

READINESS OF ST LUCIA IN THE AREA OF eGOVERNMENT

Report authored by

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Alex Attard

Acronyms

ASYCUDA	Automatic System for Customs Data
CAD	Computer Aided Design
CARICOM	Caribbean Community and Common Market
CCL	Computer Centre Ltd
CSME	CARICOM Single Market and Economy
CTU	Caribbean Telecommunications Union
ECCB	Eastern Caribbean Central Bank
ECCM	East Caribbean Common Market
ECCU	Eastern Caribbean Currency Union
ECTEL	Eastern Caribbean Telecommunications Authority
HIS	Health Information System
ICT	Information and Communication Technology
IRD	Inland Revenue Department
ISP	Internet Service Provider
IT	Information Technology
MITA	Malta Information Technology Agency, formerly Malta Information Technology Service and Training Ltd
NIC	National Insurance Corporation
OECS	Organization of Eastern Caribbean States
PC	Personal Computer
PMC	Project Monitoring Committee
RSLPF	Royal St Lucia Police Force
RSS	Regional Security System
SIGTAS	Standardized Integrated Government Tax Administration Systems
SP	Service Provider
SP-PL	Service Provider – Project Leader
SSNED	Small States Network for Economic Development
STTP	Small State Twinning Partner
TA	Technical Advisor
UHC	Universal Health Care
UNCTAD	United Nations Conference on Trade and Development
UWI	University of the West Indies
VAT	Value Added Tax
VOIP	Voice Over Internet Protocol
WAN	Wide Area Network

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Foreword

The main purpose of this report is to assess the readiness for eGovernment in St Lucia and to assist the Government of St Lucia to develop eGovernment within a strategic ICT framework. It was commissioned as part of a project, funded by the Small States Network for Economic Development, entitled “Development of eGovernment in St Lucia” with St Lucia as the beneficiary small state and the Malta Information Technology Agency (MITA) as service provider (see Annex 1)

In order to gather the necessary information for this report, the author visited St Lucia between 19 and 23 January 2009. During this visit the author met many St Lucian government officials from various institutions, as shown in Annex 2.

During the visit, the author met most of the members of the eGovernment Taskforce during the first morning of the visit and then on a one-to-one basis during the rest of the week. One of the duties of the eGovernment Taskforce is the responsibility of developing the ICT and eGovernment policies. The formation of this Taskforce is an important step in keeping the major stakeholders in government informed of developments and progress, and also to receive feed back, suggestions and critique on plans, projects, processes, policies and execution as the eGovernment program moves forward.

Throughout the whole week the author was impressed with the dedication and enthusiasm shown by all the government executives towards the launch of the eGovernment program.

Executive Summary

This report reviews the National Development agenda of St Lucia geared toward an assessment of the use of Information and Communication Technologies to support the development initiatives and undertakes an assessment aimed at uncovering the gaps that exist at the national level within the ICT sector.

The report puts forward a number of recommendations regarding the need of centralising the Government ICT function and regarding eGovernment structures.

The Government of St Lucia and more specifically the Ministry for Public Service have embarked on an exercise to define the National Information and Communication Technology Policy and Sectoral Strategies. This indicates the seriousness of the Government's intentions and also demonstrates that the Government of St Lucia understands the complexity of the undertaking.

The major challenge for the Government of St Lucia in the launching of eGovernment initiatives will be the disparities in computer access. This issue ushers in the following two main challenges.

The first relates to the often described "digital divide", the accessibility for people with disabilities and wider availability of personal computers to knowledge workers within the public service. In the case of the digital divide, not all citizens currently have equal access to computers, whether due to a lack of financial resources to purchase a personal computer and a connection to the Internet or necessary skills.¹ The placement of Internet-enabled computers in schools, public libraries and/or regional public or local government offices may help address this issue. One has to consider that much of what governments do involves interactions with people least likely to have access to the internet i.e., the poor, the elderly and the less-well educated. Although a challenge, these issues can be addressed and do not represent a permanent barrier. On the other hand, businesses in St Lucia are relatively well connected² to the online world and are keen³ to see the delivery of more government services electronically. The availability of personal computers to knowledge workers within the public service is addressed in Section 3 of this report.

The second challenge that will need to be addressed in the short term, relates to the need to define the organisational structure required to manage not only the eGovernment initiatives but also the

¹ Internet penetration in St Lucia is 9% (March 2008) Source: *ECTEL - Survey on Impact of Telecoms and ICTs in ECTEL*.

² Nearly 75% of business in St Lucia have an Internet connection: Source: *ECTEL - Survey on Impact of Telecoms and ICTs in ECTEL*.

³ See section 5 relating to the Chamber of Commerce of St Lucia

immediate and long term management of the government ICT operations in a highly structured manner to ensure maximum use of resources which are in short supply, maximum exploitation of economies of scale and avoidance of duplication, redundancies/duplication of human resources within a cohesive and a highly coordinated unit. This topic is addressed in Section 6 of this report.

This report is organised in 8 sections. Section 1 gives some background on the small island state of St Lucia and presents a brief description of its population, government, the economy and foreign relations. Section 2 covers the Public Service with information about some of the IT systems in the major ministries, including the Customs and Excise, Inland Revenue, Health, and the Police Force. This section also includes a description of the role of the Government data centre management company – Computer Centre Ltd. The Education System, which is an essential in preparing human resources required for eGovernment, is described in Section 4. Section 5 discusses the role of the private sector and the St Lucia Chamber of Commerce, Industry and Agriculture in the context of eGovernment issues. Section 6 deals with the need of a Central Common Database as a keystone system for eGovernment, and makes a case for centralisation of the Government ICT function. Section 7 puts forward recommendations as to what other formal structures are required as part of a central ICT Unit. Section 8 concludes the study.

The recommendations put forward in this report therefore relate to the need for the centralisation of the Government ICT function, the setting up of a Central Common Database and the need to put in place new government structures for the development of eGovernment

Central Common Database

Currently there is not a single source for clean (and verified) primary data of each citizen of St Lucia. A central common database is the cornerstone of strong eGovernment Strategy and Section 6.1 recommends an initiative to set up such a central common database.

Centralisation of the Government ICT Unit

The physical size and the economy of St Lucia warrant a close examination of the benefits that can be derived from a centralised ICT unit serving the whole of government. Considerable cost and operational benefits will be derived from the centralisation of applications and virtualisation of servers, the introduction of a common architecture and most importantly the maximised used of scarce technical resources. Section 6.3 presents the advantages related of centralising the ICT Unit.

Recommendations regarding new eGovernment Structures

This report recommends that the Government of St Lucia sets up 7 new structures in order to implement and support the new eGovernment strategy, namely:

- A Project Management Office,
- An ICT policy making and compliance office,
- An Information Security Office,
- A Service Management and Service Delivery Entity,
- A Sourcing and Procurement Unit,
- A Quality Assurance Unit, and
- A Change Management Office.

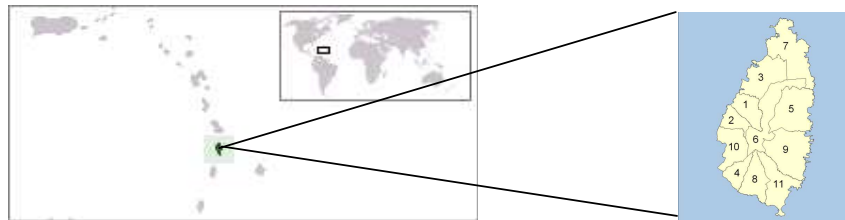
The role and function of these structures are described in Section 7.2. These structures will initially start with each role being managed by a single qualified individual, however, these roles should be expected to grow and mature into units to support the whole ICT infrastructure and service delivery within the Public Service.

01. About St Lucia

1.1 Location, Population and Brief History

Saint Lucia is one of the Windward Islands in the Eastern Caribbean, and was named for Saint Lucy of Syracuse. It is located north/northeast of the islands of Saint Vincent and the Grenadines, northwest of Barbados and south of Martinique. Its size is 620 km². Its capital is Castries.

Location and Map of St Lucia



The island is divided into 11 quarters, including the capital, which are: (1) Anse la Raye, (2) Canaries, (3) Castries, (4) Choiseul, (5) Dauphin, (6) Dennery (7) Gros Islet (8) Laborie (9) Micoud (10) Soufrière and (11) Vieux Fort.

The estimated population of St Lucia is 160,765 (2005 census). English is the official language, although many St Lucians speak a French patois. Seventy percent of the population is Roman Catholic. The rest are Seventh-day Adventists (7%), Pentecostalists (6%), Anglicans (2%), Evangelicals (2%) and Rastafari (2%). The population is evenly divided between urban and rural areas, although the capital, Castries, contains more than one-third of the population.

