

India

Abbreviations

BBNL	Bharat Broadband Network Limited	OGD	Open Government Data
CSC	Common Service Centre	OGP	Open Government Platform
DBT	Direct Benefit Transfer	PPP	Public-Private Partnership
DISHA	Digital Saksharata Abhiyan	SCA	Service Centre Agency
DoT	Department of Telecommunications	SDA	State Designated Agency
GBV	Gender-based Violence	SERP	Society for the Elimination of Rural Poverty
ICT	Information and Communications Technology	SIM	Subscriber Identity Module
IT	Information Technology	SPV	Special Purpose Vehicle
IVRS	Interactive Voice Response System	SWOT	Strength, Weakness, Opportunities, Threats
JAM	Jan-Dhan Yojana, Aadhaar card and Mobile number	UIDAI	Unique Identification Authority of India
MIS	Management Information System	UN	United Nations
MMP	Mission Mode Project	VAS	Value Added Services
NDSAP	National Data Sharing and Accessibility Policy	VAW	Violence Against Women
NeGP	National e-governance Plan	VLE	Village Level Entrepreneur
NGO	Non-governmental Organization		
NOFN	National Optical Fibre Network		

1 An overview of the context under study

The UN e-government development survey 2014, which assessed the performance of countries along three dimensions – online service delivery, e-participation and infrastructure provisioning – ranked India 118 out of 193 member-states and identified it as a country with a middling level of e-government development.¹

The report also noted that India is one among 7 countries which have “clearly advanced their e-government despite their relatively lower national income²”. For India to continue on its upward trajectory towards building a mature e-government institutional ecosystem, it is vital for the country to work on the larger agenda of enabling all sections of its population to capitalize on the gains of the digital revolution. This is a major gap at present, as the Global Information Technology Report highlights:³

“Despite many clusters of excellence and its knack for frugal innovation, India is not leveraging ICTs for the benefits of its entire population. (...). Uptake of ICTs is among the lowest in the world. When accounting for multiple SIM-card ownership, approximately one-third of the population owns a mobile phone. Smart-phones are the privilege of the very few, with 3 mobile broadband subscriptions for every 100 population. Only 15 percent of the population uses the Internet. By international standards, technology adoption by businesses remains limited, as it does within the government”.

In particular, this divide in the access to the benefits of the Internet and other ICTs is amplified along gender lines. The Intel Women and the Web Study 2013 found that a woman in India is 27% less likely than a man to have Internet access.⁴ Also, less than 40% of India's Internet users are women, a sex ratio that is far lower when compared to other countries.⁵ On a similar note, a research study by the GSMA Foundation found that “only 28% of Indian women own a mobile phone, compared with 40% of men”.⁶

As other research scholars have pointed out, this gender divide in access is symptomatic of other underlying structural divides between women and men, especially in relation to education and employment.⁷ Only 26.6% of adult women in India have completed some secondary education, as against 50.4% of their male counterparts.⁸ Moving on to the area of women's economic participation, we find that a mere 28.8% of Indian women are in the labour market, compared to 80.9% of men.⁹ Further, women are increasingly concentrated in a smaller portion of the economy, as agriculture is steadily becoming feminized due to the out-migration of men into non-farm work.¹⁰

Even in survival and health indicators, gender inequality persists. The maternal mortality rate in India is 190 per 100,000 live births,

1 United Nations (2014), United Nations E-government Survey 2014: E-government for the Future We Want, http://unpan3.un.org/egovkb/Portals/egovkb/Documents/un/2014-Survey/E-Gov_Complete_Survey-2014.pdf, Retrieved 17 November 2015.

2 Ibid, pp 20.

3 World Economic Forum (2015), The Global Information Technology Report 2015: ICTs for inclusive growth, http://www3.weforum.org/docs/WEF_Global_IT_Report_2015.pdf, Retrieved 17 November 2015, pp 26.

4 Intel (2013), Women and the Web: Bridging the Internet gap and creating new global opportunities in low and middle-income countries, http://dalberg.com/documents/Women_Web.pdf, Retrieved 17 November 2015.

5 Hindu (2013), India is now world's third largest Internet user after US, China, <http://www.thehindu.com/sci-tech/technology/internet/india-is-now-worlds-third-largest-internet-user-after-us-china/article5053115.ece>, Retrieved 17 November 2015.

