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Towards E-Government in a Small State: An AGILE Framework

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ABSTRACT

Small Caribbean states, opting to pursue services-oriented economies, have invested in information and communication technologies(ICT) to enhance their competitiveness in an environment soon to be without the preferential trade protection they have enjoyed for a number of decades. This has called for improved management in both public and private sectors and as a consequence governments, some of which have undertaken public sector reform, now seem ready to embrace E-government. However experience even in developed countries has shown that incorporating E-government practices is not a sure means of attaining desired goals. This contribution examines the position of Barbados, a small island state in the Caribbean with a developing services-based economy, as it seeks to implement E-government. Some initiatives taken are identified and an AGILE *framework is recommended as a means of achieving a successful transformation. This framework emphasises an entrepreneurial perspective akin to that recommended for small businesses as they strive to survive in a competitive global environment.*

INTRODUCTION

Over three decades ago the potential of information and communication technology to enhance the socioeconomic development of developing countries (DCs) was recognised by some international institutions. Since then DCs all over the world have been increasing their investment in ICT and extending its application into all sectors of their economies. In the private sector there is the issue of the ' productivity paradox' in the utilisation of ICT in enterprises with apparently little measurable productivity gains being attained after considerable ICT investment. Many governments have also not been noticing the expected improvements after their considerable investments. This has been a difficult pill to swallow for small DCs which are least able to afford such unprofitable investment when their populations sometimes lack basic necessities in their social systems. The reality gap between the hype about ICT and the actual performance must therefore be confronted by governments in DCs.

This contribution addresses one aspect of a larger project being undertaken by one of the authors on ICT, governance and modernisation, reviews some initiatives towards E-government taken by the Government of Barbados and proposes a framework that can be used to enhance our critical thinking on how many of the failures experienced elsewhere might be avoided. Note is taken of the literature concerning models on ICT application and, more recently on E-government adoption. Unfortunately these have tended to be about developed countries such as Canada, emerging economies like Singapore and large DCs like South Africa and India. The situation in small developing states like Barbados has special characteristics and requires specific consideration. A similarity between E-government introduction in such small states and the strategic use of IT/IS in small and medium-sized enterprises is being suggested.

Hunter and Long (2002) in examining the challenges faced in the application of IT to small businesses utilised the Entrepreneurial Process and that work has been closely studied in preparing this paper. Likewise the contributions of Heeks (2001(a), 2001(b)) have been useful in the study of efforts to re-engineer administrative processes within government and to seek to implement such processes. In his work he has generally been cognizant of the failure of E-government and other ICT initiatives in DCs and has proposed steps to attain e-readiness. Finally one of the authors has recently advised the Barbados government on national IT planning as a precursor to E-government introduction. That involvement has given great insight into many of the hindrances in the efforts towards successful ICT utilisation in that small state.

It is hoped that the framework can be useful or at least insightful for other developing countries in their thrust towards e-government.

BACKGROUND

ICT Application

It has been recognised that the impact of ICT can depend significantly on the actual ICT investment and the quality of its use. Given their ICT investment, DCs must then seek to evaluate the particular ways in which ICT has been applied. Two of the reasons suggested for the disappointing returns have been:

- the inability to build on gains attained from the initial application of ICT.
- the failure to utilize ICT beyond the effectiveness and efficiency levels, that is, at the strategic level.

Kah (2001) has pointed out that the strategic integration of ICT planning and strategy within governments and businesses in DCs and the strategic use of information systems are the keys to economic efficiency and development in these nations. While this transition from operational systems or traditional data processing to strategic information systems, in order to improve competitiveness, may involve changing the way business is conducted, the likely benefits warrant it.

Hanna(1991) has recommended three stages which institutions should follow toward the successful application of ICT:

- automation of administrative functions to improve efficiency.
- provision of improved information for better decision making.
- creation of new products and services and the development of new relationships with clients.

