Pro-Poor Access to ICTs – Exploring Appropriate Ownership Models for ICTD initiatives

Case Study of Rural e-Seva

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Table of Contents

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Rural E-Seva

E-governance in Andhra Pradesh: Background to E-Seva

The Indian state of Andhra Pradesh (AP) has received worldwide attention as one of the most progressive in the developing world in terms of significant support for the IT sector as well as large-scale e-governance activity. E-governance In AP was mostly envisioned and implemented state-wide in a centralized, top-down manner, and the main driving force behind the e-governance strategy was the previous chief minister, Chandra Babu Naidu. During his government's tenure, from the late 90s till 2004, the state went in for a massive computerization of governance activity. Typically, the e-governance efforts were centralized and focused on gradually building the blocks needed to transform government processes state-wide. While on the one side, governmental workflow and record keeping were computerized, the approach in respect of service delivery was guided by pragmatism. Here, the state government went first for urban areas - starting from the capital city of Hyderabad– where electronic delivery of services was easier to build, and there was sufficient demand density to justify huge investments.

For AP, being the early bird in e-governance meant there was no precedent to follow, and the socio-developmental aspects of ICTs were not developed in the public consciousness. Under these circumstances, it was not easy to leap directly into rural ICT initiatives. However, the AP model - strengthening backend systems and capacities[1], spreading out slowly, taking "easier to serve" services and communities first, and then going on to the more difficult services, and more "difficult to serve" communities – is seen by many senior government bureaucrats as the better option as compared to a model that rushes into community interfaces like telecentres when backends are poorly developed.

The rural e-Seva (seva means service) ICT initiative in West Godavari district of AP has its background in the TWINS pilot project in Hyderabad (later, out as the urban e-Seva project in Hyderabad and some other cities of AP), and the Saukaryam project in Vishakapatnam Municipality (one of the biggest municipalities in AP). The urban e-Seva project provides services like utility bill payments, license renewals, getting certificates of income, caste, nativity etc. The Saukaryam (meaning, 'facility') project went some

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[1] Automation of the various government departments is not complete in AP although some significant work has been done, and more is in progress.

significant steps ahead in effective egovernance, especially in matters of transparency and, therefore, accountability of governmental activity. It introduced an online complaint-filing and tracking system, as also online visibility to citizens of many aspects of work-flow such as the status of various applications made by citizens and particulars about civil works being undertaken by government[2].

West Godavari district in Andhra Pradesh, is spread over an area of 7742 sq kms with a population of 3.8 million. The literacy rate is 74%. The vast majority of population, nearly 80%, in the district is rural and 72% of the workforce is engaged in agriculture and allied activities. In Andhra Pradesh, farmland prices are the highest in West Godavari which is the most prosperous region in terms of agricultural productivity and per capita income. In this region, the density of population of (490 per square kilometer) is the highest for both rural and urban areas[3]. The district headquarter is at Eluru town, and the district is divided into 46 administrative blocks.

Designing a Rural ICT Initiative: Identifying the Major Values First

Rural e-Seva is a government led ICT intervention for under-served rural people, which clearly proceeds with e-governance as its main value plank. In fact, more than anything else, it is an attempt to employ ICTs to bring good governance to rural communities, in a manner that enforces a high degree of transparency and accountability on the governance machinery. In India, the government is the primary development agent. Development services undertaken by the government extend to many community related activities like mobilizing communities around issues of development and empowerment, developing self-governance capacity and creating 'community' resources and assets. Increasingly, more and more aspects of governance are being handed over to local communities themselves through democratically elected local self-government

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[2] Rural e-Seva was initiated by the same person, Sanjay Jaju, who initiated Saukaryam. In the current context, "champions" in Government have by and large taken the extra initiative since the government system lacks any incentive for those who want to try systemic innovations.

[3] http://web.idrc.ca/uploads/user-S/10281206920mimap2.doc, 'Farmland Prices In A Developing Economy: Some Stylized Facts And Determinants', Basanta K. Pradhan and A. Subramanian, National Council Of Applied Economic Research, New Delhi.

institutions (called 'Panchayati Raj Institutions'or PRIs). This process creates a close government–community dynamic[4].

