be reviewed quarterly consistent with financial and other reporting required.

THE SUSTAINABILITY STRATEGY

Through the extensive consultations and communications, we have come to understand the following priorities would need to be tackled. In order to sustain the project.

ACCESS TO ICP

The Maldivian Community has both underdeveloped and uneven access to Internet. In most of the atoll, the speeds of transmission are too slow to allow for increasingly graphical and bandwidth-intensive applications and services. As the most common internet service, dial-up travel at 56.6 KBS, and the demands on this limited capability are considerable, more telecommunications capacity is required if we are to communicate more successfully among the communities and with the rest of the world. Additionally, most of the island communities do not have local-dial access to the Internet and have to face prohibitively expensive satellite broadband Internet access.

Accordingly, this business plan suggests;

- Look into the possibilities of supporting broadband, satellite-based, shared-use telecommunications capacity in those regions of the Maldivian community in partnership with either Dhiraagu and/or Focus.
- The development of intra-atoll or intra-regional wireless, cable and/or dial-up local transmission capabilities with the help of partnerships, donor funding and/or fund raising through the community.

TRAINING, MENTORING AND SUPPORT

The Maldivian community clearly have a need for increased training, support and mentoring in the application of ICP services. Time and again we have been told that there are too few people with the advanced skills necessary to support accelerated adoption of ICP services and insufficient ongoing training and curricula in this area.

Accordingly, in this business plan we suggest:

- The Development of Maldivian Information and Communications Services

Given the compelling distances and geography over which all of our institutions must provide service, the Maldivian community has to identify a broad range of new Internet based services which it requires in health, education, small business, local governance and information access.

The inventory of ICP Services that we suggest to develop in response to this requirement is extensive. From distance education, to telehealth to Atoll News services, the Maldivian community has to articulate

innovative and imaginative requirements for this business plan. In every region of the Maldivian community, a Services product template has to be completed and a local “champion” has to be identified to maintain responsibility for the priority of these services throughout the implementation of the ICP.

UTILIZATION, INNOVATION AND ACCESSIBILITY

In the implementation of the ICP we will have to make use of the major educational, health, local administration and industrial/business stakeholders identified as the principal channels of distribution for all of the services and products that each community intend to develop and deliver.

While each community can create new Maldivian community info-entrepreneurs within the implementation process, they will need to rely upon an “Adoption Model” of both short-term delivery and long-term sustainability for the ICP. By “Adoption Model” we refer to assisting the existing community to integrate the ICP Services into their everyday operational life. Stakeholders can invest in the delivery of the ICP while telecommunication service providers can invest telecommunications services on an incremental cost-recovery basis. By the end of the implementation the stakeholders, health, education, industrial/small business and local administration partners will have “adopted” the new ICP services as elements of their own operating costs.

Accordingly, this business plan suggests:

- Develop a Research & Diagnostic system for the testing, introduction and management of these new ICP services;
- Understand and integrate the social and cultural elements associated with continuing innovation with ICP Services;
- Test and plan to expand new ICP services based on multiple-user access in each region of the Maldivian community.
- Test and develop some of the human systems of collaborative community planning, technical support and ongoing monitoring and evaluation associated with the ICP.

COMMUNICATIONS, TRAINING AND FEEDBACK

As we have already referenced, the ICP is based squarely on communications, training and monitoring/feedback systems. In summary, the ongoing communications program can include:

- Monthly management meetings of the progress of the ICP services.

- Monthly “same-day” electronic newsletters distributed via both email and other Medias to share milestones, upcoming events and issues associated with the ICP services.
- Postings about the ICP plan on the Atoll News Network, Portal.
- Annual showcase and demonstration workshops or campaigns to promote the ICP services.

The ongoing evaluation and feedback systems need to become operational and they can include:

- Pre- and post ICP Focus Groups and Key Informant Interviews in each region of the Maldivian community.
- Each user can be asked to complete evaluation sheets on the use of ICP facilities and services in exchange for initial reduced costs of access and use. Monthly interim data reports from these forms can be compiled and distributed.
- A Quarterly Feedback report from these evaluation forms can be discussed at each “live” meeting of the ICP Focus Groups and distributed to all stakeholders and to the existing media and the new media which are developed within the ICP program.
- An evaluation and feedback workshop can be included as an element in each of the annual ICP showcase workshop.