The Island was first visited by Europeans in about the year 1500 and first colonized successfully by France who signed a treaty with the native Carib peoples in 1660. Great Britain took control of the island from 1663 to 1667 then went to war with France over it fourteen times, and finally took complete control in 1814. Representative government came about in 1924 (with universal adult suffrage from 1953) and from 1958 to 1962 the island was a member of the Federation of the West Indies. On February 22, 1979, Saint Lucia became an independent state of the British Commonwealth.

1.2 Government

St Lucia is a parliamentary democracy modeled on the Westminster system. The head of state is Queen Elizabeth II, represented by a governor general, appointed by the Queen as her representative.

The bicameral parliament consists of a 17-member House of Assembly whose members are elected for 5-year terms and an 11-member senate appointed by the governor general.

St Lucia has an independent judiciary composed of district courts and a high court. Cases may be appealed to the Eastern Caribbean Court of Appeals and, ultimately, to the Judicial Committee of the Privy Council in London.

1.3 Economy

St Lucia has been able to attract foreign business and investment, especially in its offshore banking and tourism industries. In 2006 there was a heavy increase in foreign direct investment in 2006, mainly directed at the construction of several tourism projects. Tourism provides Saint Lucia's main source of income and the industry is the island's biggest employer.

Since the 1960s, banana cultivation and export revenues have helped fund the country's development. However, banana exports are now in a decline, due to competition from lower-cost Latin American producers and reduced European Union trade preferences. Notwithstanding, the Government of St Lucia encourages farmers to plant crops such as cocoa, mangos, and avocados to diversify its agricultural production and provide jobs for displaced banana workers.

St Lucia's economy therefore depends primarily on revenue from tourism, with some contribution from banana production and small-scale manufacturing. Infrastructure improvements in roads, communications, water supply, sewerage, and port facilities have benefited all sectors of the economy. Combined with a stable political environment and educated work force, the improvement in the infrastructure attracted foreign investors in several different sectors. Apart from the steady flow of investment in tourism, the single most significant foreign investment is Hess Oil's large petroleum storage and transshipment terminal. The extensive airport expansion project funded by the Caribbean Development Bank was of further benefit to the tourism industry.

Tourism makes up for more than 48% of St Lucia's GDP. Statistics for 2005 show that tourist visitors totaled over 700,000, mainly from the United States, the United Kingdom, and CARICOM. The hotel and restaurant industry grew by 6.3%. and stay-over arrivals increased by 6.5%. The United States remained the most important market, accounting for 35.4% of these arrivals. Similar to other tourist destinations worldwide, the tourism sector in St Lucia is currently facing declining revenues due to the global economic downturn.

St Lucia's currency is the Eastern Caribbean Dollar (EC\$), which is a regional currency shared among members of the Eastern Caribbean Currency Union (ECCU) and issued by the Eastern Caribbean Central Bank (ECCB). The EC\$ is kept pegged at EC\$2.7=U.S. \$1 by the ECCB, which also manages monetary policy, and regulates and supervises commercial banking activities in its member countries.

St Lucia forms part of the Caribbean Community and Common Market (CARICOM), the CARICOM Single Market and Economy (CSME), the East Caribbean Common Market (ECCM), the Organization of Eastern Caribbean States (OECS), and the Regional Security System (RSS).

1.4 Foreign Relations

The government of St Lucia seeks balanced international relations through mutual economic cooperation and trade and investment. St Lucia enjoys friendly relations with the major powers active in the Caribbean, including the United States, the United Kingdom, Canada, and France, and conducts its foreign policy through its membership in the OECS.

02. IT Systems in the Major Ministries

2.1 The Public Service

The Government of St Lucia of has 15 ministries, namely:

Ministry of Agriculture, Lands, Fisheries & Forestry

Ministry of Commerce, Industry, Consumer Affairs

Ministry of Communications, Works, Transport & Public Utilities

Ministry of Economic Affairs, Economic Planning and National Development

Ministry of Education and Culture

Ministry of External Affairs

Ministry of Finance

Ministry of Health Wellness, Family Affairs, Human Services, and Gender Relations

Ministry of Home Affairs & National Security

Ministry of International Trade and Investment

Ministry of Justice and Attorney General's Chambers

Ministry of Labour, Information and Broadcasting

Ministry of Physical Planning, Housing, Urban Renewal, Local Government and the Environment

Ministry of Social Transformation, Public Service, Human Resource Development, Youth and Sports

Ministry of Tourism and Civil Aviation

The number and categories of employees in the civil service are as follows:

Employees in the Civil Service

Description	# of Persons
Civil service	3016
Doctors	54
Fire service	276
Legislative	27
Nurses	207
Pension	1804
Police	954
Prisons	124
Teachers	1623
Wages	893
Other	66
Other – project	29
Total	9073

Source: The Public Sector ICT & eGovernment Unit

2.2 Government Information Technology Management and Funding

A multi-layered challenge for the development of eGovernment relates to government information technology management and funding. With 3016 employees in the administration of the public service (knowledge workers), the Government of St Lucia has a major challenge in providing these employees with personal computers to meet the challenges for the provision of electronic services to the citizens, and to provide basic PC skills and training in office automation tools to all these employees. This therefore represents a challenge of funding for acquisition and recurring cost of ownership of the hardware and software, and of a logistical nature to organise and deliver training without disruption of service to the citizen. These challenges will be addressed as part of the objectives in the National ICT Policy and Sectoral Strategies initiative (refer Page 7).

Currently there are approximately 800 PCs in use within the public services in St Lucia that are connected to the Government networks, plus approximately another 400 stand alone PCs. These units are supported by Computer Centre Ltd, the government's in-house agency which manages the government's data centre, network infrastructure, and the support and maintenance of various applications in use within the Ministry of Finance. The existing number of installed PCs is low compared to the number of knowledge workers. This issue will need to be addressed urgently, as government will need to concurrently catch up with the future implementation of eGovernment solutions and also to demonstrate leadership not only, to the private business sector but also to demonstrate the need to young citizens about the need for proficiency in the use of personal computers in basic office automation applications.

Therefore the eGovernment Unit will need to need to run a parallel project for the introduction of personal computers and staff training aligned with the specific eGovernment projects which will be launched progressively during the lifecycle of the eGovernment Strategy implementation. This topic should also be addressed as part of the objectives of the National ICT Policy and Sectoral Strategies initiative (this issue is further discussed below).

2.3 Computer Centre Ltd

Computer Centre Ltd (CCL) is the ICT in-house service provider to the Government of St Lucia. CCL and its predecessor organisations, has been in existence since 1990 under different forms. The organisation reports into the Ministry of Finance. The broad services CCL provides are:

- Application development, maintenance and support,
- Support and maintenance of the network infrastructure and data centre hardware,
- Help desk and desk-side technical support for PCs within public service.

The CCL team consists of:

- 1 General Manager
- 1 Manager
- 1 Accountant
- 1 Senior Analyst
- 3 Program analysts
- 1 Systems/DBA
- 3 Technicians
- 1 technical assistant / networks
- 1 technical assistant / servers
- 2 Help Desk Officers

Currently their hours of operation are 9:00 am to 5:00 pm.

CCL provides first level support not only for applications developed and supplied by CCL but also for some systems procured from third party service providers; e.g., passport system provided by a Canadian Company. CCL are also committed to carry out studies of system requirements for client Ministries, which systems may eventually be handed over to CCL for hosting and support.

CCL is also involved in the preparation of proposals on ICT matters to Cabinet.

The services provided are covered by a Service Level Agreement signed by the Ministry of Finance on behalf of the Government with CCL.

The major government buildings housing the various Ministries and their respective departments are situated in five adjacent buildings along the Waterfront in Castries. CCL provides a WAN infrastructure linking these buildings with a 1Gb fibre backbone. Cable and Wireless maintain the external network. Across the rest of the island CCL use frame relay connections provided by Cable and Wireless, which are slow, relatively unreliable and costly.

The management of the government telephone systems fall under the responsibility of the Ministry for Public Service, however, CCL has set up some VOIP systems for Government. There is an indication that future installations of telephone systems will be based on VOIP.

Currently CCL does not have an off-site disaster recovery site. It is being planned to use the new ICT Data Centre in Castries (set up through the cooperation agreement with Taiwan) as a back-up

location. The management of CCL and the eGovernment Unit understand the urgency of such a decision. As more mission critical applications and portals are implemented and put on-line, disaster recovery planning and business continuity will become essential and an urgent solution for the existing situation is being worked on.

In the past, one of the challenges faced by CCL was to define certain ICT Policies and Procedures. Some ministries set their own policies. Where CCL set the policies, they had no mechanism to enforce those policies. With the current set-up, the new eGovernment Taskforce is now responsible for developing the ICT and eGovernment policies.

2.4 The Customs and Excise Department

The Customs Department uses the Automatic System for Customs Data (ASYCUDA), which is a computerized customs management system that covers most foreign trade operations and procedures. It was developed by UNCTAD in 1981 and has been installed or is being implemented in over 80 countries and regions around the world. The version in use in St Lucia is ASYCUDA++. The system has been in use since 2005.

