Citizen-centricity for e-Governance initiatives in Rural Areas

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Background

Democratic governance mechanisms are becoming more receptive to the potentials of information communication technologies (ICT) to achieve good governance in its implementation. This application of ICTs for governance is covered under the umbrella term of 'e-governance'. E-Governance is expected to maximise citizen satisfaction by not just improving responsiveness of public service delivery mechanisms but also by augmenting citizens' participation in governance mechanisms (Gilmore & D'Souza, 2006[1]). Certainly for any e-governance initiative to be totally acceptable, citizens' needs and aspirations need to be its starting point and the core nuclei (Saxena, 2005[2]). However, the reality seems to its contrary, more specifically in the rural areas of developing countries such as India.

Existing Scenario in Rural India

India is one of the most populous nations of the world with a population of approximately 102 crore of which 742 million people (72% of its population) inhabit approximately 6,38,365 villages (Census, 2001[3]). The country has a diverse social and cultural profile where each region has different ecology, language and traditions. India has a paradoxical legacy of a heritage characterised by locally governed units and a federal structure attributed to its colonial past. In Indian villages every second person is illiterate, and majority of them are small farmers, artisans or laborers. Poverty affects 22% of the rural citizens (Census, 2001[4]).

To ameliorate this reality being confronted by the Indian villagers, several rural ICT interventions with varied functional objectives such as providing ICT infrastructure such as radio, video and TV or other hardware facilities, rural connectivity, computer based training / employment, establishing tele-centre setup, ensuring e-governance implementation or other ICT based application or content, have already been incubated and established in rural India (A suggestive list of such rural ICT initiatives have been enclosed as Appendix-1). Central government of India has announced National e-Governance Plan (NeGP) of the country in the year 2006 (http://www.negp.gov.in/) wherein a target to set up 1,00,000 CSCs has been proposed. These CSCs are rural tele-centres setup to provide the villagers with a slew of services, such as birth and death certificates, land registration, employment opportunities, matrimonial, *mandis* (market-places), education, veterinary services and so on in the rural areas (http://www.csc-india.org/). Another important rural-centric MMP under NeGP is termed e-PRI (electronic-*panchayati* raj institutions). The State level MMPs concentrate on complete automation of Panchayat functioning for both citizen specific services including issuance of licenses, certificates, providing proceedings of *gram sabha* or information related to beneficiaries of various schemes and also the services identified for grass root functionaries such as automation of survey data specially for below poverty line (BPL), families census services data (education and health) and for *panchayat* accounting jobs and so on. Initiatives that are already underway include e-panchayat in the State of Andhra Pradesh (http: //www. ekpanch.ap.nic.in/), e-Gram in the State of Gujarat, PriaSoft in the State of Orissa (http: //www. as.ori.nic.in/priasoft) and so on. Then there is an 'e-District scheme' (DiT, 2009[5]), which aims at providing support to the basic administrative unit and to target certain high volume services currently not covered by any of the MMP's under the NeGP and undertake backend computerisation to enable the delivery of these services through CSCs. Even the private sector has been actively setting up rural telecentres; prominent among these are ITC and Hindustan Lever Limited (HLL) which have launched grassroots ICT projects like e-Choupal and i-Shakti respectively. Similarly various nongovernmental organisations (NGO's) such as Development Alternatives and M.S. Swaminathan Research Foundation (MSSRF) have set up ICT Projects like TAARAhaat (Technology Action for Rural

Advancement) and Information Villages project respectively, to address a mix of business and social objectives in the rural areas. Therefore several rural e-governance initiatives have been speared by Government of India, or by respective state governments or by local administration or by popular non-governmental organisations or by popular market players and so on.

While some of these initiatives did generate initial enthusiasm, majority of them failed to meet the needs and expectations of rural citizens in the longer run. A popular study by (Heeks and Davis 1999[6]) suggests "…the majority of ICT based initiatives end in total failure of a system that never works; partial failure in which the major goals are unattained or in which there are significant undesirable outcomes". Majority of them appear to be heavily technology-centric, adopted from the environment of developed countries and thus fail to assure rural development in developing countries such as India (Jauhari, 2004[7], Wilson 2000[8]). The fact stays that the assumptions of developed nations are often mismatched with the cultural realities of developing nations (Heeks, 2002)[9].