6 GSMA (2010), Women and mobile: A global opportunity – A study on the mobile phone gender gap in low and middle-income countries, http://www.gsma.com/mobilefordevelopment/wp-content/uploads/2013/01/GSMA_Women_and_Mobile-A_Global_Opportunity.pdf, Retrieved 17 November 2015.

7 Deen-Swarray, M., Gilwald, A. and Morrell, A. (2012), Lifting the veil on ICT gender indicators in Africa, http://www.researchictafrica.net/publications/Evidence_for_ICT_Policy_Action/Policy_Paper_13_-_Lifting_the_veil_on_ICT_gender_indicators_in_Africa.pdf, Retrieved 17 November 2015.

8 UNDP (2014), Human Development Report 2014 – India country note, http://hdr.undp.org/sites/all/themes/hdr_theme/country-notes/IND.pdf, Retrieved 17 November 2015.

9 Ibid.

10 Desai, S.(2014), Declining sex ratios seen in gender scorecard, <http://www.thehindu.com/opinion/op-ed/declining-sex-ratios-seen-in-gender-scorecard/article5801673.ece>, Retrieved 17 November 2015.

and though it has been steadily falling in the last decade, the rate of decline is not adequate for the country to meet its Millennium Development Goal targets, by end 2015.¹¹ More worryingly, the child sex ratio has been steadily declining in the past two decades.¹² In fact, this issue of 'missing girls' in the age group of 0-6 years, that can be traced to the rising incidence of sex-selective abortions, is now seen as a 'national emergency' that warrants immediate attention.¹³

The dimension of women's political participation is more promising. Though the current parliament has only 12.15% women representatives, far less than the critical mass of 33%, the percentage of women members of parliament has been steadily increasing in every successive general election, since the first parliamentary elections.¹⁴ At the lowest tier of governance, within the village self-government bodies and the municipal bodies, the percentage of elected women representatives is far higher, thanks to a constitutional amendment mandating one-third of seats in such bodies to be reserved for women.¹⁵ But there is a long road ahead before women's presence can translate into substantive participation, as socio-political structures determine local politics, and control women's exercise of their political agency.¹⁶

On the whole, there is a high level of gender inequality, and a large gap between women and men in terms of social development attainments, in the Indian context. This assessment is corroborated by global studies. The Global Gender Gap Report 2014 ranked India 114 out of 142 countries with respect to attainments in gender equality, based on a composite measure that assessed the relative gaps between women and men in four key areas: health, education, economy and politics.¹⁷ Similarly, India was ranked 132 out of 148 countries covered by the UN Gender Development Index 2014, a gender-disaggregated measure of human development attainments along three main axes, health, education and command over economic resources.¹⁸

11 Ramachandran, S.K. (2014), India may miss U.N. Millenium Development Goal for maternal mortality rate, <http://www.thehindu.com/today-s-paper/tp-national/tp-andhrapradesh/india-may-miss-un-millennium-development-goal-for-maternal-mortality-rate/article6455727.ece> , Retrieved 17 November 2015.

12 Census of India 1991; 2001; 2011.

13 UN Women (2014), Sex Ratios and Gender Biased Sex Selection – History, Debates and Future Directions, <http://asiapacific.unfpa.org/sites/asiapacific/files/pub-pdf/Sex-Ratios-and-Gender-Biased-Sex-Selection.pdf>, Retrieved 17 November 2015.

14 Rao, B.(2015), Women M.Ps in Lok Sabha – How have the numbers changed?, <https://factly.in/women-mps-in-lok-sabha-how-have-the-numbers-changed/>, Retrieved 17 November 2015.

15 Government of India (1992), 73rd amendment to the Constitution of India, <http://indiacode.nic.in/coiweb/amend/amend73.htm>, Retrieved 17 November 2015.

16 Jayal, N.G. (2006), Engendering local democracy: The impact of quotas for women in India's panchayats , Democratization, 13:1,15-35, DOI: 10.1080/13510340500378225.

17 World Economic Forum (2014), Global Gender Gap Report 2014, <http://reports.weforum.org/global-gender-gap-report-2014/>, Retrieved 17 November 2015.