The ASYCUDA system is also in use by other OECS countries namely, Dominica, Grenada and St Vincent. Currently there are initiatives being considered to create a regional customs information sharing network for the interoperability of various customs systems over diverse regional platforms, as well as sharing of information among public agencies involved in the export and import processes.

The ASYCUDA system currently supports the complete automation of the cargo manifest. All manifests' bills of lading are electronically transmitted by shipping agents. Importers and exporters can lodge their declarations from their offices. Through the use of risk management procedures, customs officers can determine which goods require physical examination and/or documentary checks.

The system is hosted at the Customs Department with support for application development from CCL. Various applications have been built around the ASYCUDA system such as the Duty Free Shops application, written in Java. The system is used by 150 employees within the customs department. The department also provides web access to the system for 120 customs clearance brokers.

The IT unit for the Customs Department consists of:

- 1 IT Manager

- 2 persons on loan from CCL for application development and system administration

3 persons for system administration, application development and network support

1 technician for PC support

Currently the Customs department is considering the implementation of the next version of ASYCUDA – ASYCUDA World.

2.5 Inland Revenue

In common with other Caribbean states like Antigua, Dominica, Grenada, St.Kitts and St. Vincent, the Inland Revenue Department of St Lucia uses the Standardized Integrated Government Tax Administration Systems (SIGTAS), which was developed by SOGEMA, a Canadian company. SIGTAS is a system that specializes in management and information systems and is used to manage the collection of taxes. SOGEMA had worked directly with the Inland Revenue Departments in the OECS to implement the required legislative and business process changes. Additionally, IRD staff members were trained to operate and manage the SIGTAS application.

There are 110 users of SIGTAS within the IRD in St Lucia. The system, which has been in use for the past 10 years, enables the Inland Revenue department staff to operate more efficiently as the software has the ability to remind taxpayers that their taxes are due, identify and record potential taxpayers, retrieve tax information quickly, and reduce the time taken to make payments. These functions assist in the speedy collection of revenue.

The website of the Inland Revenue Department (<http://irdstlucia.gov.lc/>) is used to provide relevant information to tax-payers, downloadable forms and instructions on how to fill the forms, FAQs, Press Releases, the Department's Newsletter (although latest issue displayed is over two years old) and facility to obtain a tax calculation online to get an estimate of taxes to be paid. The tax returns can be downloaded and printed and then mailed to the IRD. There are discussions under way to provide the facility for electronic filing. St Lucia has approximately 70,000 taxable persons and 4,000 registered corporations. As a perspective, revenue for 2008 was EC\$320 million (US\$118M)

Currently there is a regional (Eastern Caribbean Currency Union countries) body reviewing IT tax programmes and tax legislation to determine what major enhancements are required to SIGTAS. Analysis is not yet complete and officials of the St Lucia IRD are hoping that a refresh to SIGTAS would be done prior to the introduction of VAT.

An upgrade or refresh of the current SIGTAS platform may present quite a challenge, since St Lucia (and the other participating countries) has owned the sources code to SIGTAS and country specific changes and enhancements may been implemented thus creating the effect of a customised system.

The VAT implementation project is being managed by a project coordinator reporting to the Permanent Secretary, Finance. The current plan caters for the introduction of VAT in April 2010; however, the necessary legislation is not yet in place. The drive is towards the introduction of a common VAT in ECCU. Therefore the relevance of an integrated VAT/Customs system is being assessed, possibly using SIGTAS with a VAT 'module'. Needless to say, the introduction of a uniform and shared regional system would greatly reduce costs for the individual participating States.

The IT unit for the Inland Revenue Department consists of:

- 2 persons for network administration and support
- 3 programmers

It is understood that currently the Accountant General is having discussions with the Banks in St Lucia regarding the processing of credit and debit card transactions online by the Government on its websites. It is not apparent if a cost benefit analysis has been made on the collection of Government's revenue by credit or debit cards. However, at present the Government is highly reluctant to pay a percentage of revenue on the credit/debit card transactions. This topic will need to be re-evaluated and reassessed by the Ministry of Finance/Accountant General to determine the benefits gain through processing payments online.

2.6 The Ministry of Health

The Ministry of Health IT system referred to as the Health Information System (HIS) is made up of 8 modules. HIS was acquired from Accesstec, Inc. The modules are web based and amongst other functions include a register of persons with diabetes and record keeping for diabetic patients. Diabetes is one of the main causes of death in St Lucia. The system also includes an HIV module which was funded by the National Aids Programme Secretariat.

A team of 3 programmers, which reports to the Health Information System Administrator of the Ministry of Health, carry out in-house development and enhancements to the HIS. The programmers were trained by Accesstec in Canada in 2008. The team also builds other mini modules around the current applications, customised to their client needs.

Universal Health Care (UHC) is a health programme established by the Ministry of Health that provides all residents of St Lucia with equal access to quality health services. The defined services are: out patient services and hospital services including Obstetrics, Gynaecology, Internal medicine, Paediatrics, Surgery, Orthopaedics, Ophthalmology, Dermatology, Urology, Dentistry and Neurology.

The pilot phase initially established three Universal Health Care pilot sites at Gros Islet Polyclinic, Monchy Health Centre and Grande Riviere Health Centre. The recently appointed new Chief Health Planner will consolidate the current efforts and improve on the strategic plan to continue the rollouts to other health centres. Caribbean Development Bank has provided the funding for the structural rehabilitation of the health centres. The initiative should also get funding for the ICT implementation in 9 health centres in 2009.

In 2006, the Ministry of Health through the Universal Health Care initiative organised one the largest enumeration exercise outside the census when 60/70% of the population was registered and issued with a UHC ID card. One main reason why the exercise was carried out resulted from the fact that there is no single central repository of 'clean' primary data about the citizens of St Lucia. (More on this topic in Section 08 – Central Common Database) The basic data collected included First and Last Name, Date of Birth, Gender and Marital Status, Birth Place, Residency and Nationality. The information is currently indexed under the person's National Insurance Corporation (NIC) number.

Another initiative under UHC, funded by the National Insurance Corporation, created digital copies (through transcription) of the existing physical paper health records.

A new network has been installed in Victoria Hospital. However users have not yet received the requisite basic ICT training. There will be a focus on end-user training in 2009. The desire is to roll out training in basic PC skills for health workers like turning on a computer, opening a browser and entering information; and training on HIS module specific use. The major issue in delivery the training is the availability of the medical personnel to attend the training sessions during shift hours. This is a common problem also encountered in other countries, which is due to the limited availability of medical personnel and trained nurses.

2.7 The Royal St Lucia Police Force

The Royal St Lucia Police Force (RSLPF) was established in 1834. The word Royal was bestowed on the title of the Force in February 1966 by Her Majesty, Queen Elizabeth II during her visit to St Lucia.

The Police Force has a total complement of about 1000 persons, with a mix of police officers and civilians. The RSLPF has 8 police stations in the Northern Division and five in the Southern Division. Each Division is headed by a Superintendent of Police. The Force has a relatively low average age with the new generation police officers having a good education and relatively IT savvy.

Since St Lucia has no army, the RSLPF maintains a coast guard unit and a Special Services Unit and is also in charge of immigration and issuing of passports.

The RSLPF has recently received a donation from the Government of ROC/Taiwan in the form of a Crime Recording System. This same initiative with the Government of Taiwan also involves the development of a Drivers Licensing System for the Transport Department of the Ministry of Communications, Work, Transport and Public Utilities. The two systems, i.e., the Crime Recording System and the Drivers Licensing System, are linked so that both agencies can track vehicle information, e.g., stolen cars. The overall package includes the application software, operating system, hardware and maintenance and support. The systems are hosted in a new ICT Data Centre in Castries. The project is part of a cooperation agreement with Taiwan.

The RSLPF also shares and provides information and data to Interpol, the US and European law enforcement agencies.

The RSLPF manages a Border Control System which was procured from DRM Systems of the UK. The system is used by the other Eastern Caribbean countries. The Border Control system is integrated with the Interpol system (referred to as the i/247).

The police network, which encompasses data and voice, passes over the Cable and Wireless network (frame relay). As mentioned earlier in this report, the network is relatively slow, unreliable and costly.

Superintendent Paul H. Lionel is the Officer in charge of the Police Communications & I.T. Unit and has held the position for the past 7 years. His wish list includes provision of additional PC hardware, additional software tools to monitor the police network and training to upgrade the skills of police officers ranging from the use of PC office automation tools to the use of specific installed police applications.

