

How do drivers of human capital systems and corporate social responsibility affect sustainability of grassroots level knowledge--#based organisations which exercise digital divide elimination as their main social responsibility?

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How do drivers of human capital systems and  
corporate social responsibility affect sustainability of  
grassroots level knowledge-based organisations which  
exercise digital divide elimination as their main social  
responsibility?

*A case study in Sri Lanka*

G. Sampath Sanjeewa Windsor

A thesis in fulfilment of the requirements for the degree of  
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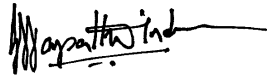
Abstract 350 words maximum:

This research examined the drivers of Human Capital (HC), Social Responsibility (SR) synergies and their perceived impact on the Sustainability of grassroots level organisations. This was done in the form of a case study of Sri Lankan Nenasala telecentres. The e-Sri Lanka program, funded by the World Bank as a South Asian first, has established a network of 1000 Nenasala telecentres (Knowledge Centres) over 10 years. However, Nenasala telecentre models point to dissimilar sustainability records. Royal and O'Donnell (2008) models were used to investigate these dissimilarities. Royal and O'Donnell (2008) models identified some key indicators and drivers of performance, which were represented as 'Human capital drivers of the value of the firm' model. Prior research investigated how these drivers act on individual segments of human capital systems with Royal and O'Donnell's (2008) 'human capital wheel'. However, these models have not been empirically investigated in developing countries, in an area such as telecentres in ICT4D, which are grassroots level small-scale organisations. Likewise, it has also not been examined how the drivers of human capital systems and social responsibility collaboratively affect sustainability of organisations. This theoretical gap will be bridged through this research. The research undertook a comprehensive archival material analysis, focus group discussions with Nenasala stakeholders and interviews with Sri Lankan Information and Communication Technology Agency officials, to uncover how different operationalization of the human capital drivers within different Nenasala models may lead to more or less sustainability outcomes. The findings showed leadership, which research termed Socio-Cultural Leadership, intertwined with SR synergies was a key to success, although it was controlled by numerous other variables such as funding and parent organisations' influence. Microfinance and crowdfunding were specially found to be potential tools that could aid SCL. This research succeeded in modifying Royal and O'Donnell's (2008) model and identifying how drivers of human capital systems affect the sustainability of grassroots enterprises. The model developed through a unique South Asian experience of a developing country, could be applied to other countries in the region that have similar social, cultural and religious boundaries as the underlying unifiers for overall grassroots programs.


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## **Abstract**

This research examines the relationship between drivers of human capital, corporate social responsibility synergies and their perceived impact on the sustainability of grassroots level knowledge-based organisations, which use elimination of the digital divide as their main social responsibility goal. Essentially, this thesis encapsulates three main subject areas, namely human capital systems, social responsibility, and sustainability. Royal and O'Donnell (2008) identified some key human capital indicators and drivers of performance, which are represented as a model. The 'Human capital drivers of the value of the firm' model attempts to show various interrelated aspects of sustainable human capital systems and their drivers in the context of corporations. Hatipoglu's (2010) research affirms that Royal and O'Donnell's (2008) model could investigate a company's development, sustainability over time and identify emerging patterns in human capital. Prior researchers such as Hatipoglu (2010) found empirical and theoretical evidence on how drivers of sustainable human capital systems perform in for-profit large organisations such as financial institutions and the pharmaceutical industry. Prior research has also investigated how these drivers act on individual segments of human capital systems with Royal and O'Donnell's (2008) 'human capital wheel'. However, these models have not been empirically investigated in prior research in developing countries or in an area such as telecentres in ICT4D, which are grassroots level, not-for-profit, or for-profit small-scale organisations. Likewise, it has also not been examined how the drivers of human capital systems and social responsibility collaboratively affect sustainability of such organisations. This theoretical gap will be bridged through this research. In this research, the empirical gaps will be addressed by investigating how the eight segments of human capital systems and social responsibility, affect sustainability in the context of telecentres as small scale organisations. This will be done in the form of a case study of Sri Lankan Nenasala telecentres. Within 10 years, the e-Sri Lanka program funded by the World Bank as a South Asian first, has established a network of 1000 Nenasala telecentres as grassroots not-for-profit or for-profit enterprises, delivering ICT projects as its main interface to the community. However, these diverse telecentre models with their substantial Social Responsibility (SR) synergies point to dissimilar sustainability records. Yet, no external academic evaluation has been undertaken to examine the impact on Nenasala sustainability stemming from the human capital drivers of these models within their

home-grown SR synergies. The researcher undertook a comprehensive archival material analysis, focus group discussions with Nenasala stakeholders and interviews with Sri Lankan Information and Communication Technology Agency (ICTA) officials, to potentially uncover how different operationalization of the human capital drivers within these Nenasala models lead to more or less sustainability outcomes within the SR synergies championed. The researcher also uncovered the drivers of human capital that perpetuated SR synergies within ‘Nenasala’ telecentres to successfully enhance sustainability, community focus, and competitive advantage over their non-Nenasala, for-profit telecentre counterparts. This research succeeded by augmenting Royal and O’Donnell’s (2008) model with identified drivers of human capital systems that affect the sustainability of grassroots non-profit or for-profit enterprises. It is the initial research of its kind with a unique South Asian perspective. Further study on the key drivers uncovered is recommended in grassroots level, not-for-profit, or for-profit knowledge-based organisations that accentuate profitable knowledge work to develop underprivileged communities.

## **Keywords**

Human Capital, CSR, ICT4D, Telecentres, Nenasala, Sri Lanka, Sustainability, Crowdfunding

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## **Abbreviations and Symbols**

BOI	Board of Investment of Sri Lanka
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BPM	Business Process Management
BPO	Business Process Outsourcing
COO	Chief Operating Officer
CS	Corporate Sustainability
CSR	Corporate Social Responsibility
CSR <sub>2</sub>	Corporate Social Responsiveness
CSP	Corporate Social Performance
Dayaka Sabha	A committee of contributors in a Buddhist temple
GoSL	Government of Sri Lanka
Grama Niladhari ('Village Officer')	A Sri Lankan public official appointed by the central government to carry out administrative duties in a Grama Niladhari Division (a village)
GT	Grameen Telecom
GB	Grameen Bank
HC	Human Capital
HRM	Human Resource Management
HRMS	Human Resource Management System
ICT	Information Communications Technology
ICTA	Information Communication Technology Agency of Sri Lanka
ICT4D	Information and Communication Technologies for Development
INGO	International Non-Governmental Organisations
IT	Information Technology
ITU	International Telecommunications Union
JIT	Just In Time
M&E	Monitoring and Evaluation
MNC	Multinational Corporation
MNO	Multinational Organisations
NGO	Non-Governmental Organisations
PPP	Public-Private Partnership
RIT	Regional Impact Team
ROI	Return on Investment
SCL	Socio-Cultural Leaders
SD	Sustainable Development
SR	Social Responsibility
VAS	Value Added Service
VGK	Vishwa Ghana Kendra
VIC	Village Information Centres
VPP	Village Pay Phone

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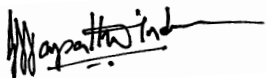
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## **Introduction**

The notion of wealth is vastly different in businesses today within the knowledge-centric economies in comparison to traditional business economies of the past. The main producers of wealth today are information and knowledge. Knowledge is considered as the thoughtfulness and attention people bring to doing their job in pursuit of the firm's goals. Knowledge workers can be thought of as workers who deal with a high degree of complexity and uncertainty that requires an elevated degree of judgement. As such, knowledge-based organisations value human capital capacity as its wealth. Visionary companies continue to heavily invest in human capital and human capital management practices for protection of knowledge and their competitive advantage. Nonetheless, knowledge-based organisations envisage themselves more as human communities and largely a part of society or social capital. This is due to the realisation that organisations are inherently linked to social capital through human capital.

Corporate Social Responsibility (CSR) is thought of as the link between a corporation's human capital and social capital. CSR is also promoted as a form of corporate self-regulation integrated into the organisation's business models that influence its sustainability. This linkage of CSR and human capital is especially visible within Sustainable Development (SD) that serves the bottom of the economic pyramid. The organisations that cater to the bottom of the economic pyramid at the grassroots are not sophisticated as corporations. Within these simple structures, CSR is replaced by the more generic concept of Social Responsibility (SR). Yet, different countries have distinct social structures, dominant issues, institutions, and human capital practices, shaped by their unique history and culture. Even with rapid globalisation of economies, many societies still maintain unique economic systems and human capital practices that heavily focus on harmonious society-business relations. As such, there seems to be different reflections on what SR means, how SR should be implemented in organisations with different ownership and financing structures at the grassroots level.

Traditionally, most business strategies focus on upper and middle class consumers. However, most of the world's population are categorised as poor or lower-middle class, with four billion people still living at the bottom of the economic pyramid,

predominantly in developing countries. Attending to the bottom of the economic pyramid requires innovations, such as telecentres in the case of Information and Communications Technologies for Development (ICT4D). ICT4D can be considered as a technology diffusion system for the disadvantaged. Developing countries, especially in South Asia, focused largely on telecentres as it was seen as the 'silver bullet' in the fair sharing of the benefits of the digital revolution and an efficient way to disseminate ICT to rural and semi-urban underprivileged. Governments, International and local Non-Governmental Organisations (NGOs) recognise the benefits of this model in regard to development. However, telecentre projects face the threat of decline unless innovative approaches can be found. Most South Asian telecentre projects have become 'white elephants', failing when donor funds concluded as they were not designed to be profitable within their SR objectives driven by human capital collaborations and socio-cultural concerns. Public-Private Partnership (PPP) was perceived as a viable alternate business model, which takes advantage of the financial capital, profit-seeking motive, and technological expertise of the private partner, combined with the public partner's drive to improve citizens' quality of life with SR and human capital synergies. Nonetheless, SR vision still requires central guidance and subsidising from overarching bodies such as governments and/or NGOs for the sustainability of those telecentres. Yet, there are projects that have stood the test of time successfully in the Indian sub-continent, generating opportunities and viable profitable knowledge work as key cornerstones, in developing remote rural communities.

Although there have been grassroots level telecentre initiatives in the sub-continent, the 'e-Sri Lanka' program is the first of its kind to be funded by the World Bank in South Asia which sets a precedent for other countries in the region to obtain World Bank funding for comprehensive nationwide e-programs. The Thousand Nenasala (knowledge centre) telecentre program is arguably the most visible part of the e-Sri Lanka initiative that provides the main interface between e-Sri Lanka and ordinary citizens, particularly in rural areas where 80 percent of the country's people and nearly 90 percent of its poor live. On a strategic level, a Nenasala is a 'single window' delivery model for citizens to access various e-services provided by the government and various other agencies faster and efficiently. Sri Lankan Nenasalas became the special emphasis of the researcher due to its unique and unparalleled innovation, holistic long-term development driven approach and significantly embedded SR and human capital

synergies within its unique multi-ethnic, multi-cultural, and multi-religious base. Moreover, Sri Lanka is a recuperating country that has established a network of Nenasalas covering all under-privileged areas in the island, including the war-torn North and the East, to upgrade the e-economic development and the quality of life of the disadvantaged, after ending 30 years of a civil war.

Overall, a Nenasala is a grassroots, non-profit or for-profit demand-based PPP initiative with Multi-Stakeholder Partnerships (MSPs), having substantial SR synergies that aim to transform each centre to a rural micro-enterprise through target populations of students, women, people with disabilities and other marginalised groups. Nenasalas sought to ensure that despite lack of affordability, disadvantaged groups gain the advantages normally limited to mid-high class societies. The program is supportive of the argument that bridging the digital divide should play a bigger role in social reform efforts, in developing social capital through poverty alleviation. Nenasala telecentres in Sri Lanka have been in existence for the last 10 years and have shown great promise in building a knowledge society by using models with unique operating, SR, human capital and funding synergies.

Sri Lanka's former president Mahinda Rajapaksa inaugurated the first Nenasala at the historic Kataragama Kirivehera on the 1st of January 2005, when he was the Prime Minister. In a historic event, The 1000th Nenasala was inaugurated at the Galigamuwa Bisovela Rajamaha Buddhist Temple by President Mahinda Rajapaksa in December 2014. The Sri Lankan government believed that free and easy access to computers and the internet is essential to help the most vulnerable people improve their lives through education, entrepreneurship, communication, and government services. Nenasalas have already helped Sri Lanka increase its computer usage and IT literacy rate from below 10 percent in 2004 to almost 40 percent by the end of 2014. In recognition of this contribution, Nenasala's e-Library Nenasala Program (eLNP) won the Bill and Melinda Gates Foundation 2014 award of US \$1 million for the best rural IT Project. This flagship project of the country was adjudged the best out of 150 projects from 110 countries. The Bill and Melinda Gates Foundation works to help all people lead healthy, productive lives under the direction of Bill and Melinda Gates and Warren Buffett.

Nenasalas have taken four paths in achieving this aim within the not-for-profit and for-profit models. First, within the not-for profit category, the majority of Nenasalas were community-based and were run by religious institutions (such as Buddhist temples, Hindu kovils and Churches) under the patronage of local clergy. The second Nenasala category was operated by village societies and was directed by community leaders. The third category was NGO operated Nenasalas. In the fourth for-profit category, local entrepreneurs operated Nenasalas, with a business model that incorporated a high sense of SR as an integral part of their contribution to uplift the standard of the local community. However, individuals who championed Nenasalas were driven by, and were in tuned with, socio-cultural aspects intertwined with development that benefits the disadvantaged.

The Information and Communication Technology Agency (ICTA) of Sri Lanka, which oversees the implementation of the Nenasala telecentre program, has the sponsorship of the Sri Lankan government and international donors. Yet, the challenge remains to realise the sustainability of the Sri Lankan telecentre models not only financially, but also on some SR goals. As such, the researcher primarily aimed to uncover drivers of sustainable human capital systems that impacted on sustainability through how SR focus is conceived, and practised within different models in this subsidised/micro-financed grassroots level program of Nenasala telecentre initiative. The secondary aim of this research was to disseminate the findings to academia, Sri Lankan ICT policy makers and the wider South Asian and international community for their information and for appropriate replications within wider telecentre implementations that is a key to ICT4D programs.

This case study encapsulated three main subject areas of corporate social responsibility, human capital systems, and sustainability. These areas as the theoretical background used to formulate the research questions of this thesis, are explored in chapters one and two as the literature review. Chapter three outlines the research methodology. The research questions explored within the study were: 1) Describe and explain the link between SR and human capital in Nenasala telecentres; 2) How do drivers of human capital (i.e., leadership and culture, recruitment and job design, training and development, performance management and rewards) affect Nenasala telecentre sustainability? and, 3) Do different types of telecentre models influence human capital

drivers and sustainability differently? The research utilised qualitative tools in exploring these questions. They were Royal and O'Donnell's (2008) 'Human capital drivers of the value of the firm' model and their 'human capital wheel' that was utilised for analysing human capital systems in depth. Three types of data collection, namely archival material analysis, interviews, and focus groups were used enabling data triangulation. Initially, analysis of publicly available documents including history of ICT4D programs, telecentres in South Asia, and the Nenasala telecentre program in Sri Lanka was undertaken to aid conceptualisation of operations of Nenasalas. The archival material analysis indicated that although the 'human capital wheel' identified ten key areas of Human Capital Systems for analysis, in Nenasala telecentres at a grassroots level, some of those key sustainable human resource practice indicators were less relevant. This was attributed to the simplification of Human Capital Systems in grassroots level organisations. The archival material analysis' findings formed the basis of chapter four and five to give a context of greater Universal Service Debate, ICT4D efforts in South Asia including origins of telecentre initiatives, the e-Sri Lanka ICT4D program and the 1000 Nenasala initiative.

Within the case study field work, data was collected through interviews with ICTA officials and other program stakeholders, by conducting focus groups of Nenasala operators and owners in order to uncover their experiences, perceptions, challenges, and suggestions related to human capital drivers and their perceived impact on sustainability within the grassroots level Nenasalas. The interview findings from the ICTA officials and other Nenasala stakeholders formed the basis of chapter six which provides a 'helicopter view' of ICTA official's experiences within the overarching government umbrella organisation ICTA that guides and administers the initiative. The focus groups' data forms the basis of chapters seven to ten which outlines the findings from a human capital lens to uncover important human capital drivers for sustainability within those grassroots level enterprises of not-for-profit community-based Nenasalas led by religious clergy, village society leaders, NGOs and the for-profit business Nenasala model led by entrepreneurs. Chapter eleven discusses what was uncovered in the not-for-profit and for-profit Nenasalas in terms of human capital and its drivers, and in terms of the research questions investigated. Furthermore, the findings were applied to the Royal and O'Donnell (2008) 'Human capital drivers of the value of the firm' model to highlight aspects important at the grassroots level.

This case study provides a unique Sri Lankan/developing nation's perspective on the knowledge gap. The study had the full patronage of the Information and Communication Technology Agency of Sri Lanka (ICTA). It is envisaged that this research could contribute to identify best practices and issues not previously identified in the human capital literature, especially related to applying the Royal and O'Donnell (2008) 'Human capital drivers of the value of the firm' model within subsidised/microfinanced grassroots level not-for-profit and for-profit organisations.

## **PART 1 – A Literature Review and Theoretical Framework**

### **CHAPTER 1 – Corporate Social Responsibility (CSR)**

#### **Introduction**

This chapter focuses on how Corporate Social Responsibility (CSR) synergies affect Corporate Sustainability, CSR theory development, important models that shaped the CSR discourse and some topical issues debated within the CSR discourse. Furthermore, stakeholder theory is examined as an attempt to measure CSR synergies by simplifying the complex and vague nature of CSR. Finally, within this chapter, CSR and human capital linkage within Sustainable Development (SD) that addresses the bottom of the economic pyramid will be examined. Furthermore, how CSR has morphed to the generic concept of Social Responsibility (SR) within SD will also be introduced within this chapter.

#### **Different shades of grey .... Which one is Corporate Social Responsibility?**

The idea of social responsibilities presumes that the corporation has not only economic and legal obligations, but also certain responsibilities towards society that extend beyond those obligations (Carroll & Shabana 2010). The high rank of corporate social responsibility on research agendas appears to be, due to the theoretical and managerial discussions that argue ‘not only doing good is the right thing to do, but it also leads to doing better’ (Lindgreen & Swaen 2010).

CSR is not a new concept as it dates back more than 50 years (Banerjee 2008). Publication of the book ‘Social Responsibilities of the Businessman’ by Howard R. Bowen (1953) is highlighted by Carroll (1999) as the beginning of the modern period of literature on CSR. Still, the concept of CSR has morphed into other concepts during its development making it a complex topic to explore. By the 1970s, formal definitions of CSR proliferated with an emphasis towards corporate social performance (CSP). With Carroll’s (1979) watershed conceptualisation of CSP, most scholars recognised that both CSR and CSP include an economic dimension (e.g., responsibilities towards shareholders), and not just social or environmental aspects (Montiel 2008). This implied

that CSR and CSP have commonalities and they overlap to a certain degree. The 1970s is also highlighted as the decade in which Corporate Social Responsiveness (CSR<sub>2</sub>) became the centre of discussions within academia (Carroll & Shabana, 2010). Yet, these ideas are differentiated by academics and progressed separately despite having much in common and lying within the same wheelhouse. Corporate Social Responsibility (CSR) was differentiated to Corporate Social Responsiveness (CSR<sub>2</sub>) by Carroll and Shabana (2010) as companies 'assuming' a socially responsible posture versus the literal act of responding towards society. De Bakker et al. (2005) distinguish CSR as action taken by firms whereas, CSP relates to the outcomes of such action. However, others such as Wartick and Cochran (1985) and Wood (1991), see CSP as an overarching concept that includes responsibilities, responsiveness, policies, and action in this domain. However, through the growth of these concepts, the 1990s are seen largely as the era the CSR concept transitioned significantly to alternative themes such as stakeholder theory, business ethics theory and corporate citizenship. For example, Frederick (2008) identifies the 1990s and 2000s as the era that focused more on global corporate citizenship. With all these ideas morphing and overlapping each other, Lindgreen and Swaen (2010) argue that the current chaotic state of affairs that this topic faces may be the result of how CSR has developed. The development also reflects the influence of various other theories, including agency theory, institutional theory, the resource based view of the firm, stakeholder theory, stewardship theory and the theory of the firm, that have resulted in numerous other conceptualisations of CSR. However, most of the research that followed in this decade conceptualises CSR as supporting the corporation's long-term interest by strengthening the environment that corporations belong to (Lee 2008)

Within this backdrop, Carroll and Shabana (2010) note 37 definitions of CSR. Others such as Dahlsrud (2006) argue that this figure underestimates the number of definitions and the true number is much higher. However, most academics agree that the range of definitions with subtle differences exposes the ambiguous nature of viewpoints and lack of agreement by theorists and practitioners of CSR (Montiel 2008). For example, Davis (1960) suggests that social responsibility refers to businesses' 'decisions and actions taken for reasons at least partially beyond the firm's direct economic or technical interest'. Carroll (1999) cites Backman's (1975) definition of social responsibility, where social responsibility also refers to the 'objectives or motives that should be given

weight by business in addition to those dealing with economic performance (e.g., profits)'. Johnson and Scholes (2002) favour the definition, 'corporate social responsibility is concerned with the ways in which an organisation exceeds the minimum obligations to stakeholders specified through regulation and corporate governance'. Banerjee (2008) notes the World Business Council definition of CSR: 'the commitment of business to contribute to sustainable economic development working with employees, their families, the local community and society at large to improve their quality of life'. De Bakker et al. (2005) prefer the McWilliams and Siegel (2001) CSR definition: 'actions that appear to further some social good, beyond the interests of the firm and that which is required by law'. However, Carroll's (1979) definition that 'the social responsibility of business encompasses the economic, legal, ethical, and discretionary expectations that society has of organizations at a given point in time' is the most cited definition (Montiel 2008). Another reason why this definition is useful is that it specifies the firm's economic responsibility as a factor to be considered in CSR, which is very important in thinking about the CSR 'business case' (Carroll & Shabana 2010). Nevertheless, the common theme running through all these definitions with subtle differences is the voluntary and discretionary nature of corporate social responsibility (Banerjee 2008).

In general, definitions of CSR fall into two general schools of thought, those that argue that business is obligated only to maximise profits within the boundaries of the law with minimal ethical constraints, and those that have suggested a broader range of obligations toward society (Schwartz & Carroll 2003). However, Carroll (1991) points out that although opponents of CSR argue that the corporation's sole responsibility is to provide a maximum financial return to shareholders, pursuit of financial gain has to take place within the laws and norms of the land. Referring to Friedman (1970), he also notes most scholars' only focus on the first part of Friedman's famous quote but not the second part. He states that Friedman's position was 'to make as much money as possible while conforming to the basic rules of society, both those embodied in the law and those embodied in ethical custom'. It is also observed that the profit principle was originally set in terms of 'acceptable profits', however, the principle transformed to 'profit maximisation' at a later stage of concept development. Others however, argue that the CSR idea is misunderstood and it is not about compatibility of profitability and responsibility but the idea that, business ought to 'convert' its social responsibilities into

business opportunities. For example, Drucker (1984) states that CSR 'is to turn a social problem into economic opportunity and economic benefit into productive capacity, into human competence, into well-paid jobs, and into wealth' (Carroll 1999). Carroll and Shabana (2010) also see profits differently. They note that profit measures the effectiveness of business activities and provides a 'risk premium' necessary for the corporation to stay in business to ensure the future supply of capital. As such, they note that 'profitability objectives should not focus on the maximum profits a business can produce but the minimum it must produce'. Conversely, others such as Barnett (2007) argue that the principle of maximising wealth is not in the interest of corporations' shareholders in the first place, and excessive financial performance leads to a decreasing ability of the company to influence its stakeholders to benefit greater causes that benefit society as a whole.

Present CSR studies comprise abundant approaches, theories and terminologies that are diverse and ambiguous (Garriga & Melé 2004). It is accepted that CSR has multiple memberships, is thought of broadly rather than in a focused manner, is interdisciplinary, and covers a wider range of literature. In addition, in terms of the level of analysis, researchers have chosen to study CSR at the macro and micro levels. CSR studies have recently changed focus from a discussion of the macro social effects gained from an organisational-level analysis of CSR, to its impact on organisational processes and performance at a micro level (Lindgreen & Swaen 2010). As a result, CSR is seen to be an internally complex theme, partly due to its admittance of a variety of descriptions, where different aspects are graded in different orders of importance subjectively (Okoye 2009). Making the situation worse, numerous definitions of CSR has been proposed, often with no clarity make theoretical development and measurement difficult (McWilliams et al. 2006). As such, although CSR is widely accepted as a valid concept today, a major problem with CSR discourse is seen to be the lack of an agreed normative basis underpinning CSR practice (Okoye 2009). This is generally attributed to an absence of an agreed universal definition of CSR by academia. Others, such as Lindgreen and Swaen (2010) paint a very basic bleak picture within this complex backdrop to argue, that conceptualisations of CSR remain in their embryonic stages and currently prescribed approaches to CSR seem perplexing to theorists and completely elude practitioners with numerous measuring and training perspectives. This lack of

agreement and boundaries within CSR is compared to an eclectic field with loose boundaries by Carroll (1994).

The rationale and assumptions behind the corporate social responsibility discourse are categorised as: 1) Corporations should think beyond making money and pay attention to social and environmental issues; 2) Corporations should behave in an ethical manner and demonstrate the highest level of integrity and transparency in all their operations; and 3) Corporations should be involved with the community they operate in terms of enhancing social welfare and providing community support through philanthropy or other means (Banerjee 2008). Comparably, Carroll and Shabana (2010) referring to Berger et. al. (2007) that examined the integration of CSR considerations in the day-to-day business agendas of organisations state, that the ‘mainstreaming’ of CSR follows from one of three rationales: the social values-led models, the business-case models and the syncretic stewardship models. The business case model has a narrow view because CSR is only recognised when there is a clear link to a firm’s financial performance. However, the advantage of the broad view over the narrow one is that it allows the firm to value and appreciate the complex relationship between CSR, the firm’s performance, and the larger society it interacts with. Garriga and Melé (2004) also classify the main CSR theories and related approaches into four groups. Namely: ‘(1) instrumental theories, in which the corporation is seen as only an instrument for wealth creation, and social activities as only a means to achieve economic results; (2) political theories, which concern themselves with the power of corporations in society and a responsible use of this power in the political arena; (3) integrative theories, in which the corporation is focused on the satisfaction of social demands; and (4) ethical theories, based on ethical responsibilities of corporations to society’. They note that in practice, each CSR theory presents four dimensions related to profits, political performance, social demands and ethical values and argue that new theories on the business and society relationship should integrate all these four dimensions. However, it is usually acknowledged that CSR development usually takes place through organisational change; whether it is incremental or transformational depends on the organisation’s situation (Lindgreen et al. 2010). However, others such as Doppelt (2003) suggest that change should focus on transformational aspects such that ‘managers must fundamentally rethink their prevailing views about strategy, technology and markets’ because in the long run, incremental improvements are not sufficient CSR advances.

However, common sense dictates that for CSR to be accepted by a conscientious businessperson, it should be framed in such a way that the entire range of business responsibilities is embraced in a coherent workable fashion (Carroll 1991).

The models thus far that have depicted CSR conceptualisation, have been high level and rudimentary. Carroll (1999) notes that earlier CSR models, for example Sethi's schema was limited, as CSR dimensions were economic and legal only. Wartich and Cochran (1985) have extended the Carroll (1979) approach arguing that corporate social involvement rests on the principles of social responsibility, the process of social responsiveness, and the policy of issues management. Carroll (1991) in his attempt to further his CSR model proposed that four kinds of social responsibilities constitute total CSR namely; economic, legal, ethical, and philanthropic, and depicted those as a pyramid. His pyramid of CSR depicted the economic category as the base (the foundation upon which all others rest), and then built upward through legal, ethical, and philanthropic categories. Social obligations are thought of as innate corporate behaviour in response to market forces or legal constraints.

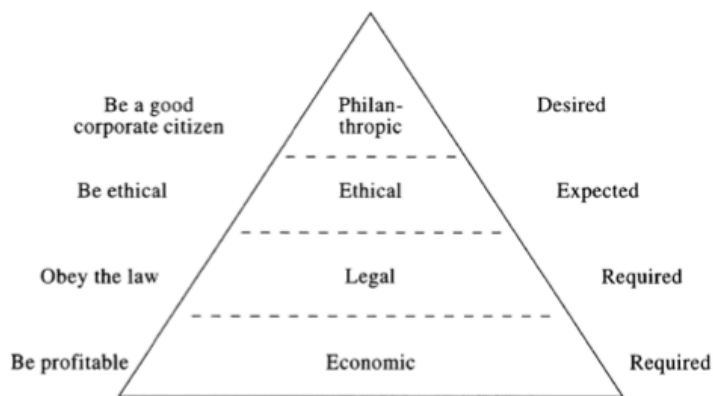


Figure 1 - Carroll's (1991) Pyramid of Corporate Social Responsibility (Schwartz & Carroll 2003)

The model proposed by Wood (1991) has expanded the notions set forth above to present a CSP model that captures CSR concerns, processes, corporate social responsiveness and outcomes of corporate behaviour including impacts, policies, and programs (Garriga and Melé 2004; Montiel 2008). Lee (2008) also asserts that Wood (1991) tries to link CSP with various related theories in organisational studies such as organisational institutionalism, stakeholder management theory and social issue

management theories, and by incorporating a number of other theoretical traditions under the rubric of the CSP framework, formulates a more practical and managerially useful model. However, Carroll (1999) argues that Wood's (1991) model was primarily built on Carroll's (1979) three-dimensional CSR model and the Wartick and Cochran (1985) model. He argues that although the outcomes and social performances were implicit in the earlier models, Wood made these points more explicit in her model and as such made a meaningful contribution to knowledge.

In 2003, Schwartz and Carroll proposed an alternative model to conceptualise Corporate Social Responsibility. The Venn diagram model initially suggests that none of the three CSR domains (i.e., economic, legal, or ethical) is *prima facie* relative to the others. The Venn diagram's seven CSR categories result from the overlap of the three core domains.

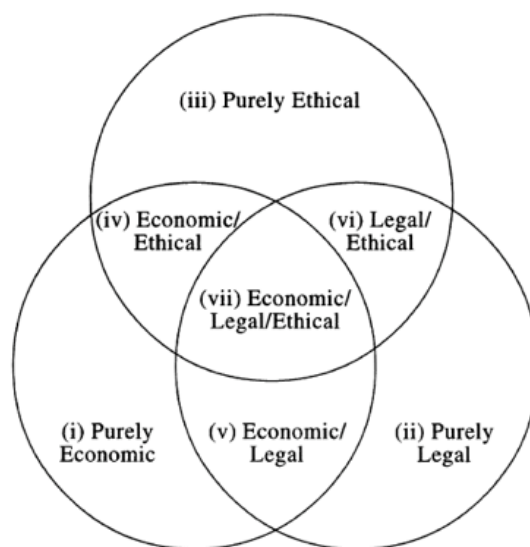


Figure 2 - The Three-Domain Model of Corporate Social Responsibility (Schwartz & Carroll 2003)

Yet, today most frequent dimensions of CSR include stakeholder, social, economic, voluntariness, and environmental dimensions (Carroll & Shabana 2010). It is suggested that future research should focus on operationalising and the creation of a valid, and reliable data-gathering instrument. However, stakeholder dimensions have been popular with academics as it provides some clarity to a complex visualisation of CSR.

Stakeholder theory and engagement, which is nested within most of the above models and used to operationalise these models, will be examined next.

### **CSR & stakeholder dimension**

Whetten et. al. (2002) define CSR as ‘societal expectations of corporate behaviour; a behaviour that is alleged by a stakeholder to be expected by society, or morally required and is therefore justifiably demanded of a business’. In this definition, the broad term society has been narrowed down to stakeholders (De Bakker et al. 2005). As a stakeholder-oriented concept, CSR holds that organisations exist within networks of stakeholders and face the potentially conflicting demands of these stakeholders which are translated into CSR objectives and policies in due time based on organisational circumstances (Lindgreen & Swaen 2010). Lee (2008) also sees institutions as ‘durable lock-ins or amalgamations of interests and social relations’. It is implied that institutions in this context are a product of repeated interactions between rational and highly interested social actors (Nee 2005).

The central concepts associated with stakeholder theory began to gain currency during the mid 1980s and centred on the notion that corporations must be viewed as operating at the centre of a ‘network of interrelated social stakeholders that create, sustain and enhance value creating capacity’ (Jamali 2008). Once an institution is legitimised and accepted by the majority, the CSR direction demanded of the institution by its stakeholders was seen to be ratified and seems to grow within the stockholder boundaries and their destructive and constructive influences. Broadly speaking, the stakeholder theory as adopted by management literature for its descriptive accuracy, instrumental power and normative validity, has today emerged as crucial for understanding and describing the structures and dimensions of business and societal relationships (Maon et al. 2010). Conversely, while CSR aims to define what responsibilities business ought to fulfil, the stakeholder concept addresses the issue of whom business is or should be accountable to (Kakabadse et al. 2005). Either way, both concepts are closely interrelated (Jamali 2008).

Stakeholder theory implies that it can be beneficial for the firm to engage in certain CSR activities that non-financial stakeholders perceive to be important, because in the absence of this, these groups might withdraw their support for the firm (McWilliams et al. 2006). Organisations from this perspective are expected to manage responsibly towards an extended web of stakeholder interests across increasingly permeable organisation boundaries and acknowledge a duty of care towards traditional interest groups as well as silent stakeholders such as local communities and the environment (Simmons 2004). The tenet of stakeholder theory is that all stakeholders matter and that organisation should integrate their responsibilities to the various stakeholder constituencies. Nonetheless, this balancing exercise has proven difficult for most managers and organisations to enact in practice.

This stream of research has also led to the determination of relevant stakeholder issues and associated measures of impacts, which with further refinement can serve as useful guidelines for managers in their pursuit of CSR actions and interventions (Davenport 2000). It can also yield interesting insights in to the organisations, particularly when these organisations are socially constructed and attempt to act in accordance with shared perceptions of multiple stakeholders (Jamali 2008). Nonetheless, the language of stakeholder theory is seen as easier to grasp by managers and practitioners as most organisations have understood and already defined obligations and responsibilities for their traditional stakeholders.

Stakeholder theory also seems easier to manoeuvre in collecting and analysing CSR data as evidenced by the proliferation of empirical studies (Jamali 2008). Numerous authors have indeed favoured and successfully utilised a stakeholder approach when examining CSR (Longo et al. 2005; Abreu et al. 2005; Papasolomou et al. 2005). The number of stakeholders and their interrelation was based on and differs by the complexity and the circumstances of the organisations. Industry sectors also had some natural CSR boundaries with clusters of organisations with similar CSR characteristics within an industry when considering the stakeholder approach. While the CSR concept suffers from a level of abstraction, the stakeholder approach offers a practical alternative for assessing the performance of firms within an industry sector. Using stakeholder models, an organisation's stakeholder management data can be gathered and compared to other firms within and across industries, making social auditing for internal

and external use both practical and possible (Davenport 2000). As such, stakeholder theory holds the promise of becoming the theoretical centrepiece in a field that is searching for workable paradigms (Jamali 2008). However, one of the factors that determines whether CSR has a positive, negative or neutral effect on firm performance, is stakeholder influence capacity (SIC), which refers to ‘the ability of a firm to identify, act on, and profit from opportunities to improve stakeholder relationships through CSR’ (Barnett 2007). However, this requires CSR synergies to be consistent with the firm’s strategies (O’Sullivan 2006). Similarly, with grassroots lobbying campaigns, a firm’s stakeholders today have considerable leverage in shaping managerial decision-making and related organisational processes, thus influencing the firm’s strategy (Walker 2012). However, not all stakeholders are convinced of CSR benefits or the measurement associated with those. Such views will be explored next.

### **Arguments against CSR and Corporate Financial Performance (CFP) relationship**

In the current climate, CSR means different things to different people (Banerjee 2008). Objections to the concept of CSR typically begin with the beliefs aligned to the classical economic argument articulated by Milton Friedman (1962) that management has one main responsibility, which is to maximise the profits of corporate owners or shareholders. It was further argued that by pursuing CSR, business will make itself less competitive globally (Carroll & Shabana 2010) as CSR dilutes business’ primary purpose and CSR would put business into fields of endeavour that are unrelated to their ‘main aim’ or core capabilities. It is further claimed that business has enough power controlling the wealth of the world and the society they interact with, then providing corporations more opportunities to wield additional social power might be unwarranted. Highlighting beliefs around the business case for CSR, Lee (2008) also notes that stakeholders may also falsely assume that what is good for society should also be good for corporations. Such assumptions may present a disadvantage to businesses and are only true under certain conditions where there are coherent institutional support and a big enough market for virtues, which may not always be the case (Vogel 2005). Others, such as Carroll and Shabana (2010), note that business and managers do not have the necessary expertise (social skills) to make socially oriented decisions and as a result, the CSR concept is misplaced within business decisions. Similarly, it is also noted that in

current research no tangible financial benefit has been made by academic or aficionados of CSR for corporations to pursue CSR as a compelling business case. As such, the evidence and the alleged link between CSR and Corporate Financial Performance (CFP) need to be explored to form a complete picture of alleged CSR benefits.

The question is, can companies perform better financially by addressing both their core business operations and their responsibilities to the broader society (Kurucz et al. 2008)? In investigating this question, Jamali (2008) identifies three main groups of instrumental theories dependent on the economic objectives proposed. The first groups' objective is the maximisation of shareholder value, measured by the share price leading to short-term profits orientation. The second group of theories focuses on the strategic goal of achieving competitive advantages leading to long-term profits. In both cases, CSR is only a question of enlightened self-interest since CSR is a mere instrument for profits. The third is related to cause-related marketing and is very close to the second. Nonetheless, various conclusions have also been made regarding the relationship between firms' social responsibility and their financial performance. One view is that firms face a trade-off between social responsibility and financial performance. A contrasting viewpoint is that the explicit costs of corporate social responsibility are minimal and that firms may actually benefit from socially responsible actions in terms of employee morale and productivity. A third perspective is that the costs of socially responsible actions are significant but are offset by a reduction in other firm costs.

Carroll and Shabana (2010) point to Griffin and Mahon's (1997) assessment of studies exploring the CSP–CFP relationship and their conclusion of a positive relationship between CSP and CFP as proof of benefits sought. Roman et al. (1999) note that results produced by CSP–CFP studies fall into three categories; positive links, negative links, and no link, and as such, they assert that the current results are inconclusive. Others, such as Margolis and Walsh (2003), argue that findings suggest that there is a positive association, and certainly very little evidence of a negative association, between a company's social performance and its financial performance. Although empirical evidence for the market outcomes of CSR is still inconclusive at best (Lee 2008), there are a growing number of shareholders and institutional investors that accept the idea that strategic adoption of CSR could lead to financial rewards in the long run. Stakeholder belief on benefits associated with CSR, along with the suggestion of

reduction of firm risk as an important advantage of social responsibility, are aspects of CSR that previous research focusing on firm's profitability and stock-market return has overlooked. However, most CSR scholars agree with the notion that, organisations at various levels need to justify that CSR is consistent with the firm's strategies and it is financially sustainable to ensure best results are achieved (O'Sullivan 2006). However, regardless of the approach utilised to visualise CSR, measuring CSR indicators in a meaningful way is the key challenge. Such validation requires coherent and consistent measurement mechanisms. Current attempts in regards to CSR measurements are examined next.

### **How to measure CSR?**

CSR represents a continuing commitment by an organisation to behave ethically and contribute to economic development, while improving the quality of life of its employees, their families, the local community, and the society. Rather than a single comprehensive activity, CSR comprises many different activities linked to society from which an organisation can choose. It warrants a critical review of existing scales and indicators to aid further research that seeks to assess the degree of CSR undertaken and to measure its impact on the different dimensions of business performance and society's well-being (Lindgreen & Swaen 2010). However, most academics agree that what is really needed is a prescriptive instrumental focus in providing recommendations (means, ideas, recipes for action) to practitioners and professionals that are instrumental in the realisation of some desired end, such as improved performance along a given CSR dimension (De Bakker et al. 2005). However, academic literature rarely considers organisational constraints and practical aspects of CSR implementation within an organisation (Maon et al. 2010). Although CSR is often represented as strategic and an essential aspect of an organisation in its linkage to society, there are very few models to analyse the adaptation of existing strategic policies, organisational culture, and practices from a CSR perspective.

This has prompted the argument from CSR cynics that time has come to address how, rather than whether, to commit to CSR (Smith 2003). Others note that the analysis of CSR is still embryonic and theoretical frameworks, measurements and empirical

methods have not yet been resolved (McWilliams et al. 2006). Furthermore, critics argue that CSR as a topic cannot be analysed through the lens of a single disciplinary perspective and as such, it is a fertile ground for theory development and empirical analysis. Yet, the central challenge for managers is 'how to arrive at some workable balance' between instrumental and other moral criteria (Lee 2008). From a strategic management perspective, the notion of corporate performance has also shifted away from single-minded financial performance to a broader one, which includes both financial and social dimensions (Lee 2008). It is suggested that measurements such as quality of output, employee turnover, R&D productivity, new product development, new market growth, and environmental competitiveness need to be focused on much more than the traditional financial lag indicators. However, others draw attention to the importance of the role of mediating variables in the corporate responsibility–performance relationship (Pivato et al. 2008). They argue that attention must be given to 'intermediate performance measures such as customer satisfaction, in proving positive correlations with social investment'. This is to say that researchers concerned with CSR need to pay more attention to the 'social' side of the equation, acknowledging that corporations are not completely autonomous actors and should be sensitive to the changing society, requiring continuous adjustments and vis-à-vis, in order to maintain a stable relationship with the society and CSR.

In current models, ethical responsibility overcomes the limitation of law by creating an ethics ethos that companies can live by and capture (Jamali 2008). The reasons for this type of responsibility lie in the belief that business and society are intertwined in an organic way. However, one limitation to this type of responsibility is its blurry definition and the consequent difficulty for business to deal with it through measurement. Equally, evolution of CSR theories reveal 'a tighter coupling between CSR and the organizations' financial goals' to argue that the focus of CSR theories are shifting away from an ethics orientation to a performance orientation with the level of analysis shifting from the macro-social level to an organisational level (Carroll & Shabana 2010).

Although Carroll's (1979) model represented a significant advance in CSR research by specifying the different dimensions of social responsibility and a range of responsibilities that managers are expected to fulfil, its contribution was primarily

taxonomic. Clarkson (1995) argues that 'Carroll's model in the form of a three dimensional cube was complex and difficult to test. It does not lend itself to the development of a methodology that could be used in the field to collect, organize, and evaluate corporate data'. Herein lays the caveat of any taxonomic approach, which can be potentially remedied with a more practical approach, such as the stakeholder approach (Jamali 2008). Carroll (1991) revisited his four-part definition of CSR and organised the notion of multiple corporate social responsibilities into a pyramid construct, which is also taxonomic. Jamali (2008) argues that Wood's (1991) model constitutes a significant advance in CSR research, noting that to use the model one would need to consider the principles that motivate a firm's social responsibility actions at institutional, organisational, and individual levels. Motivation for a firm's social responsibility actions may stem from the principle of legitimacy (institutional level), i.e., from a desire to maintain credibility and legitimacy as a responsible societal actor in a shared environment or from an organisational sense of public responsibility, particularly for outcomes related to the firm's primary and secondary areas of involvement. In addition, motivation could stem from individual managers and their personal CRS preferences. This allows for interactivity among two or more of these principle stakeholders in motivating social responsibility. Yet, current research on CSR still lacks objective behavioural measures that can be used to compare the social performance of different corporations (Lee 2008). Current measures are limited and are still subjective measures based on opinions and eclectic data (Vogel 2005). Stating that the stakeholder model of CSR was developed mainly by management scholars who were frustrated by the lack of practicality of the previous theoretical models, Lee (2008) argues that the stakeholder model solved the problem of measurement and by testing more narrowly, identifying the actors and defining their positions and function in relation to one another.

In terms of methods used, CSR scholars commonly measure social performance or survey employees within a subset of firms (Montiel 2008). Similarly, empirical research uses firm surveys and employee surveys to conceptualise CSR. CSR variables generally include ethics policy, philanthropic contributions, and stakeholder relationships (e.g., investors, shareholders, customers, suppliers, employees, and the community). However today, the notion of CSR, its measurement at some level, and its business case is very

much supported and accepted by a majority of stakeholders. As such, the present-day business case for CSR will be briefly discussed next.

### **Business case for CSR**

The business case for CSR refers to the bottom-line financial and other reasons given for businesses to pursue CSR strategies and policies. Contemporary scholars note that CSR growth came about because of concerns about the detrimental effects on society (avoiding ‘negatives’) of businesses and it now focuses on improving the positive effects on society (creating ‘positives’) (Carroll & Shabana 2010). Contrary to the efforts of early theorists and practitioners, CSR is no longer conceived as a moral responsibility of executives to use discretionary expenditure that could hamper a corporation’s profitability, but is a strategic resource to be used to improve the bottom line performance of the corporation and to create business opportunities (Lee 2008).

The basic belief that CSR can be good for business clearly drives corporate interest in CSR (Lindgreen & Swaen 2010). This is based on the reasoning that organisations create a competitive advantage by integrating non-economic factors, differentiating themselves from competitors, building a better image and reputation, and creating consumer goodwill and positive employee attitudes and behaviour. Studies prove that doing good through CSR synergies can improve corporate reputation, consumer loyalty, attract socially conscious consumers as well as good employees, increase the market value of publicly traded firms and develop new markets, while significantly reducing the risks of becoming the target of lawsuits or consumer boycotts (Lee 2008). In explaining why companies pursue CSR strategies, Carroll and Shabana (2010) note the reasons as (1) defending their reputations (pain alleviation), (2) justifying benefits over costs (the ‘traditional’ business case), (3) integrate with their broader strategies (the ‘strategic’ business case), and (4) learn, innovate and manage risk (New Economy Business case). Kurucz et al. (2008) also introduced four groupings which a business case could be based on, which is noted as (1) cost and risk reduction; (2) gaining competitive advantage; (3) developing reputation and legitimacy; and (4) seeking win-win outcomes through synergistic value creation.

CSR activities directed at managing community relations result in cost and risk reductions (Berman et al. 1999). Building positive community relationships through various projects also contributes to the firm attaining tax advantages. In addition, positive community relationships may decrease the amount of regulation imposed on the firm by governments and regulators, because the firm is perceived as a sanctioned member of society. All these benefits stem from the public belief and company acceptance of the idea that in addition to its pursuits of profits, business should be responsible to their workers, communities and other stakeholders, even if making things better for them requires companies to sacrifice some profits. Companies that realise and react to the public view of the development and implementation of CSR programs are offering a 'win-win' scenario for the organisation and its community (Lindgreen & Swaen 2010). However, others such as Porter and Kramer (2006) assert that the prevailing approaches to CSR are so fragmented and so disconnected from business strategy, it obscures many of the greatest opportunities for companies to benefit society. He notes that for the business case to be fruitful, adoption of CSR practices, their integration with firm policy, and their mainstreaming in the day-to-day business agenda should be pursued 'in the way most appropriate to each firm's strategy' within its current business context.

Companies can no longer retain their stakeholders and investors' support just through good financial returns. More and more stakeholders and investors look at broader issues related to companies, like good environmental practices and social contributions, and employee engagement that go beyond the regulatory and legislative requirements of corporations. Similarly, some socially responsible stakeholders engage in shareholder advocacy, exercising their voting rights to encourage improvement in a company's environmental or social performance. Such action is termed Socially Responsible Investment (SRI). The UK Social Investment Forum describes SRI as investment that combines investors' financial objectives with their commitment to social justice, economic development, peace and a healthy environment. SRI is closely linked to CSR credentials of corporations and corporations have increased publication of CSR data in company reports to ensure they provide the best possible spin on even bad situations.

Government bodies also advocate the benefits of focusing on environment and society within their dealings with companies. For example, US EPA in 2000, in acknowledging

the relationship between environmental and financial performance, attempted to categorise the evolution of corporations into stages of minimisation of regulatory compliance costs, proactive approaches to environmental management, and creation of value through environmental strategies. Similarly, in the Sustainability Phase model, Dunphy et al. (2000) outlined six distinct steps that companies undergo in achieving sustainability, ranging from active antagonism through indifference to a strong commitment to sustainability within the firm and society in general. Nevertheless, today companies are required to demonstrate their commitment to society's values through their social, environmental and economic goals with actions fully consistent with their employee and stakeholder expectations. According to a former Minister for the Environment and Heritage (from November 2001 to July 2004) Dr David Kemp, this 'doing well by doing good' attitude of the companies is driven by stakeholders and society pressures and has ensured that this new behaviour will outlast good intentions of the corporations (launch of The Mays Report 2003).

Nonetheless, CSR research indicates that CSR conceptualisation differs due to various factors. Today, there is little reflection on what CSR means and how CSR is implemented in enterprises of different sizes, ownership, funding structures within different economies and cultural contexts (Lindgreen & Swaen 2010). Recent research highlights that enterprises within different contexts nurtured 'peculiar' CSR orientations with intimate and personalised stakeholder relationships, moderate innovation, limited institutionalisation of CSR processes, and limited identification with the business case for CSR (Jamali 2008). Furthermore, business and society relations in different countries vary significantly. Each country has a distinct social structure, dominant issues, institutions and interests, shaped by its unique history and cultural tradition. Even in the face of rapid globalisation, different societies maintain distinctive economic systems that structure business–society relations. This necessitates further empirical investigation of CSR practices, especially on how CSR is conceived and practised in diverse institutional contexts (Lindgreen & Swaen 2010). Similarly, researchers may need a new set of theoretical and CSR models to conceptualise unique competitive challenges and constraints these organisations face in their unique environments (Lee 2008).

One area where CSR synergies are prominent is the Sustainable Development discourse. Sustainable development is also spoken within the realm of organisational sustainability and its link to the human capital of organisations. This context will be briefly introduced next.

### **How CSR altered to Social Responsibility (SR) within Sustainable Development (SD) and the Human Capital (HC) link**

Contemporary businesses are required to address economic prosperity, social equity, and environmental integrity before they can lay claim to socially responsible behaviour or sustainable practices (Montiel 2008). This drive is linked to the CSR focus of stakeholders of corporations including their employees. However, sustainable practices seem to be arbitrary and elusive to most practitioners due to lack of uniformity in the CSR concept. This has prevented corporate leaders from embracing the CSR concept in a meaningful and a practical way. Moreover, there are over 100 current definitions for sustainable development (Banerjee 2008). The United Nations views Sustainable Development as “Development that meets the needs of the present, without compromising the ability of future generations to meet their own needs” (Bruntland 1986). When transposing this idea to corporations, corporate sustainability can be expressed as “meeting the needs of a firm’s direct and indirect stakeholders (such as shareholders, employees, clients, pressure groups, communities, etc.), without compromising its ability to meet the needs of future stakeholders”. However, critics still point out that even this definition is insufficient as it does not expand on the notion of human needs (Kirkby et al. 1995) and its operationalisation is problematic and lacking practicality. Nevertheless, sustainable development is used by academics today as one of several theories and approaches used to conceptualise CSR (Garriga & Melé 2004). Additionally, definitions and key constructs for CSR and corporate sustainability have also proliferated over the last decade with ambiguous definitions and constructs that have merged in some aspects.

Despite their paradigmatic differences, CSR and SD are converging due to their shared environmental and social concerns (Montiel 2008). This convergence is especially visible in organisations that serve the bottom of the economic pyramid, predominantly

in developing countries. Such business strategies subscribe to the more generic concept of Social Responsibility (SR) due to the simplification of the CSR vision within these smaller organisations. Furthermore, SR sustainable practices, or sustainability are still linked to the human capital of these organisations just as CSR is linked to the human capital and sustainability of larger corporations. The generic concept of SR notes that SR is an ethical framework. This suggests that an entity, be it an organisation, or individual, has an obligation to act for the benefit of society. It is alleged that SR is a duty of every individual; to assist in maintaining the balance between the economy and the ecosystem in whatever the context they may find themselves. Within this simple view of SR, a trade-off exists between economic development, in the material sense, and the welfare of the society and environment to maintain equilibrium. It pertains not only to corporations, but also to organisations and everyone who could be considered as stakeholders of that organisation. SR can be passive by avoiding engaging in socially harmful acts or active by performing activities that directly advance social goals.

Increasingly, stakeholders of corporations, HR analysts, and investment advisers are paying attention to sustainability issues. One such example of this is KPMG's Sustainability Advisory Services that are designed to help organisations understand and manage the balance between financial, environmental and social dimensions of their activities, maximising long-term stakeholder value and minimising exposure to unforeseen risks. However, sustainability is a complex concept that combines many aspects, which seem to vary based on organisational circumstances, structures, goals, and their stakeholder needs that manifest as SR. As such, acceptability of a model assessing sustainability would need to be based on simplicity, practicality, accuracy, understandability, perceived value and the ability to incorporate complex contemporary thinking around SR. Although numerous models have been proposed to represent and measure sustainability, the models representations have been limited to a high level. The failure of these models could be attributed to the lack of simplicity and change consciousness of the authors to suit the simpler vision of SR.

*"The expectations for multi-national corporations are rising rapidly. At the same time, our own understanding of what we need to do to grow our business has become much more sophisticated. We understand [that] the triple bottom lines of sustainability - environmental, social, and economic - must all be addressed in order for us to be successful. I personally believe that sustainability is the most important issue facing ... industry ... in the 21st century*

William Clay Ford Jr.  
Chairman, Ford Motor Company

When considering company sustainability that is interrelated with society in the form of SR, there has been intense debate among stakeholders as to whether such companies should just be considered based on their asset value? Alternatively, should the value of intangible assets, knowledge, and social responsibility actions be considered alongside asset value? Nonetheless, many stakeholders today also expect much more from business before they decide to back them. Similarly, the main stakeholder group that drives the SR focus of an organisation is its human capital. The next chapter attempts to link the SR discourse and sustainability focus discussed in this chapter to human capital as a driver of organisational sustainability within the social communities they operate in.

## **Conclusion**

Contemporary businesses are required to address economic prosperity, social equity, and environmental integrity before they can make a claim to socially responsible behaviour or sustainable practices. Correspondingly, socially responsible behaviour of corporations materialises through their CSR synergies that are linked to wider social concerns of organisations' stakeholder groups. Similarly, stakeholder focused conceptualisation of CSR is favoured by CSR practitioners and corporate leaders as it provides them with a mechanism to conceptualise, simplify, measure and implement the complex concept of CSR. With this backdrop, Whetten et al. (2002) define CSR as 'societal expectations of corporate behaviour; a behaviour that is alleged by a stakeholder to be expected by society, or morally required, and is therefore justifiably demanded of a business'. The basic belief that CSR can be good for business clearly drives corporate interest in CSR (Lindgreen & Swaen 2010) despite the benefits of the CSR and CSP–CFP relationship, which is yet to be conclusively proven. Academics however, argue that findings suggest that there is a positive association, and certainly very little evidence of a negative association, between a company's social performance and sustainability. Nonetheless, there is little reflection on what CSR means and how CSR is implemented in enterprises with different sizes, ownership, funding structures within different economies and cultural contexts.

CSR is prominent within sustainable development discourse. The United Nations views Sustainable Development as “Development that meets the needs of the present without compromising the ability of future generations to meet their own needs” (Bruntland 1986). Despite their paradigmatic differences, CSR and SD are converging due to their shared environmental and social concerns (Montiel 2008). This convergence is especially visible in organisations that serve the bottom of the economic pyramid, predominantly in developing countries and at the grassroots level. Such business strategies subscribe to the more generic concept of SR due to the simplification of the CSR vision within these smaller organisations.

Recent research highlights that enterprises within different contexts nurtured ‘peculiar’ SR orientations with intimate and personalised stakeholder relationships, moderate innovation, limited institutionalisation of SR processes, and limited identification with the business case for SR. Furthermore, SR sustainable practices or sustainability are still linked to the human capital of these organisations. The reliance on human capital to achieve embedded SR synergies has been shown to be significant. Similarly, the human capital of an organisation is its main link to the wider society that SR attempts to serve. This linkage will be explored in the next chapter.

## **CHAPTER 2 – Human Capital (HC), SR and Sustainability nexus**

### **Introduction**

The previous chapter investigated the concept of CSR. It also highlighted that within SD, CSR has mutated to the similar version of SR. This convergence is especially visible in organisations that serve the bottom of the economic pyramid, predominantly in developing countries. As this thesis investigates this simpler view of CSR, the notion will be referred to as SR in the rest of the study.

The stakeholder view of SR is that human capital capacity of an organisation is a crucial element in achieving SR synergies, as human capital is its main link to the society. Although SR is thought of as an aspect that assists organisational sustainability, human capital can be thought of as the glue or the enabler between SR, society and sustainability. This notion is especially true in knowledge-based organisations. This chapter investigates corporations' (or organisations') attempts to achieve sustainability and sustainable practices, aided by human capital. Specifically, the chapter will focus on knowledge-based organisations and their reliance on human capital considering that the modern economy is reliant on knowledge-based organisations and knowledge workers. Lastly, the human capital measurement methods, current models and their augmentation to identify Drivers of Human Capital Systems will be explored to identify a tool to utilise within this study.

### **Knowledge-based organisations and their reliance on human capital**

The notion of wealth is vastly different in a business within the knowledge economy in comparison to traditional businesses of the past (Mayo 2001). The main producers of wealth today are information and knowledge, and increasingly there is less and less return on the traditional resources of labour, land and capital (Drucker 1993). The traditional accountancy based definition of value is also heavily biased towards financial and physical resources, to the extent where knowledge and the value it generates has been neglected. Today, with the increase of knowledge-based industries, people have become the most critical assets within a company. In a knowledge

economy, employees are no longer regarded as labour but as capital, due to the attempt to put a value on knowledge.

Bassi et al. (2001) defines knowledge as ‘the accumulated insights and understanding, both explicit and implicit, that the employees of a firm use to accomplish their assignments every day’. Here, knowledge is seen as the thoughtfulness and attention people bring to doing their job in pursuit of the firm’s goals. However, different types of knowledge exist in an organisation, distinguishing between explicit information that is either verbalised or written down, and tacit knowledge which comes from the personal experience of employees which could be thought of as reactions, feelings and intuitions (Hatipoglu 2010). A ‘knowledge worker’ possesses certain key characteristics such as being highly skilled, qualified, trained, and experienced in new and growing areas of business (Dunphy 2000). Hence, knowledge workers can be thought of as workers who deal with a high degree of complexity and uncertainty that requires a high degree of judgement.

In thinking of the worth of knowledge-based organisations, some authors such as Edvinsson and Sullivan (1996) point out, that as knowledge-based companies derive their profits from the commercialisation of the knowledge created by their employees; the valuation of a company should include both tangible and intangible assets such as human capital. Within her work, Hatipoglu (2010) also hypothesised that large discrepancies between market capitalisation and book valuations of corporations in recent times could be attributed to the growing value of intangible assets in the knowledge-intensive economy and the indifference shown towards intangible assets within knowledge-based organisations by analysts. Furthermore, contemporary performance reporting of most companies focus on the near term financial lag indicators and the crucial challenge for executives is to justify those company valuations considering that a significant portion of an organisation’s value consists of human capital as present value and future growth potential (Royal & O'Donnell 2008). As such, human capital could be thought of as the key to knowledge-based organisations’ present value and future growth, which should be included as an asset in measuring an organisation’s capability or wealth.

## Human capital and its development

In academia, human capital is acknowledged as the foundation of value creation. In describing human capital, Wiig (2004) states that human capital is...

*[. . .] part of intellectual capital. The enterprise's human capital consists of the knowledge, understanding, skills, experience and relationships of its employees. Human capital is the property of employees and is only leased or rented to the enterprise.*

Human capital is in fact, the only generative intangible and therefore the central element of intellectual capital (Ahonen 2000). Other knowledge management researchers, such as Johanson (2005) also state that:

*Human capital is often defined as part of intellectual capital (IC) or intangible resources of firms. .... A frequently used method to classify intellectual capital is to split it into human capital, structural capital, and relational capital.*

How various intangible assets are classified and how they inter-relate differs by the various conceptualisation of authors in academic literature. At its most simplistic level, knowledge capital can be seen as a subset of intellectual capital, which is in turn a subset of human capital within the intangible assets in a firm (Royal & O'Donnell 2008). The following figure represents the key notions of intangible assets as favoured by this researcher, due to its simplicity and the hierarchical logical manner of presentation.

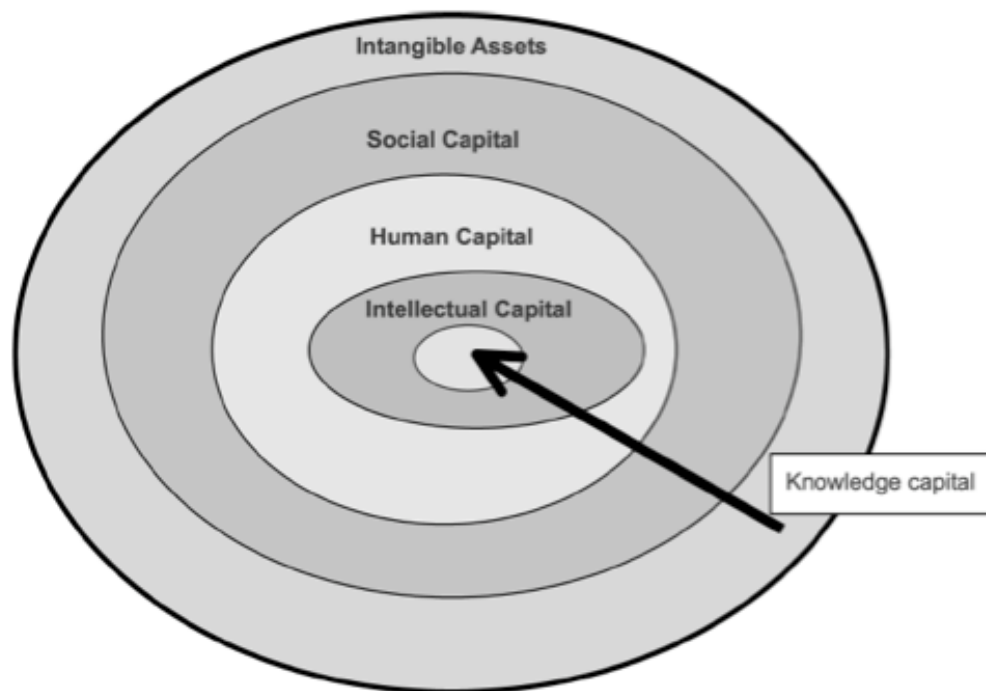


Figure 3 - HC in the context of intangible assets (Royal & O'Donnell 2008)

A range of definitions of human capital has been debated in the literature (Roos 2005; Boedker 2005). Yet, human capital has traditionally been definitively described, with most scholars agreeing on the general inference of the definitions (Roslender & Fincham 2004). The general inference is usually related to competencies of employees, which includes the knowledge, skills, experiences, and their abilities. However, some human capital aspects such as innovation capacity, creativity, know-how and previous experience, teamwork capacity, employee flexibility, tolerance for ambiguity, motivation, satisfaction, learning capacity, loyalty, and formal training and education are thought to be unique to each individual while other human capital aspects may be thought as generic or group oriented.

Human capital theory has demonstrated impressive fecundity with extensive application with other theories of economics and social sciences. The foundations of human capital theory can be traced to the field of economics and capital theory. Nerdrum and Erikson (2001) point to seventeenth century economist William Petty who argued for the inclusion of the 'value of workers' in accounting for wealth for actuarial purposes and Adam Smith's (1776) linking of employees' knowledge on the production process and the quality of output, as early examples. However, most credit Irving Fisher's capital

theory (1906) as the founding base of modern human capital, as his definition of capital was 'all-inclusive' and included human beings.

Human capital theory developed swiftly in the 1960s, driven by influential economists, concerned with explaining income distribution, growth and differences between regions and nations (Hatipoglu 2010) adding to the understanding of human behaviour, both at individual and social levels (Nerdrum & Erikson 2001). In recent times, human capital has been discussed in management literature under various names; as 'individual capital' by Sveiby (1990), as 'human centred assets' by Brooking (1996), and as 'cultural capital' by Thompson (1999). Current literature further augmented the definition of human capital to include innovation capacity and various contemporary topics such as 'diversity' and 'workplace quality' (Hatipoglu 2010). For example, Boedker et al.'s (2005) definition of human capital comprises: 1) innovation; 2) knowledge; 3) EEO/diversity; 4) education and training; 5) learning and development; 6) employee demographics; and 7) work-related competencies.

Human capital analysis is seen as significant to corporations in complex, knowledge-based economies where traditional profit and revenue models are not readily applicable. If human-capital management is thought of as management of how human capital contributes to a knowledge-based firm's core competencies by leveraging the knowledge base of its employees, it comes as no surprise that stakeholders in such industry sectors place a great deal of focus on knowledge, human capital, and the management of human capital to deliver results. As a result, human capital analysis and management is particularly prominent today in knowledge intensive industries such as finance, engineering, medical and the biotechnology sector to name a few. Human resource management systems and the practices of these industries are required to consider the complexity of internal and external interdependencies and interdependencies of the organisation. Furthermore, it is argued that people management practices should be consistent internally and with the broader context in which the firm is operating for best results (Royal & O'Donnell 2003). Today management practices advocate using practices that encourage recruitment, and retention, skill acquisition, internal career mobility and advancement to create strong ties between an organisation and its employees to ultimately enhance financial performance and sustainability

Within this climate, long-lived sustainable companies in knowledge intensive industries view intangible assets which include human capital, as integral to their future growth (De Geus 1999). Conversely, it is also argued that companies that have positive relationships with their employees improve their standing within the community, which in turn enhances their long-term viability (Bassi et al. 2001). As a result, knowledge-based companies continue to invest heavily in human-capital management systems based on the belief that such action leads to profitability, future financial returns as well as higher company valuations (Hatipoglu 2010). Furthermore, human capital drives corporate sustainability, influencing stakeholders and the larger society. This societal linkage needs to be investigated to really appreciate the contribution human capital makes to corporations today.

### **Corporate Sustainability (CS), Social Responsibility (SR) focus and Human Capital (HC)**

Corporations are the larger and fundamental building blocks of modern day economics. Their quest for more profits and their phenomenal success in transforming the world resources into wealth has shaped the world we live in today (Dunphy 2000). However, not all companies are the same. Collins and Porras (2005) point out that, some companies display remarkable resilience and have attained extraordinary long-term performance. This endurance is generally viewed as sustainability.

It is argued that many companies perish early because ‘their policies and practices are based too heavily on the thinking and language of economics’ (De Geus 1997b). Additionally, the single-minded pursuit of short-term profitability by corporations for shareholders or owners does not justify a ‘couldn’t care less’ approach to the people and planet the corporations benefit from and depend on for sustainability. Yet, if organisational longevity is taken as the criterion of sustainability, some companies seem to consistently manage to outperform their rivals (Dunphy 2000). These companies are generally thought of as visionary companies. Collins and Porras (2005) defines visionary companies as ‘premier institutions in their industries, widely admired by their peers and having an extensive track record of making a significant impact on the world around them’. They go on to observe that such visionary companies have and continue

to heavily invest in human capital and human capital management practices. Visionary companies that have survived and thrived for a long time tend to envisage themselves more as human communities within a large part of society (Senge 2000). In identifying four characteristics of long living companies that include ‘cohesion and identity, aspects of a company’s innate ability to build within community’, De Geus (2002) also confirms that these long-lived organisations’ true nature is that of a community of humans. This is to underline that corporations are instruments of social purpose, formed within society to accomplish useful social objectives (Dunphy 2000). It is alleged that their rival companies have shorter life spans because their managers focus on the economic activity of producing goods and services, forgetting human and social capital.

If human capital is driving the organisations’ value, then ‘employee relations’ would be directly associated with a company’s reputation in a knowledge economy and a main enabler of achieving its strategic objectives. Hence, the employees and larger societal interactions affect not only the morale of staff and their productivity, but also the ability to recruit new staff, community, consumer attitudes and purchasing behaviour and the views of socially responsible investors. As such, the gap between internal book value and market value increases, and intangible capital becomes more important in bridging that gap and safeguarding corporate sustainability. Measuring corporate value and human capital in knowledge-based organisations has led to the development of a variety of tools currently used for benchmarking practices and evaluating the sustainability of an organisation. How human capital in companies could be measured is investigated in the next section.

### **Human capital measurement methods**

A capital market study by Bassi et al. (2002) showed that stakeholders’ perception of a firm’s non-financial performance had a significant impact on the stakeholder’s valuation of the firm. Similarly, stakeholders generally attend to the same non-financial signals from the firm. Although this was the case, he concluded that there was little apparent demand for information on human capital when making investment decisions. Corporations also did not voluntarily provide such information to stakeholders. Analysts’ reluctance to pursue such human capital information was put down to their

belief that a levelled informational playing field would diminish their profits and prominence (Bassi et al. 2002). Similarly, unpredictable valuations of companies were attributed to indifferent thinking by many stakeholders who invested based on their emotions, random attention and perceptions of conventional wisdom while being heavily influenced by the news media which may be driven by various motivations (Shiller 2005). As a result, it is argued that stakeholders gained virtually nothing due to their faith in unsubstantiated information and uninformed measurement systems. From a corporate perspective, managers struggle to better manage knowledge and human capital and they do not possess the information systems to systematically analyse what works best under what circumstances. Critics of qualitative human capital analysis suggest that clear tools should be available to provide more practical approaches for the analysis of the human capital within a firm (Royal & O'Donnell 2005). Lack of information and the lack of consensus on current tools in conclusively determining the sustainability of human capital within a firm, has made measurement difficult.

However, the corporate bottom line currently consists of both short-term profitability and long-term value such as knowledge and human capital. Similarly, although traditional HR concentrated more on individual functions, today the HR focus has shifted from measuring HR efficiency to value creation through aligning HR to organisational strategies. This shift has occurred as organisations have come to the realisation that for sustainable competitive advantage, all HR functions need to be in synchronisation with each other as well as with the firm's broader strategic infrastructure (Becker et al. 1999). Yet, human capital cannot be tracked in the same way as financial and physical assets when considering intangible assets as long-term value of a corporation (Mayo 2001). In response to this challenge, the major consultancies and academics have devised their own systems for assessing the 'metrics' of human capital and human capital management practices. William Mercer's 'Human Capital Wheel', Towers Watson's 'Human Capital Index', and PricewaterhouseCoopers human capital reports from its 'HR Analytics' departments are examples of such attempts.

