Building an Alternative E-Governance Model: Lessons from e-Gram in Gujarat

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Abstract – **This paper frames a critique of India's existing e-governance programme in the context of a market-driven and efficiency enhancing approach. This narrow guiding vision occurs because of a deficit in normative frameworks for governance rooted in principles of governance reform, and in turn a normative model for telecentre-based e-governance. The paper proceeds to empirically assess an e-governance initiative in the state of Gujarat, e-Gram, exploring what kind of development and local governance are served by this telecentre-based initiative. By analysing e-Gram through the lens of guiding vision, accountability, and systemic integration, the paper elaborates an e-governance model based on the development cornerstones of participation, social justice and equity.**

Index Terms – **governance reform,** *gram panchayat*, **systemic integration, equity, Gujarat.**

1. INTRODUCTION

In September 2006, the government of India approved a proposal for the establishment of Common Services Centres (CSC) across rural India. A central pillar in the National e-Governance Plan (NeGP), which seeks to extend the reach of government services to communities in rural areas, the CSC scheme calls for 100,000 kiosks, with one CSC for every six villages. A key objective is "to develop a platform that can enable Government, private and social sector organizations to align their social and commercial goals for the benefit of the rural population in the remotest corners of the country" [1]. Under the CSC, both G2C (government to citizen) and B2C (business to consumer) services will be provided under a common umbrella harnessing the advantages of deployment of Information and Communication Technologies (ICTs) through the CSCs, which are more generally referred to as telecentres in the literature.

In a detailed discussion on e-governance reforms, Singh [2] highlights that governance systems and institutions in India are still in formative stages, and any governance reform process is divested with the responsiblity of shaping these institutions towards effective functioning. Such shaping needs to emphasise the element of citizen's control and participation in a political evolution of governance systems, as much as it does internal system efficiencies and cost effectiveness. Clearly, it is necessary that e-governance in India is located within the country's politically accepted and articulated governance reform priorities. It is through the lens of these principles that the CSC initiatives for e-governance should be interrogated.

However, the dominant discourse on e-governance has largely made the assumption that "governance" is built into the very structure of the telecentre – that development, governance and the CSC are inherently linked. The dominant discourse begins from the technology – in terms of connectivity, hardware, networks and applications – as given, and attempts to fit the problem within the given solution. Sreekumar [3], in a study of the Gyandoot Intranet telecentre initiative in Madhya Pradesh, India, critiques the assumed neutrality of technology and describes e-governance as a social phenomenon transforming attitudes and governance. Rather than diffusing the social dynamics of the setting in which it is introduced, it takes on their shape and reinforces the power relations of its setting. He argues that "the idea of ICT as an inherently liberating technology and e-governance as a new way of transcending inept and inefficient bureaucratic systems which empowers 'end users' appears to be completely inaccurate in the rural setting." While ICTs have the potential to create a platform for greater community awareness and participation in civic processes, e-governance initiatives tend to emerge under a model of service delivery, mediated by the private sector.

Though there is a strong case for treating access to ICTs as a basic public good [4], dominant models of ICT deployment have failed to address key policy issues of who develops, controls, implements and monitors the technology and the technological interventions. Rather than pushing half-baked technology 'solutions' into the perceived gaps in governance and development, it is necessary to explore what kind of technological systems may be suited to the needs and priorities of communities, including marginalised groups. Unpacking the dominant model reveals a space that is defined by business models and by the marketisation of governance, which is more receptive to the consumer than to the citizen. As Swamy [5] notes, "In effect, telecentres have come to embody the extended arm of economic globalisation by bringing the markets that govern urban life into rural areas, rather than a space to battle existing development challenges and unequal power structures[1]." Reflecting on the ownership structures and models of e-governance in India, Gurumurthy [6] observes that "With an overwhelming emphasis on business models, revenue and financial sustainability, the telecentre formula is at the heart of the CSC example….where public services are marketised for the 'last mile' through a user fee approach. Lacking in community and public dimensions, the diffusion of new

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1 See, for example: http://www.dnaindia.com/report.asp?newsid=1067722&pageid=2

technologies through such a model anchors entrepreneurship in the information society in an inopportune, individualistic, market-oriented manner, missing the new spaces for inclusive citizenship and participatory development." Though it represents a limited conception of both development and technology – wherein the extension of ICTs to rural areas is driven by profits, and governance and development are merely by-products – the private sector driven model of telecentre deployment has tended to overwhelm alternative approaches, including that of the CSC.