03. The Education System

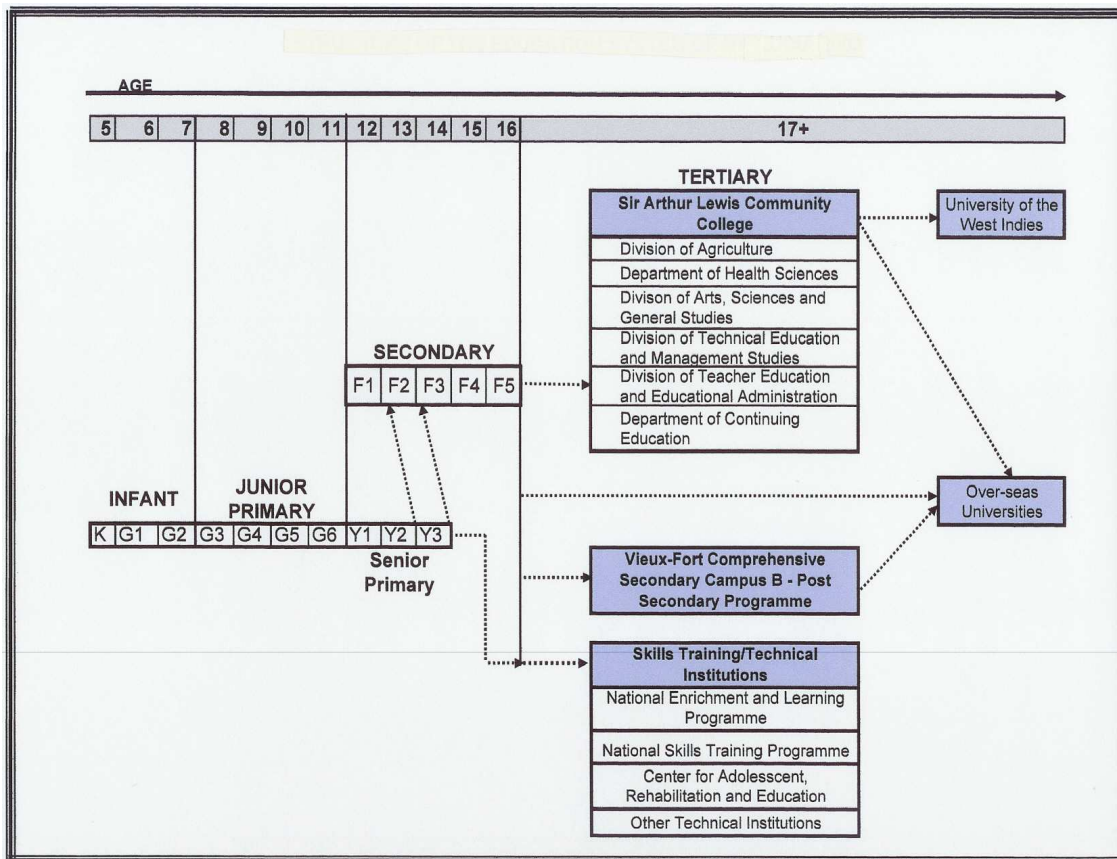
3.1 Education and ICT

Literacy and basic education are important pre-requisites for ensuring that young persons eventually participate successfully in the knowledge economy. This not only involves equipping schools with computers and connection to networks but also fostering an understanding of the need and benefits of ICT. IN St Lucia this interconnection is well understood.

3.2 Education Institutions in St Lucia

The following diagram represents the structure of the education system of St Lucia:

Structure of the Education System of St Lucia



Source: Ministry of Education and Culture, St Lucia

In St Lucia, there are a total of 105 schools Lucia of which 99 are public schools, split as follows:

75 Kindergarten and Primary Schools (K-6)

24 Secondary Schools

Of the 3000 students graduating out of the Secondary School system each year, approximately 20% enter the Sir Arthur Lewis Community College. Others enrol directly at the University of the West Indies in campuses located in Jamaica, Trinidad and Tobago and Barbados.⁴

3.3 The Sir Arthur Lewis Community College

The Sir Arthur Lewis Community College (CC) offers instruction in the following areas:

- Technical and Management Studies: Business, Building, Computer Systems, Hospitality, Electronics
- Teacher Education and Educational Administration: Primary and Secondary Education, B.Ed. (UWI), Home Economics
- Agriculture: General Agriculture - livestock, field crops, marketing & business
- Health Sciences: Nursing, Food & Nutrition, Midwifery
- Arts & Science: Cambridge Advanced Levels, B.Sc (UWI first and second years)

The Community College in collaboration with the Department of Computer Science, Mathematics and Physics of UWI at Cave Hill makes available a programme comprised of a one-year offering leading to a Certificate in Information Technology. Also, as part of its Continuing Education programme the Community College offers a part-time Certificate Programme in Computer and Information Technology comprising of ten (10) courses covering a total of 500 hours. The programme is intensive and comprehensive, allowing for some flexibility within the programme structure. The programme can be completed in two to three years (a maximum of five years is allowed).

Besides the Community College there are other institutions, like the National Skills Development Centre and the National Education Learning Unit, that provide training in other IT technical topics such as IT graphics, CAD and computer maintenance.

⁴ The University of the West Indies (UWI) is the regional institution of higher learning in the Commonwealth Caribbean. Supported by fifteen countries all current or former colonies of Great Britain, the UWI is committed to the development of the region through the training of its human resources, conducting research, delivering advisory services to governments as well as to the private sector and forging links with other institutions in the wider region and the rest of the world. UWI has three campuses, in Cave Hill, Barbados, Mona, Jamaica and St Augustine, Trinidad; in addition to fifty centres in the other contributing countries, known as the Open Campus. The Open Campus at UWI is simultaneously a virtual campus with 50 physical site locations in over 20 countries in the English-speaking Caribbean. The University of the West Indies currently has a total enrolment of over 39,000 students and graduates annually approximately 5,800 students at undergraduate, graduate and diploma levels.

In a drive to attract more students and participants in these programmes, the central government and the Ministry of Education need to overtly demonstrate that there is an overall awareness of the importance and a consciousness of the need for persons skilled in IT. The Department of Education must actively show a clear sense of understanding of the need of ICT in education and sensitivity to the need to assist the emerging workforce in achieving acceptable levels of knowledge and skills to participate fully in the movement towards a better and more efficient use of Information Technology. That sensitivity will then be reflected in a drive to provide an increased variety of training courses and education programmes.

The Department of Education has approximately 1400 personal computers mixed in administration offices and computer lab use. The age of these PCs ranges from 6 months to 8 years.

Therefore three main challenges exist for the Government of St Lucia:

- (i) to ensure the availability of trainers, teachers and lecturers in the different topics and disciplines of ICT
- (ii) to ensure that each year more funding is made available to support the provision and refurbishment of PCs in the classrooms, starting from Forms IV and V downwards
- (iii) to ensure that each year there is an increase in the number of institutions and seats providing instruction in ICT topics.

These activities all present funding challenges for the central government and should be addressed in detail in the National ICT Policy and Sectoral Strategies initiative (refer Page 7).

A positive achievement of note is that in the early part of 2009, all schools will be provided with internet access by the local ISPs free of charge.

04. The St Lucia Business Community

4.1 The Benefits for eGovernment for Business

Apart from the increase in efficiency in the delivery of government services, eGovernment provides key benefits for businesses including improved access to information within government departments and also lower cost of doing business with government.

Improved access to information

Every government gathers and archives a large amount of data, which government agencies collect from citizens and businesses, on economic, demographic and other trends. The availability of this data to businesses enhances their ability to plan better, market their products and services in an informed and structure way. Through eGovernment a greater amount of information is made available to businesses in a more organised and accessible manner. Furthermore, eGovernment helps businesses navigate through the complicated maze of government regulations, by providing well organised websites/portals with detailed explanations of regulations and the proper use of forms etc.

Lower cost of doing business

Executing electronic transactions through online applications with government entities saves considerable time when compared to conducting business in person by physically visiting the many dispersed government offices and waiting in queues. The electronic filing of applications for permits and licenses provide such an example. Therefore, eGovernment lowers the cost to a business of conducting all of its interactions with government and each transaction cost will be lower. This is especially important for small businesses as they have very small staff complements.

4.2 The Business Community in St Lucia

The economy of St Lucia is highly dependent on tourism for employment and foreign exchange inflows. Sandy beaches and year round temperate climate are the natural features that sustain the development of the tourist sector. The manufacturing sector includes paper products, food processing, beverage production, clothing and assembly of electronic components. There is also a small offshore financial sector with strong growth potential and the information technology services sector is also showing growth potential.

In recent decades, agriculture has been adversely affected by the dismantling of preferential treatment for banana in world trade, and employs only a very small proportion of the labour force, with bananas still being the leading export product. There is also some export of flowers.

The ports in Castries and Vieux Fort support the local economic activities with their container terminal facilities. There is also an oil transshipment terminal at Cul de Sac, south of the capital city of Castries.

The St Lucia Business community is eager to see more eGovernment projects that would assist businesses and help them to reduce the cost of doing business with Government.⁵ However, there is a great need, before the development of eGovernment solutions, to mechanise some of the current processes and eliminate lengthy procedures. As examples he mentioned two major areas that required improvement.

