Impact Assessment of Indian Common Services Centres

Prepared for the Ministry of Communication and Information Technology Government of India

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Prelude

The Ministry of Communication and Information Technology approached the International Telecommunications Union with a request to independently assess the impact of one of its flagship programmes under the National e-Governance Plan, the **Common Services Centres**, with a view to strengthen its outreach to citizens and to improve its efficiency by bringing about mid course corrections. This report submitted by the International Telecommunications Union aims at presenting recommendations to the Department of Electronics and Information Technology (DeitY), the main implementer of the programme, and to other actors in the telecentre ecosystem in India as a means to enhance their work practices and to ensure that the overall objectives of the programme are achieved. This study, by no means, aims to pronounce a verdict on the Common Services Centres programme of the DeitY. However, it aims at highlighting areas of concern and offering potential remedies that could be undertaken, while also appreciating the achievements of the programme in the making.

Table of contents

List of abbreviations

APTN	Asia-Pacific Telecentre Network
AGR	Adjusted Gross Revenue
ATACH	Chilean National Network of Telecentres
BCs	Business Correspondents
B2C	Business to Citizen Services
CCC	Course on Computer Concepts
CSC	Common Services Centres
DeitY	Department of Electronics and Information Technology
DIT	Department of Information Technology
EDS	Electronic Delivery of Service
FAO	Food and Agriculture Organisation
GoI	Government of India
G2C	Government to Citizen Services
HCDG	Hill Country Disabled Group
HDI	Human Development Index
ICT	Information and Communication Technology
IDI	ICT Development Index
IDRC	International Development Research Centre
IGNOU	Indira Gandhi National Open University
IL&FS	Infrastructure Leasing and Financial Services Ltd
IT	Information Technology
ITU	International Telecommunication Union
MDGs	Millennium Development Goals
NeGP	National eGovernance Plan
NIC	National Informatics Centre
NIELIT	National Institute of Electronics and Information Technology
NLSA	National Level Service Agency
PAWAN	*Panchayat* Area Wide Area Network
PhilCeCNet	Philippine Community eCentres Network
PMA	Programme Management Agency
PSGAs	Public Services Guarantee Acts
PPP	Public-Private Partnership
RBI	Reserve Bank of India
SCAs	Service Centre Agencies
SDA	State-level Designated Agency
SDCs	Skill Development Centres
SDGs	Sustainable Development Goals
SPV	Special Purpose Vehicle
SWAN	State Wide Area Network
TSTSP	Technical Support and Training Support Provider
Unimes	Universidade Metropolitana de Santos
UNESCO	United Nations Educational, Scientific and Cultural Organisation
USOF	Universal Service Obligation Fund
VLEs	Village Level Entrepreneurs
WHO	World Health Organisation

1 Executive summary

The National eGovernance Plan (NeGP) of the Government of India envisions providing Government services to the citizens at their doorsteps at an affordable cost, and in a sustainable manner, as a service to its citizens. To achieve this under the NeGP framework, more than 99,000 Common Services Centres[1] (CSCs) have so far been established in rural areas as means of providing access to services and technology as well as assuming the task of assisting citizens with the provision of both private and public services. These centres, most of which have been operational for more than two years with varying degrees of success, are now entering the second phase of implementation.

The CSCs are run by Village Level Entrepreneurs (VLEs)[2], who are chosen through a careful selection process adopted by Service Centre Agencies (SCAs) that have entered into a service level agreement with the State Governments within the Public-Private Partnership (PPP) model. A Special Purpose Vehicle (SPV) called the CSC eGovernance Services India Limited, has been established to oversee the functioning of these centres and hand-hold and build the required capacity among the VLEs to deliver services to the citizens. There are also plans to expand the number of these centres from its current spread in over 99,000 villages to each and every 250,000 *Panchayat* villages in the nation.

Prior to upscaling the centres, it is important for the Government of India (GoI) to assess the impact generated by the CSCs, both with a view to learning lessons and taking forward the best model for further implementation. With that view, the GoI requested the International Telecommunication Union (ITU), the global agency that promotes access to telecommunication services for ordinary citizens around the world, to evaluate and assess the current status of the 99,000 CSCs in an objective manner to help strengthen opportunities for turning the programme into a success and helping it in achieving its objectives, including that of scaling up. There was a special request also to identify best practices that have emerged in the CSC scheme so far, while also highlighting the challenges facing the programme. The intention is to learn from the challenges as well as celebrate and replicate the successes.

1.1 Objectives of the study

The main objective of the study is to assess the impact generated by the CSCs. However, the specific objectives of the study are two-fold:

First, it aims to identify challenges and opportunities facing the CSC programme, with a view to strengthen its goals, and thus, the programme implementation itself. Secondly, the study aims at highlighting the impact achieved so far by the CSC programme, so as to help communicate the results effectively to different stakeholders.

In short, the objectives of the study can be summarised as:

- Identifying the challenges facing the CSC programme and the opportunities.
- Assessing the early impact made by the programme in various geographies, using various approaches and models.

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[1]   CSCs are Indian telecentres that are being established under the framework of Indian National eGovernance Plan. The CSCs are expected to facilitate citizens' access to both public and private services in rural areas.

[2]   The CSCs are staffed (and in most cases, also owned) by VLEs, who are hand-held and supported by a SCA identified by the State-level Designated Agency (SDA) of the provincial Governments. The Department of Electronics and Information Technology (DeitY) is responsible for ensuring programmatic, policy-level and M&E oversight.

The above steps would help to highlight the outcomes and achievements of various models that prevail, while also specifying the issues that require immediate attention.

The ITU study, therefore, focuses on offering the status report of the CSCs as well as identifying and highlighting the best practices and successful models within the scheme. In doing so, the study will also highlight the challenges facing the scheme, especially the ones that take the scheme away from realising the vision of NeGP for the CSCs. Finally, the study is also used as an opportunity to offer a few recommendations that the GoI and its agencies responsible for CSC implementation would consider, while consolidating the current scheme and at the time of scaling up.

A three month long field study, combined with numerous face to face interviews with all stakeholders at the Central and State levels helped to gain an understanding of the current situation that prevails in the implementation of the CSC scheme. In addition, the comparison of the Indian CSCs with the global telecentre movement helped in highlighting the best practices that have emerged in India over the last two years or so. It also helped in offering recommendations for strengthening the scheme. With changes that emerged at the policy-level, it was deemed necessary for the study to also recommend certain concrete measures to ensure the achievement of outcomes rather than mere outputs in the scheme.

1.2   Highlights of findings

- India has more functional telecentres than the rest of the world combined. The 99,000 plus CSCs, and tens and thousands of privately-run public access points offer opportunities for introducing innovative approaches to connect citizens with services that meet their daily needs. Attempts undertaken at the Central, State and local levels in this direction are highly encouraging, although these often face as many challenges as successes. However, the political will and commitment shown by the executive and the administration at both the Central and State levels are noteworthy and are critical for steering the movement forward.

- Nowhere in the world do we witness the proliferation of as many computers as we see in India, combined with connectivity-spread and access opportunities among communities, most of which are classified as poor, below the poverty line, and living in remote locations. It is commendable that over the last eight years, a number of measures by both private and public sector entities have provided easy access to communication facilities and essential services to the population that need them the most. This trend requires to be encouraged with policies and practices conducive to 'access spread'.

- The fifteen years-long telecentre experience in India has produced multiple management models, resulting in practices that are deemed successful in certain pockets. The CSC programme, tipped as the world's largest telecentre scale-up, was chosen to be implemented under a Public Private Partnership (PPP) model unique to the Indian entrepreneurial spirit; and has been largely successful so far in arriving at a number of over 99,000 out of the 100,000 intended centres. The success in quantity now needs to be translated into strides taken to succeed qualitatively. There is need to emphasise upon footfalls, transactions, engagement and participation by communities at each of those CSCs. A citizen engagement strategy at CSCs is already evolving, leading to sustaining CSC operations for the future.

- Although there is a general belief that the spread of mobile phones would eliminate the need for people to visit telecentres, but there is no indication that these phone are likely to replace telecentres in India. On the contrary, it is evident that the 700 million people, who live in rural areas, are using the CSC services frequently, more so after acquiring a mobile phone. The VLEs have intelligently started marketing their services to mobile subscribers in a personalised manner, thus increasing footfalls into their centres. This trend shall, no doubt, continue at least until 2020. Any investment in CSCs would continue to result in producing high quality intermediary professionals, much required for achieving a society that is inclusive.

- As new value-chains emerge for telecentre-led services that people require, there is a need for identifying and strengthening the CSC ecosystem unique to Indian conditions, especially 'the economy of scale' that is presented as an opportunity to sustain operations. The model proposed by Professor M. S. Swaminathan in his Mission 2007 initiative demonstrates how a telecentre ecosystem can be built.

- The role of SCAs has been highly critical during the roll-out phase. While some of them have shown their commitment throughout the roll-out, their engagement was not achieved without early hiccups, and a few of them were replaced. Such a move has not only caused delay in programme implementation, but has also forced the system to define the role of the SCAs in finite terms at the State level. The time has come to further explore and redefine their role for the next phase.

- The definition of 'roll-out' is not uniform throughout the nation. SCAs have not been consistent with guaranteeing the required infrastructure at the CSCs. The early enthusiasm that prevailed amongst a few SCAs in many parts of the nation seems to have died down, thus, resulting in maintaining CSCs that are not well resourced. There is a real need to define 'roll-out' and ensure some level of uniformity across the board. It is critical to guarantee service level standards at the CSCs, with clearly spelt-out service charters.

- There is clearly an issue of branding unattended by the stakeholders. With branding, unified service charters and service guarantee will be desired by the service providers. At present, there is neither any commonness among the CSCs, nor is there an appetite for achieving one. While regional flavor is deemed necessary in the programme, the required national level branding has not been discussed yet in detail by the stakeholders. The Sri Lankan experience of branding *'Nenasalas'* (the Sri Lankan version of CSCs) is one powerful model that the Indian Government might consider emulating.

- The promises made to VLEs on the availability of eGovernment services offered some hope in the very beginning. However, the absence of these services for a very long time has made the VLEs to rediscover their business opportunity and USP, resulting in some fruitful private sector partnerships in the CSC scheme. These partnerships are critical, therefore, steps should be undertaken to widen these partnership while sustaining the current partners.

- Despite various steps undertaken by the IT departments to bring government services through a single delivery platform, silo effects within the government still persist. If such as a scenario continues, the promises made through the public service guarantee act will be difficult for the government to achieve. There is a felt need for empowering the IT departments, especially the IT secretaries at the state level to further the governmental objectives. There are good lessons to be learnt from the experiences of European nations in this direction.

- VLEs have continued to be at the fore-front of offering private and public services, often serving as ambassadors for the scheme; however, it is surprising to observe that they have also been the most neglected lot in the scheme. They have not been supported enough with any capacity building scheme to help improve their business practices. Most of the SCAs, if not all, have not fulfilled the training responsibility rested upon them. Certain efforts have been undertaken by the CSC SPV in this regard, and it is important to deepen this activity with set targets and outcome based indicators.

- There is no formal or informal network of VLEs present at the national or the State level. Networks enable the telecentre managers and operators to share their experiences and learn from each other. But, there is hardly any evidence of peer-learning among the VLEs, even at the local level. Certain SCAs have encouraged District level meetings on a regular basis, but, by and large, the VLEs do not have a learning forum; and their grievances and knowledge needs are met only by their SCAs. There is a felt need for empowering VLEs with appropriate support systems. In the forty odd telecentre nations around the world, priority has been accorded to developing national level telecentre networks. The best examples are seen in nations, such as Colombia, Chile, Thailand, Philippines and in

Europe. These nations have invested in building capacity among the managers of these networks to facilitate learning among the telecentre operators.

- Alternative and competing schemes are being introduced at the State level as State Government initiatives, leading to re-discovering the model of CSCs. The new initiatives emerging due to eDistrict programmes and the Public Services Guarantee Acts being introduced at the State-level offer opportunities to operationalise telecentres with responsibilities primarily entrusted upon the District eGovernance societies. Experienced and committed SCAs shall use their early mover advantage to become allies in these new schemes as well.

- Overall, majority of 99,000 CSCs are beginning to show signs of sustainable operations in villages after having traversed their own learning curve. Although both the Centre and States have shown intentions to help succeed, the success in terms of coverage has not been translated into depth and quality of service to citizens.

- The CSCs cannot be pronounced a success story unless these centres graduate from their dependency on utility services for generating revenue. Because of the lack of value added G2C services, such as information about various Centre/State sponsored welfare schemes, health and agriculture related information, the VLEs resort to other means of maximising their profits. The Government needs to take steps to deliver more value added G2C services through the CSCs to make them creditable. It would also enable the CSC business model to go beyond the VLEs' potential income opportunity to the idea of developing a cost-benefit analysis tool to track the benefits accrued to rural citizens through the CSCs. Such a move would help to discover a CSC-oriented sustainable business model. It is important to explore opportunities for the national/state level telecentre networks to become channels of service delivery to help attain sustainability.