Good and effective governance is the most pressing need of rural communities in India, which are characterized by poor capacities and under-developed institutions. In India, the government machinery is elaborate, and the development and welfare delivery system strongly entrenched - at least in letter – in law and policy. However, the unwieldy vastness of the government machinery and ineffective governance systems have implied that there are hardly any means for the citizens to extract accountability from the governments. This lack of accountability thrives on the complete absence of transparency in government functioning – a malady that the innovative uses of new ICTs can go a long way to remedy. ICTs can be employed to ensure such thorough transparency that can make it difficult for the government machinery to duck accountability and due responsiveness. This pressing need for a transformation in processes of governments, making them more responsive and accountable, as articulated by citizens is documented in recent research[5] as well as is evident in grassroots movements.[6] Thus, good governance can be seen as one of the most important values that can be delivered to citizens through the use of ICTs. This is the rationale that underlies rural e-Seva.

While ICTs can be a useful tool to transform governance, conversely, the potential of ICTs to deliver good governance in itself can be harnessed to provide the basic value proposition for ICTs to take off in rural contexts. Rural ICT initiatives require huge resource investment, capacity development and system and institution building, all of which pose formidable challenges. However, it is easier to overcome these challenges if a strong value proposition, like good governance, is built in *at the design stage* stimulating greater responsiveness of communities to the ICT initiative, and consequently attracting resources and multi-stakeholder participation. Rural e-Seva pegs its fundamental strategy on delivering good governance through ICTs.

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4 However, actual transfer of power to these bodies is a long-drawn out politically negotiated process and the extent of decentralization is not uniform throughout the country. For example, AP lags behind some other states like Kerala and Karnataka in this aspect.

5 See the various monographs and research reports of the Public Affairs Centre, Bangalore, India, http://www.pacindia.org/Publications/monograph_books

6 The right to information movement in parts of North India seeks to push for public access to information on government processes.

It is obvious that government backing is required if a rural ICT initiatives is to deliver e-governance. Additionally, government also has the resources and reach to develop the new systems and institutions required for any rural ICT initiative to take root. However, in respect of ICT initiatives relying heavily on e-governance activity and on government support, there are two important points on the flip side – one, governance systems in every country often represent many strong vested interests that can sabotage any attempts at reform, including through the introduction of ICTs; and two, building effective ICT-based systems requires high levels of innovation capacity – something which is not usually the forte of risk averse governance machineries.

So, how did e-Seva manage to develop effective e-governance services? And, how did an ICT initiative that was built on the value proposition of e-governance take off against the odds?

Resistance to system change within government has often meant that innovation depends largely on the effort of highly motivated and enterprising individuals who have the vision, as well as a sufficiently important position in government to push for reform. For the state of AP, the former Chief Minister, Chandra Babu Naidu, and senior bureaucrats like R. Chandrasekhar and J. Satyanarayana, set the vision and pursued the hard work required to set the pace for the digitization of government information, and the computerization of workflow as well as of the delivery of some government services. And building on this work, Sanjay Jaju, the District Collector[7] of West Godavari, and earlier the Municipal Commissioner of Vishakapatnam, brought in new paradigms in transparency of government processes. Jaju attempted this paradigm shift first during his tenure at Vishakapatnam, and later employed the lessons from Saukaryam to devise the egovernance-based ICT strategy for rural communities in West Godavari district.

Taking e-governance services to rural communities entails huge resource requirements for such outreach. The typical issue with rural communities is lower population density, which, owing to lesser density of transaction volumes, increases the unit cost of servicing. However, ICT platforms allow for the combining of government service delivery with other commercial and non-commercial community services useful to the community. This possibility for convergence of various services can offset negative effect of the transaction volumes factor. The rural e-Seva initiative attempts such a convergence through building composite services networks.

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[7] The chief district government functionary.

Involving Community Bodies in Governance Delivery

The e-Seva[8] initiative at West Godavari is an ICT-enabled services network owned and orchestrated by the district government. However, non-government partners are involved in running the e-Seva centres at the community end. For e-Seva, the deployment of government employees at the rural service centres would have meant huge additional costs; the systemic problems in governments associated with enforcing accountability; and little innovation in expanding the basket of services and their effective marketing with the community. In any case, a government servant could not be expected to deliver commercial services, and the e-Seva ICT centres were meant to be composite service centres.

