Chapter 2

e-Governance in Small States

Omer Awan

Thirty-two of the Commonwealth's fifty-four members are classified as small states (see Table 2.1). These are generally defined as countries with populations of less than 1.5 million, but which also have several shared characteristics – including susceptibility to natural disasters, environmental change and income volatility. Geographical isolation and the openness of their economies are also important issues for small states.

Of the 32 small states in the Commonwealth, 25 are classified as small island states. Cyprus and Malta are small island states, albeit not 'small island developing states' (SIDS). The Commonwealth's small states also include developing countries such as Botswana, The Gambia, Jamaica, Lesotho, Namibia and Papua New Guinea, which although they have populations of more than 1.5 million, share the characteristics of 'small states'.

Table 2.1 Small states of the Commonwealth

Africa	*Asia*	*Caribbean*	*Pacific*	*Europe*
Botswana	Maldives	Antigua and Barbuda	Kiribati	Cyprus
Lesotho	Brunei Darussalam	Barbados	Fiji	Malta
Mauritius		The Bahamas	Nauru	
Namibia		Belize	Papua New Guinea	
Seychelles		Dominica	Samoa	
Swaziland		Grenada	Solomon Islands	
The Gambia		Guyana	Tonga	
		Jamaica	Tuvalu	
		St Kitts and Nevis	Vanuatu	
		St Lucia		
		St Vincent and the Grenadines		
		Trinidad and Tobago		

2.1 Why e-governance in small states?

According to the latest UN *E-Government Survey* (UN 2012), which included 190 countries, more than half of Commonwealth small member countries (17 of 32 states) are ranked in bottom half of the rankings in terms of their online government services. None of these small states rank in the top 20 countries, with only 4 of them in the top 50 countries; Malta ranks top of the Commonwealth small states, at 35. The figures are alarming considering the evolution of ICTs and their effectiveness in the area of governance and service delivery. They clearly show that the access and use of ICTs for governance are at a formative stage in these countries, with millions of people still outside the inclusive net of benefits.

Table 2.2 E-government rankings of Commonwealth small states

Commonwealth small states	*E-government index 2012*	*E-government ranking 2012*	*E-government ranking 2010*
Malta	0.7131	35	30
Barbados	0.6566	44	40
Cyprus	0.6508	45	42
Antigua and Barbuda	0.6345	49	55
Brunei Darussalam	0.6250	54	68
Bahamas, The	0.5793	65	65
Trinidad and Tobago	0.5731	67	67
Dominica	0.5561	73	105
Grenada	0.5479	75	99
St Kitts and Nevis	0.5272	81	75
Seychelles	0.5192	84	104
St Vincent and the Grenadines	0.5177	85	94
St Lucia	0.5122	90	88
Mauritius	0.5066	93	77
Maldives	0.4994	95	92
Fiji	0.4672	105	113
Jamaica	0.4552	108	89
Guyana	0.4549	109	106
Tonga	0.4405	111	116

(Continued)

Table 2.2 E-government rankings of Commonwealth small states (cont.)

Commonwealth small states	*E-government index 2012*	*E-government ranking 2012*	*E-government ranking 2010*
Samoa	0.4358	114	115
Namibia	0.3937	123	125
Botswana	0.4186	121	117
Belize	0.3923	124	120
Tuvalu	0.3539	134	N/A
Vanuatu	0.3512	135	155
Lesotho	0.3501	136	121
Nauru	0.3242	141	N/A
Swaziland	0.3179	144	145
Kiribati	0.2998	149	N/A
Gambia, The	0.2688	161	167
Solomon Islands	0.2416	168	156
Papua New Guinea	0.2147	177	171

Source: UN E-Government Survey 2012

While each Commonwealth small state is unique – which requires their development programmes to be planned and executed according to their specific historical, cultural and social context – understanding the characteristics and development problems shared by such states can improve e-governance planning and support.

These particular characteristics and development challenges also mean that such states in particular can benefit from e-governance initiatives, as these can play a crucial role in enhancing the ability of the public sector to overcome such barriers.

2.1.1 Isolation

Isolation marks most small developing states, whether they are islands, landlocked or located far from major markets. The issue of isolation creates adverse effects for small developing states in two ways:

- First, this distance makes their transport costs high and prevents them from turning to major markets to compensate for the drawbacks of their small and limited capacity local markets (Commonwealth Secretariat and World Bank

Joint Task Force 2000). These natural limitations also create hindrances for businesses and investors, who can be discouraged from entering these isolated markets by the geographical and physical barriers to access for information and government processes.