- There are more opportunities to succeed; and the prospects of success in the CSC programme are brighter with the appointment of CSC SPV as a facilitator. While the DEITY leads in program development, the CSC SPV established under the Ministry of Communication and Information Technology at the Central level compliments its efforts in partnership development, and the State Government machinery responsible for monitoring, advising and facilitating the work of the CSC programme. Certain helpful methodologies to measure impact can be considered. The 'Outcome Mapping' model promoted by the Canadian International Development Research Centre (IDRC) is one such helpful methodology."

1.3   Key recommendations

1.3.1   USO Funds for addressing access and content needs of the CSCs

In India, there is hardly any evidence to demonstrate the use of the USO Fund in stimulating the telecentre movement, especially the CSCs. Ten years since the universal support policy came into effect on 1 April 2002, five percent of the Adjusted Gross Revenue (AGR) of all telecom service-providers has been collected to form the Universal Service Obligation Fund (USOF). As of March 31, 2012, of the 43,947.49 Cr collected for the Fund, 15,159.4 Cr have been disbursed, leaving 21,839.45 Cr as the balance after paying 6948.64 as spectrum charges to BSNL[3]. It is important to look at the experiences of other nations, such as Ecuador, Chile and Colombia, to ensure utilisation of funds in the telecentre movement as a priority.

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[3]   USO Fund status available at: http://www.usof.gov.in/usof-cms/usoffundstatus.htm

1.3.2 Marrying CSC objectives with national goals, such as the Millennium Development Goals (MDGs) or the Sustainable Development Goals (SDGs) is desirable

The SDAs have their own models of implementation. In certain States, there has been a re-thinking on strategies, resulting in uneven spread of CSCs, and its quality. The vision of CSCs, which is to bring citizens closer to Government and private services, has only partially been fulfilled so far. There is hardly any evidence to prove that the CSCs have contributed to achieving their own national goals as well as the ones internationally committed by the Indian leadership. Numerous Governments have used eGovernance as a means to achieve their national priorities. In India, conceiving a special programme in this direction that is married to national goals, such as the MDGs, SDGs or the Human Development Index (HDI), shall help to give a sense of purpose to the CSCs.

1.3.3 Legal and institutional framework to maximise the use of CSCs

In India, the last decade belonged to the era of Right to Information, and this decade shall witness passage of laws that guarantee public service delivery. The Right to Information Act of 2005 that remedied the shortcomings of the Freedom of Information Act of 2000 paved the way for Indian citizens to access information as their right. In 2008, the Second Administrative Reforms Commission[4] emphasised upon the need for a legal framework to implement e-Governance as the means to guarantee access to public information services. The Electronic Delivery of Service (EDS) Bill at the Centre and the Public Services Guarantee Acts (PSGAs) that are coming into force at the State level offer a lot of opportunities to the CSCs, as the primary access points to fulfill the mandate as laid out in these Acts.

1.3.4 Encouraging local level R&D to stimulate local innovations and contributions to CSCs

In recent years, the world has witnessed two types of transformation, thanks to the pervasive use of Information and Communication Technology (ICT) tools at the grassroots level. First, the idea of progressive transformation possibilities that had started seeing ICTs as instruments for economic and social gains since the mid-1990s. Secondly, the idea of disruptive transformation that considers ICT as an enabler to involve communities that otherwise could not be reached that easily, such as the marginalised, the poor, the rural population, those in conflict, and the disabled. This was possible, thanks to the funding support offered by numerous Governments in the developing world. In India, unfortunately, the marginalised population has not taken to shaping up the ICT tools for their own benefits yet. With District level e-Governance Societies and the District Magistrates becoming responsible for guaranteeing the public with timely access to information and services, it is important to empower them with funds that could encourage innovations at the local levels, thus moving the CSCs beyond their role as access points.

1.3.5 CSC SPV for stimulating State-level partnerships for delivering services through CSCs

A Special Purpose Vehicle (SPV) named CSC eGovernance Services India Limited was established in July 2009 as a body that would monitor the scheme with a view to guaranteeing outcomes to the Government at both the State and Central levels. It is important that the SPV not only forges partnerships, but also ensures undertaking responsibilities for facilitating the functioning of these partnerships. Often, Government programmes failed due to lack of its implementation capacity, especially while facilitating large partnerships. Not limited to nation-wide partnerships, such efforts would require to be tailor-made at the State level. The SPV needs to be actively working alongside the SDAs with State level strategies rather than limiting its role at the national level.

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[4] 'Promoting e-Governance', 11th Report of the Second Administrative Reforms Commission, December 2008.

1.3.6   Consider recognising all public access points for CSC upscaling plan

While there are over 99,000 CSCs, it is believed that an equal number of public access points are operational in the 600 odd Districts of the nation. These are public libraries, privately-run and managed telecentres, numerous NGO initiatives, and certain number of cyber cafes that have graduated from being mere access points to be recognised as telecentres. There are a good number of computer labs and telecentres functional in secondary schools too. It becomes imperative for DeitY to recognise these centres as CSCs so as to reach the figure of 250,000 centres with ease. However, service level agreements with these entities would require to be drawn in a manner that the quantity is matched with the quality of service expected of these access points.

1.3.7   Developing service level charter to move towards professionalising the CSCs

The three '**C**' approach – **C**ustomer-driven service standards; **C**ommunication; and **C**ontrol – as followed in Europe ensured that all organisations that offered Government services were committed to customer relations and complied to have a Citizen Charter at the policy as well as practice levels, adhering to service guarantee and service standards. Despite the fact that the CSCs are operated by private entrepreneurs, it is the duty of the Government to ensure minimum level service standards guaranteed at these centres, for they offer Government services, undertaking the role of front-end service windows in villages. With the PSGAs and the EDS Bill becoming a reality, without a Citizen Charter, the Government will find it hard to ensure quality of service at the CSCs.

1.3.8   Developing common branding to achieve impact

The five year long experience of CSCs has resulted in a possibility of creating an invaluable and strong brand that the citizens can identify with in their daily lives. It is interesting to note that the basic premise of the CSC scheme, which is 'decentralised implementation' got mixed up with the idea of its image, purpose and the intent at the federal level. Without the branding, like the one achieved in the *Nenasala* movement of Sri Lanka, for example, the Indian CSC movement would be an invisible actor with little or no capacity to make an impact in the minds of people for a long time to come. There shall not be any confusion in the minds of any stakeholder on the national level oneness and the purpose of CSCs. It is important to see CSCs as a national brand rather than State level initiatives.

1.3.9   Constitution of Indian CSC network as a means to encourage peer-learning

Most of the movements thrived upon the very idea of convening and coming together. The cooperative movements, self-help groups, social transformation movements and even entrepreneurships have seen solidarity among themselves. There are examples of professional organisations using forums for their own benefits, be it learning, lobbying or networking. The CSC movement is deprived of any networking opportunity at the national, State, District or even at the Block levels barring a few isolated examples. Each of the forty odd telecentre nations around the world has a national network in place. The Indian CSC movement, without wasting any more time, requires to establish its national network.

1.3.10   Continuous professional development for CSC stakeholders

Four types of stakeholders, essentially, are involved in the work related to CSCs in India. They are:
- Policy-makers at the Central, State and District levels, who have authority over the way the CSCs function, deliver and fulfill all service standards.
- CSC network managers, who, currently, are engaged as SCAs and their allied service providers, who have a mandate to use the CSC network.
- VLEs, who work as front line knowledge workers as well as managers of their own micro and mini-enterprises.

- Communities that use CSCs for meeting their own daily needs.

With opportunities expanding each day for the provision of services offered by both public and private sector entities, the CSC work at different level only gets complicated. To address this, a full-fledged capacity building programme to educate and train all actors is the key.

1.3.11   Consider investing in developing a CSC ecosystem

Professor M. S. Swaminathan was the first individual to draw out a plan for strengthening and sustaining telecentres. He professed, way back in 2003, the need for developing an ecosystem specific to Village Knowledge Centres, which is applicable to the CSCs. He described his model through the five 'C' approach for telecentres, which means that each of the five pillars ought to be developed in order to sustain telecentre operations. Investments are required to be made to succeed in achieving: a) **C**onnectivity and low-cost access devices; b) **C**ontent and services that are need and demand-based; c) **C**apacity building programme for all stakeholders; d) **C**oordination of services at the local level; and, e) **C**are and management and design of business model as per local conditions. Developing each of the above pillars requires investment, and it is important to do so in order to give the CSC movement an opportunity to succeed.

1.3.12   Develop outcome mapping exercise to establish credibility and long-term sustainability

Although the CSCs have undertaken to perform certain monitoring and evaluation functions at various levels, it is evident that the CSC SPV would require to offer leadership in measuring the impact of CSCs in the lives of people, both in quantitative and qualitative terms. This requires systematic data gathering, monitoring and performance review efforts to ensure that the ongoing investments do indeed result in outcomes anticipated from the programme, and that the CSCs are able to contribute to the vision enshrined in the NeGP. Although many assessment methodologies and techniques, such as participatory evaluation, performance management, learning and development and simple evaluation techniques are available in the development sector, it is suggested that the CSC SPV uses the 'Outcome Mapping' technique for this purpose.

2   Background

In 2006, the Government of India approved the National eGovernance Plan (NeGP) with the vision of providing Government services at the Central, State and local levels to citizens at an affordable cost, at an easily accessible place in an integrated manner so as to reduce the gap between the citizen and the Government. The Department of Information Technology (DIT), now known as the Department of Electronics and Information Technology (DeitY), was entrusted with the responsibility of implementing the NeGP in its fullness.

It was envisioned that four programme pillars were required to realise the goals of NeGP. Apart from the State Wide Area Network (SWAN), the State Data Centres (SDC), and the Government digitisation projects in a mission mode (MMPs), some 100,000 service delivery points, more than 90 percent of which were supposed to be in rural areas, were planned. These delivery points, popularly known as the Common Services Centres (CSCs) were to be established in every other village in a honey-comb model, offering private, Government and social services to citizens of India. Each CSC was expected to cover a cluster of five to seven villages, thus covering the 600,000 plus villages of the nation.

The services offered by the CSCs were anticipated to span across various sectors, such as telecommunications, agriculture, health, education, livelihoods and entertainment. These access points were also expected to support the delivery of FMCG, banking and financial services, utility payments, etc. while also supporting data collection and data processing for Government schemes. CSCs were, thus, expected to be the front-end customer service centres of the Government and other private entities that were interested in using them.

The main aim of the CSC programme was to deliver Government services to citizens. However, realising the opportunities presented by ICTs, the CSCs were also positioned as change agents in rural India, promoting entrepreneurship, building rural capacities and livelihoods that enabled community participation and collective action for social change. Such a bottom-up approach to bring about change in rural India, needless to say, positioned the CSC programme as the cornerstone of the NeGP.

To implement the programme, a Programme Management Agency (PMA) was appointed to assist the DeitY in its first phase. The PMA, known as the National Level Service Agency (NLSA) was entrusted with State-specific implementation mandate and eventual roll-out of the scheme by working closely with the SDA, identified for the purpose. During the first phase itself, a SPV called the CSC eGovernance Services India Limited was launched to offer further support to the scheme. It was also envisaged that the NLSA's role would be, eventually, subsumed by the SPV.

2.1   The Public Private Partnership model of CSC scheme

The PPP model put in place for the CSC scheme involves the private sector entities, mainly for offering services, livelihood opportunities and linkages. The social sector plays a key role in developing content pertaining to community needs, offering knowledge-based services and training to both communities and CSC operators. The public sector's mandate is fulfilled through the provision of eGovernment and offline services of the Government in addition to the financial support offered to the VLEs through the SCAs.

A three tier-structure consisting of the CSC manager, known as the Village Level Entrepreneur (VLE); the Service Centre Agency (SCA), which identifies and nurtures the VLE, and a State Designated Agency (SDA) identified by the State Government for assuming responsibility, roll-out, management and monitoring of the CSC scheme at the State level was envisaged. The CSCs established for the purpose of meeting citizens' needs would, thus, not confine themselves to providing only Government services, rather they would function as common or community service centres fulfilling citizens' all round daily needs. Keeping such a philosophy in mind, right from the design stage, these centres were developed in such a way that the infrastructure support offered through Government efforts would be made available to private parties, who had relevant services or those agencies that had the capacity to develop new services pertaining to citizens' needs.