There is also the need to eliminate unnecessary procedures in setting up a new business. Government needs to map out the procedures, determine what is necessary, eliminate redundant steps and create a simple process. Another area that causes considerable frustration with small businesses is the current import licence regime which is archaic. It was stated that import licences are hand written by government employees five times to produce five copies. The point made that the simple mechanisation of this process through the use of a stand-alone PC to produce printed copies of the licences, would reduce the turnaround time considerably.

4.3 The St Lucia Chamber of Commerce

The St Lucia Chamber of Commerce, Industry and Agriculture, founded in 1884, has 160 active members. Approximately 70% of these businesses employ between 1 and 9 persons. The role of the Chamber is to “serve as a promoter, trainer, advocate, business opportunity interlocutor, researcher and community representative”. The Chamber offers its members, as part of its membership benefits, a selection of services to assist in the development of people and businesses. In addition to the on-going services, such as the Business Information Centre and Training facility, the Chamber helps coordinate and organise local and International Trade Fairs. The Chamber is also involved in various on-going programs. These include the Junior Achievement program, Business Missions and annual Chamber awards, which recognise individual and company achievements.

The St Lucia Chamber of Commerce would like to set up a joint committee with Government and the Small Business Association to determine areas for improvement. Topics such as these examples present a huge opportunity to Government to identify such areas that can produce quick wins for

⁵ This information was obtained during an interview conducted by the present author, with the Executive Director of the St Lucia Chamber of Commerce, Mr Brian Louisy, who has been with the Chamber of Commerce for 9 years.

Government and the business community, thus giving a huge impetus to the ICT and eGovernment Strategy.

When the Customs department initially introduced ASYCUDA, the local importers and customs clearing agents embraced the system, however, initially there were reliability issues which frustrated and demotivated a lot of the users. These problems have now been overcome. The Chamber is also ready to endorse strongly the introduction of VAT.

05. Telecommunications in St Lucia

5.1 The Eastern Caribbean Telecommunications Authority

The Eastern Caribbean Telecommunications Authority (ECTEL) conducted a study (still in draft form at the time of visit to St Lucia) to determine the level of usage of Telecommunications and ICTs by Small and Medium Sized businesses in the ECTEL Member States.

The Eastern Caribbean Telecommunications Authority was established in 2000 by the Governments of five Eastern Caribbean states (Commonwealth of Dominica, Grenada, Saint Christopher and Nevis, Saint Lucia, Saint Vincent and The Grenadines) to promote market liberalization and competition in telecommunications of the contracting states.

ECTEL's mission is to create a fully liberalised telecommunications environment, by promoting competition amongst service providers for the delivery of efficient and affordable telecommunications services to the people of ECTEL Member States, by implementing applicable laws, treaties and agreements through fair, transparent and independent processes.

The participating countries in the study are Dominica, Grenada, St. Kitts and Nevis, Saint Lucia and St. Vincent and the Grenadines. The study, which began in August 2008, is based on responses from 504 businesses. ECTEL received assistance from the Statistics Departments in all the five Member States in designing the sample, identification and training of the enumerators, and supervision of the field work

5.2 Profile of Businesses/Industries covered by the survey

The businesses covered by the survey sectors included Agriculture, Forestry, Fishing and Mining (4.4%), Construction (6.3%), Manufacturing (12.5%) (3.6%), Transport, Wholesale and retail (11.5%), Information and Communication (5.4%), Accommodation and Food and Service Activities (14.3), and other Sectors (31.2%).

The number of employees in the firm was the indicator used to determine the relative size of the firms. Of the business interviewed the majority (45%) had between 11 and 50 employees.

5.3 Importance of Telecoms and ICTs

Organisations surveyed were required to indicate the degree of importance of Telecoms and ICTs to their business. The results indicated that only 2.6% of organisations indicated that Telecoms and ICT are unimportant to their business, as shown in the following table.

Degree of Importance of Telecoms & ICT

Degree of Importance of Telecoms & ICT	percent
Considered to be indispensable;	36.6%
Considered to be very important	52.3%
Considered to be important	8.5%
Considered unimportant to their business	2.6%

Source: ECTEL - Survey on Impact of Telecoms and ICTs in ECTEL

Results relating to the impact of telecommunications are summarised in the following table.

Impact of Telecoms and ICT on Business

Impact of Telecoms and ICT on Business	percent
Impacted positively and improved the information flow	87%
Improved the process of dealing with suppliers	82.2%
Improved the efficiency of work	73.1%
Generated business more speedily	72.8%

Source: ECTEL - Survey on Impact of Telecoms and ICTs in ECTEL

Given the considerable importance placed on telecoms and ICTs by businesses, there was an expectation that investment in information technology would be relatively buoyant. In response a considerable number of the respondents (48.9%) indicated that the benefits of telecoms and ICTs justified the cost of investing in these resources, while 16.4% did not see such justification and 33.7% were unsure. Moreover, 63.2% of the firms indicated that they could afford to train staff to use the technology while 16.4% stated that cost was a constraint.

5.4 Level of Usage of Telecoms and other ICT Services

The following table shows the extent of usage of ICT services. Fixed-line services was the most popular form (96.6%) of communications service utilized by the SMEs in the Member States, followed by fixed internet at 78.3% and mobile phones at 73%.

Level of Usage of Telecoms and other ICT Services

Service	ECTEL*	St Lucia
Fixed line service	96.6%	96.5%
Mobile phone	73.0%	80.1%
Mobile Broadband Access	14.1%	14.9%
Private Leased Circuits	11.3%	8.5%
Dial-up Internet access	8.1%	8.5%
Broadband internet access	70.2%	66.0%
Private Telecom Networks	5.6%	4.3%
Land Mobile Radio	3.8%	5.0%
Maritime & Aeronautical Mobile Radio	1.6%	1.4%
Other	1.2%	0.7%

**aggregate for 5 Member States*

Source: ECTEL - Survey on Impact of Telecoms and ICTs in ECTEL

5.5 Use of Internet

Approximately 90% of the firms stated that they had some form of internet access and a further 2% planned to get access within the next twelve months. The rapid uptake of broadband was evident with 31.4% of the firms reporting that they had switched from dial up to broadband in the past two years while 61.6% stated that they always had broadband access. The main factor driving the demand for broadband access to the internet was the speed of the service (61.5%), the availability of service (17.9%) and the quality of the service (10.3%).

An examination of the type of technologies used revealed that the majority (70.5%) of the firms with internet access used ADSL high speed; 8.7% used wireless broadband. The Cable Modem was next in line at 7.6%. Mobile broadband via a phone and Dial up access and dedicated internet access were each used by 2.5% of the respondents with internet access. Leased lines were used by 2.9% of the respondents.

More than 95% of the respondents who used the internet used email and 48.7% had their own website. Contacting suppliers was the main use of email for 41.5% of the survey firms who used emails. This was followed by communication with customers (39.2%) and communication among employees

13.1%. Among those who used websites, the function of marketing and advertising was reported by 83.1% of the businesses. Even more essential was the provision of information about the company for 86.3% of the respondents.

The majority (96.4%) of respondents who used the internet believed that there were benefits to doing business over the internet. Approximately 51.8% of the businesses thought that the internet was efficient in providing information on inputs and suppliers. Enabling Staff to work more efficiently was a major benefit for 40.3% of the respondents. Other notable benefits were increase in customers and sales (26.4%); increased quality of customer service (31.2%); and targeting of individual customers (26.4%).

5.6 Telecommunication Sector Review

In their Annual Telecommunication Sector Review for the period ended March 2008 ECTEL (available at www.ectel.int) it is reported that “the telecommunication sector in the ECTEL Member States expanded in terms of both subscribers and call volumes. Despite expansion in these areas, total revenues were estimated to have fallen some 6% as a result of the continued decline in the fixed line market. At the end of 2007, the sector was estimated to have contributed 10.8% to GDP up from 10.6% in the previous period.

The main highlights of the sector for the review period:

- Voice services remain the main source of revenue for the industry but revenues from Internet services record a 20% increase even as overall sector revenue is estimated to have contracted some 6%.
- The mobile market recorded 16% growth in subscribers with three Member States recording mobile penetration rates in excess of 100%.
- The decline in fixed lines in service stabilized and the number of lines in service experienced modest growth of 2%.
- The mobile market for voice services dominated fixed services in terms of revenue generation, subscribers and outgoing international traffic. However, the majority of local traffic still originated from the fixed network.
- Growth in the market for Internet access outpaced growth in the markets for voice as reduced rates and increased speeds for high speed Internet access resulted in increased uptake of fixed broadband service. There is still significant room for expansion in the market for Internet access with average penetration registered at 11.6%.

- The market for mobile Internet access and in particular, mobile broadband access was enhanced with the introduction of Enhanced Data rates for GSM Evolution (EDGE).
- SMS messaging continues to be widely used by customers owing to its affordability and ease of use.