Commitment to training within the ICP business plan is, as we have stated, a pre-requisite to the success. In summary, the training program can include:

- A “train the trainer” ICP services program to up-skill the capabilities that exist in all regions of the Maldivian community.
- The provision for a lead “champion” in every health and education facility in the community along with trained ICP program coordinators and support personnel in every atoll.
- The development and delivery of an “ICP Service” training program on the Internet with access points, coordination and support in every atoll both in Dhivehi and English.

BEYOND INITIAL FUNDING

The ICPMT have to develop a sustainable business model based on a mix of revenue sources including residuals from partners based on the aggregated purchases of members, membership fees, and other government funding sources.

From a day-to-day operational perspective, ICP will have to be staffed by a full time Project Manager to ensure effective operations. The Project Manager can be accountable to the Board of Directors through business plans and reporting on a scheduled basis.

Support for the ongoing development and ICPMT can provide maintenance of the community portal through its revenues from operations, including commitments in-kind from partners for consulting and technical support.

Enhancement of portal applications, maintenance of the ICP services and development of new services can be driven by member requirements and supported by Partners.

FUTURE IMPACTS

The ICP need to be engineered based on industry standard protocols and open architectures for hardware, software and communications. The Stakeholder members should be committed to building the portal based on these standards and to stay abreast with standards and technology development to ensure that as things change ICP can stay on the leading edge, yet firmly grounded in proven systems and approaches.

ICP Stakeholder members and staff should regularly attend training and self learning to keep up to date with latest trends. In part, it have to be this activity that can led towards the hardware and software standards that we are planning to adopt so far.

IMPLEMENTING THE SUSTAINABILITY STRATEGY

The ICP business plan is committed both to success in transforming social and economic life within the Maldivian community as well as to a rigorous performance management approach that is focused on key outcomes and results. We need to develop a systematic approach to evaluation, feedback, reporting and communications for the ICP plan.

Along with a clear vision of what to accomplish and sound management of the plan, it is extremely important that the operations and initiatives be visible and transparent to the community that ICP will be serving. The plans to include monthly data impact management reports, quarterly public reports and the annual ICP showcase and demonstration workshops can help to ensure that both the successes, and the setbacks and challenges which are encountered, help the Maldivian community develop a Learning System for the ICP program.

Put simply and succinctly, the key result of the ICP business plan will be smarter, faster and broader participation of all segments of the community in the Information Economy. The future of all of the institutions and the economy is clearly linked to success in this.

The results which we need to seek to accomplish are directly related to the vision we share for the ICP program, which we restate here:

The vision for an ICP is a community that is wise in its use of new information and internet technologies, nimble in the navigation from a resource to a knowledge-based economy, connected more successfully among the diverse regions and peoples and building the economy, communities and cultural identity.

The quantifiable results we need to seek to engender with the ICP program relate directly to a dramatic shift in the skills of the people to navigate their social and economic welfare in the digital economy. This means healthier people, smarter and more self-confident people and economically more diverse and networked businesses and settlements.

In the economic life we would expect:

- More of the businesses adopt e-commerce applications and Internet and email marketing approaches especially in tourism, travel, training services, craft production, financial and retail services.

- New infopreneur start-up businesses grow to serve the developing local market for networked based services and to sell Maldivian services and products nationally and internationally.
- Seasonal patterns of self-employment and work come to be supplemented by income and employment derived from information and networked based economic opportunities.
- The Maldivian community becomes a demonstrated “best practice” example for other geographically remote communities such that specialist training, consulting and service development enterprises, including members of the aboriginal community, are visible for other developing world markets.

The ICP program and the economic benefits that we need to expect to derive can succeed if the people are healthy and well informed. This is why we need to placed emphasis on the “adoption” model of sustainability within the health, education and local governance sectors.

In the health sector we can expect the following results:

- Telehealth and networked diagnostic, consultative, patient record and training practices become a regular and operational reality in all of the health and related institutions such that greater numbers of the people have health information, receive care and medical interventions more quickly and at less cost, and the quality of health services is demonstrated to have improved.
- Medical practitioners, especially in the more geographically remote atolls, receive regular network-based continuing training and professional development such that they are able to provide a broader range of services locally and the quality of professional life improves whereby the high turn-over rate which presently exists is dramatically improved.

