SRI LANKA

e-Sri Lanka: An Integrated Approach to e-Government Case Study

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1. Introduction

Governments the world over are increasingly viewing Information and Communication Technologies (ICTs) as a key enabler for accelerating and achieving economic and social development in their countries. ICT is seen as an important tool for improving delivery of public services, making government more transparent and accountable, broadening public participation, facilitating the sharing of information and knowledge among the people, and integrating marginalized groups and deprived regions.

While there have been some notable successes in e-governance in the Asian region, for example in Korea, Malaysia and Singapore, the overall rate of failure of e-government initiatives internationally has been very high: over 60% of e-government efforts[1] to date have not yielded satisfactory results. The challenge facing many governments today, especially those in developing countries like Sri Lanka, is to avoid the temptation of introducing ICT for ICT's sake. Instead the focus must firmly be on the human aspect and the needs of the citizens, and then deciding how best, and in what context, to apply ICTs to enable effective delivery of those needs.

Sri Lanka recently emerged from over twenty years of civil war, with the signing of a ceasefire agreement between the Government of Sri Lanka and the LTTE in 2002. While peace has prevailed in the island in the last four years, successive governments have attempted to regain lost time and opportunities, by embarking on comprehensive development roadmaps, including 'Regaining Sri Lanka' in 2002 and most recently the 'Mahinda Chintana' in 2006, the strategic plan of His Excellency The President Mahinda Rajapaksa, which places greater emphasis on rural development. ICT has formed an integral and increasingly prominent part of these national plans.

2. e-Government Strategy in Sri Lanka

"Sri Lanka has, in my estimation, one of the most mature and robust e-governance initiatives of any of the countries I have visited to date". Michael Tiemann, VP, Red Hat.

The e-government strategy in Sri Lanka is arguably one of the most comprehensive in the South Asian region and possibly among Asian countries as a whole. It is different in that it takes a more holistic approach to development, where e-government is not an end in itself, but instead a piece of an intricate puzzle, which when put together, will aim to significantly impact all sectors of the economy and society and help Sri Lanka as a nation and its people, to take a major leap forward in economic and development terms.

Sri Lanka's e-development strategy, *"e-Sri Lanka: an ICT Development Roadmap"*, (e-Sri Lanka Roadmap) elaborated in November 2002, recognized e-government as a critical area and spelt out the need to establish an institutional framework for planning and implementing e-governance. Prior to the development of the e-Sri Lanka Roadmap, the country lacked a coherent national strategy for ICT, though a Ministry for ICT was briefly in existence in the year 2000. Upto this point, e-government activities were sporadic, adhoc and often restricted to computerisation of departments, generally the result of the efforts of a group of

[1] Abdelghaffar, Bakry, Duquenoy, Middlesex University (2003)

individuals with a vision to use ICT to improve the workplace. The introduction of ICT in the Department of Immigration and Emigration is a relatively successful example of this.

The e-Sri Lanka Roadmap seeks to leverage ICTs towards achieving socio-economic development across multiple sectors of the economy and society. Significantly, the emphasis is not on ICT alone but on using ICT as a development tool to help to improve the lives of citizens. The human development and security aspect is specifically addressed, with key programmes aimed at serving the needs of poor citizens in rural communities who as with most developing nations form the bulk of the population. This paper therefore will focus and elaborate on the e-Sri Lanka Roadmap and its current programmes and projects, in particular Re-engineering Government, Nenasalas (telecentres) and the e-Society Fund.

3. Background to e-Sri Lanka

The Government of Sri Lanka developed the e-Sri Lanka Roadmap with the objective of harnessing ICTs towards achieving socio-economic development in the country. The vision of e-Sri Lanka is "to take the dividends of ICT to every village, to every citizen and to every business and transform the way government thinks and works"[2]. The e-Sri Lanka vision and roadmap gave birth to a nation-wide ICT for development initiative, addressing all sectors of the economy and society, where ICT is used to enhance national competitiveness, reduce poverty and improve the quality of life of citizens.

The concept of e-Sri Lanka had its origins in the private sector, initially among leaders from the local software industry and associations who were working closely with the US Agency for International Development (USAID) on an ICT Cluster Initiative. Inspired by the rapid progress made by its counterparts in neighbouring India, the local software industry envisioned a billion dollar software industry for Sri Lanka, driven by export lead earnings. Various consultative groups consisting of key stakeholders from the public sector, private sector and from civil society were formed and together worked on expanding the e-Sri Lanka concept, with input from external organizations including SIDA, USAID and the World Bank, which began to play an increasingly active role. From what was initially an isolated and an ICT sector specific activity, grew an ambitious and integrated nation-wide initiative, with a comprehensive five programme strategy encompassing building the national implementation capacity, building the information (ICT) infrastructure and an enabling environment, developing ICT human resources, re-engineering government and delivery of citizen services, and leveraging ICT for economic and social development. These five programmes were encapsulated and presented in the e-Sri Lanka Roadmap which was officially launched by the Prime Minister of Sri Lanka in November 2002.

The Information and Communication Technology Agency (ICTA) was created in July 2003 to implement the e-Sri Lanka Roadmap, as a government owned, limited private company reporting to the Minister of Economic Reform, Science and Technology of the Government of Sri Lanka. Prior to the establishment of ICTA, all ICT related matters had been the responsibility of CINTEC (The Council for Information Technology which had been in existence since 1983). ICTA was created as an apex body to provide leadership, to energise the process of using ICT for reform and economic growth and to create a more dynamic

[2] e-Sri Lanka: An ICT Development Roadmap (2002)