Figure 1. The PPP Framework
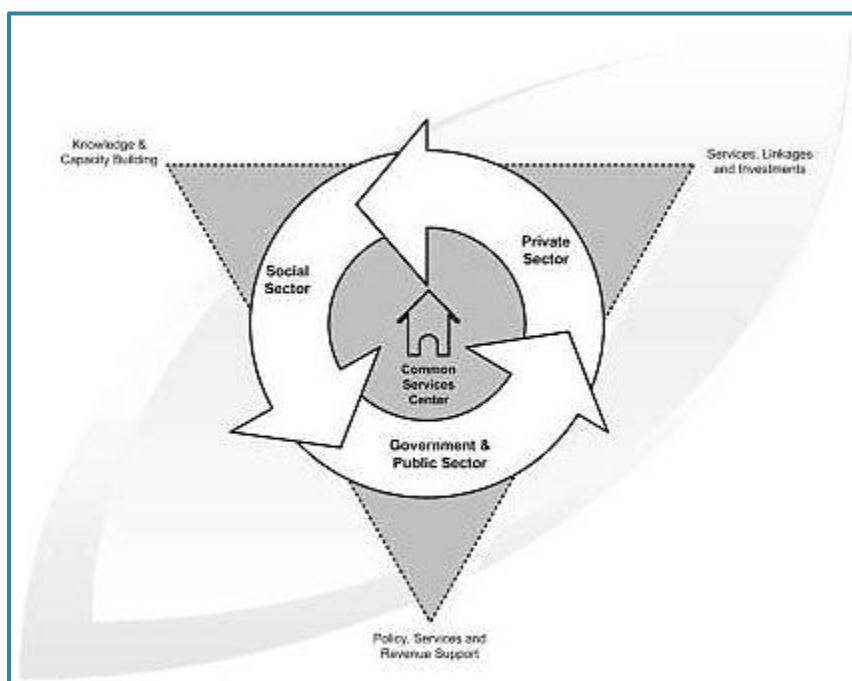
The VLE is the key to the success of the CSC operations. While content and services are important, it is the VLE's entrepreneurial ability that would ensure CSC sustainability. A good VLE would not be one, who has financial muscle only, but somebody, who has entrepreneurial traits, strong social commitment as well as respect within the community. The quality of service at the CSCs would be as effective as the quality of VLEs running them. Selection and proper training of the VLEs, therefore, would play a vital role in making the CSC a success.

While the VLE is seen as the main reason for the success of CSC operation, the SCA is seen as the prime developer and the driver of the CSC ecosystem. The SCA is currently supported, monitored and managed by the State level designated authority, the SDA in specified areas of operations. The responsibilities shouldered by the SCAs include:

- Identifying and training the VLE;
- Establishing the CSC in consultation with the VLE, either directly or through the VLE as the investor;
- Identifying and organising required applications and services pertaining to the locality and its population;
- Harnessing the State network;
- Supplying, aggregating and updating content;
- Entering into service level agreements with service providers, who can meet user needs.

Figure 2. Implementation Framework of the CSC Scheme

Source: http://csc.gov.in/
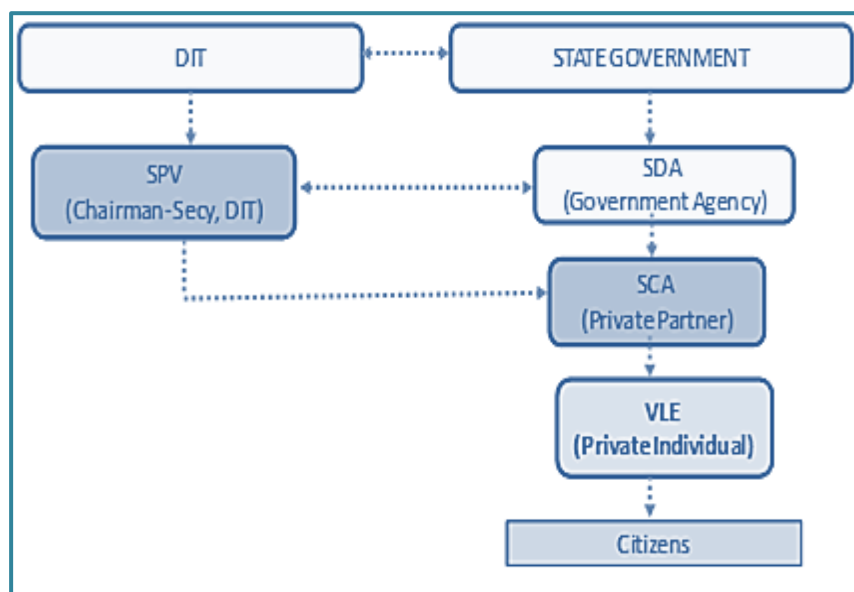
3.   Current Status of CSCs in India

As of December 31, 2012, India has already rolled-out 99,247 CSCs, with only the States of Haryana, Delhi and Nagaland lagging far behind their target numbers. While 11 States have completed the roll-out, eight others are closing in on their target numbers. The southern States of Tamilnadu and Karnataka have to work hard to meet their targets. However, thanks to certain States, such as Kerala, Gujarat, Maharashtra and Madhya Pradesh, the country-wide target of 100,000 is in sight within months.

In addition to the CSCs, many States have launched additional schemes, such as the Lok Sevak Kendras as a means to deliver Government services guaranteed under the Public Services Guarantee Acts passed in their respective States.

Figure 3. Progress of CSC as at 31 December 2012

Source: http://csc.gov.in/
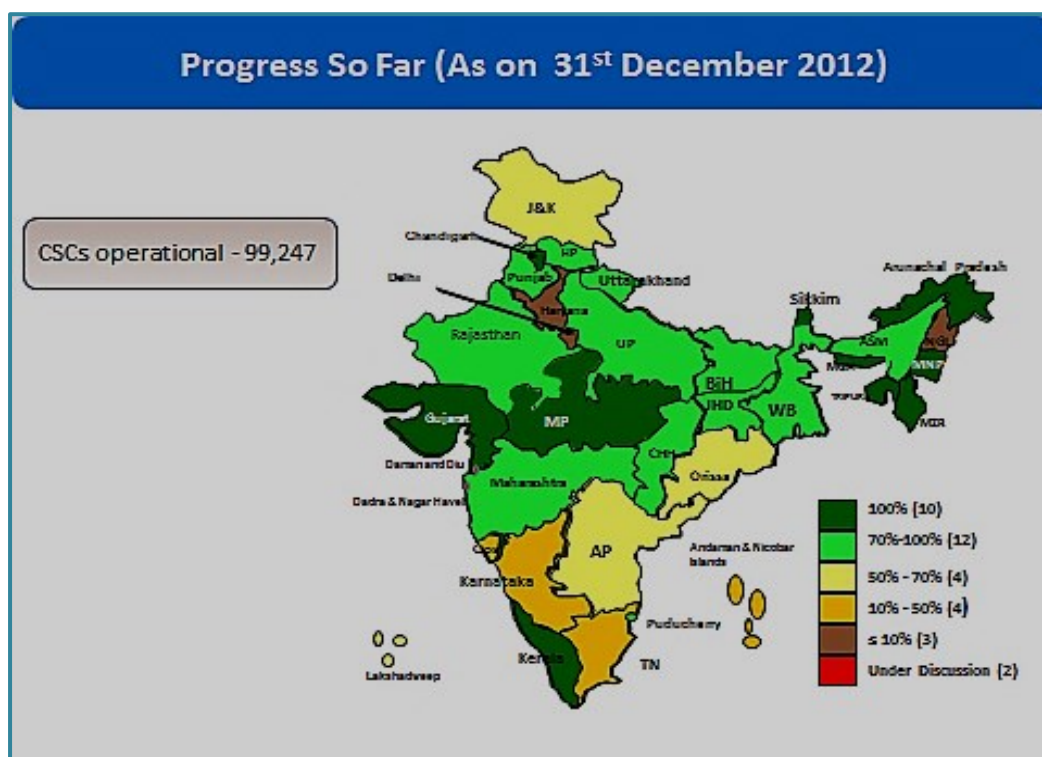
The roll-out wasn't a cake-walk for the Government or for the SCAs tasked to meet the target numbers. An estimated, 10-20 percent of CSCs were to be shut down for issues related to non-performance, while a small percentage of centres had to be relocated for viability reasons.   Although at least one CSC was envisaged for every six villages placed within reach for each of the 600,000 villages in a honey-comb model, the actual roll-out map would point to places without easy access to CSCs. These remotest hamlets with no means of any connectivity are now given priority by the Government so as to fulfil what is envisioned in the National eGovernance Plan.

Since the targets of its first phase are achieved, there is considerable hope to further scale-up these centres to reach the target of 250,000 across the nation, a promise made to the citizens of India by Her Excellency, the President in June 2010. A huge number of telecentres run by private entities, such as Drishtee, and public libraries that are operational in villages, towns, District headquarters merit to be considered as CSCs. If that were to happen, the aim of establishing one CSC in each of 250,000 Panchayat villages would not be a difficult task.

3.1   India in the ITU e-Readiness Map

ITU annually releases "Measuring Information Society" Report which measures ICT readiness of economies based on ICT Development Index (IDI), which is a composite index combining 11 indicators into one benchmark value (presented on a scale from 0 to 10). The objectives of the IDI are to monitor progress in ICT developments in both developed and developing countries and to measure the evolution of the global digital divide. The IDI is divided into three sub-indices: the access sub-index, the use sub-index and the skills sub-index, each capturing different aspects and components of the ICT development process.

Five indicators are included in the access sub-index of the IDI: fixed-telephone subscriptions per 100 inhabitants, mobile-cellular telephone subscriptions per 100 inhabitants, international Internet bandwidth per Internet user, percentage of households with a computer and percentage of households with Internet access at home. These indicators measure ICT infrastructure and readiness, which are the foundation for ICT usage and impact. The use sub-index of the IDI is calculated on the basis of three indicators: Internet users per 100 inhabitants, fixed (wired)-broadband subscriptions per 100 inhabitants and active mobile-broadband subscriptions per 100 inhabitants. The three indicators included in the skills sub-index of the IDI are: adult literacy rate, gross secondary enrolment ratio and gross tertiary enrolment ratio.

The overall ICT Development Index for India stands at 119 at the global level and at 23 at regional level. Comparing the ICT Development levels in India during the 2010 -2011 period, as depicted in the Spider chart below, there has been consistent improvement in mobile cellular subscription, household with computers, household with Internet, Internet users, fixed and mobile broadband subscriptions. However, there is decline in fixed telephone lines and the skill set sub index remains the same compared to 2010. To become more internationally and regionally competitive, India needs to move forward and close the gap with leading countries, particularly in Asia.

India stands out as the country with the fourth highest investment in telecommunications (USD 13 billion) while ranking only 14th in terms of telecommunication revenues (USD 36 billion). Thus, the country had the highest investment-to-revenue ratio among the large telecommunication markets. While achieving a mark of 935 million subscribers crossing 76 percent teledensity is commendable, broadband penetration still remains less than two percent! With the introduction of 3G and 4G technologies as well as conducive policies and regulatory environment, it offers great opportunity to transform the mobile success story into the broadband one.

In India, there exists a potential of transforming the Community Services Centres into Broadband Community Centres leveraging on the introduction of multiple applications/services such as e-Education, e-Health, e-Government, e-Commerce at community levels, hence achieving the Digital Inclusion for all goal for the citizens of India. In this way, the CSCs can help India leapfrog in terms of e-Readiness.

3.2   Services provided at the CSCs

For a long time, many States were dependent upon private services, mainly due to the fact that the Government services were not available through electronic means. With exceptions, such as the State of Delhi, and certain cities, such as Hyderabad and Bangalore, many States had to build a portfolio of online services. In this attempt, States such as Madhya Pradesh and Kerala succeeded in guaranteeing at least a handful of services to citizens through the CSCs. The State of Gujarat, despite spending huge amounts of public funds, confined itself to providing only a couple of utility services online until recently, when the National Informatics Centre came to the aid of the CSCs by opening up eDistrict services on a pilot basis across the nation.

At present, although the status might differ, by and large, the following types of services are offered by the CSCs:

- Government to Citizen Services (G2C)

- Business to Citizen Services (B2C)
- Financial Inclusion Services
- Educational Services
- Digital Literacy Programmes
- Skills Development Programmes
- Agricultural Services

3.2.1 Government to Citizen Services

The most popular of all G2C services are the ones offered by the Revenue Departments of each State at the District level. These include the facilitation, and in many cases, the provision of the following certificates:

- Domicile
- SC/ST/OB caste certificates
- Income
- Solvency
- Nationality
- Surviving member or legal heir

A good number of States have added land record information service to the list of G2C, in most cases, offering the land record document itself for a nominal fee. Issuance of birth and death certificates is becoming popular and these are offered across the board in many States. Payment of property taxes, registering with Government-run employment exchanges and placing applications for Government licenses of various kinds are also gaining popularity among the CSCs.

3.2.2 Business to Citizen Services

Among the B2C services, a good number of utility services constitute the offerings. This would include certain transactions that citizens have to do on a regular basis for the following:

- Payment of electricity and water dues;
- Payment of other utilities including telephone and Internet access;
- Gas bill payments for piped gas services in certain cities and major townships;
- Ticketing services for public and private transportation, including the railways and airliners.

Recently, the Departments of Tourism in certain States have initiated bookings for bed and breakfast schemes, while some privately-run intermediary systems offer eco-tourism site bookings too. With most of the revenue generating private services going online, it is envisaged that hundreds of Business to Citizen services would be added to the bouquet of services at the CSCs.

3.2.3 Financial Inclusion Services

Many CSCs have started to act as bank services facilitation centres, and in some cases, even as extension counters. The notification of the Reserve Bank of India (RBI) on 28 September 2010, permitting banking institutions to appoint Business Correspondents (BCs) offered new opportunity for the CSCs to contribute to their national mandate of achieving financial inclusion as per the Five Year Plan. The RBI's directive of allowing banks to engage with CSC operators and VLEs is being fulfilled in many States. In certain special cases, a few CSCs operate solely as Business Correspondents' centres for enabling the thus far unbanked population's inclusion in the banking schemes. The initial target of including 50 million individuals in banking schemes by 2012 has been met largely with the help of CSCs. The following financial services are offered through CSCs:

- Savings account opening

- Deposit/withdrawal
- NREGS wage distribution
- Government pension distribution
- Facilitation of loan distribution
- Facilitation of Kisan Credit Cards
- Micro-credit services
- Processing of loan for agriculture-related purchases, such as animal, tractor, motor, etc.
- Facilitation of recurring and fixed deposits
- Facilitation of loan recovery

A large number of CSCs that participate in financial inclusion schemes offering financial services to citizens have started using bio-metric thumb impression devices, an investment that is paying them back by bringing more footfalls into their centres for accessing services.