It was felt by the district government that the public investment required to put the centres could be reduced by bringing in self-help groups or private operators who would put in part of the investment. Since they would have the necessary incentive in the form of revenue from service delivery, these partners could be expected to be innovative in services development, delivery and expansion.

The partnership arrangement of e-Seva is designed to mobilize the entrepreneurship energies of the CBOs (Community Based Organizations) or private partners, within the overall control and strategy of the district government, so that the e-Seva centres, while delivering important governance services, also become the ICT enablers for a whole range of community activities.

The West Godavari district administration chose partners to operate e-Seva centres in consultation with government departments concerned with providing economic opportunities to socially disadvantaged sections. Getting self-help groups, facilitated by government subsidies and/or bank loans, to run these centres was the first priority. Where such SHGs were not available, groups of individuals from socially disadvantaged sections were provided loans to run it as a group activity. Of the 47 e-Seva centres in West Godavari, 16 centres are run by women's self help groups, 12 by young men's self help groups (activated through the Youth Welfare department), 14 are run by smaller groups of persons from disadvantaged castes[9] and 5 are run by individuals who are supported by central government's employment scheme. Out of the 47 centres, 36

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[8] The term 'e-Seva' is used hereafter for the rural e-Seva initiative.

[9] A traditional social stratification system in India

operate from government owned buildings (for which a nominal rent is paid by the centre operator).

All these e-Seva centres at present are in the same village/town which serves as the block headquarters (a sub-district unit of administration). In addition to these dedicated e-Seva centres, many e-Seva services are also available from an additional 120 Rural Service Delivery Points (RSDPs), located in villages. These RDSPs are telephone booths located in rural areas that are given highly subsidized Internet connectivity (through dial-up) by the public sector telephony provider (Bharat Sanchar Nigam Limited). The plan is to upgrade all these centres also to be able to deliver all e-Seva services.

The rural e-Seva services network is largely dependent on e-governance services -both as a major activity, and as a significant part of its revenue. The hub of the rural e-Seva services network is located in the district office at Eluru (headquarters of the west Godavari district). It is staffed by government officials, on specific assignment with the e-Seva initiative. This e-Seva team not only provides the e-governance services, but also builds and manages the IT platform for the whole services network. It actively promotes services development (including of commercial services) as well as marketing campaigns. Developing and managing back-linkages with a variety of service providers, whose services are delivered by e-Seva centre is a major ongoing task. The team also provides almost complete maintenance and administrative support to the centres. As one of the members of the e-Seva team put it, 'we treat them (the centres) as our babies'.

While e-Seva serves foremost as an e-governance services network, the established technology and institutional infrastructure of e-Seva is also being used to deliver a host of other socio-developmental services, community services as well as some fully commercial services.

E-governance services – Identifying Value Propositions

It is important to asses the utility of any service delivered to the community on ICT platforms in terms of the real value that the ICT dimension adds to the delivery of that service. Such a 'value analysis' is the most important step in designing any ICT initiative.

A number of government services and information are being offered by e-Seva. As e-governance is the mainstay of the E-Seva network, it is important to see these governance services in terms of the real value that they deliver to the community.

Bill Payments

Bill payments are an important transaction at the e-Seva centers, though at present only electricity bills are payable at these centres. To date more than INR[10] 400 million (USD 9.3 million) have been collected in electricity bills by the e-Seva network since 2003. Collection of payments for the public sector telephone provider and for local government taxes, like of property and water, are in the process of being added.

The 'value' for the community in bill payments and tax collection at e-Seva centres is straightforward; it is convenient in rural and semi-urban areas to have a trustworthy single point contact for multiple agencies. Citizens then do not have to travel distant centres to pay different bills, and the service agencies do not have to devote dedicated staff for bill collection.