Most matrices have taken five common approaches in relation to human capital measurement (Mayo 2001). These include attempts to value people as assets (human resource accounting), creating an index of 'good' HR practices and relating to business

results, statistical approaches to measuring productivity and output of people, measuring efficiency of HR functions' processes and ROI for 'people' initiatives, and integrating people related measures in performance management frameworks. Mayo (2001) provides various examples of human capital measures within the above categories including Towers Watson 'Human Capital Index (HCI)', the European Business Excellence Model and Malcolm Baldrige Criteria for Performance Excellence, William Mercer's 'human capital wheel', Arthur Andersen's Human Capital Appraisal, PricewaterhouseCoopers 'HR Analytics', Skandia Navigator, Dave Ulrich HR Scorecard and Mayo's Human Capital Monitor. However, these measures are designed to reflect that contributions of the people rarely have total 'causality' with other external factors such as market conditions and internal conditions like the effectiveness of internal systems and processes. As such, it is generally agreed that what is more important is intelligent interpretation of these measures rather than the numbers themselves.

However, most models claim success in their attempts to measure human capital. After surveying 400 Canadian and US companies over five years and correlating the HR practices to shareholder returns, Towers Watson consultants developed a Human Capital Index (HCI), in which they claimed to capture 30 key HR practices of high performing companies. Towers Watson Research (2001) states that "... we found that superior HR management leads to good financial performance to a much greater extent than financial outcomes lead to good HR". Thirty key HR practices were associated with a 30 percent increase in market value. The 49 key practices are represented by topics such as recruiting excellence, clear rewards and accountability, collegial and flexible workplace, communication integrity and prudent use of resources. At the conclusion of this research, it was found that not all HR initiatives were effective. They found that some initiatives, such as 360-degree feedback, were not only non-beneficial, but could be counterproductive. HCI also emphasises the fact that HR initiatives should be directly linked to the strategy of the organisation. Nonetheless, HCI claims to show what HR practices precisely had an impact on the bottom line of a corporation and creating shareholder value. HCI presented the HR practices in six dimensions and indicated how much the company's market value would be impacted by those. For example, it was alleged that if a company made significant advancement in all HR practices categorised under 'total Reward and Accountability' it should see its market

value improve by 16.5 percent as per the 2001/ 2002 survey report. Furthermore, HCI claimed that 43 key HR practices are associated with an increase of 47 percent of market value. As such, it is suggested that the business community could use the Towers Watson index as a measuring and benchmarking tool for linking human capital to sustainability.

In their book, “Build to Last”, Collins and Porras (2005) looked at eighteen companies, which they termed visionary. They described visionary companies as institutions, which prospered over long periods through multiple product cycles, multiple generations of active leaders and had been persistently great over a long period. They suggested that endurance and performance were linked by identifying the underlying characteristics of these visionary companies. In the process, they highlighted twelve points, some of which relate to human capital. It was noted that those companies that achieved sustained performance behaved differently from those whose performance was erratic. It was suggested that visionary companies invested heavily in management practices and human capital - specifically in training, recruiting, and development of staff, and the more knowledge-centric areas of R&D. Such companies were found to be early adopters of innovations or innovators within their industry. It was reported at the time that distinctive practices led to impressive results with visionary companies outperforming the US market by a factor of 15, and they were six times more successful than the comparison companies of the study.

The HR Scorecard produced by Ulrich (2001) was a tool that attempted to manage HR as a strategic asset used to determine HR's contribution towards an organisation's success by linking HR operations to a company's business targets. The scorecard had four aspects meant to balance cost with intended value creation. The aspects include human resource deliverables associated with an outcome, the need for HR policies, processes and practices, identifying alignment in the HR system to its strategic goals and HR efficiency measures. The foundation of the HR scorecard is the developed metrics ability to demonstrate how HR activities affect profitability. The process of development of such a tool is: 1) Identify deliverables desired from HR; 2) identify HR's activity for each deliverable; 3) define HR activities that are required to achieve deliverables; and 4) conduct a cost-benefit analyses of HR activities that provide deliverables. The challenge often is daunting for HR departments, considering human

capital is largely intangible and difficult to measure in isolation with other factors. Most HR scorecards used today are based on the work of Robert Kaplan and David Norton, which improved on the earlier work of Art Schneiderman.

Mayo (2001), in 'The Human Value of the Enterprise', sought to identify the human value of the enterprise or 'human asset worth'. This argues that all people might not be of equal value and some may be liabilities while others are the most important drivers of value. This also presented the issue of identifying who they are and how to maximise the value they provide. Answering such questions also requires understanding of the capability of people, and secondly on their commitment and productivity. Mayo's work looked at the most effective management of these value-creating assets in creating a framework of measures as an integral part of the organisation's performance management in practice, and how to do this strategically with HR as a credible 'Business Partner'. He stressed that people should be viewed as an asset rather than a cost. Human asset worth is defined as 'employment cost x individual asset multiplier (IAM)/1,000'. This is a weighted average assessment of capability, potential to grow, personal performance and alignment to the organisation's values within the workforce environment (how leadership, culture, motivation and learning are driving success). It was argued that the process of measurement leads to consideration of whether human capital is sufficient, should be increased, or decreased and highlights issues to address.

Many qualitative and quantitative tools claim that they can measure the human capital aspects, their link to corporate sustainability, and the ability to show the exact interrelations with one another. When evaluating such measurement tools, it was evident that each of these had valuable aspects that could be used to measure human capital's contribution to corporate sustainability. However, the fundamental problem that Mayo (2001) raised in his analysis of 'Measuring Human Capital' - using contemporary measuring tools and correlating to sustainability remained. He states that measures designed to reflect the contributions of the people will rarely have total 'causality' and measurement of such factors in reality is difficult. That is to say, that these factors will not be exclusively linked to people themselves and the efforts of people are combined with other factors such as market conditions and the effectiveness of internal systems and processes. Due to this reason, it was clear that a model that incorporated all aspects of sustainability with sufficient depth of analysis in each area

was needed in comparing two companies. However, this is not to say that all aspects of sustainability or human capital will be prominent in each company or industry within a model that is used. It is acknowledged that some aspects of human capital and their influence on sustainability will be more apparent within an analysis conducted with these tools.

Collins and Porras have used a more sensible technique to find the characteristics of corporate sustainability. Since they looked at long-lived companies to see similarities and which one could then relate to sustainability, they may have stumbled upon more generic qualities of corporate sustainability. However, since Collins and Porras (2005) did not specifically look at HRM or human capital aspects, their findings alone would not give a definitive picture of sustainable human capital practices or a clear picture of a company's sustainability status. Collins and Porras' (2005) ideas were too generic and broad when correlated to HR. However, the idea of investigating corporate sustainability as a whole to identify HR and generic sustainability traits of long-lived organisations was a credible option. It was determined that within the scope of this research, it was too difficult to isolate how each of these different characteristics interrelated. Although Towers Watson research was found to be valuable, the greatest handicap of this model was that it only focused on HR aspects of corporate sustainability and did not explore any other aspects of sustainability that have been identified in academia. Furthermore, the inner working of HCI was not obvious as it was considered and protected as intellectual property of the company.

It is also important for tools to evaluate human capital in conjunction with traditional, financial, social and environment data for making an overall assessment of corporate sustainability (Royal & O'Donnell 2003). However, tools have not achieved that level of sophistication. As such, it would be valuable to investigate the generic problems associated with current models. It is difficult to obtain reliable qualitative information about companies (Bassi et al. 2001). Furthermore, variation in assessments occurs due to various influences like media (Shiller 2000). Since many analysts base their estimates on information provided by different individuals and use differing tools in assessing this information, results on sustainability seem to differ widely and are mostly not verifiable. In some cases, it is argued that assessors simply provide estimates for human capital as a selected element of socially responsible investment, without attempting to

provide comprehensive reasoning (Royal & O'Donnell 2003). Although there are policies regarding continuous disclosure in the Australian market, it was found that efforts in HR were not readily disclosed publicly. It is suggested that, although problems created by not disclosing human capital information was highlighted, there was no agreement on how information needed to be pursued and analysed for all parties concerned. Former federal treasurer, Mr Peter Costello, believes that there should be more regulatory enforcement by the government for proper disclosure in support of transparent corporate governance. In an interview on the topic of large payouts to CEOs, he stated that governments should take more of a regulatory role and become collector and disseminator of information. He also stated that more information should be disclosed to stakeholders to make informed decision on matters related to corporate governance. However, the private sector does not yet recognise the benefits of disclosing such human capital information and views government efforts to get comprehensive disclosure as intrusive (Bassi et al. 2001). This mentality seems to be persisting although Australian corporations are fully aware of the penalties associated with non-disclosure of non-financial information. Bassi et al. (2001) state that possible reasons for not disclosing human capital information included shareholder backlash due to conflicting ideologies on investment in areas such as training and remuneration. Spending on training and employee development was seen as unpopular practices in economic hard times, when the order of the day was to cut back on spending. It also argued that management does not want to disclose human capital information as employees could see this as another attempt to intensify surveillance and control of the workplace.

### **Difficulties in measuring Human Capital, Social Responsibility and Sustainability of corporations**

Critics of the qualitative analysis process suggest that clear, standardised tools should be available to provide more practical approaches to analysing the human capital of firms (Royal & O'Donnell 2003). This lack of proper tools also meant that questions were raised about the ability of analysts to measure human capital or sustainability among industries. Furthermore, analysts also lacked the necessary competencies and skills to analyse human capital and its impact on sustainability (Royal & O'Donnell 2002). Academics argued that analysts need to undertake additional training to provide

theoretical underpinnings in human capital analysis covering sustainable HRM, organisational change, and qualitative research methodology to make adequate judgement about the sustainability of a corporation. This training would also highlight the need to come up with practical models to analyse human capital and train analysts comprehensively on using them. Alternatively, if they lacked the ability themselves, it is suggested that analysts should purchase the information and analysis from relevant HR experts. When considering current tools, the disadvantages of quantitative research is that although tools may hold true and provide analytical understanding of organisational performance in human capital or sustainability, it may ignore or underestimate the difference in different organisations and industry sectors. This lack of differentiation is also shown to be a shortcoming of the traditional financial measures. It is argued that tools should be customised to different industries. It was the view of such advocates that generic tools could be counterproductive as the practices in social, ethical, environmental, financial and human capital management, vary in complexity and by nature within different industries. This issue was highlighted when selecting more qualitative indicators for the tool like management, leadership, contributions to sustainability through strategies, and many aspects of social performance. For example, a simple indicator such as 'number of community projects' that looked at social integration of an organisation could be readily applied within one industry; where in other industries such as the nuclear industry, one would suffer from an inability to obtain reliable data since those companies tend to over emphasise their commitments. When leadership and strategic success was looked at, it was noticed that such indicators were subjective unless there was a clear uniform agreement between contending interest groups who commented on leadership that influenced sustainability or social responsibility. However, a great deal of additional work will be needed to fully develop adequate metrics indicators to evaluate companies' human capital, social performance and other important aspects of corporate social responsibility. Due to the hard economic times, analysts overemphasise the short-term gains to stakeholders by concentrating more on quarterly financial results than the foundation for long-term human capital success which link social response and sustainability (Bassi et al. 2001). Such an obsession with short-term profits is contrary to the spirit of sustainability, which requires the firm to meet the needs of its stakeholders today as well as in the future. However, due to the difficulties of measuring human capital, managers could not

reliably report the information and it is the capital market impressions that have been driving valuation of company stocks.

It is clear that the traditional financial information was limited in indicating the sustainability of a corporation. However, at the same time, it was clear that the aspects of sustainability measures discussed in the literature were hard to use in a qualitative tool due to the quality of the information and the inherent weakness of the tools. It has to be argued that ordinary stakeholders would not be able to use these tools, as the process involved is lengthy and complicated. Even analysts would find it hard to analyse different human capital aspects discussed within the tools. It was found that reliable human capital information could be gathered from academic research that has been conducted on companies. However, these resources were not available ongoing and was scarce due to the time taken to produce such information. For this reason, some information used in the human capital analysis was not current. For a qualitative analysis to be successful, continuous disclosure of human capital information from companies needs to be effectively reinforced.

Although traditional financial information is not adequate to determine the sustainability of an organisation, some investors have been rather successful in making profits from the markets by identifying long-lived companies. Therefore, one needs to look at these winning quantitative strategies and incorporate these strategies into the qualitative tools being developed. Most researchers argue that qualitative tools are not developed enough to effectively measure human capital, social responsibility and the sustainability of corporations. As such, incorporating both quantitative financial and qualitative human capital research techniques provides a more integrated understanding of the dynamics and performance aspects present within different organisational settings which may indicate patterns that could be attributed to sustainability (Royal 2002). Similarly, qualitative research can be used in an intellectually rigorous manner, and can offer a richly detailed 'portrait', which could be further investigated as required (Hakim 2000). Qualitative analyses of human capital adopt a wide range of techniques, including interviews of management and staff, focus groups, historical analysis, oral histories, participant observations, surveys, and content analysis of archival and documentary sources.

Overall, systematically embedding insights from both qualitative human capital analysis and traditional quantitative financial analysis seems to work best as per current research findings. It is important for analysts to have access to practical qualitative human capital tools as well as the quantitative financial tools to understand drivers of future growth and change. As such, the report on organisation performance should incorporate lead, as well as the lag indicators of future performance. Such an endeavour requires non-financial data such as human capital, to be readily available and be systematically accessed in a manner that fully analyses the far-reaching sustainability implications. However, researchers should be cautious in defining underlying mechanisms through which human resource systems affect performance. Some human resource practices are additive (independent, non-overlapping effects on outcomes), some are interactive (depend on other elements in the system), and some may be substitutes for one another (Royal & O'Donnell 2005).

### **Tools gap in applying human capital and social response to grassroots level organisation sustainability**

The focus on human capital as a systematic approach of examining the future performance of organisations can be thought of as an additional risk mitigation mechanism. Human capital analysis also provides observers the opportunity to recognise insights into organisational status ahead of time. Likewise, quantitative financial measures used to measure organisations within an industry overlooks differences between organisations within their sector when compared to qualitative human capital analysis. Furthermore, traditional quantitative financial measures underestimate individual, social, ethical and management practices, complexity, and variety in organisations. Nevertheless, most current models use lag indicators based on past performance than lead indicators of potential future performance that can be extracted from human capital data. As such, human capital interactions cannot be viewed as a straightforward economic exchange as it was seen in the traditional sense. For example, sustainable social practices of organisations that emphasise long-term relationships with their employees enhance organisational membership, performance and innovation and even assist attracting and retaining best staff, adding to its sustainability in numerous ways at different stages of organisation development (Royal & Althauser 2002). Such human capital insights create a strong case for human capital

analysis in organisations and in industry in general for bench marking. Researchers such as Royal (2000), Dunphy (2000), Watson Wyatt Worldwide Research (2002) and Bassi et al. (2001) have used rigorous qualitative techniques for their findings of positive association between the sophisticated use of human capital and future performance of organisations. However, it has been difficult to isolate a tool that allows a researcher to think of examining the human capital, SR synergies and organisational sustainability.

The uniqueness of grassroots level ICT4D projects, make it very difficult for researchers to find established tools to measure the sustainability of small scale knowledge-based projects found in remote rural communities in fast developing countries such as Sri Lanka. Here, they utilise human capital and culture based home-grown SR synergies to alleviate poverty and uplift the livelihood and the quality of life in disadvantaged communities.

Furthermore, traditionally most business strategies are focused on upper and middle-class people. However, most of the world's population is categorised as poor or lower-middle class with some 4000 million people making up the bottom of the economic pyramid (Garriga & Melé 2004). Attending to the bottom of the economic pyramid, needs innovations (Garriga & Melé 2004). Such innovations can improve the social and economic conditions at the 'base of the pyramid' and create a competitive advantage for the firms, especially in developing countries who target that market (Hart & Christensen 2002; Prahalad & Hammond 2002). In the Information and Communication Technologies for Development (ICT4D) sector, telecentres in Sri Lanka are considered a form of innovation that enables the dissemination of ICT to rural and semi-urban underprivileged marginalised groups.

In the ICT4D sector, the telecentres incorporate many grassroots, non-profit and for-profit knowledge-based organisations that have a heavy dependence on human capital to realise the considerable SR synergies that aim to eradicate the 'Digital Divide' in the provision of 'Universal Service'. SR visualisation, its human influence (human capital drivers) within grassroots non-profit and for-profit telecentres, and how those drivers affect their sustainability, have not been researched in depth in general, and specifically so in respect of the Sri Lankan Nenasalas. Some sort of measuring modes should be available to provide more practical approaches for analysis of the human capital, social

responsibility initiatives and their impact on sustainability within these small scale grassroots level organisations developed on different models. Lack of consensus on current tools developed by academia to determine the sustainability of human capital within an organisation has made measurement difficult within these small scale ventures. Therefore the Royal and O'Donnell (2008) 'Human capital drivers of the value of the firm' model and 'human capital wheel' that have been successfully applied to corporations were applied by the researcher within grassroots level organisations in a developing country, i.e., in fast developing Sri Lanka. Based on the findings, this research developed a model by modifying the Royal and O'Donnell (2008) models to ascertain the impact of human capital and social responsibility of small scale grassroots level knowledge-based organisations on their sustainability.

## **Conclusion**

The notion of wealth is vastly different in businesses and within the knowledge-centric economies of modern consumer societies today, in comparison to traditional business economies of the past. Knowledge is seen as part of wealth, especially in knowledge intensive industries. Knowledge is considered as the thoughtfulness and attention people bring to doing their job in pursuit of the firm's goals, and are linked to human capital. Human capital analysis also clearly provides for good management and clear guidelines on the kinds of good management practices, which are appropriate for long-term, sustainable growth. Firms that have superior HR management systems have a potential long-term source of competitive advantage. However, for sustainable competitive advantage, all HR functions need to be in synchronisation with each other as well as with the firm's broader strategic goals. HR management systems are difficult to implement, change and to replicate.

Furthermore, visionary companies have and continue to heavily invest in human capital and human capital management practices for the protection of the knowledge they encompass and to protect their competitive advantage. Nonetheless, knowledge-based organisations envisage themselves more as human communities within, and largely a part of, society. This is due to the realisation that corporations are inherently linked to the society, and social capital through human capital. SR that corporations undertake

(i.e. CSR) is thought of as the bridge that links human capital of a corporation to society. However, intangible assets such as human capital cannot be tracked in the same way as financial and physical assets, which are lag indicators. In response to this challenge, the major consultancies and academics have devised their own systems for assessing the 'metrics' of human capital and human capital management practices. Nonetheless, there is no standard among tools yet. The models touched within this chapter were a succinct attempt to acknowledge some of the existing models and to highlight their general shortcomings and strengths. The tools investigated were effective when used in one corporate sector. An analyst could benchmark companies in the same industry utilising the current tools. Since different people had different perceptions of human capital, SR and sustainability, the chosen tool was only effective if only one analyst used it to analyse all the companies. Additionally, corporations also embellished their SR credentials. There was no uniformity or commonalities in SR synergies assessed between industries. Information was not publicly available readily on all corporations for comparing sustainability and human capital. Consequently, the comparison areas of tools were kept vague. Yet, most stakeholders have resigned to the fact that tools need to be simplified and made accurate. Tool should have integrity, be consistent, reliable, have no inherent biases, or influenced by a person's judgement and make sense in the context of other measures. Further, they should focus on what is important and comprise key outputs linked to them, have the right level of detail for action to be taken, for tracking change and for showing clear ownership by an individual or team. It is also noted that such measures should have the right frequency for measurements and to provide useful trending and comparisons. While ambitious, these measures are not impossible conditions to meet.

Others argue that expert advice need to be sourced on the viability of organisations based on continuous research in investing decisions. However, current discourse has a tendency to focus on superficial human capital or social metrics, which do not provide the depth and richness required for a theoretical or practical interpretation of future value creation in knowledge-centric economies.

While superficial aspects of human capital, as a key component of the 'S' in CSR was measured using traditional accounting and quantitative data, measuring efficient and effective management of 'human capital' and analysis have progressed to an

increasingly imperative and complex process. Similarly, understanding the performance of a firm requires analysis of the ambiguities inherent in employee and stakeholder behaviour. Qualitative and systems thinking are required to analyse, the open generative systems that drive human capital value.

From an accounting perspective, Mayo (2001) suggests that human capital measures should be 'roughly right' rather than 'precisely wrong', simple to understand, clearly defined and able to be interpreted in the same way. Although, specific financial results cannot be predicted precisely via human capital, the human capital patterns shaping superior performance can be understood (Senge, 2000) and can provide insight into future value creation and destruction within listed firms. As such, human capital analysis can provide a context for stakeholders to analyse and interpret human capital and associated risk at the level of patterns and systems.

Quantitative valuation methods are necessary but not sufficient for predicting future value in complex, knowledge-based economies. They need to be supplemented by rigorous qualitative research that incorporates interpreting the ambiguity inherent in human capital as experienced by firms in changing economic conditions. Quantitative techniques are valuable to appreciate outcomes within multiple uncertain inputs. However, users need to understand the imperfections of their assumptions and there are also non-readily quantifiable issues to take into account. Human capital professionals are trained in the disciplines of organisational psychology, strategic human resource management, and interpreting ambiguity. This is distinctly different to the overly simplistic use of accounting principles in human capital metrics, especially when those metrics were designed for internal corporate use, not external stakeholder use.

The overall position taken by academics is still valid for measuring small-scale grassroots level knowledge-based organisations such as telecentres with unique home-grown features of human capital, social responsibility synergies, and how those influence their sustainability. However, current tools have not been applied to such endeavours. Similarly current tools do not encompass a high level view of all relevant areas of sustainability. As such, one needs to choose a tool that can be mould to the situation on the ground at a high level to uncover the prominent aspects present.

Further, the literature review specifies the need for a multidisciplinary perspective, and open system view based models for studying the human capital of knowledge-based organisations. The human capital drivers of the value of the firm (Royal & O'Donnell 2008) model is such a model that provides a systems view to analyse complex open systems at a high level. It formed the base to come up with a simplification of the model to survey how drivers of human capital systems and social responsibility affect the sustainability of grassroots level non-profit or for-profit enterprises such as Sri Lankan Nenasalas (knowledge centres), which are unique components of ICT4D projects.

The first two chapters were devoted to the review of the extant literature on CSR, human capital, and their links to sustainability. A greater emphasis is placed on the critical role of human capital development and appropriate human capital management systems. The three main subject areas relevant to this study are corporate social responsibility, human capital systems, and sustainability. These areas were explored in depth resulting in strong theoretical findings and a discussion in the above chapters one and two of the literature review, along with the theoretical background which was used to formulate the research questions of this thesis. As such, the literature review of chapters one and two clearly informed and was the basis for (i) the identification of the key enablers investigated in this case study, (ii) the research questions and (iii) the choice of the research model namely; the human capital drivers of the value of the firm (Royal & O'Donnell 2008).

The next chapter will elaborate more on the key enablers investigated, research questions and the model aspects chosen as the focus areas based on the research questions, and the known knowledge of Nenasalas investigated.

## **CHAPTER 3 - Research Methodology**

### **Introduction**

This thesis examines the relationship between drivers of human capital; corporate social responsibility synergies and sustainability of grassroots level initiatives that use elimination of the digital divide as their main social responsibility goal. It is believed that Drivers of Sustainable Human Capital Systems' (DSHCS) impact on sustainability differ based on how SR synergies are conceived, practised, and funded in grassroots for-profit and not-for-profit organisations. Human capital understanding is shaped by a range of disciplines such as SR, intellectual capital, and organisational change.

This chapter mainly focuses on the orientation, purpose, and the research methodologies to be adopted. However, in order to understand the research choices available, the merits of selecting the case study research strategy as opposed to others will also be explored briefly. The chapter also outlines the research questions, the research framework, and the research methods of this study, along with how the data collected was analysed within the selected framework to answer the research questions investigated. Furthermore, how and why the 'Human capital drivers of the value of the firm' (Royal & O'Donnell 2008) model was chosen and utilised within this framework is explored within this chapter. Then the reason for utilising qualitative methods within the field context will be briefly explained. Finally, the data collection, coding, and data analysis is also presented. The section also describes the two main groups of participants of the study and how those participants were selected in Sri Lanka.

### **Research purpose**

The research primarily explored how key Drivers of Sustainable Human Capital Systems (DSHCS) impact sustainability through how the SR focus is conceived, practised, and funded at grassroots level, not-for-profit or for-profit knowledge-based organisations which exercise digital divide elimination as their main social responsibility.

## **Research questions**

As the research centred on Nenasala telecentres in Sri Lanka the following questions were examined within the research

1. Describe and explain the link between SR and human capital in Nenasala telecentres.
2. How do drivers of human capital (i.e., leadership and culture, recruitment and job design, training and development, performance management and rewards) affect Nenasala telecentre sustainability?
3. Do different types of telecentre models influence human capital drivers and sustainability differently?

## **The human capital framework**

Chapters one and two, which were the literature review, established that there was a knowledge gap in how SR synergies and drivers of human capital affect the sustainability of grassroots level, not-for-profit or for-profit knowledge-based organisations such as telecentres which pursue digital divide elimination as their main social responsibility.

In chapter one it was noted that a socially responsible focus of corporations materialises through SR synergies that companies champion. However, how SR is implemented in enterprises also differs by different ownership, funding structures and cultural contexts. In chapter two it was highlighted that SR that corporations pursued were linked to human capital as the cornerstone of a knowledge organisation and the link to society that SR synergies targeted. It highlighted the importance of human capital in knowledge-centric economies and indeed in organisations, as the main creator of value. Knowledge was seen as the thoughtfulness employees brought to their jobs in the pursuit of the firm's goals. Knowledge-based organisations heavily invest in human capital and human capital management practices and systems, as human capital was seen as the primary source of having a business competitive advantage. Nonetheless, it was noted that sustainable people management systems of an organisation could not be viewed in isolation considering that modern-day businesses are combining economic

prosperity, and social and environmental aspects in their pursuit of socially responsible behaviour through their SR synergies. As organisations are seen as extensions of society, such systems need to incorporate the context of human communities. However, it was highlighted that how SR is conceived, funded, and practised differed by the country, its culture and dominant traits. How these aspects interacted in a grassroots level organisation has not been investigated previously. This research focuses on Drivers of Sustainable Human Capital Systems and their effect on sustainability on grassroots level Nenasala telecentres program in Sri Lanka. However, as mentioned in chapter two, investigating the synergies between SR, human capital drivers and sustainability needed an open system that could capture the complexity in practice, and the inner and outer interrelations within the organisational context. Such interrelated concepts have been difficult to comprehend by corporate stakeholders and managers.

In the movie “Forest Gump”, Forest Gump states that, “life is like a box of chocolates”. As such, one could argue that a simpler way to describe life to Forest Gump was to use the analogy equating life to a box of chocolates. This shows the importance of pitching the proposed ideas to the intended audience in a manner that is easier to understand without lessening the value of the concepts presented. When representing the complex idea of sustainability in a diagrammatic form, the researcher prefers a Venn diagram. It was believed that a Venn diagram representation was ideal to get the notion across to stakeholders that corporate sustainability is made up of many different aspects that are interrelated in a complex arrangement. This idea is similar to Schwartz and Carroll’s (2003) three domain model of Corporate Social Responsibility. The Venn diagram model initially suggests that there are three SR domains (i.e., economic, legal, or ethical), which are *prima facie* relative to the others. However, it is from researcher’s view that when the SR concept is looked at from a human capital focus, the fact that human capital is linked to a social aspect and other influencing factors which are based on an organisational context seems to take centre stage. However, it needs to be stated that there are many more aspects that come together to represent SR of the organisation. Within this context, the developed Venn diagram, looks like a ball of string. As such, the following “ball of string” analogy was presented by the author to explain corporate sustainability to a layman. It presents sustainability as a continuum linking past, present, and future both at a macro and micro level. Hence, the analogy is as follows...

*“A ball of string has a beginning. Layers of string have built up the ball over time based on the beginning. It also has an end at a given time, which represents the present and is linked to the beginning (past) although it is not explicitly visible. The thread itself is made from inter-woven pieces of fibre, which could be thought of as event in corporate history. Collectively they form the string. If the string were too thick or too small, it would become unusable, as it does not meet its purpose. Similarly, corporate performance needs to be consistence within its strategy over time to meet its goals. If the thread is weakened in the middle, it devalues the whole piece of string as the possibility of breakage is introduced. This is similar to a threat introduced by corporate decisions. The string has to keep a specified thickness consistently to be valuable. This consistent approach to corporate life and producing a consistent output could be thought of as the essence of sustainability. Further, the sustainability of the corporation can be viewed as a whole (i.e., the ball of string itself) or in segments (i.e., specific individual structure and associated events)”*

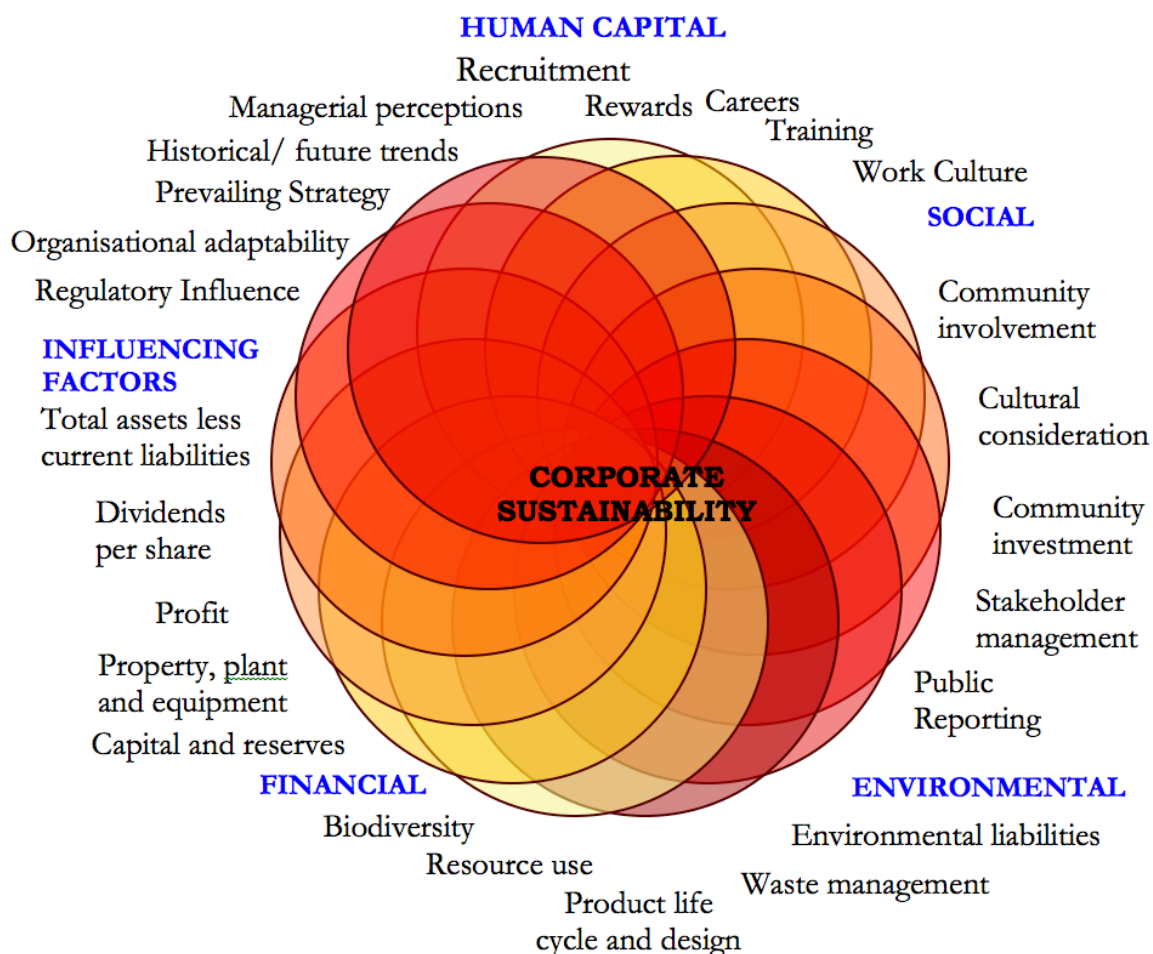


Figure 4 - CSR as a “ball of string” analogy

However, as explored in chapters one and two, the main difficulty of exploring the linkages of human capital, SR synergies and sustainability seems to be the lack of agreed tools. Critics of the qualitative human capital analysis suggest that clearer tools and models should be available to provide more practical approaches to analyse the human capital within a firm or indeed the industry (Royal & O'Donnell 2003). Yet, one of the key problems faced by analysts is justifying the credibility, impartiality, and validity of their qualitative research on companies (Royal & O'Donnell 2003). Furthermore, current non-financial qualitative human capital matrices cannot be systematically adopted by analysts in their attempts to evaluate companies using a qualitative lens without breaching the regulatory boundaries because they require in-depth knowledge that is only available to the organisational insiders (Royal & O'Donnell 2003). Nonetheless, it is possible for human capital analysts to create a 'human capital map' that underpins sustainability using the themes derived from the literature as well as previous research in the field (Royal & O'Donnell 2005). In such an attempt in this regard, the Royal (2000) model, was advanced in 2005 and in 2008 by Royal and O'Donnell. Royal and O'Donnell (2002) examined the human capital of the top 50 Australian Stock Exchange listed companies and created a five-star rating system which can be used as a means of evaluating its performance and sustainability. Using such a qualitative tool to evaluate human capital data to complement traditional financial measures could be seen as a potential risk management mechanism for stakeholders while gaining deeper insights into the sustainability of the firm. Through qualitative research of companies, which includes interviews, observations, archival and business documentation analysis, Royal (2000) has identified some key indicators and drivers of human capital performance, which were represented in a model. The model shows the relationships between various interrelated aspects of human capital and corporate sustainability. The model also attempts to link environmental, social, and financial aspects of sustainability to show a complete picture of sustainability throughout a company's history. These interrelations include internal and external pressures, managerial beliefs and perceptions, all of which, when combined, shape management strategy.

### **‘Human capital drivers of the value of the firm’ and ‘human capital wheel’ by Royal and O'Donnell (2008)**

The notion of organisations as dynamic entities that encompass several dimensions that are constantly changing was explored in chapters one and two. This is to acknowledge that environmental, technological, economic, structural, social and human factors influence the organisations’ characteristics, behaviour, and performance. As per the exploration of current human capital and sustainability measurement tools, some academics argue that complexity of knowledge-based organisational systems require measures beyond the traditional financial methods for better evaluation methods of the long-term performance leading to sustainable organisations.

Human Capital refers to human resource management systems, which consider over time the complexity of internal and external interdependencies and interdependencies of the organisation. Human capital analysis links Human Resource Management systems to the future performance of the firm. As such, researchers such as Royal and O'Donnell (2008) favour a systems view of organisations to examine intricate relationships and behaviour in knowledge-based organisations today. The open systems view originated from work of biologist Ludwig von Bertalanffy's general system theory was used later in action theory and the social systems theory. Von Bertalanffy describes systems as ‘elements in standing relationships’. Nonetheless, the systems view can be considered as world-view where system is a configuration of parts joined by numerous relationships among the members that act as a whole. The ideas of survival, adaptability, growth, flexibility and stability have also been introduced by management academics to this open systems view to improve understanding of how knowledge based organisations adapt to the changes in society (i.e. their environment). Opposed to the classical management theorists, who view organisations as closed systems, the open system views an organisation as existing and being engaged within their environment. As such, this view considers the needs of the various stakeholders of the organisation while attempting to differentiate the organisation from its competitors. Similarly, within this thinking, the emphasis of traditional theorists has shifted away from focussing on internal processes for human capital to the organisation itself as a human capital system persisting over time (sustainability) within an ecosystem. However, the modern systems approach also considers these interlinked parts to exhibit synergistic properties where

the whole is considered greater than the sum of its parts. As such, more emphasis is given to the environment the organisation belongs to, its interactive relationship with the society and human capital as the enabler of that interrelation between different internal and external systems. Similarly, modern knowledge-based organisations seem to be engaging in a balancing act between regulating the feedback loops thorough learning (opening) and regulations as control strategies (closing). Nonetheless, in organisations, order and disorder coexist. According to the systems view, order naturally disintegrates into disorder in the absence of intervention. Therefore, managers intervene with measured quantitative measures (closure) and strategies to keep organisations and its stakeholders focused on its goals. However, as organisations become more complex in knowledge economies, nonlinearity of interactions and increased environmental uncertainties seem to be more prevalent. Considering the knowledge organisations in a knowledge economy, it can be argued that the capabilities of the companies lie in the human capital relationships. That is, within its human capital, and human capital capabilities cannot be measured by traditional lagging financial indicators (Royal & O'Donnell 2002). Similarly, considering knowledge organisation is more than the sum of its parts, analysis that attempts to decompose the system into its individual parts in order to examine each part and relationship in turn is not suitable. Therefore, in trying to predict the performance of an organisation, with its main driver as human capital, requires qualitative measures that are able to gather the richness of emotions and feelings of all involved.

Royal and O'Donnell (2008) proposed four qualitative tools that could be used to identify human capital indicators and drivers of performance. Main tool was tasked with mapping human capital and drivers of the value of human capital. It was noted that it was possible for human capital analysts to create a “human capital map” using themes derived from the model as well as previous research in the field, such as Royal and O'Donnell (2005). ‘Human capital drivers of the value of the firm’ model attempts to show various interrelated aspects of sustainable human capital systems and their drivers. The theoretical underpinnings for this model come from organisation studies, human resource management, and organisational behaviour and change management literature. However, on a more practical level, the model was enhanced after observing trading patterns on the trading floors of several broking houses and investment banks during a field research project in 2004 to 2005 at Merrill Lynch offices in Sydney,

Australia and Hong Kong.

The developed model attempted to link the human capital drivers of the value of the firm and the various important human capital events that occur throughout a company's history. It also linked environmental, social, and financial aspects to produce a complete picture of corporate sustainability that could be contemplated throughout a company's history as its risks, risk appetite, and cultural aspects. The model also combines interrelations between internal and external pressures, managerial perceptions, and management strategy that have guided the organisation within the time span considered. The features discussed in the model serve only as a guide to what drives sustainable people management and does not mandate their existence in every company or across all industries at a given point. The model also does not explain the exact order of manifestation or the casual relationships, as these would depend on the uniqueness of each company history that the model would need to consider. However, using this model, a human capital analyst would be able to identify emerging patterns in human capital that ultimately affect performance, sustainability, and market valuation of the organisation studied.

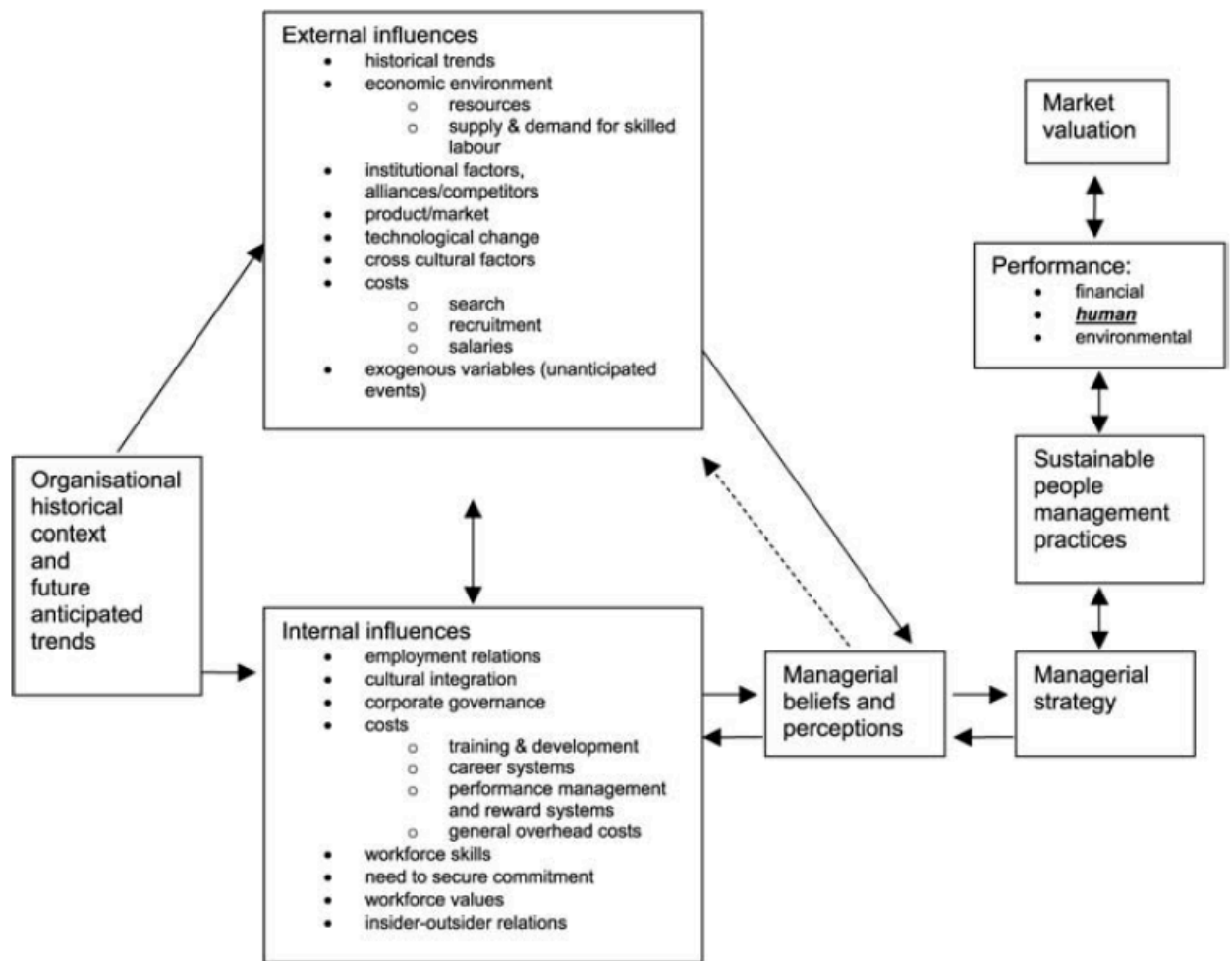


Figure 5 - Human capital drivers of the value of the firm (Royal & O'Donnell 2008)

Royal and O'Donnell (2008) Tool 1 above, attempted to represent corporate sustainability as a combination of many factors, including human capital, and indicated how these factors could influence each other in a complex arrangement. It attempts to identify the external and internal factors that would influence human capital and then turn its influence on sustainability. The idea of measuring, managing past strategy and their consequences, predicting future strategies and the ability of an organisation to implement these strategies are addressed through this model. Most importantly, the model emphasises the ability of the organisation to implement strategies directly related to human capital. Although the model briefly touched on environmental and financial aspects, it did not explore deeply on human capital aspects. However, the tool was comprehensive enough to represent the key themes of sustainability and human capital at a high level. Bowman (1938) states that, “although the work of analysis and review is related to past performance and the present position, one must be alert to the viewpoint

of the interested persons, who are not necessarily mainly concerned with the present status of the investment, but also with the future possibilities”. Similarly, the past and the consequences of present strategic decisions that affect the future are also listed under the influencing factors in the model. Since it was not this researcher’s intention to analyse the exact correlation of these factors of corporate sustainability, the order of how these aspects were interrelated was not considered within the tool.

In understanding knowledge-based organisations and their crucial link between intangible assets such as human capital and strong commitment to sustainability, one needs to investigate the ways that corporations interact with humanity. This interaction can be thought of as Social Responsibility (SR). Analysing human capital and SR to provide a clear picture of drivers of the value of a firm to attain an understanding on sustainability was enabled by Tool 1. Tool 1 ‘drivers of the value of human capital’ model enhances the ability of an analyst to identify patterns within the human capital system of an organisation that affects future performance. In essence, this tool assists to bridge the gap between tangible and intangible analysis at a high level. The use of this tool in human capital analysis potentially creates a more transparent thinking process for all stakeholders in assessing future organisational performance and sustainability.

The chosen Royal and O’Donnell (2008) Tool 1 has been developed within a systems theory view to demonstrate the ways in which an organisation as a system works in relation with its environment. As such, it is quite appropriate to capture complex multi-layer programs within grassroots level organisations, with their national and international tiers. The modern systems approach views organisations as complex and interlinked networks of various parts with synergistic properties where their sum is greater than the sum of its parts. Similarly, the Royal and O’Donnell (2008) model allows researchers to think beyond the traditional simplistic interrelations of HR and performance connections in small organisations and allows the model to be used particularly in grassroots, knowledge-based organisations in a larger context. Knowledge of human capital generates more than the individual contribution to its greater externalities. Through complex feedback loops within the existing environment, the model draws inputs to which it forms various outputs. This systems view and the notion of Holism allow the researcher to explore connections uncovered to be prominent at a grassroots level although the exact weighting of the interaction of those

connections may not be found through the model. Similarly, it needs to be noted that the model does not specify all the variables that may interact to form input or an output. What may be visible on the surface and uncovered through the research in the field would be shown as the most dominant variable as per the views of the participants of the study. Likewise, when considering the need to compare organisations within the same industry or between different industries, it needs to be highlighted that the model may indicate different prominent aspects, which may not be always visible in different industries or organisations within the same industry. This difference could be associated to the industry wide difference, organisational history, and the bias a user of the model may introduce. However, the creator and subsequent researchers that utilised this model argue that this is mainly due to the difference in organisational history in each organisation rather than any deficiency of the model. It is a valid argument when considering that the SR, human capital, sustainability context of the organisation is dictated by the present strategy and the future direction, which is also linked to its organisational history. A similar view can be taken within the realm of socially responsible behaviour a company may pursue for sustainability. However, this variation and customisation is especially relevant to sustainable development programs that operate in the developing countries as drivers of sustainable human capital systems operate at a grassroots level may differ by social, religious and national context of a country. This is to note that the organisational history, purpose and the present context it finds itself, is moderated by internal, external stakeholders that make up the social, cultural, religious and national aspects which govern how embedded SR synergies would be achieved and how they could be realised affecting its sustainability.

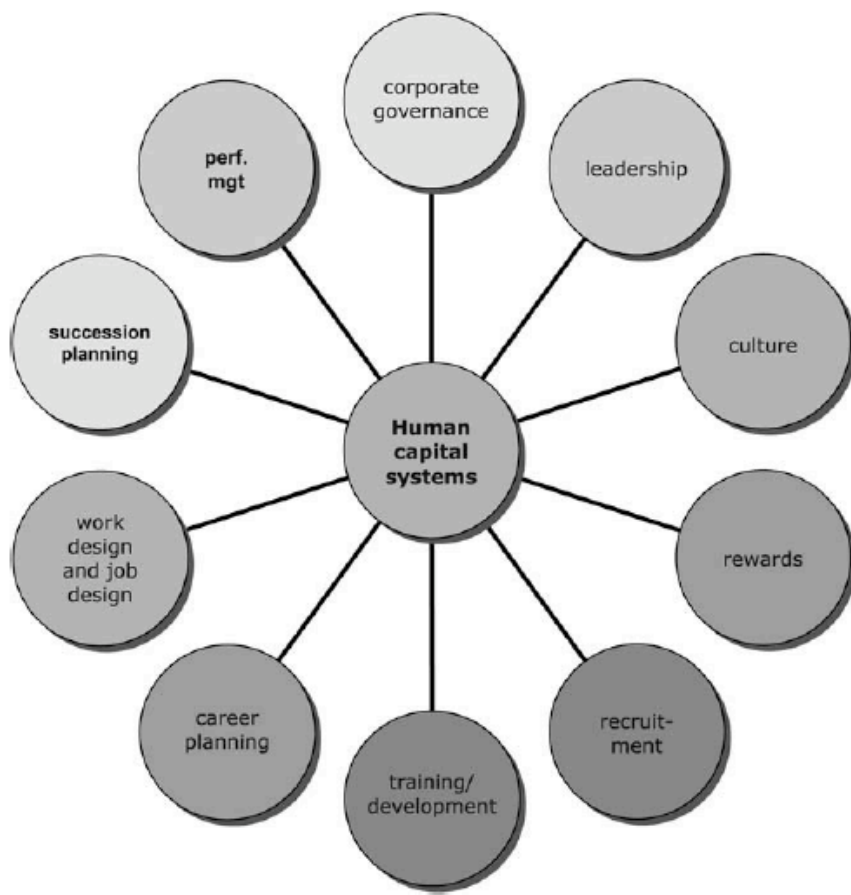


Figure 6 - The human capital wheel (Royal & O'Donnell 2008)

The Tool 2 that Royal and O'Donnell (2008) proposed was the 'human capital wheel' that was utilised for deeply analysing human capital systems. The Human Capital Wheel was a progression of their earlier work related to Human Capital Classification (HCC) process (Royal & O'Donnell 2003). However, they caution that the human capital classification process used in their academic research should not be taken as a symptomatic measure of corporate sustainability; the process seeks to distinguish patterns of human resource management practices and systems which are likely to be sustainable over time. The Human Capital Classification was later augmented with the Human Capital Wheel to analyse human capital systems in a more detailed manner. The Human Capital Wheel noted 10 areas of human capital systems that were seen as significant to an organisation. It was expected that with this detailed analysis of key HRM areas, one could get an understanding on the gap between the real and the ideal utilisation of human capital scenarios within a company. It was noted that the companies had to bridge this gap to reach the ideal utilisation of human capital to be aligned with company strategies to achieve the best outcomes. The improved models

continued to use established qualitative analysis techniques including interviews, focus groups, and a review of publicly available documents and historical accounts. Other methods also can be used within this model comprising site visits, observations, and academic sources such as case studies. It was believed that the use of qualitative methods with these models would not only provide rich reliable data, but would also preserve and provide a better sense of the company history and management strategies that are required to fully understand the events which impact human capital and its management systems.

Sustainable people management practices are those, which are enduring, timeless and stress the importance of long-term employment and organisational membership. They are internally consistent and consistent with the broader context in which the firm is operating. Practices that encourage recruitment, retention, skill acquisition, and advancement create strong ties between an organisation and its employees to perform better with regard to financial performance. The Human Capital Wheel identified ten of those key areas of Human Capital Systems of an organisation that researchers should investigate to contrast the gaps between the Corporate Business/Human Resources strategy espoused by a company and the execution of that strategy. However, the archival material analysis undertaken by this research on the Nenasala telecentres indicated that some of these sustainable human resource practice indicators might be more relevant for this study than others at a grassroots level. This was seen as a result of the simplification of Human Capital Systems for a grassroots levels organisation opposed to corporate level analysis with Human Capital Wheel in the past. As such, similar indicators were grouped together to analyse data more clearly. The four groupings of indicators were Leadership and Culture, Recruitment and Job Design, Training and Development and Performance Management and Rewards. Other indicators such as corporate governance, career planning and succession planning were seen as less relevant to the grassroots level organisation such as Nenasala as there wasn't much evidence of these indicators as per the initial data collected.

Hatipoglu (2010), who utilised the Royal and O'Donnell (2008) HCC process in her research, affirmed that the model could consider a company's development over time and identify emerging patterns in human capital that ultimately affect corporations' performance and market valuation using qualitative techniques prescribed. She also

proved that the model could be used with a wide range of publicly available information for a company-by-company analysis. She considered that to be a practical option compared to compatriot qualitative models that required data, which was considered as insider data that could be accessed only by management as company insiders. However, the model has not been used at a grassroots level in a developing country in industry sectors linked to knowledge economies.

Having considered the positive and negative aspects of the existing tools and the models developed by academia, Royal and O'Donnell's (2008) 'Human Capital Drivers of the Value of the Firm' model along with 'Human Capital Wheel' was chosen as the most suitable to evaluate the Sri Lankan Nenasala initiative after its first phase of five years. Royal and O'Donnell's (2008) 'Human capital drivers of the value of the firm' model has evolved to a very comprehensive tool over a period of five years, having been initially tested in the research of Australian companies and then being launched as a tested and a proven model without it becoming stagnated or obsolete. This model was valuable to envisage the SR, Human Capital and Sustainability linkages at the grassroots level. The current researcher selected this model for another reason. Although this model has measured and researched large firms in Australia and presented value added literature in 2000, 2003, 2005 and 2008, it has not been applied to measure and research small scale grassroots level organisations.

Therefore Royal and O'Donnell's (2008) 'Human Capital Wheel', was applied to uncover the specific drivers of sustainable human capital systems, within their home-grown social responsibility synergies and how those drivers have impacted on sustainability of those small scale grassroots level organisations. Based on the findings, the researcher planned to augment the Royal and O'Donnell (2008) Tool 1, 'Human capital drivers of the value of the firm' model by highlighting the dimensions that were prominent to the unique scenario of knowledge-based small scale grassroots level organisations in a developing country (i.e. Sri Lanka), that aim to alleviate poverty through ICT4D programs utilising the human capital and the home-grown social responsibility synergies. Given the different approaches that are available to the researcher, how the chosen tools could be applied is the subject of the next section.

## Selecting the Case Study Approach - Method

A number of ways were available to conduct this research. There was a choice between soft, subjective, speculative, and even quantitative approaches that is hard, objective and rigorous (Halfpenny, 2014). However, the classic divide between these available methods were between quantitative and qualitative techniques (Gardner, 1999). In social sciences, quantitative research is the methodical empirical investigation of observable phenomena via statistical, mathematical or computational techniques. Quantitative research is contrasted with qualitative research. At a high level, qualitative research is the examination, analysis, and interpretation of observations for the purpose of discovering underlying meanings and patterns of relationships, including classifications of types of phenomena and entities, without using mathematical models. Qualitative methods are useful to understand the conclusions produced by quantitative methods deeper. Qualitative research is employed extensively in many different academic disciplines including social sciences (Denzin and Lincoln, 2011). Qualitative researcher holds that understanding comes from exploring the totality of the situation (Bogdan and Taylor, 1990). Critics argue that, qualitative approaches have a number of limitations from not well formulated methods of analysis which may lend themselves to bias and requirement for labour intensive collection and analysis of data (Stoecker, 1991; Yin and Heald, 1975; Miles, 1979). However, qualitative research has a certain value for this study. For example, qualitative research can be rich, genuine, it would preserve the chronological flow and it suffers from little retrospective distortion (Miles, 1979). It is also often more precise than cross-lagged correlations, and requires minimal instrumentation.

Conducting a qualitative study involves selecting from a wide range of techniques. These included interviews, focus groups, participant observation, archival material analysis, and documentation (Savin-Baden and Major, 2013). This research made use of a model that provides a framework for determining patterns from the huge quantity of available information. The use of multiple sources of evidence, or triangulation, also has a distinct tradition in social science and qualitative studies (Jick, 1979). A popular method of qualitative research is the case study, which examines samples in-depth to better understand a phenomenon (Racino, 1999). Smaller but focused samples are more often used than large samples (Braddock et al, 1995). Case study research has long had

a prominent place in many disciplines and professions (Mills et al., 2009). Case study research allows one to understand a complex issue by emphasising detailed contextual analysis of a limited number of events or conditions and their relationships. Case study research method is defined as an empirical inquiry that investigates a contemporary phenomenon within its real-life context; when the boundaries between phenomenon and context are not evident; and in which multiple sources of evidence are used (Yin, 2009). The research object in a case study can often be a program, an entity, a person, or a group of people likely to be intricately connected to political, social, historical, and personal issues. The researcher investigates the object of the case study in depth using a variety of data gathering methods to get a deep understanding of the case.

A key strength of the case study method involves using multiple sources and techniques in the data gathering process. Data gathered is normally qualitative, but it may also be quantitative. Data collection usually occurs over a sustained period of time (Creswell, 2013). Distinctive qualitative methods used are focus groups and interviews. The focus group technique involves a moderator facilitating a small group discussion between selected individuals on a particular topic (Morgan, 1997). Interviews are also a standard part of qualitative research. During an interview, participants are encouraged to explore their experiences on the given topic in a manner that is sensitive and respectful. The researchers often tailor the questions they ask and ask for more examples or explanations in order to get rich, full stories and the information they need (Weiss, 1995). Thus, the interviewer's job is mainly to strike a balance between ambiguity and specificity in their question asking (Seidman, 2013). Other tools to collect data can include surveys, documentation review, observation, and even the collection of physical artefacts. The researchers can collect data and store multiple sources of evidence comprehensively and systematically. Field notes also record feelings and intuitive hunches, pose questions, and document the work in progress. Furthermore, they record testimonies, stories, and illustrations that can be used in such reports. The notes may warn of impending bias because of the detailed exposure to subject, special attention areas, or give an early signal that a patterns emerging. These notes also assist in determining whether or not the inquiry needs to be reformulated or redefined based on what is being observed. Research and field notes should be kept separate from the data being collected and stored for analysis. The data collected is coded to uncover patterns. Coding is an interpretive technique that organises the data. Coding requires the

researcher to read the data and demarcate segments within it, which may be done at different times throughout the process (Saldaña, 2012). Throughout the evaluation and analysis process, the researcher needs to remain open to new opportunities and insights. The case study method, with its use of multiple data collection methods and analysis techniques, provides researchers with opportunities to also triangulate data in order to strengthen the research findings and conclusions.

The merits of a single case study are that it can address such problems as over-generalisation, the tendency to focus on averages, static theories based on spontaneous data and, more importantly, neglect of individuality, complexity and variety (Starbuck, 1999). Both single and multiple case study research are not without their limitations (Mitchell, 1983). Single case study analysis has, however, been subject to a number of criticisms, the most common of which concern the inter-related issues of methodological rigour, researcher subjectivity, and external validity (Willis, 2014). The main criticism centres on whether the case study method constitutes a 'reliable and respectable form of social analysis.' Another criticism is that the single case study approach does not allow one to make generalisations about other organisations. Critics of the case study method believe that the study of a small number of cases can offer no grounds for establishing reliability or generality of findings. Others feel that the intense exposure to study of the case biases the findings. Some dismiss case study research as useful only as an exploratory tool. Furthermore, the danger to a research in using multiple case studies is large sample studies often yield deceptive findings. There is the possibility that an average of many instances may describe very few or even none of them. However, it does allow for some broad conclusions to be drawn to the research questions highlighted. Yet, researchers continue to use the case study research method with success in carefully planned and crafted studies of real-life situations, issues, and problems. Social scientists in particular, have made wide use of this qualitative research method. Most importantly, a researcher should consider all strategies available in a pluralistic fashion as part of a repertoire for doing social science research, and use each according to the given situation (Yin, 2009).

A case study research strategy which focuses on 'understanding the dynamics present within single settings' (Eisenhardt, 1989) and which typically combines the data collection methods using qualitative and quantitative techniques (Yin 2009). A single

case study has been adopted for this research and that there are multiple units of analysis. These include the organisational level and the grassroots establishment level. Case studies can involve either single or multiple cases and numerous levels of analysis or they can employ multiple levels of analysis in a single study (Yin 2009). A single case study design, which is often overlooked in favour of other quantitative and qualitative approaches, has been adopted for this research. The rationale for this is that in order to analyse the model in light of the empirical data, the researcher needs to be able to analyse and observe phenomena that have been previously inaccessible to other researchers. Hence, the case study is not only explanatory but also revelatory by nature. Furthermore, given the degree of access permitted, the researcher was able to apply the model to learn intricate details across a number of Nenasalas.

It has been established that the research questions articulated in this chapter have specific implications for the techniques used in the data collection process. Therefore, a single case study design was adopted for this research. Multiple units of analysis were considered the appropriate approach for this study. Further, a case study was suitable for intensive study of a single unit, for understanding a larger class of similar units (Yin 2009). Archival material analysis, interviews and focus groups were the three types of data collection methods that were used in this study enabling data triangulation. To assist in targeting and formulating the questions, researcher conducted a literature review. The two main participant groups of the field study were ICT Agency of Sri Lanka (ICTA) officials attached to the Nenasala project and randomly selected Nenasala operators and stakeholders.

Archival analysis of both primary and secondary materials was a necessary part of this research. Documentary analysis of publicly available archival material related to 'Nenasala' Telecentres was undertaken to aid conceptualisation design and operations of Nenasalas. Archival records, as Yin (2009) states, are often computerised and can include primary documentation. Other sources were human resource organisational and service records and documentation such as newsletters, company memos, company business library material and books. Combined with the other techniques discussed above, these enabled what Plowman (1991) describes as 'a somewhat eclectic approach to data collection', which has permitted this researcher to draw up a detailed set of relationships. The documentary analysis of publicly available archival material also

provided a larger context of Universal Service Debate and telecentres. Although the ICTA Nenasala program has been in existence since 2004, the advancement and focus on ICT became stronger past 2005 - 2009. As such, the major focus of the documentary analysis of this research on Nenasala telecentres was over the period from 2005 to 2013. Furthermore, the findings of the archival material analysis were used to guide the questionnaires of focus groups / interviews within the field study. The sources of information included newspaper archives, official company websites, various reports published by ICTA, research papers published by the government, consultants and academics. Since more and more information is published on the web by the critics of the program, as well as the cohorts of Nenasalas, web searches were done on the key topics investigated. When analysing the reports, generally it was found hard to separate rhetoric versus reality. This was more complicated as ICTA engaged consultants to write reports on Nenasalas and the opponents of an ICTA and Nenasalas carried out their own biased campaigns.

The archival material did indicate differences in models that seem to impact sustainability outcomes differently with grander SR synergies and initiatives. The researcher collected further data on this premise by conducting focus group discussions with Nenasala stakeholders and interviews of ICTA officials to potentially uncover how different models' human capital drivers may lead to more or less different sustainability outcomes within the SR synergies utilised and within their operationalisation.

Invaluable to the enquiry process was the use of semi-structured interviews in which respondents answered questions in a relatively open conversational way. In these interviews, the focus could to some extent be shifted with the explicit purpose of learning informally about the organisational setting and details. The semi-structured interview technique with the use of oral histories was an important analytical tool for interpreting organisational history, both the present and the future, which is a necessary component of the model. The researcher approached participants direct for interviews and recruited them for the study. Participants for focus groups were recruited with the assistance of a firm of consultants who were already involved with ICTA at the local grassroots level. Interviews and discussions with the Nenasala Project Program Manager and other relevant ICTA officials were carried out within a natural duration of about an hour by the researcher. As discussing sensitive topics with an interviewer who

has had little interaction with the participants would have been more comfortable in a private setting, interviews were conducted in a room, where only the interviewer, interviewee and the note-taker were present. It was also thought that this private setting would eliminate participant social bias that could be prevalent in a group interview or focus group scenario.

Within this research, interviews were mainly used to understand and interpret information and concepts uncovered within focus groups and the archival material analysis. It was envisaged that interviews and focus groups might have to be conducted in the English, Sinhalese and Tamil languages. As interpreting assistance was available to translate, participants were given the option of speaking in their preferred language. However, all discussions were mainly conducted in the English and Sinhalese languages as Tamil and Muslim participants were able to communicate in those two languages. Although it was envisaged that this scenario might arise within focus group discussions of owners and operators of the Nenasala telecentres in the East and the North of the country, they too spoke English and/or Sinhala fluently.

This research applies a human capital lens to the sustainability gap in Nenasala telecentres to better understand the important human capital drivers to this grassroots level not-for-profit or for-profit ICT4D telecentres initiative. However, before the grassroots level structure was examined in this regard, it was necessary to examine the overarching organisation (ICTA) that guided and administered the initiative. This ‘helicopter view’ of ICTA official’s experience, especially considering ICTA was the government umbrella organisation that set the guidance for all Nenasala models, gave a reference point to understand the context of Nenasalas, its human capital capacity and their drivers.

Interviews with ICTA officials and other Nenasala stakeholders were informal and semi-structured in order to build rapport and to gain maximum information on all facets of the Nenasala telecentre project and its associated models. Although an electronic note taker was to be used to capture the interviews and the participants were asked whether the interviews could be recorded, nearly all the participants requested not to record their interviews. Nenasala stakeholders and operators who attended the focus groups consented to be recorded in a few instances. This preference could be due to

cultural sensitivities of Sri Lankans who did not freely open up or trust a researcher that they have not interacted with much before. As a result, the interviewer reverted to using a note taker to take notes. In order to protect anonymity, no names or contact details were noted apart from a unique Nenasala identifier known to the researcher.

Archival material analysis, interviews, and focus groups were the three types of data collection methods that were used in this study enabling data triangulation. The data triangulation allowed for validation of collected data and to see different interpretations of the same questions posed in the interviews and the focus groups. Triangulation is a concept borrowed from surveying techniques (Rothbauer, 2008) and is often used to check the results when multiple methods are used in the study of the same phenomenon (Bogdan and Biklen, 2006). Triangulation can be used in both quantitative and qualitative studies. In qualitative analyses, triangulation is seen as an appropriate approach of establishment of credibility. In this context, it becomes an alternative to conventional criteria like reliability and validity. Nonetheless, it is argued that triangulation “gives a more detailed and balanced picture of the situation” (Altrichter et al., 2008). Simply, triangulation is validation of data through cross verification from two or more sources. Apart from cross-validation of data, triangulation is also used to capture different dimensions of the same phenomenon. There are also different methods in triangulation (Denzin, 2006) such as data, investigator, theory, methodological triangulation, and environmental triangulation. They all have different purpose to check the validity and comprehend the difference of opinion about the phenomena. In the social sciences and in this research, methodological triangulation involved using more than one method such as interviews, observations, questionnaires, and archival document analysis to gather data (Denzin, 2006). Triangulation was preferred based on the view that researchers and stakeholders can be more confident of a result if different methods lead to the same result.

However, triangulation used for rigor becomes less useful if not used in the larger reasoning and assumptions behind qualitative research. In qualitative research, triangulation addresses the issue of internal validity by using multiple methods. However, triangulation is difficult to perform properly. Data collected using different qualitative methods such as interviews and focus group transcripts come in different formats and are difficult to compare directly. Within this research, care was taken to ask

the same question in the same context. Correspondingly, similar findings from different methods could provide corroboration but lack of similar findings does not deliver reasons for refutation. In other words, data sets from these methods may provide only a partial view of the whole picture. However, qualitative research, with its distinctive approaches to harness the analytical potential of exceptions allows a research question to be examined from various angles. Yet, qualitative research is usually carried out from a relativist perspective, which acknowledges the existence of multiple views of equal validity (Popay et. al, 1998). As such, Barbour (1998) suggests that it is more helpful to conceive of complementary rather than conflicting perspectives. Mays and Pope (2000) also suggest that comprehensiveness may be a more realistic goal for qualitative research than is internal validity. In this context, exceptions do not pose a threat to qualitative researchers' explanations; they merely provide further scope for refining theories. However, it is widely expected that qualitative research can hold up to rigor just as quantitative research.

### **Sample and recruitment of participants**

Focus group participants were selected based on a stratified sample mainly comprising Nenasala owners and operators. Nenasalas were divided into five regions (e.g., North, East, West, South and Central) in order to represent all strata of Sri Lanka (e.g., ethnicity, religion, language and culture). The research selected 10% of Nenasalas in each region according to random sampling by drawing names out of a box. Allowing for non-response, 20% of Nenasala operators (i.e., 120) were selected. One owner or operator was nominated by each Nenasala as the participant of the focus group and invited to participate. The total sample for all five focus groups was approximately 60. Focus groups were held in Kalutara District (Western Province), Ratnapura District (Sabaragamuwa Province), Matara District (Southern Province), Trincomalee District (Eastern Province), and Kandy District (Central Province). The researcher also was able to participate in a town hall meeting organised by ICTA consultants in the Kalutara District with all Nenasala operators in the surrounding area and government officials to discuss the current issues that Nenasalas faced.

Twelve interviews were conducted with ICTA officials attached to the ‘Nenasala’ project and also with some prominent private sector and NGO affiliated participants. After selecting the interview participants, the researcher directly contacted them via telephone and e-mail to enlist their support for the research. The researcher also e-mailed Participant Information Sheets (PIS) on the research, the Consent Forms and the questionnaires to interview participants. The participant Information Sheets (PIS) and Consent Forms were prepared in accordance with HREA Pro-forma of UNSW and were approved by the UNSW ethics approval process. It should be noted that this research represented a low level of risk for the participants and the researcher. The proposed research was undertaken in association with and under the patronage of the ICT Agency of Sri Lanka and this was clearly advised to the participants. Nonetheless, the UNSW OH&S and IP policies had to cover the commitment of all the people who were associated with the research. As such, the general requirements for the OH&S, local customs and UNSW policies in regard to conducting research were observed while completing the fieldwork. Similarly, it was advised to participants that in line with UNSW policy all documentations collected such as consent forms and any recordings made would be kept with the thesis supervisor (in a secured room within a lockable cupboard). As most interview participants were very busy high ranking public servants and government officials, the researcher had to secure participation with couple of follow-up telephone calls. These efforts were complicated by the fact that some officials were not very prompt about accessing or reading their e-mails. Most of the e-mails were accessed by their secretaries who also did not pass the request to the official, based on their own views and order of prioritisation of such requests. Similarly, the cultural practice of Sri Lanka usually meant that high ranked officials did not respond and were not immediately available for an interview. As such, some references to the researcher were used to get introductions to these officials and to secure their participation.

The owners and operators who participated in the focus groups were not easily contactable, as they were spread over vast areas of the country. A consultant company who already had coordinators on the ground was used to secure chosen local Nenasala’s participation. As these local coordinators worked with all regional Nenasalas and knew all Nenasala owners and participants who were chosen for this study, it was easier for them to secure participation based on their trusted relationship and friendship. Furthermore, these coordinators already had usual meeting places for Nenasala

activities in each geographical area and district. As such, the focus groups were held in these same premises as they were usually centrally located to public transport and easier for the Nenasala participants to travel to. Furthermore, the chosen venues were familiar surroundings that put the participants at ease. The introduction to the study and all the administrative activities were conducted before the commencement of focus group discussions. The focus groups were conducted by the researcher and a Sri Lankan assistant, who enhanced the conversations with language assistance, local, social, and cultural dimensions. In order to protect anonymity, no names or contact details of participants were noted in the notes taken. For the researcher to identify the notes later, a unique identifier was used. It was informed to the participants that any information obtained in connection with this study that can be identified with participants will remain confidential and will be disclosed only with the participant's permission. In the event of the researcher planning to publish the findings/results in any academic or other publication, information will be provided in such a way that participants cannot be identified. Most participants were not comfortable with recording the focus groups discussions. This was put down to the hierarchical nature of Sri Lankan society and the participants' view that they did not want to be on record with any information that could be critical of the program. Most participants avoided any recorded information on the perception it might find its way to their superiors or ICTA officials and would reflect badly on them. As such, most focus groups were not recorded and note taking was utilised.