Individual telecoms licensees in St Lucia.

As can be seen in the following Table, notwithstanding the size of the island, St Lucia enjoys a relatively good competitive environment in the telecoms sector with a reasonable number of providers for the different services.

Telecoms Licensees in St Lucia

Licence	Fixed Public network	Public Mobile telecoms	Internet Network and services	SUBMARINE Cable
Saint Lucia	Cable & Wireless Antilles Crossing	Cable & Wireless Digicel 21st Century Telecoms	Cable & Wireless Antilles Crossing Link Technologies 21st Century Telecoms	Antilles Crossing Southern Caribbean Fiber

Source: ECTEL/NTRCs - Annual Telecommunication Sector Review

The current state of the Telecoms sector in St Lucia, outlined in the next table, demonstrates that internet penetration in St Lucia is 9%. Although this figure nearly doubled over the previous two years, in coordination with the service providers, the government of St Lucia should consider some form of incentive to encourage a higher level of internet access in preparation for the introduction of new eGovernment services.

Statistics related to Telecommunications in St Lucia

	Mar-04	Mar-05	Mar-06	Mar-07	Mar-08
Telecommunications Revenues (EC\$ Million)	\$204	\$218	\$233	\$282	\$239
Fixed Line Penetration	30%	26%	24%	24%	24%
Mobile Penetration	60%	63%	64%	88%	99%
Internet Penetration	4%	5%	5%	7%	9%
Local Traffic Originating from a Fixed Line (*)	n.a.	n.a.	196	103	173
Local Traffic Originating from a Mobile Phone (*)	51	60	82	124	215
International Outgoing Traffic (*)	24	25	34	32	41

** Millions of Minutes*

Source: ECTEL/NTRCs - Annual Telecommunication Sector Review

06. The Case for Centralisation of the Government ICT Function

6.1 Central Common Database

Currently a Central Common Database with primary data of each citizen in St Lucia does not exist. There are various databases owned by different entities such as the National Insurance Corporation (NIC), the Civil Registry, the Health UHC system and others. The data in each of these databases is suspect, and not considered clean and uniform. The primary source of information about a citizen is the baptismal certificate which is paper document issued by the church. However, a primary defect of this document is that it does not state the place of birth, which presents a problem as to whether an infant was actually born in St Lucia or not. There is also the situation whereby the parent can register the child's birth without actually naming the child. There are also issues of wrong spelling of names and legibility.

However, the major issue is that there is lack of agreement between entities (particularly the NIC and the Civil Registry) as to the ownership of data, and also the choice of a unique identifier. The NIC is arguing towards the retention of the existing NIC number which is a 6 digit number and also used by various other entities such as the driving licence system, while the Civil Registry wishes to introduce a 12 digit unique identifier. Presently there is no single central coordinated effort to create a joint and shared common database with clean primary citizen data. Primary data is considered to include at least: First and Last Name, Date of Birth, Gender and Marital Status, Birth Place, Residency and Nationality. The current situation is creating a high level of inconvenience for the citizen. Citizens have to present a government issued birth certificate for many contacts with different government departments, e.g. student registration at a school, applications for exams etc. It is not uncommon for citizens to 'buy' multiple birth certificates from the Civil Registry. The Registry receives some 400 requests a day for birth certificates. Citizens have to travel to the capital city, Castries to apply for the birth certificate and then return after a few days to collect it in person. This situation has apparently become a political hot issue, with articles appearing in the local press showing long queues at the Registry.

The existence of clean primary data in a shared national database is a key foundation stone for the evolution of a strong eGovernment strategy (see Annex 3 – What is eGovernment). Therefore, it is highly recommended that a cross-government coordinating committee is appointed with the aim of reaching an agreement for the setting up of a Central Common Database with a declared new owner of the data on behalf of government and to arrive at a decision about a new unique identifier.

6.2 Main Agencies and Smaller Units

Currently there are two main agencies within the Government of St Lucia that provide government-wide ICT services. These are the Computer Centre Ltd which reports into the Ministry of Finance and the Public Sector ICT and eGovernment Unit which reports into the Ministry for Public Service. The roles of these two entities have so far been complementary.

In addition to these two agencies there are about 11 other small units run by an IT Manager/Administrator which provide IT services to their respective departments or entities. These are:

- Universal Health Care
- Electoral Department
- Ministry of Health
- National Insurance Cooperation
- Ministry of Finance
- Director of Information Service
- Civil Status Registry
- Customs & Excise
- Ministry of Education
- Royal St Lucia Police Force
- Ministry of Social Transformation

Although there is high level of camaraderie between the managers of the individual units, there does not seem to be a formal central decision-making process on ICT matters across the Government, coordinating the prioritisation of all projects, allocation of funds, coordinating the architecture and software tools used. With the increase in demand for mechanisation and automation, the current situation could lead towards the creation of 10 separate mini data centres, using different technologies and processes.

Thus the debate over the establishment of a single centralised ICT agency, the head of which would also act as the Government CIO (ex-officio), raises questions as to how to manage and develop information technology and eGovernment projects.

In embarking on a new eGovernment strategy, it will become critical that any decision related to ICT is coordinated and managed as part of the strategy. This includes issues such as government

information technology worker recruitment, retention, and compensation; the establishment of a Government CIO; and cooperation between ministries, departments and entities, and the central ICT agency. While eGovernment provides the opportunity for government employees to develop new skills, it also presents the dilemma of hiring and retaining skilled information technology workers in a relatively high-demand field. Below-market salaries and the inability to offer some types of benefits hinder the government's ability to attract and retain skilled workers, forcing it to either outsource certain projects or delay implementation.

Therefore, in addition to the organizational aspects, the outcome of the centralisation debate has implications for the quality and level of support, funding, and inter-agency/-department cooperation that will take place.

6.3 Recommendation regarding the Centralisation of the Government ICT Function

Centralisation of the ICT functions in one ICT Unit

The Government of St Lucia is an 'organisation' with 9000 employees and serves a base of less than 200,000 customers (the citizens) spread over a contiguous area of 620km² (239 sq ml). This, in itself presents a strong case for centralisation of eGovernment and therefore it is highly recommended that the ICT requirements of the whole 'organisation' are centralised under the coordinated management of one central ICT unit. The advantages are:

- a) As the number of applications and servers grows, it will be important that uniform technologies are used to reduce the cost of ownership and cost of licences, training and third level support agreements.
- b) Centralisation of applications will allow for virtualisation of servers resulting in reduction in costs of energy, licensing of software tools and costly physical rack space inside the data centre.
- c) Good qualified senior technical persons are scarce and in high demand. Centralising such resources would encourage cross fertilisation of ideas and less dependability on single isolated resources that work in silos.
- d) Centralisation will facilitate the introduction of a common eGovernment Architecture and Interoperability Framework.
- e) It will also facilitate the introduction and enforcement of ICT policies and procedures to ensure a higher level of security and dependability.
- f) As the number of PCs grows across government, there will be a need to rationalise and reduce the number makes and models of PCs and laptops in use in government with a common desktop image. This will reduce the cost of ownership and cost of supporting the dispersed

community of users. Once PCs are employed as terminals for critical business solutions, the Government of St Lucia should introduce a PC hardware refresh policy to ensure availability of those solutions/systems and reduce downtime and the cost of ownership and support.

Lessons learnt

It is also recommended that the Government of St Lucia should draw on lessons learnt from the success achieved by Cape Verde and Malta through the set up of a central ICT unit focused on efficiency, horizontal integration and focused delivery.

07. Next Steps: New eGovernment Structures

7.1 The St Lucia Strategy

The Government of St Lucia is in the process of defining National Information and Communication Technology Policy and Sectoral Strategies which will include the National ICT Strategic Plan and an implementation plan.

In addition to the eventual decision on the preferred structure for the delivery of the strategy, recommendations about which are included in the next section, the Government will need to set up the following additional structures in support of the eGovernment Strategy. The following section puts forward a number of recommendations in this regard

7.2 Recommendations regarding new eGovernment Structures

It is being recommended that the Government of St Lucia should set up the following 7 new structures, to implement and support the new eGovernment strategy:

1. Project Management Office (PMO)

This office should be set up to manage and coordinate all programs and projects relating to the eGovernment Strategy, making sure that stakeholders have up-to-date, accurate information leading to improvement in the level of project management within Government. The head of the PMO should report directly to the ICT Agency head/Government CIO who will in turn keep the Prime Minister and the Cabinet and Permanent Secretaries informed on the progress of major projects.

2. ICT Policy making and Compliance Office

This office should be set up to draft ICT policies and disseminate information about such policies. It should also perform audits to ensure compliance. This function is now the responsibility of the newly established eGovernment Taskforce. A compliance and governance mechanism needs to be put in place.