3.2.4   Educational Services

With the establishment of the national level CSC eGovernance Services Limited Company as a SPV to support the growth of CSCs, attempts are made to include educational services to the bouquet of services offered through these centres. However, certain States, such as the State of Madhya Pradesh, have already taken measures to include certain educational services to their online portals. These include:

- Processing of online application forms for admission into colleges;
- Processing of application forms for entrance and competitive tests and examinations;
- Conducting online examinations for certain institutions with whom the CSCs have established linkages;
- Making courseware available for school going children through eLearning means;
- Acting as counselling centres and community colleges for certain open universities, including the national premier one, the Indira Gandhi National Open University;
- Coaching classes for nursery training and other short-term teacher training courses recognised by State Governments;
- Declaration of examination results online.

All the above services are offered either on a revenue sharing basis or on the basis of a fee levied against each transaction at the CSC.

The Open Education Resources developed by various organisations, such as the Azim Premji Foundation, the Reliance Foundation and by educational institutions, such as the Indira Gandhi National Open University (IGNOU) are available for use at the CSCs. In addition, IGNOU has signed up to recognise a good number of CSCs as community colleges, an initiative that needs follow up from the SPV for greater details. Many State-level open universities and open school initiatives are keen to forge partnerships to deliver their curriculum to communities through the CSCs.

3.2.5   Digital Literacy Programmes at the CSCs

The mainstay of telecentres around the world has been that of offering digital training courses to citizens, thus, enabling them to be a part of the new information society that transacts knowledge electronically in the new millennium. Although no one has attempted at quantifying the contributions made by telecentres in promoting digital literacy, it is assumed that these centres have produced more number of digitally literate individuals than any other private institution or system around the world. The Akshaya Centres in Kerala found a new meaning in their digital literacy campaign. The mandate of offering exposure to computer based

information and services to citizens, and helping them to use the tools not just for accessing, but also contributing knowledge and information, and for creating digital stories and images, has not just been confined to the State. Many private sector entities that have direct stake in IT enabled and IT led businesses joined the effort of promoting digital literacy among the people at the base of the pyramid.

At present, apart from the individual and collective efforts at the CSCs in terms of promoting digital literacy among their constituents, certain special schemes and partnerships have emerged in the recent past. In June 2010, the DeitY approved the National Institute of Electronics and Information Technology or NIELIT (formerly known as the DOEACC Society) to train and certify 100,000 CSC operators through a course called 'Course on Computer Concepts (CCC)'. Such an attempt resulted not only in updating the VLEs on the latest concepts and practices in computer based services, but also equipped them to promote their learning among the citizens they served.

The programme of CCC could be taken to a new level at villages through the introduction of another potential scheme called the 'Digital Training for Women Scheme' that, in fact, offers opportunity to leverage upon the existing NIELIT scheme. The recently announced IT policy aims to train at least one person in each of the Indian household to be made digitally literate. Such a move could result in developing more than 25,000 women IT leaders in villages, certified and trained as trainers in their own right by the NIELIT.

The digitally empowered women would acquire basic skills that would help them to participate in knowledge-based activities, in addition to advancing their education and opportunities for gaining employment. Digital empowerment also leads to demanding high quality health care from public systems, so also in accessing financial and Government services offered by the State.

There is a great opportunity for the GoI efforts to be aligned to that of the global programme launched by the International Telecommunications Union and the Telecentre.org Foundation, which stimulates the global network of telecentres around the world. The Telecentre.org Digital Women Campaign has gathered momentum, thus, the GoI joining the global campaign would be mutually beneficial.

3.2.6   Skills Development Programme

One of the action plans of the Eleventh Five Year Plan was that of setting up a virtual skill development resource network linking 50,000 Skill Development Centres (SDCs), where each centre, it was envisaged, would train approximately 200 persons. Such a move would create 10 million skilled workforce during the plan period by bringing skills to the doorsteps of rural population. Among the ideal locations identified by the Planning Commission for this purpose were the CSCs set up under the National eGovernance Plan.

The plan was to deliver training capsules of 8–12 week duration with an end of the course certification system. Of the instruction material to be provided on CD ROMS with 80–120 hours of computer time, 20 percent will be available both in online and offline modes. Training materials were to be created by participating Ministries/enterprises/industry associations with the help of NASSCOM. Mentor Groups for tutorial support in online interactive mode were to be provided by service-providers engaged by industry associations. End of the programme toolkits were to be provided by industry associations/State Governments, and Employment *Melas* (Fairs) at the end of programmes were envisaged to help unplaced trainees to get placed. However, none of the above plans got executed at least until the last day of the 11th Five Year Plan.

Certain steps undertaken by SCAs, such as Sahaj in partnership with educational institutions, such as IGNOU did result in seeing some traction among the CSCs for skills development initiatives. IL&FS also steered its work through the CSCs, resulting in a few thousand people acquiring skills. The huge opportunity that exists for developing skills among millions of rural people has not yet been tapped. The CSCs are not well equipped to seize the opportunity.

3.2.7   Agricultural Advisory and Information Services at the CSCs

Although India as a nation that is dependent on domestic agricultural produce for feeding its entire population, and the 110 million farm families that require timely information and two-way knowledge systems, the CSCs are yet to capitalise on the opportunity. It is to be noted that the first set of telecentres experimented in the villages of Puducherry, and the second wave that included Governmental experiment in Warana District thrived upon their ability to provide information as well as value-added knowledge services to farmers. The whole advocacy mantra of Mission 2007: Every village a knowledge centre movement initiated by the father of Indian Green Revolution, Professor M. S. Swaminathan, was focused on the farming community.

However, many organisations other than the M. S. Swaminathan Research Foundation that started the Village Knowledge Centre programme in Puducherry, experienced difficulties in ICT adoption in the agriculture sector. Challenges, such as non-availability of power supply, poor ICT infrastructure, lack of ICT literacy among farmers, and lack of ability to develop agrarian content and advisory services resulted in CSCs taking little or no interest in the sector. The Kisan Call Centre experiment of the Ministry of Agriculture did not integrate its work with the CSCs.

Way back in 1995, under the initiative of the National Informatics Centre (NIC), an international conference on Informatics in Sustainable Development discussed the idea of creating digital networks for farmers. However, barring some isolated efforts, the opportunity is still open for grabs. The 12th Five Year Plan offers a new thrust to this area of work. The Agricultural Resources Information System in India hopes to achieve this by ushering sustainable agricultural and rural development practices at the grassroots level in the nation. The main aim of this initiative would be to build on the existing experience of CSCs in collecting farmers' and farm data in recent years to assist in making the public distribution and agricultural procurement services transparent that certain State Governments aspired to put in place. In addition, in partnership with the Indian Meteorological Department, the CSCs are likely to offer weather information, and with the help of various market federations, commodity prices would be made available to the citizens. These two services were offered in the early stage of telecentre development in India; however, it was discontinued at CSCs due to lack of capacity among the VLEs and market viability for such services.

3.3   Various Models of CSCs

Although at the beginning, it was envisaged that the CSCs would be rolled-out in a Public-Private Partnership model involving different stakeholders through the three tier implementation structure, there has been a process of discovery in the scheme. Different Governments at the provincial level chose to implement the scheme in a manner conducive to them.

The national level PPP model is a significant development in the history of CSCs in India. Although, the Department of IT could have dealt with the entire program as a purely government driven project, the department considered appointing a national level service agency (NLSA) to manage centre-state relationship in the project, but also, engineer a new operational model at the state level.   The Public-Private Partnership model, primarily suggested by the NLSA, the Infrastructure Leasing and Financial Services Ltd (IL&FS) was that was the combination of a state government department as the designate for the project working closely with a private sector entity, created by the state government itself. These models have largely been successful in states such as Madhya Pradesh and Rajasthan where the state corporations witnessed investments as well as involvement from the private sector such as the Tata Consultancy Services.   These types of innovations within the PPP paradigm have been tried and tested in the CSC scheme, especially where the states were willing to do some 'out of the box' thinking.

3.3.1   The Rajasthan PPP Model

The CSCs scheme is implemented according to the three tier PPP model in Rajasthan. There is one SDA, RajCOMP Info Services Limited and two SCAs, M/s Vakrangee Software Limited and M/s CMS Computers Limited. Whereas M/s Vakrangee Software Limited has the responsibility of establishing CSCs in 14 Districts of Bharatpur, Bikaner and Jodhpur divisions, M/s CMS Computers Limited, Jaipur is responsible for 19 Districts of Ajmer, Jaipur, Kota, Udaipur. The VLEs form the third tier of this implementation structure. Women are given priority in selection as VLEs by the Rajasthan Government. There are 1984 VLEs (as on November, 2012). They are providing various B2C and G2C services in all 33 districts of Rajasthan. Following are some of the characteristic features of Rajasthan Government's CSC scheme:

(a)   Creation of an online services delivery portal: The VLEs provide B2C and G2C services to the community through the www.emitra.gov.in portal. It also gives information about all the VLEs and the transactions made by them. In addition to this portal, the SCAs have their own portals for B2C service delivery.

(b)   A robust monitoring system: The State has set up a centralized real time reporting mechanism to monitor CSC functioning. All project related reports and documents, such as VLE monitoring, VLE profiles, notices, circulars, etc. are made available through the http://www.cscmis.emitra.gov.in/ portal. The portal also enables real time communication and information sharing among various stakeholders, such as VLEs, SCAs, the District e-Governance Societies, etc.

(c)   Digital Certificates: Recently, the CSCs have also started issuing digitally signed copies of land records. Apart from this, they also provide digitally signed bonafide, caste and solvency certificates. They are also training concerned Government officials on how to digitally sign documents.

The Government is prepared to take a number of steps to further improve the scheme. These include: increasing the basket of services for CSCs, integration of G2C e-Mitra portal with B2C portals of SCAs, integration with banks for online transfer of funds, and publication of bimonthly newsletter to facilitate experience sharing among the stakeholders,

3.3.2   The Gujarat model

All of the 13,685 eGram centres functional in Gujarat since 2007 are governed by the *eGram Vishwagram* Society established as an entity directly under the Ministry of *Panchayat Raj*. Connected through the *Panchayat* Area Wide Area Network (PAWAN) with VSAT technology, each of these centres are equipped with a computer, printer, UPS and scanner, essential for communicating and transacting online through the Intranet established by the State Government.   In addition, each of these centres are equipped with video conferencing and voice chat supports, and are able to receive a dedicated video broadcast channel controlled by the State Government.

Following a unique model of implementation, unlike the rest of the nation, Gujarat first built the infrastructure necessary to house the eGram centres. After constructing the brick and mortar buildings in 2006, the State ensured availability of power supply in all the centres by the year 2007 through the *Jyotigram* project undertaken at the State-level. This was followed by a computerisation project that was initiated in 2008 and eConnectivity project covering all *Panchayats*, essentially the *eGram* centres located in each of 13,685 *Panchayat* offices. Subsequently, a couple of services were rolled-out to ensure communication and transaction among the *eGram* centres. The VLE selected to perform the function of *eGram* operator is paid performance-linked commission and is identified jointly by the *Gram Panchayat* and a Technical Support and Training Support Provider (TSTSP) is recruited through a competitive bidding process.

In each District, the District Development Officer has been tasked to implement the project and a separate *eGram* unit has been established to monitor the project on a daily basis. The *eGram* project nodal officer is supported by District and *Taluka* level support executives and the TSTSP to implement the project.

Although operational as a PPP project with private parties supporting its management and maintenance, the Gujarat model can be seen as one with complete onus upon the State Government's *Panchayat Raj* Ministry with the Chief Minister himself heading the society established for the purpose of implementation.

3.3.3   The Kerala model

Although the Kerala model of CSCs can be seen similar to that of Gujarat, due to its long standing history, the Akshaya project implemented by the Kerala IT Mission is founded on robust principles and business models.