The impact of technology can be decentralising or totalising, and as such, ICTs represent both an opportunity and a threat to local development and governance, in the sense of rights, participation and community empowerment. As Gurstein [7] submits, "centralised structures of power and control are unwilling to follow the technology affordances down the path of decentralisation, power dispersal and local empowerment." While the potential of the e-governance through CSCs does exist, it must be conceived of, constructed and given the ideological space to grow. The telecentre in its current dominant formulation is not a space for participatory governance and inclusive development, but rather an arena for the struggle between private and public interests. Mayanja [8] encourages a balance between the community development and enterprise models for ICT delivery. The solution, he argues, "lies in blending the two." In a study of the Bhoomi land record computerisation initiative in Karnataka, South India, Prakash and De [9] argue that different meanings of development shape the technology design, content and delivery, and that the poor communities will experience the benefits of the project only if its development paradigm is attuned to the local context. As Sayo et al. [10] observe, "the need to generate economic growth without compromising societal equity illustrates two potentially competing priorities for policy makers."

Negotiating these competing priorities can come only through an appreciation of both the unprecedented opportunity for comprehensive governance reforms in India through e-governance, as well as contextual appropriateness and real possibility of such reforms in the face of India's social, political and economic situation. It is critical to unpack how the telecentre architecture used for e-governance can address development goals and imperatives of participatory governance through forward-looking vision and conscious design that prioritises the embedding of such interventions in existing socio-developmental questions and processes. An important dimension in this is the allocation of competencies between the public, private and the community sectors and the questions of locus of control [11] in the power relationships between these sectors. The underlying objectives of social justice and equity are likely to be undermined if the central issue of ownership and control are not envisioned within the very design of such

interventions [12]. A primary goal for India's e-governance strategy therefore should be to re-visit specific governance reform objectives of India within a framework of a thorough appreciation and understanding of the new digitally enabled transformative possibilities. Such an exercise has to address the core of governance structures, and the transformational opportunity therein, while being appropriately and solidly rooted in social, political and economic realities of India. While building a broad strategic set of priorities and directions for e-governance in India, this will also help in getting the required political buy-in from the highest level, for governance system reform in India [2].

2. RATIONALE AND OBJECTIVES

The guiding principle behind e-governace thus far has been that ICTs and telecentres have been found to be a good thing for efficiency enhancements and livelihood generation, with a continuing perpetuation of the supremacy of markets. This narrow vision occurs because of a deficit in normative frameworks for governance rooted in principles of governance reform, and in turn a normative model for the telecentre. In this light, the social and developmental impact of e-governance interventions through telecentres in poor rural communities cannot be assumed – it must be interrogated.

This research study attempts to undertake such an interrogation, through an empirical assessment of an e-governance initiative of the state of Gujarat. It explores what kind of development and local governance are served by the this telecentre initiative, proceeding to elaborate principles for an e-governance model based on the development tenets of participation, social justice and equity.

The specific objectives are:

1) to evolve a model for e-governance that will effectively:

    a) address the cornerstones of governance – participation, inclusion and institutional accountability.

    b) promote local development priorities

2) to study aspects of the telecentre-based initiative in terms of the developmental impact, using the lens of:

    a) local development priorities and perspectives,

    b) governance and accountability structures, and

    c) integration with public administration systems,

rather than merely in project evaluation matrices of efficiency and quantitative outcomes.

3. METHODOLOGY

This research study examines one telecentre-based

governance and development initiative in India and its ICT-based services and processes. Project selection criteria included a certain maturity in terms of number of years of existence and a government-led ownership model. The selected case is e-Gram, a Gujarat State government initiative aiming to improve governmental efficiency and community participation.

The primary research methodology was qualitative with field visits to project sites. Data was collected through semi-structured interviews, focus groups and informal discussions with project visionaries, field implementation staff, telecentre operators, user groups and community members. Including a wide range of voices was essential for capturing the breadth and depth of the project initiation and implementation experience. The field visit was conducted November 2007, and the project visit was conducted for 2-3 days. In addition to primary data, secondary data sources were studied for the development of specific probes and targeted questioning.

Interview guides were framed on the basis of the analytical framework of this research. The visits to the field sites within each project were structured by the project implementors based on some expressed preferences from the researchers. These choices were obviously influenced by distance from urban centres and ability of the project staff to arrange for meetings with operators and community members. Community interviews were conducted in the presence of project implementors, and where needed, local language translations were used. To make up for any gaps in capturing the subtleties in responses, detailed notes were made on the context of the interviews, non-verbal cues and interjections and interactions between the people present during an interview.