Although the research had the patronage of ICTA and UNSW, all costs associated with the research were borne by the researcher through his personal funds in undertaking this research. No funding was sourced for the research or the field research. As such, participants were not provided with remuneration for participation. However, considering that Sri Lankan culture was very much inclined to assist with worthy causes and assisting others, participation of focus group or interviews did not require any inducements. However, the researcher did provide refreshments to the focus groups as this is the cultural 'done thing' to show appreciation for participation.

## **Conclusion**

There is a knowledge gap in understanding how SR, human capital synergies and drivers of human capital affect the sustainability of grassroots level, not-for-profit or for-profit knowledge-based organisations that pursue digital divide elimination as their main social responsibility. This research attempts to address that gap. The research primarily explored how key Drivers of Sustainable Human Capital Systems (DSHCS) impact sustainability through how the SR focus is conceived, practised, and funded at grassroots level, not-for-profit or for-profit knowledge-based organisations which exercise digital divide elimination as their main social responsibility.

Human capital is linked to society through SR interpretation of organisations in certain organisational contexts. How SR is implemented in grassroots level knowledge-based organisations may also differ by different ownership, funding structures and cultural contexts. Investigating such a complex environment requires a modern systems approach. In these instances, organisations need to be viewed as complex and interlinked network with various parts with synergistic properties, where their sum is greater than the sum of its parts. A systems view has been particularly helpful in understanding knowledge-based organisations as open systems with important interrelationships within the organisation and its environment. Similarly, it is noted that it would be misguided to value an organisation simply by adding the sum of its parts. The true value of the complex relationships and networks of an organisation require quantitative analysis to go beyond the inability of mere numbers of financial models/quantitative analysis, to understand such relations. Nonetheless, favouring qualitative analysis, Royal (2000) identifies some key human capital indicators and drivers of performance, which she represented as a model. Her 'Model of the Drivers of Sustainable People Management Systems' attempts to show various interrelated aspects of sustainable human capital systems and their drivers. Royal and O'Donnell (2003) also augmented the model as a human capital classification process arguing that it is possible for human capital analysts to create a 'human capital map' using themes derived from academic literature as well as their previous research in the field. The Human Capital Classification is to be utilised in aggregation with traditional financial, social, and environmental measures for making an overall assessment of Corporate Sustainability. The HCC process seeks to distinguish patterns of human resource management practices and systems that are likely to be sustainable over time. Prior researchers such as Hatipoglu (2010) found empirical and theoretical evidence on how

drivers of sustainable human capital systems perform in for-profit large organisations such as financial institutions and the pharmaceutical industry. Royal (2000) and Royal and O'Donnell (2008) also used this model in the context of large corporations in Australia. Furthermore, it has also been expanded to investigate how these drivers act on individual segments of human capital systems. Hatipoglu's (2010) research affirms that the above models could investigate a company's development over time and identify emerging patterns in human capital. However, these models have not been empirically tested in prior research in developing countries in South Asia especially in a secluded area such as ICT4D and telecentres, which are grassroots level not-for-profit or for-profit small-scale organisations that contribute towards bridging the digital divide.

The Royal (2000) and Royal and O'Donnell (2008) models allow one to think beyond the traditional simplistic interrelations of HR and performance and its links with human capital to its greater externalities. Although the exact interrelation between many factors may not be found, the complex feedback loops of this system view based model allowed the researcher during this research to explore the linkages uncovered so far. The qualitative methods employed in this study permitted the issues to be studied in depth and detail to capture multi-stakeholders' experiences, perceptions, challenges, suggestions, and emotions in generating a comprehensive picture. The case study method used in this study was selected as it attempted to illuminate a decision or set of decisions and the reason behind why they were taken, how they were implemented and with what results. As the research centred on Nenasala telecentres in Sri Lanka the following questions were examined within the research 1) Describe and explain the link between SR and human capital in Nenasala telecentres. 2) How do drivers of human capital (i.e., leadership and culture, recruitment and job design, training and development, performance management and rewards) affect Nenasala telecentre sustainability? and 3) Do different types of telecentre models influence human capital drivers and sustainability differently?

The case study utilised archival material analysis, interviews and focus groups for data triangulation. The two main participant groups of the field study were ICTA officials attached to the Nenasala project and randomly selected Nenasala operators and stakeholders. Focus group participants were selected based on a stratified sample

mainly comprising Nenasala owners and operators. Five focus groups were conducted covering the North, East, West, South and Central regions of Sri Lanka, representing all strata of Sri Lanka society. Twelve interviews were conducted with ICTA officials attached to the 'Nenasala' project and also with some prominent private sector and NGO affiliated participants. Both focus groups and interviews were conducted in accordance with HREC Pro-forma, OH&S and IP policies of UNSW and were within the societal bounds and local customs.

This research applies a human capital lens to the sustainability gap in Nenasala telecentres and their SR synergies to better understand the important human capital drivers of grassroots level not-for-profit or for-profit ICT4D telecentre initiatives in contributing to bridge the digital divide. However, before the grassroots level structure was examined in this regard, it was necessary to examine the overarching organisation (ICTA) that guides and administers the initiative. This 'helicopter view' of ICTA official's experience, especially considering ICTA was the government umbrella organisation that set the guidance for all Nenasala models, gave a reference point to understand the context of Nenasalas, its human capital capacity and its human capital drivers. Within this research, interviews were mainly used to understand and interpret information and concepts uncovered within focus groups and the archival material analysis.

The initial documentary analysis of publicly available archival material related to Nenasala telecentres was undertaken to aid the conceptualisation design and operations of Nenasalas. The documentary analysis of publicly available archival material also provided a larger context of the Universal Service Debate and telecentres. Archival material analysis findings on the Universal Service Debate and ICT4D efforts in South Asia, including other telecentre initiatives, are summarised in Chapter four.

## **PART 2 – The Context: Universal Service Debate, Information Communication Technology for Development (ICT4D), Telecentres, and the Sri Lankan Focus.**

### **CHAPTER 4 - Universal Service Debate and Telecentres**

#### **Introduction**

In the literature review, which covered chapters 1 and 2, corporate social responsibility, human capital and their link to organisational sustainability were explored. It was noted that SR is linked by human capital to sustainability of an organisation. Furthermore, chapter 2 looked at various models that attempted to measure human capital. However, it was believed that Drivers of Sustainable Human Capital Systems (DSHCS) may impact sustainability differently based on how SR synergies are conceived, practised, and funded in grassroots, for-profit and not-for-profit organisations. In chapter 3, the research methods of this study along with the reasoning for choosing ‘Human capital drivers of the value of the firm’ model within this study were explored.

In this chapter, the greater context of the Universal Service Debate and ICT4D efforts in South Asia including other telecentres initiatives are summarised. The archival material analysis findings undertaken in this research formed the basis of this chapter. This is a precursor to the introduction to the Nenasala program, which this study examines. This chapter attempts to show SR synergies are a clearly identifiable theme in many Sustainable Development programs especially in the developing world. This is especially true in the debate on ‘Universal Service’, which counters ‘Digital Divide’. This chapter explores different theoretical perspectives that ICT4D has followed and the difficulties these rural ICT4D projects face in uplifting the rural disadvantaged communities. Various models that governments and NGOs have used in their low-cost ICT4D attempts are explored, culminating with a special focus on telecentres. The telecentres’ role in the attempt to bridge the digital divide and the challenges surrounding their sustainability and scalability, along with measurement techniques used, are also investigated in this chapter.

## **What is the digital divide?**

The debate on 'Universal Service' has led to what is known as the 'Digital Divide' between the information 'haves' and 'have-nots'. The essence of the Global Digital Divide can be crystallised with the following example. Today, internet users account for only 6% of the world population. Out of that, 85% are in developed countries where 90% of all internet hosts are located (Rao 2005). Furthermore, for the Internet to be a true mass medium it needs to be accessible by all consumer segments in the world. However, the cost of online access remains unacceptably high to most developing world populations. The typical cost is around USD one per hour for internet access which happens to be the per day income of a family classified as above the poverty line in India. With one-third of the population still below the poverty line, their ability to access the internet remains low even in areas that are serviced. Further marginalisation is visible based on gender, rural-urban and poor-rich gaps. As such, the Digital Divide can be expressed as the gap that exists between those who have and those who do not have access to Information and Communications Technology (ICT) or which in layman's terms could be thought of as telephones, computers, internet access and related services.

Although governments and NGOs continue to provide resources to the disadvantaged due to the significant disparity, scholars such as Heeks (1999) argue that 'realistically the poor will not own, are unlikely to control or to use the technology in any significant numbers for the foreseeable future'. Similarly, although ICT is considered a tool for social and economic development, its impact is limited by a lack of other parallel developments in rural and remote regions (Sarker 2003). For example, although the internet could provide a farmer with information on the best time to market harvests, if there are no roads or transport to carry crops to the markets that information cannot achieve its full potential.

Others take a more cynical approach to 'Universal Service' discussions to argue that public policies that promote universal telecommunication access are political and the priority provided to them is misplaced (Mueller 2013). Noting that ICT growth rate was higher in developing countries than in high-income countries, Tseng and Ho (2001) suggest that IT is not the equaliser. They conclude that GDP per capita is the most

significant factor in determining network deployment and IT accessibility, and improving economic performance with income distribution is far better for addressing inequality. Others take an optimistic view. Using the annual IT penetration growth rate as an indicator of digital inequality and the fact that IT penetration growth rate was higher in developing countries than in high-income countries, they suggest that discussion should be about digital opportunity for the disadvantaged and not about a divide (Fink & Kenny 2003).

Access to information and communication technology (ICT) leads to the provision of knowledge and culminates in development of human and social capital (Bailey 2009). Information is power, denying information to marginalised communities actively prevents the rural poor from overcoming the unequal power structures that they are trapped within. ICT also provides the poor access to information vital to improving their lives and this makes bridging the digital divide relevant to the modern world (Alam 1999). ICT also acts like an integrator due to its ability to transcend national boundaries and influences in a cross border flow of information promoting services such as education, health and trade while aiding to lessen the isolation of rural communities (Rao 2005).

It is also largely accepted that ICT access contributes positively and significantly to economic growth (Caspary & O'Connor 2003). Timely access to valuable information, expansion of social networking and better co-ordination of rural entrepreneurs are some of the reasons that highlight ICT as a contributor to economic development. Where ICT penetration is low, lower level of knowledge and less capacity to eradicate poverty exists. This notion is supported by the 1999 Human Development Report commissioned by the United Nations Development Program, which highlights that higher the human poverty index, lower the access they have to ICT per 1,000 persons (Sarker 2003).

ICT also facilitates political visibility, public debate, and provides a voice to rural institutions within the power relations that shape citizens lives (Marker et al. 2002). Conversely, ICT has shown to improve the responsiveness of governments to their citizens, including enhancing accessibility to government services and better public consultations on decision making processes (Caspary & O'Connor 2003).

Findings of research suggest that rural economies driven by ICT have made progress particularly in the developing world. However, the question remains whether market forces alone will suffice to extend rural ICT access at a sufficiently rapid rate to meet demand and expectations of the rural populations. As a result, most developing countries have opted for national-level planning to bridge the digital divide and to reap digital dividends. Within this planning context, five areas have been given priority for bridging the digital divide. Namely, distance education, telemedicine, job matching, local development and expanding market reach (Rao, 2005). However, ICT growth and debate has happened guided by various theoretical perspectives. These different theoretical perspectives utilised within ICT4D in bridging the digital divide will be explored briefly next.

### **Different theoretical perspectives for ICT4D**

The debate on the Digital Divide has taken place along two polarities, where on one end the market alone should take care of any perceived disparities and on the other end the government should implement policies that subsidise access for the disadvantaged. Within these extremes, three general theoretical perspectives that could be used to form policy design to improve rural ICT4D are suggested (Mariscal 2005). These theoretical perspectives are Market Economy, Social Capital and IT for Development. The Market Economy view that is capitalist oriented will be explored next.

### **Market economy based ICT4D**

The Market Economy view believes that the most effective way to foster ICT diffusion to the disadvantaged is through economic growth, deregulation and with a liberalised economy. Similarly, this theoretical approach argues that market forces would drive the expansion of ICT in such a way that competition would enhance technological innovation, leading to decreased prices, making services and products affordable to the disadvantaged. Studies that support this approach suggest that considerable increases in access to telephones internet and telecommunication services require four pillars. Namely: privatisation, liberalisation, legal, and regulatory mechanisms to promote

competition, complementary public investments and support for business (Casparry & O'Connor 2003).

Those who argue that wealth causes higher ICT penetration levels point to first world countries that have come close to reaching universal access levels (Mueller 2013). They believe that competition is the main driving force of network expansion within these countries. This view argues that subsidies can distort investment and lead to inefficient practices and resource allocations (Moschella & Atkinson 1998). It is also argued that cross-subsidies create inefficiencies as well as unfair competitive practices by the incumbents. Thus, in this view, subsidies should no longer be implicit but need to become explicit transfers between providers and users in a competitive economy (Mariscal 2005).

Privatised open markets are supposed to perform best, followed by privatised monopolies, with state monopolies coming last within this perspective. Supporters of this view note that countries with open telecommunication sectors also have more internet hosts, lower monthly internet charges, a greater number of providers, and higher rates of internet penetration (Kenny, 2001) as proof that privatised open markets enable growth. However, they also accept that telecommunication markets also require legal and regulatory mechanisms to promote competition, especially fair interconnection charges and revenue-sharing arrangements between former monopolists and new entrants.

Within this view, proponents argue that public policies that promote universal telecommunications access through other avenues are mainly done for political reasons (Mueller 2013). Similarly, it is argued that universal service policy, which is a mechanism for more equitable distribution of ICT, should be focused on income distribution policy for better results (Crandall 2001). Tseng and Ho (2001) go further to suggest that IT is not an equaliser and that GDP per capita is the most significant factor determining network deployment and ICT access and improving economic performance. They state that income distribution is the better way to address inequality. However, others disagree with this view and advocate a more community focused ICT4D approach. This society-centric ICT4D approach is explored below.

## **Social capital based ICT4D**

IT literature on the social capital perspective stresses the social and political importance of ICT access (Mariscal 2005). The concept of social capital focuses on factors that bind communities together with ICT as an enabler, which is thought to have an impact on development outcomes such as growth, equity, and alleviation of poverty. Social capital could be viewed as a set of 'horizontal associations' among people that effect productivity of a given community affecting growth, equity and poverty alleviation (Putnam 1993). This view also suggests the value of social relations and role of collaboration to get collective economic results with ICT. Pinkett's (2000) 'shared constructive activity' which has been built on Kretzman and McKnight's (1993) concept of asset-based community development suggests that communities need to look inward to the assets and capabilities that allow for the successful implementation of ICT, considering that there are more external obstacles in acquiring knowledge of ICT in the developing world. They promote social capital as a mechanism of social interaction, where community leaders' impart ICT skills within the community, addressing the community needs and broadening the available pool of social capital within the community.

The studies that support this concept promote ICT as an enabler that uplifts society to achieve the desired outcomes while highlighting the interrelation and synergies between the two. For example, the internet plays a role in reducing transaction costs that build social capital (Horrigan 2002). As such, the internet is seen as a unifying force that acts as a catalyst for new types of co-operation that negate resistance, aid collaboration and knowledge transfer. Similarly, access to telephones produced social capital - the more the social interaction, the more people required access to phones (Collier 1998). Considering that prices were dependent on the usage of phones the relationship was symbiotic. Equally, Oxendine et al. (2003) also showed the criticality of social capital in the development of a community network within their studies of rural cities in Minnesota through this symbiotic relationship. However, some argue that a social capital focus cannot always be financially viable and government, NGOs or the private sector need to subsidise ICT for the greater good of the rural poor and development. This notion will be explored next.

## **Information Technology (IT) for development**

This theoretical approach argues that IT has the potential to improve living conditions by increasing the income of the disadvantaged groups. Hence, bridging the digital divide necessitates subsidised access to ICT for the benefit of the poor and the disadvantaged (Mariscal 2005). Nonetheless, developing countries also require complementary investments in other infrastructure such as electricity and roads. A basic question that surrounds the digital divide debate is ‘why ICT consumption should be subsidised by government, NGOs or society, rather than other goods and services?’

In attempting to answer this question Mariscal (2005) notes that IT facilitates development via a combination of three factors; externalities, knowledge creation and regional development. A special focus here is given to externalities that materialise when transactions generate un-priced benefits to outside parties. For example, there is an individual benefit when a new rural consumer receives an internet connection. However, this benefit is less than the total flow on benefits to the rural society from that event because knowledge transfer happens to many people from providing one internet connection to a rural village. This is the reason that ICT4D justifies subsidised access. Similarly, Romer (1986) using the endogenous growth theory suggest that innovation and technology development is determined by learning and economic growth is driven by knowledge. The endogenous growth theory holds that investment in human capital, innovation, and knowledge are significant contributors to economic growth. The theory also focuses on positive externalities and spill over effects of a knowledge-based economy which will lead to economic development. This is to say that knowledge has a positive impact on poverty reduction and IT as a channel for learning justifies subsidising. For example, it can be shown that gaining medical knowledge via internet access would benefit the individual, family and the community.

However, investors, financial institutions and urban telecom operators are reluctant to get involved in ICT ventures in rural areas in emerging markets, as they are high-risk. Institutions (e.g. World Bank), governments and NGOs are required to play a vital role in executing such regional projects, which usually involve some level of individual or organisational subsidising. However, detractors point out that regional development

(economic outcomes) through investments in ICT has been found to be indirect, complex, and difficult to measure, noting that measuring ICT benefits on regional development have been done mostly through firm-level analysis (Saunders College & Mullins 1994).

Regardless of the theoretical perspective used, rural ICT4D projects face many challenges. Before examining any specific low cost model used in ICT4D projects, those generic difficulties need to be investigated. These generic difficulties ICT4D face are examined briefly below.

### **Difficulties that rural ICT4D projects face – Issues beyond human capital**

#### ***Infrastructure and investment issues***

Due to the remoteness of the communities, the ICT4D projects generally lead to high start-up and maintenance costs. Remoteness also introduces requirements for extremely robust equipment for enhanced reliability, which increases the cost. These costs are exacerbated due to the lack of complementary infrastructure such as roads and electricity. Low population density also negatively impacts upon service cost recoverability. Low earning capacity of rural population and subscriber affordability also influences commercial viability of projects and results in low take-up of ICT4D projects by private enterprises. Such problems require governments and NGOs to subsidise such projects to assist the most disadvantaged. The remoteness also introduces issues with quality of access. For example, in rural areas, ISPs only provide slow internet access speed compared to city services, due to the distance from the exchanges. Lack of relevant human capital (e.g., technicians for maintenance) also affects infrastructure maintenance, availability and quality of service for the disadvantaged. However, the high investment required for network infrastructure is lessened by developments in new transmission technologies, leading to greater scope for private investments (Casparry & O'Connor 2003). Yet, there is no 'one-size-fits-all' solution to provide low-cost ICT access. The special demand that falls on technology and equipment, especially within ICT4D, will be explored next.

### ***Technology and end user equipment issues***

There are different criteria that apply to ICT4D scenarios in terms of robustness and usability (Caspary & O'Connor 2003). It is argued that problems arise when the unsuitable model developed by donor countries or private sector agencies is imposed on poverty eradication schemes in the third world (Sarker 2003). For example, low cost tablets, such as the Indian 'simputer', are designed to withstand the harsh environmental conditions with dual power supply modes for use in rural areas of the developing world. They also do not require a high level of computer literacy to operate due to its touch screen with icon-driven interface. Although it is seen as rudimentary technology by western standards, such technology is robust and relevant to rural populations that are limited in their computer literacy. In most cases, such technologies are seen as the first set-up to a larger uptake of technology as the rural areas develop. Still, there is a need to identify and develop new technologies that adapt to the special conditions ICT4D projects face. For example, e-mail-only appliances designed for ICT4D in rural areas would need to consume minimal bandwidth due to low bandwidth and other associated costs. However, the benefits of computers have been highlighted by some ICT4D projects as they can be used simultaneously for a variety of purposes compared to a device with limited or specific capability. Yet, considering that the rural poor benefit from local language software, customised keyboards, and easy to use computers, such projects require substantial secondary investments (Sarker 2003). Furthermore, the cost of technology varies across localities depending on the degree of remoteness, infrastructure availability, user density and the mode of communication chosen (Caspary & O'Connor 2003). However, with technologies evolving rapidly, what may be technically suitable and financially beneficial today may appear less so as time passes. Nevertheless, some aspects of ICT4D seem to be more static and to some extent ignored at the peril of the initiatives. These demand and supply-side restraints are investigated below.

### ***Demand and supply-side restraints issues***

Access to ICT shows unequal growth between developed and developing countries with growth concentrated on metro pockets, despite the majority of the developing world population and the poor living in rural areas. Considering that 60-70% of the

deployment cost lies with access network development, it is a further deterrent for rural network development due to subscriber affordability and low population density of some remote areas (de Silva et al. 2006). Although cellular wireless technologies allow for quick deployment, their cost structures are still more suited to the developed world where the users are willing to pay a high price for convenience regardless of the higher initial set-up costs.

Low-income communities require services at an affordable price and the pricing model ultimately needs to ensure long-term financial sustainability. The Bhoomi project in India is an example of such sustainable pricing (Sarker 2003). With the assistance of this program, any farmer can get a copy of land deed for a user charge of IN Rs. 15, bypassing the delays, harassment, and bribes that had to be paid in the past.

The poor also need access to local contextualised organic information systems, more than information from an alien context (Heeks 1999). While fewer than one in ten people speak English, 80 percent of websites are presented in English (Sarker 2003). Similarly, most software is limited to English although some popular languages are available as optional installations. Although initiatives such as telecentres provide local content, it is difficult to recover costs of content development (Caspary & O'Connor 2003). Hence, it is argued that NGOs and/or governments should sponsor efforts to provide information in local languages in a systematic and sustainable way. For example, 'Infoshops' in Pondicherry India provided local content via a volunteer created information database (Sarker 2003). However, the design and delivery of programs that promote local participation and integrate social institutions for sustainability with local languages are a factor for success within ICT4D (Kenny 2001). Providing training and information on a local content to reaching out and strategically building a clientele to make an ICT4D project demand driven, adds to the sustainability of the project while meeting the needs of its intended beneficiaries (Roman & Colle 2002). The telecentre set up by M S Swaminathan Research Foundation (MSSRF), where the training covered locally relevant materials in the local language that attracted and retained local clientele is a good example of such an effort.

Human potential is often neglected among women and people with disabilities within ICT4D projects (Rao 2005). For example in India, only 29 percent of internet users are

female. However, participation rates within ICT4D projects indicate that marginalised groups such as women and people with disabilities are avid users and passionate advocates of such programs. In addition, considering that females make more than half of the population of developing countries, it is advisable to re-think the project's user base and the untapped potential of such groups. Such a success story is the Koslanda Nenasala telecentre in Sri Lanka where disabled persons run the telecentre in an innovative way with significant personal and community benefits (Mozelius et al. 2010). Nonetheless, financing is also a key challenge faced by all ICT4D projects. The innovative ways followed in this regard and the necessity to provide subsidies are explored next.

### ***Financing issues - Funding ICT4D through crowdfunding and microfinance***

SR human capital literature introduced thus far notes that human capital and social focus may lead to generation of greater wealth and sustainability in knowledge-based industries. However, to get a holistic picture of the importance of funding such ventures is crucial to investigate the initial funding available to these organisations in ICT4D to practise SR and to attract human capital. Although rural ICT access programs should become commercially sustainable eventually, many depend on donor or government funding initially (Caspary & O'Connor 2003). However, others argue that developmental benefits provided by such ICT4D projects, such as telecentres, warrant the subsidising of the set-up and operation costs for the larger benefit they provide the society at large although the need for an ongoing funding commitment is seen as a downside of ICT4D services (Bastistas-Buch et al. 2001).

However, government and development organisations have resorted to innovative ways to mitigate the issue of need for continued funding and subsidising. Governments have used 'rural service provision' conditions written into operating licenses to expand services. For example, Telmex Mexico's 1990 licence required installation of at least one telephone with long-distance service in all towns with a population greater than 500 prior to the end of 1994 (Caspary & O'Connor 2003). Competitive bidding is also a feasible way to expand a network, where a license is provided to an operator with the highest service rollout commitment (Wellenius 1997b). Other methods available to government include the use of taxes to fund service expansions. For example, Peru used

a 1% tax on the gross annual billings of all telecommunication providers to set up a fund to target service provision to rural areas.

Exogenous capital is required to break the vicious circle of poverty (Ashta 2012) and needs to be complimented with technology transfers and services. Usually funding the capital for ICT4D is something that was relegated to institutional investors, NGOs and Governments. Funding for entrepreneurs has traditionally come from debt-based or equity-based sources. Traditionally venture capitalists, angel investors, governments and banks have played a role in this space. However, grassroots level start-ups in ICT4D projects typically do not have assets required as security for a bank loan. Banks have become more risk averse and conservative in granting loans. As such, rural entrepreneurs increasingly turn to equity financing such as venture capitalists, angel and private investors, soft loans from government agencies and NGOs.

Nonetheless, development in ICT, mobile technologies, software and data analysing have increased the sophistication, scale and diversity of financial services for the poor allowing billions of people to borrow and repay loans, and save for their future (Ashta 2011). Internet and mobile technologies have also had positive impacts on development tools and access (Ashta 2012). The internet has made crowdfunding of sizable social and government projects a possibility in both developed and developing countries by allowing an entrepreneur to pitch an idea or business plan to more than just family and friends. Crowdfunding originated from the concept of crowdsourcing, which is a broader concept of an individual achieving a goal by receiving small contributions from many parties. Crowdfunding is the application of this concept and can be a means for grassroots level entrepreneurs and small sized enterprises to raise the necessary funds to take the next step in their development. Different business models are also visible in the operationalising of crowdfunding platforms.

Crowdfunding is a growing business with around 800 crowdfunding platforms worldwide, and crowdfunding initiatives raised an estimated 2.6 billion USD in 2012, including about 945 million USD in Europe through 470,000 campaigns in May 2013 (Massolution 2013). Out of these projects, social causes were the most common amounting to 27.4% with Information and Communication Technology projects comprising a mere 4.8% of activity, although there is an overlap between the two.

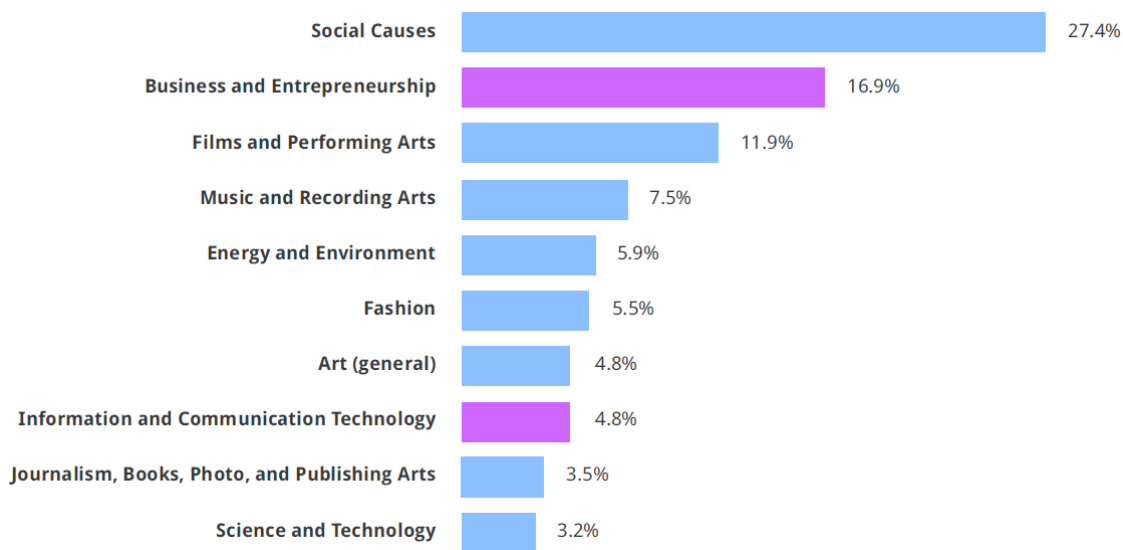


Figure 7 - Types of crowdfunding ventures across the 10 most active activities (Ingram &Teigland 2013)

A main driver of crowdfunding is the significant difficulties for new ventures to attract traditional external financing (Cosh et al. 2009). It is argued that crowdfunding will displace traditional funding models as it will become a substitute for capital from private equity funders such as venture capitalists, angel investors, incubators, NGOs and bank loans for start-ups in the US (Ingram & Teigland, 2013). However, in the current financial environment, crowdfunding acts as a complement or intermediary to traditional funding. Nonetheless, governments have shown interest in crowdfunding as a potential tool to stimulate economic growth and job creation at a grassroots level, especially considering that traditional funding such as bank loans are shrinking due to the financial crisis.

Crowdfunding is also increasingly used by ICT entrepreneurs in developing countries. Whether it is to repair or build new ICT infrastructure, crowdfunded solutions also could be the solution for a developing country struggling to raise the necessary capital for its ICT4D projects. Although entrepreneurs can utilise reputed crowdfunding sites like Kickstarter or Indiegogo, the backing of a global stakeholder from the financial, NGO or government areas adds credibility to the project at a grassroots level. The involvement of financial services firms in crowdfunding would also complement the

existing donation based sites by providing institutional clients a way to potentially invest in these ventures.

A study of technology projects on Kickstarter in the US revealed that the failure rate of crowdfunding projects was only 3.6% and that those projects that stopped responding to funders were only worth a mere \$21,324 in pledges or less than 0.05% relative to 4.5 million USD across the successful projects (Ingram & Teigland 2013). Trust in crowdfunding is governed by satisfactory relations, positive reputation, some legal requirements and through third parties such as group memberships and independent certifiers. Crowdfunding platforms also benefit entrepreneurs by allowing them to test the market, to attract skills and experience, and to create brand awareness. Furthermore, having access to a large network is recognised as a unique opportunity by potentially providing credibility through word-of-mouth. Being featured on a crowdfunding platform is also strongly correlated with success. Therefore, crowdfunding could be the solution for a developing country struggling to help their grassroots level ICT4D projects raise the necessary capital for sustainability beyond their donor funding stages.

Capital needs are complimented by new technology and services especially in grassroots development. Yet, most models proposed in grassroots level ICT4D efforts are simple in nature. Various ICT4D models have been proposed and trialled globally by interested stakeholders in the attempt to achieve ‘Universal Service’ and to bridge the ‘Digital Divide’. Some of these attempts and models will be briefly explored next as some examples of global initiatives.

### **Models for low-cost ICT access within ICT4D**

In answering the question, ‘How do various organisational models of low-cost rural ICT4D provision compare in terms of both affordability and sustainability?’ one could point to numerous models. However, the following general models are highlighted as attempts to introduce efforts in this field.

#### ***Grameen Village Phones in Bangladesh***

Grameen Village Phones is one of the best-known experiments in extending telephone access to the poor. This was a project undertaken by Grameen Bank (GB) and Grameen Telecom (GT). Grameen Bank (GB) is best known for its successful microfinance program, which assisted poor rural women of Bangladesh to much acclaim; GT and GB promoted dual objectives within this project.

### ***The multitiered franchise models***

Some ICT4D practitioners favour models with a multitiered franchise. One of the widely known examples of the multi-tiered franchise business model was the Indian start up n-Logue which was incubated by the Telecommunications and Computer Network (TeNet) Group of the Indian Institute of Technology for disseminating low-cost communication technologies to rural poor.

However, for some a larger franchise business model with an overarching body to guide the project was not always suitable for grassroots operations at very remote locations. Such requirements were usually met by mixed models.

### ***Mixed models***

The study has indicated that it is possible to use a combination of the above access models in innovative ways to support ICT4D. For example, in Brazil, virtual telephones or village voice mail systems allow individuals who do not have mobile phones to receive voice messages to their own numbers and voice mailboxes. Some mix models have chosen to wed the internet and telephone. Other projects, such as Kothmale Community Radio project in Sri Lanka, used conventional FM radio to broadcast information downloaded from the worldwide web to listeners.

### ***Shared-access models***

Despite mixed models success in reaching the most rural populations, shared-access models are favoured by governments to reach larger populations of rural poor in a methodical fashion. As a result, telecentres have become a widely utilised information-propagating avenue for ICT4D. The world experience of telecentres is explored below

briefly.

### ***Telecentres***

When costs are spread to a larger group or when technology experts can be brought in, this shared access model represents a more efficient way to disseminate ICT. Governments and agencies concerned with development recognised the benefits of this model. It has been termed the ‘telecentre movement’ (Roman & Colle 2002). ICT development efforts have focused largely on telecentres as it was seen as a ‘silver bullet’ in the fair sharing of the benefits of digital revolution. Denmark was one of the many Scandinavian countries that set up telecentres in the early 1980s as a ‘social experiment’ to promote the use of advanced ICTs among rural communities (Benjamin 2001). International development institutions like Canada’s International Development Research Centre (IDRC), UN Agencies and World Bank also initiated large scale deployment of telecentres in Asia, Africa and Latin America since early 1990s (Wattegama et al. 2010).

The telecentre model combines phone access with access to other ICT services in rural areas of developing countries. Telecentres are defined as, ‘a physical space that provides public access to ICTs for educational, personal, social and economic development’ (Gomez, Hunt & Lamoureaux 1999). A telecentre can be accessed by anyone to get a range of ICT services such as internet access, fax, word processing, online employment opportunities, training and business enterprise. Telecentres can also serve as distance education enablers by providing students and educators access to educational institutions anywhere in the world. Furthermore, telecentres provide educational software packages on site from various online educational providers. Specialised services are also offered to healthcare workers enabling them to use tele-diagnostics programs, order supplies, pass on public health information, and obtain specialist advice for complex health problems. Telecentres also allow entrepreneurs and rural business people to communicate with partners and potential clients, explore business opportunities and conduct business research (Jensen & Esterhuysen 2001)

Several types of telecentres can be distinguished based on the funding model and social objectives of projects. These models vary from small internet cafes started by individual

entrepreneurs to networks of telecentres set up based on the franchise model by an NGO and governments within their ICT4D efforts. Worldwide examples of such telecentre efforts including Cabinas Públicas in Peru, established by an NGO resulting in relatively high rate of Internet use (1,150 per 10,000 inhabitants, on par with New Zealand) and a significant reduction in prices (Girardet 2001). In Senegal, more than six thousand privately operated and profitable telecentres have come into existence since the early 1990s, more than doubling public access to a telephone. In El Salvador, Infocentros, a non-profit organisation established telecentres with interest-free loans from the government as franchises cum business incubators (Khelladi 2001) operated directly under Infocentros's management by the franchisee.

NGOs, governments and donors have established telecentres with different models to achieve particular ICT4D or social goals such as providing local content to rural poor, and to address language barriers by providing them access to information. In one such simple example in India, a telecentre downloaded weather information via US commissioned spy satellites, translated those to the local language and conveyed weather information to fishermen via loudspeaker. E-government services are also heavily catered for by telecentre initiatives. For example, in Andhra Pradesh in India, 'Relient' a private company was contracted by the state government to underwrite telecentres by providing a fibre optic backbone to link villages via a government provided 'anchor application' for e-government services (Tschang et al. 2002). Telecentres also assist the marginalised or disadvantaged within society by empowering them through employment and information. A prime example of this are the telecentres established in rural areas of Southern India by the M.S. Swaminathan Research Foundation.

The documentary data also denotes abundant examples of telecentre and pilot projects within Southern Asia comprising the countries of Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan and Sri Lanka. Yet, telecentres have a mixed success rate (Cohen 2001). At a macro level, only very few telecentre initiatives have exhibited greater sustainability outcomes within the SR synergies envisaged, scaling up beyond their pilot stages. Many telecentre projects have failed to serve their target groups sustainably, attained low patronage, and have not achieved commercial viability. Furthermore, telecentres' role in development remains controversial as not everyone

agrees that they have delivered (Wattegama et al. 2010). Conversely, other scholars attribute growth of rural ICT usage in most developing societies to the unprecedented expansion of mobile and broadband networks, which hardly received any development funding. The following sections look at the contributions of telecentres to ICT4D projects and issues they have faced in achieving sustainability.

The telecentre movement gained momentum in the developing world as governments and donor agencies focused their attention to finding best ways, and models to bridge the digital divide. Due to this models' success in reaching a large number of target groups in disadvantaged communities and the economies of scale it was largely more successful than the other models discussed (Harris et al. 2003). In emerging nations, the establishment of telecentres has contributed to the impetus of social and economic development through their enablement of its inhabitants.

The telecentre movement was initially donor funded. However, most telecentres failed when donor funds concluded. The models were not designed to be profitable or financially sustainable in the long term (Hosman 2008). Public Private Partnership (PPP) was promoted as an alternate business model, which takes advantage of the financial capital, profit-seeking motive, and technological expertise of the private partner, and the public partner's drive to improve citizens' quality of life. However, even PPPs development project record of accomplishment indicates a large number of unsuccessful initiatives, which go unreported, not helping the learning efforts (Angerer & Hammerschmid 2005). Furthermore, little has been written about the sustainability or scalability of telecentre projects adding to the issues faced by these projects (Roman & Colle 2005; Walsham & Sahay 2005).

Only a few telecentre projects have achieved financial sustainability without ongoing external support from external umbrella organisations. At best, telecentres have been able to cover operating costs while most have struggled to even replace depreciating equipment. Out of 70+ community telecentres established by the South African Universal Services Agency since 1997, only 40 percent remain operational with three percent able to cover its costs (Caspary & O'Connor 2003). These failures are surprising considering that many studies estimate a relatively high willingness to pay for ICT access by poor people in developing countries. The more realistic business

plans show that the centres will take at least four years to become self-sustaining after capital is written off, if the telecentres manage to survive through that period.

There is little empirical evidence on the comparative financial sustainability of the different ICT4D access models. On paper, Grameen Village Pay Phone models seem to have one considerable cost advantage over telecentres. However, the operating model and infrastructure are different. All models are able to use economies of scale, harmonisation of equipment and software to provide lower prices. As such, the next section focuses on telecentre issues that hamper sustainability and scalability.

### **Sustainability of telecentres**

Sustainability of telecentres has emerged as a topical issue, in ICT4D in recent times, due to high failure rates (Harris et al. 2003; Whyte 2000). Harris et al. (2003) define telecentre sustainability as ‘the ability of a project or intervention to continue in existence after the implementing agency has departed’. Whilst promising outcomes are emerging, most telecentre initiatives in Asia are still experimental and are supported by agencies external to the communities they serve (Harris et al. 2003). Researchers argue that telecentres must continually change, if they are to adapt to local social and economic developments (Van Belle & Trusler 2005; Benjamin 2001; Gurstein 2001). In this context, uncovering traits of successfully sustainable telecentres in emerging nations has become a focus (Bailur 2007; O’Neil 2002; Harris 2001; Reilly & Gomez 2001; Whyte 2000).

Various academics have explored barriers to, and components of telecentre sustainability (Kumar & Best 2006; Harris et al. 2003; Roman & Colle 2002; Benjamin 2001; Hudson 2001a; Whyte 2000). However, telecentre sustainability examinations have centred around three main categories, namely surrounding financial/economic, political and social sustainability (Bailur 2007). While it has been acknowledged that social and political sustainability are key issues with important inter-relationships, explorations thus far has mainly focused on financial sustainability (Colle 2005; Harris et al. 2003; Whyte 2000). Yet, these larger topics are generally investigated as

telecentres sustaining service delivery, financial viability, community acceptance and staff capability required for sustainability (Harris et al. 2003).

Sustainable service delivery conveys continual provision of information required by the community. In service delivery, it is important to review previous efforts and learn their lessons. This involves looking at evolving community requirements, and proactive uncovering and provision of useful information to the community (Harris et al. 2003). For sustainable service delivery, a formal process for continued feedback from telecentre users is required during the operational lifecycle (Bailey 2009). Stakeholder analysis is also useful for telecentre evaluation purposes (Bailur 2007). However, some suggest that although academics investigate stakeholders within telecentre design, little attention is given to feedback processes required for telecentre evolution (Bailey 2009). It is argued that for sustainability of telecentres, service delivery needs to include local champions (Roman & Colle 2002). That is, to promote vision of telecentres, raising awareness about ICTs as a valuable resource and to focus on information services required to build a local institution that is fully woven into the fabric of the local community. Similarly, additional consideration should be given to the use of participatory methods in the development of community technologies (Day 2004).

Communal acceptance is also critical to telecentre sustainability (Harris & Rajora 2006). Telecentres are involved in managing a community's knowledge (Thamizoli & Balasubramanian 2001) and have a significant impact on the community, its culture, communication patterns, economy, social structure, and future development (Harris et al. 2003). Conversely, telecentre staff is required to assume a role in community development (Harris & Rajora 2006; Madon 2005), and recognise and address emerging needs of the communities (McConnell 2001). In other words, telecentre services should evolve to meet community needs (Hudson 2001b). ICT programs in telecentres promoted should be relevant to the daily lives of their intended beneficiaries for it to be sustainable within rural socio-economic development and poverty eradication efforts (Sarker 2003). For example, privately run cyber-cafes under the Gyandoot model in tribal Dhar district of Madhya Pradesh State in Central India employed village youth who were eager to cater to local needs as centre operators to gain the most focus and benefit for local issues that the communities faced. The degree of community involvement and commitment to a telecentre is often reflected in user

behaviour and perceptions in evaluating the value of telecentres (Whyte 1999). As a result, the role of telecentre staff as local community ‘champions’ is an important one (Roman & Colle 2002).

The pivotal role of human resources plays in the sustainability of telecentres is sparsely explored in the literature (Roman & Colle 2002; Harris 2001; McConnell 2001). Although literature stresses the importance of the need for telecentre staff to recognise user needs (Gurstein 2001) and tailor the services to meet diverse community needs, it also presents a key problem for telecentre staff in determining priorities and acquiring relevant capabilities for such service demands (Benjamin & Dahms 1999). While telecentre records are helpful in determining needs, many telecentres do not maintain such information. Instead, they rely on telecentre staff’s interactions and observations. Hence, sustainable telecentres require specialised staff capabilities that need to be maintained and updated periodically. Hence, the methods of retaining trained staff are also paramount to sustainability, to prevent a skills drain to other ICT markets (Baark & Heeks 1998). However, core competencies required and competencies necessitated through evolution of telecentres seems to vary according to social, religious, community and country contexts (Harris et al. 2003).

Financial viability is also related to sustainability and the human capital of telecentres. Financial viability generally refers to generating sufficient income to cover costs of the telecentres. ICT solutions utilised must be affordable to be sustainable with the target beneficiary communities of the project (Sarker 2003). For example, Warana Villages Project and Taharat initiative in India failed due to expensive costs associated with V-SATs technology leading to affordability issues for its potential consumers. However, this does not preclude other sources of revenue, such as donations from government or NGOs for subsidisation of such solutions (Hudson 1999). PPP in telecentre development offers the opportunity to combine innovation, responsiveness with stability via public participation (Harris et al. 2003). However, evidence suggests that supporting telecentres exclusively by government grants is not a good sustainability formula, financially or politically (Roman & Colle 2005). Telecentres need to be demand-driven, and demand should be reflected in the community’s willingness to pay for some services (Harris et al. 2003). However, financial sustainability warrants special attention due to the reassurance required by governments, NGOs and other donors that

telecentres would not become a drain on resources without a clear sustainability plan. However, long-term evaluation is ignored within most telecentre project budgets and initial benchmarking is seldom conducted due to a lack of coordination and forward thinking within such ICT projects (Rosenau 1999). It is also noted that not having a standard measure of telecentre assessment was due to resistance to evaluation in general. The techniques used in telecentre evaluations to measure progress will be explored next.

### **Telecentre measurement techniques**

Most telecentre projects in developing countries are funded by development agencies such as the International Development Research Centre (IDRC), United Nations Educational, Scientific and Cultural Organization (UNESCO), United Nations Development Programme (UNDP) and World Bank (Wattegama et al. 2010). There are various methods used for telecentre measurements. However, they are generally based on the umbrella organisation's specifications and there is no standard or emerging consensus on measurement methods. The following techniques have been visible in actual telecentre evaluations.

- Outcome Mapping (Earl et al. 2001) which instead of impacts at large, focuses on the 'behavioural changes' of the 'boundary partners' to overcome the problem of separating out the contribution of a project from impact.
- Acacia Research Guidelines (Whyte 1999, 2000) advocates a multi-stakeholder evaluation model based on stakeholders' viewpoints and needs.
- Quasi-Experimental (Hudson 2001) are conducted as before-after and after-only evaluations. In before-after studies, data on specified indicators are collected before and after the installation of the telecentre and compared.

- Benchmarking: Indian Rural Telecentre Projects (Harris 1999) used both quantitative and qualitative approaches in ex-post evaluation of rural telecentre projects in India.
- Malaysian Telecentre Evaluation (Harris 2007) was a similar method to Harris (1999) method in ex-post evaluation of Pusat Internet Desa (PID) telecentre program in Malaysia. It recommends data surveys to be augmented by techniques like focus group discussions and story gathering to capture feelings and emotions and generate complete pictures of initiatives.
- Nenasala Interim Survey in Sri Lanka by MG Consultants (2008) utilised a survey of operators and users of Nenasala Telecentres.

However, the nature of evaluation techniques in regards to technical, conceptual strengths and the accuracy of results varied among the techniques. Documentary data emphasises that such telecentre measurement is complex, difficult to test as they contain subjective measures based on opinions and eclectic data. Furthermore, current models do not lend themselves to the development of a methodology that could be used consistently in the field. However, the central challenge for leaders today is ‘how to arrive at some workable balance’ between instrumental and other criteria (Lee 2008).

### **Gap in telecentre research**

Telecentres remain a theoretical area of research. Roman and Colle (2005) outline where telecentre research is most required on three broad interconnected areas. These include the impact of telecentres on social and economic change in the benefit of society and factors and conditions required for the long-term sustainability of telecentres. Furthermore, studying these aspects at micro and macro levels also has been recommended. The micro level is encouraged as it is important to identify the infrastructural, social, economic, and cultural factors that account for sustainability of telecentres as local institutions. The macro level is seen as important to outline the national and international environment that frames international systems, from public policy to contextually appropriate technological innovations.

Although the importance of operators in telecentre success is accepted, the significant SR synergies they champion for the rural communities, the role of human capital and their drivers in sustainability of telecentres is sparsely explored at the micro and macro levels. This research focuses on the specific drivers of human capital conditions at both micro and macro levels for the long-term sustainability of telecentres.

## **Conclusion**

With one-third of the world population still living below the poverty line, their ability to access technology is limited with marginalisation visible based on gender, rural-urban and poor-rich gaps. This notion in essence is known as ‘Digital Divide’ between the information ‘haves’ and ‘have-nots’ in ‘Universal Service’ debate. Similarly, although ICT is considered as a tool for social and economic development, its impact is limited by a lack of other parallel developments in rural and remote regions where majority of poor live. Nevertheless, bridging the ‘Digital Divide’ have gained currency with governments and NGOs in support of the benefits it promises the worlds’ under-privileged within ICT4D projects. Archival material analysis suggested that rural economies driven by ICT have made progress particularly in the developing world. However, the question remains whether market forces alone will suffice to extend rural ICT access at a sufficiently rapid rate to meet demand and expectations of the rural populations. In this context Mariscal (2005) suggest three theoretical perspectives for ICT4D, namely Market Economy, Social Capital and IT for Development.

ICT4D faces numerous other challenges including lack of complementary infrastructure, poor revenue generation ability due to low population density, low subscriber affordability and earning capacity that influences their sustainability and service delivery capacity. Yet, due to the remoteness of the communities, the ICT4D projects generally lead to high start-up and maintenance costs. Remoteness also introduces requirements for extremely robust equipment for enhanced reliability which adds to cost. Lack of populations in remote areas also introduces demand and supply-side restraints issues. As a result, ICT shows unequal growth between developed and developing countries with growth concentrated on metro pockets, despite the majority

of the developing world population and the poor living in rural areas. However, it is still argued that developmental benefits provided by ICT4D projects, warrant the subsidising of the set-up and operation costs for the larger benefit they provide the society at large.

Exogenous capital is required to break the cycle of poverty and it needs to be complimented with technology transfers and services. Usually funding the capital for ICT4D is something that was relegated to institutional investors, NGOs and Governments. However, crowdfunding and microfinance has become a means for entrepreneurs and small sized enterprises to raise the necessary funds and to take the next step in their development. Capital needs are complimented by new technology, innovative low cost initiatives, and services especially in grassroots development. Most models proposed in grassroots level ICT4D efforts are simple in nature. Some examples of global initiatives that attempted to answer the question, 'How do various organisational models of low-cost rural ICT4D provision compare in terms of both affordability and sustainability?' include Grameen Village Phones, multitiered franchise models and mixed models which use a combination of the above access models in innovative ways to support ICT4D

However, ICT development efforts have focused largely on telecentres as it was seen as a 'silver bullet' in the fair sharing of the benefits of digital revolution. Telecentres took to prominence in the early 1980s as a 'social experiment' to promote the use of advanced ICTs among rural communities. Telecentres are defined as, 'a physical space that provides public access to ICTs for educational, personal, social and economic development' (Gomez, Hunt & Lamoureaux 1999). Yet, telecentres have a mixed success rate. At a macro level, only very few telecentre initiatives have exhibited greater sustainability outcomes within the SR synergies envisaged, scaling up beyond their pilot stages. Social Capital aspect or communal acceptance is also critical to telecentre sustainability. Telecentres are involved in managing a community's knowledge and have a significant impact on the community, its culture, communication patterns, economy, social structure, and future development. The pivotal role of human resources plays in the sustainability of telecentres is also sparsely explored in the literature including the key problems for telecentre staff in determining priorities and acquiring relevant capabilities for service demands. However, lessons have also been learnt through these efforts and difficulties. These indicate relative success of

telecentres working under a strong common SR focus through an umbrella organisation over stand-alone ones and the realisation of the need to subsidise SR synergies of telecentres in remote areas for the long term.

However, the nature of evaluation techniques in Telecentres regards to technical, conceptual strengths and the accuracy of results also varied among the techniques. Documentary data emphasises that such telecentre measurement is complex, difficult to test as they contain subjective measures based on opinions and eclectic data. Furthermore, current models do not lend themselves to the development of a methodology that could be used consistently in the field. However, the central challenge for leaders today is ‘how to arrive at some workable balance’ between instrumental and other criteria.

SR synergies are common in Sustainable Development initiatives. It is also clear that SR synergies in Sustainable Development programs rely on Human Capital, especially in knowledge-based initiatives such as telecentres, which are grassroots level, not-for-profit, or for-profit organisations that contribute towards bridging the digital divide as their primary SR contribution. Within this backdrop, Sri Lanka Nenasalas (telecentres) predominantly innovated their own home grown human capital and SR initiatives while sustaining a healthy association with similar projects in South East Asia to share experiences and for exchanging expertise and vision. The next chapter outlines and explores the Sri Lankan research context in detail.

## **CHAPTER 5 – Sri Lanka, Background of the Case Study**

### **Introduction**

Chapter four summarised the larger context to Universal Service Debate and ICT4D efforts in South Asia, including other telecentre initiatives uncovered through the archival material analysis. The documentary analysis of publicly available archival material was also extended to Sri Lanka, covering Sri Lanka's ICT4D journey with e-Sri Lanka and the 1000 Nenasala initiative to aid conceptualisation design and operations of Nenasalas as this research focuses on Sri Lankan Nenasala telecentres as a case study. Sri Lanka was selected as the field for the case study as it was the first South Asian country which obtained World Bank funding to create an e-society with Nenasala telecentres as the portal to reach the disadvantaged rural communities, setting the trend to other South Asian countries to follow suit with World Bank funding. This chapter summarises current literature on the e-Sri Lanka initiative, its governing body Information and Communication Technology Agency (ICTA) of Sri Lanka and especially the 1000 Nenasala (Knowledge Centre) Project as the cornerstone of the e-Sri Lanka project of this study.

### **Sri Lanka, the country**

Sri Lanka, officially the Democratic Socialist Republic of Sri Lanka, is an island in the northern Indian Ocean off the southern coast of the Indian subcontinent. Sri Lanka has also been referred to by many names. It is called the 'The Pearl of the Indian Ocean' because of its natural beauty, which remains abundant and unspoilt. This small island contains diverse landscapes, high biodiversity and multiple climate zones.

Sri Lanka encompasses a rich, diverse, and captivating cultural heritage with its history beginning around 30,000 years ago. Within a mere area of 65,610 square kilometres, the island contains eight UNESCO World Heritage sites. Its geographic location has made it of great strategic importance from ancient times. From the 16th century, some coastal areas of the country were ruled by European powers such as Portuguese, Dutch and the British. In 1815, the entire nation became under the British colonial rule until its

independence in 1948. However, the country remained a dominion of the British Empire until the introduction of a constitution in 1972 which made Sri Lanka a Republic and made the Executive President the Head of State. However, Sri Lanka still has British influence in most of their systems, from parliamentary to legislature to business. The country has had a long history of democracy and international engagement, being a founding member of the Non-Aligned Movement, SAARC and a member of the United Nations, and the Commonwealth of Nations, the G77.

Sri Lanka is also diverse from a social point of view. With more than twenty million people, it is home to a number of religions, ethnicities and languages. However, the country's recent history has been marred by a thirty-year separatist conflict, which was ended by the government of Sri Lanka in 2009. With its capital Sri Jayawardenapura, Kotte, and business hub Colombo, the country has undergone tremendous growth since the dawn of peace and stability at the end of the 30 year old conflict. For administrative purposes, Sri Lanka is divided into 9 Provinces and 25 Districts.

According to the Economic and Social Statistics published by the World Bank in 2011, Sri Lanka had an overall literacy rate of 92%. Furthermore, Sri Lanka's GDP was USD 59.17 billion with an annual growth rate of 8.2%. A look back at growth performances of other comparable economies post Global Financial Crisis (GFC) showed that Sri Lanka has been maintaining relatively stronger growth each year. As Sri Lanka's economy grew, unemployment and poverty rates had also fallen. The country has traditionally relied on important producers of tea, coffee, gemstones, coconut, rubber, the native cinnamon and tourism. However, the government had initiated programs to create BPO opportunities and more knowledge intensive industries to capitalise on high yield, high return enterprises.

The Sri Lankan government credited this development and focus on knowledge to a strategic vision laid out as the vision of the former president's election platform 'Mahinda Chintana', which sets out Sri Lanka's development vision for the 10-year period 2006-2016. The strategy described many ambitious goals, including doubling per capita income through sustained high investment, shifting the structure of the economy, ensuring inclusive growth, improvement in living standards and social inclusion.

Sri Lanka has also invested in education and human capital. Sri Lanka has free education and has achieved a high adult literacy rate (all people aged 15 and over) of 98.1% compared to the global literacy rate of 84.1%. It is the only country in South Asia that is currently rated 'high' on the UNDP Human Development Index. Between 1980 and 2012, Sri Lanka's Human Development Index (HDI) rose by 0.9% annually from 0.557 to 0.715, which gave the country a rank of 92 out of 187 countries with comparable data. Comparatively, the HDI of South Asia as a region increased from 0.357 in 1980 to 0.558, placing Sri Lanka above the regional average.

**Human Development Index: Trends 1980 - present**

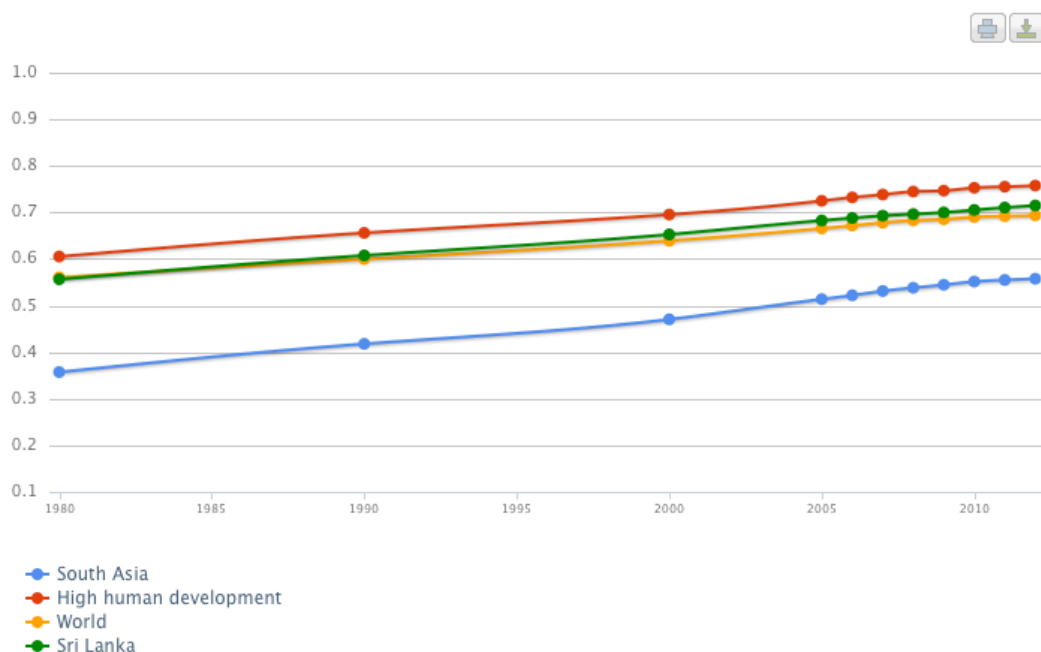


Figure 8 - Human Development Index: Trends 1980 – present (UNDP)

A cornerstone of Sri Lankan education enhancement plans within ‘Mahinda Chintana’ was to utilise technology. To facilitate this vision, Sri Lankan ICT infrastructure and services have also grown steadily due to government efforts. Sri Lanka is connected to the world with four international submarine cables that are utilised by its eight telecom companies. Sri Lanka has a high mobile-cellular penetration, which has more than doubled from around 27% in 2006 to over 87% by the end of 2011. As per ITU data, from March 2014 it was estimated that the number of Cellular Mobile Subscribers was 21,394,262. This translated to 104.4 mobile subscriptions per 100 people.

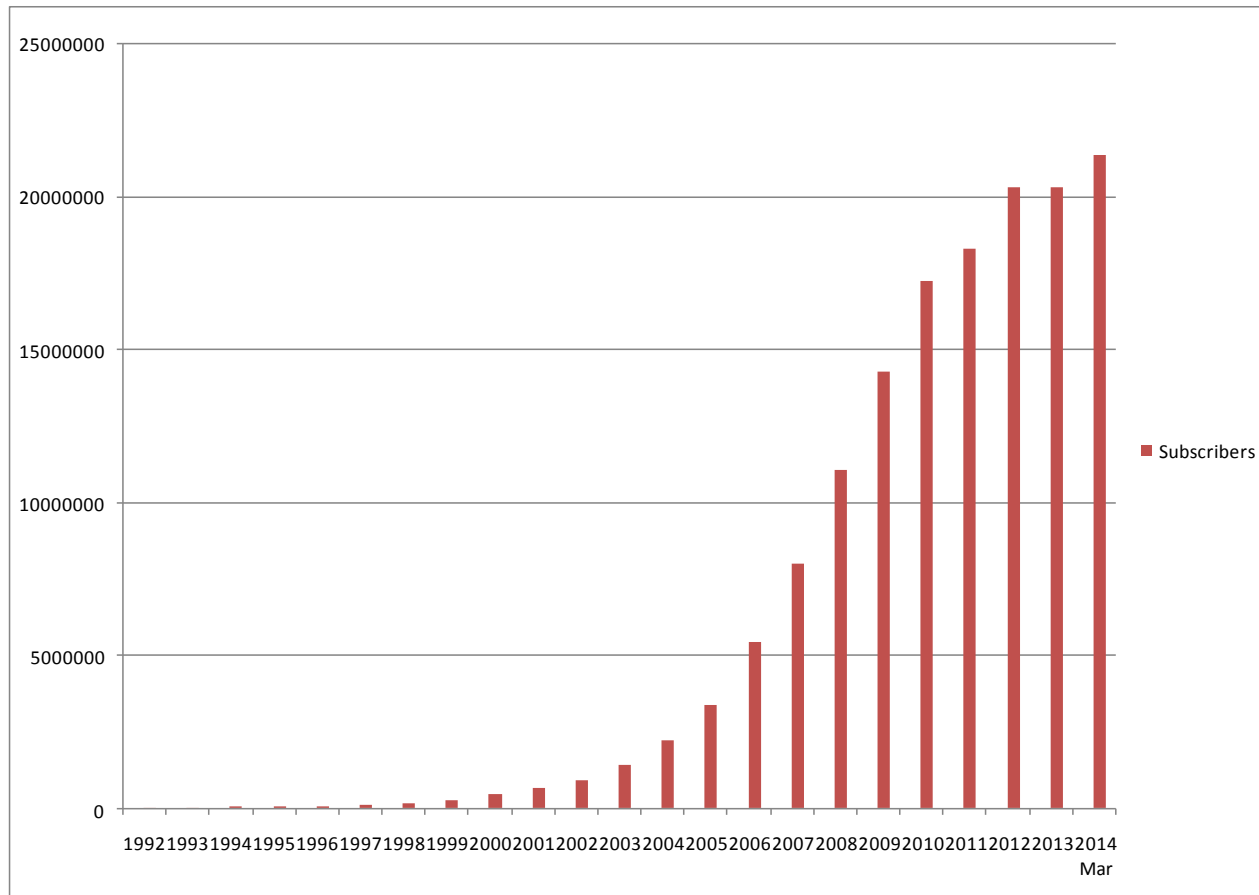
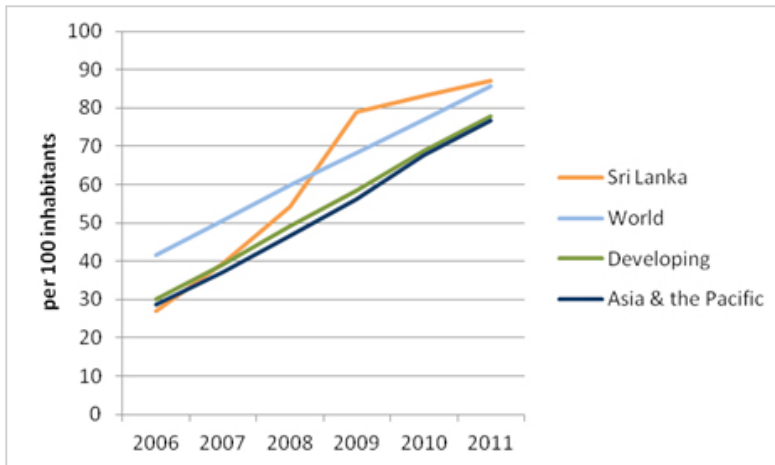


Figure 9 - Mobile Subscribers (1992 – 2014 Mar) (Source: ITU)

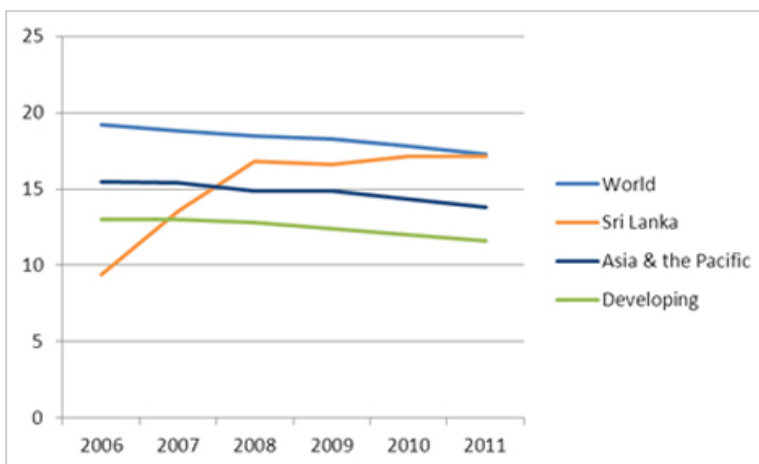
By 2012, Sri Lanka's mobile penetration was higher than the world and regional averages. With a strong regulatory regime and an inexpensive mobile market with five operators, Sri Lanka was ranked 14th globally in the 2011 cellular price comparisons which measured affordability of services. The growth of the mobile market and cheap mobile data has opened a new avenue to rural subscribers to access internet and information compared to fixed internet access, which seems to show limited growth.



Source: ITU World Telecommunication/ICT Indicators database.

Figure 10 - Mobile-cellular penetration, 2006-2011, Sri Lanka in comparison (Source: ITU World Telecommunication/ ICT Indicators database)

Sri Lanka's fixed-telephone growth shows little growth with 17% although it was above the regional and developing country average of 14% and 12% in 2011.



Source: ITU World Telecommunication/ICT Indicators database.

Figure 11 - Fixed-telephone penetration, 2006-2011, Sri Lanka in comparison (Source: ITU World Telecommunication/ ICT Indicators database)

As per data from March 2014, ITU estimates that the total number of fixed phones in Sri Lanka numbered 2,695,636 with a further 6,284 public pay phone booths. Overall, teledensity, that is the number of fixed phones per 100 inhabitants, for Sri Lanka was 13.2.

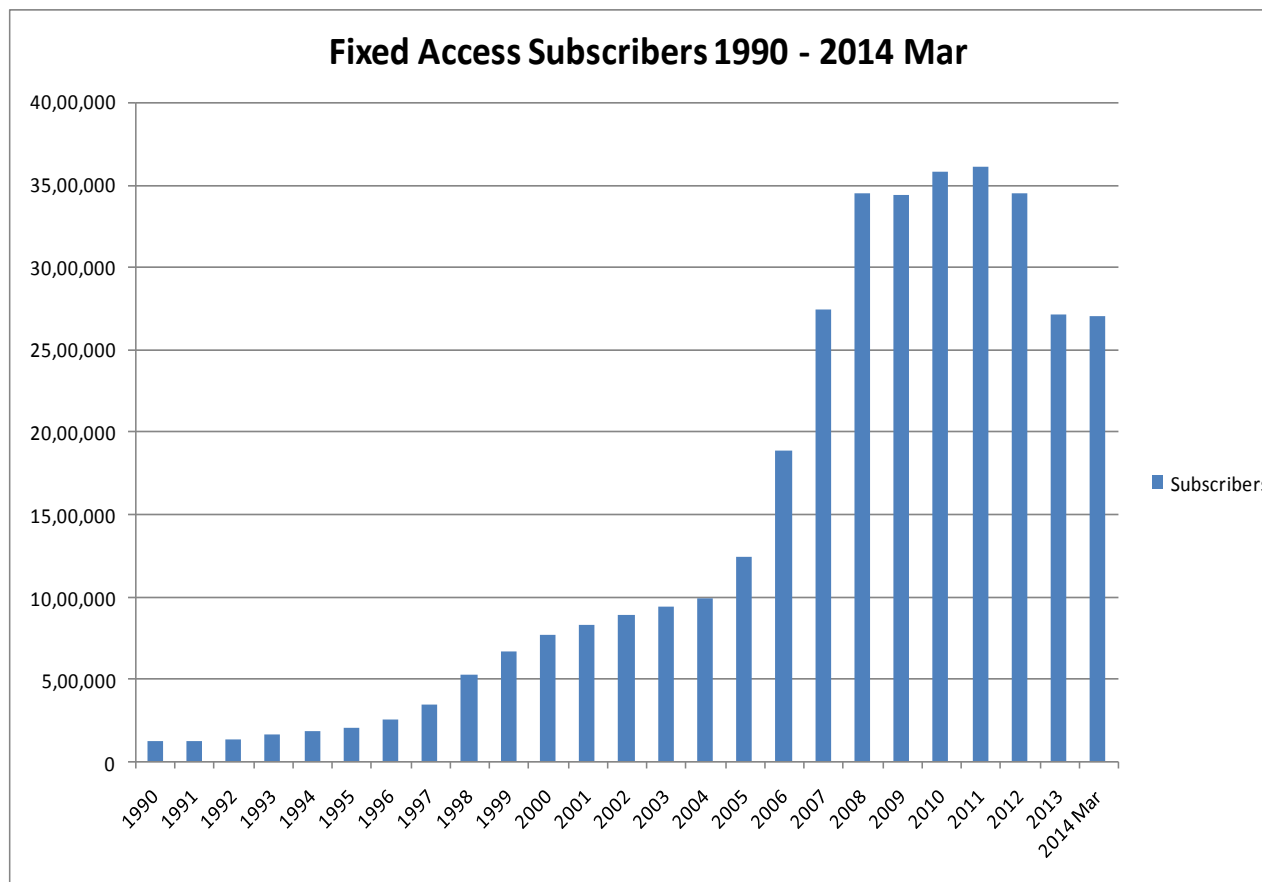
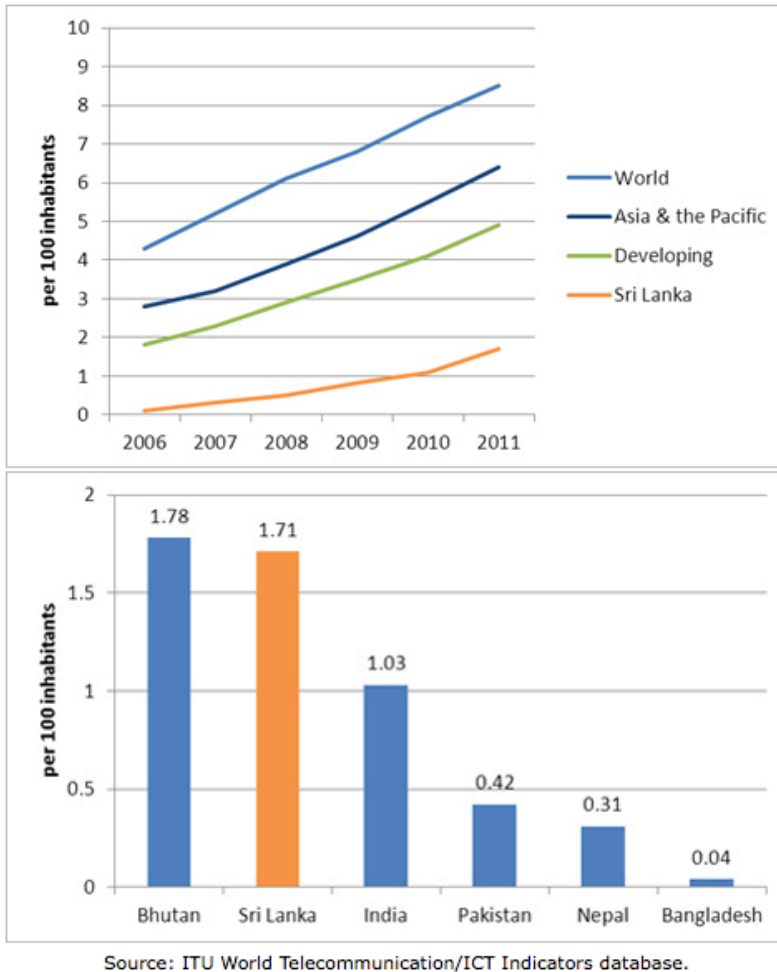


Figure 12 Fixed Access Subscribers 1990 – 2014 Mar (Source: ITU)

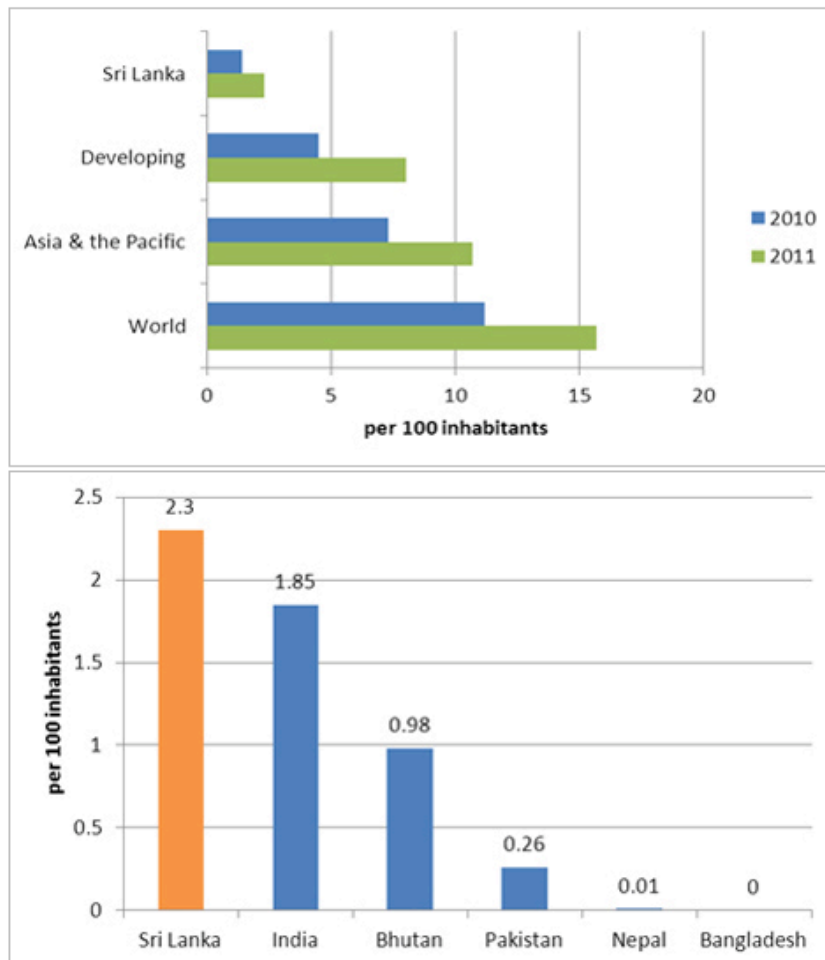
By 2011, Sri Lanka's internet and broadband penetration still remained low at 15% and ~2% respectively. This was despite Sri Lanka having a vibrant broadband market, with numerous fixed and mobile data operators providing broadband services through different technologies (WiMAX, ADSL and HSDPA) to the public via attractive service packages. This deficiency has prompted Sri Lankan regulators such as the Information Communication Technology Agency (ICTA) to popularise broadband uptake as a government policy focus. ICTA has taken action by setting up telecentres with subsidised internet access to ensure greater affordability and provide various ICT services and e-government applications. Subsidised internet access is seen as a way to create demand within disadvantaged rural groups, ultimately leading to an increase of broadband subscribers in rural locations. With the infrastructure in place, Sri Lanka has great potential for increasing broadband use once its citizens recognise the benefits that

the high-speed internet connections can bring. Both fixed and mobile broadband penetrations in Sri Lanka are behind the regional and developing country averages.