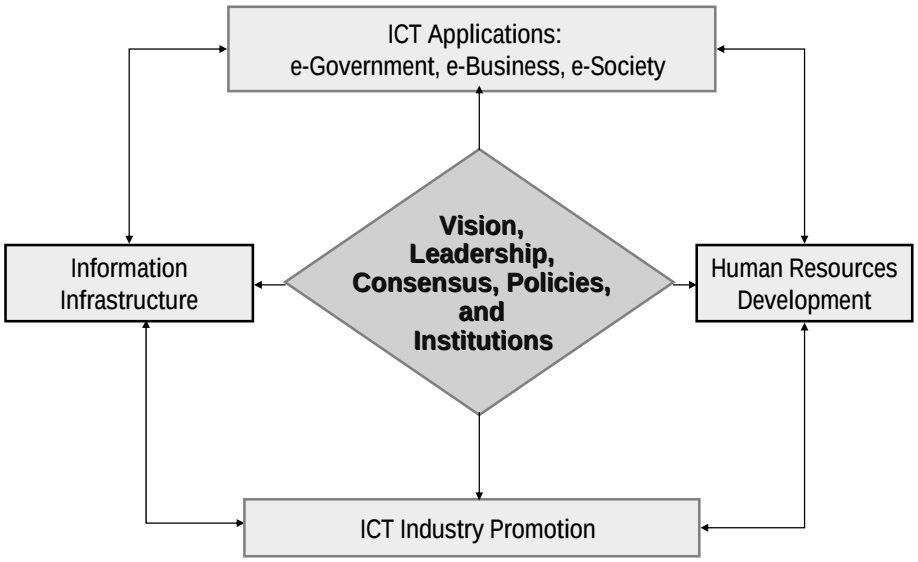
organization outside the rigidity of the government bureaucracy, more flexible and responsive to such a fast changing technology as ICT.

Once operational, one of the immediate challenges ICTA faced was to take the e-Sri Lanka Roadmap from what was essentially a comprehensive vision document and five programme strategy, to a detailed plan of implementation, with actionable and fundable programmes and projects. This was achieved in a short period of time starting from the Agency's inception in July 2003, recruitment of core staff by September 2003, to preparation of a funding proposal for submission to the World Bank in February 2004. Besides responding quickly and positively to the request from the Government of Sri Lanka to fund key components of the e-Sri Lanka Roadmap, the World Bank played a critical role in facilitating this process.

4. Design of e-Sri Lanka

The design of e-Sri Lanka is arguably unique, though since its initial conceptualization, a number of other governments around the world, especially in developing countries, have looked at adopting and adapting the e-Sri Lanka model with a view to implementing similar cross-sectoral and integrated initiatives for their own countries. The design of e-Sri Lanka is based on the need to take a more holistic approach to development using ICT. In other words, economic and social development is the overall objective with ICT merely playing the role of an enabler of development. ICT interventions undertaken in one sector alone, most commonly in government, will not result in achieving the desired objective, and instead ICT must be utilized to simultaneously impact a number of inter-dependent components to enable and catalyse long term development. To achieve this a multi-stakeholder approach is critical to ensure broad ownership and long term sustainability across the various sectors.

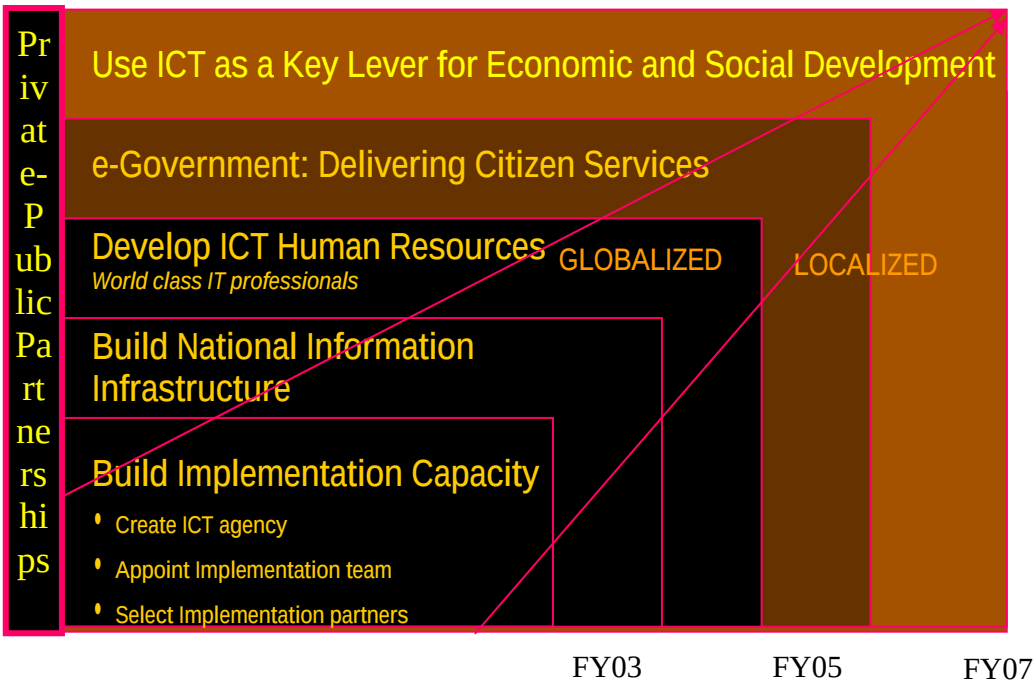
Design of e-Sri Lanka



Source: ICTA

The synergies and interdependencies across different sectors are evident. To implement ICT applications to deliver e-government services, e-business and e-commerce, a state-of-the-art ICT infrastructure or information infrastructure is a pre-requisite. Government, citizens and businesses need to be connected to be able to interact with one another. To build the necessary information infrastructure, as well as to develop the ICT applications for e-government services, a dynamic and competitive ICT industry is required. To achieve this, significant investments in building human resource skills and capacity within the ICT industry will be needed. Most importantly, for citizens to be able to take advantage of, and benefit from, the new opportunities afforded through ICT, awareness and capacity building at the community level is of paramount importance. For all this to happen, the enabling environment must also be in place, including high level commitment to enable the process of change, especially within government, the necessary legal enablers, policy frameworks, etc.

Five Programme Strategy



Source: ICTA

While the overall design and concept of an e-Sri Lanka was the product of input from a number of stakeholders which was discussed, compiled and presented in the e-Sri Lanka Roadmap in November 2002, the eventual design of the initiative for funding purposes evolved significantly during the preparation of a detailed implementation plan. This was a collaborative process involving the ICTA team, representatives of the different sectors and stakeholders appointed to Focus Groups set up to guide the preparation of the programmes and major projects, and the World Bank.

e-Sri Lanka continues to evolve during programme implementation, with ICTA and its key partners continuously adjusting and fine tuning programme strategies and implementation plans based on early lessons and feedback. From a group of sixteen pilot projects, which were initiated in September 2003 to test ideas, partnership models and implementation capabilities, prior to final design of the main programmes of projects, ICTA learned several key lessons some of which are documented in the evaluation reports for these projects. This included the need for ensuring project ownership among beneficiaries, the need for sustainability planning, awareness raising and communication plans and also for designing improved project partnership and implementation strategies.