18 UNDP (2014), Human Development Report 2014 – India country note,op.cit.

2 The evolution of e-government in India: the early days

The genesis of 'computerization in governance' efforts in the Indian context can be traced to the early 1960s. It was in the 1990s, however, that the e-government discourse emerged, in parallel with the liberalization of the country's economy, in its current form as 'technology-mediated administrative process-restructuring to promote good governance'.¹⁹ The economic reforms adopted by the Government of India in 1991 to ward off an imminent balance of payments crisis paved the way for a shift in the vision of state-led development, by which the traditional agenda of socialist planning was replaced by that of 'good governance for market-led growth and administrative efficiency'.²⁰ In this transition, ICTs emerged as an important policy priority, for their twin potential for catalyzing growth, and enabling systemic reforms in governance structures.

Firstly, in the decade immediately following the economic reforms, there were a range of policy level developments focused on equipping the country transition to a knowledge economy, such as:

- a The promotion of Foreign Direct Investment in IT and IT-enabled service sectors through the establishment of Software Technology Parks and Export Enterprise Zones, and the institution of tax-holidays;²¹

- b The creation of a separate, dedicated Ministry for Information Technology in 1999;²² and,
- c The adoption of the National Telecommunication Policy 1999, which sought to "provide a balance between the provision of universal service to all uncovered areas, including the rural areas, and the provision of high-level services capable of meeting the needs of the country's economy",²³ through the corporatization of the Department of Telecommunications by separating its policy and licensing functions from service provision functions, enhancing the competitiveness of the telecommunications sector by providing a level playing field to all players, and the establishment of a Universal Service Obligation Fund.

Secondly, there was a focus on leveraging the emerging capacities in IT and IT-enabled service sectors, for "higher efficiency, transparency, accessibility and accountability as well as reduction of procedural complexity that breeds corruption"²⁴ within existing administrative systems, which reflected the approach of the 'New Public Management' paradigm to public sector reform during the 1990s.²⁵ This manifested in developments such as:

- a The formulation of a 12 point e-governance agenda for all Union Ministries and departments, in 2000. This agenda mainly comprised of the following aspects: the digitalization of internal procedures and housekeeping processes, employee capacity-building in ICT skills, and the electronic delivery of services to the public. It was sought to be operationalized through the

¹⁹ Madon, S. (2009), *E-governance for development: A Focus on Rural India*, London: Palgrave MacMillan.

²⁰ Ibid

²¹ Gupta, M.P. (2012), 'Tracking the evolution of e-governance in India', in Weerakody, V., *Technology enabled Transformation of the Public Sector: Advances in E-government*, USA: Information Science Reference (An imprint of IGI Global).

²² Since rechristened the Ministry of Communications and Information Technology

²³ Department of Telecommunications (1999), *New Telecom Policy*, <http://www.dot.gov.in/telecom-polices/new-telecom-policy-1999>, Retrieved 17 November 2015.

²⁴ Das, S.R. and Chandrashekhar, R. (2008), *Capacity-building for E-governance in India*, <http://unpan1.un.org/intradoc/groups/public/documents/apcity/unpan045526.pdf>, Retrieved 17 November 2015.

²⁵ Singh, P. (2008), *Recommendations for meaningful and successful e-government in India*, http://www.itforchange.net/sites/default/files/ITFC/ARCPaper_Full.pdf, Retrieved 17 November 2015.

preparation of Ministry/ department-level IT strategies for a five year period, broken down into specific action plans and targets.²⁶

- b The enactment of the IT Act in 2000, that provided a “legal cover” and a “boost” to e-governance through provisions such as granting legal recognition to digital signatures, electronic gazette notifications and digital records.²⁷
- c The launch of a series of bottom-up e-government projects, championed by district level officials who were enthused by social entrepreneurial ideas in the emerging IT sector. These projects mainly focused on setting up single window information and service delivery centres and/or grievance redress points at the community level, supported by a local connectivity solution.²⁸

Some well-known initiatives among these, include:

- The Gyandoot centres, Intranet-enabled community service delivery points initiated by the district administration in Dhar (Madhya Pradesh state).
- The Lokvani centres, digitally-enabled grievance redress points set up by the district administration of Sitapur (Uttar Pradesh state) in partnership with local cybercafe owners.
- The ‘Friends’ and ‘Twins’ single window utility bill-payment centres opened by the district administrations of Thiruvananthapuram (Kerala state) and Hyderabad (Andhra Pradesh state).