Source: ITU World Telecommunication/ICT Indicators database.

Figure 13 - Fixed (wired)- broadband penetration, Sri Lanka in comparison with regional, world and developing country averages, 2006-2011 (top), and with low- and lower-middle income economies in South Asia, 2011 (bottom) (Source: ITU World Telecommunication/ ICT Indicators database)



Source: ITU World Telecommunication/ICT Indicators database.

Figure 14 - Mobile-broadband penetration, Sri Lanka in comparison with regional, world and developing country averages, 2010 and 2011 (top), and with low- and lower-middle income economies in South Asia, 2011 (bottom) (Source: ITU World Telecommunication/ ICT Indicators database)

According to March 2014 ITU data, internet subscribers through fixed access stood at 539,631. However, internet subscribers who had access to mobile broadband numbered 1,777,955. Even a higher number - 2,987,899 of subscribers - were reported as using mobile narrowband for internet access. Although mobile broadband has shown faster growth than fixed broadband, the number still shows modest growth.

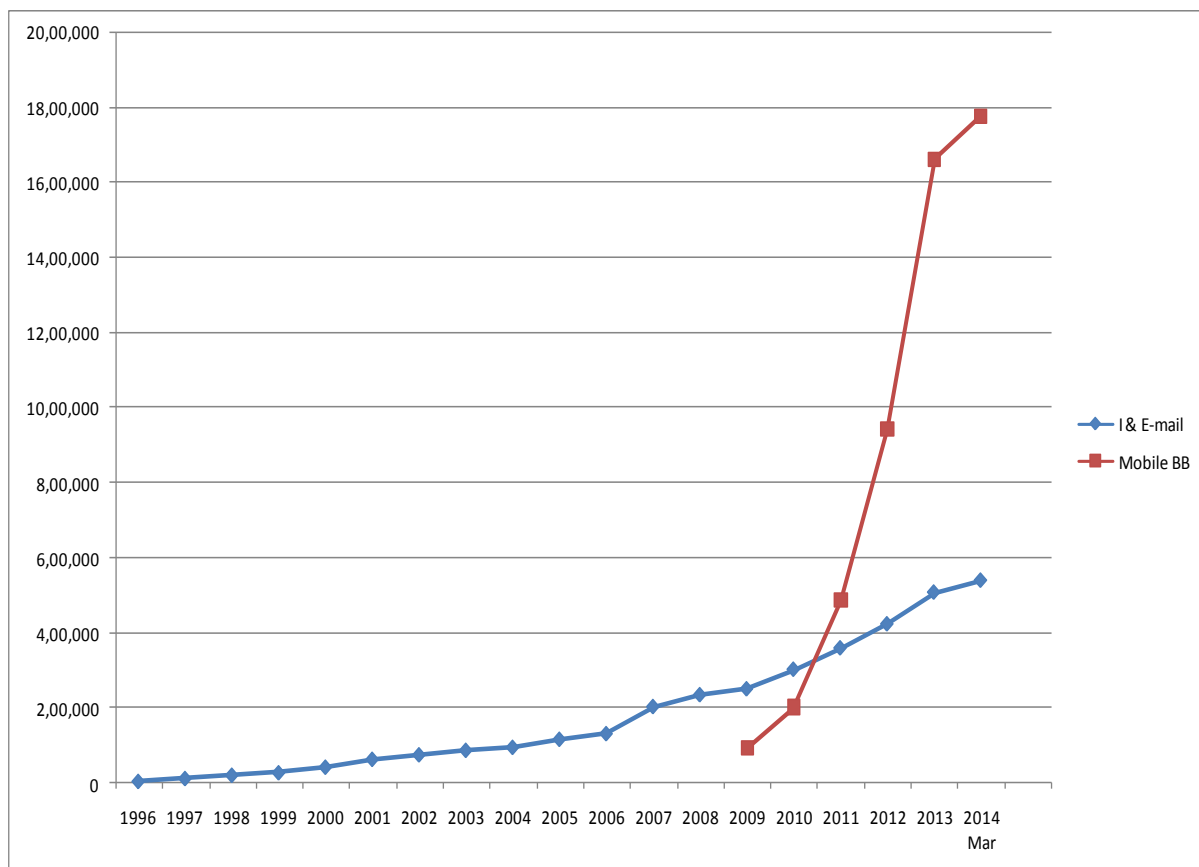


Figure 15 - Internet & E-mail Subscribers (Fixed & BB Mobile) (Source: ITU)

Sri Lanka's internet access is below regional and developing country averages. The ITU estimates that 15% of the Sri Lankan population were online which accounted for around 8% of Sri Lankan households, compared to a regional average of 25%. However, Sri Lanka's access to internet bandwidth per Internet user via a number of international fibre optic cables stood at 5,224 bit/s by the beginning of 2012, which is similar to India. This showed Sri Lanka's infrastructure readiness has already benefited IT service providers in the country.



Source: ITU World Telecommunication/ICT Indicators database.

Figure 16 - Percentage of individuals using the Internet, Sri Lanka in comparison with regional, world and developing country averages, 2006-2011 (top), and with low- and lower-middle income economies in South Asia, 2011 (bottom) (Source: ITU World Telecommunication/ ICT Indicators database)

Analysts note that Sri Lanka's telecom services took off from the mid 1990s with the ending of state monopoly when Sri Lankan and foreign entities were allowed to invest in telecoms through privatisation and liberalisation of licencing. Immense growth opportunity exists for Sri Lanka to compete in the global market for knowledge-based ICT services due to Sri Lanka's ICT growth and its assistance to knowledge acquisition. Sri Lanka's national policies supporting ICT investments and knowledge industries have begun to translate ICT readiness into tangible benefits in terms of competitiveness, service offering development, and employment in the ICT industry.

This growth of Sri Lankan ICT is reflected by Sri Lanka's rise within various ICT indexes. For example, the Global Networked Readiness Index (NRI), published in the 2013 Global Information Technology Report (GITR) by The World Economic Forum (WEF), corroborates that Sri Lanka continues to make a huge progress in the ICT sector. Sri Lanka is ranked 69 and has improved its overall position by two places. The NRI assesses the comparative impact of ICT in 144 economies in the world considering individual, business, and government usage along with economic and social impacts. This improvement can be seen in many other ICT indices. However, a country's ICT readiness is not uniform in all areas. Rural areas were still seen as lagging in ICT and development in general. However, before specifically looking at the grassroots ICT development efforts, it was also valuable to look at how these ICT4D initiatives and indeed ICT readiness of the country were funded.

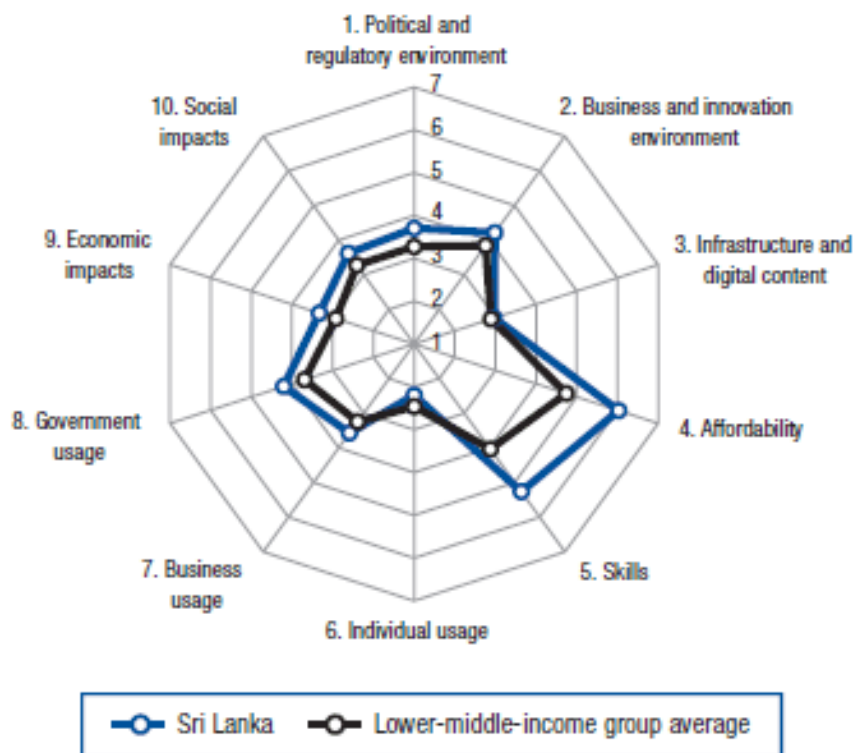


Figure 17 Global Networked Readiness Index (NRI) published in the 2013 Global Information Technology Report (GITR) by The World Economic Forum (WEF)

## **How Sri Lanka finances ICT and rural ICT4D projects**

The history of Sri Lankan grassroots level ICT4D projects has shown that numerous ideas that looked good on paper were unworkable on the ground, like in the case of numerous rural 'Micro-Telco' initiatives, due to lack of funding sources and continuous access to capital. Rural ICT4D projects require more capital than their city counterparts leaving the government and NGOs to subsidise most. As a result, government and regulatory bodies have resorted to innovative ways for continued financing and subsidisation. Considerations of sustainability by ICT4D implementers in the past have also been limited to the set up phase where funding was available from donors, adding to the premature collapse of such projects. However, today, donors are much more focused on economic viability, ROI, and the ability of locals to maintain operations in the long-term while delivering a clear social benefit promise. Furthermore, Sri Lanka lack sophisticated financial systems, credit checking or debt recovery mechanisms in rural locations. Conversely, incumbent financial institutions in Sri Lanka conventionally have restrictive lending criteria, which shuns financial services and loans to rural grassroots level entrepreneurs with little or no collateral. These rigid lending processes affect assessment, repayment prospects, and security requirements placed on rural grassroots level borrowers. In the face of these challenges, microfinance has become a popular alternative as a form of financial service provision for rural entrepreneurs and small businesses lacking access to traditional banking and related financial services offered by the mainstreams.

The microfinance industry has existed in Sri Lanka for a long time. Its popularity grew sharply in the 2000s, as the industry scaled up to help reduce poverty. Yet, some rudimentary challenges to the commercial microfinance industry exist in Sri Lanka as in the rest of the world. One prominent example of such a Sri Lankan grassroots level initiative is the member-owned Sanasa Development Bank (SDB). SDB is a cooperative microfinance bank that is fully owned by cooperative members of the Sanasa movement. The Sanasa movement that began as a collective of credit cooperatives spread throughout Sri Lanka with the aim of eradicating poverty with community upliftment and member financial empowerment. With the changing national and global economy, it changed to a credit and savings model where credit was issued from the national federation to the primary societies and their members in various districts.

Today, SDB has grown to 48 branches and 34 extension centres island-wide emboldened by its hybrid of community based approach, professional staff and conventional banking practices. Currently, SDB acts as a premier microfinance provider not only to Sanasa societies, but also to Community Based Organisations (CBOs), local NGOs, cooperative entities, and private clients.

However, initially the early vision of Sri Lanka's ICT4D development was funded by the World Bank. Today this central ICT4D initiative of Sri Lanka is government funded with local initiatives such as Nenasala telecentres utilising the above mentioned localised funding mechanisms. This e-Sri Lanka initiative was the special focus of this study and this initiative is explored next.

### **e-Sri Lanka Initiative**

The 'e-Sri Lanka' initiative, the first of its kind to be funded by the World Bank in South Asia, was a holistic, long-term, development driven approach that aims to bring ICT to every Sri Lankan citizen while attempting to transform the way the government interacts with its citizens. This ambitious initiative, driven by the Government of Sri Lanka (GOSL), aspired to provide diverse and unrestricted information and means of communication to all the citizens. Distinguishing the unlimited potential that Information and Communication Technologies (ICTs) can play in development, the GOSL set audacious broad goals for the program. These included strengthening the democratic processes in the country, the advancement of the peace and reconciliation process, improving the quality of life of the people, and enhancing social and economic development.

The project was launched in 2004 with the vision "*e-Sri Lanka aspires to the ideal of making Sri Lanka the most connected government to its people, and raising the quality of life of all its citizens with access to better public services, learning opportunities, and information.*"

However, reports reviewed indicated humble beginnings with the persistent efforts of the National Chamber of Commerce, local software industry leaders and the Sri Lankan government to convince the World Bank to fund the 'e-Sri Lanka' program in 2002 within a backdrop of political change and continuing civil conflict. This development thrust epitomised the desire of Sri Lanka to setup a BPO industry and reap the digital

dividend like its neighbour India. Sri Lanka was also keen to take advantage of the significant envisaged contribution of ICT to the socio-economic development of the country and to improve low ICT literacy in Sri Lanka compared to other developing countries in the sub-continent.

The e-Sri Lanka vision subsequently translated into a strategic action plan covering five years 2005–09 and a six component program with ambitious SR synergies, reflecting Sri Lanka's aspiration to join the region's emerging ICT enabled commercial and logistics centres. With its guiding principles drawn from 'new development economics literature', e-Sri Lanka developed in time to a coherent national e-development strategy with local understanding, strong political commitment, broad ownership, and initial implementation capacity of SR synergies through multi-donor-funded programs. Recognising the significance of the project, the GOSL assisted these efforts by keeping focus on the larger drivers and individual objectives of e-Sri Lanka programs. For example, Sri Lanka's former president, Mahinda Rajapaksa, officially declared the year 2009 as the 'Year of English and ICT'. Sri Lanka also became a signatory to the United Nations Millennium Declaration endorsing PPP to 'ensure that the benefits of new technologies, especially information and communications technologies are available to all'. However, since the cessation of the 30 year long Sri Lanka's separatist conflict in May 2009, the e-Sri Lanka project was profoundly focused on the war impacted Northern and Eastern provinces of the country with several quick win e-government solutions to improve the efficiency of the service provision in Sri Lanka's march towards speedy socio-economic development.

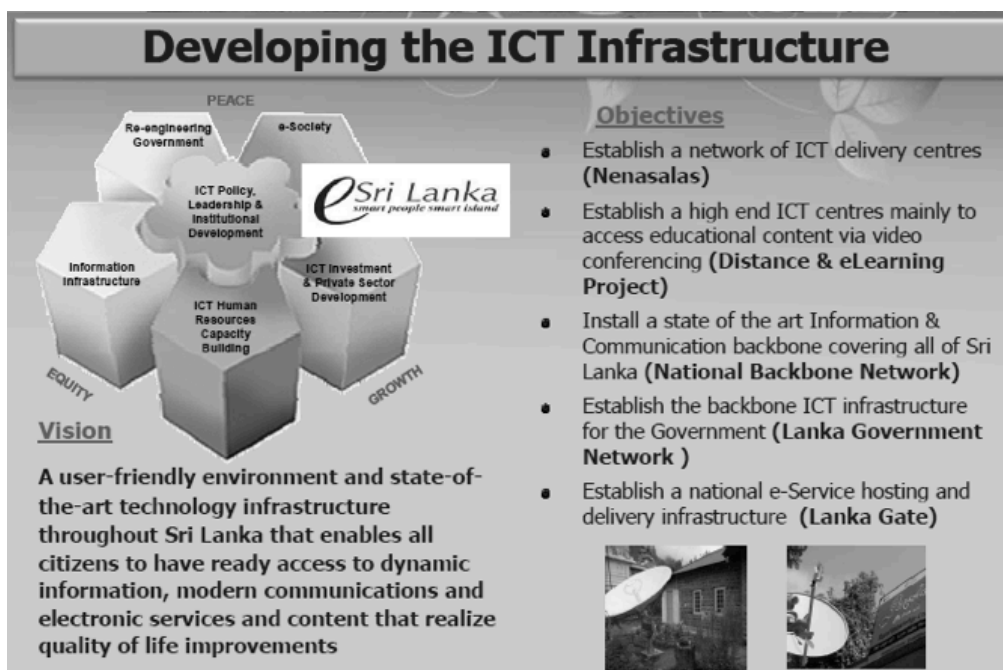


Figure 18 - Developing the ICT in Infrastructure (Source: ICTA)

In 2003, the Information Communication Technology Agency (ICTA) of Sri Lanka was established and entrusted to define, initiate, and implement Sri Lanka's ICT policy, which included e-Sri Lanka.

ICTA was credited for improving the ICT literacy rate from 9.7% in 2004 to 22% in 2008 and for creating over 45,000 new jobs in Sri Lanka's IT and Business Process Outsourcing (BPO) sector since 2005. ICTA programs also assisted ICT service exports to become the fifth largest foreign exchange earner in the country with USD 250 million in 2008. In keeping with that development, ICTA expected the IT/BPO industry to be the country's number one export revenue earner with exports of \$2 billion with 103,025 new jobs by 2015. An integral part of the ICT4D drive through ICTA is the '1000 Nenasala Telecentre project'.

### The 1000 Nenasala (Knowledge Centre) Project

The Nenasala (Knowledge Centre) program was arguably the most visible part of the e-Sri Lanka initiative, providing the main interface between e-Sri Lanka and ordinary citizens, particularly in rural areas where 80 percent of the country's people and nearly

90 percent of its poor live. Sri Lanka's telecentre network was initiated in 2004 in collaboration with Intel Corporation. Early pilot programs consisted of 20 telecentres funded by the World Bank under the name of Vishwa Ghana Kendra (VGK). Consequently, VGK became a Nenasala project with the contemporary goal of constructing 1000 telecentres with grander SR synergies and initiatives, within a geographical spread that covered the entire nation under former Mahinda Rajapakse government's election platform.

On a strategic level, Nenasala is a 'single window' delivery model for citizens to access various e-services provided by the government and various other agencies faster and efficiently. ICTA was mostly responsible for planning, program management, compliance with agreed policies, and quality assurance within the five stakeholders groups. These stakeholders included telecentre operators, telecentre support institutions, a managing agent contracted by the ICTA to run a voucher scheme, suppliers of equipment and connectivity, and a monitoring and evaluation unit that periodically evaluated the operation of telecentres and the activities of the support institutions and the voucher scheme's managing agent. The largest group out of these were the telecentre operators who were recruited through a competitive selection process. Content and e-government service developers were also critical strategic partners. These stakeholder groups have been key disseminators of ICT to Nenasala users, developing opportunities for knowledge work and empowering local knowledge workers. From the outset, the Nenasala program benefited from a team of experts drawn from government agencies, international donor institutions, private sector entities, NGOs and telecentre leaders who studied telecentre based poverty alleviation efforts in neighbouring countries such as India, and the broad spectrum of ICT4D efforts carried out by large PPP's in the region. By end 2014, there were 1000 Nenasalas operational in Sri Lanka in support of the ambitions of the development targets highlighted in the government vision.

The telecentre program focused primarily on rural communities with a population of no more than 5,000. Locations for telecentres have been selected on the basis of criteria developed with stakeholders to provide the minimum conditions needed for sustainability: a population of at least 2,000, a secondary school with at least 300 students, a reliable supply of electricity through the grid, and proximity to a fixed

market with at least 15 wholesale vendors. All candidates who wanted to set up Nenasala telecentres were required to submit business plans that had to show how financial sustainability was going to be achieved as well as SR initiatives the Nenasala would provide within the local community. Initially, local entrepreneurs were generally given priority on establishing Nenasalas as businesses. Yet, in the poorest areas NGOs, local government, and social entrepreneurs have taken the lead due to the social development commitments incorporated within SR synergies of telecentres. All Nenasalas were given standard subsidies at the beginning. However, subsidies declined over time. A parallel voucher scheme also provided subsidised access to targeted beneficiary groups enhancing the income of the Nenasala owners. However, the planning for the financial future and sustainability of Nenasala was always seen as the responsibility of the owners.

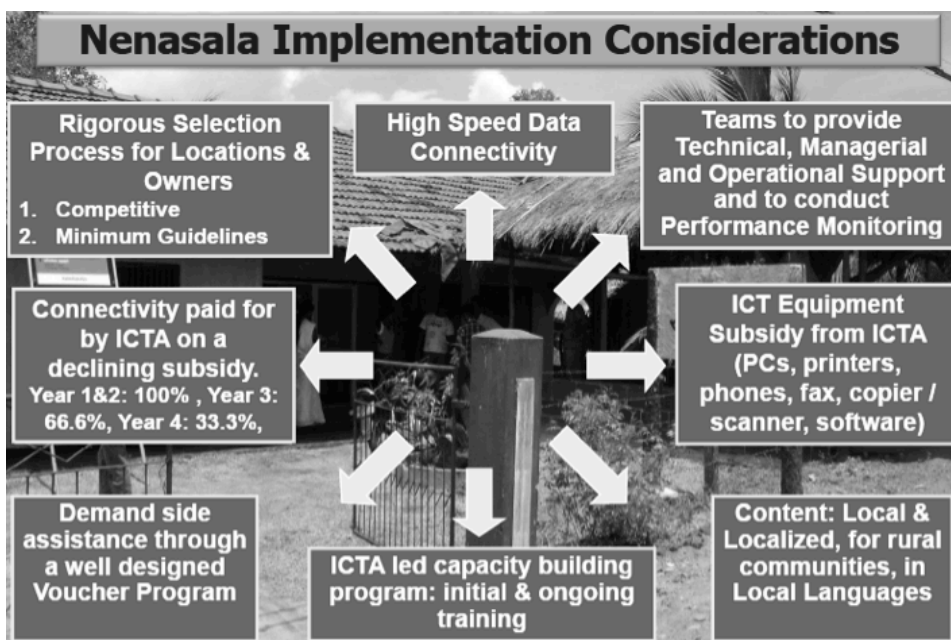


Figure 19 - Nenasala Implementation consideration (Source: ICTA)

Overall, the Nenasala project targeted populations of students, small and micro enterprises, women, people with disabilities and other marginalised groups. One of the best examples of targeting disadvantaged groups was seen in the Koslanda Nenasala that had programs to uplift the quality of the life of disabled persons. A local handicapped entrepreneur and his two siblings who all suffered from a rare physical condition of dwarfism opened a Nenasala in April 2005 during the Sri Lankan telecentre scale-up. Koslanda Nenasala was also credited with establishing the first ever

rural Business Process Outsourcing (BPO) of Sri Lanka. The owner's far-sightedness linked the Koslanda Nenasala with Indian BPOs to turn this to a profitable venture. This entrepreneur also registered a not-for-profit society, the Hill Country Disabled Group (HCDG) for the benefit of the disabled in the upcountry, providing services and e-employment to the disadvantaged.

Nenasalas also provided extensive learning opportunities for school-age children, including a video-based program for learning English. Women were given specialised content on critical issues facing children and families, including information on nutrition, breast-feeding, safe sanitation, and vaccines. Adults could perform job searches, learn how to create a resume, and access a wide variety of government services, including passport applications, driver's license renewals, and government exams. Migrant workers, who make up a significant portion of the Sri Lankan workforce, could communicate via Skype with family members they leave behind. Using the Microsoft Unlimited Potential curriculum, Intel's Teach program and certain other international computer curricula, each Nenasala trained between 500 - 1,000 rural youth and students each year in ICT technology skills, making a significant contribution to the growth of 'e-Diriya' national e-literacy initiative in response to Sri Lanka's low e-literacy rate. Nenasalas offer training, certified and accredited by various professional bodies including Tertiary and Vocational Education Commission (TVEC) and the International Computer Driving Licence (ICDL) program. Youth trained in ICT skills through such telecentres have often started up micro-enterprises to take advantage of their skills bolstering the human resource capacity of the islands BPO ICT sector. Nenasalas not only employed their own graduates, but also connected villagers to job opportunities in industries in nearby townships and district capitals. Nenasalas also assisted local community with employment related web research and online job portals access, to secure jobs within their qualifications and experience in their geographic vicinity. Sevanagala Nenasala was an example of this focus on assisting rural job-seekers especially those who graduated from Nenasalas, with job opportunities in cities and nearby towns through their own online job portal. Over 200,000 plus applicants continued to depend on this service for the right job and the right career move. This enterprise has been extended to the government employees, who sought mutual transfers between government agencies. Thus, Nenasalas have been the facilitators of

developing human capital and knowledge-based work growth for e-economic development in Sri Lanka.

The Nenasala Telecentre notion has centred on much debate at the design stage, as it involved a large-scale program with SR synergies to create small enterprises. Nevertheless, a telecentre ecosystem has emerged with ICTA's nurturing, aided by complimentary programs of e-Sri Lanka such as delivering key services and local content through the e-government and e-society programs. Learning to learn through monitoring and evaluation with synthesising inputs from multiple stakeholders has proven to be critical in managing and adapting this program. Continuing entrepreneurial education for telecentre operators, broadening connectivity options, building Regional Impact Teams (RIT) to assess progress, creating a telecentre academy in partnership with the National Open University of India and the University of Colombo in Sri Lanka, and organising national awareness seminars for telecentre operators to exchange experience and best practices were some of ICTA's progressive focus areas for the Nenasala program.

Researchers noted that this focus on development of human capital by providing knowledge work opportunities within the SR synergies pursued was a key factor that may have contributed to the long-term sustainability of telecentres. According to the ICTA Nenasala Interim Survey in 2008, the main objective of a Nenasala was to act as a hub of information, provide affordable basic communications and to be a catalyst for rural communities in aid of poverty reduction, social and economic development and peace building through ICT services provided in a sustainable manner. People's feelings, beliefs and expectations that the users have within the development thrust have helped many Nenasala operators get recognition and Nenasalas to distinguish themselves from the rest of the cybercafés and telecentres as a brand that do more for the communities through SR synergies they incorporate.

In a historic event, The 1000th Nenasala was inaugurated at the Galigamuwa Bisovela Rajamaha Buddhist Temple by the then President Mahinda Rajapaksa in December 2014. President Mahinda Rajapaksa inaugurated the first Nenasala at the historic Kataragama Kirivehera on 1st of January 2005 when he was Prime Minister. ICTA stated that the main aim of President Mahinda Rajapaksa in setting up these Nenasalas

was to empower, particularly the rural folk, through ICT. Parallel to this inauguration, the Nenasala convention was held with the participation of all Nenasala owners and operators island-wide under the patronage of then Telecommunication and Information Minister Ranjith Siyambalapitiya.

Sri Lanka then moved to the next phase of the e-Development Master Plan, 'SMART Sri Lanka' where more public and private e-services were to be promoted through Nenasalas with further government funding. In the 2013 budget, the government pledged an additional 750 million rupees to expand the Nenasala program to 14,000 Nenasalas in each Grama Niladhari Divisions (villages) in the country, to be implemented within three years. The President also proposed a provision of Rs. 300 million to ICTA for additional ICT support services. As such, in the second phase of e-Sri Lanka, where more public and private e-services were likely to be promoted, Nenasalas were poised to take central place in enhancing IT literacy in Sri Lanka capitalising upon the adaptive, innovative aspect of the Nenasala work.

Nenasalas have helped Sri Lanka increase its computer usage and IT literacy rate from below 10 percent in 2004 to almost 40 percent by 2014. In recognition of this contribution Nenasala's e-Library Nenasala Program (eLNP) won the Bill and Melinda Gates Foundation 2014 Award of \$1 million for the best rural IT Project. This flagship project of the country was adjudged the best out of 150 projects from 110 countries. The ICTA planned to use the award to upgrade the hardware in the Nenasalas, introduce tablets that can be loaned out to community members, develop educational software for children living in the most remote areas where good teachers are scarce, and create new capacity building programs for centre operators. Microsoft, a foundation partner also made a donation of software to eLNP as part of its commitment to bring the benefits of relevant and accessible technology to local communities.

Within this backdrop local entrepreneurs, community groups, NGO's, public service agencies and religious leaders established Nenasalas through entrepreneurial, business driven and the NGO managed models promoted by ICTA. Nenasala telecentres have been set up within these models with initial ICTA funding; two to four computers, a printer, and broadband internet access (Meegammana et al. 2010). Although there seem to be many variations of models that Nenasalas have been formed under, broad

categorisations can be made based on not-for-profit or for-profit, and the SR synergy orientation (ICTA Nenasala Interim Survey 2008).

- Different ownership types of Nenasalas:

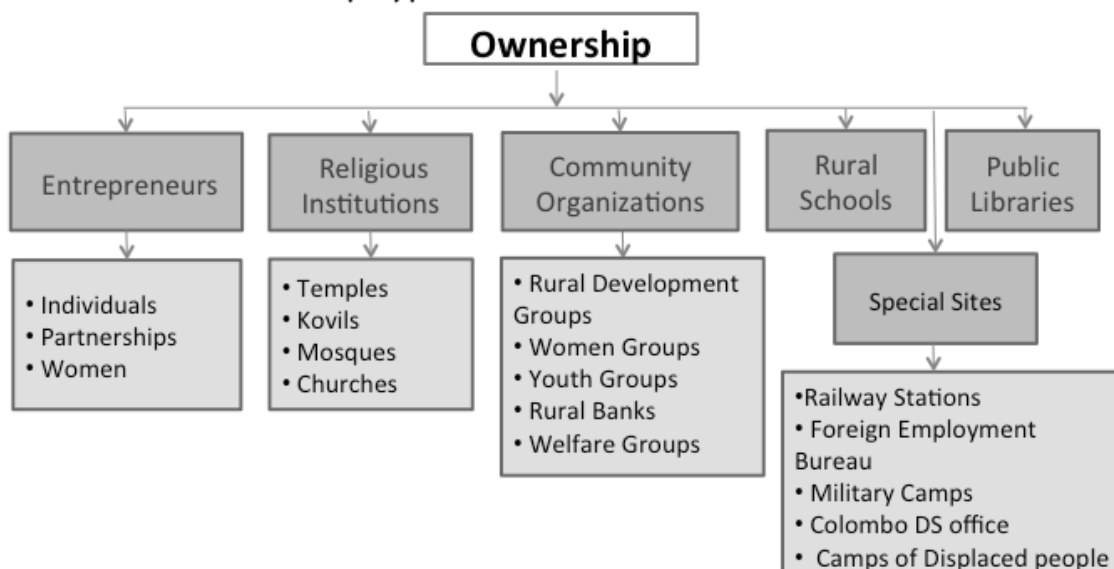


Figure 20 - Different ownership types of Nenasalas (Source: ICTA)

Documentary data indicated that these different models seem to exhibit various degrees of resilience and success on achieving sustainability. ICTA championed Nenasala in part due to the political thrust to expand the program and, in part, due to the desire to ensure long-term sustainability of the program beyond the period where external subsidies were available from the World Bank. However, on the surface it seemed that problems and risks related to the sustainability of telecentres have been de-emphasised at the cost of achieving ambitious SR synergies relatively quickly within this environment. The archival material analysis noted each model had its strengths, weaknesses, and common success factors, which needed to be focused on for each program's success. These findings are described in summary next.

### Issues faced by the Nenasala project, necessitating further research

According to the ICTA Nenasala Interim Survey in March 2008, 39% of the operators believed that Nenasala could not make sufficient profits to be self-sufficient without financial assistance. Although majority of the Nenasalas in the survey were of the not-

for-profit community model type, 90% of operators of the for-profit business model Nenasalas indicated their belief that they can be self-sufficient, opposed to 54% in the community model (ICTA Nenasala Interim Survey 2008).

Particulars		Community Model		Business Model		Total	
		No.	%	No.	%	No.	%
Within a given time frame can you make sufficient profits and operate without outside financial support?	Yes	23	53.5	10	90.9	33	61.1
	No	20	48.5	1	9.1	21	38.9
Total		43	100.0	11	100.0	54	100.0

Table 1 - Operator responses towards self-sufficiency (Source: ICTA Nenasala Interim Survey 2008)

However, according to the ICTA Nenasala Interim Survey in March 2008, the majority of Nenasala operators under the not-for-profit community models did not have a definite idea on the time period required to achieve self-sufficiency. On the period required for self-sufficiency, 44% of the community model operators have not responded to the question. Contrary to this, more than half of for-profit business model operators indicated that they could be achieving self-sufficiency within the first two years.

Particulars	Community Model		Business Model		Total	
	No.	%	No.	%	No.	%
After one year	13	30.2	5	45.4	18	33
After two years	3	7.0	1	9.1	4	7
After three years						
After four years			2	18.2	2	4
Other	8	18.6	2	18.2	10	19
Did not respond	19	44.2	1	9.1	20	37
Total	43	100.0	11	100.0	54	100

Table 2 - Time period to achieve self-sufficiency (Source: ICTA Nenasala Interim Survey 2008)

Although some of the operators did not provide a time frame for achieving self-sufficiency, 78% of both community and business model operators indicated having plans for achieving self-sufficiency, while 22% did not (Table 3). These plans varied from provisioning further communication facilities (such as telephone, fax, photocopying services) to providing computer training programs. However, having plans or intentions on achieving self-sufficiency may not be enough to measure viability of the project, unless the plans were acted upon and successful in enhancing self-sufficiency.

Particulars		Community Model		Business Model		Total	
		No.	%	No.	%	No.	%
Do you have plans for self sufficiency?	Yes	32	74.4	10	90.9	42	77.8
	No	11	25.6	1	9.1	12	22.2
Total		43	100.0	11	100.0	54	100.0

Table 3 - Operator responses towards plans for self-sufficiency (Source: ICTA Nenasala Interim Survey 2008)

In 2008, a little over 50% of the telecentres reported the potential to achieve sustainability within the not-for-profit community-based models. In most cases, information relating to usage patterns, costs and revenue etc. was non-existent within records of those Nenasalas (ICTA Nenasala Interim Survey 2008). Contrary to this, over 90% of centres under the for-profit business based models were certain about their long-term sustainability. This disparity led the authors of the report ‘M G Consultants’ to recommend initiation of a program to make telecentre operators aware and suggested measures which included organising regional study tours to countries such as India to develop new ideas for greater sustainability.

The Evaluation Final Report (2010) also acknowledged the sustainability disparity and noted that a review of social, management, economic and technical aspects of Nenasalas were required, to get a comprehensive picture of the sustainability, as it is multifaceted within the SR synergies promoted. Nonetheless, the report concluded that 66% of Nenasala telecentres are financially sustainable.

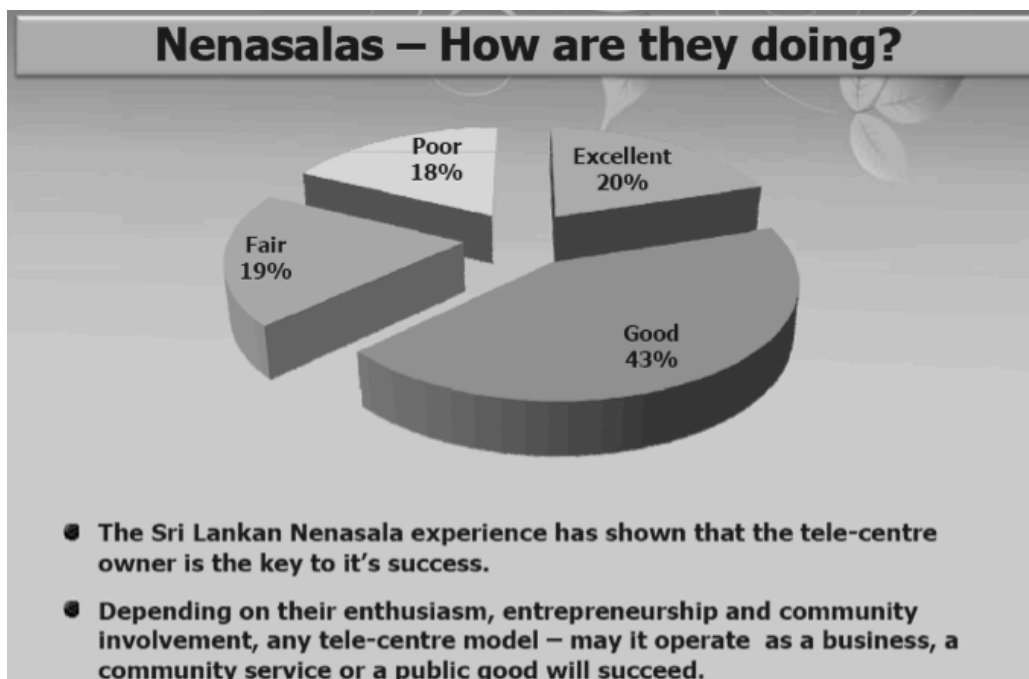


Figure 21 - Nenasalas – How are they doing? (Source: ICTA)

However, this claim of sustainability seems to be based on operator and user perceptions on sustainability (example figure 22), which may not correlate to the realities on the ground.

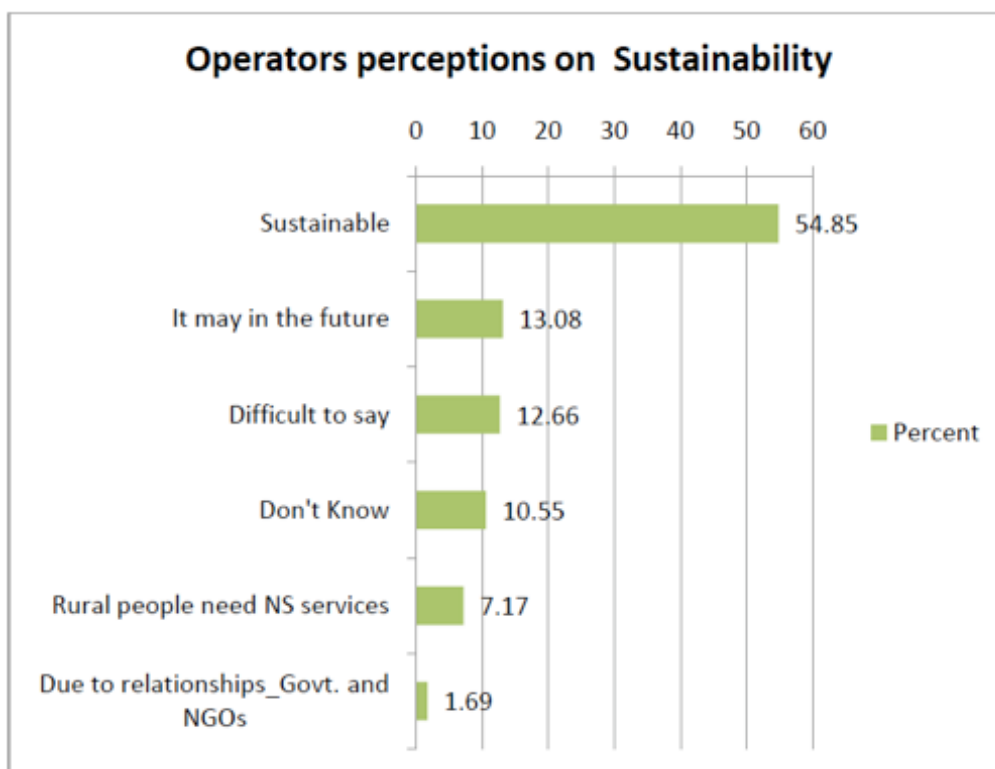


Figure 22 – Operators perception on Sustainability (Source: Nenasala Outcome Evaluation Final Report – October 2010)

Similarly, the Nenasala Outcome Evaluation Final Report (2010) asserts that the business model Nenasalas in which profits were shared between owner and operator had more chance for sustainability than the community based Nenasalas that reinvested profits back into operations and other work in the community. As before, this measure was based on perception and may not reflect the real correlation between variables.

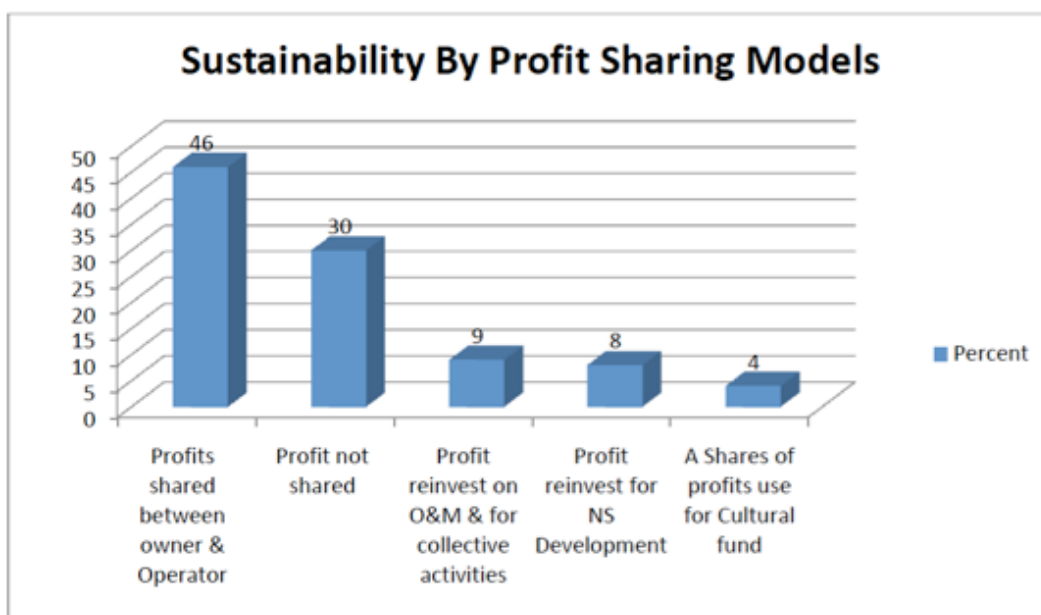


Figure 23 - Sustainability by profit sharing models (Source: Nenasala Outcome Evaluation Final Report – October 2010)

It is stated that the availability of ‘operations and maintenance fund’ was a good indicator of sustainability in Nenasalas based on the community model (Nenasala Outcome Evaluation Final Report 2010). The report noted that 47% of the Nenasala telecentres had operations and maintenance funds and this suggested the likelihood of sustainability of those Nenasalas in the future. However, no data was provided in the report on the make up or as to the purpose of ‘operations and maintenance fund’ and the value it may represent to sustainability in reality.

In 2010, the CEO of ICTA in his presentation to the Tele-Centre.org Foundation noted that building Nenasalas as a business enterprise that are sustainable in the long-term

was not ICTA's objective. He indicated that the government of Sri Lanka saw Nenasalas as a means to an end and not the end game. It was further stressed that subsidising for the good and for the long-term, was not taboo considering the larger benefits it generated for the rural communities. However, others interpreted such statements as a tacit acknowledgement of the difficulty of achieving sustainability. Adding to the concerns over achieving sustainability, the October 2010 Nenasala Outcome Evaluation Final Report showed a decrease in the number of users of Nenasalas in the second quarter of year 2010 which translated to lower revenue. Such difficulties had most stakeholders agreeing that a deeper understanding of what drives sustainability needed to be investigated in these grassroots for-profit and not-for-profit organisations.

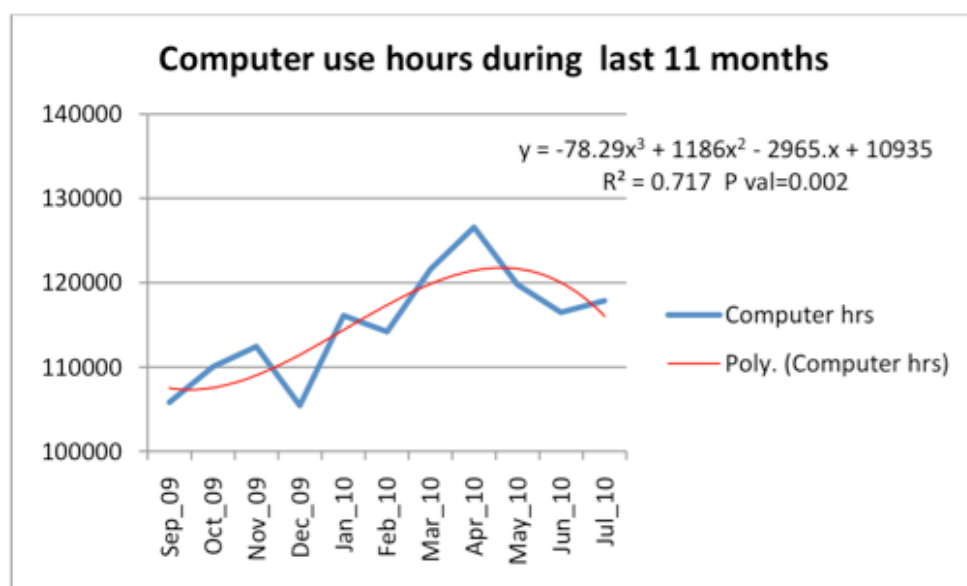


Figure 24 - Cumulative monthly total hours of computer use during last 11 months from August 2010 (Source: Nenasala Outcome Evaluation Final Report – October 2010)

## Conclusion

With the conclusion of a 30-year war, Sri Lanka was a fast developing country in South Asia. ICT infrastructure and services grew steadily due to the former government's efforts to enable Sri Lanka to develop a knowledge economy on the back of India's BPO success. Sri Lanka is well connected to the world with four international submarine cables and has a competitive telecommunication market and pricing.

Although, Sri Lanka has a high mobile-cellular penetration, internet and broadband take-up showed modest growth, particularly in rural areas. The Sri Lankan government, realising the need to take advantage of the significant envisaged contribution of ICT to the socio-economic development of the country, embarked on ICT initiatives to improve the low ICT literacy of Sri Lanka. The main initiative, 'e-Sri Lanka' was the first of its kind to be funded by the World Bank in South Asia, as a holistic, long-term, development driven approach that aimed to bring ICT to every Sri Lankan citizen while attempting to transform the way the government interacts with its citizens. However, reports indicate humble beginnings of the program with the persistent efforts of the National Chamber of Commerce, local software industry leaders and the Sri Lankan government to convince the World Bank to fund the 'e-Sri Lanka' program in 2002 within a back drop of political change and continuing civil conflict. e-Sri Lanka subsequently translated into a six-component program and a coherent national e-development strategy with local understanding, strong political commitment, broad ownership, and initial implementation capacity of SR synergies through multi-donor-funded programs. The Information Communication Technology Agency (ICTA) of Sri Lanka was established in 2003 and entrusted to define, initiate, and implement Sri Lanka's ICT policy, including e-Sri Lanka. The integral part of ICT4D's drive was the '1000 Nenasala Telecentre project', which aimed to create a knowledge economy for the disadvantaged with involvement of multifaceted stakeholders. The Nenasala (Knowledge Centre) telecentre program, arguably the most visible part of the e-Sri Lanka initiative, provided the main interface between e-Sri Lanka and ordinary citizens. By the end of 2014 there were 1000 Nenasalas in place. NGOs, religious organisations, entrepreneurs, and even various village societies have set up Nenasala telecentres with different ownership structures and funding models. These Nenasalas were supported by a Sri Lankan grassroots level start-up funding ecosystem, consisting of equity financing, which included loans from banks and private individuals, and soft loans from government agencies. The microfinance industry was also a popular alternative with Sri Lankan grassroots level telecentre owners, with its popularity having grown sharply in the 2000s.

Sri Lanka then moved to the next phase of the e-Development Master Plan, 'SMART Sri Lanka' government plan, to expand the Nenasala program to 14,000 Nenasalas in each Grama Niladhari Divisions (villages) in the country, to be implemented within

three years. Nenasalas have already achieved great success, such as increasing Sri Lanka's IT literacy rate from below 10 percent in 2004 to almost 40 percent by the end of 2014. In recognition of this contribution Nenasala's e-Library Nenasala Program (eLNP) won the Bill and Melinda Gates Foundation 2014 award of \$1 million for the best rural IT Project. This flagship project was adjudged the best out of 150 projects from 110 countries. Although there seems to be many variations of Nenasala models, broad categorisations could be done based on not-for-profit or for-profit, and the SR synergy orientation aligned to business and community based model groupings. However, these models indicated different sustainability achievements. In 2010, the CEO of ICTA noted that the government of Sri Lanka saw Nenasalas as a means to an end and not the end game, hinting that subsidising for the good (or long time) was not a taboo considering benefits envisaged. This may be an admission that Nenasalas' viability was irrevocably linked to subsidising its SR synergies to benefit the society. Archival material analysis indicated that Nenasalas under the community model did not have a definite idea on the time required to achieve self-sufficiency. The perception of sustainability of Nenasalas also differed by different ownership models. It alleged that Nenasalas that had benefit sharing between owner and the operator had a better chance of sustainability than Nenasalas reinvesting profits back into operations. The ICTA acknowledged the sustainability gap and noted that a review of the social, management, economic and technical assessment of Nenasalas was required to get a broad picture of their sustainability, as it is multifaceted within SR synergies. Apart from putting forward recommendations to enhance financial performance, there has been little effort to investigate the causes of the non-sustainability of Nenasalas with SR synergies undertaken. It was believed that the perception of various stakeholders varied on how they conceptualise and operationalise SR synergies within these models, particularly in satisfying the political, traditional and socio-cultural expectations within community-based organisations in Sri Lanka that have an effect on sustainability. Further, Sri Lanka was following a hybrid of IT for Development and Social Capital policies within its e-Sri Lanka ICT4D programs and the Nenasala telecentre initiative. These theoretical perspectives are associated with social, human capital and stakeholder theories. As such, applying a human capital lens to the sustainability gap is valuable considering the importance of human capital and their drivers to this grassroots level not-for-profit or for-profit ICT4D telecentres initiative in contributing to bridging the digital divide.

It is also necessary to examine the overarching organisation ICTA that guides and administers the initiative of e-Sri Lanka and the Nenasalas. The ‘helicopter view’ of ICTA official’s experience provides valuable insight to the program and a reference point to understand the context of Nenasalas, especially considering ICTA was the government umbrella organisation that set the guidance for all Nenasala models, its human capital capacity and their human capital drivers. Therefore, the findings from the ICTA officials and other Nenasala stakeholders sourced from interviews form the basis of the discussion of chapter six.

Prior to that, it would be valuable to summarise the key highlights of chapters 4 and 5 to crystallise the context of Universal Service, ICT4D and Sri Lankan ICT4D program.

Universal Service & ICT4D	Sri Lankan ICT4D context
<ul style="list-style-type: none"> <li>▪ ‘Digital Divide’ is the gap between the information ‘haves’ and ‘have-nots’</li> <li>▪ Governments and NGOs champion ICT4D efforts.</li> <li>▪ ICT leads to knowledge, development of human and social capital and economic growth</li> <li>▪ Theoretical perspectives for ICT4D are based on <ul style="list-style-type: none"> <li>○ Market economy</li> <li>○ Social capital</li> <li>○ IT for development</li> </ul> </li> <li>▪ Generic difficulties for ICT4D projects <ul style="list-style-type: none"> <li>○ Lack of investment and financing issues</li> <li>○ Infrastructure, technology and end user equipment issues</li> <li>○ Demand, lack of affordability and supply-side restraints</li> </ul> </li> <li>▪ Models for ICT4D <ul style="list-style-type: none"> <li>○ Multitiered franchise models</li> <li>○ Mixed models</li> <li>○ Shared-access models <ul style="list-style-type: none"> <li>• Telecentres</li> </ul> </li> </ul> </li> <li>▪ Telecentres and their sustainability <ul style="list-style-type: none"> <li>○ Financial/economic <ul style="list-style-type: none"> <li>• Sustaining service delivery</li> </ul> </li> <li>○ Political</li> <li>○ Social sustainability <ul style="list-style-type: none"> <li>• Community acceptance</li> <li>• Human capability required for sustainability</li> </ul> </li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>▪ Sri Lanka is a small island with twenty million people of diverse social, religious, ethnic, and linguistic backgrounds.</li> <li>▪ Sri Lanka’s ICT infrastructure is well positioned for growth and Sri Lanka’s development is well reflected in various ICT indexes</li> <li>▪ Sri Lanka’s mobile penetration higher than the world and regional averages.</li> <li>▪ Fixed-telephones show minor growth and are above the regional and developing country averages.</li> <li>▪ Internet and broadband penetration is low, and is below the regional average, despite a vibrant broadband market</li> <li>▪ Sri Lanka’s ICT4D effort ‘e-Sri Lanka’ 2002 initiative, was the first of its kind to be funded by the World Bank in South Asia</li> <li>▪ Information Communication Technology Agency (ICTA) of Sri Lanka was established in 2003 to define, initiate, and implement Sri Lanka’s ICT policy</li> <li>▪ e-Sri Lanka is a holistic, long-term, development driven approach which aims to bring ICT to every Sri Lankan and transform the way the government interacts with its citizens.</li> <li>▪ The 1000 Nenasala (Knowledge Centre) Project is the interface between e-Sri Lanka program and the rural disadvantaged.</li> <li>▪ Nenasala is a ‘single window’ delivery model for various e-services provided by the government and various other stakeholders.</li> <li>▪ By end 2014, 1000 Nenasalas were operational</li> <li>▪ Next phase of the e-development is, ‘SMART Sri Lanka’</li> </ul>

<ul style="list-style-type: none"> <li>▪ Human resources play a crucial pivotal role in the sustainability of telecentres</li> <li>▪ Telecentre measurement including human resources <ul style="list-style-type: none"> <li>○ Both quantitative and qualitative approaches used</li> <li>○ Qualitative approaches, techniques such as focus group discussions, interviews, and story gathering to capture feelings and emotions to generate complete pictures of initiatives.</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>▪ In 2013 budget, the government pledged an additional 750 million rupees to expand the Nenasala program to 14,000 Nenasalas in each Grama Niladhari Divisions (villages) in the country, to be implemented within three years.</li> <li>▪ Nenasalas increased IT literacy rate from below 10 percent in 2004 to almost 40 percent by 2014.</li> <li>▪ However, Nenasala project faces issues, necessitating further research <ul style="list-style-type: none"> <li>○ Many variations of Nenasala models</li> <li>○ Broad categorisations could be done based on not-for-profit or for-profit, and the SR synergy orientation aligned to business and community based model groupings.</li> <li>○ Nenasala categorises show various degree of sustainability</li> </ul> </li> </ul>
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Table 4: Summary of Universal Service, ICT4D, and Sri Lankan ICT4D context

## **PART 3 - Findings**

### **CHAPTER 6 – ICTA & Other Stakeholders**

#### **Introduction**

In Chapter five an introduction was made of Sri Lanka, Sri Lanka's ICT4D journey with e-Sri Lanka and the 1000 Nenasala initiative. This chapter dives deeper to the understanding of grassroots level Nenasalas by further investigating the umbrella organisation, Information and Communication Technology Agency (ICTA) of Sri Lanka that guides the Nenasala program.

This research applies a human capital lens to the sustainability gap in Nenasala telecentres to better understand the important human capital drivers of this grassroots level not-for-profit or for-profit ICT4D telecentres initiative in contributing to bridging the digital divide. However, while the grassroots level Nenasala structure was examined in this regard, it was also necessary to examine the overarching organisation ICTA that guided and administered the initiative. This chapter delves deeper into ICTA formation within Sri Lanka's ICT4D journey. It also documents ICTA officials' experiences as a 'helicopter view' of how the Nenasalas were managed. ICTA officials' experience, especially considering ICTA was the government umbrella organisation that developed all Nenasala models, gave a reference point to understand the context of the not-for-profit community-based and for-profit business based Nenasala models. ICTA officials' observations on human capital and its drivers were important as they viewed the human capital aspects from an overall perspective at a higher level across the Nenasala program and the Sri Lanka's ICT4D journey.

#### **What is Information and Communication Technology Agency (ICTA) of Sri Lanka?**

The Government of Sri Lanka, private sector, NGOs, and other stakeholders in the nation's ICT4D march, shared the belief that ICT is the bedrock upon which Sri Lanka could build a society with equitable distribution of opportunity and knowledge. They

saw ICT as a key determinant of the competitive advantage of nations. Significant progress has been made in this direction under the e-Sri Lanka Development Project that ICTA of Sri Lanka implemented. E-Sri Lanka entailed setting up a new institution (ICTA) from scratch, building on lessons from other pioneering nations in South Asia; attracting new talent and business-like practices from the government, drawing on local company law and being endorsed by a new parliament act.

ICTA is a wholly owned corporation of the Government of Sri Lanka and is mandated to implement the government's ICT Policy and ICT4D action plan through the Information and Communication Technology Act No. 27 of 2003. ICTA is also tasked with assisting and advising the Cabinet of Ministers with the formulation of the National Policy on ICT in each government sector.

With the vision, 'to harness ICT as a lever for economic and social advancement by taking the dividends of ICT to every village, to every citizen, to every business and to re-engineer the way government thinks and works', ICTA has made significant progress with the first phase of Sri Lanka's ICT4D journey by successfully implementing the e-Sri Lanka development program. The e-Sri Lanka program utilises ICT to develop the economy, developing ICT related human resources, reducing poverty, and improving the quality of life of Sri Lankans. Six program strategies of e-Sri Lanka encompassed the programs of ICT Policy, Leadership and Institutional Development, Information Infrastructure, Re-engineering Government, ICT Human Resource Development, ICT Investment and Private Sector Development and e-Society. A key element of ICTA's implementation of the national ICT Roadmap was a stakeholder-led approach with the use of focus groups in all programme areas and through public-private partnerships. Since inception, the e-Sri Lanka Development program has gone through a series of improvements to adjust to changing conditions of the country and was successfully concluded on 31st of December 2013. Subsequently, the World Bank undertook a thorough review of e-Sri Lanka's performance and released the Implementation Completion and Results Report (ICRR) through a letter addressed to the Secretary to the Treasury dated November 2014. The World Bank concluded that ICTA had developed into a capable and professional institution that played a substantive role in the significant outcomes that the project has attained. The ICRR assessment recognised that ICTA as an institution, compared favourably in size vis-à-vis institutions with a

similar mandate, further enhancing the overall efficiency of the project. The report also acknowledged that the project significantly contributed to social development, with a special emphasis on integrating the poorest populations of the Southern, Northern and Eastern regions of the country through the use of ICT. ICTA also gained and maintained strong government and opposition support for the project. Following the periodic Monitoring and Evaluation (M&E) of the programs, ICTA made changes for costs savings/ effectiveness enhanced efficiency. ICTA was also the key for the expansion of the project to previously inaccessible areas of the country to increase its outreach. Thus, ICTA has developed adequate human capacity and created the platform that was well placed to sustain progress in the next level of ICT4D of the country. ICTA then commenced the next stage of ICT development 'SMART Sri Lanka'. It was envisaged that SMART Sri Lanka will have greater focus on sustainable online government services, emphasising job creation, accelerated growth, a knowledge-centric economy, a globally competitive BPM (Business Process Management) sector and an expanding Nenasala telecentre network to deliver the scaling up of the promising e-Society innovations.

## **Leadership and culture**

ICTA officials believed that the leadership provided by Nenasala owners individually or through highly coordinated, motivated, leadership committees was a key to the success of Nenasalas. It was emphasised that leadership was fundamental, as good leaders could solve most problems Nenasalas faced ranging from finances, HR, technical and political problems of local society and with government officials. However, ICTA officials did not differentiate or prefer a leadership type of a particular Nenasala model. As one official noted, 'I see merit of leadership in both for-profit and not-for-profit categories. Although, you have categorised the Nenasala models at a high-level for this research, there are also other model variations within these two categories that have been successful in serving a targeted niche. This is what we see as good in the Nenasala models, and they target a particular beneficiary group led by a leader who specialises and has interest within that niche. This means theoretically, that model variation should work well within a targeted scenario'. Yet, ICTA officials noted that the most prominent leadership examples were seen in religious leaders (such as from Buddhist

temples, Hindu kovils and churches) and in Nenasalas led by local entrepreneurial leaders who operated the business model with a greater sense of SR. In the first category of leaders, success was attributed to the religious based focus of assisting the disadvantaged in society. In the second model, success was attributed to the commercial focus with an attention on the customisation of services to the local community at the right price. Similarly, ICTA did not differentiate the leadership qualities required for Nenasala success based on religious, social, or cultural divisions within the country. This is particularly important considering that each Nenasala differed based on prominent social and cultural aspects and the SR synergies they pursued, although such synergies was seen as a burden on the Nenasala sustainability by some interviewees. ICTA believed that locally focused and appropriate Nenasala set-ups would automatically cater to local sensitivities as the grassroots clientele would demand them. As the official explained, ‘it is hard for us to capture the exact needs and the local differentiators of a given area in this grassroots campaign. However, we do have high-level goals we like to achieve across the board. What focus areas a Nenasala can have and how they plan to achieve sustainability is left to the owners of each Nenasala. This way they can modify the base model to their area. These local requirements change based on aspects such as the dominant industry in the region, infrastructure, and the geographic location and even social and cultural aspects’. As an ICTA official noted, ‘it is not up to ICTA to say grassroots level leaders need to do this to benefit their communities. Although our primary goal was to serve the community through the Nenasala program as an ICT4D effort, we cannot enforce or mandate our interpretation of community service on the local community efforts as it will be at the expense of that effort’s sustainability’. As such, how the local grassroots level leaders serve their communities within programs Nenasala ran was decided by the Nenasala owners and the advisory committees that advised them, as in the case of NGOs and some religious institutions.

Nonetheless, ICTA officials were extra careful to choose the best candidates as owners of Nenasalas through their initial screening process. All potential Nenasala owners had to present a business plan where they had to clearly articulate the sustainability aspect, including financial viability of the Nenasala and the leader’s vision for its development. An ICTA official also interviewed the potential leaders to determine their suitability, ability, and determination before finalising the Nenasala establishment. As an ICTA

official put it, ‘Sri Lanka is a developing country. It does not have vast resources. Even buying a couple of computers and subsidising electricity and connectivity over a period, costs a reasonable amount of money. As such, we need to be certain about the motivation of the people who want to start a Nenasala and their ability to maintain the project in the long-run’. This was to say that apart from finding the best leaders among the people who applied to set up Nenasalas, the right mind-set around SR was paramount as the motivation to succeed in achieving the larger Nenasala goal of uplifting the quality of life of the rural disadvantaged.

Secondly, ICTA officers focused heavily on leadership training as ICTA saw disparity between the capabilities, motivation levels, and the dominant traits of people who set up Nenasalas. An ICTA official explained, ‘we have a wide variety of people who wants to set up Nenasalas. These may range from fishermen’s or farmers’ corporatives, priests, and even young business entrepreneurs who want to run a Nenasala as a business. The backgrounds, education levels and indeed the social aspects of these people vary significantly. Some people have not worked with computers at all or run a business. So we had to get all of these owners and grassroots level leaders to a middle ground of knowledge to make this program work’. As the first attempt at achieving this balance ICTA provided initial five day residential training to the owner and operator of each Nenasala before its commencement. ‘However, the costs to the program have been high considering that the training locations were good hotels in Colombo. Some questioned this expense, in favour of a more grassroots level education program. However, I think it is good to open these people’s eyes to what is out there and the success they can achieve if they set their goals as high as the city folks. So I think the expense is worth it’.

ICTA officials noted that a particular baseline understanding of ICT and business was required by the leaders to guide Nenasalas for best results. For example, at a grassroots level where people were not highly educated, a leader who had no knowledge of ICT had less chance of succeeding in directing a Nenasala than a leader who may have interacted with technology at some level. However, ICTA did not object to leaders who had no ICT experience taking ownership of Nenasalas, if those leaders exhibited the aptitude, capability to engage the relevant qualified people, and the drive required for Nenasala establishment. As the ICTA official put it, ‘I have seen very good directing of

local Nenasala by some Buddhist monks. They are not ICT literate. However, they could understand the issue at hand at a high level and engage people who knew the subject to address the actual issue. Some of these monks are born leaders. In addition, aspects of religious lives make them good administrators. After all, most temples have many projects that the monks initiate and direct to aid the community, of which Nenasala is one part'. The official went on to say that Nenasalas run by NGOs and entrepreneurs also had good leadership as good leaders were attracted to those roles as paid employees or as interested parties in operating Nenasalas as for-profit ventures. As one official stated, 'the leadership can also be attracted to Nenasala as we have seen in the case of NGOs. Those leaders are paid reasonably well compared to the other owners and operators. The entrepreneurs who set up Nenasalas are also good intelligent people who setup businesses using Nenasala as an opportunity to get ahead. So there are many leaders in many Nenasala models who have made a difference within their chosen market. We cannot limit this to one model'.

ICTA did see merits of the guidance Nenasala gained from a strong single leader as it allowed prompt decision-making and fewer complications with internal politics and social conflicts. However, this also introduced the issue of individuals taking bad decisions or decisions that were not in line with the original Nenasala vision. An ICTA official added, 'sometimes in a grassroots level village, decisions have to be taken collectively to ensure all views have been addressed. It is not like in a company where a manager is making a decision for the whole company. A group of prominent people in the village would make a decision collaboratively. This is of course messy and sometimes reaching consensus is difficult. Nevertheless, such action gives the decision a higher chance of success in that local village community. Otherwise, if one powerful person, who is left out of the decision or the program direction, may end up sabotaging the effort'.

The existence of an overarching body such as ICTA to keep leaders focused on a uniform vision across the nation was highlighted as a critical aspect of the project's success by the ICTA officials interviewed. The leadership provided by the ICTA officials within the grassroots level to Sri Lankans, and indeed by international stakeholders at the national level to ICTA, was credited for its long-term viability of the Nenasala program by all participants. ICTA officials noted that the leadership provided

by other complementary e-Sri Lanka program managers was credited by grassroots level leaders as the main contributor for the project's accomplishments within Sri Lankan society at a village level. As an ICTA official put it, 'Nenasala initiative is led and owned by the local people once ICTA established the Nenasalas. Local Nenasala or its local efforts are not government owned. ICTA's role is as an advisor and a facilitator of the overall initiative. However, without ICTA there will be no uniform vision that benefits the program. We tried to get all these people working in a certain direction to benefit the ICT4D thrust of e-Sri Lanka and indeed Smart Sri Lanka program. However, Nenasala project cannot achieve these ambitious national targets by themselves. Other programs such as e-society and e-government programs assist the Nenasala program. For example, the local content developed by e-society programs was a major help for Nenasala programs to service rural communities. Without the Sinhala and Tamil content we would have an issue in communicating with the English content'. In short, what the ICTA official was stating was that many leaders from the ICTA had to combine their knowledge in their expert areas to ensure that the stated goals of the Nenasala program were achieved. The ICTA official was quick to point out that the leadership such officials showed was within the areas that they were responsible for. This was to say that the structure of the Nenasala program was also relevant to the overall progress the telecentres achieved. The structure as per the interviewees was an evolving aspect that the officials fine-tuned over a number of years. The officials' catchphrase was 'we learnt to learn within our evaluations'. It was also noted that the data collection and analysis was outsourced to consultants as consultants brought best practice and consistency to the measurement of progress.