This analysis can readily be applied to DCs in their adoption of ICT as the experience and success of countries such as Singapore and Malaysia would confirm. The pattern in the Caribbean nations has been that once some initial improvements have been realised from the first two levels of ICT application, these small states have seldom sought to proceed to the third or strategic level.

The third level clearly can be identified as incorporating the current trend towards E-commerce and E-government activities now common in both developed and developing countries. It is evident that there has been considerable improvements in the technological infrastructure of DCs with the Internet now being employed globally. Of course there remains the concern that this global network of networks might reinforce and widen the digital divide and so increase the information gap between rich and poor countries.

As citizens have taken advantage of the Internet and other technological services encountered in their dealings with the private sector, they have come to expect similar services from the public sector which has been slower to utilize such services in its transactions with citizens. This situation has however not been limited to the developing nations.

E-government application

Globally there has been dissatisfaction with the provision of services by governments and moves towards public sector reform have been undertaken by some governments. As the private sector has become more involved in matters once reserved for the public sector the issue of governance has become paramount. The current preoccupation with and hype about electronic government or E-government have therefore reached the Caribbean.

Vision for E-government. The universal appeal of the Internet and the clamour for the delivery of higher quality services by governments have combined to make E-government a much sought after ideal. E-government can generally be defined as online government services or the transacting of business between the public and government by means of electronic systems including the Internet. (Sharma and Gupta 2003).

The terms E-government and E-governance are often in the literature taken as being synonymous. Heeks (2001) gives the perspective of the citizens as he sees E-governance as enhancing citizens' access to government information and services and providing new ways to increase their participation in the democratic process. It may reduce costs, speed up decision-making and delivery of services and lead to innovation in the way government functions. In short, when fully implemented, it would fulfill the desires of all who suffer at the hands of the public sector administration.

Types of services. Citizens, businesses and other governments should benefit from interactions with E-government projects and programmes. Some of the benefits could be realised through:

- online payment for such services as taxes, duties and licences.
- better communication by citizens with government departments and officials.
- electronic transaction of business between private and public sectors.
- improvements in government-to-government dealings.
- online democracy or voting by the Internet.

Evolution of E-government. Elmagarmid and McIver(2001) described four service levels for E-government:

- first-level services which provide one way communication for displaying information about a given agency or aspect of government.
- second-level services which offer simple two way communication possibilities for uncomplicated types of data collection e.g surveys.
- third-level services which facilitate complex transactions, These may involve legally binding transactions such as voter and motor vehicle registration.
- fourth-level services which seek to integrate a wide range of services across the whole government administration. For example, transactions made with one agency may be verified against data held in another agency.

Golden et al (2003) cited a comparative study of 190 United Nations member states which revealed that 169 had a government website presence, 97 had reached stage 1, 55 had reached stage 2, 17 had reached stage 3 but none had reached stage 4. However Elmagarmid and McIver (2001) claimed that, in at least one application, Singapore had attained stage 4.

In considering E-government introduction one has to be ever mindful of opportunities to be grasped, resistance to its adoption, the need for innovation and creativity, insistence on having a shared vision and serious political demands on its proponents.

Developing country realities. Bhatnagar questions the justification for the expense of IT in an environment where many basic needs are not met and many basic rights often violated. (Keniston 2003). Ultimately it is accepted that the real question is not how to use IT or whether to use IT but rather under what circumstances, if any, can IT be utilized to meet such needs and rights. Heeks (2001b) has stipulated that E-governance projects must show sensitivity to the reality of developing country values, structures, and infrastructure. Simply pulling Northern and/or private sector solutions off-the-shelf and trying to impose them on public sectors in DCs will be like driving square pegs into round holes. E-governance solutions must be adapted, not simply adopted, to ensure that the design of those solutions matches Southern realities.

There has been uneven progress in DCs towards the provision of online access to information. Some general barriers have been identified in the successful implementation of E-government. These include organizational, political and technical factors. In particular the need to redesign existing services and improve their coordination and integration has been highlighted.