3. Information Security Office

This office should be set up to develop, manage and implement the security policy and to verify compliance. Typical roles and responsibilities are:

- (a) *Risk and Control Assessment.* To perform the risk assessment of the Government's information assets. To recommend controls in light of the value vs. threat vs. vulnerability vs. cost.
- (b) *Threat and Vulnerability Management.* To conduct periodic vulnerability assessment of the information assets. To analyze the logs of the various systems for initiating preventive measures. This function could be outsourced to an experience company with verifiable track record.
- (c) *Identity and Access Management Entity.* This is needed to ensure that process exist in the organization for the creation, modification, access privileges and deletion of user-id and privileges.

4. Service Management and Service Delivery Entity

This is essentially the role of Computer Centre Ltd, in order to ensure appropriate availability of the systems and tools to the Government as a whole, to the individual internal clients, i.e., the public service employees and the external clients – the citizens of St Lucia. As the collection of revenue moves online, high availability of the systems will become critical as otherwise the Government's revenue through the IRD, VAT and Customs systems will be put a risk.

5. Sourcing and Procurement Unit

This should be a small specialised unit that is responsible for the development of RFPs, contract management from the commercial point of view and supplier management. Care should be taken not to confuse this unit with the role of the Government Department of Contracts. ICT contracting is very complex and will require the building of intellectual capital to be able to define and negotiate solid Service Management contracts with suppliers and Service Level agreements that deliver real value to the client.

6. Quality Assurance Procedures

Quality assurance procedures should be put in place to guarantee a level of quality for the end client, to ensure the delivery of quality work and systems that conforms to the original the requirements, specifications and design documents, and to ascertain that the process does not sacrifice quality in the name of completed objectives.

7. Change Management Office

The role of change management should also encompass a high element of business process reengineering. Prior to the implementation of any new system, the change management team will need to evaluate changes in the current processes, to eliminate unnecessary steps, redundant processes and repetition. The role would also record lessons learnt from each major and mini project and those lessons learned are reused where appropriate on new projects. A major part of this role is the definition and execution of a communication plan for each and every project and phase, to keep the

stakeholders informed in a formalised manner and also win buy-in from each respective entity. This role already exists within the eGovernment Unit, which will need to be formalised and expanded as the number of projects increase.

The structures and functions described above will initially start with each role being managed by a single qualified individual, however, these roles will should be expected to grow and mature into units to support the whole ICT infrastructure and service delivery within the Public Service.

08. Conclusion

This report contains a number of recommendations regarding (a) the urgent need to set up a Central Common Database for the further development of eGovernment on this small island state (b) the centralisation of the ICT function of the Government of St Lucia and (c) the setting up of new structures associated with eGovernment.

As mentioned in the Foreword to this report, the current attitude by all concerned towards eGovernment is highly positive. Once the new Strategic Plan is published and disseminated, consultation meetings should be arranged to receive feed back from public service stakeholders and the business community representatives. The next step would be to identify champions within the various entities to act as client representatives, and to receive and communicate feedback as the project progresses.

With the further development of ICT and as new projects are rolled out, by default, the Government will become a flagship customer for the best and most innovative IT suppliers. Within this context, the Government should aim at becoming a world class IT purchaser, delivering to the citizens and public service employees, reliable services that offer the best value for the taxpayer.

Annex 1: The Project

Project Identity:

Name: Development of eGovernment In St Lucia

Ref. No: TP SLU 01

Beneficiary Institution

Ministry of the Public Service Stanislaus James Building, Castries, Tel: 1758-468-2203; Fax; 1-758-453-1305, Email: pdalsou@gosl.gov.lc

The Service Provider

Malta Information Technology Agency (MITA – formerly know as Malta Information Technology and Training Services Ltd), Malta

Activities and deliverables

The project consisted of two main activities, namely

- (a) the drawing up of a technical report, in consultation with the St Lucia Ministry of the Public Service, containing a review of the readiness of St Lucia in the area of eGovernment with regard to the backbone and hardware infrastructure as well as institutional aspects, suggesting the way forward on these matters.
- (b) training conducted by the Malta Information Technology Agency for officials at senior management level, in the public sector of St Lucia.

Project Leader of the Service Provider

Mr Emanuel Darmanin, Malta Information Technology Agency, Gattard House, National Road Blata-l-Bajda HMR 9010, Malta; Tel: +356 25992174; Fax: +356 2123 4701; Email:

emanuel.m.darmanin@gov.mt

Responsibilities: Located in Malta and responsible for monitoring the services offered by MITA, including the services of the TA. He will liaise with the Project Leader in St Lucia. He will draw up a programme for the 5 day training visit by 2 SL Lucian public officials to be trained and is to issue an invitation for the public officials to MITA in Malta. He is to ensure that accommodation and logistics for the visit of the trainees are as required. He will liaise with the BS-PL and BS-PM in this regard.

The Technical Advisor (TA):

Mr Alex Attard, Malta Information Technology Agency, Gattard House, National Road

Blata-1-Bajda HMR 9010, Malta. Tel No : (356) 2123 4710; Fax No : (356) 2123 4701; Email: alex.attard@gov.mt.

Responsibilities: The TA is expected to provide expertise in the area of eGovernment and the implementation thereof. He will conduct an e-readiness assessment, in terms of strategy, human resources and hardware in St Lucia and write a technical report on this subject .

St Lucia Ministry of Public Service Focal Point:

Mr. Philip Dalsou, Permanent Secretary, Ministry of the Public Service, Human Resource Development, Castries, St Lucia, Tel: 758-285-6568; email: pdalsou@gosl.gov.lc

Project Leader of the Beneficiary Institution:

Mr. Daune Louisy, Deputy Permanent Secretary, Ministry of the Public Service, Human Resource Development, Castries, St Lucia, Tel: 758-285-2810; Email: dlouisy@gosl.gov.lc

Responsibilities: Appointed by the Ministry of Public Service of St Lucia to monitor the progress of the Project on behalf of St Lucia.

Project Manager:

Mr. Marlon Narcisse Director eGovernment, Government of St Lucia. Tel: 758-451-7681, Email: director@ict.gov.lc.

Responsibilities: Appointed by the Ministry of the Public Service to manage the Project on behalf of St Lucia, and to act as counterpart to the Twinning Advisor. He will draw up a programme for the 5 day visit by the TA and issue an invitation for the expert to visit St Lucia. He is to ensure that office space and related facilities for the visiting expert are as required for the task.

Annex 2: Visit to St Lucia by Technical Advisor (TA)

The Technical Advisor (TA) for the project and author of this report, was Mr Alex Attard, former Chief Executive Officer of the Malta Information Technology Agency, who was engaged by the Service Provider (SP), namely the Malta Information Technology Agency. The visit by the TA took place between January 18 and 23, 2009. The direct liaison with the TA was Mr Marlon Narcisse, Director of the Public Sector ICT & eGovernment Unit which falls under the Ministry of Public Service of St Lucia. The offices of the eGovernment Unit are situated in Castries at 4 Bridge Street. Mr Richmond Felix was assigned as coordinator during the TA's visit and was responsible for coordinating the agenda for the whole week and arranging meetings with the various entities. Mr. Felix accompanied the TA at all the meetings and briefed the TA before each meeting about the profile of the persons that would be in attendance at each meeting and background of the particular entity.

Due to the exigencies of the executives being met, some of the meetings had to be rescheduled, however by the end of the week all the planned meetings were held. Planned meetings with Antilles Crossing, a telcoms service provider and the Bank of St Lucia were not held due to several postponements; however, the unavailability of these persons did not diminish the value of the overall visit.

The following is the final schedule of all the meetings held during the visit:

1. Schedule of Meetings in St Lucia

Monday January 19 th	Tuesday January 20 th	Wednesday January 21 st	Thursday January 22 nd	Friday January 23 rd
Morning <u>9:00am to 10:30pm</u> Meeting with Project Monitoring Committee and E-Government Taskforce	Morning <u>9:00am to 10:30pm</u> Ministry of Education Ron Isaac <u>11:00am to</u>	Morning <u>9:00am to 12:30pm</u> **Launch of the development of the National Information and Communication Technology (ICT) Policy and Sectoral Strategies ** Dolphins Conference	Morning <u>9:00am to 11:30am</u> Finance, Inland Revenue, Customs, Computer Center Ltd Desmond Astwood, Kerbyn Tobias, Terrence Ferguson, Roddy Alcindor	Morning <u>8:00am to 9:00am</u> Chamber of Commerce Brian Louisy <i>(Executive Director)</i> <u>9:30am to 12:30pm</u> Wrap-up: E-Government Unit

<u>11:00am to 12:30pm</u> Police/Immigration Supt. Paul Lionel	<u>12:30pm</u> ECTEL/NTRC Embert Charles	Centre, Bay Gardens Beach Resort	<u>12:00 to 1:00pm</u> Permanent Secretary for Public Service	<u>11:30am to 1:00pm</u> Bank of Saint Lucia Lyndon Arnold (meeting cancelled by the Bank)
Afternoon <u>2:00pm to 4:00pm</u> Consolidated Foods Joanna Justin Robert Thomas	Afternoon <u>2:00pm to 4:00pm</u> Electoral Department Carson Raggie Peter Clarke Civil Registry Esther Braithwaite Franklin Chandler	Afternoon <u>2:00pm to 4:00pm</u> Ministry of Health Dwight Calixte/ Winsbert Joseph Darnville Nelson	Afternoon <u>2:00pm to 4:00pm</u> Cable & Wireless Clarence Griffith	

On Wednesday January 21, the TA was invited to attend the launch of the development of the National Information and Communication Technology Policy and Sectoral Strategies by the Hon Lenard Montoute, Minister for Social Transformation, Public Service, Human Resource Development, Youth and Sports. Hon Montoute addressed the audience and described the purpose of the initiatives being launched, the objectives and deliverables.