Certificates from Government Records

The second most popular transaction at e-Seva centres at present is the provision of certificates, such as birth, caste and income from the government. These certificates are routinely required for education, jobs and various government entitlements. Effective and convenient issuance of these certificates in dependent on good record keeping. In Andhra Pradesh, a lot of work has gone into computerization of such basic government records (as required for issuing these certificates), and today in West Godavari district, the particulars with respect to every individual are available in a digital database. But this in itself does not ensure efficient and convenient issuance of authentication certificates by local government offices. Typically, systems for receiving applications and delivering certificates are deliberately made difficult to facilitate corruption. It is usual for petty government officials to take a bribe for issuing these certificates. e-Seva circumvents this problem through simply allowing the certificate requests to be made at e-Seva centres, which are often not far from the sub-district government offices, and these requests are recorded on the computer. The applicant is then asked to return after 48 hours and collect the certificate. Every day, the centre operator makes out certificates on the basis of the online database available at the centre and takes them to the government office. Here, the designated official uses his own database to verify the certificate and authenticates it with a signature and official seal. The value for the applicant is evidently very high: she does not go to the government office where she is likely to be subject to the tyrannies of the system, and since the date and time of the service request and its fulfilment gets recorded online at the e-Seva centre, and is

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[10] Indian Rupee, INR, INR 43 is equivalent to 1 USD at current rates

monitored by senior officials, issuing officials have little discretion to delay or refuse a response without good reason.

The centre operator is allowed to charge INR 10 for each certificate issued. So far, more than 3, 50,000 such certificates have been issued from e-Seva centres. Requests for land records can also be made online through the centres, but at present certified copies of land records are obtained from the relevant department through offline channels, and delivered to the applicant. The whole process is expected to go online soon. Modules for online registration of births and deaths are also ready, and being tested.

Public Grievances

The third most popular service is of registering public grievances. Each grievance is a given a unique identifying number, and progress on it can be tracked online. Traditional means of grievance registration do of course exist, but they do not guarantee redress, because they can easily be circumvented. The value therefore of this online service is in the fact that the transaction, along with the complete content of the grievance, is not only recorded permanently, but the whole transaction - its content and the follow-up action, including the reply by the government official - is also available remotely to the senior officers (and to everyone else on the Internet) at any time for ensuring adequate responsiveness and accountability[11]. Anyone familiar with the governance systems in developing countries like India, and the way they deny and refuse statutory service obligations upon them with complete impunity, can easily understand what such a small system innovation can mean. If pursued thoroughly and systematically, it can turn an inefficient and unresponsive governance system on its head.

Compared to the number of citizens' unmet service demands from the government, the 13,000 complaints that have been dealt with by the e-Seva system is a tiny number. However, people, previously resigned to the callousness of government machinery, are only discovering the new possibilities. And within the government, where vested interests and general lethargy is challenged by the new systems, it is a very difficult and slow process for the reformists.

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[11] The value of an on-line grievance redressal system is in the higher probability of getting a solution, rather than the 'convenience' factor of not having to travel far for redressal, often touted as the real benefit. Such 'convenience' is actually not of any great significance in this context where most of the problems of the citizens, for which redressal is sought, are major, and chronic, and citizens would perhaps not mind travelling to the district headquarters if there were a chance that their problems will be solved by doing so.

While the ICT-based system makes processes transparent, accountability does not automatically follow; it is still dependent on active involvement of senior officials in monitoring processes and enforcing compliance. However, if positive changes catalysed by ICTs are to become permanent, processes of monitoring and compliance within the bureaucracy must become institutionalized – independent of individuals driving the change. Sanjay Jaju and his team have been attempting to set up and institutionalising systems and processes to enable this shift.

The Value of Information

The e-Seva team is putting more and more government work processes online, and opening them to public scrutiny. The rural e-Seva website (www.westgodavari.org) is comprehensive and citizen-centric. A very big range of governmental and other information is available here for the citizen. Web-based modules for government procurement, and file movement and pending files have been prepared for different departments, and these can be accessed by citizens. These systems are still not widely used, but the e-Seva team is negotiating internal and external barriers, and making progress.

Through e-Seva, listing on the government employment exchange can now be done online. Citizens can apply online for old age pensions, for loans under self-employment schemes or ask for subsidized agricultural inputs. In India, as in most developing countries, the number of citizens qualifying for entitlement to these welfare services of the governments is very high, and most often, the allotted resources are much lower. Beneficiaries are selected in an ad-hoc manner, and patronage and corruption holds sway in the process. Bringing in transparency in the application process for entitlements is something that in itself has a far-reaching effect on governance.