In the education and learning sectors we can expect the following results:

- More graduating secondary students pursue post-secondary training and are able to complete more of their post-secondary certification in Maldives.
- More of the elementary and secondary students develop digital competencies in the school curriculum such that they graduate with skills, attitudes and values that help them work, start businesses and bring new skills to life in the Maldivian community.
- Many more Maldivian historic, cultural and social learning resources in digital form become part of the curricula of all of the educational institutions and facilities.

In the cultural life, we can also expect to see dramatic changes due to the ICP program.

- The aboriginal community will come to adopt new digital tools and skills in their new systems of self-governance, land and environment management.

- Maldivian's cultural heritage, historic resources and art will come to be more widely known about and accessed throughout the world.

NATIONAL AND INTERNATIONAL MARKETING

The ICP plan includes e-commerce based, accelerated Internet and email marketing programs of awareness and diffusion for the small business sector of the economy. We expect that this will create dramatic changes in the quantity and quality of networked business linkages and partnerships that will be developed through the ICP program.

We can also develop linkages with a broad range of business, industrial and institutional partners that serve as important entry-points for the marketing of the services and products the ICP program will engender. These national and international marketing linkages can include:

- Industrial partnerships
- Networked contacts with International Financial Institutions involved in Information Society development cooperation in the 3rd world including:
 - the World Bank
 - UN Agencies
 - ADB
- Global small business linkages
- Institutional partnerships
- Industrial linkages
- National linkages

We have every confidence that as the skills, services and products develop throughout the ICP, the networked contacts with the foregoing firms and organizations will provide functional channels of distribution for the ICP program in national and international markets.

KEY INDICATORS

The ICP business plan includes a Learning System approach to the implementation of a formative and summative monitoring, assessment and evaluation which includes the following:

- Pre- and post Focus Groups in each atoll,
- Pre- and post key-informant interviews with stakeholders throughout the Maldivian communities,
- Client record file review,
- Post-event client service satisfaction data review,

- Learning System and Evaluation workshop at Annual ICP Showcase Workshop,
- Stakeholder/partner program and client record reviews,
- Ongoing forum with Atoll Facilitators, Project Team and Local Community Champions,
- Review of interim evaluation data reports at every quarterly meeting of the Project Team.
- Review of portal and related services project logs.

Among the Key Indicators that can be included in the Learning System and Evaluation are:

- Percentage of population in each atoll using and reporting satisfaction levels with ICP services.
- ICP Services “impact” adoption decisions of Maldivian community institutions and agencies because of experience in using ICP.
- Number of new ICP Services that are established to service new demands generated and markets “made” by the ICP.
- Percentage and types of educational offerings that are available via distance in Maldives at the end of the ICP implementation.
- Percentage and types of health services that are available via distance in Maldives at the end of the ICP implementation.
- Nature of operational, technological and financial sustainability of ICP Services at the end of the ICP implementation.
- Number and type of export product and service contracts completed relating to ICP programs in the nation and other regions of the world.

PERFORMANCE MEASUREMENT

A major transformative effect of the ICP projects will be in the ease of communication between Island Communities in all of the atolls, in all sectors. This is a function of the Internet's power to communicate, but focused through a platform that adds value by providing collaborative tools and powerful software applications to island community businesses, organizations and individuals.

A second transformative effect will come from the high profile that this platform will have – in its own right through the development of local content and applications, and through the “demonstration” component of the Communities program. This significant web presence, and the future e-commerce tools, will allow even small local businesses and organizations to participate in the global transformation of business processes and the development of new international markets.

A third transformative effect relates to how technology supports and amplifies trends towards integration in service delivery and supply chain management. Problems know no boundaries; nor do opportunities. ICP will provide birds' eye views of the social and economic landscape, and a chance to come up with holistic solutions. Children at risk, for example, will have the benefits of the entire range of expertise available in the atoll, in the fields of health, education, recreation, culture, justice or social services. Businesses will similarly be able to use experts and best practices to support high performance manufacturing, business-to-business and consumer commerce, developing and expanding export markets or life-long educational support for their workers. Industry and government will have access to tools and information that will help them provides integrated responses to important issues that effect regions, for example, in the fields of safety services and emergency response.”