The interview transcripts were coded for identifying emergent themes based on the objectives and analytical framework, and the findings from the cases were comparatively analysed.

4. FINDINGS

Overview

The e-Gram Project was initiated by the Gujarat State government under the aegis of the Department of Science and Technology in 2003 to establish e-governance in the *gram panchayat* system (village administrative unit). The main objectives of the e-gram project centre on developing the *gram panchayat* as the delivery point of e-services by various government departments for enhancing efficiency and effectiveness in governance, while simultaneously improving access of rural villages to communication and commercial services that are dependent on a computer-connectivity backbone. Through the provision of basic ICT infrastructure, the *gram panchayat* acts as a telecentre, or an 'e-gram' centre.

The project operates by means of an off-line software application developed by the National Informatics Centre (NIC), the 'e-Gram Software', that has been deployed in nearly 9000 *gram panchayats* within the state, as of late 2007. The application consists of a digitised databank of family information on the basis of which family certificates (*kutumb patra*) may be issued at the *panchayat* level, along with birth, death, caste, income and tax collection certificates.

Internet connectivity is being introduced in the e-gram villages in a phased manner through the Bharat Sanchar Nigam Limited (BSNL) network, which in turn enables linkages with the Gujarat state-wide area network (G-SWAN). The online module allows for access of Record of Right (RoR) certificates through synchronisation with the state data centre. The RoR is needed for any transaction relating to agricultural land, and hence is the most important use of the e-gram centre. Additionally, a few villages are capitalising on available broadband connectivity to pilot tele-health, tele-veterinary and tele-agriculture initiatives in conjunction with the corresponding district level departments. This combination of offline e-gram modules, along with online pilots present the possibility for achievement of the e-governance objectives of the e-gram project.

Each centre is operated by a village computer entrepreneur (VCE) who is selected by a committee consisting of the *talati* (village accounts officer), *sarpanch* (the elected head of the *gram panchayat*) and others. The VCE is allowed to charge a nominal, fixed commission each time the e-gram software is used for issuing a certificate, and 20% of her/his total earnings are reverted back to the *gram panchayat* in return for the free space and electricity infrastructure.

The VCEs at the e-gram centres with connectivity have started exploring the potential for streams of revenue independent of the governance services related to the e-gram application. The commercial services explored include printing, digital photography, and charges for online payment of electricity bills.

The E-Gram Vishwagram Society (EGVGS), an autonomous society under the Government of Gujarat, was set up in October 2007 to take the e-gram project forward in the state, as well as link it to the central governmental CSC scheme. The EGVGS aims to transform every village *panchayat* area into a village secretariat (*gram sachivalaya*), by improving the access of traditionally urban services and amenities. The secretariat is built on the principle of two-way information flow between the various levels of administration in the state – *panchayat*, *taluk* (sub-district) and district – by means of an integrated ICT backbone front-ended at the *gram panchayat* office.

In addition to the computer-connectivity architecture, the

most significant feature of the *gram sachivalaya* is the community extension worker component. The 'Gram Mitra' (translating into 'friend of the village') scheme aims to improve awareness and appropriation of governmental schemes and benefits by rural citizens by setting into place a system of extension workers with the singular mandate of information dissemination and community mobilisation at the village level. For every *gram panchayat*, one *gram mitra* each is appointed to work in the areas of agriculture, education, health, social welfare and rural development. In addition to playing the traditional extension roles performed by the *gram sewak*[2] and *talati*, the *gram mitras* work closely with the VCE and the telecentre infrastructure to use the ICT advantage for improving development outcomes and strengthening governance.

The mandate of the e-gram programme extends beyond the village to include the *taluk panchayat* (TP) and district *panchayat* (DP) for improving service delivery. This is an significant design choice on the behalf of EGVGS since e-governance should necessarily encompass all levels of administration, and cannot succeed as single point interventions in the governance systems. Centres are set up at the DP and TP levels, with services similar to those at the e-gram. The DP also has tele-conferencing facilities that are used to relay programmes to select village e-gram centres.

Perspective on development

Mr. S. Chudasma, the Director of EGVGS, says, "The vision behind the e-gram project is to provide all services available in urban areas at the rural level. This will save time and money expended by villagers on procuring these services, and also indirectly stem migration to urban areas for better amenities and services." Clearly the accent is on improvement of government service delivery for rural citizens through the adoption of ICT strategies and infrastructure. Actual implementation of e-gram in each district is led by the District Statistical Officer (DSO) with the support of a district level team.