ICTA officials also credit the continual leadership of politicians who championed and determinately pursued the early e-Sri Lanka vision with World Bank as a key leadership that has assisted the Nenasala program immensely throughout its history. In addition, the continuing leadership of the former President of Sri Lanka, who took a special interest on Nenasala and e-Sri Lanka to lay a solid foundation for the next phase of Sri Lanka's e-Development master plan 'SMART Sri Lanka', was specifically noted by ICTA officials as a critical enabler of the program and its future. One official noted that 'political stability is required for any long-term ICT4D effort. This stability provided by the successive incumbent governments and the oppositions alike for the betterment of the nation, has allowed for the past stability and future focus required by this program

to grow in Sri Lanka'. As an ICTA official explained, 'in politics what the government endorsed is usually dis-endorsed by the opposition. Similarly, there were disbelievers within the government and opposition considering that many Members of Parliament did not know much about ICT at that time. However, ICTA's initial development team with the World Bank team continued to educate and lobby both sides of politics to show them the benefits. Then the government and the opposition both saw the value of ICT and its place in developing the nation. This was a great victory for the sake of the rural population and indeed the country'. The endorsement of both major political parties has indeed meant that e-Sri Lanka and Nenasala program survived for long where most programs did not. Furthermore, support from local government also assisted the spread of Nenasalas where most local politicians were keen to get a Nenasala set up in their Jurisdictions due to the perceived benefits it provided to citizens. As such, the leadership these politicians provided for securing, establishing and indeed to successful running Nenasalas helped the not-for-profit model thrive in places like local government offices, schools and libraries.

However, ICTA officials primarily viewed the Nenasala leaders' role as within the wider Sri Lankan ICT4D path already taken and the journey ahead. They acknowledged that the leaders in not-for-profit community based models were particularly important to developing countries such as Sri Lanka with limited resources at the government and local municipality levels. Nonetheless, ICTA officials conceded that the long-term viability of the Nenasala project could not be based on the not-for-profit concept as the country gets more westernised with commercial orientation. An ICTA official noted, 'we can say that Nenasalas run by religious institutions are sustainable even though their expenses are covered by donations and the parent institutions. However, the ideal scenario would be for the Nenasala as an entity to be self-sufficient. This is what the business model Nenasalas have achieved'. This was to say that the models had to generate income sufficiently to cover expenses without external donations. As one ICTA official noted, 'Sri Lanka is developing fast. Most of the city dwellers are already well-off or have entered the middle class. Nevertheless, there is still an urban and especially a rural population that is poor or extremely poor that struggle even to get the basics. The government and the community at large want to assist this rural disadvantaged population with Nenasala efforts'. The official advised that the leaders of not-for-profit Nenasalas have also realised the need for commercialisation for future

sustainability. As far as he was concerned, this was a simple true quality of leadership, where leaders identified the disruptive trends to the status quo where one had to adapt the services to the evolving ground conditions.

ICTA officials saw that the similar, social, cultural and religious aspects may act as a common underling unifier, but still there was a need for prominent leadership within a given model to compliment the underling unifier within the model. An ICTA official noted that the not-for-profit community model worked as the society and all religions in Sri Lanka has a focus on benefiting the disadvantaged. However, this focus of ‘doing good’ for the other may not be the same in future Sri Lanka as the societies’ interest in religion is changing. Hence the belief that as the country develops and gets more commercialised, ICT4D’s focus would be following the course chartered by developed countries with profit focused ventures and a philanthropic approach to poverty alleviation through the SR synergies they sponsored. However, this change is not expected to take place in the near future in Sri Lanka or other South Asian developing nations.

The overwhelming experience of ICTA was that positive leadership gained results despite them facing difficulties on many levels. Nonetheless, even the strongest leaders faced challenges from external threats that affected Nenasalas in today’s uncertain market. However, ICTA acknowledged that such uncertainty in markets were inevitable due to the shifts in dominant technology or economic conditions. However, they noted, that the fixed line technology and computers still offered services to the rural poor that could not be achieved through mobile smart devices. As a consultant associated with ICTA noted, ‘all technology has a certain shelf life. Perhaps telecentres may have another 10 years in them when considering that even rural people are now gradually buying personal computers and have smart phones with data connections. Nevertheless, the question one needs to ask is that can this new disruptive technology replace what is done within the rural poor communities by telecentres? The answer was no’.

## **Recruitment and job design**

ICTA took a hands-off approach and a high-level view to recruitment for Nenasalas. ICTA officials were happy that the Nenasala employed rural youth and graduates. An ICTA official noted that, 'apart from Nenasala providing ICT for rural people, it has given them an opportunity to get into employment areas that were not available to them. When you consider that Nenasalas are located all over Sri Lanka, even in remote villages, this is a great achievement. The added benefit is that they also get income'. Nevertheless, ICTA officials did not see it as ICTA's place to dictate how and who should be recruited in individual Nenasalas. It was stated, 'It would be unwise to mandate who should be recruited with what qualifications and at what pay. That should be decided by the Nenasala owners according to the circumstances they face on the ground. If we mandate a minimum requirement, say in qualifications, Nenasalas in remote areas might find it difficult to find such people in that village. In addition, they might not be able to afford a person who fits the mandated criteria if the Nenasala is not generating much income from that rural village. This needs to be a local decision purely based on local circumstances'. The official also added that considering that each Nenasala offerings were different, with a variety of educational courses being offered in Nenasalas in different computer software languages, it would be difficult to have one required set of qualifications as the mandated one. However, they noted that some basic aspects of recruitment such as advertising, interviewing and hiring were discussed within the five day residential training program ICTA provided to Nenasala owners and an operator at each Nenasala's commencement. Although the base curriculum of this course was developed by ICTA, ICTA used different external consultants to deliver such training sessions. However, most of the recruitment was left at the hands of local leaders. Nonetheless, ICTA noted that NGOs and individual entrepreneurs seem to take special care when recruiting people. ICTA officials noted that other not-for-profit community based models that relied on volunteerism may not be as sophisticated as staff availability and depended on people's spare time regardless of their qualifications. However, they noted that a few Nenasalas that were more organised within the not-for-profit sector and led by strong, educated and forward looking leaders were more focused on recruitment than the others. An ICTA official also advised that recruitment and job design were dependent on the Nenasala structure, which came about due to growth. It was their assessment that the larger the Nenasala got, the more stringent the organisational structure became and organising of job roles and recruitment associated with the role became. As once official put it, 'if you operate a small Nenasala with

another operator, recruitment becomes a non-issue. In the majority of the cases of Nenasalas, I suspect this would be the case. In such scenarios, I think Nenasala owners may resort to the most qualified local youth or a family member rather than recruit from a pool of candidates. It is simple when you consider the size of most grassroots efforts such as Nenasalas’.

ICTA was also indifferent about the requirements for job design or specification as they saw this was again a task for the Nenasala owners. The officials noted that in grassroots organisations the people were generally jack-of-all-trades. In some occasions, the owner also acted as the sole operator of Nenasala. As such, it was argued that job categorisation or design to minor task levels was a fruitless exercise. Nonetheless, if a Nenasala grew to become a sizable organisation, as in the case of Balangoda Nenasala, then a more organised formal organisational structure, along with job descriptions, was seen to be relevant. As the ICTA officials put it, ‘when we go to grassroots level, it is best to keep things simple and let things form in harmony with the local environment and under local conditions. That way we get something that works for the people that is involved in the exercise and are driving the effort on the ground’. What the ICTA official was alluding at was that, one had to rely on the local leader as the implementer and manager of the majority of the aspects within grassroots initiatives.

ICTA officials acknowledged that they did not request or find any sophisticated hiring mechanisms within Nenasalas. As one official put it, ‘I have seen only a handful of instances where the Nenasala owners may have advertised when hiring a person. I know the NGOs do this quite a bit related to their Nenasalas. However, I do not think the others did any such thing. It is mostly done by word of mouth or through local knowledge. If you think of a rural village, most people know who is knowledgeable in computers in that village. So the hiring really becomes a simple aspect where you would need to speak to a few people to get it arranged’. The job role or job design was a similar matter where the person that was hired did whatever was asked of them by the Nenasala owner. It was seen as a private arrangement more than a structural necessity related to human capital. However, ICTA did concentrate on training and development. These aspects are next explored.

## **Training and development**

The ICTA indicated that training and development was important to Nenasala sustainability. The ICTA focused on training at the initiation phase of each Nenasala. The training provided in a five-day residential course was documented in a comprehensive manual provided to each participant. Two participants from each Nenasala were invited to attend the residential training, which was usually held in the Sri Lankan capital Colombo. The participants were usually made-up of the owner and a senior operator. The training material was prepared by an external consultant under the mandated base curriculum of ICTA. It was noted that roughly eight modules were prepared by the external consultant. Furthermore, the consultant who prepared the training modules served as the instructor during that particular training session. However, ICTA officials understood that it would have been ideal to provide ongoing rotational training to update the skills of Nenasala leaders considering that the leaders were of varied backgrounds with differing educational levels. Similarly, the conditions they faced within Nenasalas on the ground changed from time to time, requiring learning new skills and gaining new knowledge. However, ICTA budget constraints and the ad-hoc nature of donor funding for the Sri Lankan ICT4D roadmap prevented this ongoing training from becoming a reality. One ICTA official noted that, ‘we understand that training needs to be more rigorous and continuous. Even with five days of residential training, we can only teach the basics. It is difficult to capture the correct balance in training, as the owners are from very different backgrounds. For example, one may be a fisherman who knows nothing about book-keeping, and another could be a small businessperson who already knows the basics. Therefore, for some participants we are repeating what they already know within our training sessions and for others it is something that they have not heard about in their life. This is the difficulty in training when it comes to grassroots level initiatives’. However, ICTA officials justified their chosen training regime stating that in their experience leaders who initiated Nenasala remained with the venture long-term compared to operators who had a higher attrition rate. As such, it was envisaged that the leader’s skills and knowledge would be retained, grown with experience, and passed on to any new recruit hired in lieu of rotational training that the Nenasala program required. Similarly, ICTA saw training as giving the tool Nenasala grassroots leaders required for their new trade along with the basic skills

for developing innovative ventures rather than teaching how to be creative or successful within their new ICT profession. They expected the Nenasala owners to make their own advancement with the skills they required beyond the basics ICTA provided. However, when it came to more specific computer language related skills such as programming, ICTA did offer ad-hoc courses for the benefit of Nenasala owners and operators. Nonetheless, it was noted that the training was organised from the initial donor funding from the World Bank. How much training could be done in the future was not made clear with the end of the initial World Bank donor funding. One interesting point that was made by ICTA in terms of training was how it was developed and delivered. As an ICTA official noted, ‘we use consultants for developing the training and its delivery to grassroots level leaders. I know that critics argue that it is an expensive way to do things and internal trainers would have been cheaper. Although consultants cost money, their expertise adds value’. Nonetheless, the ICTA official avoided answering how much funding was spent on consultants when considering the larger ICTA Nenasala program. Whether any follow-up was done after the training on how valuable the five day course was, and how much of it was utilised on the ground by the owner, was not fully investigated. The ICTA official was also unaware of measures that followed the progress of training. All that was noted by the ICTA official on this topic was to say that the consultants who trained and provided the initial five-day training changed periodically. As such, the training was not similar with different costs associated with each residential training session organised. Furthermore, considering that the proprietary material trainers used within these sessions differed, measuring the impact of training on the field was seen to be difficult. Similarly, ICTA officials noted that regional support teams called ‘regional impact teams’ (RIT), were set up by ICTA to assist Nenasalas that were lacking progress. RITs either consisted of consultants who were mandated to assist the Nenasalas or a successful Nenasala owner in the area who could educate other Nenasala owners based on their knowledge or experiences. However, RITs were also an ad-hoc engagement that was dependent on donor funding. As such, no continuous training and development reinforcement to Nenasala owners was visible. One official admitted that RIT have ceased to exist in some areas. He went on to say that RIT impact was also dependent on the leadership that was put in place of RIT. Nonetheless, an ICTA official noted, ‘we have a whole team of people here. Each region has a coordinator within the ICTA who is responsible for the success of the Nenasalas in that area, but the issue is that the demand on these people could be so

much with so many Nenasalas in existence'. However, the ICTA officer was quick to add that his ICTA and RIT staffs were dedicated and this dedication allowed them to see through the tremendous workloads and the daily pressures they faced. He noted that the ICTA official team also attended training to keep their knowledge updated and relevant to the content ICTA passed on to Nenasala owners and operators. Further to the local focus on the grassroots level, the ICTA also organised overseas study tours for people who were involved in the program. The ICTA official was quick to highlight the Indian study tours that have been organised for the owners of Nenasala telecentres to learn from Indian experience as a country that also had many telecentre projects. However, outcomes from these study tours were not often debated according to the ICTA official's observations of Nenasala owners or operators. ICTA officials also noted the partnership with the Telecentre.org Foundation and the ICTA. It was stated that, the University of Colombo School of Computing (UCSC) has also been pursuing efforts to establish the Sri Lankan Telecentre Academy for certifying telecentre operators with a degree of excellence in telecentre management, which was supported by many prominent academics in the country. However, it was advised that the effort was on temporary hold due to funding issues, and when funding was available the program would commence. The Sri Lankan Telecentre Academy (SLTA) was to be a part of the global Telecentre.org Academy and was to be responsible for offering online solutions to all the other academies within the consortium. However, when asked how a Nenasala could seek assistance within the various discontinuations that happened with the e-Sri Lanka program due to obvious funding gaps, the ICTA official noted that Nenasalas could rely on peer support and local connections made with ICTA's guidance. It was further stated that ICTA initiated a programme to identify and designate the best Nenasala operators in each district as regional Nenasala Ambassadors or a local district coordinator. Furthermore, it was seen that leadership and persistence was also assisted in securing training. As one Nenasala regional coordinator noted, people who were persistence got on training programs almost by force to ensure they secured one of the scarce places within ICTA training courses even when they were theoretically not entitled to it. Although this was not the norm, it was shown as an example of some grassroots leaders' attempts in securing knowledge at any cost to gain an advantage over others. This again highlighted the fact 'if there was a will, there was a way to get what you wanted' leading to the ratification of popular notion that

leadership was key in resolving most difficulties Nenasala faced even in regard to training and development.

### **Performance management and rewards**

ICTA officials were also adamant that most Nenasala operators and owners participated in the program mainly due to their strong belief in helping the less fortunate. Although this was true in most not-for-profit community based models and considering that the not-for-profit community based model had the larger portion of Nenasalas, there was a clear demand for proper remuneration for good performance from most of the participants of the study. ICTA officials admitted to the existence of such sentiments and acknowledged that the payments people received in Nenasalas were not comparable to the commercial sector outside of Nenasala networks. They believed that several reasons contributed to this lack of remuneration to operators. One was, that most Nenasalas were located in rural areas where populations and subscriber affordability was low. Furthermore, as most Nenasalas tried to price below their commercial counterparts due to their SR synergies, their income was generally lower, affecting the salaries which were offered. Nonetheless, ICTA officials did not endorse Nenasalas to be run purely as profit based entities as they saw the Nenasala purpose from a larger national context where benefiting the rural poor was paramount over making profits. Although ICTA could not stop a Nenasala owner deciding to commercialise their telecentre, it was stated that they would need to be doing that according to the proposals submitted in getting the assistance from ICTA and the government initially. However, ICTA officials were not generally focused or troubled about the remuneration of Nenasala employees. As one ICTA officials put it, ‘we cannot mandate what an operator should be paid. That is an internal decision for the Nenasala owner. However, we know that most Nenasala operators are not getting much. In the case of the not-for-profit sector, some might not be getting a stipend, even to cover their expenses’. However, ICTA officials did not consider rewards purely monetary. One ICTA official elaborated on this notion by stating, ‘there is a belief that most people work within the Nenasala network because they feel happy assisting people. However, this is not to say that payments are not required. What I am saying is that in the larger context of the program, which benefits the grassroots level disadvantaged, there is room for many

models that may have a huge variance on rewards or formal performance measurement related to remuneration. One could be based on money making, and the other could be set up based on happiness'. Nonetheless, ICTA officials believed that for a program to be successful it had been covering its costs regardless of the model utilised in its establishment. This was to say that for any kind of payments to its participants, whether monitoring or personal satisfaction, Nenasala had to survive in the first place. An ICTA official noted that there have been instances where Nenasalas were not even making money to cover ad-hoc issues it may encounter that impact its continuity, such as problems with hardware, where some Nenasalas were unable to replace their ageing PCs. As such, it was stressed that first and foremost, a clear vision on how the Nenasala would operate in to the future was required from the owner at the planning stage. This initial check made by ICTA in analysing the business plan was seen as the first step in a long road to sustainability. Nonetheless, the ICTA also acknowledged that performance management was not done at a HR level within Nenasalas. ICTA officials advised that they were echoing the sentiments of the owners and operators to note that most Nenasalas were too small for proper HR evaluations. It was assumed that the people who worked in Nenasalas were aware of each other's capabilities and work ethics due to their close associations in the workplace. However, it was stated that Nenasala staff were generally known to have good opportunities in the private sector within a very short time. This also drove the point home that if Nenasalas were to retain good operators, some formal evaluation and appropriate payments were required to be put in place. The ICTA also acknowledged an interesting point that was made by the for-profit business model based Nenasalas. That was, the community in general saw free or subsidised services or products to be inferior to a fully paid service, even if it was found to be superior compared to the paid product. This was to say that commercialisation of Nenasala may not be a bad thing if they were to remain relevant to the community. Furthermore, they acknowledged that charging for services across the board in all models would allow for payment of decent wages to Nenasala operators and allow owners to make enough profit to stand on their own feet without government assistance or bailouts. ICTA officials focused mainly on the for-profit Nenasalas entrepreneurs operated and NGO led not-for-profit community based models when referring to remuneration. They noted that it is their experience these two models did have some payments. As the official noted, 'in the religious model we do not see much payments. Same with the village society led model. This is not to say that there are no payments in

these. Some leaders in these categories have set up a Nenasala structure, which involves paying a wage to operators and measuring what they get for their money from these people. However, this is a reality. What we have seen is that the NGO model did make payments to operators as this was mostly done by the parent NGO. When it came to the for-profit model, payments to operators were there as it suggested. However, even the for profit model sometimes focussed on putting some of the income back into the Nenasala before payments to ensure the business grew. This may be a grassroots thing'. What ICTA officials were eluding was based on the leader's vision and ambition to grow, the reward to operators and indeed to the owner – seemed to vary within the Nenasala models.

### **How to fund human capital at grassroots for Sustainability**

This research applies a human capital lens to the sustainability gap in Nenasala telecentres to better understand the important human capital drivers to this grassroots level not-for-profit or for-profit ICT4D telecentre initiative. However, sustainability, human capital and its drivers are discussed in relation to funding availability during start-up and for continuation of Nenasalas. As such, ICTA's views on funding needed to be investigated.

ICTA officials saw ongoing funding to be an issue for grassroots level Nenasalas and viewed their funding role within the context of initial setup. The ICTA did acknowledge funding had a direct influence of human capital capacity Nenasala could amass, and that in turn may have impacted sustainability. Conversely, ICTA noted that a particular baseline financial skills and understanding of business would be preferable for a potential Nenasala owner. However, such minimum conditions were not a mandated requirement of the grassroots initiative considering the diversity of models and the financial savviness of stakeholders involved. Furthermore, ICTA saw the topic of financing to be a dissimilar area it could not mandate, advise, or control. As such, locating suitable financial sources for individual Nenasalas were left up to the owners as that would depend on their circumstances. As an ICTA official noted 'what an umbrella organisation like ICTA is doing is showing the way and giving the base assistance and knowledge to owners. We are not saying to Nenasala owners to choose a particular

funding path. This is an issue for them to resolve on their own. The simple fact is there are many ways to fund a grassroots initiative like Nenasala telecentres. If you think of not-for-profit Nenasalas run by religious clergy, they fund human capital aspects mainly through donations whereas, for profit entrepreneurs may run it as a business and try to generate money from sales and services to pay for human capital. As such, what these models do cannot be covered by one funding path'. However, ICTA admitted some funding avenues such as microfinance have been utilised by grassroots initiatives much more than equity-based funding paths. However, as one ICTA official argued, equity-based funding paths were still popular as the funding was available to the Nenasala owners sooner than choosing microfinance, which had lengthy memberships associated with the credit provider to prove credit worthiness. However, in the ICTA officials' view both funding avenues had dangers to rural Nenasala owners who did not have much collateral or a regular income stream. The belief was that alternative funding paths that did not have interest payments could be advantages at a grassroots level. The crowdfunding path was seen as such a mechanism where people around the world who were interested in helping various projects within a Nenasala could assist such a venture with very little return to them. However, the ICTA official was not sure whether the credibility that participants of crowdfunding sought of a project could be achieved by a Nenasala project without some outside vouching and guidance. The ICTA official thought that such a trust building attempt could be done by ICTA or an NGO as in the case of Sarvodaya to assist Nenasala owners.

## **Conclusion**

Within the interviews that were conducted with ICTA officials, it was uncovered that they believed that the most crucial human capital driver that affected the sustainability of Nenasala program was leadership. This special form of leader focused on social-cultural aspects that aided poverty eradication through the ICT4D project with substantial SR synergies. However, officials and the program did not mandate or favour a particular model or leadership style when deciding a person's suitability to establish and run a Nenasala. It was believed that all models had specialities that could assist a targeted disadvantaged population that the Nenasala wanted to reach through ICT4D. Nonetheless, leadership of religious clergy in Nenasalas that were aligned to religious

institutions and leadership of entrepreneurs in the for-profit business models were noted as particularly successful and sustainable. However, who was recruited to progress the Nenasala was an issue that ICTA focused on from a high level within the context of the ICT4D national initiative. Internal job design and recruitment aspects within a Nenasala were not seen as a concern for ICTA. However, ICTA was keen to recruit the proper leader that could guide the Nenasala to sustainability. This was done by selecting the leaders, making sure they had robust and valid business plans that aimed at sustainability regardless of the for-profit business or not-for-profit community model Nenasalas they intended to set up. Furthermore, once the leader selection was finalised, ICTA focused heavily on providing the necessary skills to leaders to assist Nenasala sustainability and good practice. Nonetheless, considering the vastly varied backgrounds of the Nenasala leaders, the differences in the Nenasala models and the different SR synergies they pursued, ICTA could not mandate human capital aspects or prescribe one model for sustainability. Job design and internal aspects such as training and personal development of the local not-for-profit, for-profit Nenasala models was not focused at the ICTA level. Nonetheless, training of leaders through local consultants and gaining experiences at international field trips and study tours were organised by ICTA. The international efforts, such as study tours of India and the efforts to setup a Sri Lankan Telecentre Academy were hindered by the availability of funds that seemed to fluctuate within the history of the program. However, the training of ICTA staff to set the structure of the larger ICT4D effort as well as the Nenasala was advocated by officials. They also acknowledged the leadership of political leaders and leaders of ICTA support programs as been vital for the endurance of the initiative and for the future focus that has led to the growth of e-Sri Lanka into Smart Sri Lanka. However, with initial World Bank funding finishing, most of the expensive program endeavours have ended or been put on hold. These have been replaced by a focus on local assistance that may be better suited to finding solutions to local problems. These efforts included RIT and appointment of local Nenasala ambassadors to assist Nenasalas of a particular district. Nonetheless, ICTA acknowledged that some commercialisation is required to ensure that people attached to Nenasalas were properly compensated for the services they provided the community. However, this was not to say that all Nenasalas had to be converted to for-profit business models but to say that each Nenasala had to generate sufficient funds to cover expenses, compensate the people who provided the services and to have leftover funds to ensure recoverability in an emergency. This view

was supported by various perceptions of the community where it was seen as people valuing services or goods they had to purchase rather than getting them free. However, it was acknowledged that Nenasala services were particularly needed for the extremely poor segment in the Sri Lankan community who had to rely only on the free provisions. As such, ICTA officials still aimed to keep Nenasala relevant to all stakeholders while holding to its vision of aiding the development of Sri Lanka through ICT. This ‘helicopter view’ of an ICTA official’s experience gave a reference point to understand the context of Nenasalas, its human capital capacity and their human capital drivers. The next three chapters document the findings of the focus groups’ data around the not-for-profit Nenasalas.

## **CHAPTER 7 - Not-for-Profit Nenasalas – Religious Clergy Led**

### **Introduction**

The previous chapter documented ICTA officials' experiences as a 'helicopter view' of how the Nenasalas were structured and operationalised. ICTA officials' experience and observations are important considering ICTA was the government umbrella organisation that guided Nenasala models. ICTA officials' experience on human capital and its drivers were especially important as they viewed the human capital aspects from an overall perspective at a higher level across the Nenasala program and could have influenced all models that were attached to the larger vision.

When applying the human capital lens to the sustainability gap in Nenasala telecentres at the grassroots level to better understand the important human capital drivers, it was decided to categorise the Nenasalas into larger groupings of not-for-profit or for-profit ICT4D telecentres. This chapter captures the data and findings from the focus groups related to the largest group of not-for-profit focused Nenasalas, predominant in the community-based models. The not-for-profit community-based Nenasalas were categorised into three major groupings. The first category was led by religious clergy under the patronage of religious institutions. This sub-grouping is investigated within this chapter. The findings of this model are organised by the human capital drivers investigated, for ease of exploration and comparison within later chapters.

### **Leadership and culture**

All Nenasalas encompassed a unique kind of leadership. Nenasala leaders focused on socio-cultural aspects, which aim at uplifting their local community. The most prominent leadership was exhibited by the religious clergy, predominantly Buddhist monks involved with the Nenasala project. The participants indicated that the clergy was at an advantage in their leadership qualities due to their fundamental status in the community as leaders who already focused on social, community, and religious well-being of rural communities. Most clergy were uncovered to be strong leaders, and methodical organisers at the grassroots level. Although most of the older clergy had

little knowledge of ICT or technology and were not directly involved in the day-to-day operations of Nenasalas, these leaders were skilled at setting the strategic direction, recruiting capable individuals to manage the Nenasalas and to garner local community support for Nenasalas. However, religious institutions also benefited from devotee boards, such as 'Dayaka Sabhas' in temples to aid day-to-day operations of the temples and associated projects such as Nenasalas. Although some prominent 'Dayaka Sabha' members, as local village leaders, had significant leadership and influence in decisions made in their own right, most clergy played a pivotal, primary role in making decisions in Nenasalas.

The data indicated that clergy as leaders were able to voice their opinions freely compared to other leaders due to their prominent social standing. They were better at articulating their positions and were capable of moderating their messages to suit the audience. Their outspoken manner was noted by the researcher in town hall meetings he attended that were organised by an ICTA consultant for local Nenasala operators to discuss current issues they faced with the local politicians and government officials. The skills clergy developed delivering sermons to devotees, addressing prominent people in society on important community issues, officiating in many significant occasions of personal, family and community levels, may have contributed to this distinct advantage in better articulating their messages, enhancing their distinct leadership. The ability to rise above politics and personal influence due to their venerated positions were also a definite advantage in their leadership. Where other leaders were obstructed by the opinions of politicians, government officials, or local village politics, the clergy remained mostly above these challenges and managed to impose their message and determination on the others. Furthermore, the prominent nature of religious leaders within Sri Lankan society as guardians of society and people of influence in difficult times of the country's history, also gave them a special position to achieve significant community support and the support of local government officials with little resistance. When reflecting on the diversity of opinion, political and religious affiliations, and interpersonal politics that were prevalent at a village level in Sri Lanka where Nenasalas mainly operated, the leadership of clergy was a distinct advantage. It was also highlighted that some clergy directing Nenasalas were based overseas although they maintained strong ties with Sri Lanka and their relevant local religious institutions. Apart from receiving donations from overseas congregations to develop Nenasalas, the

Nenasalas run by overseas-based clergy also benefited from the progressive open-minded nature of those clergy. This meant new ideas and services that was utilised overseas were introduced or trialled in local Nenasalas by those leaders.

Discussions also found that Nenasalas run by religious leaders benefitted from a ready-made publicity mechanism of the religious institution to promote Nenasala services through other programs that already existed, and were managed by the religious institutions. The clergy as leaders was essential in the promotion of Nenasala as a worthwhile exercise to villagers. Furthermore, the religious institutions already attracted rural villagers and thereby created a clientele for Nenasalas. For example, existing Sunday 'Dhamma' schools in temples (religious schools) and other youth programs in religious institutions were crucial for Nenasala to get a ready-made youth clientele. As one participant who was an operator of a religious institution-based Nenasala explained, 'I got involved because the village priest asked me to. I was a student at 'Dhamma' schools already. Although I was busy with helping the family with agricultural work and studies, I had to assist the monk, as I could not say no. Just like me, a few other youths who were at home after Advanced Level exam helped at the temple Nenasala. We all know the priest from Dhamma School and our family are good devotees of the temple'.

Equally, traditionally temples were considered as places of learning in Sri Lanka with clergy, especially Buddhist monks being considered as teachers who taught the masses. This was a long-standing historical tradition that dated back to the early kingdoms of Sri Lanka. This tradition and the tranquil surroundings also aided the Nenasalas located in religious places as places for learning. Furthermore, parents were more amicable to allowing their children to visit temples as they were seen as safe, moral places for worship and education. However, such Nenasalas also faced difficulties due to this symbiotic religious association. For example, religious institutions and clergy necessitated a modest dress code within Nenasalas and in the religious institutions, which created a problem for some Nenasala users. Similarly, entering a religious venue required one to remove their shoes, which was seen as an inconvenience by some users of Nenasalas. Furthermore, a minority of villagers who did not share a spiritual view or followed a different religion did not visit Nenasalas due to perceived religious linkages or due to Nenasala being located on religious premises. In addition, most religious

institutions were situated away from the main road at a central prominent location within a village. This required Nenasala users to travel further into the village, away from the main roads to reach such Nenasalas. Nevertheless, enterprising religious leaders were quick to remedy these issues by relocating Nenasalas into premises detached from the religious institutions and close to main roads. This not only eliminated the issues associated with dress codes and distance, it also created an opportunity for commercialising Nenasala services by creating an effective detachment of Nenasala from the religious philosophy which was based on free service.

### **Recruitment and job design**

Participants advised that recruitment in not-for-profit community-based Nenasalas took many forms and amalgamations. Although religious clergy took a lead in some religious institution aligned Nenasalas, in other places ‘Dayaka Sabha’ (Devotee Boards) members or a prominent operators were found to be the main recruiters. In some Nenasalas the religious clergy interviewed and hired the operators. In others, a panel consisting of the clergy, Dayaka Sabha members and operators interviewed staff. The main reason the Nenasala operators provided the panel interviews was the specialist knowledge of the area, which eluded most senior clergy and Dayaka Sabha members who were generally older people. However, the majority of the participants did not seem to indicate that a systematic interview process or a formal regime around hiring was in place. They indicated that hiring was done at a village level using the village youth who were computer literate and were known to them. Only a few Nenasalas under the religious institutions indicated that they had staff recruited from other villages; due to the stringent technical requirements required to teach those classes. However, some religious institutions led by clergy who resided overseas advised that they had a stringent hiring policy and formal hiring requirements for the job roles they sought to fill. As an operator of such a Nenasala explained, ‘each year, the top of the batch from the youth who followed the Nenasala courses, and passed, were hired as instructors. This meant they were able to hire quality technically qualified staff who were known to them that fulfilled the human capital criteria they followed’. It was further explained that the Nenasala advisory committee led by the head priest as its main advisor put these operating criteria in place initially at its inception. Further, they

also revisited these guidelines periodically within their Nenasala strategic reviews they held annually. It was noted that the head priest had a keen interest in seeing Nenasala succeed and was either inquiring or directing the Nenasalas from overseas and he visited Sri Lanka within the review periods. More advanced Nenasalas, from a HR aspect, seemed to be a reality and a minority. It was only in these more advanced Nenasalas that formal job designs and job descriptions were seen. Most religious clergy who managed Nenasalas admitted that they did not have formal job descriptions or specific roles. It was noted that they hired people who were multi-skilled and could cover most operating aspects of Nenasalas. However, the more organised Nenasalas noted that they try to formalise the job descriptions as the staff numbers have now reached larger numbers. Large numbers of Nenasala staff seemed to be the main differentiator that had formal job descriptions, compared to other Nenasalas that did not have or follow any job descriptions. However, most participants within this category agreed that their operators had to be skilled enough to cover lectures on the subjects that were offered by Nenasalas in case of absenteeism. However, most did not see any need to administrative cross-skilling in the leadership roles they encompassed within Nenasalas. It was noted that such matters were dealt by the head priest in charge or the appointee of priest as the main advisor of Nenasalas. Most participants agreed that head religious clergy mostly dominated and directed the recruitment as he directed most programs run by the temple. Furthermore, in most cases the practice of engaging staff on a volunteer basis meant that no formal structures could be implemented. However, it was again put to the leadership of religious clergy as the main factor that drove recruitment. It was explained that some people had a special ability for directing and identifying the right person for the job. As one participant put it, this ability was no feat of super-human effort or ability. He noted that, 'a village Buddhist monk knows more about what goes on with people in the village than most villagers themselves, as villagers confide in monks in times of trouble. This put them in a unique position to know and select the best person for a given task. However, what one does with this sort of information depends on the intelligence and the leadership of that person. I have seen, monks who have used this information for good, with the right kind of thoughtfulness and judgment to engage a villager at the right time to assist Nenasala endeavours'. However, recruitment had to be complimented by training of those staff to handle the day-to-day jobs and to teach specialised classes and this aspect is explored next.

## **Training and development**

The participants' responses in training and development within the not-for-profit community model categories also showed diversity. However, most did not indicate a formal training or development regime. The Nenasalas run by religious institutions under the patronage of clergy mostly indicated that they relied on in-house or on the job training. This was to say that considering most operators spent their time on a volunteer basis with varying availability it was difficult to train the operators systematically. As such, the Nenasala of this category mainly employed a buddy or a mentoring system to skill up the new operators. It was indicated that this method was sufficient as there was not much to learn in terms of the provision of basic Nenasala services. However, they did not have any training for the specialist areas of teaching and lecturing of specific subjects related to software programming. These were done by skilled lecturers or students who had previously passed those courses with exceptional marks. The participants indicated that they had to recruit for those specialist areas externally or within a very small population of internal candidates, which was difficult most of the time. As one participant stated, 'we always struggle to get good masters. The very good ones ask for a lot of money and we cannot afford that. We rely on a local master who may have a following within the village and the surrounding area. However, this means that they have to teach at Nenasala as a service or without asking for much in return. Other than that, we have to rely on the students who are skilled enough to conduct the classes'. This indicated an issue that seems to be highlighted in other not-for-profit community-based models as well. However, the courses offered by Nenasala were accredited by the Vocational Training Authority of Sri Lanka (VTC), which mandated certain operating requirements for institutions that offered their courses. It was mandated that lecturers and the masters had to have advance certificate level qualifications in the area taught to conduct classes. Not for profit, Nenasalas however had minor variations on training and development, again based on the leader's vision and beliefs.

Similarly, they did not have formal development plans or succession planning to become leaders of the movement. As one priest who participated in the study noted,

‘the priest in a village temple does not change. If it is the head priest of the village temple who is advising and leading the Nenasala, then you could be sure that the priest will be there as the leader, unless something unforeseen happens. As such, we do not have an issue of succession planning for temple-based Nenasalas’. However, even the priest admitted that formal development would benefit all in the movement including the village clergy. However, this was seen by the priest in the context of betterment of quality of service provision and expansion of services through updated knowledge. These sentiments did not seem to be driven by personal desire to lead or to gain further ICT skills. This was put down to a priest’s principal focus area being different from the ICT field. As one Buddhist monk admitted, ‘clergy’s main goal in life is to attain ‘Nibbana’ (achieve enlightenment as taught in Buddhism). Yet within this life, as we seek spiritual enlightenment we seek to help the villagers and the poor people through the programs we run in our temples. ICT and Nenasalas are, not a livelihood for us. As such, we do not need to know or plan to get ahead in the area of ICT personally. However, we get our young people who run the operations to learn skills as well as they can, so we can provide the best service for those who we serve. They also can use those additional skills they gain through Nenasalas to get ahead in life and get better jobs’. However, none of the clergy or operators who represented the religious run Nenasala indicated any skilling up efforts of operators or Nenasala managers through externally run ICT courses. It was explained that the Nenasalas did not make that much money to pay for the education of Nenasala staff through external means. They however, noted that whatever the courses the Nenasala conducted internally were available to their staff for their development purposes. It was revealed that Nenasalas run by religious institutions relied on externally qualified candidates to get the skill level required to sustain the services provided and only on very rare occasions they opted to skill up operators for a highly skilled job role. It was noted that junior staff learned on the job by watching senior operators. They stated that day-to-day operations of a Nenasala were routine and the junior staff could master those skills quickly. However, the internal training the junior staff received could not cover the teaching aspects of classes most Nenasalas ran. This meant that religious clergy mainly relied on external staff to conduct their Nenasala classes, and junior operators mainly acted as tutors or assistants in classes. However, religious clergy did not see a major issue with this arrangement adding, ‘this arrangement has worked for us. Most villagers and young people attend computer classes in the city anyway to better themselves. Therefore, we can employ

those people without providing them training internally. However, sometimes we get very good students who have the capability to come up through the ranks in Nenasalas. For those people we can say we trained and got them their first training-break’.

### **Performance management and rewards**

Performance management and rewards in religious institutions led not-for-profit Nenasalas were seen as two different things. First of all, the clergy insisted that operators and leaders associated with a Nenasala provide a service to their local communities and not seek financial benefits. Hence, they were not keen to link performance to a reward or wage. As one participant clergy explained, ‘the performance of an operator or Nenasala leader in the religious context could be explained through their motivation to do good for their local communities or indeed their fellow humans’. In other words, clergy saw reward to be the happiness human beings got from doing good, and helping the poor. Nonetheless, clergy noted that they did provide a stipend to youth who were operators of Nenasalas if they had to travel to come to work. They were keen to mention that the amount was not suitable as a wage but it was a way to cover expenses incurred through travelling and meals by the operators. Nonetheless, some clergy who operated Nenasalas in a semi-business model noted that they did pay a wage for their operators. Most importantly, they noted that they could not employ or retain staff with very good skill-sets within Nenasalas if they did not provide a wage. Similarly, in most instances they could not provide wages that were demanded by the capable or well-trained operators. One monk admitted that he lost one of his best operators due to this lack of affordability, noting that the ‘Nenasala had to operate within its income. We do not have any other way to supplement its income than current income from services and donations we get ad-hoc, considering the subsidies from ICTA have now finished. Therefore, dreaming big or providing the best service is out of reach for us. I had to let go of my best operator as we could not accommodate and meet the wage he demanded. He did eventually get work in a computer company, which was in line with his ambition. It is a pity that we could not accommodate and keep him within his local community to take advantage of his knowledge which he partly got from our Nenasala’. However, other clergy were keen to highlight that their finance model was still based on income through donations of their congregations and that still

worked well. Similarly, they argued that not-for-profit community-based models were a more successful model, which had little expenses considering the operators mostly volunteered their time. Nonetheless, clergy did not measure performance formally or were not interested in measuring such an aspect regardless of what rewards were on offer. They noted that a person who was running the Nenasala would observe the efforts of the operators and they would not need to measure operator performance to know whether someone was working hard. Operators also did not see a need to measure performance. They indicated that they did their jobs and what was expected was clear. One participant voiced this argument stating, ‘these are small places. It is not like a big office where people need many managers to know which employee is doing what. We have general flexibility in offering our services to the public. We keep the priest or the manager informed of what we have done. If the books balance at the end, then it is the end of that matter. There are no further requirements beyond that’. The religious clergy also expressed that they were not keen to measure performance, as people were volunteers. As once monk put it, ‘we do not want to tell people that one person’s time and effort is less than the others, although in reality it would be the case based on knowledge and experience of the operators. To me, they are all doing good things and gathering the same merits for their spiritual journey’.

## **Conclusion**

Religious clergy, predominantly Buddhist monks, led the most prominent not-for-profit Nenasalas investigated. Religious clergy primarily aimed to provide services free of charge or at a subsidised rate utilising the donations or grants received according to Buddhist philosophy. The leader was also found at the advisory and operator levels alike with the shared goals of benefiting the rural poor in the religious context. Nonetheless, the Nenasalas led by religious clergy seemed to fair best within the not-for-profit community-based category according to the studied participants’ expressions. This models’ prominence seems to be due to the prominent place that the clergy had within the Sri Lankan society in the historical and religious context of the country, as leaders who championed important issues for the benefit of the country’s population. The model was also operationally sustainable as described by the participants. Nenasalas located in religious institutions did not require rent payments, and electricity

and connectivity payments, as these were subsidised by the providers. Such advantages made the not-for-profit community model associated with religious institutions operationally cost effective. This sustainability has been made possible by the social-cultural focus of volunteerism and donations. Although this model functioned well, Nenasala operationalisation from a human capital view did not show much sophistication.

Buddhist philosophy and religious notions of helping the disadvantaged did influence recruitment, like most others aspects of these Nenasalas. The operators of Nenasalas under the patronage of religious clergy provided services on a volunteer basis. The special place religious clergy had within the society enabled them to recruit the most suitable villagers for Nenasala service provision without being required to provide any remuneration. However, this volunteerism also prevented such Nenasalas competing on a level-footing with their commercial counterparts as staff was only available during their free time to provide their services in Nenasalas. On rare occasions, external recruitment was noted as the main mechanism in acquiring specific specialised skills to Nenasalas that could not be fulfilled through volunteerism. However, in an environment where tasks and services were developed around people who volunteered, very little formal job designs existed. Religious clergy generally focused on all-rounders as staff. Any training on day-to-day aspects of Nenasala was mainly done as on-the-job training between the staff and volunteers. When more specialised specific skills were required those skills either came from a volunteer who was already well trained and knowledgeable within their relevant careers. As such, staff development was not considered to be as important as maintaining volunteers as staff. Performance and rewards were not considered within this model as religious clergy and Nenasala managers saw performance measurement was not appropriate when a service was provided by a volunteer. As such no formal analysis of how Nenasala provided services and their efficient delivery was undertaken. Only opinions and perceptions of the religious clergy on how things should be done and their effectiveness were considered in making such analysis and decisions. Although some minor stipend was provided to some staff in these Nenasalas, most clergy believed that volunteers and operators were like-minded people who undertook these tasks for the purpose of serving people without seeking compensation for their efforts. Nonetheless, even the clergy admitted

that more stable funding sources were required to compensate staff, if Nenasalas were to be operated during peak times and not on operator's free time.

In the next chapter, the second category of not-for-profit Nenasalas, led by Village Societies, will be examined to understand the human capital and their drivers within those Nenasalas.

## **CHAPTER 8 - Not-for-Profit Nenasalas – Village Society Led**

### **Introduction**

The previous chapter investigated the largest category of not-for-profit focused Nenasalas that were led by religious clergy under the patronage of religious institutions from a human capital lens to uncover important human capital drivers. This chapter captures the data and findings of the second not-for-profit category of community-based Nenasalas that were predominantly led by various kinds of village societies. The findings for this model are organised by the human capital drivers investigated in the previous chapter for ease of exploration and comparison within the analysis.

### **Leadership and culture**

The second prominent not-for-profit grouping of Nenasalas, were run by village societies of various types. The participants indicated that they were affiliated to numerous village or district level societies. These ranged from village welfare societies, youth, women's and sports clubs. Although this model was similar to the religious institutions in many operational regards, its decisions were taken by a village committee led by a leader as its main official. These committees and leaders usually alternated annually with new office bearers being elected democratically by the villagers. The advisory and monitoring capacity of Nenasalas that operated under the village societies were usually done through the village societies' committees made up of prominent village elders and local government officials that served the village. However, in this model, the leaders were mainly visible at the committee level. How well the Nenasala functioned within a given year was mainly dependent on the capabilities and aptitude of these elected leaders. Largely, the leaders associated with village societies were prominent people within the village, such as Justices of the Peace, principals of the local schools, doctors or other local professionals - people who could bring the village community together to benefit their local communities, similar to religious clergy on a civil level. Conversely, in some cases of village society led Nenasalas, the leaders were found at the operator level where the village committee lacked the knowledge in ICT even to provide basic guidance and governance to the Nenasalas. In such cases, the

society committees relied on the selected operators for strategy, policy, and operational guidance. Village societies merely acted as the official body that endorsed the activities and ideas that were put forward.

It was revealed that day-to-day operations of these Nenasalas were mostly conducted by computer literate youth recruited from the village. The leadership provided by this youth were limited to mostly operational aspects and was not at the strategic level. The operators usually had advanced qualifications in computer technology at a certificate level. Although these youth saw Nenasala as an opportunity for employment and a stepping stone for greater job opportunities in ICT and BPO industries, they also had a desire to serve their local community that they were part of. This sense of service was heightened by the fact that the operators had to report to the village society that was made up of prominent people in the village, who maintained deep-rooted local bonds and loyalties with village families and particularly operators' parents as elders. Nonetheless, as better opportunities arrived, such operators left employment at village Nenasalas affecting its stability, continuity, and sustainability. In order to prevent this, leaders in village societies offered salaries to operators from income generated by the Nenasalas or by other programs that were associated with the village society. Such attempts to maintain continuity and stability, against constant change and attrition, were another service the village society leaders provided within this telecentre model.

A higher level of commercialisation with less subsidised services was also evident within this model compared to Nenasalas associated with religious institutions. However, the decision of leaders to employ village youth within these Nenasalas as operators was an effective cause to uplift the commercialisation, since it attracted other village youth to Nenasalas due to similarities of interests, social connections and through the introduction of youth focused services such as gaming and online social media. For example, one Nenasala reported that their premier service was Skype as most youth had their parents or relatives working overseas in Middle Eastern countries as domestic aides. Although local Nenasala prices were higher than the commercial telecentres in town, local youth were inclined to use the Nenasala as they felt that they had more freedom and privacy in a familiar atmosphere where the operator youth understood their circumstances since the operators were also from similar family backgrounds. Nevertheless, due to the significant number of village families purchasing

personal computers with money their family members sent from overseas, the continuous operation of Nenasalas was at risk. Furthermore, constant competition from cheap data packages offered with smart phones that mainly youth procured exacerbated the plight of Nenasalas. However, it was noted that there was still a population in rural villages that could not afford such hi-tech solutions due to chronic poverty and thus they remained loyal clients of Nenasalas. As such, provision of ICT services at an affordable rate and dissemination of ICT knowledge within villagers was seen as an important task carried out by the village society guided Nenasalas. Nevertheless, leaders associated with village societies of various types believed that local government officials such as 'Grama Sevaka Niladharis' and government departments that were responsible for agricultural services, could be better integrated with Nenasalas run by village societies for better provision of e-government services to benefit the rural communities who still engaged mainly in agriculture. It was suggested that such government officials should be elected to responsible leadership positions in local village societies to make this link more strong and permanent.

### **Recruitment and job design**

Participants, who represented the not-for-profit grouping of Nenasalas run by village societies of various types, noted that they also mainly recruited staff from their villages. They were not very forthcoming with a particular criterion in hiring their staff. They also indicated that they did not have any formal job planning or descriptions within their Nenasala operations. The participant noted that they mainly relied on local staff that was paid a very limited stipend for their expenses. As such, they were not expecting to attract operators with great skill sets. They saw Nenasala operations to be low key, which was appropriate to their village and community needs, which were still developing and basic in nature. For them, recruitment was a case of asking who was most qualified in the village to take-up the position and to contribute to their immediate community. Recruitment was seen as a task the Nenasala leader who was affiliated to the village society fulfilled when an operator position became available. In some cases, all these roles within Nenasala fell on one person in the village. However, as most young people were interested in paid work and had moved to the cities for work, the village societies found it difficult to keep Nenasala operators and to recruit them locally

on a low paid or volunteer basis. However, they have mostly kept Nenasalas open with one long-term operator who has been content with village life and helping others. It was noted that these operators were mainly middle-aged people who were bound to the village in some fashion due to family or other commitments such as land ownership, etc. These operators were generally skilled due to the time they had been with Nenasalas. The participants also noted that some operators were prominent people in the village who had worked in ICT industry or jobs in cities in the past that were now retired or have left their jobs. However, considering that most operators were multi-skilled there were no formal job roles or duties written down. The other factor observed was the general small number of operators who ran these Nenasalas. The participants noted that there were one to two operators who either single-handedly or on a rotational basis kept Nenasalas operating. One participant who represented this category noted that he was a 'jack-of-all trades, as he was the only one that was keeping the Nenasala alive'. He noted that in his village society the committee members who were prominent villagers knew little about IT. As such, he was the go-to guy for IT in the whole village, which was a role he cherished and saw as a great honour. When asked whether he had any succession plans for his Nenasala, he noted that the Nenasala would be in serious trouble the day he withdrew his services from the village society. He also noted that at certain stages, he had left his work at the Nenasala due to various differences with village society leaders. He admitted that the village society did not have much of an option than to invite him back to work, which essentially was a monopolistic situation. He advised that in remote rural villages this could happen, as there was a lack of human capital. Nonetheless, there was no formal, organised approach to recruitment, or job descriptions of Nenasala operations within this grouping. However, the successful Nenasalas run by village societies that have stood the test of time showed that it was a prominent leader that seems to drive all aspects, including recruitment. In most cases, it was the village committee head that directed all programs. Considering that these officials changed, this requirement for stability also depended on the length the leadership could be continuously provided. As one participant put it, 'in some years village people elect the best people for the job objectively without favour. In some years, leaders chosen are not politically driven. That is to say, they elect themselves by stacking the system and voting for the village committee. This means that they then need to pay back favours. Nenasala operators may also be chosen without much regard to qualifications. It all depends on the leader and the intention they had in terms of

benefiting their local community as far as I can see'. Another participant also noted that leadership and the leader's view also dictated how that year's program will be funded. This meant that if a leader was not in favour of fundraising or securing external financial sources, the ability to pay a Nenasala operator was impacted. In such a scenario, attracting a qualified individual within the village or from the neighbouring area was difficult. This also impacted the recruitment method and candidate pool. Such observations on recruitment were also attributed to the leadership of individuals who ran the village societies.

### **Training and development**

The participants who represented the Nenasalas run by village societies of various types indicated more difficulty with training and development. It was stated that some village run Nenasalas did not have many patrons. As such, the operators and lecturers of those Nenasalas could not attract well-trained or qualified personnel due to lack of affordability. The main reason for this was the low salaries offered by these Nenasalas. Only very few Nenasalas which were run by village societies reported that they had adequate skilled lecturers who conducted classes on ICTs. Furthermore, some of the individuals who conducted classes were local teachers and volunteered their service to their local communities. They were neither available for full-time Nenasala work, nor expected payment for their work. The full-time operators of these Nenasalas were also only skilled in the basic computer operations or operating other machines such as photocopiers, laminators, phones and fax machines. Due to this lack of opportunity and circumstance, the Nenasala operators of this category could not get further training within the Nenasalas they were part of. They indicated that any advanced training they received was through formal studies they completed following courses externally, paid for with their own money, for their own career development and enhancing job prospects. The participants did not see the Nenasala offering formal development plans or education assistance to better themselves for the roles they played in the Nenasala or to provide quality service within the Nenasalas they served. The main issue with this dilemma seems to be the funding availability. One owner noted, 'most of the time we are trying to cover our basic bills and wages. We focus on the essentials like the electricity, connectivity bill, rent, and the wage payment we need to make to our

employees. After that, we do not have much money left. In some months, we cannot even cover our expenses. The little we may be able to save in other months, we put aside in case we get a machine breakdown or use to cover the left-over bills from past months. This is a 'Catch 22'. If a PC breaks down and we cannot repair the machine quickly, then the whole Nenasala stops and the income also stops'. Nevertheless, this did not stop Nenasala owners offering training courses they conducted to less trained junior staff for their betterment. Even in this scenario, no formal plan for staff development was noted. It was much more a case of the individual operators requesting training from the Nenasala owners and the two parties committing to a private agreement on what that training would entail. Further, participants noted that if they required a skilled operator or a lecturer, they had to rely on external hiring which required a substantial payment, then that came at the expense of another aspect as money had to be diverted, hindering Nenasala operations or its growth plans. Similar to the Nenasalas run by religious institutions, no leadership development was noticed in the village society led Nenasalas. As one participant explained, 'in village societies the leadership changes every year. Village folk would elect new officials annually. These officials may be prominent locals but would not know much about IT. They rely on the local youth to run the Nenasala. Even then, we have a limited choice considering the payments youth request these days. As such, we do not have any formal training for the village society leaders who may take decisions and advise the Nenasala on ICT or technology. In any case these leaders may not stay for long'. It was further explained that the village youth who were asked to head Nenasalas only got the job because they had more skills in ICT than the other villagers who had none. As such, no training was required for them, as they had the most knowledge. Training again was seen as something youth got externally for their own benefit or and not a responsibility of Nenasala or the village society. However, again the participants' comments indicated that good leaders understood the issues Nenasala faced, including the training requirements of staff that was vital for the growth and sustainability of Nenasalas. Some leaders were better in identifying that training was vital and was something that needed to be focused on than others. However, the consensus was that even if a good leader was elected, due to the rotational basis of leadership training programs, they could be short-lived. Due to village politics, focus on training and development was something that was seen to be a temporary aspect a leader could introduce within their tenure.

## **Performance management and rewards**

Similarly, participants who represented the village society led Nenasala also indicated that they did not link performance and rewards. However, some operators indicated that they did get a wage or minor payment for their services through the village society funds. Nonetheless, volunteering was also prominent within this grouping. Overall, the perception of the participants was that most operators and owners were contributing their time due to the desire to uplift the local village communities they belonged to or was due to connections with the village society. Considering that Nenasalas within this category charged for services, there was also a view that payment of a salary may allow Nenasalas to attract more qualified staff for specialised services, such as conducting classes. The view was that the income Nenasalas generated had to be fully reinvested in Nenasala development and that would increase its sustainability. However, leaders of such Nenasalas indicated that they also had the issue of a low-income generation to contend with. As such, they also expressed the view that they could not afford a substantial wage after meeting the operational costs of the Nenasala. Again, the operators of such Nenasalas were found to be mainly village youth. They, however, took the opportunity to work in the Nenasala as they saw it as a stepping-stone to greater things in the ICT sector. As one operator put it, ‘to be honest, I joined the program after finishing my A. L. studies while I was waiting at home looking for work. Although it gives me something to do, I do not get much money from this job. As I am now looking to settle down, I need to find a job that provides for me long-term. I was hoping to get a computer operator job in town or in the BPO industry using these skills. The Nenasala in our village may not be a place to start working, hoping to advance your career’. However, when asked whether he would have acquired enough skills in the Nenasala for the BPO industry, he noted that as an operator, he only could work as a computer operator elsewhere. However, to work in the PBO industry he needed to have computer programming skills, which he had to develop externally. Again, he added that working for the Nenasala was still better than sitting at home jobless or helping the family with agricultural activities as many of his friends did. Here, such operators saw the mere fact of having employment as a reward, despite complaining they did not get sufficient remuneration through these endeavours. Furthermore, even village society leaders expressed this view. They also stated that the Nenasala provided a way to help the talented youth in the village to better them-selves. In their view, it was unavoidable

that village youth would eventually leave Nenasala employment for better opportunities in the ICT industry. It was noted that most youth were focused on leaving traditional employment within villages that were mainly dominated by agriculture or local cottage industries. Nonetheless, they found it difficult to pay the youth higher wages, as the Nenasala operations did not generate income beyond their expenses. The owners saw this as a part of Nenasala existence, where its services were generally priced lower than their commercial counterparts to encourage the poor in the villages to use the Nenasala services. Nonetheless, they could not categorically say that the payments of higher wages would occur if prices of the offerings were increased to the levels of privately owned ‘communications centres’ in the towns. However, the general view was that as resources available to villagers and village societies who ran Nenasalas were limited, wages paid to operators and the service prices had to match the situation on the ground to get rural villages to use the services. Nonetheless, more liberal village society leaders were more open about the need to enhance the income stream of Nenasalas to pay a suitable wage to their operators to keep them motivated and to continue in Nenasala employment, even by subsidizing Nenasala operations through other income streams of village societies. Their main argument was that if you are keeping a bright young man within the village, the benefit that would be coming from that to his family and indeed to the community would be more than if an outsider was to come into the village to work in a Nenasala on a daily basis.

## **Conclusion**

The second prominent not-for-profit grouping of Nenasalas was run by village societies of various types. These societies had many diverse purposes, which were not always linked to ICT. The operationalization of Nenasalas run by village societies was basic and did not show much sophistication at a human capital level. How well the Nenasalas and other programs sponsored by the village societies achieved intended outcomes in a given year was usually dependent on the foresight and the knowledge, ability, preferences and interest of the leaders elected to office. The leader attached to Nenasalas led by village societies was elected by the village people and the position usually rotated every year creating a continuity vacuum. As participants explained, village politics, personal ambition and difference of opinion between different alliances

in the villages, meant that direction and leadership lacked continuity sometimes leading to a dysfunctional system. However, Nenasalas that have survived within this model either indicated sustained good leadership or a good leader that stayed for a sustained period leading to a culture that accommodated the cornerstones of the Nenasala program and human capital development needed to accommodate the program's goals. Such leaders tried to recruit locally from experienced villagers that dabbled in ICT on a volunteer basis or a permanent part-time basis if the villager was retired from full-time work and shared the goal of benefiting the poor within their village. These Nenasalas also tried to attract local youth as operators of Nenasalas. However, there was high turnover as youth used their Nenasala experience to enter other jobs in the ICT industry or used such opportunities to mark time in gaining the skills they needed to find permanent employment. As such, Nenasalas that were led by leaders associated with village societies did not have formal job designs, or in many cases, training and development for staff. Such arrangements were local arrangements between the operators and the Nenasala leadership. External recruitment was noted as the main mechanism in acquiring specialised skills to Nenasalas, rather than internal development. However, such Nenasalas could not afford external recruitment as they faced funding difficulties due to low subscriber affordability and low income subsidisation from village societies. Most participants noted that they barely could cover their primary expenses and balance the budget each month. Nenasala leaders argued that training required for more specialised specific skills was covered by the professionals themselves and it was not a burden that grassroots level organisations could bear. Although development of junior operators was looked at, it was not seen as a mandatory requirement for a Nenasala's operations. Only the few progressive leaders understood that training and development of staff was a key to Nenasala's survival and growth. Again, performance and rewards were not seen as a situation the leaders or the village society could manage. Payments were seen to be secondary, as something to look at within the income a Nenasala generated, which in most cases was low. Nenasalas were run by village societies that mainly obtained their funding from member funds collected as annual fees and income from services. They have attempted to pay their staff in order to retain the youth who worked in these Nenasalas. However, the payments were not substantial and their staff turnover seems to be frequent. Furthermore, no formal performance management was visible in such Nenasalas. However, where exceptional leadership was visible in Nenasalas run by village

societies, there seems to be a plan to remunerate the operators and to ensure that those operators provide their services to Nenasalas consistently and in a manner that services could be grown aligned to village peoples' needs.

The models seem to be largely fragmented, with modifications according to local circumstances that did not allow for systematic measurement or evaluation by local implementers or their village society parent organisations. Nonetheless, the not-for-profit village society led community-based model indicated that it has been sustainable within the operationalisation as described by the participants. This sustainability has been maintained due to good leadership and a local socio-cultural focus of villagers that banded together to sustain the effort. However, participants believed that as the local village society changed, this model would be harder to maintain, as local societies would not be relevant to villagers during village development. In the next chapter, the focus group data and findings related to the last category of not-for-profit Nenasalas that was led by local and international NGOs will be examined to understand the human capital and their drivers within those Nenasalas compared to religious led and village society led models.

## **CHAPTER 9 - Not-for-Profit Nenasalas – NGO Led**

### **Introduction**

The previous two chapters investigated the not-for-profit community-based Nenasalas led by religious clergy and village society leaders from a human capital lens to uncover important human capital drivers. This chapter captures the focus group data and findings of the third and last not-for-profit category of Nenasalas that were led by various kinds of NGO and INGOs. The findings of this model are organised by the human capital drivers investigated in previous chapters for ease of exploration and comparison within the analysis.

### **Leadership and culture**

Not-for-profit Nenasalas that operated under the patronage of NGOs had an operational mix of religious institutions and village society-based Nenasala models. The NGO-based Nenasalas were mainly operated by donor funding for the provision of ICT benefits to local target groups. These target groups could be specific, such as children or women in a particular village or wide-ranging to cover all families in a village or a region. NGOs had substantial SR synergies linked to their Nenasala programs and business models while accommodating socio-cultural sensitivities of their local target beneficiary groups. Cultural and social diversity was prominent in Sri Lanka in various regions based on language, race, and religion and even varied based on geography. This local focus and sensitivity towards socio-cultural concerns and community needs were visible in International Non Governmental Organisations (INGOs) and their staff who also sponsored Nenasalas.

NGO-led Nenasalas did have managers that had been appointed to run those Nenasalas as employees of the parent organisations. Although study participants acknowledged the contribution these staff made as leaders or managers of the Nenasalas, they argued that the direction and strategy was set by NGO heads and officials. As such, it was argued by them that the real leaders of this model would be found within the NGOs and the INGOs. However, as with many grassroots level initiatives, the Nenasala managers did

have a focus on serving the local disadvantaged as the targeted beneficiaries of these Nenasalas. As such, it could be noted that some leadership was shown by the managers and even the operators on some aspects within their engagement with the larger Nenasala program directed by the NGOs. Although the operators were generally given the freedom to manage the day-to-day activities of the Nenasala, local NGO leaders in NGO committees or boards provided directions for executing overall Nenasala strategies. Nonetheless, a prominent operator or a board member was clearly identifiable in successful operations of this model as the key person who was most knowledgeable in ICT. In one example noted by a participant, an individual in an Eastern province of Sri Lanka had set up a local NGO in association with an INGO based in Japan. This local NGO was providing Nenasala services to local area children in the form of computer training. This Nenasala service was based on his individual vision and determination to benefit the disadvantaged youth in the region. As the income generated from Nenasala services and NGO activity was not sufficient, he also worked part-time to supplement his income to continue his NGO work. This drive, determination, and vision for benefiting local communities through philanthropic activities were key traits of the leaders that were involved in the NGO movement, particularly at the grassroots level. However, he advised that he consulted the INGO program managers on his strategy as he operated on the larger INGO brand. However, due to his local success, his INGO counterparts did not meddle too much in his vision or programs.

The parent NGO or INGO vision or culture dominated the Nenasalas in this grouping. This linkage manifested in many ways. In some cases the programs that the Nenasala were focused on were related to other activities promoted by the NGO, and also in some cases Nenasalas promoted the NGO's beliefs on technology direction within their projects and services offered. Similarly, the Nenasala staff also subscribed to the larger vision of the NGOs including the human capital directives. Furthermore, Nenasalas of this type had some level of subsidisation from the NGO. Some Nenasala operators noted that having an NGO board behind Nenasala activity could also hinder its progress as the focus of NGO projects changed when NGO leaders changed. Some participants noted that during Sri Lanka's separatist war, priority was given to basic needs of local target groups such as food, shelter, and medicine at the cost of ICT training provided through Nenasalas, which was seen as a secondary need. They noted that leaders of the

NGOs shifted from one focus area to another important one as the need arose and no priority to Nenasala needs could be given. With the end of hostilities and the separatist war in 2009, Sri Lankan NGO led Nenasalas have been benefiting from the undivided focus of NGO-based leaders, particularly in the North and East of the country that was going through a rapid development phase. Nonetheless, some participants argued that NGOs had a declining prominence in the country upon its return to normalcy as more government focus was given to poverty eradication and development. Nonetheless, with more than 1400 registered NGOs in Sri Lanka by 2013, the NGO leaders were still a significant force committed to reducing poverty in rural villages as many disadvantaged people were from remote rural areas.

### **Recruitment and job design**

Nenasala owners and operators from the not-for-profit Nenasalas that were under the patronage of NGOs who participated within the study advised that they were primarily employees of the NGO although they were associated with the Nenasala. They noted that they had some prior ICT background and the NGOs did look for ICT qualified people within their recruitment. It was advised that the NGO advertised the Nenasala related positions in the local newspapers, asking for specific qualifications. Some staff advised that the parent NGOs looked for staff that had similar skills to the NGO's internal ICT staff to keep standards uniform. They indicated that they faced an interview, either in a panel format or with the NGO heads, before they were selected. However, they were unable to explain the overall recruitment strategy or the methods of the NGOs that they were part of. The participants could only say that they were recruited within the NGO HR policies and guidelines. They also indicated that they had to obey the HR guidelines such as behaviour rules, and to maintain a safe workplace for the NGO. However, there were many amalgamations in hiring noted within this model as well. Although the majority of the operators noted that they were part of the NGO, some participants noted that they were part of the NGO by branding only. These participants stated that they were given material support by the NGO to start a Nenasala or operated out of NGO owned buildings. However, for all intents and purposes they considered themselves to be independent Nenasala operators, even if they had to operate the Nenasala under the NGO brand. These participants stated that the NGOs

were keen to associate with various kinds of projects within Sri Lanka as their donors wanted to see a diverse portfolios of projects. This symbiotic association in such a scenario was a political one. The recruitment within these Nenasalas was done by the person who acted as the owner or manager without any intervention of the NGO leader or the NGO boards. Similarly, the job design was made by the owners. However, from the participants who acknowledged being in this classification, it was clear that the job design did not have much focus. Most operators were not aware of any formal job descriptions specific to Nenasala. They stated that they did whatever was asked of them. They also said that the owners would tell them what they had to do initially and the tasks became routine with time. Hence, they did not see any need for knowing the job description of their roles. However, in contrast, the NGO directed Nenasalas' recruitment was done according to their parent organisation's HR guidelines and practices and they did set job descriptions. However, such job descriptions were the same as the IT job roles of the NGOs. In one example, 'Sarvodaya', one of the oldest and prominent local NGOs in Sri Lanka, noted that they advertised the roles of the Nenasala they ran under their ICT4D arm Sarvodaya-Fusion in the local print media and online as they did with any role of the NGO. They noted that the suitable candidates were shortlisted and interviewed by their HR staff and some ICT managers from Sarvodaya-Fusion who were knowledgeable about telecentre operations. It was revealed that they followed their NGO HR policies and did not have any special HR policies to recruit for Nenasala staff. It was also noted that their job descriptions and job design also followed the generic approaches the NGO followed internally. Another Nenasala participant noted that ICT was also something needed and utilised by the NGOs. As such, he thought that it was appropriate that when NGOs advertised and recruited Nenasala operators, the NGO followed the same criteria and process for recruitment as they would do for recruiting an internal ICT support person. However, as in the village society led Nenasalas, the number of staff within these NGO led Nenasalas was not significant. As such, work and job design was neither seen as a priority nor a necessity to recruit a competent operator who could 'be an all-rounder' that could service the Nenasala clientele under the auspicious of the host NGOs. As such, recruitment was seen in a simpler light, although NGOs recruitment practices were a bit more robust than the other not-for-profit community-based Nenasala models. However, as in other not-for-profit models, the success of hiring was put to an individual who either worked as an owner that operated the Nenasala under the NGO banner or as the responsible

officer of the NGO for the Nenasala. What participants highlighted was that individual knowledge of ICT, HR, and interest in Nenasalas seemed to determine who was hired under what requirements and with what success.

### **Training and development**

Participants who were operators of Nenasalas under the NGO sponsorship did indicate a comparatively more sophisticated level of training and development compared to the other not-for profit community-based Nenasala models. They noted that they were given training by the NGO to operate Nenasalas. However, this training was more related to the provision of services and administration activities of Nenasalas. Again, the specialised IT subject areas required for conducting courses and lectures were not included in the internal training the NGO provided. Furthermore, they did indicate that such specialised classes and training provided through Nenasala was conducted by an external provider to assist the upkeep of Nenasala course offerings. Similar to other models, NGOs relied on recruiting such operators with existing skills. NGO managed Nenasalas did note that they paid particular attention to the specific qualification of candidates that they required during their hiring process for a particular type of technology or computer language offering. Participants noted that gaining and maintaining skills required to work in Nenasalas was seen as the responsibility of the operators, as those skills also benefited the individual's advancement. However, NGOs seem to be more enlightened to the fact that training and education provided a key advantage in the marketplace and to the quality of service provided by the Nenasala to its clientele. As such, more time and effort seems to be spent on hiring the people with the right skills for the Nenasala roles that became available. This approach was also validated by the participants as an acceptable way of acquiring skills than providing in-house specialised training that introduced a cost to the NGOs that had to depend on donations and show prudent spending. NGOs also had the option of hiring their own graduates who showed advance capability within the studies they undertook in Nenasala as operators and instructors. This HR aspect was similar to what was observed in more sophisticated Nenasala operations associated with religious institutions run by clergy. However, NGO's leadership understood that the training they did provide would amount to nothing if their operators changed jobs or used the Nenasala as a

steppingstone to a better job in ICT. As such, the leaders in the NGO sector were more focused on retention of their most qualified staff. However, the leaders noted that in the worst-case scenario they were forced to look externally to cover an operator who left Nenasala's employment. Therefore training and development was not a 'showstopper', and as long as the leader and the NGO could hire another good candidate, they could keep Nenasala operational.

Nenasalas that were run by NGOs did focus on leadership development. This development was mainly focused on NGO level or program leadership development. As one NGO head explained, 'we believe that our local leadership needs to understand what the NGO is trying to achieve on the ground at the grassroots level. For that we need the right kind of people who can work with each other. Considering NGOs have multiple layers of management, we run team-building and leadership courses for our management staff and potential management trainees. These were the kind of out-bound training which is enjoyable to all'. However, the NGO participants did not extend these development requirements to Nenasala or operator level staff. It was seen as the duty of each staff to pursue their development paths with required external training. However, most NGO related participants believed that they could apply for other NGO jobs and they would be considered favourably as they had NGO related experience, which gave them an advantage over external candidates. It was stated, 'even with IT in a Nenasala, NGOs are a bit different. NGOs do not have a religious or money making intention. We exist for the good of a targeted population and we operate with donations. This requires a special mindset'. Yet, the NGO staffs were more focused on remuneration and reward compared to other not-for-profit Nenasalas and this aspect will be explored next.

