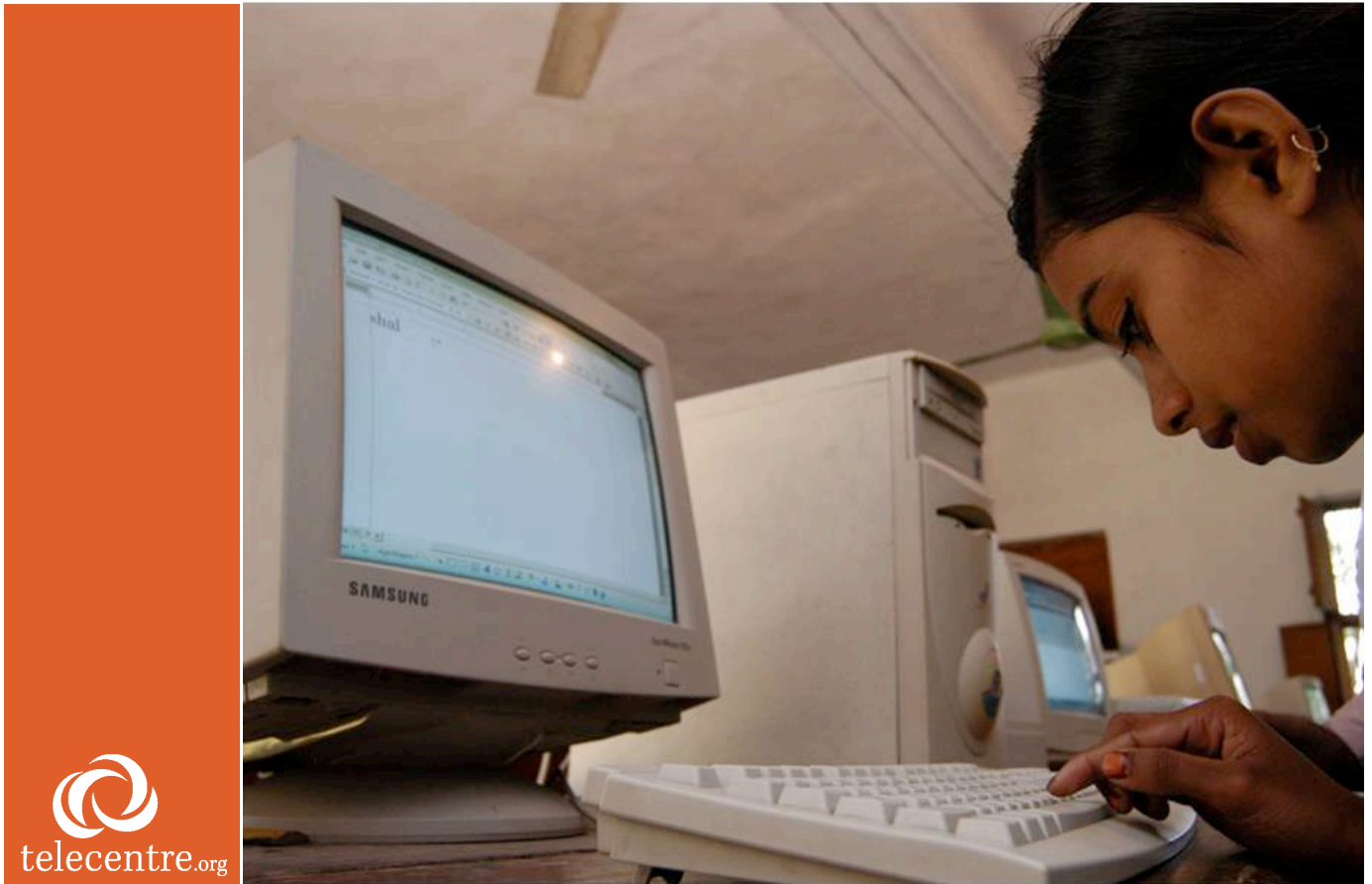


# TELECENTRE SUSTAINABILITY



## Misnomers, Challenges, and Opportunities

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### Abstract

The prime agenda of setting up telecentres across the world is not only taking information, communication and technology (ICT) to the deprived and underserved; but also ensuring its actual appropriation by them to access value added information, knowledge, and services and to use the same for their overall advancement. Initially revolving around the idea of enhancing rural community's access to computers, Internet, and other basic ICT facilities, the scope and scale of telecentre

activities have increased manifold over the years. But, in spite of this, sustainability has been a central concern in the telecentre domain throughout the world, especially after their appearance in developing countries. The main reason cited for this continued struggle with sustainability is the ecosystem gap. The telecentre ecosystem is defined as the community of stakeholders/actors comprising telecentre managers and operators, service providers and content developers, software developers, global and local information technology companies,