5. Objective of e-Sri Lanka

The overall objective of e-Sri Lanka as noted earlier is to harness and exploit ICTs for achieving broad based growth across key sectors of the economy and society, in support of the overall development goals of economic growth, equity and peace building.

The expected outcomes of e-Sri Lanka[3] are:

- A more effective, citizen-centered and business-friendly government.
- Empowerment of the rural poor, disadvantaged groups, women, and youth through increased and affordable access to information and communication tools.
- Developed leadership and skills in ICT.
- Employment in the ICT and IT enabled services (ITES) industry.
- Enhanced competitiveness of user industries and services.

6. Target Beneficiaries and Stakeholders

Owing to its integrated and cross sectoral approach, the targeted beneficiaries of e-Sri Lanka are significant and wide spread. The initiative aims to create thousands of job opportunities within the ICT industry and IT Enabled Services sector, increase ICT literacy levels across the entire nation, empower the rural communities through affordable access to information and communication, vastly improve service delivery within government and generally raise awareness across the entire country. The major focus though, is on uplifting the rural communities and the rural poor living outside the Western Province and who form the bulk (over 70%) of the country's population of just over 20 million people.

One of the major challenges therefore, which faced the proponents of e-Sri Lanka, was the process of ensuring ownership and that the key stakeholders and beneficiaries were full participants in the design and planning stages. This was achieved to a large extent through the establishment of broadly representative focus groups during the design and planning phase for the various components of e-Sri Lanka, as well as a strong commitment to a bottom up approach, i.e. let the communities identify their needs, not a prescriptive top down approach, often a flawed characteristic of large donor funded initiatives.

A key success factor therefore in the evolution of the design of e-Sri Lanka was the ongoing engagement, through focus groups and other mechanisms, and thereby broad ownership of

[3] Project Appraisal Document, World Bank (2004)

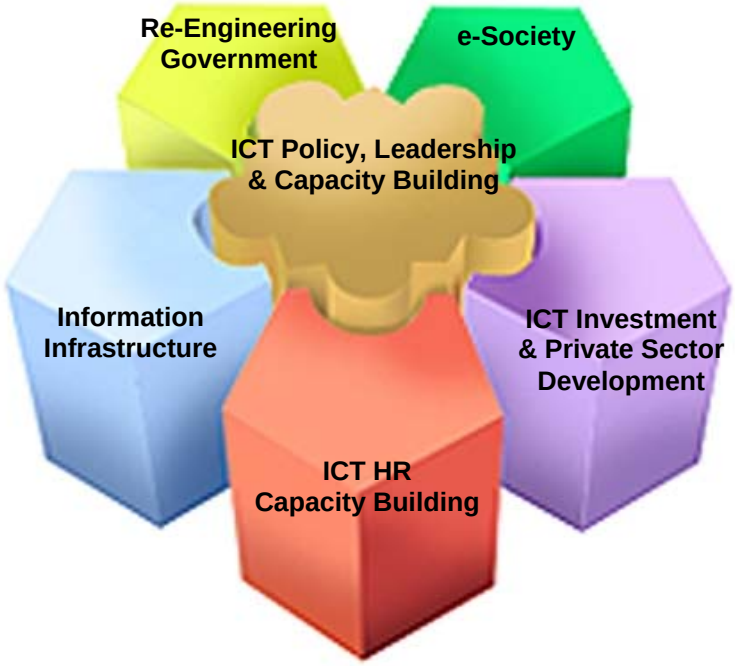
e-Sri Lanka among the different stakeholders from the various sectors. Industry needs and the requirements for building ICT industry's capacity and competitiveness were determined by a collection of stakeholders representing the various chambers, industry associations and companies, both large and small. Similarly, both the implementation of community based telecentres ('Nenasalas' - meaning 'knowledge centres') and design of a community grants fund (e-Society Fund) for the development of societal applications were characterized by a bottom-up approach, where the designers, implementers and owners of the projects were from the communities themselves.

Going forward, through participatory monitoring and evaluation, focus groups and other mechanisms, ICTA and its key partners will need to continuously interact with the stakeholders and beneficiaries, to ensure programmes are delivering the desired results and ultimate benefits to citizens. In this regard, ICTA has taken the bold step of building a results oriented monitoring and evaluation system, in contrast to token monitoring and evaluation frameworks which are arguably a common feature of many development projects worldwide. ICTA and its partners' commitment to institutionalization and operation of the monitoring and evaluation framework and to results based monitoring and evaluation in general, will contribute significantly to the eventual success or failure of e-Sri Lanka.

7. Description of e-Sri Lanka Programmes

There are currently six core programmes being implemented under the supervision and coordination of ICTA. Each of the programmes are sub-divided into a number of strategies or components and then into a number of projects and activities within each component.

e-Sri Lanka Programme Components



Source: ICTA

The classification differs slightly from that used in the Project Appraisal Document (PAD) prepared for World Bank funding purposes. However the classification ties the structure back to the original programmes as specified in the e-Sri Lanka Roadmap. It is retained by ICTA as it covers the totality of projects that need to be addressed to satisfy the objectives of the e-Sri Lanka Roadmap and which requires funding beyond the current levels made available by the World Bank.

Current funding for e-Sri Lanka totals 83 million US dollars, including a soft loan of $53 million from the World Bank, co-financing of $15 million from the EXIM Bank of Korea, $14 million from the Government of Sri Lanka and $1 million from the Japanese Social Development Fund (JSDF). Negotiations with the Swedish International Development Agency (SIDA) are also ongoing for an estimated further $2 million dollars. This represents around 30% of the estimated $300 million required to fully implement e-Sri Lanka as envisioned in the original Roadmap. The onus is on ICTA and its partners and stakeholders to secure the additional funding and partnerships needed to achieve this.