Lee-Kelley and James (2003) examined the extent to which E-government implementation might lead to the exclusion of certain groups in the community. Results suggest that:

- a citizen's socio-economic status, language and ethnic background, computer skills and E-government vision are significantly related to the willingness to utilise E-government services.
- Internet availability and confidence in its use tend to determine one's willingness to use E-government services.

While these results relate to a UK study they would appear to be even more applicable to a typical DC. In particular, one must acknowledge that whereas E-government services must be made available to all citizens, with commercial services involving the private sector a citizen makes a conscious decision to become involved. Hence the matter of universal access to information technology becomes a crucial factor in the adoption of E-government. It may be that, until such access is assured, citizen should be allowed some choice in the type of technology that is employed in their dealings with the public sector.

Challenges. Heeks (2001a) has identified two other challenges facing developing countries as they undertake E-government application: lack of e-readiness and large design-reality gaps. In assessing E-government readiness he listed six key questions which relate to the following:

- data systems, quality and security.
- legal infrastructure.
- institutional capability to coordinate and drive E-government.
- human infrastructure.
- technological capability.
- visionary leadership.

The design-reality gaps represent the differences between design ideas and organisational realities of these small states.

Contrary to the impression given by the hype surrounding E-government, realising its benefits takes more than the mere creation of a Web presence. Getting citizens online and transacting their business with assurance in a secure environment should be the goal of those contemplating E-government.

Successful implementation of E-government or indeed of any ICT strategy is dependent on the support of the public sector officials and other stakeholders. Hewitt (2003) sees the protection of "turf" by public sector functionaries as a key hindrance within departments and ministries. He asserts that the enthusiastic and sustained leadership of the Head of government is perhaps the best way to achieve national consensus and commitment in an undertaking like IT planning. He advocates that the articulation of such a strategy should be done ideally by the chief executive of government.

CURRENT BARBADOS SITUATION

Barbados is a small Caribbean island nation which in the past three decades has sought to diversify economic activities and has committed itself to becoming a services economy. In the early Seventies the provision of offshore data conversion services for North American corporations signaled the start to the development of an information services sector. This involvement in global outsourcing activities has continued to the present time when the main focus therein is on software development and the operation of call-centres. Additionally an international business and financial services sector whose competitiveness depends on the reliability and cost of ICT services is now promoted. Investors within the offshore sector have insisted that the timely availability of information from government agencies is a major factor in the sustainability of the sector.

In recent times there has been an acceleration in the adoption and diffusion of ICT in small states to coincide with their involvement in the provision of those services for which the Internet and similar technologies have become essential. Indeed those cognizant of the pros and cons of the new global environment, particularly the demands and challenges posed by it, readily admit that such small states must seek to understand the fundamentals driving the new dispensation. They would then be able to put in place the necessary infrastructures, processes, systems and regulations to attain greatest growth and a better living for their citizens.

The Barbados Prime Minister, in an address to a joint International Monetary Fund /Caribbean Development Bank seminar in 2000 stated:

All Caribbean countries will have to undertake the expense of creating a new post- industrial physical infrastructure capable of supporting economic and social activity in an Information Age to compete in the new global society

Initiatives

The following are some of the major initiatives taken by the Barbados Government to establish its E-government presence and to attain competitiveness on the global scene:

Public Sector Reform. Almost a decade ago the Barbados Government embarked on a programme of Public Sector Reform (PSR) to alter organizational structures, processes and behaviour so as to improve administrative capacity.

The Draft White Paper on PSR noted that the public sector was poorly served in the area of modern IT with its management systems being haphazard. A policy to equip all government departments and agencies with computers and other modern IT was immediately announced. The haste with which that policy was implemented and IT solutions recommended for various departments gave the distinct impression that technology was being thrown at the problem. Not surprisingly some unused and underused PCs remained on desks and in boxes in the public sector, a situation not uncommon in other DCs.