Figure 4. The Kerala model
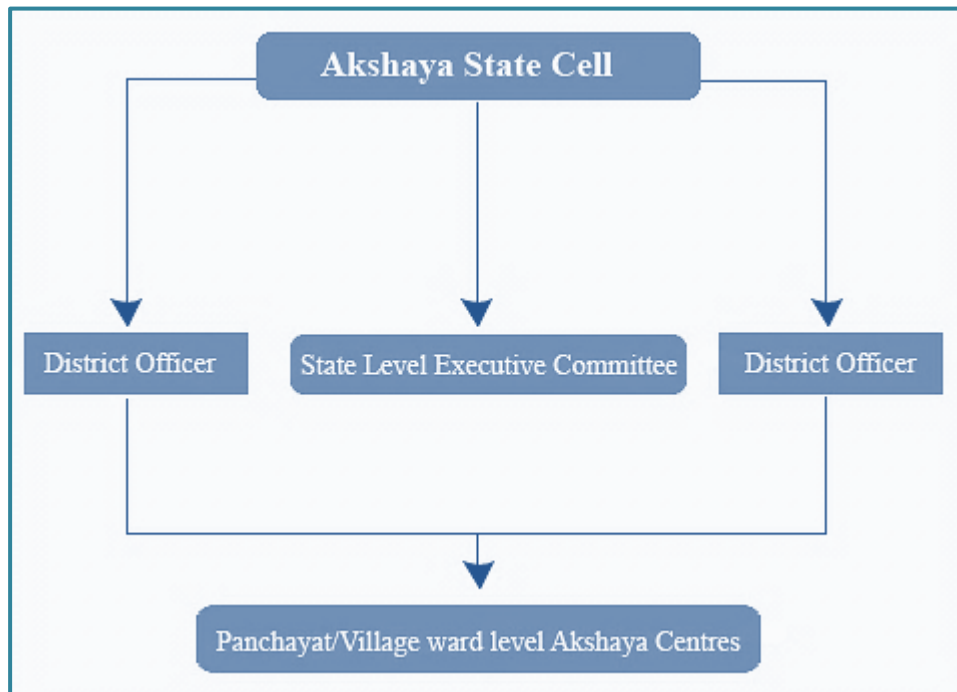
Implemented by a State level Executive Committee, headed by the Chief Minister of the State, that provides the highest forum for implementation, the Akshaya project is implemented by the Kerala IT Mission as its flagship project with all functional autonomy offered through a Government order issued in February 2005. The Akshaya State cell, as of now, functioning as a body under the Kerala IT Mission, and one that is linked to the Department of IT, has assumed all functional responsibilities, mainly to facilitate partnerships required to introduce new services and sustainability options for the centres run by Akshaya entrepreneurs.

In the Kerala model, the SCA role is undertaken by the Akshaya State Cell, established through a Government order. Today, Akshaya is a full-fledged SCA managing the CSC project. While at the District level, the project is run under the supervision of the District Collector and the District Planning Officer, who monitor, evaluate and control its implementation as per guidelines laid down by the Government, at the grassroots level, the project is managed by Akshaya entrepreneurs. These entrepreneurs are supported by the local Government units in Kerala.

The Akshaya model has been termed as the most successful model in the entire nation, for it combines the power of State machinery, the reach of Panchayats and the entrepreneurial spirit of Akshaya operators to steer the project. The model is quite unique to the CSC movement spread across the entire nation. The CEO of the Akshaya Cell operates more or less like a partnership broker and match-maker between public-private agencies and the Akshaya entrepreneurs for sourcing services on the basis of demand expressed by the

users of the Akshaya Kendras. All the 2235 centres in Kerala are fully sustainable, a scenario yet to be achieved in many parts of the nation.

3.3.4   The West Bengal model

The role of *Panchayati Raj* Ministry as the State Designated Agency (SDA) looking after the affairs of the CSCs, makes the West Bengal model different from the one followed by majority of State Governments in the nation. While most of the States, barring Gujarat, have identified the State level Ministry of Information Technology as the nodal agency for implementing the CSC scheme, the Government of West Bengal chose to implement the scheme through the *Panchayat Raj* Department with a view to ensure that the CSCs are initiated in each and every *Gram Panchayat* with support offered by the *Sarpanch*.

There are two major distinctions that this approach had to take in its stride. First, specific to the State of West Bengal, this approach disadvantaged the scheme by not having the Chief Minister's oversight to the programme, the way it happens in most of the States where the CM has also assumed the responsibility of the Ministry of IT. Secondly, the convening power of the District Magistrate is equated to that of the *Sarpanch*, which, by no means, can match up. While in all other States, the District Magistrate reviews the CSC scheme, in the State of West Bengal, the *Sarpanch* reports the progress of CSC implementation to the State Ministry of *Panchayat Raj*.

Interestingly, the Ministry of IT staff in the State of West Bengal does not involve itself in the functioning of the CSCs, though they assume responsibilities for major eGovernance developments in the State, including that of developing specific applications for their roll-out.   The Ministry of Panchayat Raj also finds it a bit difficult to convene State level meetings aimed at integrating Government services of all their line Ministries. Also, their role in overseeing the State level mission mode projects as well as the State Wide Area Network development is limited. All these factors make it compelling for them to steer the project more on the basis of obtaining good will rather than in the full-fledged role of a coordinator. The Ministry of Panchayat Raj's over-dependency on the SCA is quite evident in West Bengal.

Unlike Gujarat, the State of West Bengal is yet to launch a State-level society to oversee the functioning of eGovernance, a move that was considered in the early days of the CSC movement. It, therefore, becomes imminent for the key officers of the State of West Bengal, who are responsible for the roll-out and sustainability of CSCs to learn from their peers in order to strengthen the managerial practices of the scheme.

The enormous experience that the Ministries of IT at both the State and Central levels possess in terms of managing projects under the PPP mode is something that the Ministries of *Panchayat Raj* are yet to master. A peer-learning exercise aimed at transferring PPP project management skills would surely help.

3.3.5   Emerging models

The PPP model put in place in the CSC scheme continues to pose two fundamental questions, the very same questions that the proponents of Mission 2007, the national alliance that demanded telecentres in each and every village in India, raised during their advocacy phase:

First, considering the provision of public services is the foremost duty of the Government, especially to the remotest and under-served population without any preference to any section of the society, creed or colour, the idea of privatising the delivery of services by putting it in the hands of private entrepreneurs is a concept that is questionable. With the private entrepreneurs acting as the front-end service providers, clearly, the preference at the CSC level is to deliver services that generate revenue for the investors in the CSCs, thus, eliminating the opportunity of serving the citizens at low-cost or even free-of-cost.

During the field visits, it was difficult to ascertain whether the ultra-poor population living under the US1$ threshold of the World Bank are able to benefit from the CSC project. These populace who are on the move looking for subsistence based living, mainly through physical labour support they provide as construction

workers have no knowledge about the CSC project, thus have little or no opportunity to access the services provided by these centres.

Secondly, the aspect of 'Knowledge Centres', again advocated by the proponents of Mission 2007, has been diluted by turning the CSCs as mere access points for citizens to transact tangible services. A majority of rural citizens depend upon the middlemen in taking decisions, whether these are input/output related in their agricultural practice, or in availing any subsidy scheme or even in terms of making decisions about their wards' educational priorities. For this, the concept of value-addition at telecentres was demonstrated by all those, who experimented with the telecentre movement in the late 90s. With District eGovernance societies being formed with clear mandate to serve 'all' citizens, including those, who do not have the ability to pay for services, the current model of PPP would need to be looked into, with a view to including the excluded. This can be done by offering incentives to the VLEs on the basis of their performance with regard to including the excluded in their daily work. The viability gap model would need to move away from incentives for infrastructure development to incentives offered for performance, especially for the ability of the CSC to fulfill the Government's mandate of reaching the unreached. The District Magistrates responsible for ensuring equitable growth, development, and distribution of services among all citizens, would require to play a major role in redefining the CSCs and the model thereof.

4.   Challenges Facing the CSC Scheme

The CSC scheme has been one of much publicised schemes of the early 21st century in India, announcing itself as the panacea for all the evils facing the rural India in terms of offering access to services. The gap between the Bharat (rural India) and India (urban India) was to be minimized with the help of ICT tools, and the gap between those that govern and those that are governed was also to be reduced with the help of the eGovernance scheme put in place under the NeGP. To a large extent, one can say that the scheme has been successful in fulfilling the above expectations. However, four distinct challenges faced by the CSC scheme are very evident at the ground level. These are:

- **Lack of ownership of the scheme**: Ideally the leadership of the scheme, as seen in many other nations, should rest upon the central government. However, by design, the ownership of the CSC scheme lies with the respective State Governments. Although the ownership and the onus of the scheme and its transition to the states have already happened, the state level leadership continues to experiment with public service delivery through various models. It is likely that the states, once they settle down for a service level model, are likely to come forward and promote the scheme that it deserves.

- **Lack of implementation machinery**: A scheme of this kind that brings in revolutionary changes ought to be offered the status of a 'mega' project of the Government in the league of the National Unique ID scheme. There is a scope for the project to step up its promotional work amongst its external and internal stakeholders. However, with limited push within the government for the required budgetary and manpower support, the project is still managed by a very small team within the Ministry of Communication and IT.

- **Lack of visionary leadership**: The project has not been promoted in the way observed in many other nations, where the top-level leadership prides over bringing the Government closer to the citizens. The Chilean, Colombian, Sri Lankan, Thai and Brazilian examples are pertinent where these citizen-centred initiatives have been led by the Presidents and the Prime Ministers themselves. In India, neither the political leadership nor the bureaucratic leadership was courageous enough to assume the responsibility for envisioning a much transparent future India through the scheme.

- **Lack of cohesiveness**: Due to the PPP model adopted to implement the scheme, and the layers that the approach brought in, the vision of NeGP has clearly got lost in the transmission. The last mile and the front-end window of the Government neither match the vision nor do they have the capabilities to realise the vision enshrined in the NeGP, i.e., to bring Government and other services to the doorsteps of the citizens. Although more than 90,000 centres are operational, yet the services offered at the centre limit its access by only a small number of population. This is mainly due to the lack of online G2C services. It forces the VLEs to explore other means to achieve financial sustainability at the cost of community empowerment and development.

5   The Way Forward

The evolution of Information and Communications Technology (ICT), especially broadband, has received significant attention in most countries around the world. The Government of India, through the National Telecom Policy 2012, has adopted the vision "Broadband on Demand" and envisages leveraging telecom infrastructure to enable all citizens and businesses, both in rural and urban areas, to participate in the Internet and web economy, thereby ensuring equitable and inclusive development across the nation. Being part of the global information economy, India needs to put in place a robust framework to capitalise on the existing technologies to enhance competitiveness, increase productivity and economic development, to promote greater social inclusion, and to facilitate the sustainable use of broadband services in the future.

While the development of national backbone networks are essential for the deployment of broadband, there is critical need to improve the access and usage of broadband at community as well as individual levels, including the rural population in India. From the supply side considerations, eGovernment services play crucial role in stimulating the growth of broadband. The role of Community Services Centers, especially through eGovernment services including integrated services that exploit inter-linkages among different public services on a functionally and/or thematically similar one-stop-shop portal is critical for improving and facilitating citizen experience.

CSCs with single sign-on integrated services on portals can organisationally transform public service delivery at both the front and the back ends. They can increase functional productivity in Governments by identifying and improving governance processes and mechanisms across several Departments, leading to greater efficiency and effectiveness of services along with needed cost savings. With a focus on governance solutions that enhance service delivery and streamline public sector efficiency, it would also ensure participation of community using Public Private and Peoples' Partnership model for achieving sustainable socio-economic development.

Infrastructure development/roll out targets for licensed telecom service providers can be coordinated with the CSC footprints, especially taking into account broadband as part of Universal Service to connect underserved communities in India.

Local content and applications, such as eEducation, eHealth, eAgriculture can be developed in close coordination with relevant UN Agencies, such as UNESCO, WHO, FAO, respectively, which will transform the CSCs into Broadband Community Centers.

6 Key Recommendations

6.1 USO Funds for addressing access and content needs of the CSCs

Ten years since the universal support policy came into effect on 1 April 2002, five percent of the Adjusted Gross Revenue (AGR) of all telecom service-providers has been collected to form the Universal Service Obligation Fund (USOF). As of March 31, 2012, of the 43,947.49 Cr collected for the Fund, 15,159.4 Cr have been disbursed, leaving 21,839.45 Cr as the balance after paying 6948.64 as spectrum charges to BSNL[5]. Many nations have used this fund effectively for the growth and benefit of telecentres. In India, none of the six schemes operational under the USO Fund offer direct funding opportunities to telecentres or organisations that develop useful services for the telecentres. Though the recent changes helped to expand its terrain to mobile services, mobile infrastructure and fixed and wireless broadband and fibre optic backbone, the extension does not directly cover telecentre related services. More than 30 percent of telecentres covered under this study suffered from extremely poor quality of telecom connectivity, a figure which is worth worrying about.

In Chile recently, the Government has redefined its fund, which has been successful in extending basic telecommunications to rural and low-income areas, to support telecentre and backbone projects. The Fund has launched a national telecentres programme. In 2008, using the USO, the Colombian telecentre programme, Compartel had a budget of USD 62.9 million for the Internet connectivity programme, USD 30.6 million for telecentres and USD 5.0 million for improving service quality. By November 2008, Compartel had connected 15,500 public institutions to the Internet and about 11,000 of the sites are in schools.

In Ecuador, of the USD 9.59 million collected from the operators since 2000 and the State owned fixed line operators, who owed USD 35.0 million for unpaid contributions, a sum of USD 19.98 million, amounting to almost 50 percent, was invested for the creation of community telecentres and educational centres. In Romania, the resources of the Universal Service Fund are allocated on the following basis: 45 percent of funds for financing telecentres, 35 percent of funds for subsidising to enable low income families to access the fixed network and 20 percent of funds for financing public phones and providing accessible directory services.