The bulk of funding currently available for e-Sri Lanka is allocated for building the government and national information infrastructure, viewed as the critical enabler for all other programme components. This includes establishing broadband telecommunications networks in the regions, community based telecentres and a government wide area network. Additional funding will be required for some areas including ICT human resources capacity building and content development.

The *ICT Policy, Leadership & Institutional Capacity Building Programme*[4] focuses on developing a conducive environment to achieve the objectives of 'e-Sri Lanka' and establishing the necessary institutional framework. Its goal is to create a pro-active policy and a regulatory environment that is supportive of ICT reform and ICT-based development, develop the ICT leadership and institutional capacity, and communicate these initiatives and policies to the wider stakeholder audience.

The Programme is implemented through the following Core Strategies:

- Facilitate the formulation and adoption of a National ICT Policy, ICT Action Plan and necessary Legal Framework in collaboration with the Administrative Reforms Committee and relevant stakeholder groups;
- Provide focus and leadership for e-Sri Lanka and for ICT for development in general, including building e-leadership skills among senior government officials, business and civil society leaders;
- Establish ICTA as a 'centre of excellence' in ICT for development, through timely and cost effective implementation of e-Sri Lanka and building external capacity in project management;
- Monitor and evaluate progress to ensure a focus on development results, through obtaining feedback and lessons learned, to inform decision making and continually adjust strategies;

[4] –ICTA (2006)

- Create a 'knowledge culture' at ICTA; utilize global knowledge and best practice in ICT for development as well as share lessons and experiences from 'e-Sri Lanka' with partners and stakeholders;
- Build awareness of e-Sri Lanka and ICTA and of the benefits of ICT through an effective communications strategy;

The vision of the *Information Infrastructure Programme* is a user-friendly and state-of-the-art technology or ICT infrastructure established throughout Sri Lanka that enables all citizens to have equal and affordable access to dynamic information, modern communications, electronic services, and content, creating the enabling environment for e-government, e-commerce and e-business.

The Core Strategies of the Information Infrastructure Programme are:

- Facilitate the installation of modern information and communication backbones (Regional Telecommunications Networks) to provide competitive and affordable telecommunications services for citizens and appropriate channels for delivery of citizen services, including e-government, e-commerce, e-learning and e-business;
- Establish a network of over 1000 ICT service delivery or telecentres (Nenasalas) to empower the population in the rural areas of the country, through affordable access to information and communication technologies;
- Design and implement common standards through guidelines for Technical Architecture, Security and Standards (TASS) for ICT usage across the whole of government and all nationwide activities relating to ICT;
- Create a "single window" for citizens to access services and content provided by the government through establishing interoperability standards;

The objective of the *Re-engineering Government Programme* is fundamental reform of government with the objective of improving citizen service delivery. This will be achieved by improving the way government works, by first re-engineering and then technologically empowering government business processes, including government-to-government (G2G), government-to-citizen (G2C) and government-to-business (G2B).

The Core Strategies of the Re-engineering Government Programme are:

- Collaborate with the Administrative Reforms Committee (ARC) and bring about a new governance framework that is enabled by ICT;
- Enable implementation of a shared infrastructure across government facilitating the merging of functions between agencies to achieve greater efficiency and better delivery of services to citizens;
- Ensure that the stock of ICT equipment required for an efficient and effective e-government programme is upgraded;
- Outsource automated government services and functions to the private sector which will be used as the engine for re-engineering;
- Make public services truly "citizen centric" by ensuring geographically non-discriminate delivery;

The *ICT Investment and Private Sector Development Programme* has parallel aims of supporting the domestic ICT sector and the ICT export industry of Sri Lanka. For the domestic sector, ICTA is aiming to increase utilization of ICT across all sectors, particularly in government. The second objective is to re-brand Sri Lanka as a destination of choice for ICT products, services and investments. These twin aims will aim to create a competitive ICT industry and contribute to achieving sustainable economic growth and employment creation in Sri Lanka.

The Core Strategies for the ICT Investment and Private Sector Development Programme:

- Use re-engineering government as a catalyst for the development of the local ICT sector by enabling the sector to fully participate through outsourcing of services and functions to local companies and use of local products.
- Promote the use of ICT in the non-ICT private sector consequently increasing awareness of its benefits across all levels in the private sector;
- Promote local ICT products and services to the global market;
- Brand Sri Lanka as an attractive destination for global Multi National Corporations to invest and set-up operations (Foreign Direct Investment);
- Create Centres of Excellence (CoEs) for emerging technologies, and increase the opportunities for local entrepreneurs to play a key part in global markets;

The *ICT Human Resources Capacity Building Programme* will support re-engineering government by equipping public sector employees with the required ICT, leadership and management skills and competencies. ICTA will also encourage international training institutions to invest in Sri Lanka and increase the pool of ICT trained professionals so that Sri Lanka has the numbers needed to cater to inward investment opportunities and is seen as an attractive destination for high quality human resources. The third dimension is to provide education and learning opportunities for all citizens through distance and e-learning, utilizing the ICT infrastructure being established across the country.

The Core Strategies of the ICT Human Resources Capacity Building Programme:

- Equip government employees with the appropriate ICT skills and competencies needed to manage and administer e-government services;
- Establish a multi-skilled pool of ICT trained professionals, that can facilitate the development of an IT Enabled Services industry in Sri Lanka;
- Collaborate with the Ministry of Education to ensure that all schools provide education in basic ICT skills and infuse ICT into teaching and learning of other subjects;
- Increase the number of ICT undergraduates for ICT based University courses and provide higher level ICT training to University faculties;
- Improve opportunities and incentives for English and ICT literacy, especially in rural areas, in particular through distance and e-learning methods, radio and television based programmes;

The *e-Society Programme* seeks to use ICT as a key lever for socio-economic development at the community level. Ensuring equitable and balanced access to information and knowledge, especially within the rural society, and representation of marginalised and deprived groups, will promote equitable growth and assist in closing gaps between urban and rural areas.

The overall goal of the e-Society programme is to promote the innovative use of ICT to meet the social and economic needs of the most vulnerable communities in Sri Lanka, to develop approaches to scale up successful applications, and to empower civil society with affordable access to information, communication, and relevant local content.