donors, civil society organizations, policymakers and government, and above all, the community. The hypothesis put forward in this positioning paper is that for the long term survival of telecentres in developing countries, a sustainable ecosystem that consists of all the telecentre stakeholders in an interacting and interdependent relationship and an enabling policy environment is vital. Telecentre.org Foundation, as a global network of grassroots telecentres, is committed towards the development and nurturing of such an

ecosystem that is capable of sustaining telecentres across the world, irrespective of their varied socio-economic, cultural, and political settings. This ecosystem has the ability to create systems and processes that will help in overcoming telecentre challenges and induce sustainability around its five pillars, i. e., policy, social, financial, operational, and organisational. These pillars, when strengthened, serve as the foundation for long term telecentre sustainability.

## 1. Introduction

The prime agenda of setting up telecentres across the world is not only taking information, communication, and technology (ICT) to the deprived and underserved; but also ensuring its actual appropriation by them to access value added information, knowledge and services, and to use the same for their overall advancement. Initially revolving around the idea of enhancing rural community's access to computers, Internet and other basic ICT facilities, the scope and scale of telecentre activities have increased manifold over the years. In addition to encouraging communication through traditional as well as emerging ICTs, it currently includes local knowledge and content generation and dissemination; capacity building, not only in terms of imparting computer literacy, but also enabling people to use traditional media, such as community radio to empower themselves; the provision of a number of services and information related to government schemes, promoting micro-financing and micro-enterprises; community development and awareness generation; and so on.

But in spite of increased scale and scope of activities, sustainability has been a central concern in the telecentre domain throughout the world, especially after their appearance in developing countries. The main reason cited for this continued struggle with sustainability is the ecosystem gap. Telecentres cannot be established in a vacuum; they require an enabling environment, a nurturing and sustainable 'ecosystem' to take root and flourish. More than any other

enterprise, telecentres need the collaboration of all sectors of the society for creating the 'telecentre ecosystem'.

An ecosystem is defined as "a community of organisms together with their physical environment, viewed as a system of interacting and interdependent relationships..." In the telecentre context, the community of organisms/actors comprise telecentre managers and operators, service providers and content developers, software developers, global and local information and technology (IT) companies, donors, civil society organizations (CSOs), policy makers and government, and above all, the community.

Therefore, the hypothesis, put forward here, is that for the long term survival of the telecentres in developing countries, a sustainable ecosystem that consists of all the telecentre stakeholders in an interacting and interdependent relationship and an enabling policy environment is vital. Telecentre.org Foundation, as a global network of grassroots telecentres, is committed towards the development and nurturing of such an ecosystem that is capable of sustaining telecentres across the world, irrespective of their varied socio-economic, cultural and political settings. This ecosystem has the ability to create systems and processes that will help in overcoming telecentre challenges and induce sustainability.

## 2. Philosophical Orientation

Conceptually, the term 'sustainability' traces its roots to the Latin word 'sustinere', which means to 'support' or 'endure'. This term is used in the discipline of 'ecology' to describe the intrinsic properties and components of natural ecosystems, like that of the rain forests, coral reefs, etc. that have helped them survive since the ages. Its usage in the development sector is comparatively recent, but it has striking similarities to the way 'sustainability' is used in ecology. The concept of 'sustainable development' tries to strike a balance between human development and the usage of natural resources so that resources are successfully replenished for the use of future generations.

In the development field, the Brundtland Report defines sustainable development or sustainability as "development that meets the needs of the present without compromising the ability of future generations to meet their own needs. Sustainable development focuses on improving the quality of life for all of the Earth's citizens without increasing the use of natural resources beyond the capacity of the environment to supply them indefinitely" (WCED 1987). Elaborating the term further, the 2005 World Summit on Information Society noted that sustainable development requires the reconciliation of environmental, social, and economic demands, which came to be regarded as its "three pillars" (United Nations General Assembly, 2005, World Summit Outcome, Resolution A/60/1, adopted by the General Assembly on 15 September 2005).

As the above discussion justifies, by definition, 'sustainability' is dependent on more than one factor. When applied to the telecentre context, sustainability can be defined as the potential for long-term maintenance and continued existence of a telecentre, which has operational, financial, social, policy, and organisational dimensions. Therefore, sustainability is not just about the financial and operational aspects of the telecentre enterprise, it has strong social, organisational, and political connotations too. It means that on a broader scale, telecentres require community acceptance, a mature policy environment, and appropriate multi-stakeholder partnerships and networking to stay operational and empower the communities they are serving.