Under the Gram Darshini (village view) service on the website, village-related information regarding civil works being undertaken by public authorities, information about schools and hospitals etc. is provided, which can be empowering for local activism. Making such information available to everyone over a public website is putting significant pressure on the government machinery to deliver. The details of every citizen are available from the website. Every citizen, in this database, has a unique identity number, and though this may be commonplace in developed countries, hardly

few developing countries have such digitized comprehensive citizen databases. This owes to comprehensive work done earlier by the state e-governance authorities.

A complete list of those who are given old age by the government was computerised and put on the project website along with the photographs and the citizen identification number of the beneficiaries. This helped the administration weed out over 7,000 bogus names saving over INR 7 million (USD 162.8 thousand) yearly for the state[12].

The e-Seva website also gives information on the list of beneficiaries of many other government schemes selected from different villages. Now citizens are able to challenge their non-inclusion or someone else's wrongful inclusion in the list. Recently, detailed information on financial assistance given to socially and economically disadvantaged persons, individually or as self-help groups, has been made available on the website. The information includes the nature of activity for which this assistance has been given. Very often financial assistance is availed of by persons citing some livelihood activity, but is spent on other things. The online information now allows others in the village community to challenge such malpractices. As more and more government information, like for example the database of those who are recognized as falling below poverty line (BPL), goes online (as is planned), the system will be able to choose and deliver entitlements even without the need for a formal application. And since these databases are accessible to everyone, processes that will ensure that the information is accurate will come into play – mistakes will be noticed by a large group of interested people and there will be pressure to correct errors of omission (eligible people not being given the benefit) and commission (bogus or ineligible beneficiaries).

(Putting detailed information about citizens online does have significant implications of privacy and abuse of private information. However, it is important to appreciate here that the e-Seva initiative has effectively turned the public information paradigm in India on its head. While for disclosure of the tiniest bit of public information the traditional government attitude has been "WHY?", with e-Seva it is "WHY NOT?". The implications of such a paradigm of public information are very huge for Indian governance systems. Another issue of relevance here is that in small rural communities, usually, there is little among people that is hidden from one another, and the issue often is not so much what the villagers know about each other, *but of what they do not know about the manner in which processes of governance operate around them, and result in exclusion of the already disadvantaged.* The separation of the private domain from the public in the

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[12] http://www.iicd.org/stories/articles/Story.import5151

context of an open information environment is certainly an important issue that has to be addressed with suitable laws and practices for privacy and data protection. This will need to be done in a way that is still consistent with the openness required for the accountability of governance mechanisms.)

As most information become widely accessible, many officials have still not completely understood how the new transparency regime implies that falsification of information to superiors can be increasingly hazardous. Members of the e-Seva team reported they have found departmental officials at district level grossly misrepresenting facts about the figures on the Public Distribution System[13] (PDS) to visiting officials and political authorities from the state capital. E-Seva personnel had clear figures with them from the databases, telling a different story, to disprove many submissions. However, in this instance, the contradictions were not exposed since the PDS database was still not online.

Such 'gate-keeping' of accurate information will soon be impossible since PDS information, including food grain allocations to each PDS outlet, the actual disbursement to those entitled, stocks left over etc. are in the process of being made available at e-Seva centres. The PDS outlet operator, the key person in the PDS chain, must fill in regular disbursement and stock statements at the nearest e-Seva centre. These will be available online for anyone to view and challenge, including the numerous persons who are shown as being given PDS benefits but may not have received it in quantities as shown, or anything at all. And many of the supposed claimants, as in case of old age pension, may be non-existent persons. In India, the PDS system, the only large scale social security net, suffers major leakages and a considerable part of the food stock, intended for distribution among the poor, is diverted to the black market.