The e-Society Programme will aim to use knowledge and information to move the 'centre of gravity' of power and influence back to the rural masses, through the following strategies:

- Raise awareness among rural communities about the uses and benefits of ICT through a strategic and sustained communications campaign;
- Develop multi-stakeholder partnerships in ICT for Development. These partnerships will network ICTA with other organizations and institutions that are engaged in promoting an e-Society;
- Establish a grants fund that will adopt a bottom up approach to solicit and develop innovative solutions using ICT to benefit rural poor, women, displaced persons, and those residing in conflict-affected areas;
- Introduce and mainstream ICT in rural communities to provide increased opportunities for economic growth and an improved quality of life;
- Enhance the readiness and capacity of communities by developing & delivering appropriate training and capacity building programmes;

8. Implementation Approach for e-Sri Lanka

The foundation to e-Sri Lanka and a critical first step outlined in the e-Sri Lanka Roadmap was building the necessary implementation framework and capacity. ICTA was established in 2003 through an Act of Parliament, as the apex body for ICT policy setting and direction for the country and given the mandate of coordinating implementation of e-Sri Lanka. In setting up a centralized unit like ICTA, Sri Lanka followed the example of many other countries. Governments around the world have taken responsibility to provide national leadership in the development and application of technology in their countries. This is being achieved through the establishment of an administrative structure within government with specific responsibilities to develop a national vision for ICT, prepare implementation plans with key strategies having specific goals to realize the vision, and action plans for their achievement.

ICTA's 'modus operandi' is to provide leadership and act primarily as a facilitator and catalyst in leading ICT enabled development. ICTA will work in close partnership with government organizations, the ICT industry, the private sector, academia and civil society. In the implementation of projects, ICTA will seek to empower and equip other sections of government, the private sector and citizen groups to carry out projects and only where it is absolutely necessary, initiate key projects itself, to provide leadership, while ensuring that in the longer term these projects are handed over to entities that logically have responsibility for such functions. ICTA will also engage and consult all sectors of Sri Lankan society in forming ideas, in setting priorities and in advising government of the most effective use of ICT to achieve economic and social improvements and will closely monitor, evaluate and report progress in the implementation of e-Sri Lanka.

Implementation of e-Sri Lanka therefore, will be very much the responsibility of ICTA's contracted partners, working in partnership with the project owners and beneficiaries. For example, projects awarded in the form of grants from the e-Society Fund's community assistance programme (CAP), will be designed and implemented by community based organizations themselves and project implementation will be monitored by a consortium made up of a leading management consulting firm, experienced in grant management and administration, partnering with an NGO with the largest grass roots network in the island.

This in itself represents a significant step forward: a partnership model combining the best skills available in the private sector with that of the NGO community is unusual in Sri Lanka at least but essential for sustainable development. Multi-stakeholder partnerships cutting across government, the private sector, NGOs and civil society will bring the best of all worlds and is a fundamental principle upon which e-Sri Lanka is based. In countries like Sri Lanka, government backing is critical, but equally important is to allow the private sector, not the government bureaucracy, to drive the projects and introduce a professional approach as well as also ensure that civil society organizations and NGOs who work at the community level and better understand community needs, form part of the partnership.

9. Challenges and Lessons Learned

One of the major challenges faced in implementing e-Sri Lanka has been the unstable and constantly changing political environment. While e-Sri Lanka's survival and indeed strengthening through successive governments has been a noteworthy success and credit to the overall soundness of the vision and concept as well as to ICTA's own capabilities, these political changes have also given rise to some challenges. Changing ideologies have necessitated some adjustments to programme strategies, implementation approaches and partnership models. Nevertheless, the overall vision and concept of e-Sri Lanka has remained remarkably intact.

The other significant challenge facing e-Sri Lanka and ICTA on an ongoing basis is the increasing impatience on the part of the stakeholder community and the expectation of immediate and visible results. Across government, ICT industry, academia, NGO community and especially the media, expectations of quick results have been extremely high and therefore some disappointments inevitable. While establishing ICT infrastructure and systems alone can be achieved relatively swiftly, doing things too fast significantly increases the risk of getting it wrong. Worldwide experience has demonstrated that e-Government is not about simply automating departments and processes. Instead it is all about shifting the centre of gravity from government to the people and ensuring a focus on serving the citizen. Achieving socio-economic development through the use of ICT, as with any development intervention, takes time.

One of the early lessons learned by ICTA therefore, is the need for an effective communication strategy. Building awareness among the stakeholders and beneficiaries of ICT and ICT enabled development is critical to ensuring broad participation and thereby sustainable development. Equally important, and in conjunction with raising awareness of the uses and benefits of ICT, is expectation management. Key stakeholders need to be made aware of what can be achieved and by when, and informed of the many issues and challenges that need to be overcome. Consequently, they need to also be continuously kept abreast of

progress made through regular reporting and feedback mechanisms. In this aspect, ICTA's monitoring and evaluation system will play a crucial role.

As with many past experiences, another key lesson learned is the need for local ownership. This has been a critical success factor in enabling and ensuring the survival of e-Sri Lanka through different regimes. The fact that e-Sri Lanka was a home grown concept and close to the hearts and minds of its many stakeholders, ensured effective lobbying for its survival and business continuity when government changed hands. Any other development project, most likely to have been designed and created by a donor institution working with a single local ministerial counterpart, would have suffered a very quick death at the hands of a new government. The survival of e-Sri Lanka through successive governments is testimony to its broad ownership among the stakeholder community.

Another early lesson learned has been the critical need to build national implementation capacity and the need to find champions to successfully take projects forward. For a cross-sectoral initiative like e-Sri Lanka this presents a major challenge, and if not resolved, a major obstacle, to progress. Building local project management skills and implementation capacity has become a critical part of ICTA's work going forward, and will play a large part in determining the overall success or failure of e-Sri Lanka. ICTA will need to identify and partner with real champions among its various partners, both in terms of identifying key individuals as well as capable institutions and companies.