## 3. Theoretical Perspective

An overview of the mainstream telecentre literature suggests that the sustainability issue attained critical dimensions during the second phase of telecentre growth in the developing countries of Africa, Asia, and Latin America. In these regions, telecentres were introduced under pilot projects and as pilot projects, they were financially supported by international agencies, like the IDRC, UNESCO, and ITU. These agencies had a vested interest in learning from

this pilot project process so that the same could be generalized and applied to other locations (Fuchs, 1997). It was clearly evident in the case of donor funded projects that donor-recipient relationships cannot last forever. Sooner or later, they had to think about their exit plans. Given this context, the issue of sustainability, more importantly, that of financial sustainability, acquired an all time important status (Dagron, 2002; Harris et al, 2003; Harris, 2007).

### 3.1 Five sustainability pillars

The sustainability issues discussed in various studies can be organised around five pillars that support telecentre sustainability in general. These are: financial, social, operational, policy, and organisational. To achieve financial sustainability, researchers have opined that telecentres need to be run like an enterprise. They have suggested increased focus on improving telecentres' governance structure and streamlining their operations and management from an enterprise point of view (Proenza, 2002; Roman and Colle, 2002). While achieving financial sustainability was an immediate concern for telecentres, their long term sustainability in the village community was largely determined by community acceptance. A number of subsequent studies have dealt extensively with telecentres' social sustainability issues (Dagron, 2002; Best and Maclay, 2002; Mphahlele and Maepa, 2003; Stoll and Menou, 2003).

Moreover, telecentres require low cost, regular connectivity and electricity, and basic telecommunication infrastructure to function optimally in the rural and remote communities. This could be possible only through creating a mature and conducive policy environment at the national level that supports deregulated and privatised telecommunication policy and is capable of creating a legal and institutional framework for national telecentre programme (Wellenius, 2003; Best and Maclay, 2002; Jauernig, 2003). Similarly, for efficient and sustained service delivery in the rural areas, the telecentre operator

requires appropriate partnerships and networking at various levels.

The above discussion suggests that if examined closely, merely being financially viable is regarded as a skewed/narrow telecentre sustainability definition in view of the myriad other factors that affect it, especially in the rural setting (Dagron, 2002). Studies have ascertained that telecentres could achieve their social development goals and financial sustainability only by integrating social, political, and technical sustainability as vital elements in telecentre planning and operation itself (Stoll and Menou, 2003). Hence, most often, in the literature, the concept of telecentre sustainability has been treated holistically because, "(sustainability) is not only about the financials; there are other potential impacts and dependencies that can act as show stoppers for the telecentres" (Jauernig, 2003).

## 4. The Misnomer

Among all the five sustainability pillars, a telecentre's financial viability is still seen as the most important concern in the telecentre field, because in its absence, there are more chances of the closure of the telecentre. And with the closure of the telecentre, the question of its social and development impact would be eliminated automatically (Kumar, 2004). As mentioned, most of the researchers contend that the telecentres worst hit by the financial challenges were the donor funded telecentre pilot projects. Since sustainability was not central to the planning of these telecentre projects, they were the hardest hit by this problem.

### 4.1 'Breaking even' as financial sustainability determinant

For donor funded telecentre projects, financial sustainability was seen as very crucial and was also considered as one of the most important success indicators after the donor's exit. During this phase, the concept of sustainability, especially the concept of economic or financial sustainability began to be described as the capability of a telecentre project to survive beyond the "pilot" phase when donor funding was withdrawn

(Dagron, 2002; Harris et al, 2003; Harris, 2007).

The same thinking also influenced the way financial sustainability was defined during this period. A glance at the telecentre literature reveals that a number of studies viewed telecentres' financial sustainability in this light (Dagron, 2002; Proenza, 2002; Harris et al, 2003; Harris, 2007; Khumalo, no date; Huda et al, 2010). For example, Harris et al (2003) define "Financial viability (as) the capacity that a telecentre has for generating sufficient income to cover its costs of operation, and/or the cost of initially establishing it." Proenza (2002), too, discusses the full financial viability of the telecentre projects only in terms of equipment maintenance and replacement. Another source opines that "In practice, telecentres may be seen as financially viable if they cover their operating costs" (Best, 2004).

Although he touches upon the sustainability issue very briefly, Khumalo also uses the same definition and goes a little further to mention that "... the operator must generate revenue to cover the costs **and make a reasonable surplus**" (Khumalo, no date). Therefore, financially, 'breaking even' and being able to pay for all the expenses incurred in running the telecentre and maintaining the infrastructure available at the telecentre was considered the main pursuit in terms of sustainability. It primarily referred to the capacity of the telecentres to generate enough revenue to run successfully.