Contextual Influences of Rural Regions on e-Governance Initiatives

After all in a country as diverse and rich as India, rural reality tends to be beset with many complex events and typical indigenous knowledge systems. These cultural and aspects would vary from region to region and have unique influence on the needs and expectations of its inhabitants, thereby exerting dissimilar influences on its regional e-Governance implementation too. Several researchers such as (Carter and Weerakkody 2008)[10] affirm that the salient influents on usage intention of citizens for e-governance initiative may differ contextually and are dependent on a nation's demographics, cultural norms and so on. These contextual factors are numerous and a suggestive list of contextual factors that affect the adoption of e-governance in a developing country as India has been delineated in literature. However, grouping of some of them in indicative (and not exhaustive) categories is as below:

- Regional Administrative Culture: Such as facilitating conditions provided by government (Hung *et al.*, 2005)[11]; work culture in administrative organization (Kraemer & Dedrick, 1997)[12]

- Citizen Characteristics: Such as user profile based on age, gender, education, income and occupation of people (Dwivedi *et al.*, 2006)[13]; user-uncertainty (Hung *et al.*, 2005)

- Physical Infrastructure: Access to ICTs, e-services and mass media channels (Carter & Weerakkody, 2008; Darrell, 2002[14]; Dimitrova & Chen, 2006[15]; Fang, 2002[16]; Mutula, 2005[17]; Oxendine, Borgida, Sullivan & Jackson 2003[18]) ; security concerns (Jarvenpaa, Tractinsky & Sarinen 1999[19]) and supporting infrastructure (Ramachandran, 2003[20]; Ratnadeep & Hara, 2006[21])

- Socio-Cultural Factors: Civic mindedness (Hung *et al.*, 2005); idiosyncrasies of particular groups, reflecting the group's societal affiliation and position (Penz, 2005[22]); specific social and cultural issues (Carter & Weerakkody, 2008; Kanungo, 2004[23]) ; trust factor (Belanger & Carter, 2005[24]; Bhattacherjee, 2002[25]; Gefen *et al.*, 2002[26] ; Navarra & Cornford, 2003[27]); resistance to change (Margetts & Dunleavy, 2002[28]); and risk-reduction (Belanger & Carter, 2005; Gefen *et al.*, 2002).

Indeed the related e-governance literature is replete with illustrative list of such contextual factors, but due to the local variation, only few studies venture to recommend systemic solutions to overcome them, that too especially in rural context of a developing and diverse country as India.

Citizens' Perspectives of Contextual Influences

The main preposition of this theme paper is since these contextual influences are a prominent influence, therefore before designing any e-governance initiatives for the rural areas, diverse needs of the citizens may be given proper consideration from the perspective of the people's potentialities, needs and aspirations defined by their respective rural reality. This would result in design of customised e-governance initiatives that would be more responsive to the contextual reality of its respective rural areas and hence better utilised by the locales and therefore prove to be more sustainable. Responsiveness of a design approach for e-governance initiative to such contextual realities of citizens is generally referred as citizen-centric or people-centric

approach for designing e-governance initiatives and is expected to ensure overall acceptability of e-governance initiatives.

Understanding Citizen-Centricity

"Citizen-centricity is about turning the focus of government around – looking at the world through the other end of the telescope, so that the needs of the citizen and businesses come first, rather than operational (aspects) or other imperatives inside the government machine".