E-gram directly caters to the *gram panchayat* system for improved functioning, and increases efficiencies in government departments. Further, the e-gram project is not just a stand-alone software application, and intersects with the state government's village secretariat initiative through synergies with the *gram mitra* component. Rather than introducing an ICT system first and then later tackling the integration within existing systems, e-gram operates on a systemically integrated model wherein the computer-connectivity infrastructure is necessarily placed within the *gram panchayat* building, and the *gram mitras* connect their community mobilisation work to the that of the VCE through the use of ICTs.

Governance and accountability structures

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2   Government servant appointed as a secretary to the *gram panchayat*.

The e-gram project is essentially a local development project operationalised through decentralised governance systems. The District Development Officer (DDO) is the chief functionary at the district level, while the actual implementation occurs through the DSO, who is responsible for all aspects of the project. The DSO is supported by an externally contracted private agency, specifically in charge of technical aspects of the project, by means of an elaborate system of coordination and monitoring. A software developed in consultation with the EGVGS records technical issues, as well as data on service provision and potential areas of quantitative improvement. The rationale behind the outsourcing is to diffuse the responsibilities of implementation to agencies with better technical capacity, and direct limited governmental resources toward the actual development aspects of the project. Importantly, since the outsourcing is contractual, and no independent revenue streams exist for the private agency, no commissions are charged, and all decision making regarding project progress remain under the purview of the district office.

Although the VCE receives ongoing support from the TLE, her/his initial selection process happens in a democratic manner with representation from the community. The VCE "...will sit in the panchayat office, give the certificates, take 80% income and 20% will go to the *gram panchayat*..." says the Mehsana district DDO. The location of the e-gram centre in the *gram panchayat* building and the revenue sharing model ensures that the accountability to the *panchayat* is built into the system, with the VCE reporting directly to the *talati*, even while the technical monitoring aspects are with the TLE. The DDO reflects, "There is an advantage in having the e-gram centre at the *gram panchayat*. Otherwise, if you keep it in any other place, the government will have no direct control. The person operating it can charge anything."

E-gram also provides an entry point for challenging and re-defining the roles of local administrative functionaries. All requests and complaints get recorded in the system, so that certificates can be printed on immediate request and the *talati* has no reason to delay the signature authorisation. The system has allowed for the re-design of basic district level governmental processes, and this awareness amongst rural citizens has increased accountability of government functionaries. Further, e-gram has allowed for the *talati* to focus time and energies on other areas in his diverse work portfolio, with increased efficiencies

Systemic integration with public institutions

The e-gram initiative is perhaps unique amongst telecentre-based e-governance approaches in India in being scaffolded within local public institutions. Rather than placing the ICT infrastructure as an add-on to pre-existing systems, the government re-designed the community

extension model in the form of the *gram mitra* programme, and created potentialities for true synergies between the re-shaped public systems and newly introduced ICT systems. The *gram mitra* programme seeks to improve awareness of development schemes amongst rural populations, while providing opportunities for rural youth to engage in development processes in their roles as *gram mitras*. Both e-gram and the *gram mitra* programmes form the foundation for the village secretariat initiative of the state government, and enable shared community development efforts between the two programmes.

Every *gram panchayat* appoints five *gram mitras*, who report directly to an authority in the respective local line department. The *gram mitras* do not come under that governmental cadre and are paid a monthly honorarium of Rs. 1000. The *gram mitras* major responsibility is to visit village households and disseminate information on various governmental schemes and programmes, while addressing villager's information needs. The *gram mitra* also helps villagers in filing applications for schemes and transfers these over to the respective authority in the line department. The *gram mitra* is responsible for follow-up with the line departments until the application is duly processed and the benefits of the scheme realised by the applicant.

Daily monitoring of the *gram mitras* is shared between the *talati* and the line departments, but the *talati* does not have the authority to assign work in addition to what is already specified by the line departments. The *gram mitra* is situated with a unique spin on the traditional extension worker system of the local administration. It signifies the creation of an extension worker without any executive powers, in contrast to the *gram sewak* model of a governmental employee with both executive and extension powers. The logic of creating this new level of informational extension worker is because both roles divested in the same functionary has the potential to work against each other, in the sense that executive roles confers powers, which are corruptible, while access to information that enhances transparency is the key way to confront corruption. By separating the two through introduction of the *gram mitra*, the *gram sewak* is left with only executive and coordination responsibilities, thus creating a new loop of accountability.