### 4.2 Beyond 'breaking even': The social enterprise model

Around the same time, when the telecentre pilot projects were being implemented, some CSOs and private sector companies were toying with the idea of telecentre as a 'social enterprise' wherein the telecentre is managed as a business by a local entrepreneur and also brings in the benefits of the knowledge society to the local community. Cabinas publicas of Peru and TARAhaat and Drishtee telecentres in India are such examples in sight. They brought in the concept of the telecentre as an alternative livelihood for the local entrepreneur. Along with providing

livelihood to the rural youth within the village, these centres capitalised on the emerging capacity building opportunities within the community that were essential to succeed in the new job market.

This trend has brought about a paradigm shift in the very nature of the telecentres, especially in the telecentre 2.0 context. They are no longer viewed only as development projects, but as an emerging alternative livelihood option for the rural entrepreneurs. Consequently, financial sustainability too has to be viewed in a different light, i. e., beyond the 'break even' point as an enterprise that generates enough revenue to support the entrepreneur and his/ her family. Here, the narrow definition of telecentres' financial sustainability can be refuted. If the telecentres are presented as an alternative livelihood option to the rural entrepreneur, is breaking even enough? Isn't it important for the telecentres to generate a surplus so that the people associated with this social enterprise are also able to sustain themselves and their families? Social enterprises cannot survive on volunteerism or altruism on a long term basis. They have to eventually transform themselves into a profit generating enterprise.

## 5. The Challenges

During the initial years of telecentre implementation, achieving the 'break even' point, too, was not an easy task for them in view of the several challenges they faced in remaining operational and successful. To some extent, the lack of sustainability in the telecentre enterprise could be attributed to some of the key challenges specific to the telecentre field. These are:

### 5.1 Balancing between profit making and community development

An overview of the telecentre literature suggests that somehow, the telecentre sustainability concern is intricately related to the very nature of the telecentre enterprise itself. A telecentre is seen as a 'social entrepreneurial' venture. Social entrepreneurship is undertaken by a social entrepreneur or someone, who recognises a social problem and uses entrepreneurial principles to

organise, create, and manage a business around it. His/her main aim is to bring about community development and social change through his/her enterprise. Whereas an entrepreneur always thinks in economic terms whether it is his/her own growth, the growth of his community, district, or nation; the social entrepreneur, in addition to financial development, also includes activities related to social development as a part of entrepreneurship. It primarily works towards the empowerment of all the segments of the community. In the beginning, most of the telecentres found it very difficult to strike a balance between the two (Kiri and Menon, 2006; Kuriyan and Toyama, 2007).

Studies have revealed that except for the telecentres run and managed by nongovernment organisations (NGOs), the private sector, or government agencies, the most successful telecentres are the ones that are run by business driven entrepreneurs, who are interested in the commercial success of this enterprise, often at the expense of their social goals (Kuriyan et al, 2005). The same is true for the success of the Cabinas Publicas de Internet in Peru because they are run as family enterprises by entrepreneurs. Their main concern is to generate enough profit to continue Cabinas Publicas as a family enterprise and also pay for its maintenance and the staff hired to run it, as mentioned by Ana Maria Fernandez-Maldonado (Badshah and Garrido, 2005). It is in this context, that telecentres are seen as a livelihood option too, not merely as a development project funded by donors. And this is possible only when telecentres are viewed more and more as entrepreneurial spaces to tap several commercial possibilities (Rangaswamy, 2006). This thinking is very important when analysing sustainability for telecentre 2.0. Reconciling the objectives of social development with profit making has always baffled the telecentre implementers and researchers. It has adversely impacted the financial viability of the telecentre enterprise too.

### 5.2 Selling 'information', 'knowledge' and 'skills'

Secondly, telecentres have introduced and currently sell a unique genre of ICT based information, products and services. For example, some of the first telecentres trained the rural communities in using the ICTs and provided them ICT based information, which were quite extraordinary at that time. Even today, for majority of the telecentres across the world, selling 'skills' is one of the highest revenue generators.

Selling ICT based 'information' to the rural communities is challenging. In the rural context, the determining factors for selling ICT based 'information' are – does information sell? If yes, then, what kind of information sells in the rural communities? Moreover, how much can they afford to pay for this information? The literature reflects on these dilemmas of selling information to the rural communities.