In India, there is hardly any evidence to demonstrate the use of fund in stimulating the telecentre movement, especially the CSCs. It is important to look at the experiences of other nations to ensure the utilisation of funds now.

6.2 Marrying CSC objectives with national goals, such as the MDGs or the SDGs is desirable

Though the SDAs have their own models of implementation, in certain cases, the evidential re-think on their strategies have resulted in some uneven spread of CSCs, and have also impacted the quality. The vision of CSCs, which is to bring citizens closer to the Government and private services, has only partially been fulfilled so far.

As the Broadband Commission has pointed out, "The real power of broadband lies in its potential to improve development outcomes around the world. There is, today, growing evidence that broadband is making a tangible difference in the lives of people around the world and accelerating progress towards the Millennium Development Goals. The Rio+20 conference advanced Sustainable Development Goals (SDGs) recognising that it is essential to work toward improved access to ICT, especially broadband networks and services..." In achieving the MDG targets and the SDGs, telecentres are seen pivotal around the world. In India, there is lack of evidence to steer the CSC work in that direction. It's time to quantify efforts to demonstrate the contributions made by the CSCs towards achieving the MDGs.

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[5]   USO Fund status available at: http://www.usof.gov.in/usof-cms/usof_fundstatus.htm

It is important to implement programmes that would offer growing body of evidence to demonstrate that the CSCs are indeed boosting the GDP and income of individuals. Similar to the efforts in Senegal, where a survey reported that 27.8 percent of school pupils acquired better knowledge with content from ICTs, India too should attempt at using resources at its disposal, such as the learning material developed by the Azim Premji Foundation. Experiments, such as ChildCount+ for community health reporting and alerts platform that are used in Ghana, can be extensively put to use at CSCs to register, monitor and track the health status of children under five for screening malnutrition. India is reportedly placed at the rock bottom of nutrition index[6], encountering the maximum infant mortality due to lack of coordinated efforts to immunise children against malaria, diarrhoea and pneumonia.

The replication of Portugal, Uruguay and Thailand initiative in India in the form of One Tablet/Laptop per Child in States, such as Uttar Pradesh can be supported by the CSC by offering software and basic tools for improving education. The idea promoted by Professor M. S. Swaminathan for selecting one woman and one man as 'Green Managers' in villages attached to telecentres can be tried at the national level.

6.3   Legal and institutional framework to maximise the use of CSCs

The last decade of India belonged to the era of Right to Information and laws that guaranteed public service delivery. The Right to Information Act of 2005 that remedied the shortcomings of the Freedom of Information Act of 2000 paved the way for Indian citizens to access information as their right. In 2008, the Second Administrative Reforms Commission[7] emphasised upon the need for a legal framework to implement e-Governance as means to guarantee access to public information, services. This was followed by some States of India guaranteeing the same for their people by enacting their own Acts[8] with many more States following them.

The Central Government followed up and evolved the experience of these States into a federal one in the form of introducing the Electronic Service Delivery Bill. The Bill requires public authorities to deliver all public services electronically within a maximum mandated period. The EDS Bill 2007 was introduced in the Parliament on 27th December 2011. The Bill was referred to the Parliamentary Standing Committee on IT and the Committee submitted its report in August 2012. DeitY is now working on the recommendations of the Committee. The Bill establishes Central and State Electronic Service Delivery Commissions to monitor the compliance of Government Departments and hear representations. Public authorities have to establish a mechanism to redress complaints.

The EDS Bill and the PSGAs offer a lot of opportunities to the CSCs as the primary access points. It is important for the Department of IT to ensure making it mandatory for CSCs and similar public access points liable under the proposed Central and State Electronic Service Delivery Commissions. The Chief Commissioners and his/her team should be encouraged to work with the SDA and the CSCs to guarantee public service delivery through the CSCs.

While these Commissions look at penalising centres that are not performing, they should also look at ways and means to reward and offer incentives to those centres that are outstanding.

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[6]   http://www.bbc.co.uk/news/world-asia-india-19190437

[7]   'Promoting e-Governance', 11th Report of the Second Administrative Reforms Commission, December 2008.

[8]   Andhra Pradesh Information Technology (Electronic Service Delivery) Rules, 2011; Kerala Information Technology (Electronic Delivery of Services) Rules, 2010; Madhya Pradesh Information Technology (Regulation of Electronic Delivery of Citizen Services and Appointment of Service Providers) Rules, 2010; Chhattisgarh Citizen Service (Electronic Governance) Rules, 2003; and Jharkhand Electronic Service Delivery Act, 2011.

6.4　Encouraging local level R&D to stimulate local innovation and contribution to CSCs

In recent years, the world has witnessed two types of transformation, thanks to the pervasive use of ICT tools at the grassroots level. First, the idea of progressive transformation possibilities that caught the minds of world institutions that had started seeing ICTs as instruments for economic and social gains since the mid-1990s. Secondly, the idea of disruptive transformation that considers ICT as an enabler to involve communities that, otherwise, are not that easily reached, such as the marginalised, the poor, the rural population, those in conflict, and the disabled. Although, early movers doubted results, telecentres have aptly proven that disruptive transformation is possible, due mainly to the involvement of the very same marginalised population in the design and use of technologies, more so, in shaping them up to suit their own conditions and requirements.

Many nations have taken the route of involving small entrepreneurs, especially the telecentre operators themselves, in developing applications that address their daily problems. The Sri Lankan *Nenasala* movement has seen the deployment of many such applications, to name a few, Sinhala language tools, Lankajobs.net and http://www.beepeeo.com/. A special set of eSociety Funds[9] facilitate local innovation at telecentres. Similar attempts are witnessed in nations, such as Thailand, Colombia, Egypt and Brazil. In Europe, telecentres are seen as tools for social innovation, thus extending their functions beyond their early notion of being access points. In addition, telecentres are seen to have attributes of social reinvention, while also demonstrating effects of stretching the boundaries of technology diffusion in meaningful ways.

In India, unfortunately, the marginalised population has not taken to shaping up the ICT tools for their own benefits yet. The CSCs offer that opportunity. Allocation of unused USO Funds towards encouraging local research and development, and local innovation and technology diffusion in remote areas would stimulate solutions to problems related to access to services, access to information in India, where local languages, local cultures, local practices and local needs are decisive factors .

With District level eGovernance Societies managing the affairs of CSCs, the District Magistrates responsible for guaranteeing public with timely access to information and services may be empowered with funds that could spring up local innovations at the Districts and Block levels, thus stretching the function of CSCs beyond their role as access points.

6.5　CSC SPV for stimulating partnerships for delivering services through CSCs

The Department of Information Technology has been highly pro-active by setting up of a Special Purpose Vehicle (SPV) in the name of CSC eGovernance Services India Limited was established in July 2009 as a body that would monitor the scheme with a view to guaranteeing outcomes to the Government both at the State and Central levels. Its functions, at the time of its establishment, were identified, but not limited to, as:

- Facilitating Government outreach through CSCs;
- Providing standardised monitoring frameworks for decision making;
- Catalysing and maintaining content aggregation;
- Enabling Government functioning through CSCs;
- Facilitating G2C service readiness;
- Monitoring outcomes of CSCs;

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[9]　Under the eSociety Development Initiative, Sri Lanka has instituted three types of funds: a) Community Assistance Programme (CAP); b) Partnership Assistance Programme (PAP); and, Replication Assistance Programme (RAP). The numerous projects funded at the local level to stimulate local R&D under the above funds can be accessed online at: http://www.icta.lk/en/programmes/e-society/125-e-society-development-initiative.html

- Building capacity of all stakeholders;
- Facilitating deployment of services; and
- Looping in best practices.

It is suggested that there should be no compromise in terms of offering functional autonomy to the SPV and the mandate to serve. What is missing that could be justified, perhaps, as implicit in the above list, is partnership development with institutions and entities that can offer useful services to communities through the CSCs. It is important that the SPV not only forges partnerships, but also ensures undertaking responsibilities for facilitating the functioning of these partnerships. Often, Government programmes failed due to lack of their implementation capacity, especially while facilitating large partnerships. Not limited to nation-wide partnerships, such efforts would require to be tailor-made at the State level.

The CSC SPV is an excellent opportunity for stimulating cross-cultural learning and knowledge exchange among the CSC innovators. Apart from looping in best practices, the SPV would require to develop action plans for replicating and adapting the innovative practices that prevail within the CSC network. This requires orchestration of partnerships and support structures to test and scale up innovative ideas at the State level. It is deemed that the SPV develops capacity to take a leadership role in forging this. In addition, the SPV requires to enhance its capacity to monitor and map the outcomes of the CSC programme with specific skills required to do so. The outcomes ought to be measured in terms of qualitative life changes among the communities that the CSCs serve.

6.6   Developing service level charter to move towards professionalising the CSCs

The three '**C**' approach – **C**ustomer-driven service standards; **C**ommunication; and **C**ontrol - followed in Europe to ensure that all organisations that offer Government services are committed to customer relations and do comply to have a Citizen Charter at the policy as well as practice levels, adhering to service guarantee and service standards. Despite the fact that the CSCs are operated by private entrepreneurs, it is the duty of the Government to ensure minimum level service standards guaranteed at these centres, for they offer Government services, undertaking the role of front-end service windows in villages.

To implement the Service Charters, popularly known as the Citizen Charter, the CSC scheme requires to focus on the following five '**D**s'; and it is desired that the CSC SPV, together with the SDAs, takes its onus:

- **D**efine, debate and decide within the stakeholders the need to have a Citizens' Charter; and determine the leadership to steer the task of developing and drawing the service level Charter and the *modus operandi* to implement the same.
- **D**raft a set of service standards for discussion and for reaching agreement with those, who would be tasked to guarantee the Electronic Service Delivery and Public Service Delivery Acts.
- **D**iscuss with stakeholders, especially the VLEs, the services to be brought under the Charter and write the final set of standards.
- **D**raw the final Charter, organise its implementation, offer communication material to inform users on their rights, and test the design through a pilot programme.
- **D**eliver the final set of Charter, approved by all competent authorities and publish the same in a manner that the Charter itself offers the much required PR and advertisement spin for the CSCs.

The five D would help to integrate the Charter in actual functioning of the CSCs and take some control of their daily functioning. The monitoring and evaluation tool would be ideally based on the Charter and the service level guaranteed under its framework, rather than the current practice of collecting quantitative data.

Once the CSCs are successful with the three Cs and five Ds, then, it is possible for them to focus on the Big 'B' required to achieve oneness and uniformity across the board, which is defined in the logic of branding.

6.7   Developing common branding to achieve impact

The five year long experience of CSCs, albeit the rapid penetration of these centres in villages that happened during the last two years, has resulted in a possibility of creating an invaluable strong brand that the citizens can identify with in their daily lives. It is interesting to note that the basic premise of the CSC scheme, which is 'decentralised implementation', got mixed up with the idea of its image, purpose and the intent at the federal level.

CSCs are a part of the National eGovernance Plan and in their intent, they stand to realise the vision enshrined there. A national vision with strong mission requires uncompromisable action planning and branding as the foundation stone for ensuring outcomes. The scheme is heavily decentralised and with that, the aspect of communicating the objectives of CSCs has suffered a great deal. It is time for the CSC movement to pick up its vague, distorted and in-coherent approach to communicate the brand CSC**.**

On the basis of the mandatory products and services offered and the quality of service guaranteed at CSCs, the core values of CSCs are required to be defined. These values help to specify the mission, the USP of CSCs, so also target groups, thus, forming a great foundation for the CSC movement. In other words, those values become the tagline of the CSC movement, offering all the prospects on one hand, and creating the very personality and character of the scheme on the other. Such a move of creating a brand, oneness of purpose, brand value and a character for the CSCs would result in enhancing the quality and uniqueness that lies in innovation and creativity, and the sophistication that comes along with the Service Charters discussed above.

Currently, as per the study, it is possible to mention that all the above aspects are missing in the CSC scene. Branding the CSCs should be aimed at achieving the following: a) Developing a shared understanding of key actions, timelines, purpose, responsibilities and duties aligned with the VLEs in ensuring service level guarantee and adherence of standards outlined in its own Citizen Charter; and b) Creating a sense of pride, expectation and engagement in the minds of citizens, who use the services offered for their ingenuity, authenticity and acceptance as well as enhancing participation among parties and systems that stand to testify the set of services availed by citizens at the CSCs.

Without branding, like the one achieved in the *Nenasala* movement of Sri Lanka, for example, the Indian CSC movement would remain an invisible actor with little or no capacity to reach out to its intended target groups.

6.8   Constitution of Indian CSC network as a means to encourage peer-learning

Most of the movements thrived upon the very idea of convening and coming together. The cooperative movements, self-help groups, social transformation movements and even, entrepreneurship have seen solidarity among themselves. There are examples of professional organisations using forums for their own benefits, be it learning, lobbying or networking. The CSC movement is deprived of any networking opportunity at the national, State, District or even at the Block level, barring a few isolated examples.