It is advantageous for the e-gram project to be situated within this new local development architecture since the linkages between the VCE handling e-gram and the *gram mitras* handling local development extension are synergistic and symbiotic, facilitated by the placement of both functionaries in the same *gram panchayat* building. At the level of dissemination, the computer presents the opportunity for provision of relevant, updated information through e-gram and the *gram mitra*, and is the node for building, what can otherwise be, passive access of this information into active use and appropriation.

A Pachod village resident who has benefited from the e-gram and *gram mitra* system highlights his increase in awareness and access of development schemes, "The *gram mitras* have become the mediator between the government and the people in terms of schemes and programmes. There are many schemes that the government gives, but no one knows about it. The *gram mitras* have changed that."

5. DISCUSSION

The empirical assessment of e-gram provides an analytical framework for designing e-governance initiatives that are based on principles of social justice, equity and participatory governance. Some lessons from the e-gram case pointing toward an alternative e-governance model to the dominant private sector led and entrepreneur-based model are outlined below:

ICT vision should be situated within social equity and justice frameworks

The interactions with the project director and implementors were reflective of the strong emphasis on a broad conceptualisation of development as not limited to economic concerns alone, but inclusive of the precepts of participation, equity and social justice. Efforts have centred on developing a strong focus on Below Poverty Line (BPL) families through the e-gram centres and the *gram mitras*. All census and household data of BPL families has been digitised at each centre, and the *gram mitras* use this data for their targetting of corresponding development schemes for BPL families. This thrust on inclusive outcomes is a direct result of a normative perspective on development guiding the e-governance initiative.

The strategic decision to place ownership of the e-gram centre not with the computer operator and private companies (as in the CSCs), but within the larger local administrative system has significant implications for the developmental outcomes of the project. Innovations and strategies at the e-gram centres are driven by the development mandate of the district administration, rather than by the business motive of an individual entrepreneur, and their controlling franchiser private companies. Future plans from the district administration include public alerts during calamities and educational projects. It is unlikely that a profit motive would have ever led to the realisation of such possibilities for the e-gram centre.

Furthermore, the revenue sharing model between VCE and *gram panchayat* necessitates transparency in earnings, and this allows for a mechanism of checks and balances on income generation at the e-gram centre. Any inflections from the stated objectives can be monitored, and revenues earned also incentivises the *gram panchayat* for the support provided for running the e-gram centre. Ownership in public administrative system thus prevents commercialisation of governance processes.

Mechanisms should exist for community involvement to enable two-way information flow

The *gram mitra* model is based on the unfettered flow of information from the government to people, where they act as 'conduits' for local administrative functions. This information flow is greatly benefited by the computer-based systems set up at the e-gram centre. For instance, a computer can store greater quantity, variety and accuracy of information on schemes and benefits than can individuals. Further, the computer-connectivity infrastructure available at the e-gram centre allows for the possibility of dynamic updation and corrections to the information made available.

At another level, the *gram mitra* also engages in information collection activities from amongst the village residents. They administer surveys that focus on census-type information including number of pregnant women, verification of BPL families, etc., which are used to generate computerised *kutumb patras* by the VCE. Printouts are then used by the *gram mitras* to identify what schemes can be given to respective families, using linkages with the *talati* and block officers.

This ecology represents a two-way information flow model for e-gram between the the governance systems and the village residents. With an inherent potential for creating new bottom-up public information systems, the e-gram project allows for formulating a critical distinction between 'access to' and 'appropriation of' ICTs. By encouraging participatory development processes around e-gram, communities can engage in challenging centralised 'governmental' databases and statistics. There exists the possibility of information collection processes built on values of participation and inclusivity of the marginalised in any community. The e-gram ecology thus allows for an active shaping of the computer-connectivity technologies in ways that are empowering to communities, pointing to the crucial role for any e-governance initiative to meet the affirmed national priorities of enhancing democratic and decentralised governance.

Conceptualisation of e-governance should transcend digitisation and service provision

Dominant discourse posits e-governance as 'online provision of goverment services' achieved through digitisation and creation of ICT-based front ends. However, the normative moorings of e-governance point towards transcending the digitisation meanings represented by the 'e' and shifting focus to actual potentialities for governance reform [2]. E-gram is a case in point where ICTs are being used for achieving the basic objectives of governance. Aspects of local governance and community orientation are strongly incorporated in the ICT architecture and corresponding processes of e-gram.

To conclude, a normative developmental vision, community involvement, and linkages to other public systems and processes all provide the governance context to ICTs. As evidenced in the case of e-gram, these principles can root any e-governance initiative within tenets of goverance reform and participatory development, highlighting the true transformatory potential of ICTs.

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