Not all these initiatives were successes (as they were adversely affected by the lack of a common support infrastructure for

digitalized governance), but they did manage to set the stage for the nascent e-government processes to enter into the maturation phase.

However, policymakers started realizing that to enable a speeding-up of e-government development in the country:

“a programme approach would need to be adopted, which must be guided by a common vision, strategy and approach. This would have the added advantage of enabling huge savings in costs, in terms of sharing the core and support infrastructure, enable interoperability through standards etc, which would result in the citizen having a seamless view of Government.”²⁹

Thus, the stage was set for the development of the first, systematic framework for e-government in the country—the National e-governance Plan.³⁰

²⁶ 2nd Administrative Reforms Commission (2008), Promoting e-governance: The SMART Way forward, http://arc.gov.in/11threp/ARC_11th_report.htm, Retrieved 17 November 2015.

²⁷ Gupta, M.P. (2012), ‘Tracking the evolution of e-governance in India’, op.cit.

²⁸ Singh, P. (2013), E-governance in India: Existing context and possible scope for UNDP programming over 2013-18, http://www.itforchange.net/E-governance_in_India%3A_Existing_context_and_possible_scope_for_UNDP_programing_over_2013-18, Retrieved 17 November 2015.

²⁹ 2nd Administrative Reforms Commission (2008), Promoting e-governance: The SMART Way forward, op.cit, pp 106.

³⁰ In Indian policy debates, the idea of e-government is closely intertwined with that of e-governance. This is because the transition to e-government has been primarily viewed as a shift to a new paradigm of governance – one in which new governance arrangements such as partnerships between traditional state agencies and private and third sector agencies, are a key strategy for overcoming inefficiencies in legacy systems.

3 E-gov takes off: National e-governance plan (2006) and its key elements

The National e-governance Plan (NeGP) was formulated by the Department of Information Technology and the Department of Administrative Reforms and Public Grievances, in 2006, with the vision of “Make all Government services accessible to the common man in his locality, through common service delivery outlets and ensure efficiency, transparency and reliability of such services at affordable costs to realize the basic needs of the common man”.

³¹ As the following discussion on its key elements reveals, NeGP provided “a well integrated and solid basis for technology and financial enablement of e-governance activity in India which was hitherto missing”. ³² However, it failed to chalk out a strategy for how digitally-enabled governance reform can bring about accountable governance towards social inclusion and thus, the gender equality agenda was overlooked.

3.1 STATE DATA CENTRES AND SERVICE DELIVERY GATEWAYS: CREATING GOVERNMENTAL INFRASTRUCTURE FOR E-SERVICE DELIVERY

The NeGP provided for the establishment of State Data Centres to “consolidate services, applications and infrastructure to provide efficient electronic delivery of (digitally-enabled governance) services”.³³ In particular, the State Data Centres were entrusted

with managing the development of the technical backbones that would enable the transition to online service delivery: the Electronic Service Delivery Gateways and the State Wide Area Networks.

Electronic Service Delivery Gateways are the “standardized interfacing, messaging and routing switch(es) through which various players such as departments, front-end service access providers and back-end service providers can make their applications and data inter-operable”.³⁴ State Wide Area Networks refer to the “converged backbone network for data, voice and video communications throughout a State/Union Territory”.³⁵

3.2 MISSION MODE PROJECTS: A PUSH FOR BACK-END DIGITALIZATION

The NeGP (2006) also focused on speeding up back-end digitalization in specific governmental agencies, in order to enable a quick transition to online service delivery, by instituting 27 Mission Mode Projects – some led by the Union government, others by state governments, and a few that were to be implemented jointly by the Union and state governments.

These Mission Mode Projects (MMPs) mainly supported the design of digitalized service delivery programmes in select areas of governance such as income tax, insurance, pension, passport services, and agriculture, instituting e-service delivery systems at the district level etc. In 2011, 4 additional projects were introduced in the areas of health, education, postal services, and digitalization

³¹ Government of India (2006), National e-Governance Plan, <http://india.gov.in/e-governance/national-e-governance-plan>, Retrieved 17 November 2015.

³² Singh, P. (2008), Recommendations for meaningful and successful e-government in India, op.cit., pp 17.

³³ <http://deity.gov.in/content/data-centre>, Retrieved 17 November 2015.