(Intel & Gov3, 2006)

Citizen centric approach entails evolving an e-governance offering that is integrated, is citizen-driven and ethnographically sensitive, rather than a mere understanding of technology an its acceptance by users. Citizen centric approach focuses on the citizens needs from the point-of-view of citizens themselves, and therefore citizen-participation and their representatives is the core-essence of citizen-centricity in e-governance. It involves a detailed "understanding of human elements" (Lee-Kelley and Kolsaker, 2004[29]) (and not conventional technology or bureaucratic parameters) to determine why citizens would bolster their usage of e-governance initiatives over the prevailing mechanism of fulfilling their governance needs. Such a citizen-centric approach is expected to retain six guiding principles in its vision *viz.* "A holistic approach to customer focus; web-centric delivery; building a credible brand; value addition by large efficiency gains; continuous improvement, building trust and confidence" (Gupta, 2007, pp.40[30])

Why Citizen Centricity

Many philosophers (Burn & Robins, 2003[31]; Donnelly, 1999[32]; Fors & Moreno, 2002[33]; Pujar *et al*, 2008[34]) have put across a need for adopting a citizen-centric approach for designing e-governance initiatives. The related published literature on good governance has also proposed grounding action agenda in the contextual realities of each country, including verifiable participation of citizens in the governmental decision-making process (Evans & Yen, 2006[35]; Grindle, 2004[36]) ; to ensure legitimacy (Farnham & Horton, 1996[37]); representative-ness (Garson, 1999[38]) and efficiency with which public affairs are conducted (Dhameja & Medury, 2004[39]).

It is this aspect of good governance that also sets the tone for imbuing citizen-centricity in rural e-governance initiatives.

Support for citizen-centricity also comes from numerous theories drawn from prevailing emerging trends in management, public administration, governance and design realm. Management gurus insist on 'Customer relation management' with customer as the driving force for all the strategies, public administration practices are being influenced by 'New Public Management (NPM)' practices where citizen is to be revered as a customer and even good-governance principles insist on citizen as the core-nucleus of all governance activities. Principles of citizen-centricity are also supported by inclusive "bottom-up" approach and collaborative stakeholder-management practices. It also draws from 'network governance' theories of inclusion, e-participation frameworks and also from the user-centered design approach, where the end-user decides the design strategy to their own advantage. Academics and practitioners of all these disciplines highlight the need as well as the benefits of bringing citizens to the centre-stage of processes of democratic governance using e-governance initiatives. The common underlying justification for such a citizen-centric approach is that since citizen is the ultimate beneficiary and also the primary actor in a democracy, therefore all development and governance processes should focus on people (Fors and Moreno, 2002, 198,199). Moreover, despite being the chief beneficiaries of rural e-governance initiatives (ReGI), rural citizens have been generally viewed as passive recipients and not as co-designers in the process of implementation of such initiatives. The other stakeholders, namely, donor agencies, government bodies and system designers are not the direct recipients of rural e-governance initiatives, they do not entirely understand the needs, aspirations and context of rural citizens and end up being more focused on technology aspects. There is a need for a design approach that is broader in perspective and not merely based on understanding of technological diffusion or acceptance parameters. There is a dearth of explicit elaboration as to how to design such citizen-centric e-governance initiatives for a developing and diverse country like India, especially with reference to its rural setting. Therefore an attempt is required by the designers and policy makers alike to explore the social, technical, cultural, administrative and related contextual factors influencing an e-governance

implementation, with the objective of developing an e-governance approach that is more suitable and effective from the perspective of rural citizens.