The philosophy behind PSR in Barbados has been that it must be centred on people and not systems with programmes such as Performance Review and Development Systems and Customer Service Improvement Programme being promoted. While such programmes can bring improvements, there must be greater emphasis on the wider utilization of enabling technologies such as electronic document management systems, electronic data interchange, e-mail, the Internet and Intranet, all of which have a vital role to play in delivering the client-oriented service now expected by citizens.

Electronic Government The quest for an E-government framework represents a recognition of the paradigm shift from manual record keeping systems that has occurred, thus reflecting the new requirements of the Information Age. The more efficient and effective delivery of public sector services to citizens and organizations alike is but one of these requirements. E-government may thus be seen as a modern or ICT-enhanced version of PSR.

The Government of Barbados Information Network (GOBINET) was initiated in 1998 to establish a coordinated government presence on the Internet for the purpose of providing the widest possible dissemination of information. The Barbados Government Information Services (BGIS) website was the first to be developed with that department expected to be responsible for managing the content of websites under the GOBINET umbrella. These websites would provide current, consistent and reliable information without contradictions and errors. Standards with respect to the publishing of government information on the Internet as well as guidelines for responsible and productive utilisation of the Internet by public servants are being developed by the Government computer agency.

In 2002, some 64 websites existed in the public sector of which only 34 could be described as being active. These sites present mainly historical and some current information to the citizen or organisation. However a number of agencies have independently created their own websites and this has resulted in some lack of consistency in the information published. The stated intention that the Government of Barbados should present a single official face to the world through GOBINET is yet to be attained. Obviously, the desire for publicity on the Internet and the offers of assistance from website developers, local and foreign who may have varying levels of proficiency, could not be easily resisted by some agency head The need for some measure of control and consistency as agencies seek to utilise the latest technologies reaffirms the importance of leadership for ICT application in the public sector.

Two major projects that have been introduced and are having significant impact on the conduct of business across many public sector units are:

- SmartStream or the computerization of government's financial and human resources functions. A major benefit of this project will be the discipline brought to the management of these functions. Departmental heads and other managers will be able to exercise greater strategic planning in their respective units. In order to facilitate communication across the public service an Intranet is being introduced.
- Enabling Environment for Public Service Investment (EEPSI). This establishes an information system network within government to facilitate private sector investment in Barbados, from mainly North American investors. A one-stop-one-shop facility linking several government agencies would, inter alia, reduce response time to investors' queries and so promote Barbados as a good place with which to do business.

Telecommunications The telecommunications infrastructure may be considered to be the most important component in the wider deployment of ICT throughout all sectors and industries in a country. The available services must be of a high quality and proven reliability with the costs being close to what obtains in a developed country. This has been recognized by the Barbados government as it stated:

The government has a vision of Barbados being the centre of excellence for information technology and telecommunications in the Caribbean.....We will ensure that telecommunications services , which are of strategic significance in enabling offshore services and informatics to be internationally competitive, are competitive in both costs and technology.

In Barbados, such services have been provided by a monopoly global corporation. Negotiations began in earnest between government and the monopoly service provider in 1999 with a view to activating a phased liberalisation of services which was expected to start in December 2000 and culminate with open competition in December 2002. Three new telecommunications services providers were finally identified by the middle of 2003. Interconnectivity negotiations between these and the former monopoly provider have now been concluded after ministerial intervention to avert a breakdown in the talks. When one realises that the original licences granted to the monopoly provider were due to expire in 2011, the voiding of that contract with the Government must doubtlessly have necessitated the granting of conditionalities to the provider. Meanwhile many concerned players in all areas of the economy, especially the offshore services sector, await the final freeing

up of the provision of telecommunication services. This should lead to cheaper telecommunications services and eventually to the enhancement of their competitiveness globally.

