

# Digital Government in Remote Locations

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## INTRODUCTION

All governments face difficulties in trying to ensure the full participation of every citizen. The further a citizen is located from the centre of power and administration, such as a capital city, the less engaged they are likely to be. This phenomenon can be observed at both a national and an international level. At the global level countries located in close proximity to major world markets are more likely to have well-developed e-government services, than more marginally located countries, particularly those with low population densities. Within individual countries, there is typically a marked variation between rural and urban areas both in terms of access to available infrastructure and uptake by citizens (Parker, 2000). In general, the more remote the location and the smaller the population density, the lower the rate of participation will be. This can be observed in even in the most highly developed, highly populated countries; for example, the Japanese government struggles to provide the often elderly residents of remote islands with government services (Hayashi & Hori, 2002). In a country that is less developed without easy access to major world markets, the effects on rural citizens are intensified.

The small island developing states of the South Pacific are some of the most remotely located nations in the world; their economies are relatively underdeveloped and they have low population densities. By researching the difficulties faced in attempting to implement e-government in some of the most distant corners of the earth, lessons can be learned about the way that information and communication technologies (ICTs) can overcome the barriers of geography. The insights gained from this exercise are relevant worldwide; as many economically developed countries also have pockets of population that are hard to reach.

A counter argument is that some of these differences may be attributable to a country's level of economic development rather than its actual geographic location.

A notable example of a remotely located country that has a highly developed e-government system is New Zealand. Despite having only four million inhabitants, and being placed on the other side of the globe from the major world markets of Europe and the USA, in 2001 New Zealand was nominated by the UN as the country with the third most advanced e-government system in the world (Boyle & Nicholson, 2003). ICTs now make it possible to connect a citizen in even the most far-flung location directly to central government services.

This article investigates the status of e-government in remote locations. Representatives from ten different South Pacific Islands were surveyed to discover what they perceived as the main barriers and opportunities in developing e-government in each of their different countries. The island states of the South Pacific have developed independently and are culturally diverse. However, they all share some common features with regards to adoption of ICTs. In order to appreciate these factors more fully, one country, Samoa, has been used as an example. By comparing Samoa with New Zealand, lessons can be learned about how to utilise ICT to overcome the disadvantages of distance and low population.

E-government is sometimes viewed as a subset of e-commerce. However, it needs to be remembered that there are substantive differences between the private and public sectors. Governments have a duty to make sure that services are available to all citizens, and usually the citizens who are the most needy are those who have the least access to government services (Curthoys & Crabtree, 2003). Often this is because such citizens live in remote rural locations. The public sector is a law-based system, and government includes many processes that are different from processes encountered in private sector settings such as retail or banking, for example: complex decision making; negotiations between stakeholders; policy formulation; and democratic participation (Lenk, 2002). An example is the highly contentious issue of land ownership in the South Pacific; the use of e-government could

Table 1. UN-ASPA Five stages of e-government (adapted from UN & ASPA, 2001)

STAGE	DESCRIPTION	SPECIFIC FEATURES
Stage One	<b>Emerging Web Presence</b> Static information on the government is provided	Postal address E-mail address FAQs
Stage Two	<b>Enhanced Web Presence</b> Information is kept up to date, some documents can be downloaded	Updated regularly Search function Newsletters
Stage Three	<b>Interactive Web Presence</b> Citizens can search databases, and submit online forms	Downloadable forms Specialised databases Discussion forum
Stage Four	<b>Transactional Web Presence</b> Transactions can be completed online, and sites are fully secure	Public user log on Online payment Security policy
Stage Five	<b>Fully Integrated Web Presence</b> A single customisable portal provides all services and links	Portal Complete information

potentially help land boards to demonstrate a fair and transparent approach to this issue.

## BACKGROUND

Samoa is an independent island nation in the South Pacific, with a long history of political and economic stability. The country has a land area of approximately 2,938 square kilometres, and a population of approximately 170,000. The Samoan economy is made up of agriculture, fishing, handicraft production, small manufacturing goods, and one automobile-wiring firm. Tourism has recently become a valuable contributor to the Samoan economy, and since 1990 has been the top foreign exchange earner. SMEs are central to Samoa’s economic well-being comprising 98% of the Samoan economy.

New Zealand has been able to adopt e-government quickly due to a number of factors:

- It has a relatively simple structure of government compared to many countries
- A small population facilitates the quick spread of new ideas
- The population is well educated
- The country has a history of being an early adopter of innovative ideas (Boyle & Nicholson, 2003)

If Samoa is to learn from the example of New Zealand, any common features shared by both countries need to be identified and considered. Samoa also has some of these characteristics. As a small country, it has a simple governance structure. Though central government does consult with village mayors (Pulenu’u) and presidents of the village women’s committees, there is no local government as such. This means that current systems of government are relatively easy to automate. Like New Zealand, Samoa has a low population density, which can be an advantage,

in that provided internal communications are adequate, ICT-based strategies can be implemented more rapidly than in a larger country. However, a small population often means that there is a lack of appropriate skills to implement such policies (Comnet-IT, 2002). Samoa has its own University, and the educational level of the population is high for a developing country, with a 96% literacy rate, and two thirds of 15-19 year olds in education (Purcell & Toland, 2004). Despite this, there is still a shortage of the relevant ICT skills. Though a comparison between the two countries is useful, it does need to be remembered that New Zealand is much more economically developed than Samoa, and in terms of factors such as transport and telecommunications infrastructure, the two countries are worlds apart.

Recent research (Curthoys & Crabtree, 2003) has found that many governments have poured resources into developing e-government systems with mixed results. Despite the extensive development of e-government services in the UK, most citizens have continued to interact with government by traditional methods; as of 2002, only 11% of UK citizens had used a government online service. The conclusion that can be drawn from this is that to be successful e-government must be popular with its actual users, the citizens themselves. Governments need to consult with their citizens in order to identify services that citizens are likely to use online. Samoa has taken careful steps to involve rural as well as urban citizens in the development of its new ICT policy. The policy was built up through a bottom-up process of consultation at the village level, representatives of the National ICT Committee visited both rural and urban villages to collect the opinions of a wide range of people.

A number of frameworks have been developed that can be used to track the growth of e-government (Jupp, 2003). The UN/ASPA five-stage model, shown in Table 1, has been selected for this research as it clearly identifies each step of development. At stage one, the e-govern-



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