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Appendix-1

List of Rural ICT Initiatives in India

S.N	Name	Type	Initiator	Region
1	Akshaya	e-Governance	Kerala State Department of Information Technology	Southern India
2	AP online- One-stop-shop on the Internet	e-Governance	Govt. of Andhra Pradesh	Southern India
3	AP Technology Services Ltd	e-Governance	Govt. of Andhra Pradesh	Southern India
4	Aquachoupal.com/e-Choupal	Tele-Centre	ITC's International Business Division	Southern India
5	AsCent Online Marketing :Computer Aided Design of Artisanal Goods	Computer based Training / Employment	AsCent	Southern India
6	Bhoomi	e-Governance	Govt. of Karnataka	Southern India
7	Chennai Kavigal	Application / Content	Chennai Kavigal	Southern India
8	Community Access to Sustainable Health (Ca:sh)	Application / Content	Media Lab Asia	Southern India
9	Community Learning Centres In Karnataka: Azim Premji Foundation	Computer based Training / Employment	Govt. of Karnataka	Southern India
10	Computer aided Administration of Registration Department (CARD)	e-Governance	Govt. of Andhra Pradesh	Southern India
11	Computer Based Functional Literacy: TATA Group	Computer based Training / Employment	Tata Group	Southern India
12	Computer literacy for High Schools in Andhra Pradesh	Computer based Training / Employment	Govt. of Andhra Pradesh	Southern India
13	Computer on Wheels (COW)	Application / Content	Rajeswari Raj Pingali, a local development practitioner	Southern India
14	Computerized Panchayat in Belandur	e-Governance	Bellandur Gram Panchayat and Village Development Committee	Southern India
15	Cyber Grameen	Tele-Centre	Swarna Bharat Trust	Southern India

16	Data Vision	Hardware	Web Ezee Technologies	Southern India
17	Deccan Development Society's Radio and Video Projects	Radio, Video and TV	DDS	Southern India
18	Digital Photoshop Studio and Equipment: HP Labs India	Hardware	Hewlett Packard Labs Ltd.	Southern India
19	Early Detection and Prevention System 2000: A Computerized Medical Diagnostic System	Application / Content	The George Foundation	Southern India
20	e-Computerised Operations for Police Services : eCops	e-Governance	Govt. of Andhra Pradesh	Southern India
21	Ek Panch	Application / Content	National Informatics Centre (NIC), Hyderabad	Southern India
22	e-Seva	e-Governance	Govt. of Andhra Pradesh	Southern India
23	e-Srinkhala	e-Governance	Keltron	Southern India
24	e-Tapaal: E-mail in Indian Languages	Application / Content	Kaveri Communications Pvt. Ltd.	Southern India
25	Four-in-one Computer for Rural TeleCentres	Hardware	Hewlett-Packard Labs India	Southern India
26	Freedom Foundation: Using the Net to Help HIV-positive children	Computer based Training / Employment	Freedom Foundation	Southern India
27	FRIENDS (Fast, Reliable, Instant, Efficient Network for the Disbursement of Services)	e-Governance	Kerala State Department of Information Technology	Southern India
28	Fully Automated Services of Transport Department (FAST)	e-Governance	Govt. of Andhra Pradesh	Southern India
29	Gram Phones	Hardware	Rural Telecom Foundation (RTF)	Southern India
30	HISAAB	Application / Content	Media Lab Asia	Southern India
31	ICT and E-Inclusion Research	Application / Content	Hewlett-Packard Labs India	Southern India
32	India Health Care Project	e-Governance	Govt. of Andhra Pradesh	Southern India
33	India IT Freedom Project	Application / Content	Govt. of Andhra Pradesh	Southern India
34	IndiaAgriLine: Agricultural Information	Application / Content	EID Parry enterprise of the Murugappa group.	Southern India

35	Information Technology and Rural Extension in India	Tele-Centre	Tamil Nadu University of Veterinary & Animal Sciences (TANUVAS)	Southern India
36	Infothela	Hardware	Media Lab Asia	Southern India
37	iStation: E-mail without a PC	Hardware	iNabling Technologies Pvt. Ltd.	Southern India
38	J-FarmIndia.Com Agricultural Information and Services	Application / Content	Tractor and Farmer Equipments India Ltd. (TAFE Ltd)	Southern India
39	Karshaka Pragati: Farmer Empowerment in Rural AP	Application / Content	Co-Options Technologies Ltd.	Southern India
40	Khajane	e-Governance	Government of Karnataka	Southern India
41	Krishi Marata Vahini	e-Governance	Govt. of Karnataka	Southern India
42	MAHILA SPURTHI	Tele-Centre	Collectorate of West Godavari	Southern India
43	Mahiti	Application / Content	MAHITI Infotech Pvt. Ltd.	Southern India
44	Mahiti Sindhu - School Project In Rural Karnataka	Computer based Training / Employment	NIIT	Southern India
45	Mana TV	Radio, Video and TV	Govt. of Andhra Pradesh	Southern India
46	MANAGE: Andhra Pradesh	Tele-Centre	Govt. of Andhra Pradesh	Southern India
47	Mandya Tele Centres	Hardware	iNabling Technologies Pvt. Ltd	Southern India
48	Modular Infotech: Indian Language Fontography and Software	Application / Content	Modular Infotech Pvt Ltd.	Southern India
49	Multi Purpose Household Survey (MPHS)	e-Governance	Govt. of Andhra Pradesh	Southern India
50	Namma Dhwani: The Community Radio Workshop Program	Radio, Video and TV	VOICES	Southern India
51	Networked HIV-AIDS Intervention	Application / Content	Samuha.org	Southern India
52	NUDI: Computing in Kannada	Application / Content	Kannada Ganaka Parishat	Southern India