The world-wide telecentre movement put telecentres on the world map only due to the fact that they were able to come together as a global network, and in many cases, much more strongly as national networks of telecentres. The Philippine Community eCentres Network (PhilCeCNet), the Thaitelecentre.org, Telecentre-Europe, Colombian National Telecentre Network, Chilean National Network of Telecentres (ATACH) and the Sri Lankan Telecentre Family are only a few of the many such efforts around the world. The United Nations Economic Commission has helped to establish regional networks of telecentres in various regions of the world, with the Asian one, the Asia-Pacific Telecentre Network (APTN) currently housed in Thailand. At the global level, steered by the International Development Research Centre, the Swiss Agency for Development and Cooperation and Microsoft have helped to develop telecentre.org as the global platform for telecentre stakeholders. These networks, by and large, have the following mandates to achieve:

- To fulfill knowledge sharing and learning needs among all those in the business of telecentres at the grassroots level;

- To leverage resources and mobilise action for advocacy;
- To enhance the capacity of telecentre practitioners to bring real change at the grassroots;
- To be a part of a network that offers peer-learning and mutual support.

The by-products of these networking efforts essentially are: a) Bringing all stakeholders in public, private and NGO sectors to a common platform, where issues facing the telecentre movement can be elicited and addressed through mutual action; b) Highlighting the work of telecentres among Government agencies that are used to seeing a Government initiative as a departmental initiative rather than a national initiative; c) Identifying best practices and innovation in the telecentre world, especially for addressing problems associated with achieving national goals, such as the MDGs, SDGs and HDIs; and d) Recognising outstanding performance for their rewards.

Thus, the Indian CSC movement, without wasting any more time, requires to establish its national network.

6.9   Continuous Professional Development for CSC stakeholders

Four types of stakeholders, essentially, are involved in the work related to CSCs in India. They are:
- Policy-makers at the Central, State and District levels, who have authority over the way the CSCs function, deliver and fulfill all service standards.
- CSC network managers, who currently are engaged as Service Centre Agencies and their allied service providers, who have a mandate to use the CSC network.
- Village-level entrepreneurs, who work as front line knowledge workers as well as managers of their own micro and mini-enterprises.
- Communities that use CSCs for meeting their own daily needs.

With opportunities expanding each day for the provision of services offered by both public and private sector organisations through the CSC, its work at different levels has only got complicated. Neither has anyone yet comprehended the complexity, nor has anyone attempted at gaining an understanding of the nature of this operation as it evolves and unfolds.

Apart from the pure subject specific capacity that the telecentre stakeholders are required to have, there is a need for developing soft skills among the VLEs. The VLEs are expected to also possess enough knowledge on the duties, liabilities and responsibilities entrusted upon them while delivering Government services, be it of financial inclusion or insurance sector or services, such as processing the Aadhaar cards or registering citizens for public distribution schemes. In addition, since the CSC business relies largely upon offering training and skills development services to communities, the VLEs are expected to also possess, to an extent, the skills to train others. There is also a huge demand for spoken and written English and business correspondence courses among the VLEs.

The network managers, who work as SCAs, require to possess skills, such as partnership development, negotiations, training of trainers, monitoring and evaluation, and leadership, apart from all the skills identified for the VLEs. Although the network leaders are not likely to perform VLE functions, they are expected to possess enough knowledge about the duties of the VLEs. With changes in technology becoming so rapid, it is important to see that these managers are exposed to all the latest trends in technology and their applications, which are relevant to CSC operations.

The policy makers and the decision-makers from the Centre down to the District and in certain cases, down to the *Panchayat* level require to attend a crash course on CSCs. Attempts should be made to orientate the user community on their rights as citizens, while availing services at the CSCs. It becomes imminent that the CSC SPV Ltd. develops a systematic approach to CPD for CSC stakeholders.

6.10   Develop outcome mapping exercise to establish credibility and long-term sustainability

Although the CSCs have undertaken certain monitoring and evaluation functions at various levels, it is evident that the CSC SPV would require to offer leadership in measuring the impact of CSCs in the lives of people, both in quantitative and qualitative terms. This requires systematic data gathering, monitoring and performance review efforts to ensure that the investments made indeed result in outcomes anticipated at the start of the programme, and the CSCs are able to contribute to the vision enshrined in the NeGP.

Although many assessment methodologies and techniques, such as participatory evaluation, performance management, learning and development and simple evaluation techniques are available in the market, it is suggested that the CSC SPV uses the 'Outcome Mapping' (OM) technique for this purpose. Outcome Mapping is a project progress measurement system designed by the Canadian International Development Research Centre (IDRC) exactly a decade ago, and it is still popular among the development-oriented organisations. It differs from the traditional metrics in a sense that it does not focus on measuring deliverable, and their effects on primary targets, but on the behavioral changes exhibited by the larger stakeholdership. The outcome mapping process consists of a lengthy design phase followed by cycles of record-keeping phases. Although, at the beginning, the process may appear to be time consuming, for a project such as the CSCs, in its early-set up, it is worth investing the time and effort to design the OM techniques in such a way that data collection is not a laborious exercise, but an automated daily exercise with or without the knowledge of the stakeholders involved.

Also, for sustaining the CSC operation, it is essential for the stakeholders to focus on the five 'C' ecosystem model proposed by Professor M. S. Swaminathan:

- Connectivity and access issues
- Content and service development
- Capacity building of telecentre stakeholders
- Coordination of service, products, information and knowledge transactions
- Care and management of CSCs with specific details to business modeling

Without such an approach, it is unlikely that the CSC scheme would evolve its own sustainability plan, focusing on the telecentre ecosystem with a view to strengthening each and every pillar. Rather, the scheme would end up as a highly decentralised one with no sense of oneness to achieve results.

Annexure 1: Global Case Studies (Examples from Sri Lanka and Brazil)

Balangoda Telecentre in Sri Lanka: Fulfilling IT literacy and IT training needs of the community

The Telecentre in Balangoda, run by Udesh Mallikaratne, is the most popular one among hundreds of computer training centres in the entire Balangoda town located in the Sabaragamuwa province of Sri Lanka. Having managed to train more than 10 percent of the population of the entire town in IT skills, and with a footfall of over 1,000 people each day, the Balangoda telecentre can be considered as one of the busiest telecentres of the world.

The telecentre conducts special events such as exhibition, concerts and personality development retreats every now and then, thus, becoming a very unique centre in its own right. These events are co-organised by the telecentre and the community, with much fanfare and fervour. Udesh, the owner of this telecentre asserts that he could have become a Government teacher. But, he chose to establish the telecentre, for he thought that his passion for teaching has a bigger and better chance at the nenasala.

Udesh offers a bouquet of courses for the students to select from, ranging from basic IT to accountancy, graphics and professional diploma programmes. He also trains his students for the Bachelor of IT courses conducted by the University of Colombo School of Computing. He has established partnerships with more than 20 training and certification bodies. The courses offered at the nenasala are much in demand.

In his small township, Udesh stands tall among his students, parents and all authorities. With no funding support from any organisation, he has been able to establish his telecentre as a sustainable enterprise and employs more than 15 trainers and IT-trained staff. His telecentre employs a customer services manager, something that not many telecentres, not even the larger ones, have considered appointing.

In line with the President of Sri Lanka's call for using telecentres to teach the three predominant languages of Sri Lanka, his telecentre offers all the three language courses. Trishanthi, who teaches Tamil in this telecentre, says that she is privileged to train over 400 Sinhala people to speak Tamil each year. Her dream is to teach the language to each and everyone in the town, while Udesh dreams much bigger. He wants to transform his telecentre into a University in five year's time. He is hopeful of impressing upon the Government authorities of Balangoda for a piece of land or a suitable building where he can begin the process of setting up the first ever IT University in Sabaragamuwa province, a model that he wants to see his peers follow.

Koslanda telecentre: Aspiring to become the Rural BPO of Sri Lanka

As a growing teenager, Srikanthan had no hope in life for he was born like his sister, with a genetic disorder. But, today he is a *Grama Niladhari*, thanks to the telecentre movement that has brought him up to the ranks of Claudio Orrego, the Chilean politician, and Roberto "Bob" Cabarrubias of Barangai Basak-Pardo of the Philippines. Claudio is the Presidential aspirant of Chile and Bob is hopeful of becoming the Mayor of Cebu, the city that is seen as one of the best tourist destinations of Asia. What is common among the three men? All of them started their professional career managing telecentres, surely with the aspiration of becoming politically powerful. And, their telecentres did exactly the same favour. Just like the trend setters, Bob and Claudio, no one would be surprised if Srikanthan would become one of the members of the Sri Lankan Parliament one day.

For Srikanthan, life is all about helping others. Born to very able parents, Mr. Selvaratnam and Ms. Saraswati, who actually hail from Tamilandu, Srikanthan, his brother Chandrakanthan and his sister, Prema were born handicapped in Sri Lanka after they moved to the estate hills, initially as workers. The three siblings suffer from a rare physical condition of dwarfism, but their determination today goes beyond one's imagination.

While running a printing press in Koslanda, Srikanthan came to know about the telecentre programme in 2004 and expressed interest in running a centre as a family enterprise. Seeing his enthusiasm despite his physical conditions, the selectors had no other opinion but to thank him for his partnership. In April 2005, he opened

one of the first telecentres of the Sri Lanka telecentre scale-up. The Koslanda telecentre has trained thousands of community members in IT skills, and hundreds of others from other parts of rural Sri Lanka, offering them food and accommodation during the entire period of training. Subsequently, Srikanthan has established the first ever rural BPO in Sri Lanka; and has registered a not-for-profit society, the Hill Country Disabled Group (HCDG)[10].

His initiative of bringing digital jobs to rural areas to encourage rural talent, rather than the other way round, helps a number of young people. Together with Mr. Vengadeshwaran of Glenanore *Nenasala*, Srikanthan has established the first rural BPO[11] of Sri Lanka, offering translation services to businesses. His translators are on call on all seven days of a week to provide Tamil or Sinhala to English translation of technical, legal and financial documents. Today, his clients include the Sri Lankan Government agencies, embassies abroad, the Marathon photo company and the ICTA itself. Srikanthan claims to have modelled his business after the successful venture in England called, Solution4IT[12].

Santos telecentre allies with open universities to promote distance education in Brazil

Sandra Rocha, a middle-aged entrepreneur, runs the most popular telecentre in the township of Santos on the outskirts of Sao Paulo in Brazil. With very small investments made some five years ago, the telecentre has grown enough to be considered as the extension centre of a couple of universities in Brazil, especially the Universidade Metropolitana de Santos (Unimes) that offers opportunities to rural girls and boys to pursue their graduate and postgraduate education through the telecentre run by Sandra.

Sandra's telecentre is an enterprise with a difference. The telecentre, in fact, becomes highly active in the evenings, catering to students with classroom, training and computer facilities with a small online library. Sandra and her husband also manage the tutors, who coach the students of Unimes. These tutors, who are on the payroll of the telecentre, are accountable to Sandra for their work, while Sandra assumes the responsibility of managing the partnership with Unimes. A percentage of course fee collected by Unimes is offered to Sandra for converting her telecentre into a distance learning centre for students in the evening hours. The telecentre admits students, who wish to pursue formal as well as vocational courses in a range of subjects that are linked to the local job market.

Apart from offering her telecentre for distance learning courses, Sandra also runs a counselling and student placement service to help her graduates find jobs. Assisted by Unimes, her student placement service partners with a range of local businesses and service industry. Students, who attend courses at Sandra's telecentre, are also offered the opportunity to pursue co-curricular activities and other courses that help them to gain extra skills.

'101 dimensions' telecentre for managing e-waste in the city of Sao Paulo

Sonia Maria de Silva runs an NGO named 101 Dimensao in the satellite city of Sao Paulo outside Brasilia (Brazil), which is involved in discovering potential skills among men and women, who work as scavengers and rag pickers. Her NGO is involved in forging partnerships with various organisations, including the Metropolitan Government and the education system in her city. She has made it possible for her community to become equal partners in a variety of programmes led by her NGO.

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[10] The Hill Country Disabled Group works as a non profit entity managed by the empowered members of the disabled community in Badulla District of Sri Lanka.

[11] More details of Srikanthan's BPO venture can be obtained from www.beepeeo.com. Last accessed on 31 January 2012

[12] Solution4IT (www.solution4it.com) is a Birmingham based company in the UK with a BPO turn-over of GBP one billion. Last accessed on 31 January 2012.

As a means to develop the capacity of her community members, she offers them training and vocational skills including the digital literacy programme. Her NGO teaches young people on eWaste management, thereby helping them to segregate disposable waste from the computer and electronic parts that could be recycled. All parts are systematically grouped and sent to respective destinations for disposal, and to potential buyers, who recycle them.
(http://www2.camara.leg.br/camaranoticias/tv/materias/BRASILEIROS/167702-SONHO-100-DIMENSAO-%28BL.1%29.html).

Her NGO conducts training programmes for local school children on eWaste management. All other waste material, degradable and non-degradable, are segregated by her NGO members for further use and disposal.
(http://m.youtube.com/#/watch?feature=player_embedded&v=sCpO2RfsYls&desktop_uri=%2Fwatch%3Ffeature%3Dplayer_embedded%26v%3DsCpO2RfsYls&gl=BR).

Sonia has used her knowledge of computers and the wealth of information available online to her advantage. She has come up with a number of designs for a variety of items produced by her NGO out of the waste material. Her NGO today produces clothes, furniture, curios, and a number of items made out of the waste material; and through the marketing arm of the NGO, she has been promoting the sale of such items.