- Second, isolation of communities within the small developing states limits the flow of information, and inadequate communication channels caused by isolation negatively impact bargaining capabilities. This makes local economies more vulnerable and also restricts citizen participation in government processes (Favaro 2008).

This then makes ICTs and their virtual presence even more valuable for small developing states. For example, a government's online presence becomes much more fundamental if a state is to overcome these barriers. In the era of globalisation where e-commerce and e-trade have become an unavoidable phenomenon, small developing states cannot survive without leveraging the power of the digital economy. The online presence of a government's institutes, ministries, processes and information – for example, in the areas of tourism and investment – would definitely assist small developing states to achieve a competitive advantage in global markets by overcoming the geographical and physical barriers caused by isolation.

ICTs are also an important mechanism to enhance the ability of the public sector to cost-effectively and efficiently reach and tailor services to isolated communities within the state, to include them in public decision-making and to network government. To achieve cost-effective, relevant and personalised services, e-governance needs to be client-centric; moreover, customer focus and addressing clients' changing needs enhances democratic dialogue (CceGov 2007).

2.1.2 Susceptibility to natural disasters and income volatility

Environmental disasters and income volatility are two much interlinked features of small developing states, which affect their endeavours for sustainable economic development.

Disasters, both natural and as a result of human activity, are on the rise, with grave consequences for the survival and livelihood of individuals. This is particularly the case for those living in small island states, where disasters can quickly reverse hard-won economic gains. The impacts of disasters have been estimated at 10–15 per cent of their gross domestic product (GDP) (Commonwealth Secretariat 2009). Small island states, in particular due to their locations, are often vulnerable to environmental hazards such as cyclones, hurricanes, volcanic eruptions, earthquakes, drought and environmental change, which affect the entire population and economy.

It has become more imperative for developing small states to adopt ICT-enabled e-governance initiatives to tackle natural disasters. Effective e-governance services

incorporate the whole range of ICTs to provide support to citizens at all stages of disaster risk reduction (DRR). ICTs are not only important for the development of efficient environmental early-warning systems, but also assist citizens during a response to a natural disaster. Government-owned internet/SMS-based services can provide real-time information and solutions to citizens. For instance, in response to Haiti's earthquake in 2010, open-source crisis-mapping software was applied to collect masses of real-time information coming through ICTs and social media regarding immediate needs. An international group of self-organised volunteers updated the information and made it publicly available online to assist recovery efforts (Kelman 2012).

There is also often a higher incidence of poverty, more uneven income distribution and higher income volatility in small states when compared to large states. The reason behind income volatility, besides environmental disasters, is the high level of exports/imports and low variation in production and trade, due to the small domestic market and resource base. This leaves these countries exposed to changes in world markets and more vulnerable to external economic shocks. Where one prevailing activity has declined, it has tended to be replaced with another, increasing the vulnerability of the population to changes in the external environment (Commonwealth Secretariat and World Bank Joint Task Force 2000).

Income volatility and environmental hazards necessitate the need for external economic relations (i.e. access to global capital markets), but these very factors are the reasons why private markets see small states as more risky than larger states – so that market access becomes more difficult for these states. It also play a crucial role in improving overall economic performance, through magnifying access and use of fundamental development resources. Moreover, e-governance policies that support the growth of the ICT sector, the creation of jobs and an increase in viable business possibilities, as well as supporting the infrastructure, access and use of ICTs to strengthen commercial, health, educational, cultural and public services, can help states to withstand external shocks.

2.1.3 Limited institutional capacity

Higher input costs and the absence of economies of scale in the provision of public goods and services explain why small states tend to have larger governments (Alesina and Wacziarg 1998). There are fixed costs in creating public institutions and providing public services such as policing, education, justice, social services and foreign affairs. Since these public services must be provided regardless of population size, the cost is higher per person (or per taxpayer) in small states. E-governance therefore becomes a vital intervention to achieve economies of scale in the long run. ICT solutions such as cloud computing – remotely hosted IT infrastructure and applications – mobile devices and networking can lead to significant cost-savings for small state governments (Cas and Ota 2008).