³⁴ <http://deity.gov.in/content/nsdg-dpl-e-infra-str>, Retrieved 17 November 2015.

³⁵ India has a quasi-federal polity, comprising of states/union territories that are integral parts of the Union of India. For more on State Wide Area Networks, see https://en.wikipedia.org/wiki/State_Wide_Area_Network, Retrieved 17 November 2015.

of the public distribution system in India, which took the total number of MMPS to 31.

In the sections that follow, we proceed to examine 3 MMPs in greater detail:

- 1 The health sector MMP, as it is the only one out of this list of 31 which pertains to a public service specifically targeted at women,
- 2 'Common Service Centre (CSC) scheme' and
- 3 Unique Identification scheme 'Aadhar' (UID)

The CSC and UID projects have been crucial in shaping e-governance development in India, as they have tackled head-on the question of developing an effective and efficient country-wide support architecture for digitally-enabled public service delivery. These 2 projects have also, albeit inadvertently, generated considerable public debate about gender issues and concerns around socially marginalized groups in the transition from legacy systems to e-service delivery.

Health sector MMP

The health sector MMP has focused mainly on the development of a centralized mechanism for tracking the delivery of maternal and child health care services (in specific, a Mother and Child Tracking System) by monitoring front-line health extension workers delivering antenatal and post-natal health care services at the village level. Some state governments have introduced their own innovations, such as the IVR-based health information service of

the Government of Uttar Pradesh,³⁶ and the Health Advice Call Centre of the Government of Maharashtra.³⁷

However, it is important to note here that the overwhelming emphasis of the e-health MMP has been on the creation of "a bureaucratic apparatus that enables centralized tracking of health spending rather than strengthening decentralized community-centred accountability mechanisms³⁸". This has meant that interventions in this area lack a women's rights orientation, and tend to pursue a welfare approach.

'Common Service Centre' scheme/MMP

The Common Service Centre (CSC) scheme, launched in 2006, has sought to set up a country-wide network of ICT-enabled single window service delivery centres, across all 250,000 Gram Panchayats (village self-government bodies), under a public-private partnership model. The scheme's stated objective is that of "develop(ing) 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 through a combination of IT-based as well as non-IT-based services".³⁹

36 Khurana, M. (2014), Aarogyam – An ICT-based community centric approach for improving reproductive and child health, <http://nisg.org/files/documents/UP1418303342.pdf>, Retrieved 17 November 2015.

37 Rao, A.K. (2014), Case studies on e-governance in India, <http://nisg.org/files/documents/UP1418304090.pdf>, Retrieved 17 November 2015.

38 Gurumurthy, A. and Chami, N. (2013), Digital technologies and gender justice in India – An analysis of key policy and programming concerns, <http://itforchange.net/sites/default/files/IT%20for%20Change%20-%20HLP%20Submission%20-%2016%20April%202014-1.pdf>, Retrieved 17 November 2015.

39 Department of Electronics and Information Technology, Government of India (2006), Guidelines for implementation of the Common Service Centres Scheme in states, <http://nisg.org/files/documents/A02010001.pdf>, Retrieved 17 November 2015.

To realize this objective, the CSC scheme has adopted the following implementation structure:⁴⁰

- at the lowest level, a local Village Level Entrepreneur
- at the middle level, a Service Centre Agency (SCA, loosely analogous to a franchiser). The SCAs are usually big corporate entities.
- at the top level, a governmental body designated by the state, the State Designated Agency (SDA)

The roll-out of the scheme has been smooth only in the few states that have modified the intermediary structure in the scheme guidelines by instituting a dedicated public sector agency, instead of a corporate entity, to perform the role of the SCA.

Fulfilling satisfactorily the twin mandate of financial sustainability and inclusive service delivery has proven to be a tall order for the CSC scheme. In fact, Ray and Kuriyan (2007: pp 1, 10) who studied CSC centres have concluded that the village level entrepreneurs, because of the pressures to break even, may not focus enough on vulnerable groups and marginalized women, who “are less than ideal customers because of their lack of ability (or willingness) to pay for services on an ongoing basis”.⁴¹

Also, in a bid to strengthen the implementation of the CSC scheme, in 2009, the Government of India set up a Special Purpose Vehicle (SPV) entitled ‘CSC e-governance Services India Limited’, incorporated as a private company, to monitor the activities of the SCAs. Paradoxically, the SCAs are also shareholders of the company. This raises concerns about the interests that drive policies for the

introduction of ICTs in public service delivery and digital learning programmes.⁴² It also highlights the potential accountability deficit in public-private partnership approaches in e-government implementation.⁴³

The discussion shows how in single window programmes for last mile access the state's intent to empower women and the entrepreneur's profit motive can be at loggerheads. This can undermine women's right to access public information and services.⁴⁴ Weak governance of Private Public Partnerships can also compromise citizen interests of women beneficiaries.