Although Kuriyan and Toyama (2007) give only a passing reference to this issue, it is central to the telecentre sustainability debate. Research on the information seeking behaviour of the rural and marginalised communities suggests that they seek information either within the community as traditional knowledge or from trusted and reliable external sources. The 'state' is also bound to provide 'information' to the rural and marginalised communities under its welfare agenda and such information too is respected. Traditionally, rural communities have been sourcing information from:

- Their peers, villager elders
- The government – through its health, agriculture, rural development extension workers.
- The private sector – Lately, the private sector also joined the above as an information provider (most of the times as a free incentive), because it had to sell its products in the rural areas.
- NGOs – Driven by their own development goals, the NGO sector has also emerged as an important information provider on agriculture, health, and sanitation, etc.

After their appearance in the rural areas, telecentres have emerged as an alternative to the conventional, rural information sources, since selling information to the village community is an important component of telecentre operations. Initially, the 'commoditisation' of 'information' or projecting 'information' as something that sells was a huge challenge for the telecentres set up in rural and remote areas. In fact, one of the prime objectives of some of the first such initiatives was to show and prove that "development information sells and that a potential source of revenue exists for telecentres that provide information services that its customers are prepared to pay for" (Harris et al, 2003). Moreover, perceiving the telecentre as an "alien source" of information further complicated the sustainability issue (Kuriyan and Toyama, 2007). In such a scenario, it was imperative for telecentres to attain respectability and credibility among the rural communities to become sustainable.

Furthermore, to sell information through telecentres, it was important to raise awareness about 'information' and ICTs as a valuable resource for individuals, families, organisations, and communities (Roman and Colle, 2002). Telecentre managers and operators have to convince users that information and ICT are going to help them improve their lifestyle and add to their community's development. Generally, people don't see a significant connection between a computer and their family's or community's development. Persuading the community to accept the ICT based information, services, and products in itself was a huge task for the telecentre social entrepreneur.

Therefore, it is imperative for any telecentre programme targeting popular participation in the information society, whether initiated by the government or the private sector, to consider planning vigorous campaigns to illustrate the benefits of information as an important resource for daily living (Roman and Colle, 2002). Only then will information will sell. Moreover, for information to sell, it has to be relevant, contextual, appropriate, affordable, and available

in local languages (Heeks, 1999; Proenza, 2002; Harris et al, 2003; Kuriyan and Toyama, 2007). But during the early days of telecentre experimentation in developing countries, the web was full of alien information in an alien language to be delivered through an alien source, i.e., the telecentre.

### 5.3 Struggling with technical and infrastructure issues

In addition to the challenges mentioned above, some of the earliest telecentre social entrepreneurs had to face severe challenges with regard to connectivity, appropriateness, affordability, and robustness of infrastructure and technology to function properly in rural and remote areas. In fact, lack of telecommunication infrastructure and connectivity was one of the main challenges to telecentre sustainability leading to the closure of many telecentres in the early years of telecentre experimentation in developing countries (Proenza, 2002; Wellenius, 2003; Jauernig, 2003).

## 6. The Opportunities

In spite of all the challenges, telecentres have evolved over a period of time in terms of their scale and scope of activities and the technologies embedded therein. From being ICT access and training centres, telecentres are increasingly being regarded as knowledge centres that are helping the deprived and marginalised communities in being integrated in the knowledge economy and information society. In the developing countries, telecentres are also playing a key role in facilitating e-Governance. Service delivery at the grassroots level has always been a major challenge for the governments in these countries. Even measures like decentralisation have not helped in the delivery of essential services in the rural and remote areas. Gradually, the telecentres are emerging as the front end delivery windows for these services. Apart from achieving these broader objectives, there are many other opportunities that a telecentre can avail of to become sustainable in all respects.

### 6.1 Opportunities at the community level

Telecentres combine the following functions in rural communities, which can positively influence their sustainability:

- Training and capacity building centre
- Service delivery centre – By becoming a services and information delivery centre, the telecentres are increasingly helping the public, private, and the NGO sector in fulfilling their respective mandates.
- Information delivery centre
- Knowledge processing centre

### 6.2 Empowerment opportunities

Empowerment related activities in themselves are not conducive to telecentre sustainability. But they help the telecentres in overcoming the credibility challenge. These activities help them be accepted by the wider community. By undertaking empowerment related activities, telecentres are able to position themselves positively in the communities they are serving.

### 6.3 Technology

Telecentres have been experimenting with various technologies to overcome the challenges of bringing essential services to the doorstep of the common man. They provide a fertile ground to experiment with various types of technological convergence. The mobile technology, combined with the resources at the disposal of the telecentres, can be effectively used to disseminate all kinds of information to the remotest areas.