Other Socio-development Services

As has been emphasized, governments are the main developmental agency in India. It has both the mandate as well as a well developed institutional structure for delivering all-round development services such as education, health, agriculture related services etc. A positive aspect of having an ICT-enabled integrated government outpost in the community is that a community-centred orientation, about providing every possible service that is valued, begins to take root in the thinking of governments. This is the

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[13] PDS is the basic social welfare net in India, which assures some basic food supplies to the poor at subsidised prices.

approach taken by e-Seva to development services, unlike that of traditional government departments whose community approach is strait-jacketed in narrow "this-is-my-domain-and-this-is-not" thinking. E-Seva looks at services in a composite manner, beyond 'departmentalism' and from the view point of the community and the citizen. And since sustainability of centres is also important in the e-Seva design, there is a conscious effort to co-opt as many services as possible under the e-Seva umbrella.

Education services are an important part of e-Seva. Everyday, for a few hours, students from local government schools come to view education CDs developed by a non-profit organization, Azim Premji Foundation. A teacher from the school facilitates the CD-based lessons in batches. The centre operator is paid a small fee by the education department for each student who attends these sessions. The e-Seva website also provides extensive links to many other government and non-government education resources.

Health related resources are also being built on the website. Video-conferencing between village Primary Health Centres and hospitals at the district level has been tried out for tele-counselling on health. This service has been found useful and is gaining popularity. Video conferencing is also used for education and for agriculture related information and services.

The e-Seva website is also developing into an important community media space. Members of the community can post news and their views on various matters. The new 'i-look' service allows community members to post pictures as well. Often these pictures are offered as evidence of points raised in the postings, many of which are aimed at government or civic authorities. A recent picture posting on i-look shows how the government mortuary piled corpses in the open, in clear view of residential areas. Authorities took immediate notice and initiated remedial measures.

Commercial Services at e-Seva Centres

A good part of the income for the centre operators comes from stand-alone services like photocopying, digital photography, printouts and desktop publishing. Internet browsing is also offered for hourly charges. Computer education is a good source for income for most centres.

Online matrimonial listings (notices of those seeking wives/husbands) are accepted for a certain fee, as are advertisements of merchandise at e-Seva centres. There is also a facility for online auctions. e-Seva centres offer SMS (short message service, offered by cell phone operators) services from computer to cell phones. Members of the community can directly order agriculture inputs like seeds online from the e-Seva centres. Handicrafts made locally are also available for purchase through the website and these may be ordered and delivered as gifts.

The centres offer other commercial services like booking and delivery of railway tickets, booking of tourism department's ferry services and making online reservations for rooms in temple dormitories at Tirupati, which is a world famous temple town. India's largest consumer goods company – Hindustan Lever Limited - provides a service whereby the centre operator is provided a fixed fee for every member of the community who registers for viewing content on its website. The content is concerned with community issues such as health and hygiene, but the company also promotes its goods through it. The e-Seva centres also double as small shops for consumer goods. This can be very useful for community members since the distribution chains in rural areas are weak, and people may end up paying more than the maximum retail price listed for any item. And in running these small shops, self-help groups also make some money for themselves. Some e-Seva centre operators also work as agents for a few financial services offered by various companies[14].

Services offered at e-Seva Centres
E-governance
Bill payments
Certificates – Income, caste, nativity
Filing grievances, and tracking progress
Land Records
Birth and death registration
Employment registration
Online applications
Information – beneficiary lists, public works, government work flow
Developmental services
Education CDs

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[14] ICICI, which is India's second largest financial services group, sells its insurance and other financial products through these centres.

Education, health, agriculture information
Tele-medicine – video-conferencing on health issues
Online agriculture services request
Community media –i-look

Commercial services
Stand alone computer services – print-out, digital photography, DTP, Photostat, job work
Computer education
Auctions
Matrimonial listing
Sale of consumer goods
Online orders for seeds
Tickets and other bookings – railway, ferry, hotel rooms
Sending computer to mobile SMS
Internet browsing
Ordering handicrafts and online request for gift delivery

Organisation and Ownership of e-Seva

The e-Seva franchisees meet every month with the steering committee of e-Seva to ensure proper working of the services network and to sort out problems. The steering committee is made up of government officials. These meetings involving the franchisees, many of which are self-help groups, are good avenues for community inputs. However, in practice, the network is highly government driven, and is nurtured by the personal enterprise of the District Collector, and e-Seva team members. Community interests are ensured while deciding issues, mostly through inputs from government officials relying on their experience with field work and inputs received from the community during field visits. Apart from developing and sustaining more and more services useful for the community, issues of affordability and equitable access are also accorded high priority. Recently, when a proposal was mooted by the state government authorities, that the centre operators could collect INR 15 (USD 0.32) as service charges for certain services instead of INR 10 (USD 0.23) that is currently being charged, the District Collector has preferred to persist with present charges, on considerations of affordability. The service charges for all services, including the commercial services are decided by the e-Seva team for all centres.