Linked to these key lessons learned is the corresponding need for a very flexible programme design, responsive to the ever changing environment and changing needs and expectations of stakeholders. On this count, e-Sri Lanka and ICTA, in design at least, are dynamic and flexible models which allow for continuous adaptation according to needs and lessons learned along the way. The challenge facing ICTA and implementers will be to resist the temptation to view e-Sri Lanka as a blueprint and resort to 'digging in heels' when the going gets tough, as it inevitably will. Instead, ICTA and its partners will need to be open to fresh ideas and receptive to the need for changes to strategies and implementation plans.

10. Impact on Marginalised Groups

As mentioned earlier, e-Sri Lanka is by design, intended to have a impact on the rural communities. The three primary objectives of e-Sri Lanka of peace, growth and equity are in line with the overall poverty reduction strategies for the country. The Nenasala project, in particular, is expected to contribute towards the difficult process of peace building by targeting communities in the North and East of the country and linking them with communities in other regions, in particular with those in the South, in an effort towards bridging the growing ethnic divide between these regions. Together with establishing regional telecommunications networks, it is hoped that the Nenasalas will help in creating a flow of information and knowledge between these divided communities and with the outside world, thereby connecting communities and people.

By concentrating on the most deprived regions, that is, the North, East and South of the country, the Nenasala project is also intended to significantly contribute towards reducing existing inequalities and bridging the 'development divide' between these regions on the one hand and the western province on the other. The latter being where the capital city Colombo

is located, and therefore where the largest proportion of development is centred around. By providing equal and affordable access to information and knowledge, it is hoped that citizens in rural communities will be better placed to take advantage of, and benefit from, opportunities for development. This in turn, will help to boost economic growth in the long term by harnessing the hitherto untapped and latent capabilities of the rural masses in the communities.

10.1 Impact of Nenasalas on Marginalised Groups

The early implementation success of the Nenasala (or Knowledge Centre) Project, which has already established 150 operational telecentres in the space of twelve months, and its championing by no less than His Excellency the President himself, has led to considerable excitement, enthusiasm and participation from the rural communities. Increasingly, ICT is no longer being viewed as an exclusive tool of the privileged few.

Based on lessons learned in many countries, the roll out of Nenasalas was preceeded by an elaborate project preparation phase, where conceptualization of the Nenasalas, and selection of locations was carried out by a broadly representative, stakeholder led focus group. A comprehensive island-wide survey was initiated in 2003 and using the survey results, evaluation criteria developed for the selection of locations. The criteria included size of the village, village population, availability and location of schools, village market places and bus-stands. On this basis, 100 locations were initially selected for establishing Nenasalas, all located within the North, East and South of the country, assumed to be the most urgent and deprived areas. Following this process, detailed evaluation criteria were developed for selection of Nenasala operators.

A comprehensive capacity building programme was also started in mid 2004, to raise community awareness about the existence and objectives of the Nenasala project, and to encourage preparation of project proposals to establish Nenasalas in the communities. Extensive training and capacity building workshops were conducted at a community level to help with the development of business plans and project proposals. Led by ICTA, six pilot Nenasalas were also set up to gain some early lessons and feedback on the design and operation of the centres. Based on these pilots, a standard model was developed for the Nenasalas, in terms of size, infrastructure and cost. Following on from this, the process of calling for applications to set up Nenasalas was initiated, with ICTA offering to cover the costs of ICT infrastructure and connectivity, with applicants requested to meet the costs of the location, utilities and operation (excluding connectivity costs).

10.2 Impact of e-Society Fund on Marginalised Groups

Owing to the general awareness created and the fact that over 250 awareness raising and capacity building workshops were held at the community level, the e-Society Grants Fund received over 240 proposals for grant funding in the first round of applications itself, which was initially planned to issue a mere 5 grants. In early 2006, ICTA and its partners were forced to radically re-think the strategy for the fund, exploring ways to speed up the application and award process and also look for alternative funding sources to meet the huge demand.

Prior to calling for the first round of applications for grants from the e-Society Fund, ICTA and its partners embarked on an awareness raising campaign at the community level. This

was conducted in partnership with Sarvodaya, an NGO with the largest network in the country, with significant grass roots representation and engagement. Under the supervision and guidance of Sarvodaya, workshops were carried out at a community level, aimed at helping communities understand the various applications and benefits of ICT. These workshops focused on helping target communities to identify ways and means of using ICT to impact their daily lives, and ultimately to prepare the ground work prior to calling for grant applications from the communities.

The overall objective of the participatory approach for the e-Society Fund was to ensure a bottom up approach, where target communities armed with the right information and knowledge would be in a better position to identify ICT applications most suited to their specific needs and able to impact their lives. The strength of this approach was partially reflected in the number of applications received in the first round, the high quality of proposals received (though only 5 grants were awarded in the first round, ICTA is looking to increase the number of grants to 11), and the overall interest and excitement generated by the fund itself.

10.3 Impact of Re-engineering Government Programme

The focus of the re-engineering government programme, while also looking at processes internal to goverment is primarily focused on improving service delivery to the citizen. The process of identifying appropriate services was based on a comprehensive e-government study carried out in 2003, including a needs assessment and survey of ICT usage in government. The design of the programme was led by a focus group, broadly representing the different sectors, including civil society. Priority services and applications were identified by the focus group, and formed the basis for the e-government strategy for Sri Lanka. Currently the programme is geared towards delivering three critical databases, the public, land and companies registers, as well as key services including, a Government Information Centre, e-Motoring, e-Foreign Employment and e-Divisional Secretariat. Together with the roll out of the necessary infrastructure, including the government network (LGN) and Nenasalas, the eventual impact of these services can be significant.

The journey towards an e-Sri Lanka has only just begun, and it is still early days before any economic impact of the various programmes and projects can be assessed. Nevertheless, in the short span of time that implementation of e-Sri Lanka has been ongoing (since January 2005 when funding from the World Bank became available), there has already been a massive increase in awareness levels around the country, especially in the rural areas. Owing to the high profile nature of e-Sri Lanka, and perhaps the general controversy surrounding ICTs and the concept of ICT for development as a whole, there has been significant discussion and debate in all parts of the country, from rural villages to the highest echelons of government. In general, ICTA and e-Sri Lanka has already generated considerable excitement, and the in-built focus of the programmes on the rural communities means that if implemented successfully, e-Sri Lanka will have an impact on the lives of ordinary citizens. The challenges will be two fold: one, to ensure equal opportunities exist for all to benefit, and two, to ensure that the introduction of ICT does not in any way diminish the social fabric, history and strong cultural traditions prevalent in the communities, but instead will serve to complement these aspects.