This vision of how ICP will change island communities applies equally well to Male'. Developing public access and training, along with the portal and support infrastructure to support it, is an important first step towards these important results.

Measuring these results will certainly be an important task for the ICPMT and MCST. The following qualitative and quantitative measures were developed in this Business Plan:

KEY INDICATORS – QUANTITATIVE

- Use of project facilities by sectors (measure customer interactions, clients served, questions answered at help desks and neighborhood centres and by project staff). The goal will be to show a significant increase in these measures during the project period.
- Public access penetration – a measurement of the percentage of neighborhoods in the atoll that have access to the Internet through a public access islands access site such as a public library, community centre or business. The goal is 100% of all the islands in the atolls.
- Economic development indicators: population growth and distribution, new business development, international business growth measured.
- Home and business penetration of Internet and commerce use. An early marketing goal will be to measure both using statistically valid methodologies, with regular measurements over time.
- Island access site availability – percentage of time that ICP services are available to and through island access sites based on agreed levels of support standardized throughout the atoll, modified for local requirements, documented with service agreements between the ICP organization and individual partners.
- Value of intellectual property developed through ICP activities. This measure will include commercialization of technologies for the benefit of individual partners and ICP as an organization.
- Network growth and development (measure network nodes, Internet hosts, shops before ICP development and during project milestones). The goal of ICP will be to show a significant growth in each of these measures.
- The ICP itself will become an important source of quantitative data, with the availability of “click-through” data on website use, and the opportunity to poll customers on-line.

KEY INDICATORS – QUALITATIVE

- Quality feedback from customers in the atoll, based on online and offline surveys, questionnaires, focus groups and interviews. Quality of service will be monitored and quality goals will be based on high standards, showing improvement over the life of the project.

- Regular stakeholder surveys to keep track of the levels of ongoing support for the project, using focus groups, questionnaires, surveys. The goal of ICP will be to increase the level of support of the original partners over the life of the project, and to add partners from the public, private and voluntary sectors.
- Regular visioning and strategic planning exercises to provide high-quality assessment of the alignment of the project's current direction with the future as seen by stakeholders and experts in ICP, economic and community development.

PARTNER BENEFITS

The community tele-centers can provide users without access to Internet connected PCs at home or work to access community information through the portal.

The ICP concept should be designed to enable meaningful online applications in a way that generates early success stories. These, in turn, can fuel future service development and accelerate support for conquering the real-world connectivity hurdles faced by atoll communities. Once the ICP services are in place, any individual or organization should be able to post content to the community in a consistent manner providing new opportunities for communications and commerce.

The integration of interactive voice over the internet technology with the interactive Web-based information means that everyone in the atolls can have access to enhanced electronically delivered services and the staff who must support it, can have the tools they need to get the job done.

COMMUNITY BENEFITS

The power of the ICP capability, combined with affordable internet connectivity, could be used to connect students, teachers and specialists in virtual private network sessions. This could be applied to healthcare delivery, tourism, small business and government with individuals and organizations collaborating and interacting in real time just the way they do today in person or over the phone.

FAILURE ANALYSIS

There are substantial barriers, gaps and challenges in establishing the portal in the atolls. However, these impediments to effective communications and participation in the knowledge-based economy are not unique to the market, but reflect the digital divide faced by all rural communities.

BARRIERS

Probably the most significant barrier would be the inability to work out an arrangement with the incumbent telecommunication service providers that is mutually agreeable. It is predicted that the incumbent's would prefer to have an exclusive arrangement. However, we suggest an open approach, one that it is inclusive for any interested parties. There will be a need to continue to work towards success in this area.

LOW IT IQ

A general lack of understanding about the importance of information technology and access with the public will be a barrier to wider participation and support for the ICP. Less than 40% of homes in the atolls have a personal computer and fewer still have Internet access today.

LACK OF STANDARDS

There is a pronounced lack of mature industry standards for electronic services delivery. The absence of standards will be a barrier to wide spread availability and affordability of information.