Moreover, small states have limited public and private capacity. In the private sector this results in restricted development, while in the public sector it leads to small states being unable to compete and participate in the global political arena. This negatively impacts e-government infrastructure development on the one hand, and the securing of local and international funds for e-governance initiatives on the other. E-government initiatives, such as national ICT strategies, must therefore be developed according to the specific country context, resources and needs. Technologies such as mobile devices and kiosks offer cheap, simple and convenient solutions to deliver e-government services, particularly in low-resource, low-capacity conditions.

2.1.4 Importance of improved governance for small states

The strategic outcomes of e-governance, including participatory government, transparency and accountability, help small states to achieve better governance. Since small states are more vulnerable to high public and external debt, the quality of their institutions matters even more than in large countries (Bräutigam and Woolcock 2001). Small states with high-quality institutions have less growth volatility, and are more likely to benefit from higher rates of economic growth (ibid). It has been claimed that for lower-income small states in particular, improving governance and the quality of institutions raises the public debt threshold (i.e. the public debt that countries can safely sustain without experiencing debt crisis). There is also evidence that better institutional quality is associated in emerging markets with prudent borrowing and a more countercyclical fiscal policy response (IMF 2003).

Furthermore, good governance, including increased transparency, can support citizen participation, help investors make better-informed assessments and can reassure markets and donors on the government's fiscal goals. Enhanced transparency is particularly important for small states, because they are at an informational disadvantage compared to large countries – foreign investors tend to know less about them – while at the same time they are more open and dependent on foreign capital. In an increasingly globalised world, small states need to compete with large countries that investors are more familiar with, that benefit from economies of scale and that suffer less from isolation.

2.2 E-governance prerequisites for small states

Keeping in view the unique issues, attributes and importance of e-governance for Commonwealth small states, it is important to note that e-governance is not a 'stand-alone' and 'ready to implement' process. In 2008 the Commonwealth Telecommunications Organisation (CTO) conducted a survey that demonstrated the bleak picture of how e-governance initiatives have fared in developing/transitional countries, evaluating 35 per cent of the initiatives as total failures, 50 per cent as partial failures and only 15 per cent as successes (CTO 2008). This leads to the question of what

influences or causes the failure of the majority of initiatives. The report suggests that a number of critical factors that result in the failure of e-government projects include unrealistic project goals, inaccurate assessments of resources, poor reporting of the project's status, unmanaged risks, poor communication among stakeholders and poor project management.

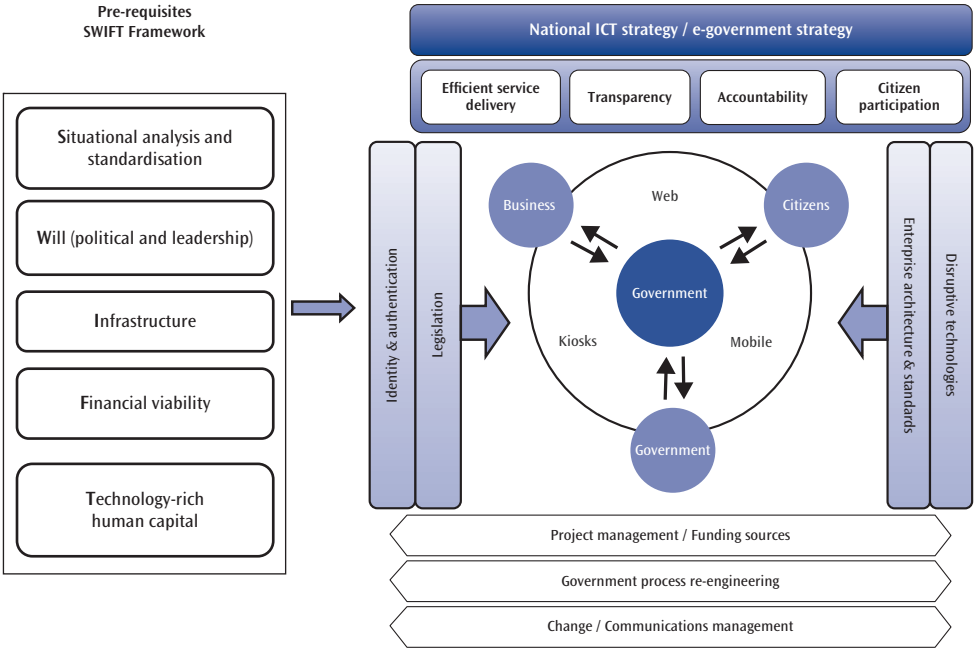
The framework proposed in this handbook aims to offer a set of guidelines for e-governance strategists, to help them better plan and implement projects by analysing and evaluating the opportunities and threats in their external environment and by settling on a set of prerequisites necessary to maximise the chances of project success.