### 6.4 Inclusiveness

Inclusiveness is one of the most important characteristics of the telecentre programme across the world. Mature telecentres have the capacity to bring about inclusive development to benefit marginalised communities.

### 6.5 Achieving MDG goals

Telecentres, with the power of technology, can accelerate the achievement of critical millennium development goals (MDGs) like education, health, food security, etc.

## 6.6 Policy

The spread of telecentres in the developing countries has also influenced the implementation of favourable telecommunication and IT policies in these countries.

## 7. Telecentre.org Sustainability Framework

As mentioned in 'Section 3: Theoretical Perspective', the overall telecentre sustainability emerges from the interplay of five sustainability pillars, namely, policy, social,

financial, operational, and organisational, which are inter-related, inter-dependent, and influence each other. Neglecting sustainability in one pillar affects sustainability in others too and, in turn, impacts the overall telecentre sustainability.

The literature review has revealed that in each of the sustainability pillars, telecentres face certain challenges; there are some sustainability determinants and opportunities that counter those

challenges; and there are stakeholders, who have the necessary resources and expertise to work towards both overcoming the challenges and contributing to strengthening the sustainability determinants and opportunities. The telecentre sustainability matrix given below tries to identify the key challenges, sustainability determinants, opportunities, and stakeholders in each of the five pillars that together ensure holistic telecentre sustainability.

## TELECENTRE SUSTAINABILITY MATRICES

Policy Related Sustainability			
Challenges	Sustainability Determinants	Opportunities	Stakeholders
1. Governance in rural and remote areas	National e-Governance Plan	Telecentres as e-Governance delivery channels	a) National Governments b) Telecommunication & Information Technology Ministries c) Telecommunication & Information Technology Departments/ Agencies d) Telecentre Entrepreneurs
2. Lack of national telecentre policy	a) National policy b) National e-strategies c) Creating a legal and institutional framework for national telecentre programme	a) Visibility to telecentre programme b) Resource mobilization	a) National Governments b) Telecommunication & Information Technology Ministries c) Telecommunication & Information Technology Departments/ Agencies
3. Lack of state subsidies	Provision of state subsidies	a) Telecommunication Development Fund b) Community Investment Funds c) Universal Service Obligation (USO)	a) National Governments b) Telecommunication & Information Technology Ministries c) Telecommunication & Information Technology Departments/ Agencies
4. Overcoming the silo effect in local governance	Integrating telecentre programme with appropriate ICT based government programmes	Telecentres as single window service delivery channels	a) National Government b) Appropriate Ministries c) Appropriate Departments/ Agencies
5. Lack of connectivity & poor reliability	a) Low cost & regular connectivity b) Appropriate broadband policies	a) Broadband b) WiFi	Service/Spectrum Providers
6. Lack of electricity supply & poor reliability	Low cost & regular electricity	a) Solar energy b) Alternative energy models	a) Electricity Department/ Agency b) CSOs c) Private Sector
7. Lack of telecommunication infrastructure	a) Deregulated & privatised telecommunication policy b) Low cost telecommunication infrastructure	Mobile technology	a) Telecommunication Department/ Agency b) Service Providers

Social Sustainability			
Challenges	Sustainability Determinants	Opportunities	Stakeholders
1. Lack of credibility & respectability	a) Community acceptance b) Community ownership	a) Baseline survey b) Telecentres as 'commons' or common property resources (CPR) c) Telecentres as socio-cultural community centres	a) Community b) Telecentre entrepreneur
2. Lack of appropriate services and products	a) Community need assessment b) Back end linkages with service providers	a) Participatory need assessment	a) Community b) Telecentre entrepreneur c) Community based organisations
3. Lack of commitment	Community participation in planning and management	a) Telecentres as 'commons' or common property resources (CPR) b) Telecentres as socio-cultural community centres	a) Community b) Telecentre entrepreneur

Financial Sustainability			
Challenges	Sustainability Determinants	Opportunities	Stakeholders
1. Lack of successful business model	a) Cultivating entrepreneurship b) Capability to generate surplus revenue beyond the 'break even' point	a) Capacity building for telecentre entrepreneurs b) Social enterprise model development c) Business approach d) Business plan development	a) Telecentre entrepreneurs b) Telecentre networks c) Academia d) CSOs
2. Lack of telecentre products and services	a) Product and services inventory development b) Product and services procurement	a) Partnership b) Franchisee model	a) Content developers b) Service providers c) Telecentre entrepreneur
3. Lack of awareness about telecentre services and products	a) Community outreach b) Developing appropriate marketing strategies	a) Awareness campaigns b) Advertising	a) Telecentre entrepreneurs b) Telecentre networks c) community
4. Location – urban telecentres comparatively more successful	Generate demand for services and products in rural areas	a) Awareness campaigns b) Advertising	a) Telecentre entrepreneur b) Community