DEARTH OF AFFORDABLE DATA SOURCES

Willingness to share cost effective data is fundamental to the success of ICP, but this will be an elusive goal. As with the major public sector players, the biggest barrier will be information interoperability – even when businesses decide that sharing is beneficial, uncoordinated data makes sharing impossible.

This phenomenon is part of a historical nature of competition for scarce resources and the natural inclination of members to protect their investments and information. In many cases that means they will be not ready or willing to digitize their information.

LACK OF AFFORDABLE INTERNET CONNECTIVITY

The greatest gap we have in the community is lack of access to affordable internet connectivity. In some atolls there is no telephone service provided for the local households. ADSL has not been widely

deployed in the atolls and leased lines services are either unavailable or prohibitively expensive relative to Malé. Scalable connectivity, such as fibre optic or fixed wireless is not available from the telecommunication service providers to all the atolls.

ABSENCE OF FUNDING SOURCES

There has been a pronounced absence of funding available to address these barriers and gaps at the government, public and private sector.

RISK ASSESSMENT

Risks	Mitigations
<p>Technology</p> <p>The technology becomes obsolete or second class.</p>	<p>The portal will be built using open source technologies available from leading companies in the world today.</p> <p>Similarly, the software we will be using is proven shrink-wrapped product and the additional development needed will be done to industry accepted standards and protocols.</p> <p>The portal product comes with 1 years maintenance, but the risk of obsolescence is very low, as the software we are using to build the portal has not fundamentally changed three decades since it came onto the market.</p>
<p>Unable to keep up the latest developments in the fast paced technology world.</p> <p>Competition</p> <p>Incumbent telecom picks off key members.</p>	<p>Through the partnership we can be kept abreast of the latest technologies. These partnerships will also allow ICP to tap into an extensive knowledge base. In addition to our partnership we can budget specifically for activities that will ensure we are always kept abreast of what is happening in the marketplace.</p> <p>We can work aggressively through the other community network contacts and directly with Dhiraagu and/or Focus to establish a working relationship of mutual benefit. In addition, several of the members will already be large Dhiraagu customers, yet can be committed to support the network and the community portal program for its competitive and community benefits.</p>
<p>Operational</p> <p>Don't have the staff resources to maintain the program after initial funding is received</p>	<p>One year maintenance support is included in the contract with Enndot to help maintain and improve the portal. We can also scope a system that can be highly automated, Web-enabled to minimize first person training and support requirements. The ICP development approach means publishers can provide content at their own pace without undermining the usefulness of the portal.</p>

Unable to achieve our schedule of deliverables	The flexible, metadata approach, means applications can come on when they are ready without limiting the usefulness of the portal. Also, portal framework has taken the approach of building foundation applications that will make the development of transaction-based interactive applications easier to develop and deploy. ICPMT staff can monitor performance monthly and review quarterly, making appropriate adjustments as required.
Unable to attract and retain new members to sustain revenue from operations.	We need to have an aggressive marketing and education program, with members acting as spokespeople and evangelists for the community. In addition, we will need to approach community members in other atolls in an effort to broaden the participation rate for all concerned.
Political	
Risks	Mitigations
Municipal council support wanes as circumstances dictate other priorities	By minimizing the new investment required, and protecting the investments already made in the back office, we can keep the costs down. In addition, the communities members can be aggregating their purchases to lower costs and aggregating their workloads over the ICP improve productivity. Doing more with less is in keeping with expectations of local political leaders.
Initial budgets are cut and program Ruffiyas get clawed back.	ICP need to actively pursuing funding with the Industry, in order to minimize exposure to one capital funding source.
Financial	
Revenue from operations does not meet plan	We can established a diversified budget of revenue sources including residuals from partners, aggregated purchases, memberships fees and other government funding programs. In addition, each stakeholder member need to have a track record of IT spending that will help sustain the application development and staffing requirements needed to maintain the community portal.
Do not meet financial targets and continue to operate at a loss beyond an acceptable time frame	In the absolute worst-case scenario, realizes ICP simply cannot financially continue to provide portal services to the community. Should this occur the members might be able to sell these assets to a local ISP or other service provider wanting access to the market!
	We have also significantly reduced the revenue projections over the period of the plan in light of present and expected reduction in the spending in the economy. At this reduced level of revenue, we can still be able to maintain acceptable operating and performance ratios.