The local schools in Brasilia have incorporated her model and approach as a part of their school curriculum in primary science that promotes environmental awareness. Schools are regularly brought to Sonia's organisation for learning about waste management and recycling of eWaste material, something that they have started to practice in their daily life in the city where Sonia was once a downtrodden, hopeless and homeless person. Very aptly, her NGO 101 Dimensao offers 101 dimensions to the life of the so called hopeless people.

Annexure 2: Indian Case Studies

Akshaya model in Kerala for digital training and digital services

As a project of the Kerala IT Mission, one that was initiated to bridge the digital divide in one of the remotest districts of Kerala, Malappuram, just a decade ago, Akshaya project is a brand name in itself in the daily life of rural and urban citizens of Kerala. Within the vicinity of two kilometres, the Akshaya centres are accessible to any citizen for more than 10-12 hours a day. These centres, although set up initially with assistance from the Government, have come of age assuming the role of social enterprises, owned by thousands of entrepreneurs in the State.

Picture 1: Akshaya entrepreneur at her social enterprise that offers scores of services

Photo Credit: Basheerhamad Shadrach

There are a good number of women entrepreneurs among the owners of these centres that serve the citizens today, acting as instruments of social change, rural empowerment and economic development. The project has triggered economic growth and the creation of direct and indirect employment in the fields of eLearning, eTransactions and eGovernance.

The success of Akshaya was not achieved overnight through mere connectedness, but through concerted efforts undertaken by the Government to showcase it as a project that would promote eLiteracy in the State, and would make digitally literate at least one member of each of the 6.4 million families that live in the State of Kerala. With success achieved in its initial phase of imparting basic training on the basics and scope of IT, hands-on skills in operating computers and other gadgets, and using the Internet for one's own purposes, the project has turned into world's largest eLiteracy programme in rural areas.

Picture 2: The ethos of partnership practised in real-time at the Akshaya centres

Photo Credit: Basheerhamad Shadrach

The eLiteracy effort gave all the required confidence among the general public to access the Akshaya centres, and a purpose and meaning to the footprints of over 200 citizens, who benefit from the services offered by the centres each day. Today, one might claim that more than 80 percent of rural citizens of Kerala have benefitted from the 2662 centres functioning in the State.

Picture 3: Users waiting outside a centre in Kerala

Photo Credit: Basheerhamad Shadrach

The programme has reached sustainability in terms of its institutional capacity to manage these centres. The policy directives of the Government of Kerala are highly facilitative. The social acceptance is so high that more than 80 percent of the citizens access these centres with good participation in the centre's functioning as well; and, on the financial side, the 2662 centres earn a commission of about USD 400,000 each month by offering a bouquet of services, and, at the operational level, each of the social entrepreneurs has appointed 4-10 staff to sustain the multiple roles.

UP Online: The new feather in the cap of a vibrant Uttar Pradesh

The decision of the UP Chief Minister to launch Government services online is one of the landmark events in the modern history of the State. Modelled around the eDistrict pilot initiated jointly by the DeitY and its agency, the National Informatics Centre and the State Government of UP, the programme offers new hope for the 200 million citizens of UP that depend on a number of services offered by the State.

Photo Credit: Basheerhamad Shadrach

Close to 9000 centres that are operational in UP, set up mostly by Sahaj, more than 1.4 million applicants seeking each of the 26 services offered under the umbrella of UP online, were attended to since its launch in August 2012. Services ranging from the issuance of birth and death certificates, income certificates, land records, acceptance of applications for unemployment allowances are processed at the CSCs in UP. These centres that struggled to survive just a year ago, due to the introduction of UP online, have now found a revival in their daily operations.

Existence of a Common Service Centre in the remotest Sundarbans

One of the Blocks in the South 24 Parganas District of India that has no access to electric supply, but has been able to sustain its daily life through solar energy offered to them under a special scheme of the Government is the Sundarbans, the world's largest single block of tidal halophytic mangrove forest in the world.

Picture 5: The exterior view of a Common Services Centre in West Bengal

Photo Credit: Basheerhamad Shadrach

The UNESCO World heritage site that runs through Bangladesh and the Indian State of West Bengal is a stunning example of how the Government of India together with its State counterpart, and a private agency, Sahaj, has managed to establish a Government service centre for its populace.

The distance or its access, be it by motorised vehicles on well paved all weather roads or on kutcha (unpaved) pavements, where cycle-rickshaws operate to ferry in people, goods and products, the Common Services Centres scheme has left no stone unturned to achieve its goal of offering access to knowledge to people, through the provision of Internet access and services.

Photo Credit: Basheerhamad Shadrach

The Sundarbans is spread across an estimated area of about 4,110 km², of which about 1,700 km² are occupied by water bodies in the form of rivers, canals and creeks that vary in width from a few metres to several kilometres. It is heartening to see the power of knowledge and connectivity made possible to the citizens that live in these islands.

Gujarat's PAWAN channel, a push model for content delivery

The eGram Vishwagram project of the Gujarat Panchayati Raj Department has established a novel method of connecting its people with one another. The Project has installed VSATs and/or broadband connectivity in each of the 13,693 Gram Panchayats in the State, located in its 224 Talukas spread across 26 Districts. In fact, almost half of the Panchyats have both VSATs as well as broadband lines to enable two-way audio and one-way video facility.

The eGram VSAT connectivity network is the largest public domain network in Asia that connects Government offices. The network offers connectivity to an unprecedented number of 1300 concurrent users at the same time for sharing data, and 200 concurrent connections for voice communication. 70 users can connect to the video conference channel at the same time, and video broadcast channel can reach out to all the 13685 centres that are currently operational.

The entire network and its ecosystem are supported by a team of 575 experienced IT professionals deployed at the State, District, Block and village levels. These IT professionals deal with any hardware or software

problems encountered by the village level entrepreneurs, who are employed to run the Common Services Centres.

The PAWAN channel plays an important role in the lives of rural entrepreneurs and the user community that access each of 13685 centres. The broadcast schedule includes programmes from the Health Department, Education Department, distance learning programmes of various universities, introductory programmes on eServices and training programmes on various subjects, including IT courses. Apart from this, the Channel broadcasts the following specific programmes on scheduled hours:

- Feel Gujarat Visit Gujarat
- Operation Savdhan
- Online Ration Card Training for VCEs
- Khushboo Gujarat Ki –Gir
- Adobe Software Training
- Khushboo Gujarat Ki –Kutch
- RTO Learning Licensee Training for VCEs
- Khushboo Gujarat Ki –Somnath
- e-Poster making
- BSNL DSA Training Course

The pioneering MP Online Limited brings Government closer to citizens

Anytime, anywhere availability of 24X7 online Government services is the mission of MP Online Limited, an innovative business and service model developed by the Government of Madhya Pradesh as a pioneering effort.

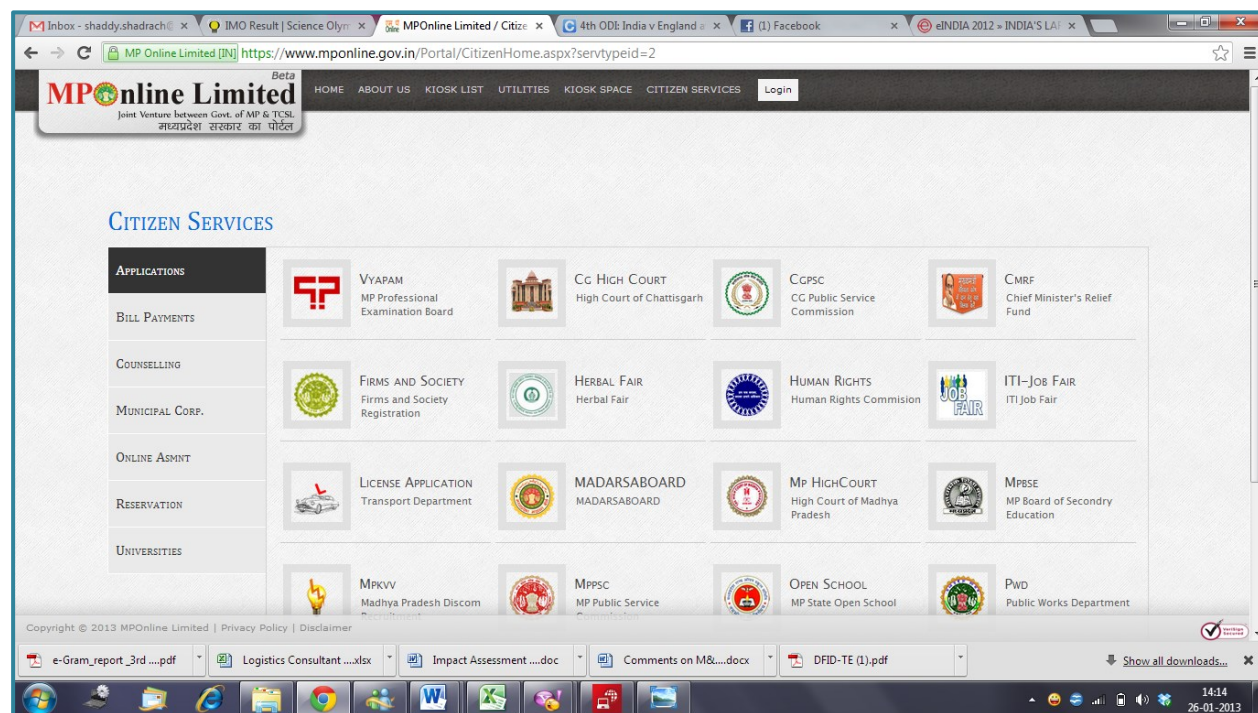## Picture 7: The bouquet of services offered through MP Online Limited

Photo Credit: Basheerhamad Shadrach

A symbol of what is defined as the integrated Government, MP Online Limited is currently catering to almost all Government Departments in the State of Madhya Pradesh, ranging from traffic, commercial tax, agriculture, regional transport office, Public Welfare Department, Electricity Department, the police and Public Works Department and a host of other Government agencies are also part of it. More than 50 Government Departments participate in MP Online, thus making it as one of the single largest networked Government services delivered through a single window in the entire nation. In its entirety, the MP Online hosts over 225 services aimed at the citizenry.

Picture 8: A VLE displaying the range of services offered at his CSC through MP Online Limited

Photo Credit: Basheerhamad Shadrach

The operational model of MP Online makes the scheme not only unique amongst all similar efforts, but also a powerful one, for it imbibes a Multi-Stakeholder approach where the private sector brings in its managerial skills, the public sector ensures its participation with services, and individual entrepreneurs and orchestrators add value through their grassroots connectivity. Several aspects of MP Online are replicable and are indeed replicated by the CSC fraternity across the nation.

About the Authors

Basheerhamad Shadrach has worked in grassroots informatics for over two decades now, at local, national, regional and international levels. As the Founding CEO of the global network, Telecentre.org Foundation, among other pioneering efforts, Shadrach conceived, designed and launched the first ever global Telecentre.org Digital Women Campaign in partnership with the International Telecommunications Union, the regional telecentre networks in Asia, Europe, Americas and Africa, numerous private sector entities including Microsoft, intel and others as well as the academia around the world. He launched the Telecentre Academies as means to build the professional capacity of telecentre knowledge workers in more than 15 nations around the world with support from various open and distance learning universities. Shadrach has published books and briefing papers on telecentres and has remained a pioneer in the field. His work in partnership with Professor M. S. Swaminathan in the Mission 2007: Every village a knowledge centre initiative resulted in the shaping up of the Indian Common Services Centre Programme, and the 100,000 telecentres in India. The Mission 2007 model has since been replicated in various other nations in Asia, Africa and Latin America. Shadrach's work leading to the development of an assessment model for telecentres earned him a PhD from the prestigious Loughborough University in the UK. Currently, apart from advising the Bill & Melinda Gates Foundation in their access to learning programme, Shadrach works as the Country Director for the Open University, UK for their India-based teacher education initiative.

Sameer Sharma is currently Senior Advisor at ITU Regional office for Asia-Pacific, Bangkok, responsible for South Asia covering India, Nepal, Bhutan, Sri Lanka, Bangladesh, Afghanistan, Pakistan, Iran and Maldives, where he is responsible for providing technical assistance to the countries for ICT for Development including creating conducive policy and regulatory framework. He is also focal point on Cybersecurity for countries in Asia-Pacific Region. He has assisted several countries in their migration from legacy networks to Next Generation Networks, designing Broadband Policy Framework and wireless broadband master plans for over eleven countries including countries from Pacific Islands and ASEAN. He is also responsible for assisting countries on cyber security issues and developed framework for establishment of CIRT. He also actively works with UN Agencies including UNESCO on ICT for Education and WHO for e-health, UNICEF for School Connectivity. He was recently involved for development of policy framework on ICT for Persons with Disability for Afghanistan, Nepal and India. He organized several regional events and training courses for Asia-Pacific countries. Before joining the ITU, he held several senior positions, such as Advisor, Malaysian Communications and Multimedia Commission (MCMC), Malaysia as well as Director TRAI, India He has organized Sub regional Ministerial Forums, Regional Forums and International Training Programs and Heads of Regional Regulators Roundtables. He has been awarded by ITU with a medal of excellence for performance in 2009.