Partnerships & Networks for Sustainability			
Challenges	Sustainability Determinants	Opportunities	Stakeholders
1. High implementation costs	a) Multi-Sectoral/ Stakeholder Partnerships b) Public Private Partnerships	Lowering implementation costs	a) Telecentre entrepreneur b) Telecentre stakeholders
2. Location	Partnership with local institutions	Establishing telecentre credibility	a) Telecentre entrepreneur b) Telecentre stakeholders c) Community
3. Maintaining partnerships	Partnership sustainability/ management	a) Evolving partnerships b) Exploring new partnerships c) Exploring new areas of collaboration in existing partnerships	a) Telecentre entrepreneur b) Telecentre stakeholders

Operational Sustainability			
Challenges	Sustainability Determinants	Opportunities	Stakeholders
1. Lack of business skills	Entrepreneurial skills development	Capacity building	a) Telecentre entrepreneur b) Academia c) Telecentre networks
2. Attrition	a) Encouragement b) Staff motivation	a) Capacity building b) Refresher courses	a) Telecentre entrepreneur b) Telecentre networks
3. Lack of relevant services and products	a) Community need assessment b) Innovation in services	a) Proper supply chain b) Partnerships and networking	a) Community b) Telecentre entrepreneur c) Various telecentre stakeholders
4. Lack of customers, technological challenges	a) Innovation in customers b) Innovation in technology	a) Small, medium enterprises (SMEs) as telecentre customers b) Mobile technology c) Technological convergence	a) Telecentre entrepreneur b) Telecentre stakeholders
5. Enterprise failures	Business approach	a) Developing a business plan	a) Telecentre entrepreneur b) Telecentre staff
6. Lack of community interest in telecentre	a) Establishing telecentre credibility in the community	a) Community leader/ champion b) Community involvement	a) Community b) Telecentre entrepreneur
7. Distance	Location - centrally located	Locating telecentre in existing local public institutions, like library, post office, primary health centre, etc.	a) Telecentre entrepreneur b) Telecentre networks

### 8. The 5Cs formula for telecentre sustainability: the telecentre ecosystem

The discussion so far suggests that in order to formulate the sustainability framework for telecentres, the telecentre ecosystem is the key. In this context, the 5Cs formulae propagated by Mission 2007 or the Grameen Gyan Abhiyan cannot be ignored. The 5Cs refer to:

connectivity (which also implies appropriate access devices and are accessible, affordable and reliable), content and services (which are appropriate and responsive to the needs and demands expressed by the community), capacity building (of both the telecentre operators or 'knowledge workers', and the user community), care and management (of the telecentre by rural communities themselves) and coordination (that bring along all the telecentre stakeholders together at various levels).

The 5Cs are essential for national telecentre scale up, creating appropriate services and content for them, creating backward and forward linkages for them, making them sustainable and so on. In other words, as mentioned in the beginning, the 5Cs lead towards the creation of the 'telecentre ecosystem', an enabling environment

in which telecentres can take root and grow. This ecosystem is composed of international donors, global IT companies, civil society organizations, the government, content developers, service providers, and above all, the community. The 5Cs ensure collaboration among these sectors for achieving telecentre sustainability.

Coordination is the most critical component of the telecentre ecosystem since it strengthens and supports all the other Cs as well. It is essential to influence government policies, establishing appropriate and affordable connectivity and procuring appropriate access devices by negotiating with service providers and hardware developers; to create a central database of content and services at various levels with the help of the academia, relevant government agencies and departments, and the grassroots communities, who possess traditional knowledge and establishing linkages with content generators and providers; for engaging stakeholders to develop open curricula for the training and capacity building of telecentre managers; and to set up suitable mechanisms for the general care and management of the telecentres by establishing linkages

with service and maintenance providers.

### 9. Implementation Guidelines

Based on the discussion carried out so far, the present positioning paper presents the following implementation guide to evolve a telecentre ecosystem that ensures sustainability for grassroots telecentres. Both top down and bottom up action plans are necessary to make the telecentres sustainable in the village communities.

#### 9.1 Top-down action plans

##### Stage 1. Advocacy

- Taking stock of the key elements, which are essential for inducing telecentre sustainability around the five pillars. This exercise would help in identifying and strengthening the existing resources as well as the gaps therein, which need to be filled. For example, advocacy for deregulated and privatised telecommunication and broadband policies.