Technology Underpinnings

Initially, all e-Seva centres were connected through dial-up connectivity, but the bandwidth of these connections is poor. Now n-Logue[15] provides wireless in local loop connectivity to 18 centres. Recently, the district government has also put up a WiFi network that connects 20 government offices and one e-Seva centre. The WiFi network was set up at a time when the outdoor WiFi connectivity was still not allowed officially as per telecom regulation. The funds for this purpose were mobilized on the personal initiative of the District Collector by diverting public collections raised during a big festival in the district. The e-Seva team was excited about the WiFi possibilities and wanted to explore them further. However, recently, the state government has promised to reach fibre optic broadband connectivity to all villages within a year in West Godavari, owing to which the E-Seva team has shelved plans for the expansion of the WiFi network.

To reduce Internet charges, the databases and other information are exchanged between the centres and the network hub through periodic synchronisation. The e-Seva team has developed customised software for specific activities like certification, complaints, land records, auctions etc, and it keeps giving software support for new activities as they are added. Because of a relatively long and successful history of computerization within government in AP, software platforms and systems are well developed and standardized, and for the same reason, and government officials are relatively more comfortable with computers. This background has given e-Seva a good head start over other rural ICT initiatives in India.

Investing in an ICT-based Institutional Infrastructure

The rural e-Seva project in West Godavari is a local government-owned and -operated ICT-based services network. The network is most of all an outpost for delivering governance services in a manner that apart from being more convenient to citizens also imposes accountability on the government machinery. Far reaching transparency of governance processes, induced by ICTs, has begun to put pressure on the governance machinery to deliver on its mandate. Making information on government processes and decisions available to all is empowering for the citizen. Such "process visibility" also

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[15] A rural Internet service provider, providing connectivity through wireless in local loop. For more details refer to the TeNeT – N-Logue- Dhan case study

enables senior officials to effectively track the working of the government machinery and ensure accountability. A complete re-working of the government-citizen relationship is being shaped by such e-governance efforts.

Apart from the transparency and efficiency that e-Seva as an online platform ensures, the cooperation of community bodies like self-help groups and private operators in the delivery of governance services also brings about cross-institutional accountability in the delivery of these services. The private partners - self-help groups and individual operators - have to make sure that the government machinery plays its part in making services available since it is necessary for the successful operation of their enterprise (centre operators have access to senior officials for redress, and their case can easily be proved by the online transaction recording). On the other hand, the government machinery, not only as the services provider for e-governance, but also through the ownership of the services network, ensures that the centre operator serves the citizens and the community well.

Apart from transforming governance, e-Seva also addresses the issue of weak institutional capacity in rural areas, in relation to markets, development machinery as well as public/community media (the i-look service of e-Seva has all the qualities of a open, participatory media space; however, its use is just picking up since the Internet is still not an established habit for most people). A host of ICT-based services are being developed as the building blocks of a robust institutional infrastructure for reducing the exclusion of rural areas. These services range from easy access of consumer goods, access to new markets through e-commerce, better health, education and livelihood development services to a budding bottom-up media.

Scaling as Institutionalising – Individual Leadership to Community Ownership

The fact that the e-Seva network is basically a government driven initiative, with little involvement of the community, brings two related issues into focus.

One, since governments are often inept at handling innovation and institutional transformation, initiatives like e-Seva are invariably dependent on the leadership and personal commitment of certain individuals in government. This raises the issue of sustainability of the innovation, and its institutionalization.

Two, in the case of initiatives like e-Seva, which are driven by bureaucracy with little or no involvement of self-government bodies at village, block and district levels, the issue of exclusion of the community from setting the direction and taking ownership of the processes and outcomes is a critical gap that requires attention. In the long run, only complete community involvement and ownership can ensure that community interest remains uppermost in the e-Seva strategy and implementation. Dependence on committed bureaucrats in positions of authority for this purpose is not sustainable.