The introduction of e-governance in small states requires a set of guidelines that cater to the specific needs of these countries. The following 'SWIFT Framework' intends to do just that (Figure 2.1).

2.2.1. Situational analysis and standardisation

E-governance is about providing more citizen-centred services, these being services that are attuned to the needs and circumstances of the people or the situational context. Factors here include cultural and linguistic suitability, as culture is the aggregate of

Figure 2.1 Prerequisite conditions (SWIFT) analysis for the development of e-governance



individual personality traits that, along with historical background, shapes the values shared by members of a society (Ali et al. 2009). Such factors have a significant influence on ICT adoption and therefore on the readiness of a region for e-government initiatives (Maitland and Bauer 2001).

Hence the digital divide is not only caused by income disparity, but is also associated with cultural attitudes towards technology (ibid). If people perceive e-governance initiatives to be worthwhile and easy to use, then they would be much more readily accepted and adopted (Patel and Jacobson 2008). For example, citizens would be more supportive and would be more regular users of a public website to pay their electricity bills if they recognised the benefits it brought them in terms of saving time and effort going to a government office.

Another important aspect of citizens' attitudes towards e-government are the risks they perceive to be associated with it – such as increased taxation if e-government projects are too expensive, or loss of local employment of non-IT experts whose jobs may be compromised due to the introduction of e-services (Sjoberg and Schreiner 2005). Such perceptions of risk may propel people to resist change, sometimes even when they recognise the benefits that may accompany the change. Therefore, unless context-appropriate e-government initiatives are introduced at a suitable pace and with understanding of the local context, they cannot be expected to go very far. Creating an ICT-receptive environment and inducing positive perceptions of e-government initiatives among the local population, through advertising their advantages and benefits, is an important strategy to ensure their success.

The goal of standardisation is to design e-government projects so that they are well co-ordinated, uniform and so easy to implement and utilise. First, it is general business knowledge that a well-planned strategy with clear objectives is the backbone of a successful project. According to De' (2006), most e-government programmes fail in developing countries around the world due to a lack of direction and continued support by the responsible government department. Such projects may have been perceived as a way to fulfil the growing demand for 'computerisation', without a clear understanding of the problem being addressed or the adequate design of such systems. Or they may have dealt with only the immediate aspects of these problems, without evaluating their more in-depth causes.

Second, countrywide success of e-government projects requires co-ordination among different government departments responsible for the diverse aspects of e-government programmes, both within an area or city and between them. Without such co-ordination and without a cohesive strategy, the e-government scheme is at greater risk of failure (Ali et al. 2009). Moreover, standardisation of e-government projects enables government to monitor and evaluate them more effectively, without which determining the causes of their success or failure would be next to impossible.

Third, a methodology for the identification and authentication of users of e-government services is important to both safeguard privacy and to ensure that users can be

authenticated. Electronic identity authentication can take many forms, such as national identity numbers, social security numbers and 'smart' identity cards. These allow citizens to authenticate themselves in an easy and comprehensively secure way whenever they access e-government applications, and enable the creation of an architecture for secure e-government electronic identity management.

Therefore, for an e-government project to be able to achieve its desired goal of improved service delivery to citizens, it is essential that its objectives and goals are clearly predetermined and that the situational context is understood by officials responsible for conducting such projects. In addition, all aspects of the projects must be co-ordinated and standardised to ensure smooth progress towards the end goal (see Chapter 5 for details on the process of standardisation). E-governance solutions must be adapted, not simply adopted, to ensure that the design of those solutions matches developing country situations (Bishop and Savoury 2004) and that there is not a large gap between the design of the e-government projects and the realities of the state where they are introduced.

2.2.2 Will (political and leadership)

All government reforms require 'political will' to succeed and be sustained, and e-government reforms are no different (PCIP 2002). Political will exists when senior decision-makers have the determination to exercise leadership in the face of resistance and obstacles. Some government officials, particularly in developing countries, are prone to distrust any new initiative that may seem to challenge their prestige. According to Ali et al. (2009), there is the risk that some government officials could view the introduction of ICT into government as a loss of their status and power. Furthermore, the traditional bureaucracy within government may resist changes in procedures and possibly the increased transparency that e-government will provide (PCIP 2002). If e-government initiatives lack support from the people who have to carry them out, then not much can be expected of their outcome (Ali et al. 2009).