##### Stage 2. Implementation

- Identifying and bringing together key stakeholders at various levels, who have the resources and expertise to help in filling sustainability

- gaps or strengthening sustainability pillars.
- Adopting a legal and institutional framework for implementing a national telecentre programme. This will help in delineating key roles and responsibilities of various stakeholders as well as streamlining telecentre implementation across the region or country with scope for local adaptations.
- Chalking out a decentralised implementation plan and delegating roles and responsibilities to various stakeholders to coordinate implementation at different levels. Experimenting with Build Own Operate and
- Transfer (BOOT) and other operational models.

### Stage 3. Sustaining

- Maintaining and managing established multi-stakeholder partnerships and support systems, like networks, and exploring new ones to diversify the scale and scope of telecentre activities.

## 9.2 Bottom-up action plans

### Stage 1. Awareness generation

- Encouraging the local implementing agency to identify indicators that the telecentre is likely to influence in the course of its operation in the village community; and to conduct a baseline survey to document the existing state of affairs in terms of these indicators. The baseline survey findings can be used at a later stage for measuring telecentre impact against the identified indicators. Eventually, such factual data would help telecentres in establishing their credentials and advocate for their continued existence in a challenging environment.
- Starting pre-launch awareness campaigns with the active involvement of community leaders, opinion leaders, and champions.

### Stage 2 Need Assessment

- Ascertaining community level services and information needs and developing a bouquet of services and products that have universal demand and creating back end systems and processes, like supply chains, for the same. Later, encouraging entrepreneurs to take care of locale specific needs and demands at the village level.

### Stage 3. Local implementation

- Selecting local entrepreneurs for running and managing telecentres and creating systems and processes for their regular capacity building.
- Starting post-launch awareness campaigns with the active involvement of community leaders, opinion leaders, and champions. Launching such campaigns everytime new services and products are introduced.
- Running and managing the telecentre in an entrepreneurial mode.
- Encouraging the community to participate in telecentre planning and management and providing support to the local entrepreneur.

### Stage 4. Sustaining the telecentre

- Sustaining local partnerships, networking, and community engagement for long term telecentre sustainability at the community level.

## 10. Points for Further Discussion

Telecentres across the world have been facing myriad challenges related to sustainability. These challenges together with the lack of quantifiable telecentre impact data have begun a debate around continued investment on them. To make a point for the continued existence of and investment on telecentres, it is worth exploring the cost of some of the services provided by the telecentre if these were channelled through alternative sources. Many of the private sector giants like Microsoft and Intel are channelizing their corporate social responsibility- (CSR) based training programmes like IT training through

telecentres and other public access centres. The telecentres provide them with a channel to reach out to their bottom-of-the-pyramid customers. It would be interesting to note the hidden costs of delivering these services in the absence of the telecentres. Aren't the telecentres subsidising their training delivery? What would have been the costs if these companies were required to do all this on their own? It would also shed some light on the necessity of telecentres and their value addition in delivering services. So it is worth exploring the cost of providing this service to the community through some alternative means.

Another point for further discussion could be calculating the Return on Benefits instead of Return on Investment, which is generally used in the enterprise context. Telecentres as social enterprises accrue certain social benefits to the community, which are qualitative in nature. Therefore, these need to be calculated and measured differently.

Telecentres are also contributing towards making the public system affordable for the rural and urban poor. As the single window delivery channel for e-Governance, it helps in cutting the costs of service delivery in rural and remote areas.

## 11. Conclusion

Telecentre.org Foundation puts forward the case for a sustainability framework to address various issues that telecentres are facing around the world. The sustainability framework is built around five pillars, namely, financial, social, operational, policy, and organisational around which telecentres have been facing challenges. According to this framework, each of these pillars is governed through some sustainability determinants, in other words, some essential conditions that need to be present for successfully operating the telecentre enterprise. These challenges also offer some opportunities in disguise to support telecentres through different kinds of innovations. In addition, there are stakeholders, who have the necessary resources and expertise to work towards both overcoming the challenges and contributing to strengthening the sustainability

determinants and opportunities.

The sustainability pillars, along with all telecentre stakeholders who have the necessary resources and expertise to support these pillars, constitute the telecentre ecosystem. In fact, the ecosystem gap is the main reason behind this continued struggle with sustainability. Telecentre.org Foundation, as a global network of grassroots telecentres, is committed towards the development and nurturing of such an ecosystem that is capable of sustaining telecentres across the world, irrespective of their varied socio-economic, cultural, and political settings. This ecosystem has the ability to create systems and processes that will help in overcoming telecentre challenges

and induce sustainability around its five pillars. These pillars, when strengthened, serve as the foundation for long term telecentre sustainability.

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