Other. Additional initiatives have been undertaken by the Government to establish the appropriate enabling environment for the successful transition to both E-commerce and E-government. These include:

- Education Sector Enhancement Programme (EDUTECH) which, inter alia, seeks to incorporate ICT in all aspects of the education system with the objective of preparing students to function in a technologically advanced society. That this has become the nation's highest-funded public sector project should indicate the importance attributed to education and to the utilization of ICT in that sector.
- Establishment of a Technology Centre where short, high-impact and modular courses in the latest ICT are being offered. This should produce a cadre of persons equipped to grasp any employment opportunities that may become available.
- Community Technology Programme or the placing PCs in the Community Centres which seeks to address the matter of universal access to information technology. Community centres will be transformed into resource centres where Internet access and training will be provided. Citizens who are unable to procure PCs will be able to have access to the Internet for themselves and their children.
- Removal of import duty on personal computers thus making them more affordable to the citizens.
- A major step in creating the appropriate legal and regulatory infrastructure has been taken with the preparation of an Electronic Transaction Act with associated regulations currently being drafted. Other legislation promised deals with Right to Privacy, Data Protection, Computer Misuse and Intellectual Property. Such legislation would also facilitate E-commerce activities.
- Strategic Information Technology Planning is being tackled at national, sectoral and departmental levels.

THE *AGILE* FRAMEWORK

A framework is here proposed as a comprehensive rollout of the necessary strategies that are needed to implement an E-government project.

The *AGILE* framework has been conceived by one of the authors to analyse:

- the external fundamentals related to the successful creation of organisations in communities, and
- the internal and external stimuli contributing to the success and sustainability of such organisations.

The introduction of E-government in a small state is akin to the creation and sustained development of an organisation and as a result this framework is being applied to it. With this framework a matrix is provided to guide the thinking and planning necessary to deal with threats, available opportunities and demands in the changing external environments around such organisations. A second objective is to harness the collective creativity from within the organisations. In applying the framework to the introduction of E-government in a small state it is intended that critical thinking can best be focused on the provision of building blocks appropriate for such a state as it confronts a very competitive global environment.

The *AGILE* Principle incorporates the following aspects:

A Alliances
G Governance
I Infrastructures
L Learning
E Entrepreneurship

Alliances. E-government is about transforming government and providing more citizen-centred services with the Internet and Intranet having major roles to play. Success with E-government application requires a shared vision and active participation by all stakeholders, citizens, the private sector and other governments. Heeks (2001a) identifies the following digital connections:

- within government or E-administration. Included here are the creation of new digital channels, improving existing ones such as central-to-local government and ministry-to-ministry, and the decentralisation of decision making to lower levels.
- between government and citizens/non-government organisations (NGOs). This involves increasing the flow of information with citizens and being more responsive to their requests for service. Similarly building civil society through partnerships with NGOs should be encouraged.
- between government and the private sector. Public Sector Reform has brought a greater involvement of the private sector in the affairs of government, for example, with the outsourcing of projects when this is deemed to be in the best interests of all. Governments can also learn from the experience of the private sector gained from applying ICT in their commercial transactions.

One must also include the connections between governments themselves. Some developed countries may provide assistance in designing, implementing and funding ICT projects but these projects must not become 'donor-led'. On the other hand networking with governments in other DCs which have undertaken similar projects should reduce the prospect of reinventing the wheel. Government's procurement process can also benefit through alliances with external entities, e.g. suppliers and trading partners.

Among the relevant alliances in which the Barbados is currently engaged are:

- Social Partnership, an alliance of government, private sector and labour, which first was formed in Barbados a decade ago when it faced international financial agencies in a period of national financial problems and restructuring of the economy. This concept has proven to be very effective for the discussing and resolution of national issues which could , if unresolved, result in social and labour dislocations. This involvement could be used by government to share its E-government strategy and priorities with its partners and learn of their ICT experiences and expectations.
- The Heads of Government of the Caribbean Community (CARICOM) has approved a recommendation for the formulation of a CARICOM ICT Strategy. The main focus of this initiative is to foster E-commerce competitiveness among small and medium sized businesses in the region. A draft produced by a Working Group has stressed equitable, universal and affordable access to information, effective social society participation in the development of a regulatory framework and human resource development.
- Caribbean Regional ICT Development Programme sponsored by the UNDESA.