It is imperative to realise that all successful e-government projects are backed by a visionary leader or leaders who push for change, even through tough times. The right leader is authoritative, a risk-taker, is willing to secure funds for the programme, will commit time on a continuing basis and will openly endorse and advocate for e-government (PCIP 2002). The leader or leaders of small states must also:

- Ensure that the role of ICT is strategically linked to economic growth and national development of the state.
- Be able to vouch for the benefits of ICT usage from a personal standpoint. The leader must champion the cause for e-government and take ownership of the project, even in the face of opposition from within the public service or ruling political party. The champion should endeavour to build support both within and outside his or her administration.

- Seek support in the private sector from those already convinced of the need for greater technology utilisation.
- Have to depend on consultants, suppliers or other states. Since small states do not possess all the requisite human and financial resources, the involvement of top public servants in the planning phase may help them to appreciate how their units could benefit. Ultimately they might become advocates for the e-government initiative, and so convince others of the need for it (Bishop and Savoury 2004).
- Realise that the best way to resolve resistance is to involve all stakeholders and government officials at all levels in the planning and implementation of the initiatives (this process is further detailed in Chapter 3). This will encourage familiarity with and 'ownership' of projects, which will in turn increase their sustainability and chances of success (PCIP 2002).

2.2.3 Infrastructure

Before analysing the state of ICT infrastructure and access to infrastructure, and before e-governance can be introduced in any country, its advocates need to ensure that there are no laws that prevent putting information and services online. The development of e-government initiatives can be assisted by modifying or removing laws intended for the non-digital world (infoDev 2008). An enabling environment needs to be created which supports e-development and allows ICTs to perform to their optimal level for social and economic progress (Guermazi and Satola 2005).

However, the most important prerequisite in terms of infrastructure is that the realisation of e-government programmes depends greatly on whether people have access to and user-knowledge of the internet. Hence a widely accessible and affordable communications infrastructure, together with a regulatory framework, is one of the essential factors for the successful delivery of government services online. ICT access and e-government must be closely linked. One significant way to do this is by building numerous computerised service centres across the country, as most service users in developing countries and small states do not yet have access to the internet in their homes (Bhatia et al. 2009). The increased availability of e-government services that save citizens and businesses time and money can also raise demand for ICT and boost future infrastructure development.

Table 2.3 shows two clear trends that can assist small states in developing their future e-governance strategies. First, despite immense internet growth over the last decade, many small states lag far behind in terms of access to the internet (the primary source of e-governance applications so far). More than 50 per cent of small states still have fewer than 50 internet users per 100 inhabitants, and so are lacking a major prerequisite for e-governance. Second, an additional delivery channel to increase the reach of government services is via mobile technology, particularly given the ubiquity of mobile

phones in small and developing countries. Table 2.3 suggests that mobile subscription growth has reached exponential levels, with more than 10 Commonwealth small states having gone beyond 100 per cent growth rates (see Chapter 6 for more information on m-government).

Furthermore, a lack of ICT infrastructure within government departments at the central and state levels also poses a barrier to e-governance implementation. States that have mostly paper-based systems face two main obstacles: first, automating internal records and processes, and second, making information and services publicly available online. However, these obstacles can also be looked upon as opportunities to redesign inadequate processes before they are computerised (infoDev 2008) (see Chapter 4 for information on government process re-engineering). Therefore, such countries would benefit from adopting e-government-specific legislation and building a strong communications infrastructure, as the initial steps towards countrywide implementation. New laws addressing all aspects of e-government can be made at one time before starting projects; alternatively, incremental changes in the laws and procedures can be taken with each progressive step of the process (ibid.) (see Chapter 5 for details on legislation).

Table 2.3 Access to ICTs in Commonwealth small states

Commonwealth small states	*Mobile/cellular subscriptions per 100*	*Number of internet users per 100*
Antigua and Barbuda	182	82
Bahamas, The	86	65
Barbados	127	72
Belize	64	N/A (12.7 in 2010)
Botswana	143	7
Brunei Darussalam	109	56
Cyprus	98	58
Dominica	164	51
Fiji	84	28
Gambia, The	N/A (85 in 2010)	11
Grenada	N/A (117 in 2010)	N/A (33 in 2010)
Guyana	69	32
Jamaica	108	32

(Continued)

Table 2.3 Access to ICTs in Commonwealth small states (cont.)