### **Performance management and rewards**

The Nenasalas operated by NGOs noted that their payments were made by the parent organisation. NGO led Nenasala employees expected a wage for their work within Nenasala. They did not care whether the money for the wages was provided from Nenasala income or from the parent NGO. It was noted that the NGO led Nenasala employees were paid comparatively well, compared to other not-for-profit community-based Nenasala categories. It was noted that their salaries were comparable to other

rural IT staff payments in the private sector. Although this was not much by western standards, this is significant as this category also made similar wages to the for-profit Nenasala employees. However, NGO led Nenasalas did not make sufficient funds to cover wages every month. Most participants who fell into this grouping admitted that their parent NGOs focused on Nenasala sustainability beyond the period of being subsidised by the NGOs. NGOs did periodically hold reviews of Nenasalas and hold combined planning sessions to mitigate any issues uncovered that would hinder sustainability or financial self-sufficiency. As one participant put it, 'our organisation holds a meeting with us every month. They look at how much we have made and the expenses we incurred. They also look at statistics we keep on Nenasala usage, etc. and tell us what we can do better. They do help if there is a funding shortfall to pay the wages of staff involved. However, they are not pleased if there are consistent gaps which they have to fill'. It was also stated that Nenasala operators and owners felt some pressure to perform because there was continuous scrutiny from the parent NGO that was focused on Nenasala success. This was seen as a good idea by the rest of the participants who noted that continuous performance evaluations and continuous assessment and remediation were better than ad-hoc or no reviews. Nonetheless, they indicated that their wages were not aligned to any performance measurement or target the NGO set. It was added that the review conducted by NGOs was not that sophisticated to include human capital measurements. The reviews were merely painted as income vs. expenditure checks along with task allocation to address any issues uncovered. The participants also added that their NGO led Nenasalas were not reviewed by ICTA regularly. However, it needs to be noted that ICTA has conducted two large surveys to review the overall health and status of the Nenasala program in 2008 and 2010. Nonetheless, no regular monthly reviews were conducted by ICTA. The participants noted that ICTA might have seen that reviews were an issue for the local Nenasala owners to manage within their own affairs. However, there was the view that if ICTA checked on the progress more regularly the not-for-profit Nenasala owners and operators may have been more compelled to act on and solve their own issues. However, one prominent NGO Sarvodaya who was a pioneer in the telecentre movement in Sri Lanka advised that they not only conducted reviews but also held operators to account for those results. It was noted, 'we are focused on the sustainability of the whole Nenasala program as well as on each component of the program which includes Nenasala projects. We review these frequently as conditions change so often in

Sri Lankan society mainly to do with income and living costs. We like to know those conditions and local views on the demand for services we provide in advance. As such, we ask each of our telecentres to keep records on some key measures. In the past when we encountered non-performance of non-sustainability issues at the local level, we have either amalgamated centres or replaced staff etc.’ However, none of the NGOs provided any evidence of sophisticated measures or use of leading human capital indicators. The measures NGOs pointed to were basic measures and included such aspects as the number of people who used Nenasala, their demographics, the income generated, the number of vouchers redeemed for internet usage and detailed accounts of expenditure. Yet, the research uncovered that the NGOs were more focused on the sustainability and individual performance of Nenasalas than the other models in the not-for-profit community-based models. Yet some NGO led Nenasalas indicated that NGOs themselves could be financially dysfunctional. In one instance, a participant referring to the NGO head stated, ‘NGO madam wants us to remain open and encourages us to do the tasks they allocate. However, they do not fund us now. They expect us to work under their banner without providing any solutions to the problems we face with finances or long-term survival within our village. Sometimes we cannot generate enough income to pay our staff’. When asked why Nenasala was important to the NGO, the participant speculated that NGOs were compelled to show that they are helping the local grassroots communities to gain funds from their local and international donors. She added ‘they do many projects in Sri Lanka to show that they are catering to all sectors to have the best chance of securing funding from many donor sectors’. Some even claimed that ‘the NGO did not have the interest to have the project succeed beyond the donor funding provisions and was only interested in having a telecentre project in their books to get the initial funding from international donors’. In another example, a participant in the south advised that a particular NGO operated Nenasala has been defunct and closed for some time. However, when there was going to be a visit from a donor, the Nenasala was re-opened in a hurry and new operators were recruited to maintain the illusion that the centre was operational. After the donor’s visit, the Nenasala was again neglected without any monitoring or support by the local NGO. As it was stated, ‘the local NGO boss could mobilise 100s of people through his NGO and show success of the Nenasala to foreign donors who knew nothing about the long-term status of the projects. Similarly, as the operators were paid through the NGO and were NGO employees they kept silent about what really went on’. As such, it was uncovered

that some instances of bad behaviour were not picked up by ICTA checks within the larger Nenasala telecentre program. Overall, performance measurements and rewards were an aspect that was present and advanced by the NGO leaders. Although the intensity of such messages varied according to the participants, most leaders did genuinely care and believe that good remuneration was required to attract good staff to the Nenasala operations and then it was up to the NGOs to get the most out of those skilled employees and to keep them honest.

## **Conclusion**

The third group of not-for-profit community-based Nenasalas were those under the patronage of local and international NGOs. The focus group data showed that even if NGO led Nenasala's operationalisation as a grassroots level organisation did not show much sophistication, this Nenasala model seemed to be largely an extension of the NGO, which systematically measured its sustainability, human capital readiness and financial sustainability. Although both leaders and operators shared goals of benefiting the rural poor, sustainability has been achieved by volunteerism and donations. NGO led Nenasalas were seen to be more commercially oriented than the other not-for-profit models. NGO leaders were generally more educated, focused, and were inclined to run a structured professional organisation under their leadership. NGOs were structured formal organisations that could recruit the best leaders to run these complex organisations. Good leaders and qualified staff also liked to associate with NGOs due to their level of pay and the opportunity for reputation enhancement. Leaders were found at the advisory levels at NGOs and operator levels alike within this model.

Nenasalas under the patronage of local NGOs were the most organised in terms of recruitment and job design as they followed the internal NGOs guidelines for Nenasala recruitment. However, external recruitment was still noted as the main mechanism of acquiring specific specialised skills to Nenasalas, rather than the internal development of operators and internal NGO staff. It was also noted that most NGO led Nenasalas did not have specific job descriptions for their roles. Yet, the parent NGOs tried to hire staff based on internal job descriptions they utilised within the NGO for IT staff. Although most not-for-profit Nenasala leaders were generally focused on operators who were

multi-skilled 'jack of all trades', NGO leaders paid special attention to employing educated staff that were actually qualified in ICT. Considering the wage that these Nenasalas offered was higher than other not-for-profit Nenasalas, NGOs were rather successful in recruiting better candidates.

Training of not-for-profit NGO led Nenasalas was generally geared towards the general skills required for day-to-day operations. Such training was mainly done as induction training or on-the-job training. These training sessions were conducted by the parent NGO and were based on their HR and organisational policies. Nevertheless, internal training or advancement was not focused as a requirement but an incentive the NGO management could offer the Nenasala staff without incurring much expenditure. Most development plans that operators described were internal arrangements between operators and NGO management. However, the staff believed that they would be given preferential treatment or would have advancement paths within the NGO as they were already familiar with NGO policies and had the knowledge and mindset required to work within the NGO sector.

Performance and rewards were a focus and were demanded by NGO led Nenasala staff. Although, within other not-for-profit models, reward or wages were not considered with any significance as operators were like-minded people who undertook these jobs for the purpose of serving people; NGOs serving the targeted community came at a cost. Most Nenasala operators did acknowledge that their Nenasalas did not make sufficient funds to cover expenses all months and expected their wages to be paid by the parent NGO. As such, most Nenasalas run by NGOs had some level of subsidisation with operations or in payment of operator wages. Equally, Nenasalas under the NGO patronage also depended on funding from the parent NGO to cover funding shortfalls or for any capital expenditure. However, even NGO heads agreed that this meant that such Nenasalas could attract most qualified candidates to these positions through the payment of comparative remuneration or could operate in situations that required funding to resolve things such as equipment breakdowns.

Nonetheless, participants from the not-for-profit community-based models indicated that commercialisation was required for the longevity of the not-for-profit models as the socio-cultural factors of Sri Lanka gradually changes. As such, the focus group data and

findings from the next major variation of model, which is the for-profit business model, will be explored within the next chapter.

## **CHAPTER 10 - For-Profit Nenasalas**

### **Introduction**

The previous chapters investigated the focus group data and findings related to not-for-profit community-based Nenasalas led by religious clergy, village society leaders and NGOs from a human capital lens to uncover important human capital drivers that aid sustainability. Within this chapter, the focus group data of the for-profit business Nenasala model will be explored from a human capital lens to uncover how human capital drivers aid sustainability of such Nenasalas. The Nenasalas that operate under the for-profit model seems to have reported promising results in the 2008 and 2010 Nenasala surveys undertaken by ICTA. In addition, the Nenasala program has also given precedence to the not-for-profit model for financial, cultural and political reasons. However, whether the for-profit business model based Nenasalas have any advantages or disadvantages from a human capital point of view has not been explored comprehensively in past studies. Such findings would be a key to the program as the program is focused towards the not-for-profit sector. The findings of the for-profit model are also aligned to the human capital drivers investigated and reported in the not-for-profit categories. This chapter attempts to analyse the focus group data of the for-profit Nenasalas categorisations led by entrepreneurs within the bounds of the research questions.

### **Leadership and culture**

For-profit Nenasalas were led by local entrepreneurs who operated a business model with a high sense of SR with the intention of serving their local communities. The Nenasalas operated by local entrepreneur leaders were financially viable from a traditional business view in comparison with the not-for-profit models. Although not-for-profit Nenasalas were financially secure and sustainable at the moment through donations and grants, for-profit Nenasalas under their entrepreneur leaders, were profitable business ventures that made profits after covering their expenses. However, the entrepreneur leaders' hybrid business model had SR aspects that manifested in different ways at different intensity to benefit local communities. This ranged from

providing services at a lower rate than non-Nenasala telecentres to providing scholarships to needy children for ICT courses.

Opposed to other leaders in the study, entrepreneurial leaders had the highest focus on commercial viability and provision of additional services demanded by local villagers. The focus was much more on pricing services at the correct level suitable to the local clientele rather than subsidisation for the sake of social benefit. Leaders were also keen to exploit any available opportunity to make services affordable such as providing assistance for disadvantaged children to pursue ICT courses. One example of this is a Nenasala leader in the Central Province of Sri Lanka. He offered recognised computer certificate courses at half-price compared to non-Nenasala competitors through guaranteed scholarships secured from philanthropic business persons locally. Similarly, entrepreneurial leaders always attempted to price services lower than their non-Nenasala competitors to ensure that they could attract more clients through building a reputation and a brand name known for being reasonably priced. However, entrepreneurial leaders generally avoided providing free services, arguing that people did not value or subscribe to a service just because it was free. Rather, they focused on quality at the right price that was affordable to the local community.

Overall, the participants noted that the nimble and flexible approach of for-profit Nenasalas was due to leadership. Leadership was seen as a key for quick action in reacting to the realities of financial pressures. Most successful entrepreneurial leaders have spent their own money in their efforts to gain commercial viability for Nenasala programs and to exploit the niche market in their immediate local area they serviced. Entrepreneurial leaders also focused on complimentary revenue generating methods, such as selling computer accessories and providing additional value added services (VAS) like computer and mobile phone repairs, due to their keen sense of business. These attempts also varied from selling popular movie CDs, stationary, office VAS such as printing, photocopying, and laminating, and BPO linked subcontracting work received from local and overseas BPO providers. It was also noted that most successful leaders within this category had some level of previous engagement in the ICT industry before they got involved with Nenasalas. As such, these entrepreneurial leaders had the knowledge required to focus heavily on spinoff e-ventures that either secured continued grants or generated additional revenue. One entrepreneurial leader who operated two

Nenasalas in the Southern Province noted that he initiated an online art-selling project and employed a local fine-arts graduate who was successful in generating ad-hoc revenue for the Nenasala through online sales. He noted that although revenue was not regular, the revenue they got was substantial, noting that they sold an Indian buyer art worth Rs. 200,000 in one particular month. Considering their usual income the Nenasala generated was Rs. 23,000, such revenue boosts were seen as significant. In addition, he stated that he started an online service for local fisherman for providing information on possible fish stock locations based on favourable weather conditions that attracted fish to a certain area. However, it was emphasised that the entrepreneurial leaders did not receive much support for such e-ventures compared to other leaders of not-for-profit models in terms of advice, finance, or moral support. Recalling his experience, he stated that ‘we approached the Minister of Parliament responsible for fisheries. The Minister was very much dismissive of the idea and did not even look at our project results. All he said was that he has better technology than our solution. Nevertheless, I know that the fisherman in our areas had no such facilities and that they took a gamble in locating fish each day. Nonetheless, a highly motivated entrepreneurial leader could make decisions to change a given course and take actions faster than leaders in other not-for-profit community based models. The not-for-profit community model based leaders usually liaised with an advisory committee or a board that could influence Nenasala decisions, which delayed taking direct action and decisions to the frustration of highly motivated leaders who wanted to operate the Nenasala at a faster phase. As one for-profit participant noted, ‘if changes are required within my Nenasala, I make it happen overnight. It is my business and I will live with the success or failure of my decision at the end of the day’. However, the responsibility of achieving success was also a heavy burden on the leaders who pursued this for-profit business model and unilateral decisions.

Overall, not-for-profit leaders were focused on building their enterprises with the help of their employees. They were very careful to create and nurture a work culture that they thought was efficient and brought the best out in people. This belief also extended to their clientele. As such, the leaders made an attempt to provide a presentable and comfortable Nenasala. As one entrepreneur explained, ‘if you are in a happy place you are likely to be in a good mood and you would spend and buy more. I always tell my staff to greet the customers, pay attention to them and be helpful. This is to get my

customers to be repeat patrons. I practice this outlook with my staff as well. I feel that if my staff is happy they will treat my clients better'. However, recruitment was also highly focused by such leaders. Their view was that you need to get the right person for the job as the team was more powerful than a skilled individual'. Next, recruitment practices of such Nenasalas will be investigated further.

### **Recruitment and job design**

Participants noted that the owners of the Nenasalas run under the for-profit business model were the most efficient and most innovative when it came to recruitment. Entrepreneurial leaders paid particular attention to recruitment as an important decision as they believed that this decision amounted to generating different amounts of revenue within the business venture. For example, these leaders were more inclined to hire well-known computer tutors due to their celebrity power in attracting local students to these Nenasalas. As one entrepreneur explained, 'I hired a master as he had a following in the local area. Students came to his classes because of his name and reputation. I had to pay what the master asked. I did not even have money to begin with. However, I had to come to an agreement that I would pay as class numbers grew. We managed to achieve this goal of growing student numbers in my Nenasala through this effort'. Similarly, the for-profit owners also paid close attention to hiring competent multi-skilled operators at the best market price in order to have best ROI. This was primarily to ensure that each operator could cover all service aspects of Nenasala and cover each other's work in their absences. One entrepreneurial noted that, 'hiring is critical. I not only look for trustworthy people I can leave the store with but also for people that get along with the rest of the staff in getting the job done without my supervision'. When asked whether he manages to recruit staff like that from the village, he said 'I did and still do. However, like with anything else these days it is hard to get good workers'. When asked to elaborate, he noted that some staff were not trustworthy and did steal from the shop in the past and when uncovered he took action to remove them immediately. He also admitted that good reliable staff had left for better paid BPO jobs. However, he held no resentment over the high turnover. He noted 'we all like to have better living conditions. This is the reason why I started the Nenasala shop in the first place. However, the same requirements are there for these young people. You do not get rich

by working for someone all your life. They need to get skilled up and perhaps start their own Nenasala or enterprise one day'. Within the discussion, another aspect of human personality that affected Nenasala operation was uncovered. One owner noted that Nenasalas had an image issue when considering recruitment of talented young people. He stated that young people wanted to have a big title along with the money they demanded. He said that if a commercial telecentre operator offered the title 'Manager', most operators took those jobs regardless of the money offered and went on to say convenience or distance travelled was not an issue for young people, like it is for older staff. Similarly, he said that girls who were employed as operators in his store were from another district as they preferred to be working away from home to get more freedom. He added that one of his operators had a boyfriend and due to the cultural sensitivities of her village she took work in the next district to keep her relationship a secret from her family. However, he noted that these life preferences of operators were not an issue for him and he tended to look for the most qualified operators he could employ at the wages he had to offer. Similarly, another entrepreneur from the Eastern province saw recruitment as a secondary aspect as he ran his Nenasala as a family business. He said that he operated the Nenasala with his brother-in-law and brother. He said that he trained himself as a phone repairer while his brother-in-law took care of all the computer work. He stated that this work arrangement worked best as he could trust the people he worked with. In addition, as both of them saw this to be their livelihood, they both worked hard on making the business a success for their families' sake. They did not contemplate hiring outside their family and friends as he noted that he would rather pay trustworthy people known to him than a stranger. Nevertheless, these arrangements only worked as his Nenasala did not offer courses or hold as many classes as other for-profit Nenasalas. He admitted that if courses or classes were to be conducted he would need to hire an individual with specialised skills on software languages and software development. Nonetheless, he saw this as a valid recruitment model arguing, 'this approach limits my costs. We share our profits. We only take out what we need to live out of the business. The leftover money we use for expansion of services. The photocopier, laminator, fax, and the extra computer are things I bought with our money. ICTA did not help with that'. Furthermore, he raised a very interesting point, which was a recurring theme in few participant discussions. He noted that 'even if we hire a consultant at Rs. one lakh (i.e. Rs. 100,000 per month) what will we do with such a person in this area? This village is beginning to modernise now. Most homes are

beginning to buy computers thanks to their relatives who are working in Middle Eastern countries and sending money home. The local kids have already learnt the basics with computers and they may not be interested in ICT as a future career. Therefore, a specialised consultant will be too qualified to deliver what local people want, which is basic computer knowledge. I will gain nothing from such an investment as the local people do not want it. I have to focus on what our clients need in the village, to make money. That is the reality of what we can sell in this area. Not what a text book or some ICT consultant in Colombo might say, as to what we need in this area'. His point was that recruitment and how Nenasala operated had to be dictated and decided by local grassroots level constituents' needs and what they could afford.

Nonetheless, the majority of the for-profit business model based Nenasala owners, recruited staff externally. This was to hire staff that already had the skills, rather than train people at a lower skill level internally. As one participant explained, 'when we hire someone already with the skills, we can hit the ground running. There is no training or delays in providing service to my customers. Also I think it would be cheaper as we do not have to train or send them to classes'. However, entrepreneurs could not provide figures to prove that it was cheaper to hire an operator externally that was already skilled, than a lower skilled operator who needed to be trained internally. Most entrepreneurial leaders seem to be adamant that external recruitment was the way forward based on their beliefs. Furthermore, entrepreneurial leaders indicated that they preferred to recruit degree qualified youth on every occasion if possible. However, such decisions were made within the income of the Nenasala and in most occasions, such recruitments were linked to a specially funded project or e-venture. The entrepreneurial leaders understood the importance of education and the ability of educated people to make a difference even with simple services. They also saw education as a way to innovation. As one participant added, 'we try to get the most qualified within our budget range. We have noticed that they have better ideas on how to do things. In addition, they suggest alternatives and solutions to problems we face rather than waiting for me to address the issue or come up with solutions. For example, one of the graduates that worked for us had good ideas on what we needed to teach in Nenasalas. He seems to know what technology was in demand. I think it is because he was educated in the ICT field. He is also doing ICT studies on his own time to further his own career. These sorts of people are valuable to us'. However, when asked about

required qualifications for owners that ICTA should look at when establishing Nenasalas, participants noted that being degree qualified or certified in a particular computer language was not required. As per the majority view, leadership and common sense was required to make a Nenasala a success. Nonetheless, most participants acknowledged that a business background followed by ICT knowledge would be helpful for establishing and running a Nenasala, as it would allow the leader to communicate on the same level with his operators and counterparts, when making strategic decisions related to technologies or services within Nenasalas.

Similar to other models, no job designing and specific job roles were visible in the for-profit business based model. Again, the participants noted that the low number of staff and the simple work activities undertaken in a Nenasala was the reason for this. They noted that they hired all-rounders that could cover all bases and accommodated people taking time off to cater for simple things, such as lunch breaks, etc. However, as in the other models, the majority view here was that more advanced technical skills were required to teach and conduct classes and only a few specific people felt that capability within the local communities and scarceness demanded premium prices. Although Nenasala owners tried to skill up the other operators by allowing them to follow classes conducted and allowing them to handle minor aspects such as tutorials within classes, the higher skill attainment was a slow process via such simple steps. However, there were very few specific examples of Nenasalas growing to be large operations that provided education services to students. Within this large Nenasalas, job roles were clearly defined. They also had a clear organisational hierarchy and tasks each person was responsible for within the bureaucracy. However, this level of organisation was a rarity, which was unique to Nenasalas that had grown to a considerable size over time.

## **Training and development**

For-profit business based Nenasalas were more focused on training compared to other not-for-profit community-based models. This was attributed to the high importance entrepreneurial leaders put on education and knowledge. However, this did not mean that entrepreneurial leaders focused on training up people within their Nenasalas. They saw training as something that they fulfilled through recruitment. They believed that

training was something that the employees would naturally attain through the betterment of their marketability and career development. Their primary source of knowledge and skills was through selective recruiting of staff externally. Entrepreneurial leaders also tried to source people in a just-in-time fashion, recruiting as much as they could to save money. As one owner noted, 'I only hire people based on the jobs I have, when I really need them. We have one person for the shop. However, when it comes to the classes we get masters for the duration of the course schedule. That way we do not have to keep them on our payroll all the time'. However, when asked whether skilled staff could always be sourced in time, he said that it could be done. Adding 'sometime you cannot get the person you had in mind as they have taken up another assignment, but you can get someone with enough skills'. The participant went on to explain that 'jobs were hard to come by these days and there are a lot of skilled graduates in Sri Lanka. As such, you can always get someone who works freelance or come to an agreement with someone to take up work as assignment'. However, such JIT recruitment of staff to avoid training meant that their tutor worked when new students become available after A. L. exams each year and were looking for other opportunities during their off time. This highlighted an issue that was visible in the for-profit business model Nenasalas on many occasions. That was the concerns over payments or attempts to save money caused owners to employ people part-time or in a casual manner, which did not ensure continuity, training and development of human capital that was beneficial for growth. Most participants also noted that the Nenasala was often used by some of these graduate instructors as a stepping-stone. One participant stated his experience noting, 'I employed a graduate who got his education from the UK and returned to Sri Lanka to be with his family. He was very well qualified and I employed him for a specific project I got funding for. However, he was after something more permanent. I lost him to a BPO offer in three months. However, I got quality work while I had him. I cannot say that an internally trained operator would not have left me under those circumstances as well. So I believe that training is a cost I can avoid through recruitment'. Such experiences meant that Nenasala owners were not keen on spending their own money on training and development of a transient work force as they saw it.

Nonetheless, the for-profit business model Nenasala owners also focused more on career development and education for junior staff they had hired at various stages. They

saw some stability in employing juniors as they had to develop their skills for some time before they were marketable or were at a stage where they could move within the industry. However, the entrepreneurial leaders provided training that was offered by Nenasalas to these junior staff to ensure that the junior staff were cross-skilled to an extent to cover any unforeseen contingency with their higher paid more skilled staff. Nevertheless, they were also cautious about skilling junior staff too quickly. One participant noted, 'we do train our young staff who are all-rounders. However, this is done as an agreement between them and me. It is not formal. This is something I do more as a service to them. However, I do not give them too many skills too quickly. Last time I did that, the operator left my Nenasala for another job in town. This is after all I did for him and getting promises from him that he is here for the long haul'. Although development was thought by Nenasala owners as something to be treated carefully where formalising anything, making commitments, and development too quickly within early employment, was seen as something to be avoided. Instead, they took a wait and see approach to staff to figure out who intended staying employed in the Nenasala long-term. However, one of the issues the owners and operators saw alike in terms of personal development was lack of career advancement opportunities in Nenasalas. It was stated, 'in my Nenasala there is only one manager, me. I also own it. As such, the operators do not have much opportunity to be promoted to any other position as you would have in a BPO or in an office job. Here operators are stuck in the same position for a long time and the pay may not change that much from the time you were employed to the time you leave Nenasala employment'. As such, career progression or advancement in terms of pay was limited in a Nenasala leading to most staff seeking to make career moves to other external jobs to hasten their advancement. This also meant that training and development was something the leaders could use as an enticement to keep operators in Nenasala employment. However, this was not reported as a normal practice by owners. Nonetheless, most entrepreneurial leaders thought that they were doing a service to the community by employing out of work qualified youth and graduates. As one entrepreneurial leader put it, 'in Sri Lanka, it is different from Australia. Here we have no social security. We may have free educational and health services, but once you graduate you may find yourself unemployed. If that is the case and you have no family support, you will go hungry. Therefore, we are doing well by employing these rural kids even with a minor amount of money. It is good for us and good for their self-esteem to say that they are working.

This is enough even if we do not provide them with training or development'. Operators also acknowledge these sentiments. One operator said that, 'when I graduated, I applied for many jobs. In the meantime, I got this. I do not mind this work as it allows me to get some money. Without this opportunity in the Nenasala I would have to work in the family farm and in fields. My family would still support me as it is the case of many families in Sri Lanka and it is our culture. Nevertheless, this gives me an opportunity for advancement in life. I can also look people in the eye and say I work. So I consider this is a kind of development of a person's life'. Nonetheless, the researcher formed the view that entrepreneurial leaders and their operators were appreciative of each other's contribution, in this reciprocal and at times opportunistic relationship. This complex relationship was driven by the emphasis they put on education, skilled external recruitment and making money. This commercial driven focus on training and development was a key difference between the not-for-profit community-based models although the not-for-profit NGO model also placed heavy emphasis on training and development.

### **Performance management and rewards**

The participants noted that the operators within the for-profit business models saw that reward was tied to performance. This was particularly true in the area of teaching and lecturing and for the skilled operators who conducted those courses through such Nenasalas. This meant that the entrepreneurial leaders had to acknowledge good performance of highly skilled staff and to manage expectation in terms of payments that could be made to them in return. It was noted by one participant, 'a person who conducted classes saw success based on student numbers and demanded increase to his wage. It is true that he increased the student numbers because he had a good reputation within the community for conducting classes, but the fees he was asking were too much considering we are trying to provide classes at a subsidised price compared to our commercial non-Nenasala counterparts'. He added that he had to part ways with the tutor who conducted the courses at his for-profit Nenasala as he was unable to meet higher compensation demands adding, 'he was good, but at the end of the day I have to work within my means. The reason most people went under in this business was that they could not balance the books at the end of the day'. Furthermore, entrepreneurial

leaders also focused on alternative revenue generating schemes. These mostly included value added services such as mobile phone repairs and sale of IT devices to enable them to employ more expensive staff. Participants also added that such skills related to the VAS were also at a premium and that meant those operators who had those skills could also demand more money. Nevertheless, in most cases the participants stated that relationships between owner and operators were amicable. As such, they were able to negotiate a mutually agreeable arrangement in terms of payments. Participants noted that most operators as people who managed the Nenasalas in the owner's absence knew how much money the Nenasala made. This meant that both parties were very realistic in their approach in terms of their demands and what they were prepared to accept. As one operator explained, 'our Nenasala had an accident recently where all computers we had, except for one, were damaged by rain. This meant that we had to cut down on services provided including classes. You cannot conduct a class with one PC. We got to a stage where we could not even raise money to replace the units. We got some assistance from ICTA in this regards to getting the PCs fixed. However, this meant that I had to be realistic about my payment demands. The simple story is that if there was no Nenasala all of us were out of work'. This understating approach to remuneration seemed to be also linked to the size of a Nenasala as the same understanding was lacking in larger Nenasalas where operators were removed from the realisation of how much revenue the Nenasala actually made. These larger organisations exhibited similar situations to not-for-profit community-based Nenasalas where ownership towards the upkeep of Nenasala was lacking in employees compared to the smaller for-profit Nenasalas. Nonetheless, it was noted that these for-profit Nenasalas were more resilient as entrepreneurial leaders were more determined and interested in making the project successful as it was thought of as their property. Similarly, the operators also understood that only through success, more payments and benefits would flow to them. As a result, it was noted that owners and operators alike worked hard within this model compared to not-for-profit community models where operators and owners operated in a much more relaxed atmosphere. For example, one Nenasala operated until late at night as many of its users used the Skype service to contact their relatives who were working overseas. An operator of that Nenasala noted that, 'we do not mind working until late at night as that is how we make money. More money means that the Nenasala is kept operational, profitable and that results in better pay for workers'.

Although the focus of the operators and owners was on making money they also thought about how to price products within the SR synergies they championed. An entrepreneurial owner indicated, 'the community values services or products that they actually have to pay for'. In explaining his comments he noted, 'it is like this, if a person is sick here they can go to a government hospital and get free medicine in Sri Lanka. However, most people prefer to go to a private clinic and pay a lot of money because their mindset is that, as you had to pay for it, it must be good and there must be a quality issue with free medicine. This same thing I notice in my classes. When I advertised to say free or subsidised classes only very few students came. Most of them were suspicious of quality and benefit to them. However, when I started charging for services student attendance increased. This goes to show that just giving something for free does not always work'. As such, the for-profit owners focused on pricing products properly to the local market. This commercial focus also allowed the owners to pay their operators market rates, compared to other models investigated, adding weight to the argument that free services did not always translate to longevity or sustainability of telecentres. However, they were quick to clarify that although this was the social norm they observed, that in Sri Lanka there were people impacted by extreme poverty who needed a helping hand. They seem to acknowledge the service and social benefit the not-for-profit models provided for the disadvantaged as a niche, although for-profit Nenasalas also engaged in charitable and subsidised activities within the SR synergies they pursued.

Even for-profit Nenasala owners and operators were not concerned about performance management in a traditional sense. However, the owners were aware of the concept of performance management much more than their not-for-profit Nenasala counterparts. The participants view was that the performance was automatically measured in small grassroots organisations due to the small number of people involved. This meant that people had an informal, implicit way of gauging each other's performance. As one owner explained, 'if the work is done and we make money then the person is doing their job well. If we are not making money then we need to look at why'. However, considering that this operator only had two staff members who alternated between days they worked, it was explained that the owner could understand who was doing what easily. Nonetheless, he went on to explain the reason for the alternating shifts and said, 'there was a conflict between the two girls. For some reason they got jealous and started

to tell me bad things about the other person's work. As far as I could see, this was a personal situation. I had to make alternate dates for them to work in the shop without providing room to argue and cut each other down, impacting the work we had to do'. As such, the notion that in a small team that co-workers would observe and advise of bad work behaviour in regards to each other was not always true. A similar attitude was taken towards the operators who conducted courses in Nenasalas. It was noted that 'if they do well, we get lot of enrolments in each batch. Each batch of students come to us after O. L. or A. L. exams while they are waiting to go to higher class, university or while they look for work. By looking at these numbers and students who enrol, their continuation rates within courses and feedback, you can see how well the classes are working out. There is no need to do formal evaluations of tutors'. When it was asked what happened to under-performing staff, the owners said that they had to be replaced. As the work arrangements were mainly casual or part-time this was not seen as an issue. Furthermore, owners and operators agreed that formal performance evaluations would be awkward in close-knit rural communities, as most people were not accustomed to that. One owner said, 'if we have to let go of someone because of their performance, it is better to use an excuse like business is not doing well. After all, some of these people are living in our villages. It would not be good to be formal with them'. Nonetheless, as a category, for-profit business based models were far more focused on performance and rewards than their not-for-profit community-based Nenasala counterparts.

## **Conclusion**

Within the profit-based business model Nenasalas run by entrepreneurial leaders, leadership was seen as the key element of sustainability. Focus group data highlighted that if leadership was good all other obstacles Nenasala faced could be overcome. Similarly, entrepreneurial leaders were seen as more efficient, more flexible, and quicker in making crucial decisions that benefited the for-profit business model Nenasalas over the other not-for profit ones. It was further seen that entrepreneurial leaders were good at creating an atmosphere that was conducive to business with customers as well as staff. The operators were also seen to be taking more ownership and interest in these establishments than not-for profit Nenasalas as they also

understood that key for their prosperity and growth was based on providing the best service, at best price to the local customers.

Within the context of cooperation, Nenasala owners relied on external recruitment to source new skills and knowledge rather than internally pursuing the development of staff. This external recruitment was seen as a fast way of acquiring the skills required without investing a lot in staff that the owner considered transient. However, the seasonal nature of work (casual or part-time) was an issue that affected operators and sustainability. It was uncovered that operators took opportunities for more stable work as work became available in towns or in the BPO industry to ensure better job security. Job design and role clarity was seen as relevant only with a higher degree of complexity or increased staff numbers in the Nenasala. In the smaller for-profit business-based Nenasalas, operators were expected to be jacks-of-all-trades. However, in the very few cases where Nenasalas have grown to be substantial enterprises over time, some role separation along with organisational hierarchy was visible. Nonetheless, owners and operators noted that they cooperated to get the work done and to ensure that they made the most profit for their mutual benefit.

Training and development was only noticed at the junior levels as a private arrangement between the operator and the owner. The owners, although willing to assist the junior staff with their development, were not too keen to commit early as they were fearful of losing trained staff for better opportunities. Nonetheless, junior staff particularly saw Nenasalas as an opportunity to learn the ropes to further their career within the ICT industry. Yet, the majority of operators in the for-profit Nenasalas were heavily focused on remuneration. Nonetheless, all concerned understood that the benefits and wages of operators had to be within the income of the Nenasala. As such, they were keen to work symbiotically with the owner to achieve the best results for their community to make a profit in the process. However, this meant that Nenasala owners were focusing on the services that are more lucrative for Nenasala to generate income.

Before the analysis of findings from the not-for-profit and for-profit Nenasala models, it would be valuable to summarise the highlights found in each model separately. This is done in the form of a table in Appendix A. Next, the analysis of findings as answers to the data themes/research questions, future implications, and suggestions to adapting

Royal & O'Donnell (2008) model to suit its application to the small scale grassroots level organisations will be elaborated in Chapter 11.

## **PART 4 – Analysis of Findings, Future Implications, Adapting the Royal & O'Donnell Model (2008) and, the Conclusion**

### **CHAPTER 11 - Analysis of Findings**

#### **Introduction**

This thesis examined the relationship between corporate social responsibility synergies, drivers of human capital and sustainability of grassroots level initiatives that use the elimination of the digital divide as their main social responsibility goal. The three main subject areas this study encapsulated were corporate social responsibility, human capital systems, and sustainability. It was found that Drivers of Sustainable Human Capital Systems (DSHCS) impact on sustainability differed based on how SR synergies were conceived, practised in grassroots, for-profit and not-for-profit organisations.

Chapters, seven to nine investigated the findings of not-for-profit community-based Nenasalas led by religious clergy, village society leaders and NGOs from a human capital lens to uncover important human capital drivers for sustainability within those grassroots level enterprises. Chapter ten investigated the for-profit business Nenasala model within a human capital lens to uncover important human capital drivers that aided sustainability of such Nenasalas. The focus groups data formed the basis of chapters seven, to ten. This chapter analyses the qualitative findings to answer the research questions pursued within this study. The findings will answer each research question clearly. Although the models used had many underlying unifiers, such as a high degree of SR, they did differ significantly in regards to human capital aspects driven by for-profit and not-for-profit viewpoints. As previously noted, ICTA Nenasala 2008 and 2010 surveys have indicated a difference in sustainability of these models. Furthermore, within this chapter what was observed in the not-for-profit and for-profit Nenasalas, in terms of human capital and its drivers, were extracted to enhance, further develop and adapt the Royal and O'Donnell's (2008) models in terms of their application to grassroots operations.

## **Discussion of data/ themes**

### **1. Describe and explain the link between SR and Human Capital**

The chosen Royal and O'Donnell (2008) Tool 1, has been developed within the systems theory view. It allows the demonstration of ways in which an organisation as a system works in relation with its environment and it was appropriate to capture complex multi-layer programs within the grassroots level organisations. It allowed the researcher to map human capital, drivers of the value of human capital and SR at a high level to answer the above question.

The link between SR and human capital within the Nenasala was found to be a symbiotic one. Nenasala as a grassroots level initiative was very much driven by the needs of, and was influenced by, the local target group that the Nenasalas tried to serve. This is to say that the local leaders and the operators were very much in tune with the desires of their clients and the desires indirectly or directly dictated by the Nenasala strategic direction and service provisions Nenasalas could undertake. As the target groups of Nenasalas were the marginalised and the disadvantaged, mainly in rural areas of Sri Lanka, leaders and operators intuitively believed that their mission was to help these disadvantaged target groups to resolve the difficulties they faced through ICT as the Nenasala strategy seems to also align with that notion. Similarly, the Nenasala leaders and operators were part of the local community and were impacted by the problems the larger communities faced. As such, an element of social capital was linked to the SR provisions of these Nenasalas through its human capital. Most operators stated that Nenasala was involved in assisting people even if they could not explain their behaviours in terms of the SR of the organisation or larger program run by ICTA. Only the educated leaders could explain these interactions as SR motivation within the context of the 'Nenasala' the enterprise, its human capital and the guidelines ICTA promoted. This sense of inherent SR was assisted by the religious and social norms of Sri Lanka. Participants indicated that the SR was naturally generated within Nenasala staff and the leaders themselves rather than being something that was imposed on them externally or due to the Nenasala structure. This observation supported the notion that human capital did not work in isolation of the local society in grassroots level initiatives such as Nenasalas.

However, there was a difference in how leaders and even operators looked at SR within these models. This was due to the organisational focus or purpose. In not-for-profit models, leaders and operators primarily focused on 'doing good' for their clientele via ICT. Making money or sustainability was a secondary consideration. In addition, financial sustainability was seen in the context of some level of subsidisation from the parent organisations. For example, in religious clergy led Nenasalas, the temples subsidised or provided most expenses from rent, electricity to connectivity. The operators and leaders did not focus on financial considerations and were not pressured by money as they counted on donations and parent organisations to keep such programs viable. They also did not even consider SR in the corporate sense as something that had to be funded. They saw that their Nenasalas existence was to help people within the religious philosophy they followed. Such notions were guided by inbuilt beliefs, which they held and acted upon rather than a formalised notion mandated by the religion itself or other organisation such as ICTA. As such, their belief was that human capital was a key to SR manifestation within the not-for profit Nenasala models in their interaction with society or local communities. Yet, it was observed that more worldly religious clergy leaders tend to blend this inbuilt SR belief of people with the worldly considerations of financial aspects and sustainability that SR was related to.

Within the village society led Nenasala model the SR was again driven by a very much inherent view within people associated with the program at the village level. However, their motivation was mainly to do with assisting the villagers to better themselves or local development with ICT as they saw this as a way to develop their livelihoods as well as their immediate villages. Yet, variations of these motivations were visible considering each society that associated with Nenasala had different social focuses ranging from sporting activity to uplifting village peoples' living standards. However, the underlying theme of all these motivations was the development of grassroots level society and the quality of life of villagers. As in the religious clergy led Nenasalas, within this model SR was generated mainly within the human capital associated with the Nenasala initiative and not by ICTA influence.

The NGO led Nenasala model also championed serving their targeted clientele through a SR focus. However, people associated with this model worked within and were

primarily motivated by the NGO goals that they adhered to, as they saw their engagement through the structure of NGO employment. Their actions were not motivated by religious or social views. Within this model, financial considerations and focus on sustainability guided the SR that the NGO focused on and was translated to the leaders' guidance within grassroots effort. This is to say that SR within NGO led Nenasalas was bounded by NGO briefs, and financial and other guidelines as were imposed by the government on the NGO from a governance perspective. SR in terms of a particular project goal was seen as a goal that the NGO tried to accomplish within the Nenasala program. On most occasions, such goals and targets were measured by NGOs. However, this is not to say that the leaders and the operators associated with NGO led Nenasalas may have not had a religious or philanthropic view of themselves as individuals or a group within those Nenasalas. This individual and group views on SR were visible in NGO led Nenasalas inevitably due to social influences. However, those views were moderated by the primary directions provided by the NGOs. As such, one could note that human capital influence within this model was moderated by the NGO structure and strategy.

What was different between the for-profit and not-for-profit model was significant in the findings. For the for-profit entrepreneur led Nenasalas, SR was not a primary focus although utilising human capital in the best way was. The majority of participants of the study that led Nenasalas of this type saw SR as a business opportunity to exploit for their advantage, just like human capital. Within this model, SR manifested in different business opportunities they created within their business goals. For example, such Nenasala owners aimed to increase attendance and popularised their classes by introducing new services that their clientele needed by subsidising classes to the poor with the assistance of scholarships from business people in the area. They also engaged the best human capital to conduct these classes due to the attendance increase expected due to the star power of these teachers. Yet, these leaders were quick to point out that SR should not correlate to free services. In their view, free or subsidised services were seen as inferior by Sri Lankans due to the mentality that they held. Their view was that SR aspects should be funded somehow, allowing them to pursue those initiatives over the long-term considering that attracting the best human capital also costs money. However, the participants of the study advised that these grassroots level entrepreneur leaders were seen as important people in the rural villages due to their knowledge of

ICT and the service they provided the public through Nenasalas. As such, they argued that the leaders of such Nenasalas were automatically linked to a SR mindset that linked serving the village people through Nenasalas. Other model participants' view was that entrepreneur leaders and their operators also could be partial to SR, due to their personal beliefs.

Although ICTA did champion the notion of SR explicitly within the models as the guiding umbrella organisation, ICTA did not mandate the need for SR within the models. However, ICTA pointed out that uplifting the life of disadvantaged was a goal of the program and that required substantial SR elements within the Nenasala program and grassroots level Nenasalas. Although they did not mandate a SR focus, they thought the program and the models that had already been put in place accommodated the goals that they aspired. ICTA officials believed this inbuilt SR view was championed by the human capital, mainly the Nenasala leaders. ICTA officials expressed the belief that a good leader would overcome most obstacles presented to them within the models to champion the SR synergies of the local Nenasalas. As such, they focused on engaging the most appropriate leaders to the Nenasala at the grassroots level. It was noted that a good leader would attract like-minded human capital that would accentuate the SR vision that the leader championed. In this regard, ICTA officials did see a direct link between SR and human capital linked to grassroots level Nenasalas. ICTA officials also extended this notion to the overall Nenasala project that was guided by ICTA staff and other important stakeholders such as politicians. ICTA officials noted that the SR focus at the ground level was a result of the SR focus of the human capital of the umbrella organisations and program sponsors. Yet, the motivation for this SR focus within the human capital was given to be many things, ranging from religious reasons, parent organisation structural influences on human capital, to the desire to develop Sri Lanka through ICT. In ICTA officials' view, although this implicit notion of SR has worked thus far in Nenasala models it may require some adjustments as the ground conditions the program faced were changing within Sri Lanka with changes to society, country and international influences. As an ICTA official explained 'sometimes we can see clear themes around these models linked to human capital that assist SR'. These themes could be common across the not-for-profit and for-profit divide. For example, it was stated that 'As Sri Lanka is a majority Buddhist country people involved have been influenced by the philanthropic notions attached to Buddhism, whether the Nenasala

model was for-profit or not-for-profit. Human thinking and feelings come through their actions within their local Nenasalas activities'. Participants also noted that ICTA influence could not be disregarded in this aspect as all Nenasalas operated under one banner, regardless of leadership differences on the grassroots level. This meant that certain copying and mimicking took place within the Nenasalas at the local level in the program due to program level influence. If one Nenasala leader introduced a service that was good for his community, others also followed or trailed it within their Nenasalas. As such, a SR synergy that had a benefit to local communities seemed to propagate through human nature. Although such actions may not be always labelled as SR at the grassroots level, on a more sophisticated level the results of such action fell under the SR activity of that organisation.

Most leaders in the Nenasala program did already have a strong sense of social justice and a desire to see a betterment of targeted beneficiaries' lives. However, the study could not definitively uncover whether such leaders were attracted to a program such as Nenasalas that looked to benefit Sri Lankans or whether the program umbrella organisation ICTA was particularly successful in recruiting such leaders through their decisions to award Nenasalas to the best candidates, highlighting the importance of human capital. On the surface, evidence of both were noticed.

The beliefs of leaders of Nenasalas needed to be considered in terms of the human capital influence on sustainability within the SR context. Within the study, there were numerous examples within each of the Nenasala models where the individual belief of the leader related to SR or social justice dominated the whole Nenasala strategy or service delivery outlook. When considering Nenasala human capital, the leader who guided the grassroots level engagement was seen to be a key on SR objectives for the Nenasala. The participants noted that although individual leaders were guided by their beliefs on SR and human capital, there were other moderating influences such as finance, umbrella organisation's influence and other infrastructure limitations. In terms of finances, leaders of various models managed to come up with activities that suited their budgets. For example, not-for-profit religious clergy led Nenasalas were successful in doing 'good' through SR out of their Nenasalas despite predominantly utilising donations and volunteerism of human capital for provision of their services. The entrepreneur led Nenasalas used SR and human capital activities within their

business models in a manner where those efforts were funded to at least cost recovery levels. As such, one could not argue that one model was superior to the others in terms of human capital influence on SR as each model could generate value for the society within their niches.

Such influence, whether the human capital motivation was religious, social or indeed ecumenical, it could be considered as a unique unifier within the overall program. The existence of unifying forces indicated that the hybrid human capital model that emerged in Nenasalas in Sri Lanka could be applied to other developing countries that had similar economic, social, cultural and religious bounds as underlying unifiers for their overall ICT4D programs. At a simple superficial level, one could argue that the human condition of making money was also a unifier for the for-profit business model that acted similar to cultural, religious, or social unifiers of the not-for-profit models. The study indicated that even the for-profit business Nenasala owners were focused on SR synergies to assist their local communities. This was evident by the comments of many owners of this category of Nenasalas, where they stated that they attempted to keep prices lower than fully commercially driven telecentre counterparts and to provide relief to poor through various schemes, such as scholarships to needy children through the local business community, to ensure that the most disadvantaged were not left behind. This also meant that the human capital engagement also had to be flexible to suit the need of the individual project and evolving Nenasala conditions. However, the SR focus was strongest in Nenasalas of not-for-profit community models headed by religious clergy where human capital did not cost, or cost very little. Nonetheless, each of these Nenasalas championed their own SR synergy that was relevant to its targeted local communities. Considering that Sri Lanka had about 38,000 villages, this focus on the local factors and industries through SR synergies was especially relevant in helping each of those communities through the livelihoods they were already involved in. For example, a Nenasala that was located in an area where fishing was the main cottage industry would focus on fishing related activities within the ICT4D efforts of Nenasalas. This local focus was seen as a way of uplifting whole communities out of poverty through their existing livelihoods and ways of life without uprooting their existence from what they knew. However, to implement this scheme the Nenasala owner did engage a local youth who was educated and skilled in programming beyond the norm of this area within the project budget. In another example, a community that

produced coir product was on the verge of collapse but got a break from a Facebook page created by a local youth associated with a Nenasala under the advice of the leader. As it happened, a product manager who was looking for product in their supermarket noticed the Facebook page and commissioned local manufactures who engaged in the cottage industry to supply the supermarket chain, aiding the whole local community. This action not only benefited the local manufactures who were facing economic ruin but also the product manager and the supermarket that was facing a shortage of coir products due to high demand. As such, Nenasalas as a grassroots initiative highlighted the need for local focus on, and the need for SR synergies that local ICT4D projects could champion, which in turn would utilise the strengths of the local communities to generate true business opportunities for the whole community. As it was explained by an ICTA official, 'The human capital in effort costs nothing. The youth who did this project did it as a learning experience for Nenasala. Although the people of that village got a lucky break from a product manager who was looking at Facebook, it was a local youth who put their plight on Facebook utilising the local telecentre computer facilities, calling it specifically SR. It stands to reason, as the community gets wealthier and they realise the benefits of IT and its role in lifting communities out of poverty, that community people, especially the youth, would use the telecentre facilities more to better equip themselves with knowledge generating opportunities. This is the beauty of the social focus at the grassroots level as you see tremendous transformations and opportunities at little cost to human capital. Nevertheless, behind all this stands an army of dedicated people from Nenasala operators to leaders who contribute in their own way to make it happen'. Conversely, the benefits that the ICT4D efforts provided to the local communities through the SR synergies championed by local Nenasala staff have been understood by policy makers in Sri Lanka. Such realisation could have been the catalyst for the former President Mahinda Rajapaksa's decision, in his 2013 budget, to set up a Nenasala telecentre in every Grama Niladhari Division as a special project to broaden access to IT facilities. It was hoped that 14,000 Nenasalas would be implemented within three years. The 2013 Budget allocated 750 million rupees to set up these Nenasalas with another Rs. 300 million to the ICTA.

## **2. How do drivers of human capital (i.e. leadership and culture, recruitment and job design, training and development, performance management and rewards) affect Nenasala telecentre sustainability?**

The chosen Royal and O'Donnell (2008) Tool 2 was the 'human capital wheel' that was utilised for deeply analysing human capital systems. Although the Human Capital Wheel noted 10 areas of human capital systems that were seen as significant to an organisation, the archival material analysis indicated that eight were more appropriate at the grassroots level. These eight indicators were grouped to four areas to organise the findings in a coherent manner. The data for answering this question was sourced from focus groups conducted within this research. The following sections outline the findings of both the not-for-profit and for-profit Nenasala model categorisation within the same groupings discussed before.

### **Leadership and culture**

All the participants of the study attached to various Nenasala models noted leadership to be the primary human capital aspect that they believed to be important for Nenasala telecentre sustainability. They were adamant that all challenges the grassroots initiative faced could be overcome with proper leadership. Nonetheless, they noted that the leadership that was required had to be in line with the socio-cultural focus of the Nenasala telecentre project which was primarily concerned with assisting the rural poor through ICT4D.

Within the study, it was uncovered that sustainability was enhanced by leadership provided by Nenasala leaders at multiple tiers, rather than the single SR focus associated within the Nenasala models via ICTA as previously thought. The researcher referred to this special community-based leadership style adopted by Sri Lankan Nenasalas as Socio-Cultural Leadership (SCL) by borrowing the theorem from the education field. Fundamentally, SCL in the context of community-based SR oriented leadership was defined as a 'leadership style that actively seeks to ensure that, despite lack of affordability, disadvantaged groups gain the advantages normally limited to mid-high class societies'. Hence, SCL was focused on bridging the digital divide and

played a large role in the social reform effort within the country, which aimed to alleviate poverty. Although SCL has taken four paths based on Nenasala models, they all incorporated a single core key theme. That is, all leaders and individuals who championed Nenasalas were driven by and were in tune with socio-cultural aspects, which are intertwined with ICT4D that benefits the disadvantaged in their local communities. This uniform vision seems to have originated through the intrinsic Sri Lankan social and cultural determination of caring for the disadvantaged and the poor. Furthermore, ICTA's encouragement to serve the disadvantaged in Sri Lankan villages by providing ICT4D services at a low cost or subsidised manner through Nenasalas as one of its primary goals also aided this vision and its propagation over time without weakening the programs momentum. However, leadership seems to be a key according to the majority of the participants as it was believed leadership would be the overarching factor that would guide the rest of the human capital drivers in the grassroots level Nenasalas.

Even the cynics and the critics of Nenasala acknowledge that leadership and the undying determination of a strong leader went a long way to achieve success and sustainability in the majority of the Nenasala experiences. For example, one for-profit business based Nenasala entrepreneur noted, 'you cannot blame ICTA for the failures of any Nenasalas within the program. They did what they said they would do. They initiated a telecentre program; established Nenasalas by providing computers and other equipment. They trained the leaders and showed the way to sustainability. They even had support programs for income supplementation like the voucher scheme which gave an income of around Rs. 25,000 per month to support staff of Nenasalas till they got on their feet. This is on top of the advice and support the grassroots Nenasala owners got from their local Nenasala support groups, regional impact teams and ICTA officials. Therefore, if a person still says that they cannot run a Nenasala and the issue is with Nenasala models, it may not be such a problem. I think it is a personal leadership issue with them. They have not saved funds when times were good, planned for the future sufficiently or thought beyond the period of subsidisation'. He added that the success he had was due to his own hard work and his vision to make something out of the opportunity provided to him by Nenasala. He added, 'I followed the ICTA model for about six months. I offered IT classes and courses. I realised quickly that the market in my local area was not suitable for those service offerings. Even if we are in the East of

the country where a civil war was going on until the recent past; things changed with the arrival of peace in 2009. Government has given us facilities like electricity, water and new roads. We also have broadband from Sri Lanka Telecom. The children in my village know how to use PCs, technology, and e-mail. This is not what we had a few years go. We had to travel 30 km to Trincomalee just to send an email spending time on the road, and petrol on our motorbike. As such, I had to change my ways and adapt to the local needs of people and the prevailing conditions in my village to set up my business for success. Now I focus more on services, product sales, and other complimentary markets like mobile phones as that is what the local people want'. This determination to succeed and ability to adapt to local conditions was seen as a key to success of Nenasalas by most participants regardless of the model used. As one participant highlighted, 'you have leaders who are visionaries in all occupations. These people succeed at any level because of their vision, inner strength, and determination to succeed within the circumstances they face. These people are also able to convince the others around them on what they stand for and get others to follow those good causes. This is particularly true at the grassroots level where conditions are much more basic and harsh. These leaders could be people who are money oriented as in corporate types like Bill Gates or philanthropists who aim to benefit humanity like the religious clergy of this country. If you see the history of Sri Lanka you find examples of both types, perhaps more so in the philanthropist category considering the country's Buddhist influence'. Another participant tried to drive the point home with a simple analogy, 'if a boat sinks at sea, the occupants of the boat may have different reactions. Some may try to save themselves by doing all they can and try to swim to safety. Others may simply give up and drown. Others may pray divine intervention to save them. All I am saying is that my money is on the person who is trying to save himself by swimming if you consider the likelihood of survival. It is the same with the Nenasala program. Some made it work by utilising all means available to them while others were still waiting for government handouts and ICTA bailouts'. On the surface, this crude logic could not be faulted based on what was observed within the Nenasala program, that strong leaders indeed made a difference at the grassroots level.

The study included entrepreneurs who pursued a for-profit focus on all aspects of Nenasalas. Similarly, the study cited examples of individuals within the religious community and NGOs who pursued Nenasalas as an avenue to benefit the society they

were part of. Nonetheless the overwhelming majority of both categories stated that the commercialisation of the Nenasala models was required if the program was to survive in to the future without donations or government support. The basic premise of this statement was that Nenasalas had to cover its own expenses and find ways to save money to cater for its future needs and unforeseen circumstances. However, commercialisation was seen as a decision that usually manifested within the leadership of an individual due to their realisation of changing circumstances around them at the grassroots level, which required changes in their enterprises. In the study, there were examples of not-for-profit community-based models that charged for their services. It was seen as an example of the realisation that money mattered for long-term survival. Not all not-for-profit Nenasalas thought of charging for services to make a profit. The not-for-profit community model was not seeking to change its SR focus, but to supplement its income, which they got from donations. It was explained that the money they charged was to cover the basic expenses and to collect some funds for emergencies such as hardware faults. It needs to be noted that this notion is similar to sentiments of Friedman (1970) on SR where he believed that SR should be based on 'acceptable profits' where he stated that corporations had 'to make as much money as possible while conforming to the basic rules of society, both those embodied in the law and those embodied in ethical custom'. It is an acknowledgement that the profit principle was originally set in terms of the social context that was aimed at working with society, although various interpretations have materialised since then. Nonetheless, the research indicates that leadership was a key to requiring modification to the 'organisation's strategy' in its bid to be sustainable in the long term. As such, one needs to highlight leadership as the key human capital driver of a model at a grassroots level that aids leading to sustainability. When considering the not-for-profit community-based models of Nenasalas that was most reluctant to charge for their services, it was the Nenasalas that were led by the religious clergy, who associated the Buddhist tradition of benefiting others without seeking benefit to you. Hence that model was very much immune to the requirements of money. Although some priests in charge of Nenasalas advocated charging for services for the Nenasala to be sustainable in its own right in the future, most participants noted that village people resented such decisions purely because Nenasalas were attached to the temple. It was noted that Sri Lankans did have the view that what is associated with temples or religious institutions had to be not-for-profit. However, village society and NGO leaders were not criticised for attempting to raise

revenue to expand Nenasalas. Most of the not for profit Nenasala models have some level of subsidisation of costs from parent organisations. Only leaders who were strong and visionary attempted to end the dependence on donations for Nenasalas' existence for the long-term benefit. As such, what seems to be seen in the most successful Nenasalas is leadership that went against the prevailing trends and the norms to accommodate changing ground conditions. Although for-profit entrepreneur led Nenasalas existed to make a profit from the venture, these entities had to compete with other local non-Nenasala telecommunication shops. Again, the participant view was that for a Nenasala in the for-profit category to survive in the current marketplace it had to have good leadership. This was attributed to the business acumen and savviness of the Nenasala owner in assisting the Nenasala's financial sustainability.

Within the leadership context, ICTA's focus was to guide leaders at a high-level to assist or show the road to sustainability. Although they acknowledged and endorsed leadership as the key to sustainability in grassroots level organisations such as Nenasalas, they focused on leadership at many levels within the multitier e-Sri Lanka and Smart Sri Lanka national programs, which had international involvement. This was to note that many grassroots level programs had multiple stakeholders who had to contribute at various levels for the success of a program overall. In other words, leadership had to be present at the micro and macro levels of the program. As noted by one ICTA official, 'if the original ideas that became the e-Sri Lanka program were not put forward by the software industry leaders and those ideas were not championed with a tenacious determination by government leaders at that time, this program would have amounted to nothing, nor would it have got off the ground. Even more, the program eventually got the support from both the government and opposition at the time. It was stated that the opposition and the government had the foresight to put their political differences and posturing aside, as political support was necessary for any national level initiative such as Nenasala. Special acknowledgement needs to be given to politicians who kept the momentum going in supporting this vision into the large scale effort of e-Sri Lanka and Smart Sri Lanka. Especially the former President Mahinda Rajapaksa's leadership in continuing to advocate this agenda and drive the government officials involved in the implementation, without letting it stall like many other past development programs in this country. Furthermore, one needs also to value the leadership of ICTA officials and the support organisations that showed dedication and

determination to get the activities in their areas to be a success. So the point is, leadership is not specific to the grassroots level in these programs, it is multi-level both nationally and internationally if one considers all the international supporters of this program in the World Bank team'. As such, it is important for a model to consider human capital to capture leadership at both local and international levels, which is multi-tiered. Further to the leadership that supported the larger ICT4D initiative, the Nenasala program could not exist without the grassroots leaders according to the participants within the study. They noted that the main difference within the Nenasala program was the dedicated, centrally organised grassroots leadership opposed to other programs that have been run in Sri Lanka. It was noted that choosing people who had the common goal of serving their communities was a masterstroke of the project designers. The researcher referred to such conditions as 'a unique unifier' that was an enabler of this program and its sustainability. However, they pointed out that community focus and SR were there from top to bottom in the program like a pyramid structure with the same enthusiasm to see the Nenasala projects progress.

The finding indicates that grassroots initiatives such as Nenasala telecentres rely on leadership that exists rather than nurturing leadership from inside as for larger corporates. ICTA relied on leaders that existed in the grassroots level within villages for the ICT4D purposes by developing specific models to target those segments. Overwhelming evidence uncovered was that leadership was sourced through recruitment at the required level as necessitated within the Nenasala grassroots initiative within most models. This was also seen at the support organisations as well as in ICTA as the guiding arm of this effort, as well as the more formally structured Nenasala models, such as the NGO led model. However, how community leaders developed at the grassroots level, why they joined such a grassroots movements or whether existing leaders could be made more competent through better training, were not fully understood within the mechanism observed. The participants also noted that the right leaders were also better at promoting operationalising structures, introducing new operating procedures and for better training and development programs. As such, NGOs focused heavily on attracting the best leaders. The focus on acquisition of right leadership skills could be attributed to the formalised organisation, operating procedures of the parent NGO and the NGOs flow-on effects of HR guidelines on recruitment. Furthermore, participants noted that the reason why better leadership was visible in

NGOs was not only that sophisticated operations required and sought better leaders but also better leaders also sought to join sophisticated operations. As such, larger sophisticated organisations that offered better employment conditions and pay were more successful in attracting the best leaders as observed especially in the case of Sri Lankan NGOs. Contrary to this, in the religious institutions the leadership was put down to the inherent abilities of the clergy attached to the religious institution as the clergy did not generally change between temples. Here the ability of the clergy and the religious training the clergy received in their perspective religious orders were the main aspects that polished their inbuilt skills; as no external recruitment was seen. As one participant noted, 'in religious life, a novice monk is considered junior from a religious sense regardless of his abilities and position in society as a layman. However, one would hope that the head priest would use the common sense to utilise the junior monk in the Nenasala considering his knowledge of ICT and skills'. Yet, in village society led Nenasalas the better leadership attributes were put to the leader's knowledge, common sense and interest in the Nenasala. This was to say that NGO religious leaders had external help in developing their leadership skills and would get help with training and development where village leaders did not receive such support or any kind of organised training.

What was clear from the Nenasala experience was that certain dominant aspects within a community could act as a unifying force in this context and aid the ICT4D program. For example, in Sri Lanka, due to the prominent Buddhist philosophy and the notion of aiding the less fortunate, Buddhist community leaders were more likely to champion the not-for-profit Nenasala models. The fact religious clergy also had an advantage as natural leaders in communities, was an added bonus for the program. However, the fact that an underlying unifier existed in the form of religious philosophy within the targeted sector was not a reason for the overall sustainability of Nenasalas from a leadership perspective. ICTA saw things much more simply and developed different models for different target sectors with varying unifiers. However, leadership was something that had to be carefully chosen and nurtured for sustainability.

The focus on SR synergies whether in the for-profit or not-for-profit Nenasalas, also seemed to be a driving force or motivational aspect for leaders within this grassroots level movement. The participants also noted that the local focus came from local

leaders who were generally associated with or were thinking of the larger trade within that locality. The point they made was that this dual leadership role was especially appropriate as they knew how to apply ICT to benefit the livelihoods or cottage industries the local people engaged in. The participants also noted that local leaders and the conditions they faced dictated how a Nenasala operated and what services the Nenasala should provide. They noted that it was appropriate for grassroots level enterprises to adapt to or grow in to a target market considering that the market dictated the sustainability path the leader could take. This meant that the notion of a uniform franchise operating model was not appropriate for grassroots level efforts, such as Nenasalas. The participant view was that the unique unifiers discussed, with customisation at the local leadership level within the bounds set by the umbrella organisation to keep the original vision in focus, was the best way to set up grassroots level ICT4D initiatives such as Nenasalas. However, they noted that the success of the initiative was dependent on the beliefs and determination of the leadership on the unique unifiers across the multiple tiers of the program. This was to say that if the belief was not uniform then the program would form weak links within its delivery chain. They also saw contentious leadership, sometimes where the ideas of leaders at various tiers clashed. Yet it was noted that the program has managed to get over such clashing of ideas as strong unique unifiers were the key that drove all leaders.

An environment that created leaders or nurtured them for success within an organisation was not a focus factor with a grassroots initiative. This was evidenced by the fact that most things that was formalised and analysed at detail in large corporations as human capital requirements for leadership, were seen as implicit aspects that followed the banner 'leadership' at the grassroots level. In simple terms, grassroots level was a very simplistic, rough, and unstructured version of the larger corporations. As one owner noted, 'these sort of HR factors and HR drivers as you put it, can be linked to leadership or shown to be caused by a leader at our Nenasalas. If the leader is good, the people who work for him enjoy working there and stay longer. That forms a stronger team. That will attract more customers and produce better offerings that are suitable to local conditions. We do not see a good organisational atmosphere or HR aspects as a thing we need to plan separately'. This simplicity was highlighting the key belief that most HR drivers that were thought of separately within a large corporation when applying the

human capital systems aspects of the 'human capital wheel' (Royal and O'Donnell 2008) were not seen as unnecessarily complicated at the grassroots level by participants.

The culture of a grassroots level organisation promoted by the umbrella organisation was highlighted by the participants in terms of a possible unique unifier such as serving the community and religious belief. However, the general belief was that this unique unifier, along with the leadership that championed those courses was the key contributors of setting up an environment within the Nenasala to achieve the goals planned for that specifically targeted benefit group. These observations on organisational culture were common around for-profit or not-for-profit categories. The culture that the leaders promoted within their Nenasalas with their operators reflected this commercialised and subsidised mix based on SCL's beliefs and the ideology they subscribed. For for-profit entrepreneur led Nenasalas the unique unifier was profit-making; even the SCLs wanted to assist the local disadvantaged through philanthropy and subsidisation. In contrast, not-for-profit leadership mainly concentrated on SR, sometimes at the expense of sustainability. As one operator of a not-for-profit Nenasala that was led by a Buddhist monk noted, 'in our Nenasala our priest wants us to operate it as an extension of the temple program. So we cannot think of charging for services. Because it would be awkward to ask for money from a villager who came to the temple to get a single photocopy considering that villager could be also a good parent of the temple and known to us personally. This affects the sustainability and growth as we do not get donations to do everything we want to do in the Nenasala. The manager also felt obliged, even if she may not agree with the direction taken. Such cultural restrictions that were placed on the staff due to SCL influence was again reflected by the operators of Nenasalas. As another operator noted, 'our Nenasala is located within the temple. The temple has a tranquil and serene environment. People usually treat each other very nicely within the temple. Therefore, we have a bit of a relaxed 'anything goes' kind of atmosphere within our Nenasala. I think all this is due to the environment we work within'. Contrary to such observations, NGO and for-profit entrepreneur led Nenasala SCLs did report a much more business oriented structured Nenasala culture in their operations. The main reason they gave for this was that the focus on making money was to cover expenses and in certain cases to make a profit from Nenasala operations for future expansion. As one operator put it, 'from an office culture point of view we know we cannot relax. All of us are always focused on the customers and how to make money

to cover our costs. We know that our wages along with Nenasala longevity are dependent on making enough money. We started thinking like this because our owner always looks at the books and focuses on the money we make'. The NGO model also noted that their Nenasala culture was also influenced by a sustainability focus. They noted that although they did not primarily focus on money, they had to generate enough income to cover their bills and the wages. As one NGO led Nenasala operator put it, 'I am not saying that the NGO model focuses on money, but the issue is that we are acutely aware that in the NGO model if we do not cover our expenses, the parent NGO has to provide money to cover that shortfall. As such, all are focused on doing the best we can to ensure that we are profitable'. Yet, overall the Nenasalas reported that the Nenasala culture was a relaxed and friendly one. As one entrepreneur of a for-profit Nenasala explained, 'we need to keep in mind that the Nenasala is a small grassroots operation. Where Nenasala has grown to be medium-scale, operations can be a handful. As such, by nature the operators are very close to each other and the SCLs. When people work in this sort of small operations, close and corporative work usually happens. What this means is that leaderships usually sets the tone and the path these small enterprises take'. What was uncovered is that the Nenasala culture was dictated by the unique unifier firstly and then by the philosophy that guided that operation. However, as the operational philosophy was led by the SCL of Nenasalas it could be said that leadership was a key contributor for culture and sustainability.

Blame for Nenasala failures was attributed to two groups. Firstly, it was noted that the leader that was chosen or selected by ICTA might have not been appropriate to the Nenasala movement. This was not a blame aimed at the models that were in place. Perhaps a criticism of the leadership or owner selection process built-in to these models was not appropriate. As one entrepreneurial for-profit business model based Nenasala owner put it, 'when you consider the large amount of Nenasalas that failed initially, you can argue that the ownership selection was foolhardy initially. If your objective is to own a Nenasala, the candidate would always try to say what ICTA wanted to hear. Such people may also be careful to put a good business case together to highlight a good reason for them to get the Nenasala. However, when a Nenasala went bad it was clear that the wrong people have established the Nenasala with ulterior motives not suited for the Nenasala program to the larger ICT4D initiatives. What I am saying is that what may look good as a proposal may not always turn out to be that in reality'. The second

reason participants highlighted could be put down to lack of ICTA monitoring of progress or putting pressure on the Nenasala owners to show interim or continuous progress for the assistance they got from government within these endeavours. What was highlighted is a need for an overarching organisation for propagating the larger goals and the vision in a uniform manner, consistent with the enforcement mechanisms to enforce obligations on all participants. This is not to say that ICTA failed in this aspect within the Nenasala program in Sri Lanka, but what the operators and owners were saying was that better results could have been achieved if continuous monitoring and evaluations were done of Nenasalas in a periodic and ad-hoc manner.

### **Recruitment and job design**

As expected, the grassroots level organisations lacked the sophistication of larger organisations. Neither the ICTA mandated, nor the Nenasala owners pursued any kind of policies related to recruitment or job design for job roles of grassroots level Nenasala programs. Most participants did not explicitly relate the notion of recruitment to sustainability. What was noted in the grassroots level in terms of recruitment was a simpler version compared to larger IT organisations or the Nenasala parent organisation ICTA. ICTA argued such rigid guidelines were unreasonable to mandate and impractical to implement in small organisations such as Nenasalas. The same sentiments were noted from owners and operators of Nenasalas of not-for-profit well as for-profit Nenasalas. They advised that, ‘what seemed to be working on the ground well was the jack-of-all-trades operators who could take on multiple roles within these grassroots level enterprises’. Nonetheless, all involved in the Nenasala program from ICTA, support organisations and grassroots level Nenasala SCL, saw the importance of leadership and recruiting the right leaders for the success of the program. However, they mainly relied on external hiring for Nenasala operators rather than focusing on nurturing talent internally as was visible in larger corporations. Although nurturing talent and promoting talented individuals to higher positions within a company was common and seen as important to develop people who identified with company ethos, Nenasalas, as grassroots level organisations, saw internal development as an uncertain investment due to the transient nature of the workforce. Furthermore, grassroots organisations like Nenasalas struggled to have succession planning due to this high

turnover. However, as the SCLs remained with the initiative long-term and in many cases could perform most operator tasks within Nenasala, the SCLs were mostly seen as the gap-fill when sudden loss of staff occurred due to resignations.