CONTINGENCY PLAN

ICP need to establish a diversified budget from revenue sources including residuals from partners for members' aggregated purchases, membership fees and other government funding programs. In addition,

each stakeholder member need to have a track record of IT spending that will help sustain the application development and staffing requirements needed to maintain the community portal.

Operation of the system is not conditional on the generation of additional revenue beyond those projected. On-going sustainability of the portal can be supported within existing budgets. Recovery from potential under projections can include:

- Re-prioritization of application and project development.
- Decreasing technical support and operation management support expenditures.
- Additional funding requests (Donors, Government & Partners).
- As a contingency, when short of revenue targets will need to seek operating expense avoidance and reductions wherever possible.

REVENUE

We can sustain the community network beyond initial funding programs through the following means:

- Advertising
- Membership fees
- User fees from members
- Commissions and discounts on purchases by ICP members
- Inter atolls consulting fees, network development, planning and marketing
- New partnerships/stakeholder sharing of costs
- Reduced line charges to ICP members by consolidating circuits and eliminating access to legacy infrastructure where possible
- Capital or one-time costs will diminish in later years

MEMBERSHIP FEES

At least for a period of two years, ICP will need committed stakeholder membership income of Rf50,000 annually, and partner membership income of Rf30,000 annually. There can be four levels of membership with varying annual fees: community at Rf250, consortium at Rf1,000, stakeholder at Rf5,000, and partner at Rf10,000. During this initial period, ICP have to be actively campaigning for members at all levels, in order to increase the revenues generated by membership fees for the years that follows.

FINANCIAL COMMITMENTS

Members need to contribute a total of Rf800,000 for the successful implementation of the ICP. Stakeholders and partner members need to be very committed to the success of ICP and should continue to make contributions as required.

INITIAL COST

To develop the back office infrastructure needed to operate the ICP, the community and/or the ICPMT will need to raise a minimum of Rf800,000 for the three years of this budget application. A detailed examination of the project budget can be found in Appendix 1.

APPENDIX 1: INITIAL COST

SET-UP AND INSTALLATION COSTS				
	2005-2006	2006-2007	2007-2008	Total
Hardware/software				
Computer	Rf75,000	Rf50,000	Rf0	Rf125,000
Printer	Rf10,000	Rf10,000	Rf0	Rf20,000
Scanner	Rf0	Rf0	Rf0	Rf0
Miscellaneous hardware	Rf20,000	Rf0	Rf0	Rf20,000
Installation charges				
Phone lines	Rf5,000	Rf0	Rf0	Rf5,000
Internet	Rf20,000	Rf0	Rf0	Rf20,000
Network wiring	Rf75,000	Rf10,000	Rf0	Rf85,000
Other charges				
Furniture	Rf20,000	Rf20,000	Rf0	Rf40,000
Office supplies	Rf5,000	Rf0	Rf0	Rf5,000
Total	Rf230,000	Rf90,000	Rf0	Rf320,000

OPERATING COSTS				
	2005-2006	2006-2007	2007-2008	Total
Telecommunications				
Telephone/Internet services	Rf25,000	Rf25,000	Rf25,000	Rf75,000
Human resources				
Coordinator	Rf30,000	Rf30,000	Rf30,000	Rf90,000
Volunteer	Rf25,000	Rf30,000	Rf30,000	Rf85,000
IT Support	Rf40,000	Rf40,000	Rf40,000	Rf120,000
Skills development				
Trainer	Rf30,000	Rf30,000	Rf30,000	Rf90,000
Other				
Rent	Rf10,000	Rf10,000	Rf10,000	Rf30,000
Promotion/advertisin	Rf5,000	Rf10,000	Rf11,000	Rf26,000

g				
Maintenance	Rf10,000	Rf10,000	Rf10,000	Rf30,000
Sub-Total	Rf150,000	Rf160,000	Rf161,000	Rf471,000
Total	Rf380,000	Rf250,000	Rf161,000	Rf791,000