This said, it is still important to understand that there is a crucial role for leadership especially in the time that constitutes the transition for institutional transformation. In fact, effective leadership and innovation can work for furthering the interests of the marginalised when existing processes of community participation are mediated mainly by the elite. Local political structures in countries like India are mostly built on patronage. Community representatives in local politics, including within self-government institutions, by and large position themselves as intermediaries in getting government benefits for people. Obviously, such community politics will initially pose challenges to changes that threaten the status quo. Institutional innovations like online applications for entitlement, online availability of lists of beneficiaries, and a free and open sharing of decision-making processes, can destabilize vested interests in bureaucracy and local politics. In the case of e-Seva, the leadership provided by Sanjay Jaju and his team in negotiating challenges and obstacles typical of entrenched systems at local levels serving the local bureaucracy and the political elite in the community has made the success of the initiative possible[16].

The imperative now is for systemic changes to take root and deliver manifest value to the community, whereby, a self-perpetuating momentum then will institutionalise the innovations of e-Seva. Sanjay Jaju says that the Saukaryam initiative that he put in place in Vishakapatnam has continued to work effectively even after he left because the system had taken deep root during his time there.

It is undeniable that a greater role for the community, in the long run, must go hand in hand with the processes for transparency and accountability of governance that e-Seva has opened up. In fact, these very values may be rendered meaningless unless citizens engage with government. A larger role for local self-government institutions (PRIs) in

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[16] The political context and situation in the case of another government led district-wide ICT initiative in another state in India, Kerala, is somewhat different and this seems to have had implications for developing e-governance related institutional innovations and transformation there. This is separately discussed in the Akshaya case study.

associating with the e-Seva network needs to be the next step. Some early linkages between e-Seva centres and PRIs are now being built in the area of collection of panchayat taxes and some other levies. These linkages must go in the direction of the active involvement of PRIs in all aspects of running of the e-Seva network and the centres. The involvement of community based bodies - the self-help groups - at present is mostly concerned with practical issues of managing the centres. Their role needs to be expanded and made more 'ownership' oriented, not only for individual centres, but for the whole e-Seva network. In the absence of such developments, bureaucracy-inspired governance innovations will die an eventual death when new officials take over, as has been seen in many other places in India.

If Value is Perceived, Technology Becomes Affordable

With e-Seva getting established in West Godavari, and proving the value of new ICTs for rural populations, state government has begun to roll out rural e-Seva in other districts of the state. The e-governance work in AP, and the success of the e-Seva initiative in West Godavari, also shows that the *issue of connectivity* to rural areas is not necessarily the main issue for people to enjoy the benefits of the new ICTs. Many other rural areas in India are as well or better connected than West Godavari. The real issue is of building institutions, a social consciousness, a community culture and individual capacities required for delivering and receiving substantial values over the connectivity infrastructure. Once sufficient work is done on these all-important issues, which of course needs time and application, institutional and social demand for connectivity can be expected to draw infrastructural response in terms of adequate connectivity to all areas.

This may look like putting the cart before the horse. Yet, ICT innovations that have taken place in recent years mean that extending connectivity to any area is a much less daunting task than ever before, as long as sufficient value is perceived by the people in obtaining connectivity, and the intermediary agencies (governments, regulators, community based organisations), and the institutions serving the people have the capacity to respond to this demand.

Building on the social and institutional developments of initiatives like rural e-Seva, that have the proven the enormous utility of ICTs for rural development, the government of AP has announced an INR 4,000 million (USD 89 million) project, with private participation, which promises to bring broadband connectivity to every village in the

state within the next 2 years through fibre optic cables, at a base charge of INR 100 (USD 2.2) per connection per month. The project, called the AP Broadband Network will link over 40,000 government offices to these villages, "taking government services to the doorsteps of citizens, and triggering significant economic activity''[17] as well. And to ensure that everyone can benefits from these services, AP has also launched a major e-literacy drive, to provide free e-literacy to at least one member of every family in the state, taking the cue from success of the Akshaya initiative in Kerala.

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[17] State Information Technology Minister quoted in the news item "Broadband link for all villages in two years", The Hindu, 4th January 2005.