When considering that the focus of the Nenasala was to recruit leadership and staff in a just-in-time manner to save costs, the lack of potential salary inducements was a ‘catch twenty-two’ scenario. As such, it needs to be noted the importance of the availability of sufficient funds, especially in the initial stages of a grassroots initiative, to properly establish it within the targeted community. As one participant stated, ‘if we can attract the best staff, I think we can give better service, especially in IT training. However, we have this issue of cash flow. If we can only afford to get the base level tutors then we have to offer a lower grade product and to compete with the other non-Nenasala entities and their classes. This is the reality we face’. Again, the collective belief of the participants was that the leadership was critical to overcoming Nenasala issues that seemed to be interrelated. As one monk who directed a Nenasala stated, ‘I think that all of these models perform sufficiently in their own way. How you choose to operate a Nenasala does not matter as long as the leader you have in that Nenasala knows what direction they need to take to make a Nenasala a success for that targeted group. It is that local insight of a leader that will overcome all problems from finance to the people we can employ. The short story is that we do not necessarily need the best staff to operate Nenasala staff in every scenario considering that some Nenasalas only need to offer basic services which is dictated by the local village demand’.

According to the participants, formalisation was not required for a grassroots level operation such as Nenasala. SCLs were also not keen on formal recruitment methods. However, they noted that they had to get the right man for the job if Nenasala was to survive, sustain and thrive. However, most owners of the not-for-profit community-based models believed that they had been successful in hiring the right people without the use of complicated HR methods. One owner noted, ‘you know who is going to succeed within a Nenasala in a casual discussion or a simple interview. If I like them, I hire them. This simple way has worked for me. I like to keep things simple. After all we are working with village people and it is not an IT office’. However, considering some operators volunteered or provided their time with very little remuneration, most not-for-profit community-based model SCLs did not expect or demand much from their

operators in terms of performance. In these scenarios, recruitment was relaxed to the level of hiring whoever could spend their time in the Nenasala, providing they had basic computer skills. However, more structured local NGOs and progressive clergy along with village societies acknowledged that some formal hiring would assist them in selecting SCLs and the operators who were better fitted to Nenasala's vision. This was a tacit acknowledgement of the value of formal HR methods that would add value to the hiring process of Nenasalas. However, they were not expecting hiring advice from ICTA as they noted it might be too difficult for ICTA to cater for many local differences or local human capital circumstances within each Nenasala through broad advice from the central body. Nonetheless, out of the not-for-profit community model categories, only NGOs indicated some level of sophistication in regards to recruitment or job design. This was purely based on their larger HR guidelines, which had been extended to cover the operations of the Nenasala as an extension of NGO programs. However, the for-profit Nenasalas did consider recruitment to be a significant endeavour. Entrepreneur SCLs stated that getting the right person for their operation directly contributed to the sustainability of their operations. This view was held mainly due to the fact that they paid a salary to their employees. As such, the SCL wanted to get the best value for their money in attracting the best human capital they could source. The for-profit Nenasalas also focused on getting the most educated staff for their Nenasalas within the salaries they could afford. This was based on the belief that people who were educated not only brought more ideas to the organisation, which would yield better revenue windfalls in the future. Overall, for the majority of Nenasala models, recruitment and job design was informal. Recruitment success mainly depended on the knowledge, foresight, interest level and the leadership of the dominant SCL within the Nenasala rather than the model.

The majority of the Nenasala models did not follow any formal job design within their operationalisation. The main reason that participants gave for this was that the staff numbers of their Nenasalas were limited to only one or two operators. Some larger Nenasalas had specific roles or job descriptions within their organisational structures. Larger Nenasala operations were very much a rarity and only a very few examples were found within the research. In one Nenasala, where around 20 operators were present, the organisation structure where 'who did what' was clearly visible. This also incorporated the authority of the people within the role they were assigned to. Overall,

Nenasalas were seen as small units, where each covered the tasks to the best of their abilities under the directions given by the Nenasala SCLs. The consensus was that such organisation of roles was not required at grassroots level enterprises in general. Such operations were not seen as a complicated situation that required much structure or definition. As one operator put it, 'If you go to a shop in the village, you have one or two people running all aspects of the shop. One could be the owner but he does the same or has the capability to do the same job as the worker. Nenasalas are the same. It is not like in ICTA or in an IT company where there are lot of people with specific job titles. At the grassroots village level we all are generalists'. Such sentiments were expressed by the entrepreneur led for-profit Nenasala owners and operators as well. This unanimity of view was driven by the size of Nenasalas and the notion that in small operations, one had to do whatever that had to be done without worrying about structure or order. Most participants stated that order or structure was not required within small enterprises as it would make an easy task more bureaucratic. However, the NGO operated Nenasalas were focused on order more than the other models. This focus seemed to be driven by the structure emphasis of the parent organisations. Yet the operator numbers the NGOs employed within Nenasalas seemed to be one or two. However, as per the participants from this category, they were given a formal job description with all tasks they were responsible for upon recruitment. However, the tasks the NGO related Nenasalas undertook were similar to the other models. The only difference seems to be that those job roles were documented formally, where in other models, roles were not formalised. As a participant noted, 'in our NGO they told us what was expected from us and got us to sign a contract with what we had to do when we got employed. However, we do the day-to-day tasks, so there is a difference between theory and practice. Overall, as in recruitment, a relaxed approach to job design was taken within Nenasalas. The guiding theme was that in both recruitment and job design each SCL had to choose the best methods for the Nenasala they directed. Formalisation was seen as a form of red tape that would overly complicate a simple entity like Nenasalas. However, the perception of the study participants was that recruitment of the SCL as the leader was very significant towards Nenasala sustainability.

## **Training and development**

Training and development was not a focus for the majority of the Nenasala operators or the SCLs that advised them. Training and development was a casual affair within the Nenasala models, which they did not see as relevant to sustainability. Only NGO led Nenasalas' participants informed of having formal training as part of their inductions, which they believed was linked to sustainability. None of the Nenasalas thought of training in the formal HR sense or as a requirement for sustainability. The participants simply did not see continuous learning as required in a grassroots level organisation unless it was to learn a new computer language or new technology related to a course that had to be offered. The Nenasala SCLs and operators did however acknowledge that learning new technologies was important to update Nenasala offerings according to the latest ICT trends. Yet, they relied on ICTA for such training rather than organising such activities locally. As participants noted, ICTA did organise such ad-hoc training classes. The majority of the Nenasalas were currently focused on external recruitment to fill the skill gaps they saw. How skills were developed within internal staff they already recruited or whether a benefit might be gained by training and development of internal staff was not a major focus of the Nenasala owners. As a result, most Nenasalas did not have a formal personal development program for their employees or provided any training for them with the aim of seeking a sustainability advantage for Nenasala through well-trained and motivated staff. Furthermore, no training budget was noted within Nenasalas. The Nenasala owners saw training as an expense that was a risky proposition. They explained training at a grassroots level had to be mostly limited to on the job training. Others saw training as the responsibility of ICTA, the overarching body that ran the Nenasala program, to plan for sustainability. The participants also thought of training as a once off activity that occurred when a Nenasala began. When questioned about training, most participants remembered the one-off residential training ICTA provided when the Nenasala started and stated that they expected to be and were fully trained within that five day ICTA session. Yet, none acknowledged that the training and development ICTA provided was linked to the sustainability of Nenasalas at the grassroots level. The participants noted that the income generated within Nenasalas was mostly fully utilised on meeting the basic expenses such as electricity, connectivity charges, rent and wages of the operators. Most Nenasalas indicated that they did not have spare funding after meeting the operational costs, and even if they had

savings they would utilise those funds to purchase new equipment or to repair their existing ageing equipment. Nonetheless, most of the participants who were operators believed that they were adequately trained to perform the duties required within Nenasala. Although most accepted that they could not perform a specialised task, such as teaching a course on a particular computer language, they believed that such tasks were beyond the day-to-day offerings of Nenasalas.

The participants believed that such specialised tasks required specialised skills and educated technical people. Nonetheless, most saw this to be a specific area of Nenasala's service offering, which could be considered as a niche recruitment area. They did not see specialised classes or training as relevant for sustainability. Most technical training was provided by tutors who were specifically hired for conducting classes. As such, SCL saw no value in internal training on those specific specialist skills. In terms of professional or personal development, what was on offer to operators was mainly limited to courses that the Nenasala offered to its clients. Although such offers were an incentive to employees of Nenasalas in remote villages, who may not have been able to afford those courses within their means, it was less than the incentives and benefits an employee would expect in the corporate sector even by Sri Lankan standards. Yet, the SCLs did offer training to new operators through the classes they already conducted within Nenasalas with the assistance of external tutors. Such training was seen not as training per se by both parties. This was thought of as incentives to young operators to stay with Nenasalas and to use them as relief instructors in the classes conducted. As such, training was seasonally conducted, and the SCLs thought of such training as opportunities to keep operators interested throughout the year. As one operator noted, 'such arrangements also benefited the owners. Our owner allowed me to take the course without paying. However, he got a free gap-fill tutor through this exercise. If our tutor can't make a class or runs late, I can get the students to prepare for class as I have done that class exercise before. This training benefits me too. I've got a bit of teaching experience and I got my knowledge updated when students asked me questions. This will help me with my career'. Although internal staff benefitted from these sorts of arrangements with the SCLs, they did not appreciate or generally think of such education as personal development. They saw opportunities as limited to progress in a grassroots level organisation like Nenasala. As one operator put it, 'we know we cannot progress in Nenasala considering Nenasala is a small organisation. Most

Nenasalas have only two or three staff. This does not provide career progression. If you want to get ahead you need to get another job in a larger place after getting a bit of experience here'. This non-strategic view of training and development from operators at the grassroots level impacted sustainability. These sentiments were also echoed by the SCLs. Most SCLs who participated stated that their operators were only interested in skilling up to get a job with Sri Lankan BPO providers and were not focused on Nenasala sustainability. They were reluctant to provide any training on the belief that if too much training was provided the junior staff would leave them for more lucrative job prospects sooner. However, there were differing opinions expressed within focus groups on this topic. Such SCLs saw change as part of life. One Buddhist monk noted that the operators at their Nenasalas were selected mainly from talented ex-students. Adding that most students were from poor backgrounds, the monk said that it was normal for people to seek to better their lives as many others in their families depended on such talented students to make themselves a success. Although some SCLs saw it as natural to better oneself and the participants themselves had similar life stories to tell in terms of their ICT journey, they still insisted that for their Nenasalas to train people too soon was a disadvantage for sustainability. Other SCLs saw the concept of development not in terms of training or skilling up of operators. They thought that development meant better job titles, rather than internal promotions. It was noted that in Sri Lankan culture, having a big title was a status symbol. Although in villages the title did not come with all the benefits, villagers saw it as a symbol of importance. As such, participants noted that operators and Sri Lankan workers in general sought to get significant titles. Considering such opportunities were not present in Nenasalas, most SCLs argued that the majority of Nenasala employees used it as a staging post for bigger and better opportunities and titles. The SCLs did see employment within Nenasala as an opportunity for village youth and that they needed to be grateful for that opportunity and should stay longer within Nenasala employment, which would have assisted sustainability through continuity. The view was that in a country where unemployment with youth was high, having a job of any capacity was a good thing for the youth. However, the young operators who were in the not-for-profit Nenasala noted this view was a bit insulting. They noted that they started working in Nenasalas because of their personal connections with the SCLs. Most of them started to work in Nenasalas based on invitations from SCLs and not to get a job at any cost. Both SCLs and operators concurred that no external training was provided apart from ICTA. The main

reason provided for this was the associated exorbitant costs with training and the lack of affordability for grassroots level entities. It was noted that this trend would continue within grassroots level ICT4D projects as most funding came from an external body like ICTA or an NGO. Although that funding was enough for initial training, subsequent income of grassroots level enterprises was not sufficient for further external training or continuous education. This meant that grassroots level organisations simply could not afford to do any significant training beyond what they managed to secure free or through external hiring, leading to a gap in sustainability from a human capital sense.

However, Nenasalas relied on free online training that they found. One operator noted that they searched the internet for free training materials and even websites like YouTube to seek answers to some technical questions and for their technical knowledge. Operators noted that the success of training at a grassroots level specially depended on the leadership the SCL provided to find alternatives to expensive formal training. As ICTA officials stated, some SCLs relentlessly persuaded ICTA officials to admit their Nenasala staff into courses, despite those courses being only available to newly set up Nenasalas. Persistent calls to ICTA program organisers by those SCLs sometimes created opportunities in enabling their operators to participate in courses due to cancellations or classes not meeting full capacity. Leadership was seen as the key aspect in getting the required training although SCLs and operators did not think training and development was a great contributor to Nenasala sustainability. It was further highlighted by participants of the study that some SCLs understood the value of trained staff and wanted to train their staff as they saw this was necessary to achieve their Nenasala objectives. However, grassroots level organisations by nature were dealing with resource poor situations. As such, it was advocated that overarching umbrella organisations, such as ICTA, should concentrate on the main training areas that achieved the best ROI for the long term of the program. What the participants advised was putting more funding towards training SCLs and owners of Nenasalas as they were the key stakeholders that kept the initiative progressing. What they valued was additional training on soft skills needed for running and growing the business along with training on developments in technology that Nenasala users would demand. They also advocated ICTA continuing to provide specialised computer training classes to Nenasala operators. However, what was advocated here was internal upskilling of Nenasala staff as SCLs employed externally trained, local tutors to provide such

specialised training to Nenasala users. SCLs were of the view that those internally trained tutors could benefit Nenasalas as it would be a cost reduction to their service provision, which would assist sustainability. However, ICTA did not have such plans as training budgets were linked to donor funding that have already being fully utilised. Overall the SCLs and Operators themselves did not see any value of training the operator level junior roles. They thought that they could teach themselves on-the-job the basics of operating technical equipment and even a basic computer activity like typesetting.

### **Performance management and rewards**

Performance management was not a factor that the study participants considered to be linked to sustainability or required at a grassroots level. However, reward was seen as a direct requirement for sustainability. Remuneration was again discussed by participants in terms of affordability and access to funding sources available for Nenasalas.

Most participants did not even know about formal performance management avenues that larger corporations followed rigorously and saw no need for it. The collective consensus was that in small enterprises there was no need for performance management as the owners and operators automatically knew when sound performance was lacking from a party. Performance management was seen as an issue for formal IT organisations with sophistication, complex structure and many employees. As one operator noted, ‘this does not apply to small shops like ours. When we ask an operator to do a job, we know how they are going and what they have done because we work in close proximity. Also, what we do here is not complex. If we see that the operators are not working out then we usually get rid of them with an excuse to avoid any embarrassment to either party. We do not have a hearing or an examination on what people have done or not done. All these actions are based on what we observe. We do not need to measure or get feedback from anyone’. However, in the NGO model, the operator and SCLs did indicate some formal reviews were conducted by the parent NGO within their periodic reviews of the NGO linked performance management and rewards in regards to Nenasala sustainability. Nevertheless, this was put down to a formality stemming from those formal organisational structures. However, the NGO led

Nenasala operators did not state that their remuneration was linked to the performance reviews that were undertaken or a sustainability target. It was highlighted as a case of measurement of overall health of Nenasalas to ensure the venture was performing within the guidelines set by the parent NGO and was making enough money to be financially sustainable. Even entrepreneur SCLs in the for-profit Nenasalas who wanted optimum performance for the money they expended as wages, stated that they did not require formal performance monitoring within their Nenasalas to know whether the Nenasala was sustainable. They stated that they knew who performed well as they are always within their Nenasalas with their operators. Similarly, some owners noted that they always thought that the atmosphere the SCL created within each Nenasala better explained performance rather than rewards. This was to say that if the Nenasala culture was good, staff would intrinsically work hard even if other factors such as remuneration were below the other non-Nenasala providers. The prevailing notion expressed was that operators joined Nenasalas as they were similar minded individuals that identified with the unique unifier that the SCLs promoted within their Nenasalas. As such SCL's leadership was seen as important in the success of Nenasalas and sustainability rather than rewards or any specific performance measurement associated with remuneration.

Payments or remuneration were linked to sustainability. Remuneration the Nenasala operators received was minimal. This impacted on Nenasala sustainability in two ways. Firstly, Nenasalas saw a larger churn in staff that changed jobs seeking greener pastures elsewhere. Secondly, Nenasalas, especially in the for-profit sector, struggled to employ the best employees that were available in the market due to what Nenasalas were able to offer as competitive remuneration. Most operators who participated in the study noted that the remuneration should match their contribution and what was expected to be paid by a multi-talented operator in the Sri Lankan IT market. However, as employment opportunities were hard to come by in Sri Lanka, most operators were content with their circumstances until they managed to find alternate employment in the ICT industry. The remuneration was directly dependent on the funding available. The Nenasala programs had to ensure that they had sufficient funds for its intended duration either through donations or the projects/services' income to attract the best-qualified to replace staff lost through natural attrition or unforeseen changes. This funding aspect is a theme that had a symbiotic association with human capital drivers and sustainability. The requirement for sound and continuous funding sources was highlighted as a key enabler

for the program's future sustainability. Nonetheless, lack of remuneration was not an issue at all levels of the Nenasala program. ICTA officials were considerably better off in terms of remuneration. ICTA officials also got the opportunity to travel extensively to learn and promote the programs with various international stakeholders. However, it needs to be acknowledged that within the not-for-profit model, money was not seen as the most prominent driving force for sustainability. As ICTA officials and not-for-profit community-based model SCLs noted, most people who worked with these not-for-profit community-based models were motivated by doing good for communities and the satisfaction they got from volunteering for such work. However, one of the difficulties that arose from this model was the lack of free time of volunteers that affected the servicing hours of Nenasalas, which also affected sustainability. However, it needs to be acknowledged that the religious SCL led Nenasala model with larger SR synergies was sustainable within the niche target amid its own drawbacks. Within the not-for-profit models, particularly in village society and NGO led models, remunerating employees seemed to feature highly in the context of employee retention and sustainability. Although the wages in the NGO model were subsidised by the parent organisations in village society run Nenasalas, no such subsidisations were visible. That meant the village society led model was much more hard-pressed to earn enough to pay the wages and expenses. Considering that even in the NGO model, parent NGOs were increasingly becoming reluctant to pay day-to-day funding shortfalls, NGO led Nenasala SCLs and operators felt that they were also under pressure to earn more to pay salaries, which was one of their larger expenses. However, Nenasala SCLs attached to village societies noted that their staff was flexible when it came to rewards, considering most understood the financial difficulties a grassroots level Nenasala faced. Most commercially driven entrepreneur led Nenasala operators were focused on their remuneration rather than other models. They openly noted that they were keen to make as much as possible and would consider better external opportunities if those opportunities offered them more remuneration. As one entrepreneur SCL noted, 'if operators are honest in expressing their views they would have to say that they are going to take up an opportunity that is going to pay more. If some say otherwise, they are not being truthful. Especially the younger kids have their life ahead of them and they would consider their financial security more than the older operators. However, there are cases where some people like to live close to their homes and villages. Such people that have roots also have other income sources from their properties and farms in

their villages. If that is the case, I can see them staying in their villages despite being paid less than IT jobs in the cities'. However, overall the consensus was that payment of a wage to operators was a necessity to attract and retain quality staff that could progress the Nenasala movement and aid the overall e-Sri Lanka delivery strategy of the country. This view was also endorsed by the religious clergy who also understood that if Nenasalas were to expand and become commercially sustainable at a larger scale, commercialisation of not-for-profit Nenasalas to a level that they become financially sustainable had to be done. Although paying remuneration was not a current concern of the religious clergy led Nenasalas, this notion was understood by them as society and culture was gradually changing to a much more westernised and busy one, where doing good and serving others may not be a priority, affecting not-for-profit Nenasala sustainability.

### **3. Does different types of telecentre models impact HC drivers and Sustainability**

The study uncovered many variations of Nenasala models. For the ease of representation within the study, these Nenasala models were broken down into two main categories. These were not-for-profit and for-profit categorisations. Within the not-for-profit categorisation, three main types of Nenasalas were visible. These were noted as Nenasalas led by religious SCLs under religious institutions, village society based Nenasalas led by prominent village SCLs and Nenasalas that operated under the patronage of NGOs led by NGO SCLs. The for-profit Nenasalas numbered few and were led by villages based entrepreneurs that operated Nenasala as a business with a high level of SR synergies.

It was clear that each of the models had unique human capital drivers and common elements. For example, all Nenasala models did rely on external recruitment of skilled staff and their leaders as a means of attracting the required skills in a JIT manner. Such notions could be explained through the needs of grassroots level programs, as grassroots level programs did not have much money for continuous development of staff internally. Similarly, Nenasalas were exhibiting very rudimentary make-ups when considering job design and performance management. The participants of the study explained these similarities in terms of the size of Nenasalas. Their common view was

that Nenasalas were small organisations with two to three staff, inclusive of the SCL. As such, small organisational structures did not require complexity that one would expect to see in a large corporation. It was argued that in small operations all operators could be considered generalists and the owners and co-workers knew how people performed without formal evaluations, considering the proximity and overlap of tasks. Similarly, when considering aspects such as training and development, it was clear that all models of Nenasala subscribed to a common theme that was dictated by the fact those models still catered to a grassroots clientele. The reality was that at the grassroots level, such aspects were replaced with cost effective easy win solutions such as recruiting skilled staff externally, saving money that was otherwise needed for continuous training. Although such action also relegated Nenasala to a perpetual cycle of external recruitment and a transient workforce who used Nenasala employment as a stepping stone for better opportunities, such action was seen to be expected and accepted within the circumstance Nenasalas faced on the ground. However, models and the socio-cultural aspects that guided these Nenasalas seem to guide human capital toward differing conclusions in other 'Human Capital Wheel' elements investigated. As it was noted, not-for-profit Nenasalas were dominated by Nenasalas attached to religious institutions. Such association automatically imposed a much more dominant influence that led human behaviour. For example, within religious clergy led Nenasalas, reward was not considered in terms of monetary terms. Reward to human capital was seen as much more a spiritual satisfaction that one would get by helping the disadvantaged. This belief was endorsed by the leadership of such Nenasalas who were again driven by the notion of 'doing good' within the Buddhist philosophy. Yet, all other operators associated with not-for-profit and for-profit Nenasalas thought that operators should be compensated financially for retaining human capital capacity within the Nenasala program. However, when considering the evidence on the surface, which was based on participants' opinions and observations, one could not fault either Nenasala model's strategy. ICTA officials certainly emphasised differing approaches in human capital as a deliberate aspect and noted that the fact these various models were devised on purpose to exploit a niche target group in the best possible way leads to sustainability. Similarly, others argued that same point by highlighting that people were part of society and they all had various motivations and beliefs that needed to be harnessed in different ways as in the different models ICTA utilised. It was interpreted as different people with a certain mindset may naturally gravitate to a particular model

that was closer to their thinking. Therefore, some participants argued that social mindsets needed different models to harness that social consciousness. It also meant that it was particularly important for ICTA to recruit the correct leader with the like mindset to enhance and promote different models.

The unique unifiers that bound the likeminded social capital to Nenasala human capital among the for-profit and not-for-profit Nenasala categories differed. For example, in the not-for-profit Nenasalas most SCLs favoured serving the disadvantaged at no charge. The culture they championed within their Nenasalas was based on the Buddhist philosophy that again aligned with doing ‘good’ for the less fortunate without seeking favour or benefit to themselves. However, the other models of the not-for-profit category, such as village society or NGO led models’ SCLs, did charge for their services to sustain Nenasalas although these SCLs also sought to benefit their local communities. However, in these models the general unique unifier could be seen as provision of sustainable and affordable services to the rural disadvantaged for uplifting their lives. As such, the study appreciated both sides of the participants’ arguments to say that the models were suited to the targeted audience they intended to support and were successful in engaging the like-minded people into those efforts under the larger unifying identifiers of the program. As observed, these unifiers could be either internal to Nenasala human capital, as in the religious beliefs of people, or the motivation of making money in the for-profit entrepreneur led Nenasalas that operated as a business. However, it needs to be noted that such intrinsic unifiers within Nenasala human capital were present to varying degrees in all models. Therefore, unique unifiers could be based on the social and cultural norms of a country. People who participated in the study explained that Sri Lanka was a majority Buddhist country and those unifiers would have been effective even for the money minded people who were associated with models, such as the entrepreneur led Nenasalas and NGOs led not-for-profit Nenasalas, as they were run by Sri Lankans who would have subscribed to the social and cultural norms of Sri Lanka. Similarly, the unifiers could have come from larger structural influences. The study noted that the NGO model was very much influenced by the parent NGO’s processes and beliefs on how its human capital reacted to a given scenario within Nenasalas. Such organisational influences were visible in multiple tiers. For example, NGO led Nenasalas were influenced by the NGO, which in turn was influenced by the structural guidelines ICTA championed within the NGO engagement. Similarly ICTA

as a national body was influenced by donor organisations such as the World Bank and other telecentre projects' experiences within the South Asian region. Furthermore, such unifiers could be related to regional or village based influences. For example, village society led Nenasalas were mainly concerned about uplifting the villagers' lives with ICT and were mainly influenced by the local social or economic concerns. Also, such unifiers were driven by environmental aspects. These aspects were mainly manifested as a focus on a particular livelihood within an area driven by local environment dictated aspects, such as prominent cottage industries in Sri Lanka. For example, the participants noted that in Sri Lanka, specific areas were famous for various cottage industries. Whether it is traditional mask-making or tourism, Nenasalas seemed to be intertwined with that cottage industry in the local area. People tried to point out that this was driven by an environmental aspect of the local area and the linkage of the human capital and social capital to the environment reflected the Nenasala vision of being interlinked with the environment with which it was a part of. In one example, in the South of the island an entrepreneur who ran a for-profit Nenasala stated that he started a Sri Lankan 'batik' clothing promotion website as the area was famous for 'batik' clothing and designing. The website allowed the local 'batik' clothing shops and artists to showcase their products to tourists. In return, the Nenasala owner got a commission from the sales. This was shown as an example of Nenasala working together with local people, their traditions and the environment as the traditional 'batik' material was sourced from the environment and manufactured in a sustainable way. In simple terms, what was observed was Nenasala human capital working in unison with their local society and environment for economical upliftment of the areas they served within a specific model that targeted such a context. The participants who promoted this concept noted that this sustainability was all about the multifacetedness of the human capital's contribution in a grassroots level venture and it did encompass local social, cultural, environmental and economic factors.

ICTA officials saw sustainability in a different way. Their aim was to ensure the longevity of local Nenasalas beyond the subsidisation period, as they thought of Nenasala as their window to the Sri Lankan community for the larger ICT4D effort the government undertook. Although ICTA focused on the larger initiative, it was not willing to interfere with the individual Nenasala human capital as part of the larger program. They left the running of Nenasalas to the individual SCLs. Some participants

saw this as a weakness of the program that impacted the sustainability of particular Nenasalas. Their arguments were that ICTA officials could not take a hands-off attitude to Nenasala SCLs and human capital capability as not all Nenasalas were doing well within the guidance of the local SCLs. ICTA officials argued that they showed the way with the initial setup and ongoing local support mechanisms, such as the RIT, to assist Nenasalas. The participants' view was that more stringent ICTA central control would have seen much stability in the initial periods and allowed some Nenasalas that closed down, to survive with ICTA's guidance. When asked how much contact an SCL of a Nenasala had with ICTA officials, one participant noted, 'I call them when I need something or they call me if they need something. I do have access to the highest level of the organisation at ICTA. I could contact the ICTA CEO if I needed to talk to him about any issue. However, as I ran my Nenasala as a business, I made decisions in running it and I lived with those consequences. ICTA did not enquire, check or were worried about those decisions or their impact on sustainability of my Nenasala'. Similarly, when considering what was learned from Nenasalas that failed, an ICTA official noted 'we do not have an individual post-mortem of why each Nenasala has failed. However, we did look into the larger causes of such failures with the help of a consultancy firm through comprehensive surveys in 2008 and 2010. So we do have a good idea about why Nenasalas fail or run in to difficulty'. However, it was not clear whether enough action was taken to avoid these closures in the first place or as part of the larger reviews. Participants did acknowledge that ICTA did make some efforts through the RIT and the local Nenasala ambassadors to get local Nenasalas to help themselves. As ICTA officials put it, 'Nenasala is an independent entity and ICTA provided the initial setup assistance and the larger program framework. However, that initial setup assistance has also stopped since the donations from the World Bank ended. New Nenasalas do not get any subsidising assistance apart from the PCs and initial advice. Therefore, our view is that Nenasalas need to have plans to be independent and stand on their own feet as soon as possible. If Nenasala SCL needs help, we mainly encourage local Nenasala collaboration'. The point the critics made was that the current models had a fundamental dependence with ICTA due to SR synergies that ICTA promoted within the larger program, which the outside world saw as Nenasala being driven by ICTA and a part of a government program. It was also noted that ICTA association also created a mentality of dependence within SCLs of Nenasalas and operators even though ICTA's efforts were aimed at the opposite of this.

This notion of ownership of Nenasalas by ICTA was also visible in the funding difficulties Nenasala faced and the debate that ensued. However, the majority of the participants stated that if they were pushed more by ICTA, with continuous monthly assessments, like what was uncovered in NGO models and to a lesser extent in the for-profit business models, most Nenasalas would have ended up with a more self-sufficient outlook.

The Nenasala models ICTA promoted were aimed at different targeted clientele, social and regional contexts. These models also had commonalities in human capital aspects, along with differences in how differing human capital drivers and aspects combined to form its human capital capacity. Within Nenasalas, it was mainly due to leadership or SCL as the researcher termed it. Leadership also impacted thinking around SR synergies on Nenasala. Such SR synergies did contribute to sustainability by making Nenasala part of the local community and the social capital fabric of the country. However, in an unexpected discovery, focus group participants started pointing out funding as the second most important factor for Nenasala sustainability. This point was highlighted over and over again within their discussions. Although some participants argued that leadership was the key and strong leadership could overcome all difficulties Nenasalas faced including funding issues, with the research finding that leaders' thinking around funding fundamentally impacted the paths Nenasalas could take and the human resource capability the Nenasalas could develop. As such, it is important to look at how a grassroots organisation can be funded initially and ongoing with the human capital that these programs attract and maintain. The Sri Lankan start-up funding ecosystem, Nenasala SCLs, operators and ICTA officials' views on funding and financing options are explored next.

### ***Funding and financing of Nenasalas - Is Leadership Enough?***

Overall, the unanimous expression by focus group participants was that leadership was the most important factor for Nenasala telecentre sustainability. Although not as an answer to a direct investigatory question, almost all the participants expressed their experience that continuous financing modes were the second most important factor for Nenasala sustainability. This was a revelation from an unexpected quarter.

The most prominent and abundant not-for-profit Nenasalas were led by religious clergy, predominantly led by Buddhist monks. Their primary aim was to provide services free of charge or at a subsidised manner utilising the donations or grants received by patrons of the religious institutions such as temples. Participants indicated that clergy were also successful in comparison to other SCLs, in getting support of the community to fund and aid Nenasalas. In Sri Lanka, the tradition of donating to religious institutions is prevalent either based on religious or on philanthropic views. This practice also extended to government institutions and private businesses due to social influences. For example, one Nenasala affiliated with a religious institution that started provision of services with two computers, grew to service the community with 40 computers purely based on community donations of computers to the Nenasala. Furthermore, it was highlighted that some clergy directing Nenasalas were based overseas, although they maintained strong ties with Sri Lanka and their relevant local religious institutions. This meant that such clergy could rely on overseas congregations, who were wealthy by Sri Lankan standards, to fund or subsidise worthy Sri Lankan projects such as Nenasalas. Such overseas congregations regularly donated to projects initiated by the clergy, which benefited Nenasalas. Although on some occasions donations received were not sufficient to cover all the expenses, Nenasalas run by religious institutions were not focused on commercialisation or profit making from such activity. As noted by one clergy, 'clergy as SCLs are not in the business of making money and they only sought to serve and benefit others who could not even afford to pay for the basic ICT services'. Their primary aim was to provide services free of charge or in a subsidised manner utilising the donations or grants received. Although free or subsidised services could be provided quite successfully within this model with clergy as the foremost SCLs, other not-for-profit community-based SCLs could not achieve the same level of success due to disparities in their social and cultural standing.

The operators of those Nenasalas also provided services on a volunteer basis at no cost. The operators of Nenasalas were also influenced by the philosophy of serving others under the SCL of clergy. This allowed such Nenasalas to source instructors and operators on a volunteer basis at no cost. However, the downside of this practice was that the instructors were only available on their free time in afternoons or on weekends unlike commercial ventures that operated during peak periods within the day. However,

the SCLs who participated in the study acknowledged that commercialisation of Nenasalas was required to attract more prominent instructors on a permanent basis, which in turn necessitated a payment of a salary. Such payments were currently made either through donations or income generated from the Nenasala. Nenasalas run by religious SCLs also had an advantage compared to other Nenasalas on the operating expenses incurred, as electricity and ADSL charges were subsidised by providers due to these Nenasalas being classified as part of the religious institutions. Furthermore, the premises where Nenasalas were located were owned by the religious institutions. Therefore, the vast majority of Nenasalas associated with religious institutions did not require any rent payments. Such advantages made the not-for-profit community model associated with religious institutions very successful in meeting operational cost requirements. However, clergy were reluctant to secure funding from Banks for Nenasala modernisation or expansion activities. Nonetheless, even the clergy admitted that more stable funding sources were required if Nenasala was to be operated during peak times and not on the operator's free time. These Nenasalas were sustainable and had been in existence for some time. However, if human capital capacity was to be expanded, more funding was required.

How well the not-for-profit Nenasalas were run by village societies of various types and how well their programs achieved intended outcomes in a given year, were usually dependent on the foresight and the interest of the leaders elected to office. Similarly, funding of such Nenasalas was generally limited to member funds collected as annual fees, although some instances were uncovered where microcredit was secured for Nenasala expansion with the guidance of visionary leaders. As one participant noted, 'the focus and perspectives of society officials are different. The current Chairperson is not in favour of any kind of bank loans or microcredit. He believes that the society would not be able to make repayment and get into debt. This focus may change when the next officials are elected next year'. However, this model faced funding difficulty due to these differing views that took prominence every year, disrupting continuity of funding direction. Similarly human capital capacity also suffered due to indecision and continuous change weakening the model and its overall sustainability.

Not-for-profit community-based Nenasalas that were under the patronage of local NGOs had a level of subsidisation by the NGO either within operations or in payment

of operator wages. Equally, Nenasalas under the NGO patronage also depended on funding from the parent NGO to cover funding shortfalls or for any capital expenditure. As one participant noted, 'as we serve a poor community, they do not have much money to make Nenasalas sustainable'. However, commercial viability was a primary focus of the NGOs to ensure that the Nenasalas could perform beyond the initial level of funding and subsidisation received from the NGO. In another example, the NGOs donated resources, buildings, and funds to Nenasalas, initially to conduct their operations independently in a financially viable manner. However, the expected level of commercialisation was to get a return on the investments made to assist other NGO activities out of the profits made by the Nenasala. Similarly, NGO level SCLs also acted as enablers to allow individuals to operate Nenasalas under the branding of the NGO. However, human capital capacity was noticeably higher due to the structured approach of the parent NGOs and the ad-hoc financing it provided. However, the verdict on the sustainability of the model has to be left open by the study participants considering these Nenasalas did not outperform not-for-profit religious led or for-profit entrepreneur led Nenasalas.

For-profit Nenasalas were led by local entrepreneurs who operated a business model with the intention of serving the local community. The Nenasalas operated by local entrepreneurs were financially sustainable from a traditional business sense than the not-for-profit models. Although not-for-profit Nenasalas were financially supported through donations and grants, for-profit Nenasalas under the entrepreneurs were profitable business ventures that made profits after covering their expenses. However, the entrepreneurs' hybrid business model also encompassed SR synergies to varying degrees to benefit their local communities. Overall, the participants noted that the nimble and flexible approach of for-profit Nenasalas was due to leadership. Leadership was seen as a key for quick action in reacting to the realities on the ground with financial pressures. Most successful entrepreneurial SCLs have spent their own money in their efforts to gain commercial viability for Nenasala programs and to exploit the niche market in their immediate local area they serviced.

Most successful entrepreneurs of this category tried different financing methods and attempted to gain commercial viability by finding the niche market for the immediate local area they serviced. These entrepreneurs indicated that they secured private funding

for Nenasala expansion as well as for modernisation through novel means. These methods ranged from getting savings as loans from family members, getting loans from local business people or Banks or grassroots level microfinance providers such as the SDB. However, they expressed their frustration in securing credit from traditional lenders such as banks and local moneylenders. It was noted that banks asked too many questions with multiple forms to fill only to reject them at the end of the process. The local moneylenders also asked for collateral, like the family home or farm. One participant of this category noted, 'these institutions show little understanding of a grassroots level business or the difficulties we face'. Yet, this model also successfully attracted the best human capital, utilising SR as a way for business opportunity leading to sustainable outcomes.

Nenasalas were seen by the wider community as government controlled even though the control and ownership was not with the government in any of the models investigated. This belief hindered Nenasala SCLs from accessing traditional financial institutions and financial services for obtaining bank loans for expansion plans or modernisation compared to other contemporary privately owned small businesses. As a result, the entrepreneurs did explore and were open to novel ideas around financing. One of the financing mechanisms that had gained popularity and was utilised by owners was microfinancing. Microfinance providers in Sri Lanka, such as Sanasa Bank, did offer loans to Nenasala owners, particularly entrepreneurs who operated Nenasalas with a commercially sustainably business model after they demonstrated their credit worthiness. This meant that a prospective borrower had to become a member of a local society with their savings and gradually prove their credit worthiness. As one owner put it, 'with the SDB microfinance, I had to prove that I could pay small microloans before they lent me larger amounts. In addition, as they are village people, they know me, my family, and my integrity in regards to money. It was not like approaching a bank, filling out a form and asking someone who knows nothing about you to make a decision on granting a loan. With grassroots level lending, you are not a number like in the banking system'. Nevertheless, some entrepreneurs expressed frustration at this gradual approach to credit. They were in favour of faster financing options for larger amounts. However, with no access to Banks and with high risk associated with private moneylenders, most appreciated the services of conservative microcredit providers as seen in the collective of credit cooperatives of SDB.

Local entrepreneurs who operated for-profit Nenasalas, unlike not-for-profit Nenasalas, were aware of crowdfunding as the ‘newest’ funding mode that could be utilised via the internet for fundraising. Entrepreneurs indicated that most Nenasala SCLs had not fully understood or embraced crowdfunding as a unique way to raise funds for Nenasalas without much collateral. Most participants still stated that state-provided ‘soft loans’ or equity-based forms of loans were the obvious places to look for financing, apart from bootstrapping the Nenasala finance themselves. Only one entrepreneur had considered attempting a crowdfunding campaign, even though many had heard and investigated the notion. They were also of the opinion that crowdfunding may provide access to the skills and resources that Nenasala needed within the context of notions such as equity crowdfunding. However, entrepreneurs were uncertain about the amounts of money available in Sri Lanka, and indeed the world, that could be channelled to a grassroots level enterprise such as Nenasalas. They were also concerned about the possibility of having a large number of individuals with equity in their small enterprises. Additionally, cultural barriers or social characteristics such as a risk-averse nature were viewed by the participants as hindrances to the growth of crowdfunding in Sri Lankan Nenasalas. Other participants were of the perception that crowdfunding was not yet seen as a ‘sure thing’ as it was new. They also noted that lenders may not realise the high failure rate among start-ups such as Nenasalas, and feared a potential backlash in later years creating issues for themselves if the lenders were local. Some who saw the value of crowdfunding recommended that government agencies such as ICTA should promote novel finding avenues for Nenasalas and should create a greater awareness of the benefits of crowdfunding to entrepreneurs and other not-for-profit SCLs. They wanted to understand the success stories along with facts. Some thought that they may need to convince the public that the risk of fraud with grassroots level enterprises such as Nenasala was very low. Some participants questioned whether crowdfunding platform providers could perform their role as an intermediary for NGOs or governments in facilitating funding discussion, and deal with myths and cultural barriers to increase Nenasala market size. They favoured government support for the development of crowdfunding campaigns to facilitate the promotion of funding Nenasalas within Sri Lanka as well as outside of Sri Lanka. They thought both good practices and lessons learnt from where crowdfunding have ‘gone bad’ may require legal restrictions to limit public liability in Nenasala campaigns.

Without a uniting focus, an overall approach and strategy from an umbrella organisation such as ICTA, the achievement on sustainability of the grassroots level Nenasala program would have been considerably diminished. Yet, ICTA predominantly saw the Nenasalas' operationalisation within the greater Sri Lankan ICT4D journey. Considering the diverse backgrounds of human capital involved, limited funding avenues and varied finance management skill levels of Nenasala SCLs, ICTA focused mainly on the financial training of SCLs, rather than investigating and advancing further alternative funding sources for the Nenasalas. ICTA's initial five-day residential training course that covered all aspects required for Nenasala sustainability included bookkeeping, marketing, and financial planning. Conversely, ICTA noted that particular baseline financial skills and understanding of business would be preferable for a potential Nenasala owner as they would then have some idea of sustainable practices. However, ICTA could not mandate minimum human capital requirements for the grassroots initiative considering the diversity of models and stakeholders involved. Furthermore, ICTA saw the topic of financing to be a dissimilar area that was hard to advice, mandate, or control. Therefore, locating suitable financial sources for individual Nenasalas were left up to the SCLs as it had to be suitable for their circumstances. Additionally, except for putting forward recommendations to enhance service growth of Nenasalas, there had been little effort taken to investigate the causes of differing sustainability outcomes of various Nenasala models. Correspondingly, the effort taken to rescue unsuccessful, failing Nenasalas and post-mortems on failed Nenasalas were found to be minimal. At a discussion, it was highlighted how the tremendous collective effort by local SCLs was short-lived, as there was negligible follow-up from ICTA with the base issue of waning income and the continuing need for funding reoccurring periodically.

Nenasala owners also continued to wish for donor funding, NGO grants, and government support to finance Nenasalas for sustainability, rather than embrace financing methods such as microcredit or crowdfunding. Only few owners and SCLs voiced concerns over getting out of the donor fund dependency bondage. Nonetheless, most owners were unanimous in highlighting alternate affordable funding sources as a key factor for future 'Nenasala' telecentre human capital capacity growth, operational stability and sustainability. Overall, the majority of grassroots level leaders who

championed Nenasalas were driven by, and were in tuned with, socio-cultural aspects of Sri Lanka, which were intertwined with SR synergies focused on development that benefited the disadvantaged. However, the majority of participants argued that Sri Lanka as a developing country seems to have relied too much on the not-for-profit community-based models due to socio-cultural concerns at the expense of commercial viability. The SCLs associated with local entrepreneurs who operate a for-profit business model with a sense of SR, seems to be more conducive for commercial viability and hence sustainability of Nenasalas in the western sense. Such entrepreneurs have successfully utilised creative finance sourcing to enhance the sustainability of their Nenasalas. These owners were more knowledgeable of finance providers and the products available in the market place. Furthermore, the for-profit business model seems to be more conducive for riskier modes of financing as decisions were taken by one owner which was faster than the not-for-profit ones where decision-making was consultative and slow and it was generally hard to reach a consensus which was acceptable to all. Furthermore, most for-profit business model entrepreneurs operated Nenasalas as a livelihood. This meant that they had direct interest on the success or failure of the endeavour and clear ownership compared to other models. Most entrepreneurs were partial to financing and capital raising approaches as they were of the view that 'you got to be in it to win it'. Contrary to this, the not-for-profit Nenasala model took conservative less risky approaches to financing that did not require decisiveness or personal commitment. Participants of the study believed that the not-for-profit community-based models seem to be gradually mutating to a for-profit business model with SR synergies. As such, it was apparent to them that more robust, continuing funding sources were required to provide flexibility and modification of strategies to suit the changing circumstances at the grassroots level. The participants saw a need for partnerships with finance providers centrally at ICTA level and a mechanism at grassroots level to educate owners of appropriate funding avenues before a Nenasala failed and also ICTA had to intervene with rescue packages.

Archival material analysis data indicated that the start-up funding ecosystem in Sri Lanka consisted of equity financing including bank loans, venture capitalists, angel and private investors, and soft loans from government agencies. However, financing by private individuals, soft loans from government agencies and NGOs, and microfinancing were prominent at a grassroots level Nenasalas. Nonetheless, novel

concepts such as crowdfunding was also discussed as a valuable strategy for funding rural grassroots ICT4D initiative, such as Nenasalas, as they required no equity guarantees.

The interview data indicated that a developing economy such as Sri Lanka, lacked sophisticated credit checking or debt recovery mechanisms. Participants stated that incumbent financial institutions in Sri Lanka traditionally have restrictive lending criteria, which shun financial services and loans to rural grassroots level entrepreneurs and not-for-profit entities with little or no collateral. These rigid lending processes affected assessment, repayment conditions, and security requirements and placed a great burden on rural grassroots level borrowers such as the Nenasala owners. These restrictions often limited the potential of Nenasalas in terms of growth, human capital capacity and sustainability. In the face of these challenges, microfinance has become a popular alternative form of financial services provision for rural entrepreneurs and small businesses lacking access to traditional banking. It was evident that the microfinance industry has existed in Sri Lanka for a long time. The focus group participants indicated that some rudimentary challenges to the commercial microfinance industry existed in Sri Lanka. These include lack of industry regulation compared to traditional financial institutions, lack of institutional capacity and inefficiencies of MFIs, and exorbitant interest rates charged by some providers. Similarly, some Sri Lankan MFI executives argued for restricting microcredit to start or expand a micro enterprise with clear returns, even within the poorest areas, which was against the charter of assisting the poor.

Yet, advocates still claim that microfinance assists financial inclusion of the disadvantaged making it a valuable tool to raise an individual, family, and indeed a rural community out of poverty by giving entrepreneurs with good ideas a chance to make those a reality. Considering most microfinance organisations grew within communities or out of collectives, it was also noted that such organisations fostered social capital and community cohesion, which was valuable at grassroots level organisations such as Nenasalas. One prominent Sri Lankan example of such a grassroots level movement highlighted in multiple interviews as providing micro credit to Nenasalas was the member-owned Sanasa Development Bank (SDB).

Findings revealed that the idea of involving the religious leadership to sustain SR synergies embedded within the 1000 Nenasala project was successful in gaining initial momentum and stability. This shows that those Nenasalas affiliated with religious institutions have stood the test of time concerning sustainability. However, even clergy involved with the Nenasala program conveyed the need for financial security and clear funding sources at the level of the over-arching body in the next phase ‘Smart Sri Lanka’, if Nenasalas were to get beyond the dependence of local and international donor handouts. Interestingly, what religious institutions practised was similar to crowdsourcing. Considering that increasingly people worldwide engage in Social Philanthropy online, crowdfunding platforms may be the next disruptive innovation that could benefit grassroots level movements such as telecentres. Yet, for the growth and sustainability of Nenasalas many participants still wished for traditional telecentre funding mechanisms of continuous donor funding or the government financial support. At the same time, study participants also saw those two traditional dependence modes of funding were drying out after the first phase of ten years of Nenasala existence. The successful Nenasalas with innovative leadership, especially among the entrepreneur based categories expressed the importance of microfinance as a continuous funding mechanism and went on to explain how they obtained microcredit to expand their services and become financially sustainable.

Principally, two microfinance delivery mechanisms were visible in Nenasala telecentres. Some telecentre entrepreneurs secured microcredit based on their relationship with other local microcredit providers. Others opted for group-based models, where several entrepreneurs applied for loans and financial services, either as a co-operative or a society, as noted in the case of Sanasa societies. The number of Nenasalas that obtained microcredit was significant. Other participants still argued that funding should be sourced from the government and international donors such as the World Bank, stating that Nenasala is a government maintained initiative led by ICTA. They put the case for ongoing subsidising, even when ICTA and the government had been clear that Nenasalas had to be self-sufficient after the initial assistance provided concluded. However, ICTA attempted to assist Nenasalas in financial difficulties. Such action also severed the widespread notion among owners and operators that Nenasala sustainability depends on securing more donor funding and government support.

Donor funding, government sponsorship, and ICTA direction have succeeded in establishing a Nenasala network during the donor-funding period of e-Sri Lanka. However, more needs to be done for self-motivation and financial self-sufficiency in the right direction to ensure the sustainability of Nenasalas in the next phase, 'Smart Sri Lanka'. With the majority of these Nenasalas being not-for-profit community based Nenasalas and the ground conditions changing toward for-profit business based models, linkage of microfinance with all Nenasala models was seen as a key transformation aspect at the umbrella organisation level, if Nenasala programs are to go beyond the donor or government funding dependency towards self-sufficiency. In this context, crowdfunding stood out as a possible forward strategy, which shows promise in funding rural projects. Investors and borrowers considered the social lending websites as an opportunity to reintegrate the disenfranchised from conventional financial institutions who have been marginalised due to their modest credit records and lack of equity. They expressed interest in the idea and saw this as a way to fund interesting individual projects within each Nenasala as well as funding the larger program beyond government and donor subsidisation. However, participants noted that generating trust would be paramount to crowdfunding's success. They advocated the use of a prominent NGO or government agency such as ICTA to sponsor trust. Significant steps also need to be taken to re-orient the operators and stakeholders of Nenasala program. Re-clarifying the boundaries of the program, the obligations of each stakeholder and the roles of ICTA in holding Nenasala owners accountable to the original shared vision they subscribed in the initial take-up, should also be undertaken. However, this would be a difficult task considering most stakeholders did not show any readiness for changing their mindset to enable the transition at this juncture for greater sustainability. Although the financing aspect transpired as a surprise, as per the data gathered, funding strategies of Nenasala telecentre models seem to be a key aspect that affected human capital and its influence on sustainability.

### **Findings applied to Royal and O'Donnell (2008) model**

Studies carried out by Royal (2000, 2002) in to the investment banking industry used qualitative techniques such as interviews across all levels of the organisation, participant observation, oral histories and content analysis from archival and business

documentation and surveys to determine key human capital indicators, and drivers of human capital that lead to better performance. In 2008, Royal and O'Donnell introduced the 'Human capital drivers of the value of the firm' model, which was an adaptation of the Royal (2000) model. Royal and O'Donnell's (2008) model highlighted the importance of internal influences that affect managerial beliefs, perceptions and management strategy, including the state of the employment relations, cultural factors, costs associated with the need to secure commitment of employees (such as reward, performance management, career and development systems) and insider–outsider relations in achieving sustainable human capital practices. Such external influences that affect managerial beliefs and perceptions and management strategy included historical trends, the competitive nature of the economic environment, institutional factors, the nature of the product and industry, technological changes and the costs associated with recruitment. Although these internal and external influences are interrelated, they have not necessarily evolved in a linear fashion. By considering a company's development over time, the features discussed in the model serve as a guide to human capital drivers of the value of the firm. It is not necessarily a blueprint of the conclusive reasons for achieving sustainability in a company, across a variety of industries, at any one time. The model also does not explain the exact order of the aspect that is captured in the model and their amalgamations for the simple reason that each company has its own unique history, often with gaps in publicly reported data at least. However, analysis over time utilising the model lends itself more or less to an emphasis on features (one or more) discussed in the model as key to promoting sustainable human capital practices along with their drivers within the context the organisation faced. However, while it is unlikely that one can simply ascertain the exact causal relationship using this model, one would be able to identify emerging key patterns in human capital that affect performance and ultimately sustainability. The model provides more accurate and transparent information about the nature of an organisation's human capital, current and future performance as the model can be used with publicly available data. The model also highlights the important role a human capital analysis plays in understanding the drivers of human capital within the organisations social synergies. Understanding the human elements within organisations is extremely important as human capital is considered the key value within the knowledge-centric organisations and the knowledge economy with which we deal today.

Hatipoglu (2010) utilised the Royal and O'Donnell (2008) 'Human capital drivers of the value of the firm' model within her research. She noted that it provided an insight into patterns of human-capital practices in an organisation, within an industry and helps better anticipate future events within that organisation. However, Hatipoglu (2010) and previous research that centred on these models, applied the model to large Australian corporations. Furthermore, Hatipoglu (2010) utilised these models with a wide range of publicly available information on a company-by-company basis and showed that it could be successfully used to analyse data across industries. She argued that other models available in academia, unlike the Royal and O'Donnell (2008) model, required internal company data that can be accessed only by management. However, Royal and O'Donnell (2008) note that 'Human capital drivers of the value of the firm' model should be used in conjunction with other quantitative and qualitative tools such as traditional financial, social and environmental data for the purposes of making an overall assessment of Corporate Sustainability. Therefore the model should not be taken as an indicative measure of Corporate Sustainability by itself but a way to seek and distinguish patterns of human resource management practices which are likely to be sustainable over time within the organisational context. Royal and O'Donnell (2008) referred to this process as creating a human capital map of an organisation.

The second of the four tools for Human Capital analysis used in Royal and O'Donnell (2008) is the Human Capital Wheel which attempted to isolate key Human Capital systems' aspects which need to be internally consistent and consistent with larger corporate strategy, in order for the firm to execute its stated corporate strategy (Royal & O'Donnell 2008). The Human Capital Wheel (Royal & O'Donnell 2005) evoked the contingency view (Donaldson 1998) as organisations are individually different, face different circumstances (contingency variables) and require different ways of managing and reacting. The contingency approach argues that there is no one universally applicable set of management principles (rules) by which to manage organisations. Hence, it attempts to acknowledge the leadership and the managerial reactions that could vary. Analysing human capital systems using the human capital wheel after creating a human capital map, it is possible to conduct a further detailed research in the human capital systems that react with the drivers of that organisation (Royal & O'Donnell 2008). From an analysis of these key management systems, an experienced analyst of human capital could derive insights on gaps between the existent and the

aspired human capital position in the companies investigated. This is not only useful in providing meaning to past events, but it may distinguish elements of human resource systems and practices that need to be enhanced to address noticed shortcomings to avoid undesirable outcomes within the organisation examined (Royal & O'Donnell 2003). Through such analysis it would assist to avoid anticipated future events that could have harmed the organisation if left unaddressed.

The methodologies used by these tools were based on established qualitative analysis techniques, which provide accurate data, preserve the chronological flow of management strategies and organisational history. In practice, these qualitative techniques could include interviews, in-house surveys, focus groups, and review of internal resources including historical documents as appropriate. Other methods such as site visits, observations and academic sources such as case studies could also be used. These qualitative methods allowed the researcher to capture experiences, perceptions, challenges, suggestions, and emotions of multi-stakeholders in multiple tiers within the grassroots program, generating a better comprehensive picture of the individuals, organisations and the context of the program operated. Furthermore, these tools together provided clarity on investigating the drivers of human capital and the important aspect of human capital in Nenasalas as grassroots organisations to augment the Royal and O'Donnell (2008) model from its prior use in larger sophisticated organisations to suit a grassroots for-profit or not-for-profit initiative, which was a multi-tiered PPP.

When applying the model to a grassroots level organisation, what was evident was the simplification of aspects one would reasonably expect from previous applications in larger organisations and the previous model interpretation of the Royal and O'Donnell (2008) model - to an extent this is expected when examining simple structures such as grassroots level Nenasala organisations. However, the multi-tiered complexity visible in MNC can also be seen in grassroots level organisations considering that most grassroots initiatives were coordinated by a larger national body, sometimes with international involvement. The Nenasala grassroots level movement examined was certainly multitiered with multiple international and national stakeholders collaborating on the larger SR synergies that were pursued. However, different models had different influences in different tiers.

In the Nenasala program, multiple e-Sri Lanka program streams collaborated with the Nenasala program. Nenasala support institutions, such as RIT, technical and product suppliers along with Nenasala SCLs and operators, were noted as the main local stakeholders. This was on top of the grassroots level collaboration of various Nenasala parent organisations, and Nenasala patrons such as local villagers. Internationally, various consultants, World Bank, and other INGO donors were involved. Furthermore, other Sri Lankan organisations, such as banks and microfinance providers, acted as enablers to Nenasalas. As such, when one considers human capital drivers, such aspects need to be explored within this multitiered model. Correspondingly, what was examined in Nenasala was indicative of many grassroots initiatives that had international, NGO and government sponsorship in Sri Lanka. The research mainly focused on three main tiers that influenced the Nenasala program, namely ICTA, Nenasala support institutions and the grassroots level Nenasalas. The Royal and O'Donnell (2008) model includes Institutional Factors as an external influence. Although one could utilise this heading to explore this prominent tiering aspects visible in the grassroots level organisations, the model was augmented to capture these explicit influences of parent organisations, overarching body, local and international stakeholders that included government, and local and international NGOs. Although these stakeholders' actions affected human capital as human capital drivers, the observations and participants' comments indicated that the impact was mainly on the grassroots level organisation's strategy. The combined impact of these national and international influences affected a strategy of a Nenasala locally, mainly through leadership decisions. For example, the World Bank's decision to end funding for the first phase of e-Sri Lanka caused the cancellation of ICTA's support programs, like subsidising connectivity and the voucher scheme they operated to provide an additional revenue stream to Nenasala by promoting Nenasalas' programs with local school children. Cancellation of funding also affected the service that was provided by local support organisations such as RITs. The changing conditions around them forced a reaction from the local Nenasala support agencies and Nenasala parent organisations. Accordingly, Nenasala SCLs ultimately set their direction of Nenasala to find additional funding through new service provisions and the provision of VAS or to cut back on services impacting human capital at the grassroots level. Therefore, this tiering effect impacting the local level Nenasalas and its human capital was a significant item, which had to be highlighted within the model.

The leader of a grassroots movement could be different from the actual manager who manages day-to-day operations. Nenasala leaders who were referred to as Socio-cultural leaders (SCLs) in this research had a key difference even with other grassroots movements and large corporation leaders. The SCLs were driven more by the socio-cultural aspects of Sri Lanka and were integral for setting the organisational strategy based on those values they embodied. The research uncovered that SCLs were visible in multiple tiers of the Nenasala program, even though the most significant contribution came from the SCLs at the grassroots level. It needed to be noted that not all SCLs were motivated by the same socio-cultural aspects, as the results indicated within this research. This differentiation needed to be made as research indicated change and the rate of change of social-cultural aspects that impacted Nenasala was different in various Nenasala models. For example, inclusion of women and women's rights seem to differ regionally in Sri Lanka. Although in cities women had been seen on an equal footing and in many leadership positions, in rural villages the leadership was still mainly a male dominated arena, although women played an important role within Sri Lankan society. However, social values that local villages held were expected to change as time goes on and various village societies modernise. For example, the involvement of village elders in Nenasala was seen as driven by cultural values within villages, which were passed down from previous generations. It was noted that such social traditions may be changing with youth taking more of a lead in Nenasalas. Similarly, the influence of other factors related to the social, cultural and religious aspect also impacted how Nenasala SCLs opted to structure their Nenasalas in response to changing circumstances based on what the local customs and norms dictated. Furthermore, there could be sub-cultures within society that also had their own sets of norms. For example, students' culture affected Nenasalas that operated within a school or a university, considering that such student groups had their own set of norms that were separate from the larger social norms of the area that the schools or the university were located. This meant that the SCLs who ran those Nenasalas were much more liberal in their operational setup and services they offered compared to religious, society or NGO led models. As social, cultural response and focus was dissimilar within the Nenasala leaders, this differentiation of Nenasala leaders' focus and response affected the Nenasala organisational strategy. These SCLs and their contributions as the main trendsetters and main guiding lights at multiple layers were noted as leadership, as this

was a more appropriate term than the managerial terminology indicated in the original model.

SR synergies were prominent within Sri Lankan grassroots initiatives according to participants. Also, there were multiple localised SR synergies visible in Nenasala models. These were visible in not-for-profit community-based, as well as for-profit business-based models. Although how intensely these SR synergies were pursued differed within each Nenasala; all involved with the Nenasala program had the common vision of uplifting the rural communities with the aid of ICT4D as one of their main motivations. As the SR synergies to be pursued were mainly decided at the SCL level, the model was augmented to show this connection specifically. Although the SR influence was seen as an external pressure by participants, whether by ICTA or a parental organisation through their larger agenda, this external influence required human capital to internalise SR synergies within Nenasalas. Therefore, how many SR synergies that could be pursued by a Nenasala were determined, by its internal situation and human capital capability and the values that they championed. Participants also noted that SR responsibilities, and indeed the existence of Nenasalas, was dependent on the future anticipated trends (local/ international) in the ICT market. They noted that technology and the cost associated with provision of services was changing at a rapid rate. This change in cost structure required the SCLs to rethink the viability of their offering on a continuous basis. As one participant explained, 'the cost of hardware, for example a PC, has come down quite a lot now. Also, now you can even buy a computer from large IT companies like Dell in Sri Lanka. The story with internet services is the same. Therefore, I think that even the rural Sri Lankans in the near future will be able to afford their own PCs'. As such, what participants were highlighting was that the possibility of ICT4D is also mutating where services or programs that were needed ten years ago are not relevant today.

The next major variation was the addition of funding availability for the human capital model, as a specific and explicit aspect. Although Royal and O'Donnell's (2008) model had this aspect as an implicit activity within the heading of resources and related expenditure as a cost in both internal and external influences on HR; when applying this model at a grassroots level it was uncovered that funding availability is a major human capital driver linked to SCLs' vision. As such, 'Funding availability' was added to the

model as an external influence and a driver to human capital. This factor not only guided the internal influences on HR in terms of remuneration which was guided by the organisational context, and also impacted the options SCLs had in terms of developing this grassroots initiative from an external hiring perspective. The participants' view was that the funding availability should be considered as an external element; most funding was still sourced externally and external funding sources dictated the grassroots level operation strategy. Availability of funds was critical to strategy as it dictated what SR synergies SCLs could pursue within their Nenasalas and what growth decisions SCLs could take in the future. Funding models in this grassroots context were diverse, and incorporated local funding as well as international funding aspects as a whole. For example, the models examined secured funding and, capital locally from microfinance providers, through donations of well-wishers, and through money that was received internationally through ICTA from the World Bank or supportive INGO organisations. However, the consensus was that although funding avenues dictated the path SCLs could take a Nenasala, good SCLs could also overcome the restrictions funding put on them. This was highlighted by participants with examples from the for-profit and not-for-profit Nenasalas. As such, leadership was again highlighted as the key theme that surfaced at the grassroots level over the funding and the sources of funding available. The consensus of participants was that throwing resources and good money at bad leaders would not make a difference on the ground. The belief that was expressed was that the fundamentals of good leadership ability did not change when times were good or bad. However, the participants saw that those good leadership principles could be the difference between success and failure when money was scarce as in many grassroots organisations. Leadership was seen as critical to start motivating operators and to allow the larger support team to see the bigger picture in hard times. A good leader's ability to think outside the square, especially in terms of financing and indeed in focusing on the long-term vision rather than a short-term profit, was noted as the most relevant leadership quality at the grassroots level. The general view was that even if a Nenasala was doing well on most levels, one major problem with financing or cash flow could lead to its decline as Nenasalas did not have many reserves. Participants noted that a combination of multiple minor problems, such as not been able to repair a broken PC or not being able to pay a bill, can cascade to larger issues in a grassroots level entity such as a Nenasala as their tolerance level to adversity is different to larger corporations due to funding shortfalls and their ongoing hand-to-mouth existence. It was noted that to be

one of the few Nenasalas that survived, it took capable leadership, adequate financing, well-defined goals and efficient business practices that could keep local rural poor interested in the initiative. One participant stated that one needed to think of a Nenasala like a car. If one important part like the engine stopped working, the whole thing could come to a halt or veer off course. However, most participants were of the belief that SCLs had their work cut out for them as the vicious cycle with funding availability dictated recruiting and rewarding valuable staff for their retention, while the values of operators and society, in general, changed to a more financial focus which impacted the existence of grassroots initiatives such as Nenasalas.

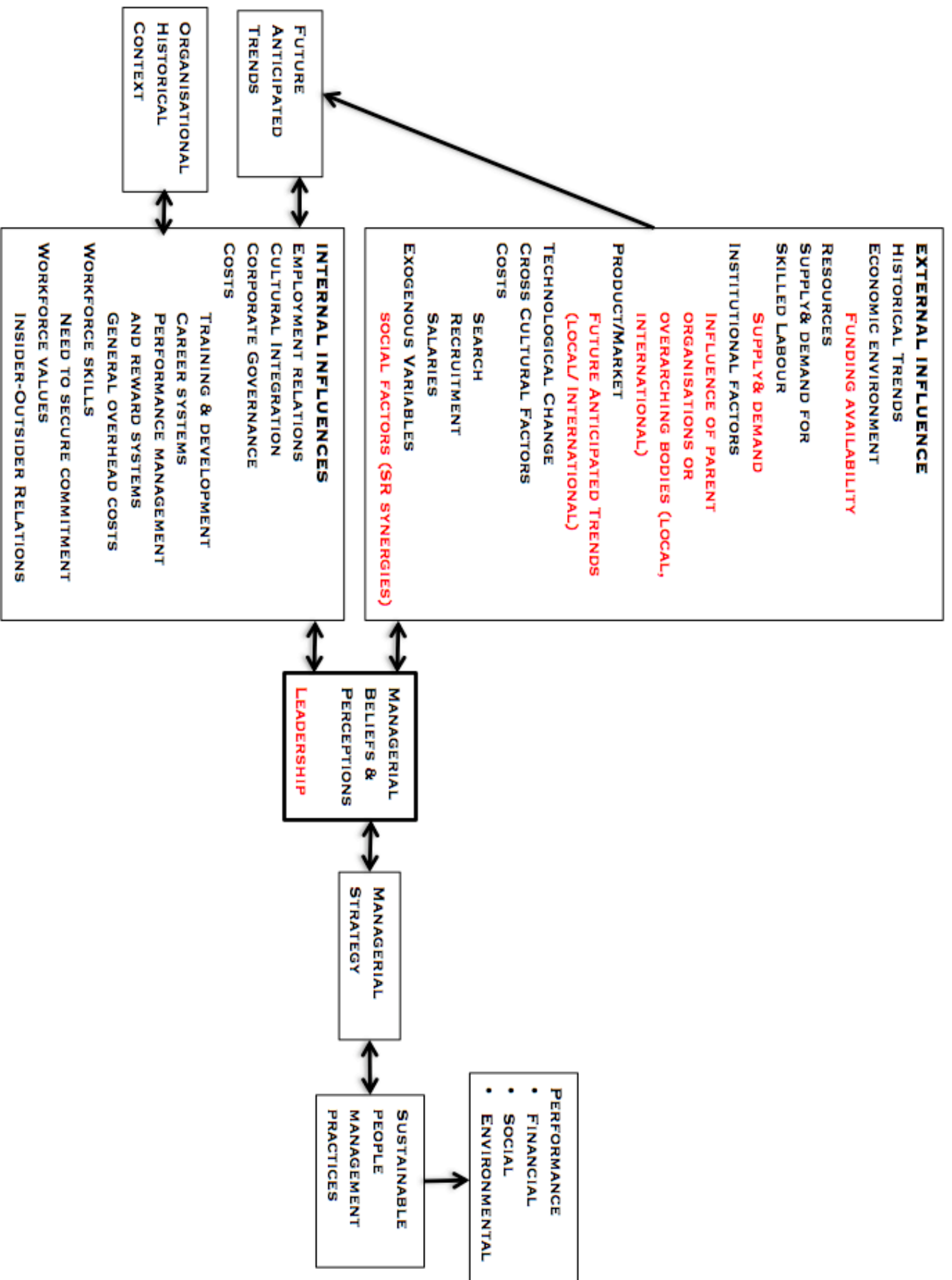
From the results of the research, it is asserted that sustainable people management practices at the grassroots level were mainly influenced by a combination of SCL's focus, influences of host or umbrella organisations, the SR synergies they decided to pursue and the availability of funding. Nonetheless, supporting this was the human capital of the organisation as its base capacity. External human capital markets were its source of future talent considering talent was sourced mainly through recruitment at the grassroots level where influence of the ICT industry sector, as an external influence, seems to be prominent. For example, within the research it was noted that the Sri Lankan ICT industry was influenced by international or NGO factors. Such factors uncovered within this research included industry-wide changes due to HR demand from multinational organisations, BPOs that were setting up operations in Sri Lanka, and various manufacturing industries set up under Board of Investment of Sri Lanka (BOI) in Export Processing Zones drawing human capital away from local grassroots level ICT industry. Furthermore, human capital in the ICT sector was also impacted by the loss of skilled staff to other countries such as Australia and New Zealand through emigration. Similarly, as the economy of Sri Lanka was growing at a faster rate compared to the region, higher human capital demand led to resources mandating of higher salaries. This also externally influenced the HR availability and affordability within grassroots level movements that relied on affordable skilled labour being available in an ad-hoc or just-in-time manner. Similarly, the dissatisfaction operators experienced due to meagre remuneration, lack of development opportunities and up-skilling, were internal HR influences that played a major role in Nenasalas. However, all of these aspects were mediated by the basic variable of social, cultural and religious bounds, which acted as the underlying unifier for overall grassroots level programs,

although one could not discard the organisations' historical context within this view. For example, the fact that within Nenasala history a decision taken by ICTA to favour not-for-profit community-based models and their philosophy has changed the make-up of the movement at a fundamental level. This means that commercialisation of such a grassroots level movement will be difficult in the future due to its original set-up. However, research showed that most Nenasalas were successful in achieving a workable balance between these competing internal and external factors. It is asserted that such Nenasalas as grassroots level organisations achieved higher levels of social performance through their focus on human capital and exploiting SR synergies that aligned with grassroots level clientele it aimed to benefit.

Based on what was revealed in this research, Royal and O'Donnell's (2008) 'Human capital drivers of the value of the firm' model was modified. The model that could be applied to grassroots level not-for-profit and for-profit knowledge-based organisations indicates that external influences tend to be prominent in driving human capital within such initiatives. It also shows some critical factors, such as leadership is a key over other human capital aspects at the grassroots level. However, for optimal social performance, which is visible as SR synergies in such organisations one needs to strike a balance between internal and external influences with unique modifiers that are important in the context the organisation operates in. In any case, the adapted Royal and O'Donnell (2008) 'Human capital drivers of the value of the firm' model's outlook, when applied to the Nenasala grassroots level initiative, is given below.

# Human Capital Drivers of the Value of the Grassroots Initiatives (Windsor 2015)

\*Adapted from Royal and O'Donnell (2008), Human capital drivers of the value of the firm



## **Conclusion**

This chapter analysed the qualitative findings to answer the research questions pursued within this study. The findings revealed that the models were influenced by many underlying unique unifiers. The impact of these internal and external influences did differ significantly in regards to human capital of for-profit and not-for-profit models. ICTA Nenasala 2008 and 2010 surveys have already indicated a difference in sustainability of these models. Prominent aspects observed in the not-for-profit and for-profit Nenasalas in terms of human capital and its drivers, were extracted to enhance and further develop the Royal and O'Donnell's (2008) model used in terms of their application to grassroots operations. The findings of the three questions investigated were summarised below to crystallise the ideas highlighted.