Commonwealth small states	*Mobile/cellular subscriptions per 100*	*Number of internet users per 100*
Kiribati	14	10
Lesotho	48	4
Maldives	166	34
Malta	125	69
Mauritius	99	35
Namibia	0.3937	12
Nauru	N/A	N/A
Papua New Guinea	34	2
St Kitts and Nevis	N/A (153 in 2010)	N/A (76 in 2010)
St Lucia	123	42
St Vincent and the Grenadines	121	43
Samoa	N/A (91 in 2010)	N/A (7 in 2010)
Seychelles	146	44
Solomon Islands	50	6
Swaziland	64	20
Trinidad and Tobago	136	55
Tonga	53	25
Tuvalu	22	30
Vanuatu	N/A (119 in 2010	N/A (8 in 2010)

Source: World Bank 2013

While building new telecommunications infrastructure, it is important to keep in mind the vulnerability of small states to environmental disasters. Their geographical location often makes them susceptible to natural disasters such as hurricanes, cyclones, volcanic eruptions, earthquakes, landslides and floods brought about by a rise in sea levels. These natural phenomena can severely disturb the performance of the economy and cause a significant amount of damage to the physical environment, as was apparent by the 2004 tsunami in the Indian Ocean (Downes 2005). While keeping the constraints of new emerging technologies like 'cloud computing' in mind, this can still be a suitable solution for the small development states (see Chapter 6 for details).

2.2.4 Financial viability

Income inequality within and between nations has headed the agenda of development organisations for many decades, and has apparently continued into the digital world. Here the digital divide between nations remains extensive: a person in a high-income country is more than 22 times more likely to be an internet user than one in a low-income country, although there are signs that ICT diffusion is slowly becoming more equal (UNCTAD 2006). This digital divide not only exists between countries and regions, but also within a country's borders, most commonly between rich and poor, between men and women, and between urban and rural areas (ibid).

Financial constraints are a major factor in the digital divide; they prevent the less privileged from owning personal computers and being able to pay the price of expensive broadband services and internet access (Ali et al. 2009). Moreover, urban areas receive an excessively large part of public and private ICT investment in relation to the rest of the country, and usually have at least a basic communications infrastructure. They are therefore able to take better advantage of ICTs compared to rural areas, where there are lower incentives for ICT service providers to invest.

On another note, a lack of funding from the government can serve as a major impediment on the path to e-governance success. Most developing country governments have small budgets and many priorities, and there is more competition for the distribution of public funds between different sectors. Thus, e-governance initiatives need to demonstrate that they would benefit a large number of people in order to justify their costs. One way of doing this is to boost usage, by promoting initiatives through multiple traditional media channels (PCIP 2002).

Before initiating e-governance projects, a government must have sufficient funds for long-term viability and sustainability, as well as a group of ICT-educated or trained officials to manage and conduct the projects (see Chapter 3 for more details). Additionally, it must be acknowledged from the outset that all the benefits of a countrywide project can never fully be reaped until it is made accessible for every single citizen, thus combatting the problem of the digital divide arising out of disparity of income distribution. E-governance and increased investment in ICT infrastructure is also in itself a strategy for income generation.

Commonwealth small states are often highly dependent on external economic relations for survival – from dependence on migrant labour remittances to maintain living standards, to overseas development assistance to supplement domestic financial resources (Downes 2005). However, the available data for the Caribbean indicates that there was a general reduction in overseas development assistance (ODA) as a percentage of gross national income over the decade 1995–2004. Recent efforts have been made by developed countries to assist developing countries to ease their debt problem through the writing off and rescheduling of accumulated debts (ibid).

Given the financial constraints, it is essential for small developing states to form and maintain alliances to receive financial assistance and save costs for ICT projects. There can be many such alliances. However, developing small states may wish to consider the following options:

- **Alliances within government** – and between different government departments – in order to receive financial assistance for ICT projects.
- **Alliances between government and citizens/non-governmental organisations (NGOs).**
- **Alliances between government and the private sector** – such as outsourcing of projects, when this is deemed to be in the best interests of all. Governments can also learn from the application of ICTs in commercial organisations.
- **Alliances between governments** – some developed countries may provide assistance in designing, implementing and funding ICT projects, but these must not become 'donor-led'. Similarly, networking with governments in other developed countries which have undertaken similar projects should reduce the prospect of 'reinventing the wheel'. A government's procurement process can also benefit from alliances with external entities, e.g. suppliers and trading partners (Bishop and Savoury 2004).