11. Improving the Participation of Beneficiaries

Owing to the size and cross-sectoral nature of e-Sri Lanka, one of the challenges which faced its proponents was how to effectively engage all beneficiaries in the design and planning stages. Ensuring ownership and participation by all stakeholder groups presented, and will continue to present, a major challenge. In a developing country like Sri Lanka, ICT awareness levels are extremely low, let alone an understanding of how ICT can be effectively utilised to improve work productivity and livelihoods. This can present an even greater challenge. In conjunction with rolling out citizen services and ICT projects, therefore, there will need to be a significant investment in building human capacities, especially those at the community level. By design, e-Sri Lanka attempts to address these two fundamental issues: i.e. giving the 'voiceless a voice', as well as investing a significant proportion of funding and effort on building relevant human capacities.

11.2 Improving Participation of Beneficiaries in Nenasalas

There are two types of Nenasalas currently in operation: Nenasalas owned and operated by individual entrepreneurs from the communities, and Nenasalas run by religious institutions such as temples or churches, the latter being natural points of congregation for the community, as well as being social institutions likely to equitably serve the needs of the entire community and its various stakeholder groups. In this setting, it is perhaps more likely that community needs will be taken into account as well as making necessary course corrections based on feedback received from the community on the type and quality of services.

Based on initial feedback received from the communities following the implementation of the first 150 Nenasalas, the process of determining owners of Nenasalas will be adjusted and strengthened going forward to enhance the community ownership aspect. As of early 2006, ICTA is now looking to solicit and increase the number of applications from community based organizations and societies, and correspondingly reduce the number of applications entertained from individuals. This is in response to growing demands from the communities themselves to ensure that services provided in the Nenasalas are principally focused on addressing community needs. This shift towards a more society based model is significant: it reflects active interest and engagement, with communities demonstrating an understanding of the potential of ICT, and an interest in ensuring relevance and ownership going forward.

11.1 Improving Participation of Beneficiaries for the e-Society Fund

The e-Society Fund is characterized by a bottom up approach, where the communities themselves will identify and propose projects to be implemented in their own communities. Training and project support will also be provided by grass roots NGOs and community based organizations in preparing project proposals for funding. Once awarded, the onus will be on the community to own, implement and manage the projects.

Going forward, ICTA and its partners will need to invest significantly in strengthening the process of project proposal preparation. Grant application guidelines and procedures will need to be robust and the assistance provided for proposal preparation will need to be effective to ensure projects are well designed and addressing the key issues of relevance, impact and long term sustainability. In doing this, ICTA and its partners will need to invest considerable time in ensuring a participatory approach to project preparation and have

mechanisms in place to provide ongoing support to project owners, beyond the project implementation phase.

11.3 Improving Participation on the Re-engineering Government Programme

The participatory approach to design and implementation of the re-engineering government programme has been successful to a limited extent. Government stakeholders and other sector representatives have been engaged and ownership has been created within the relevant government departments and institutions. Nevertheless, ICTA, its partners and the programme as a whole, would certainly benefit through further engagement of the beneficiaries, including local government offices and the rural communities, in determining the most appropriate application of ICT. Currently it is somewhat of a prescriptive top down approach, in terms of identifying projects, with the relevant stakeholders engaged once projects are under preparation.

The challenge going forward for all projects will be to ensure that select stakeholders are not allowed to dominate projects and activities in an attempt to serve their own narrower self interests. Ensuring relevance and ownership of projects by the ultimate beneficiaries is vital and will need to be addressed by ICTA and its partners prior to, and during implementation of projects. There is a corresponding critical need for an inclusive and participatory approach to implementing, monitoring and evaluating projects as outlined in ICTA's monitoring and evaluation strategy[5].

11.4 Participation through Monitoring and Evaluation

ICTA's monitoring and evaluation strategy developed in 2004, outlines the need for a result based approach to monitoring and evaluation, where the primary focus is ultimately on development effectiveness and not simply on project management and implementation. ICTA has outsourced monitoring and evaluation to an external party to enable an independent assessment of performance and a common approach to interpreting project outcomes. The development focus of the strategy is reflected in the adoption of a logical framework for defining and monitoring project results. For example, for the Nenasala project the core indicators are related to usage of computer and internet based services, including e-governance and e-commerce. ICTA will strive to monitor the extent and range of Nenasala services and their impact on the community at large rather than simply monitor the infrastructure roll out, financial records, ICT training activities and general levels of usage.

In the case of the Nenasalas, the objective of monitoring and evaluation will be to determine whether citizens in rural areas of the country have ready access to ICTs which are making a real difference in their lives, and for example, that there has been a measurable increase in SME activity and e-commerce in rural areas, significant numbers in the communities understand how they can harness ICTs in their lives and ICTs have been effectively utilised to enhance the creative power of people in rural communities. In this aspect, as well as choice of indicators, a participatory approach to monitoring and evaluation is critical, to ensure feedback from community groups is incorporated, and corrective measures taken so that ultimately the benefits accruing to communities are real and pervasive.

[5] ICTA Monitoring & Evaluation Strategy (Shoban Rainford, 2004)

12. Stakeholder Management

Ownership of e-Sri Lanka lies across a multitude of sectors and stakeholders. For the e-Society Grants Fund, ownership rests with the communities themselves. For the Nenasalas or telecentres, ownership once again is with the telecentre operator from the communities. For the ICT Industry Capacity Building Fund (ICBP), the ICT industry and associations are the primary stakeholders. In the case of e-government services, the relevant government organizations are the owners. Effective stakeholder management therefore, is one of ICTA's core responsibilities. Managing competing demands for projects and resources will be an ongoing challenge for ICTA and its partners and will lead to some conflict with disappointed stakeholders. Also as noted earlier, expectations of quick results and limited understanding of the time needed for real development change, will likely exacerbate the situation.