### **Link between Social Responsibility (SR) and Human Capital (HC)**

- Link between SR and HC is synergetic.
  - SR synergy that benefit to local communities seemed to propagate through HC.
  - Action that benefited society not always labelled as SR at the grassroots level, but was an inherent implicit provision
- Element of Social Capital was linked to the SR provisions of Nenasalas through its Leadership and Human Capital
  - Grassroots level initiatives were driven and influenced by the local target groups that they aimed to serve.
  - Grassroots level leaders' strategic directions were indirectly or directly dictated by the local target groups.
  - Grassroots level leaders and staff were part of and identified with local target groups.
  - SR synergies were especially relevant in helping local communities through the livelihoods most locals were already involved in.
- Grassroots level leaders were key to SR and HC synergies

- Grassroots level leaders championed and progressed inbuilt SR with HC as an enabler
  - Good leader would overcome most obstacles to champion the SR synergies of the local Nenasalas.
  - Individual belief of the leader related to SR or social justice dominated the whole Nenasala strategy or service delivery outlook.
  - Leaders view on SR differed due to internal and external factors (such as personal beliefs, parent organisations' views, local social views etc.)
  - For-profit entrepreneur led Nenasalas saw SR and HC as a business opportunity to exploit for their advantage. Not-for-profit model leaders saw SR as a duty towards HC and local society.
- Umbrella organisation kept SR and HC link uniform
    - Umbrella organisation controlled SR and HC relationship for best results through various Nenasala models
    - Nenasala model dictated the type of leader that perpetuated models' purpose
    - Nenasala models used to capture SR for a specific target group may require some adjustments as the ground conditions the program faced were changing within Sri Lanka with changes to society, country and international influences.
- Influence of a unique unifier
    - This sense of inherent SR was assisted by the religious and social norms of Sri Lanka.
    - Unique unifier may span all or part of an umbrella organisation; leadership, human capital, social capital
- The Nenasala model is a great success at grass roots level
    - Social focus at the grassroots level can result in tremendous transformations with little investment to HC
    - Behind such success stands an army of dedicated people from Nenasala operators to leaders who contribute at different levels.
    - The benefits that the Information, Communication, Technology for Development (ICT4D) efforts provided to the local communities through the SR

synergies championed by local human capital have been understood by policy makers in Sri Lanka.

- Such realisation could have been the ICT4D catalyst for other countries in the region with similar conditions.

**How do drivers of human capital (i.e. leadership and culture, recruitment and job design, training and development, performance management and rewards) affect Nenasala telecentre sustainability?**

Table 5: Summary of the key empirical findings

Leadership & culture	Recruitment & job design	Training & development	Performance management & rewards
<ul style="list-style-type: none"> <li>▪ Primary HC aspect that is important to sustainability is leadership</li> <li>▪ Community based leadership style adopted by Sri Lankan Nenasalas named Socio-Cultural Leadership</li> <li>▪ Leadership is the overarching factor that guide the rest of the HC drivers at grassroots level</li> <li>▪ Leaders who championed Nenasalas were driven by socio-cultural determinations</li> <li>▪ Leaders' focus dictated by model used by ICTA</li> <li>▪ Leaders motivated by many internal aspects and unique unifiers.</li> <li>▪ Leaders key to convince others the worth of the cause</li> <li>▪ Majority of challenges at the grassroots initiative could be overcome</li> </ul>	<ul style="list-style-type: none"> <li>▪ Recruitment and job design not explicitly linked to sustainability at grass roots level and thought of simply</li> <li>▪ Getting the right leader directly contributed to sustainability</li> <li>▪ Leaders remained with the initiative long-term and seen as gap-fill when sudden loss of staff</li> <li>▪ Transient work forces used grass roots initiative as a stepping stone</li> <li>▪ No ICTA mandated policies for recruitment or job design.</li> <li>▪ Locally sourced jack-of-all-trades needed at grassroots level</li> <li>▪ External recruitment undertaken over nurturing internal talent.</li> <li>▪ Internal development not done due to transient nature of the workforce</li> </ul>	<ul style="list-style-type: none"> <li>▪ Training and development not explicitly linked to sustainability at grass roots level and leadership was a key aspect in attitude towards training and development</li> <li>▪ Resource poor grass roots level organisations need umbrella organisations to provide training with best ROI</li> <li>▪ ICTA focused on training leaders initially and had no budget for reoccurring training</li> <li>▪ Staff considered adequately trained after one-off ICTA residential training</li> <li>▪ Formal training and development stemming from organisational structures in NGOs</li> <li>▪ Continuous training not focused at grassroots level organisation</li> <li>▪ External recruitment</li> </ul>	<ul style="list-style-type: none"> <li>▪ Performance management not explicitly linked to sustainability and performance management seen as an intrinsic matter for grass roots Nenasala leaders</li> <li>▪ Removing operators was a sensitive matter and done without embarrassment</li> <li>▪ Formality around performance management and rewards stemming from organisational structures which is used superficially</li> <li>▪ As staff volunteered in not-for-profit community-based models, leaders did not demand performance</li> <li>▪ Atmosphere created by leaders better explained performance rather than rewards at grass roots level</li> <li>▪ Similar minded individuals that</li> </ul>

<p>with proper leadership.</p> <ul style="list-style-type: none"> <li>▪ Leaders visible at multiple tiers; from umbrella organisation, national, international and stakeholder's level</li> <li>▪ Leaders as visionaries key for adapting to local conditions</li> <li>▪ Commercialisation required for sustainability</li> <li>▪ Leaders generally focused on prominent trade within their locality</li> <li>▪ Leaders may go against prevailing trends to accommodate ground conditions</li> <li>▪ Umbrella organisation guide leaders</li> <li>▪ Nenasalas rely on sourcing leadership that exists</li> <li>▪ Leadership development minimal at grass roots level</li> <li>▪ Development of leaders visible in sophisticated parent organisations.</li> <li>▪ ICTA focused on models to harness existing leadership</li> <li>▪ A culture that nurtured leaders was not a focus factor</li> <li>▪ HR factors linked to good organisational culture simplified under leadership</li> <li>▪ Nenasala culture driven by the model</li> <li>▪ Blame for Nenasala failures was attributed to inappropriate leaders</li> </ul>	<ul style="list-style-type: none"> <li>▪ Staff sourced in a just-in-time manner to save on costs</li> <li>▪ Low salary 'catch twenty-two' scenario in recruitment</li> <li>▪ Leadership critical to recruit aligned with grass root strategy</li> <li>▪ Formal recruitment methods unnecessary for recruitment</li> <li>▪ Formal hiring of leaders would assist Nenasala's vision. ICTA catered for this via Nenasala model.</li> <li>▪ NGO Nenasala indicated sophistication in regards to recruitment or job design due to parent NGO HR guidelines</li> <li>▪ Entrepreneur and NGOs more focused on get best ROI from HC</li> <li>▪ Formal job design or organisation structure not focused in small grass roots shops</li> <li>▪ Formalisation seen as a form of red tape</li> </ul>	<p>a substitute for training and development of staff</p> <ul style="list-style-type: none"> <li>▪ Nenasalas had no formal development or training program and did not link those with motivated staff.</li> <li>▪ Training seen as an expense and risky proposition</li> <li>▪ Exorbitant costs excluded external training due to lack of affordability for grassroots level entities.</li> <li>▪ Free training materials from internet alternatives to expensive formal training</li> <li>▪ Training provided limited to internal courses that the Nenasala offered which introduced no cost but was beneficial in terms of class coverage</li> <li>▪ Leader saw no value in internal training for specific specialist skills required for classes</li> <li>▪ Staff viewed development as better job titles, rather than personal development</li> </ul>	<p>identified with the unique unifier enabled better performance</p> <ul style="list-style-type: none"> <li>▪ Reward linked to sustainability</li> <li>▪ Remuneration discussed in terms of affordability and income</li> <li>▪ Lack of remuneration saw a larger churn in staff</li> <li>▪ Attracting best employees difficult due to less than market rate remuneration.</li> <li>▪ Staff content with circumstances until they managed to find alternate employment in ICT industry</li> <li>▪ Remuneration not an issue at all levels of the Nenasala program. ICTA and stakeholder staff paid well.</li> <li>▪ NGO, village society run Nenasalas subsidised by the parent organisations</li> <li>▪ In not-for-profit model remuneration not the most prominent driving force for sustainability</li> <li>▪ This funding aspect had a symbiotic association with human capital drivers and sustainability</li> <li>▪ Remuneration too would become important as culture was gradually changing to a much more westernised one</li> </ul>
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## **Does different types of telecentre models impact HC drivers and sustainability**

- Many variations of Nenasala models exist with unique human capital drivers and common elements.
  - ICTA devised various models to exploit niche target groups and emphasised differing human capital aspects as deliberate
  - Models that targeted different prominent socio-cultural aspects
  - These models also had commonalities in human capital aspects, along with differences in how differing human capital drivers and aspects combined to form its human capital capacity.
  - The unique unifiers that bound the like-minded social capital to Nenasala human capital among the for-profit and not-for-profit Nenasala categories differed by
    - Unique unifiers generally based on the social and cultural norms of a country
    - Unifiers could be based on larger structural/ organisational influences (in multiple tiers locally or with international stakeholders)
    - Unifiers could be regional
  - No fault found with Nenasala modes' strategy
- Recruit the correct leader to enhance and promote relevant human capital drivers for sustainability
- Size of Nenasalas showed to simplification of all human capital aspects and drivers that linked to sustainability
- Not-for-profit and for-profit Nenasalas leaders believed that some level of commercialisation was required for uplifting human capital capacity and sustainability

- ICTA focused on the larger initiative, it was not willing to interfere with the individual Nenasala human capital drivers as part of the larger program.
  - Funding availability was an unexpected driver of human capital and noted as second most important factor for Nenasala sustainability.
  - Strong leadership as the first and most important driver could overcome all difficulties Nenasalas faced including funding issues.
  - Leaders' thinking around funding fundamentally impacted the paths Nenasalas could take and the human resource capability the Nenasalas could develop.
  - It is important to look at how a grassroots organisation's human capital is critical for its sustainability whether it be for initial funding or for ongoing sustainability.

Overall, leadership was the most significant factor for Nenasala sustainability. Although not directly investigated, continuous availability of financing was highlighted as the second most significant factor. All Nenasala models were successful in raising funds within their targeted communities. However, entrepreneurs focused more on commercial viability and novel funding avenues. Nonetheless, owners continued to wish for donor funding and government handouts. More needs to be done for self-motivation and financial self-sufficiency to ensure the sustainability of Nenasalas in the next phase, 'Smart Sri Lanka'. However, this would require changing their mindset to enable the transition to greater sustainability.

The Nenasala grassroots level movement was multitiered with multiple international and national stakeholders. When applying the Royal and O'Donnell (2008) model to Nenasala program, what was evident was the simplification of aspects one would reasonably expect from previous applications. Yet, different models had different prominent influences in different tiers. The model asserts that external influences tend to be more prominent in driving human capital. The sustainable people management practices at the grassroots level were mainly influenced by a combination of SCL's focus, influences of host or umbrella organisations, the SR synergies they decided to pursue and the availability of funding. Nonetheless, supporting this was the human capital of the organisation as its base capacity. All of these aspects were mediated by the variables such as social, cultural, and religious bounds, which acted as underlying

unifiers. However, for optimal human capital performance, Nenasalas had to strike a balance between internal, external influences and unique unifiers that are important in the context the Nenasala operated. The research showed that largely Nenasalas were successful in achieving this balance and to utilise human capital to assist SR synergies that benefitted grassroots level clientele.

## **CHAPTER 12 - Conclusion**

This thesis examined the relationship between corporate social responsibility synergies, drivers of human capital and sustainability of grassroots level initiatives that use the elimination of the digital divide as their main social responsibility goal. It is believed that Drivers of Sustainable Human Capital Systems (DSHCS) impact on sustainability differ based on how SR synergies are conceived, practised in grassroots, for-profit and not-for-profit organisations. The three main subject areas this study encapsulates were corporate social responsibility, human capital systems, and sustainability.

These areas were explored in Chapters one and two of the literature review along with the theoretical background which was used to 1) identify and formulate the key enablers to be investigated in the case study, 2) the research questions and 3) the choice of the research model, of this thesis. In Chapter one, it was noted that Corporate Social Responsibility (CSR) focus of corporations materialise through Social Responsibility (SR) synergies that organisations champion. Chapter two highlighted that the Social Responsibility that corporations pursued was irrevocably linked to Human Capital (HC) that was the cornerstone of knowledge-based organisations and the link to Social Capital which SR synergies targeted.

Chapter three outlined the research questions, the research framework, and the research methods of this study along with how the data collected was analysed within the selected framework to answer the research questions investigated. Furthermore, the chapter elaborated why Royal and O'Donnell's (2008) qualitative tools were chosen within this research. Tool 1 the 'Human Capital Drivers of the Value of the Firm' model was invaluable to visualise sustainability as a combination of many factors including SR synergies, human capital, and their drivers that influenced each other in a complex arrangement at a grassroots level organisation such as Nenasala. Tool 2 that Royal and O'Donnell (2008) proposed was the 'Human Capital Wheel'. It was utilised for analysing human capital systems deeply within this research. The data chapters were also organised within the groupings based on the 'Human Capital Wheel'. Although the 'Human Capital Wheel' identified ten key areas of Human Capital Systems, the archival material analysis undertaken by this research on the Nenasala telecentres indicated that some of these key sustainable human resource practice indicators might be less relevant

at a grassroots level. This was seen as a result of the simplification of Human Capital Systems in a grassroots level organisation. Archival material analysis, interviews, and focus groups were the three types of data collection methods that were used in this study enabling data triangulation. The two main participant groups of the field study were Information and Communication Technology Agency of Sri Lanka (ICTA) officials and stakeholders attached to the Nenasala project who were interviewed and, randomly selected Nenasala operators and owners who participated in the focus groups.

The archival material analysis findings undertaken with this research formed the basis of Chapters four and five to give a context to the research. In Chapter four, the greater context of Universal Service Debate, Information and communication technologies for development (ICT4D) efforts in South Asia, including other origins of telecentres initiatives, were summarised. This was a precursor to the introduction to the Nenasala program, which this study examined. In Chapter five, the archival material analysis data that related to Sri Lanka, Sri Lanka's ICT4D journey with e-Sri Lanka and the 1000 Nenasala initiative was elaborated on, to aid the conceptualisation of design and operations of the Nenasala telecentres this research focused on as a case study.

Before the grassroots level Nenasala structure was examined within the study, it was necessary to examine the overarching government umbrella organisation ICTA that guided and administered the initiative. This 'helicopter view' of ICTA officials' experience, was especially important considering ICTA developed all Nenasala models and ICTA officials' views gave a reference point to understand the context of Nenasalas, its human capital capacity and their human capital drivers. The findings from the ICTA officials and other Nenasala stakeholders were sourced from interviews. Within this research, interviews were mainly used to understand and interpret information and concepts uncovered within focus groups and the archival material analysis. These findings formed the basis of Chapter six.

Chapters, seven to nine investigated the findings of not-for-profit community-based Nenasalas led by religious clergy, village society leaders and Non Governmental Organisations (NGOs) from a human capital lens to uncover important human capital drivers for sustainability within those grassroots level enterprises. Chapter ten investigated the for-profit business Nenasala model within a human capital lens to

uncover important human capital drivers that aided sustainability of such Nenasalas. The focus groups data formed the basis of Chapters seven, to ten.

Previous chapter, Chapter 11 analysed the qualitative findings to answer the research questions pursued within this study. The findings answered each research question clearly. Furthermore, within that chapter what was observed in the not-for-profit and for-profit Nenasalas, in terms of human capital and its drivers, were extracted to enhance and adapt the Royal and O'Donnell's (2008) models in terms of their application to grassroots level small scale organisations in a developing country.

This study on the Sri Lankan 'Nenasala' telecentres aimed firstly to investigate the relationship between drivers of human capital systems, social responsibility synergies and sustainability of knowledge-based organisations, which use elimination of the digital divide as their main social responsibility goal. Secondly, it aimed to shed further light on how the telecentre models utilised in Sri Lanka could improve sustainability in contributing to the growth of knowledge, eliminating the digital divide and poverty. After a comprehensive archival material analysis, the study obtained further data by conducting focus group discussions with Nenasala stakeholders and interviews conducted with ICTA officials to potentially uncover how different models' operationalisation led to more or less sustainability outcomes.

The research uncovered how SR was conceptualised within the models was mainly due to the prevalent perceptions of Socio-Cultural Leaders (i.e. SCLs) of Nenasalas and Information Communication Technology Agency (ICTA) of Sri Lanka officials. Although the SCLs have taken four paths in Nenasalas, fundamentally, the Socio-Cultural Leaders (SCLs) in the context of SR orientation were focused on bridging the digital divide and a social reform effort that is aimed at the alleviation of poverty in rural communities in Sri Lanka. Similarly, the SCLs of the overarching parent program were the key for sustaining the longevity and maintaining the focus on the larger Social Responsibility (SR) initiatives such as Nenasala, e-Sri Lanka and Smart Sri Lanka programs. However, for Sri Lanka, as a developing country, not-for-profit community-based Nenasalas seemed to be a more significant contributor to society and culture. According to the participants, out of the not-for-profit community-based models, socio-cultural aspects seemed to be best aligned with religious institution led Nenasalas.

Findings revealed that former President Mahinda Rajapakse's initiative of involving the religious leadership, Buddhist philanthropic philosophy and volunteerism, and the SR embedded Sri Lankan culture could be credited for establishing a target of 1000 Nenasalas island-wide and the initial stability of the program. Although Nenasalas affiliated with religious institutions have stood the test of time in regard to sustainability, even clergy involved with the Nenasala program have expressed the need for commercialisation and funding security in the next phase of Sri Lanka's ICT4D program 'Smart Sri Lanka', that is beyond the dependence on donations and donor funding. Similarly, participants of the study believed that the tide was shifting from a not-for-profit community-based model to a for-profit business based model as Sri Lanka was undergoing economic and socio-cultural change. It was argued that the SCLs, such as local entrepreneurs who operated a business model with a high sense of SR, seemed to be more open to commercial viability and hence sustainability of Nenasalas in the western sense.

Responsibilities shouldered, and the role played by ICTA, in disbursing start-up funding and providing infrastructure, facilitating training, conducting evaluations for strategic direction and ongoing advice, has also borne fruit in setting up a Nenasala program with 1000 grassroots level initiatives. The SCLs at the overarching parent program have been valuable towards sustaining the longevity of the grassroots initiatives by promoting the core values and directives of the program while maintaining the synergies with the master program Smart Sri Lanka. That is, the SCL provided by ICTA officials and the relevant ministers and politicians as patrons of the ICT4D initiatives in the support programs, have been key contributors to the stability and continuity of the overall vision. Although Nenasala SCLs were seen prominently at the local level, without the unifying direction, overall strategy, and policy from the overarching body ICTA, the success of the program would have been significantly throttled.

The link between SR and HC within the Nenasala was found to be a symbiotic one. The Nenasala human capital was very much in tune with the need of the grassroots social capital they aimed to serve. Those needs indirectly or directly dictated the Nenasala strategic direction, service provision, and human capital capacity. The SR focus was also extended to the umbrella organisations and their SCLs such as ICTA officials, politicians and support teams. Although ICTA did champion the notion of SR explicitly

within the program, ICTA did not mandate the need for SR with a given model. Yet, ICTA believed that they had succeeded in developing models that propagated SR synergies that attracted relevant human capital to serve the niche target group they sought to benefit. It was ICTA's belief that all models were sustainable and appropriate with their niche target. What was clear is that certain dominant aspects within a community could act as a unifying force in this context and aid the ICT4D program. Nenasala SR motivations ranged from individual, social, religious and economic angles. The research called such conditions 'a unique unifier' that was an enabler of sustainability. However, the majority of participants and ICTA officials believed this inbuilt SR view was mainly championed by the Nenasala SCLs.

When investigating the Drivers of Human Capital (i.e. leadership and culture, recruitment and job design, training and development, performance management and rewards) and their effect on Nenasala telecentre sustainability, some drivers were found to be more prominent than others at the grassroots level. The participants of the study identified leadership to be the primary human capital aspect that assisted Nenasala sustainability. They believed that most obstacles the grassroots initiative faced could be overcome with leadership. Leadership was provided to Nenasalas at multiple tiers within the program. The leadership of religious clergy and, entrepreneurs who ran a for-profit business based Nenasala were highlighted as the most effective within the models. ICTA officials believed that the leadership required changed within different models, which targeted different population sectors for sustainability. As such, ICTA officials were careful to choose and nurture the right leaders for sustainability. However, participants believed the flexible approach of for-profit Nenasalas, with entrepreneur leadership, may be what is required in future as the nation's socio-cultural and economic landscape was changing gradually.

A grassroots level organisation lacks the sophistications of larger organisations. Neither ICTA mandated, nor the Nenasala owners pursued any kind of policies related to recruitment or job design for roles of grassroots level Nenasala programs. Recruitment and job design was mostly an informal affair in Nenasalas, which was not linked to sustainability. Yet, the participants were adamant that overall, Nenasalas have been successful in hiring the right people without the use of complicated Human Resource (HR) methods. More structured recruitment and job design was visible in NGO led

Nenasalas due to the influence of structured parent organisations. The for-profit entrepreneurial SCLs also paid close attention to hiring competent multi-skilled operators at the best market price in order to have best Return on Investment (ROI) for sustainability within their model. They further believed that proper recruitment amounted to generating greater revenue within the business venture, which would ultimately enhance sustainability. Nenasala SCLs saw internal development as an uncertain investment due to the transient nature of the workforce. The majority of Nenasala SCLs recruited staff externally, to hire staff that already had the required skills.

Training and development was not a focus for the majority of the Nenasala operators or the SCLs. None of the Nenasala models thought of training in the formal HR sense or as a requirement for sustainability. Only NGO led Nenasalas had formal training and formal development programs due to parent NGO HR influences. NGO and for-profit business model Nenasala owners focused more on career development and education for junior staff as they saw some stability in employing juniors who had to develop their skills for some time before they were marketable or were at a stage they could move within the industry. The Nenasala SCLs and operators did acknowledge that continuous learning was required for keeping up with new technologies, to update Nenasala offerings to the latest ICT trends and for sustainability. Yet, they relied on ICTA for such training. Considering the diverse backgrounds and varied skill levels of Nenasala owners, ICTA focused heavily on training with an initial five day residential training for the owner and an operator of each Nenasala that covered all aspects required for successful operation and financial planning to aid sustainability. The initial five day training provided by ICTA to the owner and an operator of a Nenasala, during the donor funded initiation period was found to be successful and beneficial. It has clearly laid a solid foundation and path for sustainability. However, periodical ongoing training at the field level to suit the changing circumstances and the challenges the operators and the stakeholders faced, would have also increased chances for growth and sustainability of Nenasalas. Conversely, ICTA officials still counted on a baseline understanding of business and ICT to guide Nenasalas for best results although it was not a mandated requirement of the grassroots initiative.

Performance management was not a factor that the study participants considered to be linked to sustainability or required at a grassroots level. They believed that an informal and implicit way of gauging each other's performance was appropriate for the grassroots level. However, reward was seen as a direct requirement for sustainability, although the remuneration Nenasala operators received was minimal. This affected Nenasalas in two ways; firstly, Nenasalas saw a larger turn over in staff, which changed jobs seeking greener pastures. Secondly, Nenasalas in the for-profit sector especially struggled to employ the best employees that were available in the market due to not being able to offer competitive remuneration. Remuneration was discussed by participants in terms of affordability and access to funding sources available for Nenasalas rather than sustainability of human capital. Although not-for-profit Nenasala SCLs still argued that Nenasala staff worked for the joy of assisting the poor, as they were in tune with the SR synergies of the Nenasala program, operators expected acknowledgement of good performance and sufficient payments in return.

Different types of telecentre models impacted human capital drivers and sustainability differently. The study uncovered many variations of Nenasala models. It was clear that models had unique human capital drivers and common elements. Most of the human capital elements that large corporations focused on were not considered significant due to Nenasala size and its very rudimentary make-up. At the grassroots level such aspects were replaced with cost effective, easy win solutions. However, models and the socio-cultural aspects that guided those seemed to guide human capital toward differing conclusions in other factors. For example, the Nenasala program was dominated by Nenasalas attached to religious institutions. Such association automatically imposed much more dominant religious beliefs as an influence that led human behaviour. ICTA officials emphasised these differing approaches in human capital to be a deliberate design aspect, devised to exploit the niche target group in the best possible way. These unique unifiers that bound like-minded social capital to Nenasala human capital among the for-profit and not-for-profit Nenasala categories differed, as they could be internal to Nenasala human capital as in religious beliefs, or external as in parent organisations' influence. To harness social consciousness, ICTA focused on recruiting the correct leader within the correct model. However, except for putting forward recommendations to enhance the growth of Nenasalas, there has been little effort taken to investigate the causes of differing sustainability outcomes of various Nenasala models.

Correspondingly, efforts taken to rescue an unsuccessful failing Nenasalas and post-mortems conducted on failed Nenasalas were found to be minimal. The participants blamed minimal follow-up or lack of central governance from the overarching authorised body ICTA for such failures. ICTA officials view was Nenasalas had to be independent with local Nenasala collaboration as its main support avenue. However, critics noted that due to SR synergies ICTA promoted within the larger program, Nenasala was seen to be driven by ICTA and the government owned, and that created a mentality of dependence with leadership and funding. Yet, it is argued that a more robust continuing mechanism (open system) is required for ongoing field level consultation, monitoring, sourcing continuous feedback to modify the direction and strategy to suit the changing circumstances at the grassroots level. However, when considering the evidence on the surface, which was based on participants' opinions and observations, one could not fault any Nenasala model's strategy. Nenasala human capital worked in unison with their local society and environment for the economical upliftment of the areas they served within the different models. The participants believed that sustainability at the grassroots level was multifaceted and encompassed local socio-cultural, environmental and economic factors. ICTA officials saw sustainability in a different way and thought of Nenasalas within larger ICT4D sustainability.

Funding, government sponsorship and ICTA direction have also flourished in the initial program's donor funded period of the first phase of five years. More needs to be done for self-motivation, self-sufficiency, and financing for better sustainability of Nenasalas in the next phase, 'Smart Sri Lanka'. The linkage of microfinance with Nenasala models was seen as a key to the future success and transformation of the program to go beyond the donor funding dependency. Nonetheless, significant steps have to be taken to re-orient the mindset of operators and stakeholders of Nenasalas to transit from the donor funding to self-sufficiency. However, most stakeholders did not show any readiness for this transition at the current juncture. Nenasala stakeholders continued to focus on donor funding and government support. This dependency was apparent as only very few voiced concerns on getting out of the donor funding dependency bondage. Yet, most owners were unanimous on highlighting funding as a key factor for 'Nenasala' telecentre success, growth, and sustainability.

The analysis of the data collected indicated differences in models of Nenasala operationalization and financing approaches. However, if Nenasalas are to make this transition from a not-for-profit community-based model to a for-profit business based model, affordable financing and capital raising avenues need to be available to Nenasala owners. Considering that Nenasala owners as grassroots level operators have been shunned by mainstream traditional financial institutions such as banks, more grassroots oriented pro-sustainable development financing options, such as microfinance, need to be propagated throughout the grassroots level Nenasalas. As grassroots level microfinance providers, such as SDB, also has poverty alleviation as a key goal, and these providers could become better partners for Nenasala programs as both aim for similar SR synergies. It is the participants' view that this transformation needs to be driven by ICTA as the umbrella organisation. It is hoped that availability of microfinance within a government-initiated program such as Nenasalas will provide the legitimisation of a financing regime that is required to gain critical masses within the grassroots providers. Although, ICTA championed the unified vision and the need for SR synergies to uplift the rural disadvantaged out of the poverty cycle through ICT4D, their hands-off approach in regards to local financial strategies has neither helped the culture of dependence, nor the amount of Nenasalas that got into financial difficulty. Nonetheless, ICTA still has attempted to motivate the Nenasala owners and stakeholders to shoulder responsibility within the complex symbiotic partnership, which sometimes had blurred boundaries, creating dependence and confusion. This dissimilar impact on sustainability stemming from financing methods utilised at a grassroots level is a significant issue that requires further scrutiny. Further research should pursue an in-depth exploration of strategic financing approaches, such as crowdfunding and crowdsourcing as well as enablers and hindrances of crowdfunding on the sustainability of grassroots, not-for-profit and for-profit telecentre ICT4D initiatives.

Nonetheless, a unique hybrid model of SCLs has emerged in Nenasalas which could be applied to other developing countries in the South Asian region that has similar social, cultural and religious bounds as the underlying unifier for overall programs. The SCLs noticed are particularly relevant to developing countries as these SCLs, particularly from the not-for-profit community-based models, seem to have mutated to a for-profit business model with significant SR synergies that benefit the local communities as already visible in developed western countries. What was observed in Sri Lanka at a

grassroots level could be the beginning of this commercialisation for more viable and sustainable commercialised business models, prevalent in developed western societies. Furthermore, the change of dominant technology and the introduction of disruptive innovations does not change this requirement of SCLs at both the micro and macro level of grassroots initiatives in developing countries such as Sri Lanka, as the new technology also requires the same conditions of SCLs with accompanying funding assistance as much as the prevalent technology.

Applying Royal and O'Donnell's (2008) 'Human Capital Drivers of the Value of the Firm' model and 'Human Capital Wheel' to the qualitative data collected, the research managed to adapt the Royal and O'Donnell (2008) model to a grassroots level for-profit or not-for-profit PPP initiative that was multi-tiered with multi-stakeholders. The use of qualitative techniques with the models provided rich data and allowed the capturing of experiences, perceptions, challenges, suggestions, and emotions of multi-stakeholders, generating a better and a comprehensive picture of the individuals, organisations and the context the program operated under. The model developed still preserves the systems' thinking and the contingency view that the Royal and O'Donnell (2008) 'Human capital drivers of the value of the firm' model pursued. The adapted model represents the findings as a part of an overall system allowing potential contribution to further development by investigating specific parts such as financing options, outcomes or events of the model. Furthermore, it still champions the view that organisations are different, face different circumstances and require different ways of handling human capital with different key human capital attributes being prominent at various times. Similarly, the application of the model shows that there is no one universally applicable set of management principles to manage grassroots organisations. However, as the findings suggest, the model adapted for grassroots level not-for-profit or for-profit organisations, acknowledges that leadership and the managerial reactions are key to success although these qualities may vary based on many variables. The addition of funding availability to Royal and O'Donnell's (2008) 'Human capital drivers of the value of the firm' model as a specific aspect was seen as an advancement. Although Royal and O'Donnell's (2008) model had this aspect implicitly, along with costs of both internal and external influences on HR, the model applied at a grassroots level indicated that finance sources and availability is a major human capital driver next to SCL's influence. Availability of funds was critical to strategy as it dictated what SR synergies

SCLs could pursue within their Nenasalas, within their human capital capacity. From the results of the research, the new model asserts that the sustainable people management practices at a grassroots level are a combination of SCL's focus, influences of host or umbrella organisations, the SR synergies they decide to pursue and the availability of funding. Nonetheless, supporting these observations is the human capital capacity of the organisation as its base capacity and external human capital market as its source of future talent, considering that new talent is sourced by external recruitment at the grassroots level. When applying the model to a grassroots level organisation, what is evident is the simplification of aspects, as one would expect in larger organisations and the previous use of this model. The model also captures the national and international tiering of the grassroots initiative and the influence of those organisations on the SCLs who guide the program locally. When considering the country's ICT human capital landscape, a grassroots level dependence of certain external influences seems to be more prominent. These external influences in the case of Nenasalas were driven mainly by the influence of multinational corporations and the Business Process Outsourcing (BPO) industry in Sri Lanka. Affordability of skilled labour sourced in an ad-hoc just-in-time manner, remuneration restrictions, and lack of internal development opportunities were internal HR influences that played a major role in Nenasalas. However, all of these aspects were mediated by the basic variable at social, cultural, and religious bounds, which acted as the underlying unifier for overall grassroots level programs. Similarly, the historical context and past decisions taken also shaped the future of a grassroots initiative such as Nenasala.

However, the Royal and O'Donnell (2008) 'Human capital drivers of the value of the firm' model has not been empirically tested in developing countries in an area such as ICT4D and especially telecentres which are grassroots level, not-for-profit or for-profit small scale Public Private Partnership (PPP) initiatives with Multi-Stakeholder Partnership (MSPs) and with substantial SR synergies. The enhanced model goes some way to provide a system view of grassroots level human capital drivers and its impact on current and future performance. It also highlighted the important role human capital analysis plays in understanding the drivers of human capital in creating value in an organisational context. Although the new model does not provide an indicative measure of Corporate Sustainability (CS), it assists in distinguishing patterns of human resource

management practices which are likely to be a key to performance, sustainability and helps anticipate future events within that organisation and indeed industry.

It is envisaged that further field research to bridge the gaps as uncovered above, could contribute to uncover issues not previously identified, especially related to subsidised micro-financed grassroots level organisations with an embedded SR component that is associated with ICT4D projects for poverty alleviation of disadvantaged masses. What has been uncovered in this research provides a unique Asian perspective to be shared with the international community, academia, and the regional players. Such research and finding could be invaluable for other developing countries with similar ICT4D circumstances.

### **Future direction and the significance of the research**

Detractors of telecentres argue that although it was a valid concept in the early ICT4D efforts in the 1990s due to growth of complimentary services such as electricity in rural communities; today, those gains have been superseded by advances in other innovative disruptive technologies and rapid ICT4D advances due to increased affordability of equipment. For example, competition from cheap data services offered by mobile carriers was a serious threat to fixed-line service providers such as Nenasalas in Sri Lanka. ‘Sarvodaya’, an early pioneer in the Sri Lankan telecentre movement - a well-known 54 year old national NGO, has countered this threat through ‘Fusion’, their ICT4D arm. Fusion focuses on e-empowerment of communities through a combination of telecentres, mobile phones, and smart devices (Android phones and tablets) that span across sectors of education, agriculture, micro-finance, youth, and women’s empowerment. The SCLs within Fusion focus more on mobile smart devices that interact with VAS provided through the Fusion website. This allows their telecentres to make the transition to mobile technology to gain the early mover advantage in the technology life cycle. As a SCL from ‘Sarvodaya’ noted, ‘we were one of the pioneers in the Sri Lankan telecentre movement. When the effort was organised under Nenasala under the government, we acted as a consultant to that effort and established ourselves few Nenasalas under the ICTA model. However, we needed to change with times and take up innovations that were going to give more benefits to rural villages we support.

That is why we started establishing services via mobile smart devices. We think it is the future. Even if a donor gives Sarvodaya money to establish a telecentre, Sarvodaya advice would be to direct that effort on to mobile technology’.

The technical paradigm shift is clearly recognisable with the take-up of mobile technologies in developing countries such as Sri Lanka, which require a clear rethink of the ICT4D approach. While rural ICT4D fixed line initiatives struggled to endure, mobile phone take-up has emerged as a success story, particularly in the Asian continent. Many rural locations without fixed telecom infrastructure in Sri Lanka now have mobile phone coverage as a result of market deregulation since the 1990s, policy changes, introduction of new technologies and incremental network coverage expansions. It is also clear that mobile technologies are competitive and cheap as seen with the Sri Lankan market experience. It is acknowledged that the cost of ICT equipment in general has fallen to a level that many rural families could afford mobile smart phones that could be connected to internet via mobile data connections.

Sri Lankan mobile penetration has more than doubled and reached 87% by the end of 2011. At the beginning of 2012, the country’s mobile penetration level was higher than the world and regional averages. Within a highly proactive regulatory regime and a competitive mobile market with five operators, Sri Lanka was ranked 14th globally in the 2011 mobile-cellular price basket, which measured affordability of services. However, Sri Lanka’s internet and broadband penetration remained low at 15% and 2% respectively in 2011, which was below the regional and developing country averages. This is despite Sri Lanka having a dynamic broadband market with different fixed solution providers. A similar story was visible with fixed-telephone take-up, which was stagnant at around 17%, although it was above the regional and developing country average of 14%. This deficiency has prompted Sri Lankan regulatory bodies and ICTA to make broadband access a policy focus through Nenasala telecentres with a subsidy scheme. Those bodies also have commenced provision of various e-government applications to further drive demand within disadvantaged rural groups and to ensure greater take-up to facilitate fixed services.

Nonetheless, most participants, including Sarvodaya SCLs, did not dispute the impact of early telecentre projects such as the Sarvodaya Village Information Centre initiatives

had in Sri Lanka in introducing rural villagers to computers and technology for the first time. They also acknowledged that the early gains thus far through telecentres allowed governments, NGOs, and other world organisations such as World Bank and UN to provide vital services to improve agriculture, health, and social services to rural communities in Sri Lanka. Although ICT4D rhetoric suggests that there is no need for fixed line ICT4D initiatives in remote areas and thus donors should focus on mobile solutions for their future ventures, this rhetoric and criticism seem rather simplistic and premature. It is clear that commercial ventures of mobile phone companies serve the greater population in cities to gain a larger revenue base. They are also reluctant to engage in non-mainstream interests, and to provide tailor-made solutions to the rural poor as seen by current examples of the developed countries. Therefore, it opens up a multitude of opportunities in ICT4D, particularly in smaller rural markets, which requires bottom-up ICT4D initiatives that effectively serve niche rural poor markets rather than the top-down mobile phone solutions currently being promoted. History has also shown that numerous ICT4D ideas failed in their pilot stage without reaching scale-up. Moreover, the failures faced by telecentre ICT4D projects, mainly, were not due to inappropriate technology; rather it was due to poor design, implementation, lack of human capital capacity, and lack of long-term focus that affected the longevity of such projects. Furthermore, most telecentre projects in the world were ill thought out and executed with flawed unsustainable economic models. Considerations of sustainability by ICT4D implementers in the past have been limited to initial set-up and to the duration of the funding provided by donors. Today, donors are much more focused on economic viability, ROI, and the ability of local human capital to maintain telecentre operations in the long-term while delivering a clear social benefit promise. This focus on the short-term has proven to be not well suited for ICT4D initiatives such as telecentres, that require continued operational, technical and funding support at the grassroots level.

Equally, leadership is crucial for these ICT4D initiatives. Having a team of inspirational leaders who contribute at various levels, motivate others, and are driven by measurable results has been deficient in grassroots and program levels of ICT4D efforts in Asia. Similarly, as SCLs associated with Nenasala program noted, leaders at the grassroots level were required, not only to react and manage constant change, but also foresee the next wave of change, which may render the current direction useless. Yet, nurturing

potential leaders to achieve alternative visions has not been a priority for most developing nations that have been dependent on top-down initiatives dictated by donors. As the world transforms to knowledge economies, there is urgency for new dynamic leadership models to drive national policy making and to drive social and economic development at the grassroots level. Although there has been a clear advancement of technology and accompanying complementary infrastructure required for ICT4D in developing countries such as Sri Lanka, it is argued that lives of disadvantaged rural people in least developed areas of the country require grassroots leadership initiatives that have central coordination and governance through a responsible authority. Without such leadership at multiple tiers, the fate of any mobile ICT4D development initiative currently focused by the ICT4D fraternity could also fail. The contemporary thinking seems to indicate that funding is a key to running effective grassroots level campaigns in alleviating poverty through ICT4D initiatives. However, the research indicates that leadership is the key and may overcome even funding difficulties and other challenges these programs face. However, it is also clear that reliance on donor funding is no longer a sustainable proposition within these programs. As such, more work could be done to understand appropriate funding models that may act as enablers for leadership of these grassroots initiatives.

Roman and Colle (2005) state that Telecentres remain a theoretical area of research and provide an overview of where telecentre research is most required. They suggest it should focus on three broad interconnected areas, including impact of telecentres on social and economic change and conditions required for the long-term sustainability of telecentres. They also suggest studying these aspects at two levels - the micro level which is important to identify the infrastructural, social, economic and cultural factors that account for sustainability of local institutions and the macro level which is important in outlining the national and international environment that frames international systems, from public policy to contextually appropriate technological innovations. Therefore, the research investigating the relationship between drivers of human capital systems, social responsibility synergies, and sustainability of knowledge-based grassroots organisations such as Sri Lanka's Nenasala telecentre initiative, which use elimination of digital divide as their main social responsibility goal on both the micro and macro levels, is a valuable contribution to the current knowledge gap.

This research utilised Royal and O'Donnell's (2008) 'Human capital drivers of the value of the firm' model. Using these models, prior researchers such as Royal (2000) and Hatipoglu (2010) have found empirical and theoretical evidence on how drivers of sustainable human capital systems perform in for-profit large organisations of the financial and pharmaceutical industry in Australia. The model has also been expanded to investigate how these drivers act on individual segments of human capital systems within a large corporation. Prior research further affirms that the above models could investigate a company's development over time and identify emerging patterns in human capital. However, this model has not been empirically tested in developing countries, especially in South Asia, in an area such as ICT4D and telecentres that are grassroots level, not-for-profit or for-profit small scale organisations that contribute towards bridging the digital divide. Furthermore, it has also not been examined how the drivers of human capital systems and corporate social responsibility synergies collaboratively affect sustainability of such organisations. This theoretical gap was bridged in this research. In the present study the two empirical gaps were also addressed by investigating how seven segments of human capital systems and corporate social responsibility in the sense of eliminating digital divide affected corporate sustainability.

The analysis indicates how differences in Nenasala models' operationalisation and financing approaches affect human capital aspects and SR manifestations within operationalisation to result in dissimilar impacts on sustainability. Further research is recommended to provide an in-depth understanding of the best practices of the human capital aspects of the existing grassroots, non-profit and for-profit outlets, as well as enablers and hindrances of SR synergies on sustainability. Although similar gaps between grassroots, non-profit and for-profit organisations have been explored in subjects such as microfinance (Augustine 2012) and the interdependence of non-profit and for-profit business models have been explored within the technology driven sustainable community development (Arora & Kazmi 2012), this is the first time Nenasala telecentre models were examined within the SR synergies they encompass. It is envisaged that research in the field could contribute to the operationalisation of telecentres and identify issues not previously identified in the SR literature, especially related to subsidised, micro-financed grassroots level organisations, through the Sri Lankan telecentre models examined within this case study. The findings may also compliment the sustainability debate of telecentres by exploring the SR perspective and

the funding strategies of different models used. The study provides a unique and significant Asian perspective to be shared with the international community, academia and the regional players.

### **Limitations of the research**

The research was conducted with the full patronage of ICTA. As Nenasala programs were seen as an integral component of e-Sri Lanka, the country's ICT4D journey, the officials, stakeholders and even the Nenasala grassroots participants may have been reluctant to highlight all the issues with the program directly to the researcher. Furthermore, as Sri Lanka was pursuing the next phase of development through ICT4D aspects with international donors, access to ICTA officials and support organisations' participants was limited and their participation had to be secured cautiously. It was stressed that the research was not looking to find issues or failures with the program but to uncover its human capital drivers and the findings would ultimately assist Sri Lankan telecentre initiatives and indeed telecentre networks of countries that have similar socio-cultural aspects in the region. In other words, the participants' confidence had to be gained first by convincing them that the research was an enabler to realising Sri Lanka's vision of a 'Smart Sri Lanka' and not a hindrance, as many locals were suspicious based on past fault finding missions disguised as research. However, it was noted that people, particularly in official positions attached to the government, were not very forthcoming with major issues the Nenasalas experienced, partly as they wanted to portray the Nenasala program as a success and partly due to Sri Lankan cultural sensitivities which favoured not commenting on your shortcomings to outsiders. Nonetheless, no deliberate attempts to hide data or mislead the researcher were noted within this research.

The research received no research grant and was conducted utilising the meagre financial resources of the researcher. This affected the scope of the research. For example, although it was noted dissimilar social and cultural aspects influencing leadership were found to be a key human capital systems driver, no extensive differentiation of those aspects of SCLs were undertaken within this research. Similarly, it was noted that the industry sector influences such as the influence of multinational and Board of Investment of Sri Lanka (BOI) industries, may be influencing human

capital aspects of the ICT industry at a grassroots level. Such details could not be investigated within this research as the scope had to be limited. However, it is the researcher's assessment that a balanced view was acquired within the findings of the focus groups and interviews, supported and complemented by the archival material analysis, although the facilitation of better financial resources would have given the opportunity to get a larger pool of participants who would have given more diverse perspectives.

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- UNDP - United Nations Development Programme - Human Development Reports - <http://hdr.undp.org/en>

## Appendix A - Summary of Findings from not-for-profit and for-profit Nenasala models explored on Chapters 6-10

	Leadership & culture	Recruitment & job design	Training & development	Performance management & rewards
ICTA	<ul style="list-style-type: none"> <li>All Nenasalas encompassed a unique kind of leadership. Nenasala leaders focused on socio-cultural aspects, which aimed at uplifting their local community.</li> <li>Leadership No.1 key to success</li> <li>Leadership provided individually or through committees</li> <li>Leadership key in both for-profit and not-for-profit categories</li> <li>Good leaders could solve most problems</li> <li>ICTA did not prefer a leadership type.</li> <li>Leadership type dictated by Nenasala model.</li> <li>Prominent leadership examples were religious leaders and entrepreneurial leaders who operated the business model</li> <li>Most religious leaders were good administrators.</li> <li>NGOs able to attract good leaders through wages</li> <li>Entrepreneurs were good leaders as they focused on profit for themselves and had ownership</li> <li>Best leader chosen through screening</li> <li>ICTA focused heavily on leadership training as disparity between capabilities, and motivation of leaders exists</li> <li>Baseline understanding of ICT and business helpful for leaders</li> <li>Leadership multitiered with multiple national and international layers</li> </ul>	<ul style="list-style-type: none"> <li>Hands-off approach to recruitment</li> <li>Happy that the Nenasala employed rural youth and graduates</li> <li>Unwise to mandate recruitment pay. That should be decided by the Nenasala circumstances</li> <li>Each Nenasala offerings were different, it would be difficult to have uniform qualifications</li> <li>Used different external consultants to deliver ICTA training sessions.</li> <li>NGOs and individual entrepreneurs seem to take special care when recruiting people.</li> <li>Not-for-profit community based models relied on volunteerism</li> <li>May resort to the most qualified local youth or a family member rather than recruit from a pool of candidates. Recruitment simplified based on size of Nenasalas</li> <li>General staff recruited were jack-of-all-trades.</li> <li>Job categorisation or design was a fruitless exercise and sophisticated hiring mechanisms within Nenasalas not required</li> </ul>	<ul style="list-style-type: none"> <li>Training and development was important for Nenasala sustainability.</li> <li>Training provided in a five-day residential course. Proprietary training material used by trainers</li> <li>Two participants from each Nenasala initially trained</li> <li>Ongoing rotational training to leaders beneficial due to varied backgrounds</li> <li>Leaders who initiated Nenasala remained with the venture long-term. Leader's skills passed on to any new recruits in lieu of rotational training</li> <li>Operators had a higher attrition rate</li> <li>More specific computer language related skills provided by ICTA via ad-hoc courses</li> <li>Training budget linked to World Bank donor funding</li> <li>Progress of training not measured specifically.</li> <li>Similarly, ICTA officials noted that regional support teams called 'regional impact teams' (RIT), were set up by ICTA to assist Nenasalas that were lacking progress.</li> <li>ICTA official team also attended training nationally and internationally.</li> <li>ICTA also organised overseas study tours for Nenasala staff</li> <li>University of Colombo School of Computing (UCSC) and ICTA pursuing efforts to</li> </ul>	<ul style="list-style-type: none"> <li>ICTA adamant that most Nenasala operators and owners participated in the program to help the less fortunate.</li> <li>Payments received in Nenasalas were not comparable to the commercial sector</li> <li>Nenasalas located in rural areas where populations and subscriber affordability was low</li> <li>Nenasalas tried to price below their commercial counterparts generating lower income and salaries offered.</li> <li>ICTA did not mandate payments and it's a decision for the Nenasala owner</li> <li>Performance management was not done. Nenasala were too small for proper HR evaluations</li> <li>Entrepreneurs operated for-profit Nenasalas and NGO led not-for-profit community based models focused on remuneration more. Some payments done by the parent NGO.</li> </ul>

	<ul style="list-style-type: none"> <li>Strong single leader allowed prompt decision-making and fewer internal politics. However, individuals can take bad decisions which were not in line with the original Nenasala vision</li> <li>Overarching body kept leaders focused on a uniform vision</li> <li>Prominent leadership within a model compliment the underlining unifier within the model</li> </ul>		<p>establish the Sri Lankan Telecentre Academy for certifying telecentre operators. Effort temporary on hold due to funding issues</p> <ul style="list-style-type: none"> <li>Best Nenasala operators in each district act as regional Nenasala Ambassadors or a local district coordinator.</li> <li>Leadership and persistence key to securing training.</li> </ul>	
	<b>Leadership &amp; culture</b>	<b>Recruitment &amp; job design</b>	<b>Training &amp; development</b>	<b>Performance management &amp; rewards</b>
Not-for-Profit Nenasalas – Religious Clergy Led	<ul style="list-style-type: none"> <li>Clergy was at an advantage in their leadership due to their fundamental status in the community as leaders</li> <li>Most clergy are strong leaders, and methodical organisers at the grassroots level</li> <li>Clergy had little of ICT knowledge but were skilled at setting the strategic direction, recruiting capable individuals</li> <li>Religious leaders were supported by devotee boards, such as ‘Dayaka Sabhas’.</li> <li>Clergy as leaders voiced their opinions freely due to their prominent social standing. They were better at articulating their positions and were capable of moderating their messages to suit the audience</li> <li>Religious leaders achieved significant community and local government support</li> <li>Some clergy directing Nenasalas were based overseas and added to progressive nature</li> <li>Religious leaders benefitted from a</li> </ul>	<ul style="list-style-type: none"> <li>Religious clergy took a lead in recruitment.</li> <li>Some ‘Dayaka Sabha’ (Devotee Boards) members or operators assisted</li> <li>No systematic interview process or a formal regime around hiring</li> <li>Hiring was mainly done at a village level using the village youth who were computer literate and were known to them</li> <li>External recruitment if stringent technical requirements required teaching classes.</li> <li>Clergy who resided overseas had a stringent hiring policy and formal hiring requirements</li> <li>Each year, usually the top of the batch from the youth who followed the Nenasala courses, hired as instructors.</li> <li>More advanced Nenasalas, from a HR aspect, seemed to be a reality and a minority. More formalise the job descriptions existed as staff numbers reached larger numbers.</li> <li>Religious leaders had a</li> </ul>	<ul style="list-style-type: none"> <li>No formal training or development regime.</li> <li>Mostly relied on in-house or on the job training. They employed a buddy or a mentoring system to skill up the new operators to learn basic Nenasala services</li> <li>Courses offered mandated that lecturers had to have advanced level certificate qualifications. Such qualifications were met via external recruitment</li> <li>No formal development plans or succession plans for leaders, as the priest in a village did not change often.</li> <li>Operators used Nenasala to get additional skills to better jobs</li> <li>No skilling up efforts of operators or Nenasala managers through externally run ICT courses</li> </ul>	<ul style="list-style-type: none"> <li>Clergy insisted that operators of Nenasala provide a service to their local communities and not seek financial benefits</li> <li>Minor stipend provided to operators for travel etc.</li> <li>Some clergy who operated Nenasalas in a semi-business model did pay a wage for their operators.</li> <li>Most acknowledged that retaining employees was difficult without a wage.</li> <li>Most could not provide wages that well-trained operators sought</li> <li>Payments made was linked to ICTA subsidies and could not be maintained with ad-hoc donations received</li> <li>Not-for-profit community-based models had little expenses. Finance model based on donations still worked well with volunteering</li> <li>Did not measure performance formally. Operators also did not see a need to measure performance as they were volunteering.</li> </ul>

	<p>ready-made publicity mechanism of the religious institution and attracted readymade clientele</p> <ul style="list-style-type: none"> <li>Traditionally temples were considered as places of learning in Sri Lanka and parents saw them as safe, moral places</li> </ul>	<p>special ability for directing and identifying the right person for the job due to village information they held</p>		
	<b>Leadership &amp; culture</b>	<b>Recruitment &amp; job design</b>	<b>Training &amp; development</b>	<b>Performance management &amp; rewards</b>
<p>Not-for-Profit Nenasalas</p> <p>– Village Society Led</p>	<ul style="list-style-type: none"> <li>Village committee led by a leader as its main official.</li> <li>Committees and leaders usually alternated annually elected by villagers. Committees made up of prominent village elders and local government officials</li> <li>How well the Nenasala functioned within a given year was mainly dependent on the capabilities and aptitude of elected leader.</li> <li>Some leadership found at the operator level as village committee lacked the knowledge of ICT</li> <li>This sense of service was heightened by the fact that the operators had to report to village society made up of prominent people in the village</li> <li>Leaders believed that local government officials such as ‘Grama Sevaka Niladharis’ and government departments could be better integrated with Nenasalas. It was suggested that such government officials should be elected to responsible leadership positions in local village societies to make this link strong and permanent.</li> </ul>	<ul style="list-style-type: none"> <li>Mainly recruited staff from their villages.</li> <li>No formal criterion in hiring.</li> <li>No formal job planning or descriptions</li> <li>Due to limited stipend not expected to attract operators with great skill sets.</li> <li>Low skilled operators appropriate for their village needs, which were basic</li> <li>Most young people were interested in paid work and had moved to the cities for work, the village societies found it difficult to retain and hire Nenasala operators locally</li> <li>Most operators were middle-aged people who were bound to the village due to family or other commitments.</li> <li>Operators were multi-skilled. No formal job roles or duties written down</li> <li>A prominent leader seems to drive all aspects, including recruitment.</li> <li>Considering officials changed, employee retention also depended on the length of the leadership</li> <li>If leaders were not in favour of fundraising or securing external financial sources, the ability to pay a Nenasala operator was</li> </ul>	<ul style="list-style-type: none"> <li>Many difficulties with training and development</li> <li>Village run Nenasalas did not have many patrons. As such, no funding for training operators and attract well-trained or qualified personnel</li> <li>Operators only skilled in the basic computer operations and equipment</li> <li>Operators secured training externally with their money to develop their own careers and job prospects</li> <li>The main dilemma was funding availability. This is a ‘Catch 22’</li> <li>No formal plan for staff development. Nenasala owners offered training courses, they conducted to junior staff.</li> <li>Skilled operators and lecturers were sourced externally at substantial cost, hindering Nenasala operations or its growth plans.</li> <li>Even if a good leader was elected, due to the rotational nature, benefits short-lived</li> <li>Youth saw Nenasala as an opportunity for employment and a stepping stone for greater job opportunities in ICT and BPO industries</li> </ul>	<ul style="list-style-type: none"> <li>Performance and rewards not focused on.</li> <li>Some operators received minor payment. Yet, volunteering was also prominent</li> <li>Income Nenasalas generated had to be fully reinvested in Nenasala development to increase its sustainability.</li> <li>Operators saw having employment as a reward, despite not getting sufficient remuneration</li> <li>General view was wages paid to operators and the service prices had to match the situation on the ground to get rural villages to use the services</li> </ul>

		<p>impacted.</p> <ul style="list-style-type: none"> <li>Lack of funding limited attracting a qualified individual, recruitment methods, and a candidate pool.</li> </ul>		
	Leadership & culture	Recruitment & job design	Training & development	Performance management & rewards
<p>Not-for-Profit Nenasalas</p> <p>– NGO Led</p>	<ul style="list-style-type: none"> <li>NGO-based Nenasalas were mainly operated by donor funding from parent NGO</li> <li>Managers were appointed to run those Nenasalas as employees of the parent organisations.</li> <li>The direction and strategy was set by NGO heads and officials. As such, real leaders of this model would be found within the NGOs and the INGOs.</li> <li>Operators were generally given the freedom to manage the day-to-day activities</li> <li>A prominent operator or a board member was clearly identifiable in successful operations of this model as the key person who was most knowledgeable in ICT.</li> <li>The parent NGO or INGO vision or culture dominated the Nenasala leader's vision.</li> <li>Having an NGO board behind Nenasala activity could also hinder its progress as the focus of NGO projects changed when NGO leaders changed.</li> </ul>	<ul style="list-style-type: none"> <li>NGOs did look for ICT qualified people within their recruitment.</li> <li>NGO advertised the Nenasala related positions in the local newspapers, asking for specific qualifications</li> <li>NGOs looked for staff that had similar skills to the NGO's internal ICT staff to keep standards uniform.</li> <li>Staff faced an interview, either in a panel format or with the NGO heads before selection</li> <li>NGO HR policies and guidelines applied to Nenasala staff</li> <li>Job design had little focus. No formal job descriptions specific to Nenasala.</li> <li>Recruitment was seen in a simpler light, although NGOs recruitment practices were more robust than the other not-for-profit community-based Nenasala models.</li> </ul>	<ul style="list-style-type: none"> <li>Comparatively more sophisticated level of training and development compared to the other not-for-profit community-based Nenasala models.</li> <li>Training provided by NGO to operate Nenasalas. Training limited to provision of services and administration of Nenasalas</li> <li>Specialised classes and training provided by external providers. NGOs relied on external recruiting for such skills.</li> <li>Gaining and maintaining skills required to work in Nenasalas was seen as the responsibility of the operators, as those skills also benefited the individual's advancement</li> <li>NGOs enlightened to the fact that training and education provided a key advantage in the marketplace and better quality of service to its clientele. As such, more effort seems to be spent on hiring the people with the right skills.</li> <li>NGO sector were more focused on retention of their most qualified staff for continuity and ROI.</li> <li>Training and development was not seen as a 'showstopper'</li> <li>NGOs focus on leadership</li> </ul>	<ul style="list-style-type: none"> <li>Operators expected and received wages</li> <li>NGO led Nenasala employees paid comparatively well, compared to other not-for-profit community-based Nenasala categories</li> <li>Not all Nenasalas make sufficient funds to cover wages every month, which had to be subsidised by the NGOs.</li> <li>NGOs were focused on Nenasala sustainability beyond the period of being subsidised by the NGOs.</li> <li>Operators and owners felt some pressure to perform because there was continuous scrutiny from the parent NGO</li> <li>Wages were not aligned to any performance measurement or target the NGO set</li> <li>Leaders did genuinely care and believe that good remuneration was required to attract good staff</li> </ul>

			development. NGOs have multiple layers of management and run team-building and leadership courses for potential management trainees	
	Leadership & culture	Recruitment & job design	Training & development	Performance management & rewards
For-Profit Nenasalas  - led by entrepreneurs	<ul style="list-style-type: none"> <li>Local entrepreneurs had high sense of SR with the intention of serving their local communities.</li> <li>Leaders had the highest focus on commercial viability</li> <li>Leaders exploited opportunities to make services affordable</li> <li>Generally avoided providing free services. They focused on quality at the right price that was affordable to the local community.</li> <li>Nimble and flexible approach of for-profit Nenasalas attributed to leadership.</li> <li>Motivated leaders operated the Nenasalas at a faster phase.</li> <li>Achieving success was also a heavy burden on the leaders</li> <li>Leaders were careful to create and nurture a work culture to get the best of people.</li> <li>This belief also extended to their clientele.</li> </ul>	<ul style="list-style-type: none"> <li>Most efficient and most innovative when it came to recruitment</li> <li>Paid particular attention to recruitment as a way to generate revenue</li> <li>More inclined to hire well-known computer tutors due to their celebrity power in attracting local students to these Nenasalas</li> <li>Hired competent multi-skilled operators at the best market price in order to have best ROI</li> <li>Recruitment impacted as young preferred bigger ventures than Nenasalas</li> <li>Some leaders saw recruitment as a secondary aspect as Nenasala was run as a family business</li> <li>Recruitment aligned to local conditions and what they could afford.</li> <li>Most staff recruited externally than internal development</li> <li>Preferred to recruit degree qualified youth. Usually linked to a specially funded project or e-venture</li> <li>Tried to source people in a just-in-time fashion, to save money</li> <li>No job designing and specific job roles. Low number of staff and the simple work activities undertaken in a Nenasala was the reason.</li> </ul>	<ul style="list-style-type: none"> <li>More focused on training compared to other not-for-profit community-based models</li> <li>Generally training replaced with recruitment</li> <li>Leaders believed that training was something that the employees would naturally attain for their marketability and career development</li> <li>Training and development not a priority for a transient work force</li> <li>Focused more on development of junior staff. Junior staff was cross-skilled to cover any unforeseen contingency with their higher paid skilled staff. They were cautious about skilling juniors too quickly. Such, training was done as an informal private agreement</li> <li>Leaders and operators were appreciative of each other's contribution, in this reciprocal and at times opportunistic relationship. This complex relationship was driven by the emphasis they put on education, skilled external recruitment and making money</li> </ul>	<ul style="list-style-type: none"> <li>Reward was tied to performance</li> <li>Entrepreneurial leaders had to acknowledge good performance of highly skilled staff and to manage expectation around payments</li> <li>Leaders and operators focused on alternative revenue generating schemes</li> <li>Operators knew how much money the Nenasala made. This meant that both parties were very realistic in their approach to remuneration.</li> <li>In larger Nenasalas where operators were removed from this realisation, operators had unrealistic remuneration expectations</li> <li>Operators also understood that success met better pay</li> <li>Owners paid operators market rates, compared to other models investigated</li> <li>Performance management was not focused on but leaders were aware of it more</li> <li>performance management automatically understood due to the small number of staff</li> <li>Under-performing staff was replaced. As the work arrangements were mainly casual or part-time this was not an issue.</li> </ul>

## Appendix B - Guide questions for interviews and focus groups

### Guide questions for interviews

Note:

- *Terminology such as Human Capital Systems and Drivers will be explained within the question/discussion in simpler understandable terms.*
- *Drivers of Human Capital Systems will be discussed one at a time, to get clear answers regarding each Driver.*

1. Can you please explain ICTAs Human Capital Systems that apply to ‘Nenasala telecentres’?

1.1. If there are documents relating to the above could you please provide them?

2. If there is a defined HR policy for Nenasala telecentres,

2.1. Have HR practices outside the policy being uncovered within ‘Nenasala’ telecentres?

2.2. If so, what are the reasons for those?

3. Could you explain the following segments of ICTAs Human Capital Systems that apply to ‘Nenasala telecentres’?

3.1. Leadership

3.2. Culture

3.3. Performance management and rewards

3.4. Recruitment

3.5. Training and development

3.6. Succession and career planning

3.7. Work and job design (i.e. job characteristics and skills)

4. According to your experience, please order the following segments of ICTA’s Human Capital Systems in level of importance as it relates to ‘Nenasala’ telecentres and explain,

☐ Leadership

☐ Culture

☐ Performance management and rewards

☐ Recruitment

☐ Training and development

☐ Succession and career planning

☐ Work and job design (i.e. job characteristics and skills)

5. Are the following segments of ICTA's Human Capital Systems uniform or do they differ among for-profit *OR* non-profit 'Nenasala' telecentres?

- Leadership
- Culture
- Performance management and rewards
- Recruitment
- Training and development
- Succession and career planning
- Work and job design (i.e. job characteristics and skills)

6. Are the following segments of ICTA's Human Capital Systems uniform or differ according to different 'Nenasala' telecentre sponsoring parent organisations?

- Leadership
- Culture
- Performance management and rewards
- Recruitment
- Training and development
- Succession and career planning
- Work and job design (i.e. job characteristics and skills)

7. Please try to explain whether following segments of ICTA's Human Capital Systems have changed in the past?

- Leadership
- Culture
- Performance management and rewards
- Recruitment
- Training and development
- Succession and career planning
- Work and job design (i.e. job characteristics and skills)

7.1. Are these expected to change with the anticipated future trends?

- Leadership
- Culture
- Performance management and rewards
- Recruitment
- Training and development
- Succession and career planning
- Work and job design (i.e. job characteristics and skills)

8. Could you please provide details whether there are other Human Capital aspects beneficial to 'Nenasala' Telecentres other than the segments discussed so far?
9. Do you believe following segments of ICTA's Human Capital Systems contribute *OR* not to sustainability of 'Nenasala' telecentres? Please explain your answer.
- Leadership
  - Culture
  - Performance management and rewards
  - Recruitment
  - Training and development
  - Succession and career planning
  - Work and job design (i.e. job characteristics and skills)
10. Please try to elaborate ICTA's Human Capital System's contribution to 'Nenasala' Telecentre Sustainability, according to your view outside the above factors listed in Q-9?
11. Can you please explain ICTA's Corporate Social Responsibility synergies that apply to 'Nenasala' telecentres?
- Economic – Be profitable without exploiting people
  - Legal –Work within the law
  - Ethical – Be ethical
  - Philanthropic - Be a good corporate citizen towards society
12. What aspects of Nenasala's Corporate Social Responsibility have been more successful and why?
- Economic – Be profitable without exploiting people
  - Legal –Work within the law
  - Ethical – Be ethical
  - Philanthropic - Be a good corporate citizen towards society
13. Do you believe that Corporate Social Responsibility that is aimed at bridging the digital divide is impacting Nenasala sustainability? If so, how?
- Economic – Be profitable without exploiting people
  - Legal –Work within the law
  - Ethical – Be ethical
  - Philanthropic - Be a good corporate citizen towards society

14. Are the following segments of Corporate Social Responsibility uniform or do they differ among ...

14.1 For-profit *OR* not-for-profit 'Nenasala' telecentres?

- Economic – Be profitable without exploiting people
- Legal –Work within the law
- Ethical – Be ethical
- Philanthropic - Be a good corporate citizen towards society

14.2 Different 'Nenasala' telecentre sponsoring parent organisations?

- Economic – Be profitable without exploiting people
- Legal –Work within the law
- Ethical – Be ethical
- Philanthropic - Be a good corporate citizen towards society

15. According to your view, are there any other aspects of Nenasala Corporate Social Responsibility that contribute to 'Nenasala' telecentre sustainability?

16. Do you like to speak about any other aspects related to our topic (i.e. how ICTA/ Nenasala HR policies and CSR contribute or hinder Nenasala's sustainability)

## Guide questions for focus groups

Note:

- *Terminology such as Human Capital Systems and Drivers will be explained within the question/discussion in simpler understandable terms.*
- *Drivers of Human Capital Systems will be discussed one at a time, to get clear answers regarding each Driver.*

1. Can you please explain ICTA's Human Resource policies that apply to 'Nenasala' telecentres?

1.1. If there are documents relating to the above could you please provide them?

2. If there is a defined HR policy for Nenasala telecentres?

2.1. Have HR practices outside the policy been practised in your local 'Nenasala' telecentres?

2.2. If so, what are the reasons for those?

3. Could you explain the following segments of ICTA's Human Resource policies that apply to 'Nenasala' telecentres,

3.1. Leadership

3.2. Culture

3.3. Performance management and rewards

3.4. Recruitment

3.5. Training and development

3.6. Succession and career planning

3.7. Work and job design (i.e. job characteristics and skills)

4. According to your experience, please order the following segments of ICTA's Human Resource policies in level of importance as it relates to 'Nenasala' telecentres and explain,

☐ Leadership

☐ Culture

☐ Performance management and rewards

☐ Recruitment

☐ Training and development

☐ Succession and career planning

☐ Work and job design (i.e. job characteristics and skills)

5. Are the following segments of ICTA's Human Resource policies uniform or do they differ among for-profit *OR* non-profit 'Nenasala' telecentres?

- Leadership
- Culture
- Performance management and rewards
- Recruitment
- Training and development
- Succession and career planning
- Work and job design (i.e. job characteristics and skills)

6. Do the following segments of ICTA's Human Resource policies uniform or differ according to different 'Nenasala' telecentre sponsoring parent organisations?

- Leadership
- Culture
- Performance management and rewards
- Recruitment
- Training and development
- Succession and career planning
- Work and job design (i.e. job characteristics and skills)

7. Please try to explain whether following segments of ICTAs Human Resource policies have changed in the past?

- Leadership
- Culture
- Performance management and rewards
- Recruitment
- Training and development
- Succession and career planning
- Work and job design (i.e. job characteristics and skills)

7.1. Are they expected to change with the anticipated future trends?

- Leadership
- Culture
- Performance management and rewards
- Recruitment
- Training and development
- Succession and career planning
- Work and job design (i.e. job characteristics and skills)

8. Could you please provide details whether there are other Human Resource aspects beneficial to 'Nenasala' telecentres other than the segments discussed so far?

9. Do you believe following segments of ICTA's Human Resource policies contribute *OR* not to Sustainability of 'Nenasala' telecentres? Please explain your answer.

- Leadership
- Culture
- Performance management and rewards
- Recruitment
- Training and development
- Succession and career planning
- Work and job design (i.e. job characteristics and skills)

10. Please try to elaborate ICTA's Human Resource policies' contribution to 'Nenasala' telecentre Sustainability, according to your view outside the above factor listed in Q-9?

11. Can you please explain ICTA's Corporate Social Responsibility synergies that apply to 'Nenasala' telecentres?

- Economic – Be profitable without exploiting people
- Legal –Work within the law
- Ethical – Be ethical
- Philanthropic - Be a good corporate citizen towards society

12. What aspects of Nenasala's Corporate Social Responsibility have been more successful and why?

- Economic – Be profitable without exploiting people
- Legal –Work within the law
- Ethical – Be ethical
- Philanthropic - Be a good corporate citizen towards society

13. Do you believe that Corporate Social Responsibility that is aimed at bridging the digital divide is impacting Nenasala Sustainability? If so, how?

- Economic – Be profitable without exploiting people
- Legal –Work within the law
- Ethical – Be ethical
- Philanthropic - Be a good corporate citizen towards society

14. Are the following segments of Corporate Social Responsibility uniform or do they differ among ...

14.1 For-profit *OR* non-profit 'Nenasala' telecentres?

- Economic – Be profitable without exploiting people
- Legal –Work within the law
- Ethical – Be ethical
- Philanthropic - Be a good corporate citizen towards society

14.2 Different ‘Nenasala’ telecentre sponsoring parent organisations?

- Economic – Be profitable without exploiting people
- Legal –Work within the law
- Ethical – Be ethical
- Philanthropic - Be a good corporate citizen towards society

15. According to your view, are there any other aspects of Nenasala Corporate Social Responsibility that contribute to ‘Nenasala’ telecentre Sustainability?

16. Do you like to speak about any other aspects related to our topic (i.e. how ICTA/ Nenasala HR policies and CSR contribute or hinder Nenasala’s Sustainability)