The event was also addressed by the Hon Kennedy Swaratsingh, Minister of Public Administration of the Republic of Trinidad and Tobago. Hon Swaratsingh described his country's experience and lessons learned with the implementation of the "fastforward" National ICT strategy. Hon Swaratsingh is also the President of the Caribbean Telecommunications Union (CTU). The event was attended by officers from the public service including several Permanent Secretaries.

In accordance with the terms of reference of the contract for the twinning project funded by the Small States Network for Economic Development (SSNED), the Ministry for Public Service established the Project Monitoring Committee (PMC) composed as follows:

- Philip Dalsou, Ministry Focal Point, Permanent Secretary, Ministry for Public Service
- Daune Louisy, Project Leader / Deputy Permanent Secretary, Ministry for Public Service
- Marlon Narcisse, Project Manager / Director eGovernment Unit
- Richmond Felix, Representative from the Public Sector

Brian Louisy or assigned alternate, representative from Chamber of Commerce / Stakeholder

The PMC also established an eGovernment Taskforce consisting of representatives from the major stakeholders from the respective government departments and entities, consisting of the following persons:

Philip Dalsou	Permanent Secretary, Ministry of Public Service
Marlon Narcisse	Director, E-Government Unit
Richmond Felix	Website Developer, E-Government Project
Liota Charlemagne	Information Systems Manager, E-Government Unit
Aloysius Burke	IS Manager, Universal Health Care
Brian Clarke	Systems Network Administrator, Electoral Department
Danville Nelson	Systems Administrator, Ministry of Health
Desmond Astwood	General Manager, Computer Centre Ltd.
Desmond Dujon Henry	Computer Systems Manager, National Insurance Cooperation
Isaac Anthony	Permanent Secretary, Ministry of Finance
Kervyn Tobias	IT Manager, Ministry of Finance
Richard Alfred	Webmaster & Network Administrator, DIS
Terrance Fergerson	Project Manager, Inland Revenue Department
Franklin Chandler	Systems Administrator, Civil Status Registry
Roddy Alcindor	IT Manager, Customs & Excise
Ron Isaac	IT Manager, Ministry of Education
Paul Lionel	Superintendent, Royal St Lucia Police Force
Shane Maxwell	IT Manager, Ministry of Social Transformation

Annex 3: What is eGovernment

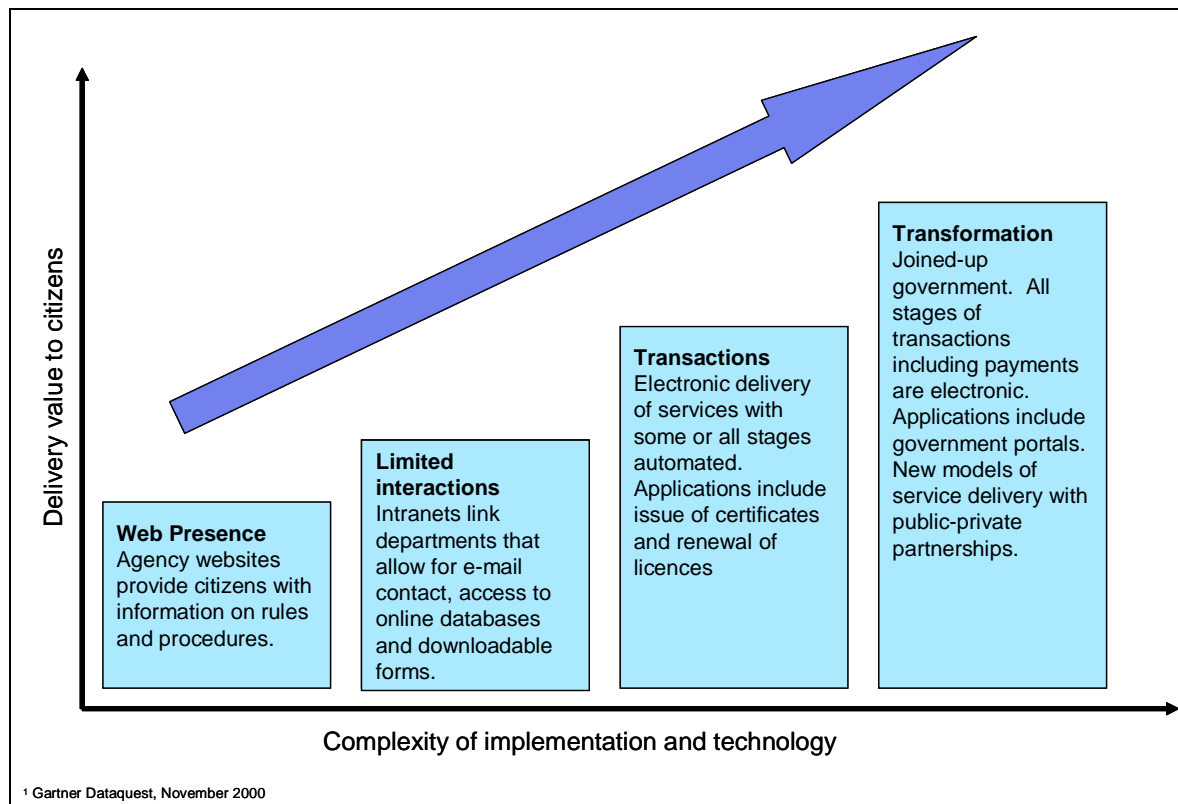
E-government involves using information technology, and especially the Internet, to improve the delivery of services to citizens, businesses, and other government agencies. It has the potential to more directly connect the government with its citizens in a manner that opens new opportunities while also raising new challenges. E-government enables citizens to interact and receive services from the government 24 hours a day, seven days a week.

The Gartner Group summarizes eGovernment as “the continuous optimization of service delivery, constituency participation, and governance by transforming internal and external relationships through technology, the Internet, and new media”.

Stages of eGovernment

eGovernment expansion and adoption is generally seen as a four-step process:

11. eGovernment Evolution: Four Critical Stages



Web Presence Phase

The first stage of development of eGovernment is the establishment of a placeholder for delivering information in the future. It is essentially the publication and passive presentation on the Web of general static information on government operations and services; rules and procedures such as hours of operation, mailing address, and/or phone numbers, but has no interactive capabilities. This phase represents the simplest and least expensive entrance into eGovernment, but it also offers the fewest options for citizens.

Interaction Phase

The second stage is interaction. Such basic Web portals containing online forms, requests for proposals and opinion surveys on critical issues of interest and are designed to help the customer avoid a trip to an office or make a phone call by making commonly requested information and forms available online. Efforts of these types of portals are still limited in their ability to streamline and automate government functions. Interactions are relatively simple and generally revolve around information provision. The national government's official site serves as an entry point with links to pages of other branches of government and may include instructions for obtaining services, downloadable forms to be printed and mailed back to an agency, or perhaps e-mail contact to respond to simple questions.

Transaction Phase

The third stage in the evolution of eGovernment initiatives is transaction and includes complete and secure online setting like in eCommerce sites with authentication and digital signatures. These initiatives are more complex and embody the types of activities popularly associated with eGovernment. They enable citizens to complete entire tasks electronically. These initiatives effectively create self-service operations for tasks such as license renewals, paying taxes and fees, and submitting bids for procurement contracts. Although the level of interactivity is of a higher magnitude than second stage initiatives, the activities still involve a flow of information that is primarily one-way (either to government or to the client). The electronic responses are generally highly regularized and create predictable outcomes; e.g., approving a license renewal, creating a receipt, acknowledging a bid.

Transformation Phase:

The highest order of evolution for eGovernment initiatives is transformation. Initiatives at this level utilize the full capabilities of the technology to transform how government functions are conceived, organized, and executed. Citizens and businesses can personalize or customize a national portal. This portal becomes a unique showcase of all the governmental services available in the relevant area of interest. The needs of different constituencies are the main criteria for portal design and access (government structure and functions are only secondary criteria). The portal allows secure electronic payments to be made, facilitating transactions such as taxes, fines, and services payments.