Competing demands for resources will be the other primary issue. As e-Sri Lanka grows in stature and achieves success, other ministries and departments outside the existing funding framework will start demanding for attention and resources, as will neglected private sector organisations and NGOs. If e-Sri Lanka and ICTA then moves to entertain these requests, for example to respond to a request for assistance from within government, then civil society will start to lament the lack of priority and attention for e-society initiatives, as will the ICT industry for its own. One of the mechanisms which could be employed to mitigate these risks is to establish a greater advisory role and function within ICTA. This will certainly serve to help address numerous government requests for attention and assistance.

At project level, conflicts will also undoubtedly surface as project implementation gets underway. With multiple partners, contracts and implementers, ICTA will need to constantly manage relationships between the different players and stakeholders and step in where necessary to diffuse tensions. Based on its early learning from its pilot initiatives, ICTA has already taken steps to ensure that partnership strategies and contracting methods are strengthened to reduce ambiguity on roles and responsibilities of the different parties involved in the projects. Effective monitoring and evaluation with feedback to the relevant focus groups which represent the stakeholder community, will also help to clear issues and validate actions taken.

13. Capacity Needs of Stakeholders

Building implementation capacity was identified as a key activity in the original e-Sri Lanka Roadmap. In its current organisational structure, ICTA has grouped this activity under the ICT Policy, Leadership and Institutional Capacity Building Programme. ICTA's entire operational model and implementation strategy is based on the fundamental assumption that the private sector, in particular, will be the primary implementer of e-Sri Lanka. Twelve months into implementation of e-Sri Lanka, and as highlighted in the section on 'Challenges and Lessons Learned', ICTA is now facing several shortcomings in this approach. Some of the expectations that certain required skills were already available in the local private sector have turned out to be false ones. Further the assumption that local private sector and NGOs would gear up to add capacity and skill sets has also been proven to be wrong. Last but not least, it was anticipated that organizations from across the different sectors would look to establish partnerships with one another to address the diverse needs of complex projects.

ICTA is now having to invest a considerable amount of time and effort to find solutions to these dilemmas, firstly by conducting regular briefings and seminars for the local private sector and NGOs to help them to understand the scope and complexity of the projects and appreciate the need to build partnerships to complement each others' skills to meet project needs. Secondly, by investing time to facilitate the whole process of partnerships building and where possible, create public private partnerships and constructs. In some specific cases, aware of partner limitations, ICTA is investing in building capacity within the appropriate institution itself.

One of the more obvious success stories in the area of capacity building has been the development of ICTA as an institution in itself. Barely two and a half years old, ICTA is already showing remarkable agility and ability to respond to the ever changing environment, and has made extremely satisfactory progress to date. This has served to simply underline the importance of building local capacity to drive complex initiatives of this nature. Setting up ICTA as an autonomous agency, government owned but with a more flexible 'private sector style' mode of operation, and attracting Sri Lankan professionals including some from overseas, has helped ICTA to meet and successfully overcome major obstacles to progress, which would have brought any other institution to a grinding halt. The challenge will be how ICTA manages to retain core staff and when this is not possible, ensure the institutional learning mechanisms are in place to allow as smooth a transition as possible.

14. Recommendations

In summary, it can be concluded that some of the possible pre-conditions for participatory methods to succeed in e-government initiatives and to succeed in ICT initiatives in general include: 1) awareness building among primary stakeholders and beneficiaries of the potential uses and benefits of ICT, and 2) participation by stakeholders and beneficiaries at all levels and across the entire lifecycle of the project, from the design and planning stages, across project implementation through to monitoring and evaluation. Interaction with beneficiaries is particularly important in terms of ensuring that the project concept and design, and consequently the application of ICT, correctly addresses real needs of beneficiaries. Ultimately, as with any development intervention, needs should be clearly identified first.

Early lessons learned from e-Sri Lanka have strongly emphasized the need for effective communications and awareness building activities upfront as an essential pre-requisite to preparing any ICT interventions. The early successes of both the Nenasala project and the e-Society Fund have in part been owed to the interest and buy in created among beneficiaries and consequently the community ownership created for both initiatives. Besides conducting workshops and focus groups, e-Sri Lanka has also taken unusual alternative approaches to raising interest and awareness, including conducting street dramas in the communities, which have received positive feedback. Projects like the Nenasalas and the e-Society Fund which have engaged and consulted the communities from the early inception stages and during ongoing implementation, have arguably had a more positive impact, and therefore, are more likely to be sustainable in the long term. The Nenasalas in particular have benefited from interaction with the beneficiaries, both in terms of its evolving design as well as for necessary corrective measures to types and nature of services offered.

Bio Data of the Author

Shoban Kyle Sittampalam Rainford has a first class degree in Economics and over nine years professional experience in the field of international development, based in Europe, the Middle East and in South Asia, working for international organisations including the United Nations (UN ESCAP), United Nations Childrens' Fund (UNICEF), Save the Children and for the Government of Sri Lanka on a flagship World Bank project.

Returning to Sri Lanka in August 2003, Shoban is now serving as a consultant to the Government of Sri Lanka attached to the Information & Communication Technology Agency (ICTA) operating under the Office of His Excellency the President. ICTA is the apex body for ICT policy and direction for the nation and mandated to implement 'e-Sri Lanka', a national ICT for development initiative. Shoban was a member of the core team which designed the 'e-Sri Lanka' programmes and projects.

Shoban is Programme Manager for ICT Human Resources Capacity Building as well as head of Monitoring and Evaluation for the Agency, and has been responsible for a number of key initiatives including an ICT Training Programme for 10,000 public sector employees, a National ICT Literacy Programme and establishing a pilot Distance and e-Learning Network and e-Government Centre of Excellence through public private partnership, among others.

Shoban is currently serving on several high level committees, including a working committee for English Skills reporting to the Secretary to H.E. the President, an Advisory Committee for the University Grants Commission and a sub-committee on ICT Education for the Ministry of Education. Shoban also represents ICTA on two international networks, namely the Global Knowledge Partnership (GKP) and the International Development Evaluation Association (IDEAS).

Prior to joining ICTA, Shoban was working in London, UK, for the International Secretariat for Save the Children, which he helped to establish in 1998.