New technologies that are usually developed in larger and more advanced countries have been slowly reaching small states, mainly for personal consumption purposes (and for limited use for production purposes). Nevertheless, the goal of developing a partnership for development still needs to be actively pursued. Small states still face major challenges, which require technical and financial resources from the developed world (Downes 2005).

2.2.5 Technology-rich human capital

Being ICT literate is a prerequisite for government officials responsible for conducting e-governance projects, and for citizens to be able to utilise them to their full potential (ibid). This is possible when ICT education is prevalent in the concerned country (see Chapter 3 for strategies to build ICT human capacity). Small states generally have a fairly good level of primary education; however, the migration of skilled personnel to more developed countries leads to a shortage of well-trained teachers. According to Downes (2005) teachers, along with nurses, are the most significant migrant group of persons from several developing countries in recent years. While a good-quality primary school education level is crucial to the development of the human resource base of a country, the development of universal secondary level education is seen as vital to meeting labour market needs. Small states have a long way to go in this area, as few countries have achieved universal secondary level education.

This then raises the question of the presence of an ICT-skilled labour force for the implementation of ICT projects. A large number of skilled people migrate from small states to developed countries in search of work and cultural experiences, which has been propelled through the mass media and tourism. Criminal activities such as the drugs trade, money laundering and piracy have arisen in small states, influenced by a decline in traditional areas of economic activity; these also have a significant impact on societal values and the nature of economic production. Moreover, feelings of political exclusion and powerlessness on the part of citizens in small states also impacts upon the movement of skilled labour forces (Downes 2005).

Although remittances from migration have been valuable to small countries, the cultural foundation of these countries has been changed significantly. In addition, the loss of skilled human resources adversely affects the provision of high-quality services in some of these small countries (for example, health and education). What is more, the limited financial and human resources associated with small states restricts their ability to manage the development process in an efficient and effective manner. Small states usually provide the same range of public services as large states, but have a much lower capacity to manage the administrative systems (ibid).

2.3 Conclusion

While each small state has unique characteristics, small states share some common developmental and public services challenges due to their geographical attributes, making a strong case for e-governance to convert these challenges into opportunities. However, while there is great potential for e-government initiatives to help small states overcome challenges in good governance, transparency, citizen participation and economic development, it is important to understand, analyse and evaluate the opportunities and threats in the external environment before designing and implementing e-governance programmes. Neglecting to analyse these factors may result in waste of valuable resources, delaying the benefits of e-governance and missing the desired targets of any e-governance interventions.

The SWIFT Framework aims to assist decision-makers from small states in determining the status of the five key prerequisites for the development of successful e-government initiatives, and therefore identify priority areas for further action.

References

Alesina, A and Wacziarg, R (1998), 'Openness, Country Size and Government,' *Journal of Public Economics*, Vol. 69, 305–21.

Ali, M, V Weerakkody and R El-Haddadeh (2009), 'The Impact of National Culture on E-Government Implementation: A Comparison Case Study', *Proceedings of the Fifteenth Americas Conference on Information Systems*, San Francisco, California 6–9

August 2009, available at: http://bura.brunel.ac.uk/bitstream/2438/3660/1/Culture%20and%20eGov_Final.pdf (accessed 20 August 2010).

Bhatia, D, SC Bhatnagar and J Tominaga (2009), 'How Do Manual and E-Government Services Compare? Experiences from India', ICT Regulation Toolkit, available at: www.ictregulationtoolkit.org/en/Publication.3820.html (accessed on 8 March 2013).

Bishop, S and S Savoury (2004), *Towards E-Government in a Small State: An AGILE Framework*, Idea Group Publishing, USA.

Bräutigam, D, and M Woolcock (2001), 'The Role of Institutions in Managing Vulnerability and Opportunity in Small Developing Countries. Small States in a Global Economy,' Discussion Paper No. 2001/07, United Nations University/WIDER, Helsinki.

Cas, SM, and R Ota (2008), *Big Government, High Debt, and Fiscal Adjustment in Small States*, International Monetary Fund (IMF), Washington, DC.

CceGov (2007), Citizen-centric eGovernment study, available at: www.ccegov.eu (accessed on 8 March 2013).

Commonwealth Secretariat (2009), 'Commonwealth Secretariat's Statement to the 2nd Global Platform on Disaster Risk Reduction', 16–19 June 2009, Geneva, Switzerland.