There is ample evidence to support the pursuit of external alliances since other countries are themselves grappling with the same issues. Shared experiences and joint participation in international fora e.g. at meeting of the Commonwealth can be very beneficial. Mention must be made of one such partnerships formed to address common issues in which Barbados participated:

Commonwealth Network Society Summit, held in London Oct 6-7, 2003, was organised in response to a call by the Commonwealth Heads of Governments for a high level meeting of representatives from across the Commonwealth to consider bridging the digital divide and promoting wider use of ICTs.

A local ministerial ICT committee has already begun a study of the deliberations of that Summit as it considers further ICT utilisation.

Governance. In Barbados and in the Caribbean generally the public sector represents the largest single source of employment and this has implications for any move toward E-government and a wider utilisation of ICT. The private sector in developed countries, with its long and productive utilisation of ICT in many areas can be expected to lead the way. However, in DCs, with a shorter and much less successful experience with ICT application throughout that sector, the leadership of government is vital.

Governments in DCs must intervene to ensure that the role of ICT is strategically linked to economic growth and national development. they must be seen as model users of the technology since, at least in Barbados, the private sector has tended to be content with "satisficing' rather than seeking to optimise its ICT investment. Traditionally governments in DCs have had to undertake innovative and developmental projects where risk of failure tends to deter private sector involvement.

Effective management is essential for success with E-government introduction. As with an E-government thrust or indeed any ICT application success means implementation on time, within budget and satisfactory to customers or citizens. A major challenge to be overcome is the resistance endemic to the public service itself. This task entails raising awareness levels about E-government itself, training in specific skills needed and, above all, ensuring a shared vision. This vision must therefore be focused on the citizens, meeting their needs and improving their quality of life. The involvement of stakeholders must be ensured with channels for communications being set up and utilised effectively.

Infrastructure. The thrust towards E-government and E-commerce in a small state must then be spearheaded by its government which must necessarily create the enabling environment with appropriate legislation and associated policy documents.

A national information infrastructure may be viewed as a strategy for combining communications networks, computers, databases, information resources, people and policies to enable the country to obtain and share information locally and with others globally. Each country must determine the level of detail and sophistication required for its social and economic environment. In Barbados there have been piecemeal ICT initiatives taken by successive governments, for example, planning for the closely related issues of PSR, E-commerce, E-government and Telecommunications is being undertaken by distinct ministries. However it must be accepted that progress toward successful E-government introduction demands careful planning and coordination of strategies and projects.

Specific areas of importance are:

- development of the physical infrastructure e.g telecommunications
- procurement and maintenance of computer equipment.
- development of human resources.
- development of the legal and regulatory infrastructure
- creation of an institutional infrastructure within the public sector to lead the move toward E-government e.g. a Central IT Office.

Significantly the Barbados government in its effort to promote universal access and enhance its E-government application has provided not only computers in community centres but is also financing basic training in literacy skills for citizens.

Learning So far issues relating to the design aspects have been addressed but if the vision is to become a shared vision E-governance awareness must be created. The mind-set gap outlined by Heeks (2001a) has to be closed. There are actual gaps between e-literate citizens and those without access to technology or even resistant to the technology, and between the perception of the typical citizens and the user-friendliness of E-government processes. A national information culture must be developed in these countries where the oral tradition for a long time predominated. Communication between citizens and government must be agreed upon for, according to a UK Government White Paper: *People want a government which meets their needs, which is available when they need it and which delivers results for them.*

Trust and confidence in the E-government processes have to be established. This calls for the building of awareness and commitment among all stakeholders. Education and training for those involved must be pursued at all levels and, since E-government ultimately affects everyone, this learning process must encompass everyone. Citizens should be shown how this new paradigm with greater access to information will lead to the better delivery of services. For DCs where the availability of information rather than issues about data privacy as noted in developed countries is a major concern, this will require a concerted effort.