53	OddanchatramMarket.com	Application / Content	Reddiarchatram Seed Growers Association (RSGA), Kannivadi, and Kulumai, a Federation of Self-Help Groups (SHGs).	Southern India
54	OLTP: Online Transaction Processing	e-Governance	Govt. of Andhra Pradesh	Southern India
55	Orphan IT	Computer based Training / Employment	Orphan IT	Southern India
56	Prakruthi	Computer based Training / Employment	Prakruthi	Southern India
57	Project by Anna University and En Masse	Computer based Training / Employment	Anna University	Southern India
58	Rasi Maiyams : FOOD	Tele-Centre	Foundation Of Occupational Development (FOOD)	Southern India
59	Rural Development Network	e-Governance	Govt. of Kerala	Southern India
60	Saukaryam	e-Governance	Govt. of Andhra Pradesh	Southern India
61	Sisu Samrakshak: ICT-Enabled Child Health Care by UNICEF	Application / Content	UNICEF	Southern India
62	Sumangali Seva Ashram IT Education Program for Women and Children	Computer based Training / Employment	Sumangali Sewa Ashram	Southern India
63	Sustainable Access in Rural India : SARI	Tele-Centre	The Telecommunications and Computer Networks Group	Southern India
64	Sustainable Dryland Agriculture	Tele-Centre	Govt. of Andhra Pradesh	Southern India
65	Swayam Krishi Sangam	Application / Content	Swayam Krishi Sangam	Southern India
66	Swayamkrushi Women's Development Mutually Aided Thrift and Cooperative Society	Tele-Centre	Govt. of Andhra Pradesh	Southern India
67	Tambaram Municipality	e-Governance	Tambaram Municipality	Southern India
68	Telemedicine Â– AP Govt and CARE Foundation	e-Governance	Govt. of Andhra Pradesh	Southern India

69	Tel-Nek: IT Enabled Education for Rural Women	Computer based Training / Employment	FOCAD, GAIA, Basque country, Gordexola Tele centre Spain	Southern India
70	The E- commerce Store and E-marketers Project: FOOD	Application / Content	Foundation Of Occupational Development (FOOD)	Southern India
71	The Inter-city Marketing Programme: FOOD	Hardware	Foundation Of Occupational Development (FOOD)	Southern India
72	The Kalanjiam Community Banking Programme (KCBP)-Dhan Foundation	Application / Content	Dhan Foundation	Southern India
73	Village Knowledge Centres: MSSRF	Tele-Centre	M.S Swaminathan Research Foundation	Southern India
74	VoGRAM	e-Governance	Indian Institute of Science Bangalore	Southern India
75	VOICE: Vijayawada Online Information Centre	e-Governance	Govt. of Andhra Pradesh	Southern India
76	WorldCorps: AP CM's Empowerment of Youth Program	Computer based Training / Employment	World Corps India	Southern India
77	Yuva.com	Computer based Training / Employment	Govt. of Karnataka	Southern India
78.	n-Logue	Rural Connectivity		IIT, M

Source: itforchange.net/ic4d/south-india.html (ICT4D)

Database search for ICT for rural development; Accessed in November, 2004

(But it is not to be treated as an updated or an exhaustive list)