Commonwealth Secretariat and World Bank Joint Task Force (2000), *Small States – Meeting Challenges in the Global Economy*, Report of the Commonwealth Secretariat/World Bank Joint Task Force on Small States), London.

Commonwealth Telecommunications Organisation (CTO) (2008), 'E-Government For Development Information Exchange', University of Manchester, available at: www.egov4dev.org/success/sfrates.shtml (accessed on 8 March 2013).

De', R (2006), 'The Impact of Indian E-Government Initiatives: Issues of Poverty and Vulnerability Reduction, and Conflict', *Regional Development Dialogue*, Vol. 27 No. 2, 88–100.

Downes, A (2005), 'Progress Towards Achieving the Millennium Development Goals in the Small States of the Commonwealth', available at: www.eclac.cl/portofspain/noticias/paginas/6/37516/22_MDG_Report_-_Downes_and_Downes_-_Millenniumm_Dev_Goals.pdf (accessed on 6 March 2013)

Favaro, E (2008), 'Small states, smart solutions: improving connectivity and increasing the effectiveness of public services', World Bank, Washington, DC, available at: http://siteresources.worldbank.org/INTDEBTDEPT/Resources/468980-1206974166266/4833916-1206989877225/SmallStatesComplete.pdf (accessed on 8 March 2013).

Guermazi, B, and D Satola (2005), 'Chapter 2: Creating the "Right" Enabling Environment for ICT', in RSchware (Ed.), *E-Development: From Excitement to Effectiveness*, available at: http://www-wds.worldbank.org/servlet/WDSContentServer/WDSP/IB/2005/11/08/000090341_20051108163202/Rendered/PDF/341470EDevelopment.pdf (accessed on 5 March 2013).

infoDev (2008), 'Chapter 12: Infrastructure and the Digital Divide', infoDev e-Government Tool Kit, available at: http://egov.comesa.int/index.php/en/e-government-toolkit/57-infodev-e-government-toolkit-contents (accessed on 8 March 2013).

International Monetary Fund (2003), *World Economic Outlook, September 2003: Public Debt in Emerging Markets*, World Economic and Financial Surveys, IMF, Washington, DC.

Kelman, I (2012), 'SIDS and ICTs: Applications for Disaster Risk Reduction, Including Climate Change Adaptation', Summary Report Panel on ICTs and Small Island Developing States at the Fifth International Conference on Information and Communication Technologies and Development (ICTD 2012), Atlanta, USA, 12 March 2012.

Maitland, CF, and JM Bauer (2001), 'National level culture and global diffusion: The case of the Internet', in CEss (Ed.), *Culture, technology, communication: Towards an intercultural global village*, State University of New York Press, Albany, NY, 87–128.

Pacific Council on International Policy (PCIP) (2002), *Roadmap for E-government in the Developing World: 10 Questions E-Government Leaders Should Ask Themselves*, Pacific Council on International Policy, The Working Group on E-Government in the Developing World, available at: www.itu.int/wsis/docs/background/themes/egov/pacific_council.pdf (accessed on 8 March 2013).

Patel, H, and D Jacobson (2008), 'Factors Influencing Citizen Adoption of E-Government: A Review and Critical Assessment', Paper 176, *ECIS 2008 Proceedings*, London School of Economics, available at: http://is2.lse.ac.uk/asp/aspecis/20080090.pdf (accessed 22 August 2010).

Sjoberg, S, and C Schreiner (2005), 'How Do Learners in Different Cultures Relate to Science and Technology? Results and Perspectives from the Project ROSE (the Relevance of Science Education)', Vol. 6 No. 2, available at: www.ils.uio.no/english/rose/network/countries/norway/eng/nor-sjoberg-apfslt2005.pdf (accessed on 6 March 2013).

United Nations (2012), 'UN E-government Survey – E-government for People', available at: http://unpan1.un.org/intradoc/groups/public/documents/un/unpan048065.pdf (accessed on 6 March 2013).

UN Conference on Trade and Development (UNCTAD) (2006), *The Digital Divide Report: ICT Diffusion Index, 2005*, available at: www.unctad.org/Templates/webflyer.asp?docid=6994&intItemID=2068&lang=1 (accessed on 5 March 2013).

World Bank (2013), World Bank Data, available at: http://data.worldbank.org/indicator (accessed on 3 March 2013).