For those who embrace the realities of the information revolution, the opportunity exists to transform the very societal fabric of local communities by making it possible to combine vast amounts of information now available on the Internet and elsewhere with local knowledge to attain sustainable development and poverty mitigation. There is no one-size-fits-all model for E-government adaption since each state has unique characteristics, priorities and resources and is a specific state of E-readiness.

The reality in small states is that there is a serious shortage of IT professionals with experience in such strategic areas as an E-government initiative. In addition to the technical know-how major challenges will include the capacity to manage the change process involved and the ability to implement and maintain newly instituted systems. Project management skills must be greatly improved as this is one area in which DCs have been greatly lacking. Likewise the choice of initial projects can be crucial in securing the desired involvement from the stakeholders.

A good example to be followed by a small state in an undertaking as challenging as E-government introduction is the approach taken by Jamaica recently. According to Hewitt (2003) that nation, in its strategic IT planning exercise carried out in preparation for its E-government thrust, utilised:

- mentoring assistance from a US Federal Department, and
- a specially invited panel of Jamaicans working in the IT industry in North America who were able to provide expertise with a local perspective.

Entrepreneurship

According to the Roadmap for E-government in the Developing World, behind every successful E-government project is a visionary leader who pushes for change, has authority, is willing to take risks, is willing to secure funding, commits time to the project and will publicly endorse and advocate for E-government. The leader must also be able to vouch for the benefits of ICT usage from a personal standpoint. In the face of opposition, even from within the public service or ruling political party, the leader must champion the cause for E-government and take ownership of the project. The champion should endeavour to build support both within and outside his administration. For example 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. The leader may also seek support in the private sector from those already convinced of the need for greater technology utilisation. In addition there must be external dependance on consultants, suppliers or other states since, as indicated earlier, these small states do not possess all the requisite human and financial resources.

The national drive toward E-government can therefore be compared to the IT application in a small business which has been identified as displaying similar characteristics. Hunter and Long (2002) examined the use of Information Systems in small businesses and portrayed their managers as promoters who

- capitalised on opportunities. Computers are to be used not only as operational tools to support day to day operations but to improve decision making and long term planning, for example, to foster competitiveness.

- responded quickly, even in an ad-hoc manner, to those opportunities. The dynamism of small businesses presents the decision maker with quickly changing situations that have to be handled.
- were forced to confront and overcome difficult conditions such as lack of financial and human resources. Creativity and innovation, that is, an entrepreneurial vision, must be employed in the novel situation being faced.

The Theory of Entrepreneurship is considered as a means of understanding the innovative use of information technology in a dynamic and competitive environment. This Theory suggests that entrepreneurship involves risk taking, astute business management and innovation with the entrepreneur engrossed in a strategic venture development. The entrepreneur has, not only to prepare the venture, but also to launch it and ensure its growth

This corresponds closely with the situation facing the leadership of a small state as it seeks to enhance its ICT utilisation beyond the basic levels where effectiveness and efficiency gains are sought. The E-government initiative should be seen as constituting such a venture with a strategic focus being advocated for entry into the very competitive environment which awaits every small state which attempts to face the global scene.

CONCLUSION

An E-government initiative brings with it much hope and even hype that citizens and institutions will benefit from the services provided by the government. However before this can be realised much planning and coordination must take place. The government of a small state must devise a national strategy in consultation with all stakeholders. At the national level, at the regional level and internationally, particularly with small states throughout the Commonwealth which have contemplated or undertaken such initiatives, there must be partnerships and alliances so as to optimise the limited human and financial resources available in the search for such a complex technological solution.

The *AGILE* framework presented here could assist governments in Barbados and similar small states in their E-government initiatives as they seek to achieve the best for their citizens and institutions.

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