Unique Identification Number/ Aadhar project

The ambitious UID ‘Aadhar’ project is an effort to “create a universal identity infrastructure, a foundation over which public and private agencies can build services and applications that benefit residents across India....(through) issuing every resident a unique identification number linked to the resident's demographic and biometric information, which they can use to identify themselves anywhere in India, and to access a host of benefits and services”.⁴⁵

In other words, the UID project aims at creating a mechanism that will enable the assembling together of various data traces associated with a specific individual, which are currently scattered

⁴⁰ Ibid and IT for Change (2012), Exploring an institutional model for Community Knowledge Centres: A research study for the Karnataka Knowledge Commission, <http://www.itforchange.net/node/969>, Retrieved 17 November 2015.

⁴¹ Kuriyan, R. and Ray, I., (2007), Public-Private Partnerships and Information Technologies for Development in India, <http://tier.cs.berkeley.edu/docs/Renee-ppp-ictd2007.pdf>, Retrieved 17 November 2015.

⁴² For example, CSC e-governance Services India Limited has held public consultations that call to question the legitimacy that a corporate entity can have in undertaking policy discussions with the wider public

⁴³ Singh, P.J. (2013), Technology in governance – An agenda for centralisation, privatisation and depoliticisation, http://www.itforchange.net/Technology_in_governance-An_agenda_for_centralisation_privatisation_and_depoliticisation, Retrieved 20 November 2015.

⁴⁴ Singh, P.J., Gurumurthy, A. and Nandini, C. (2012), Exploring an institutional model for community knowledge centres – A research study for the Karnataka Knowledge Commission, <http://www.itforchange.net/taxonomy/term/317>, Retrieved 20 November 2015.

⁴⁵ UIDAI website (2012), page now offline.

across multiple data-bases of different agencies⁴⁶. This project was formally rolled out in 2009, under the aegis of a governmental agency expressly constituted for this purpose – the Unique Identification Authority of India/ UIDAI.

Aadhar is a critical pivot in the Indian government's current plans for a complete switch-over to direct benefit transfers in lieu of subsidy spending, in order to minimize 'leakages' and corruption in welfare schemes. The support infrastructure the government envisions for this new welfare paradigm goes by the moniker 'JAM' – which stands for Jan-Dhan Yojana (financial inclusion scheme)),⁴⁷ Aadhar Card and Mobile Number. The idea being that bank accounts of welfare beneficiaries can be seeded (the process of linking a database to Aadhar numbers) with their Aadhar Card Number, and mobile numbers linked to Aadhar Cards, in order to create an authentication mechanism for Direct Benefit Transfers (either into bank accounts or using mobile money transfers).⁴⁸

Civil society activists have highlighted a number of problems with the project. Firstly, it was launched without prior parliamentary approval. Secondly, this country-wide personal data collection exercise has not been backed by adequate data protection and privacy safeguards. This is a grave issue as India lacks a strong privacy legislation⁴⁹ with well-rounded clauses on informed consent, and time limitation and purpose limitation of data collection exercises.

Thirdly, there is the danger of "functionality creep"⁵⁰. There is no legal provision that requires the government to re-evaluate the effects on individual privacy, in every instance of Aadhar-seeding (the process of linking a database to Aadhar numbers). What this means is that the government can create massive interlinked databases about citizens.

A Public Interest Litigation (PIL) was filed in the Supreme Court of India in 2014, challenging the constitutionality of the Aadhar project. And In its final judgment delivered in 2015, the Court ruled that the linking of Aadhar to welfare schemes could be done on a voluntary basis, but no person could be deprived of any benefit because of the lack of an Aadhar Card. However, in the current context where there is a huge push for Aadhar-enabled Direct Benefit Transfers (DBTs), it may well become 'mandatory by default'. In January 2015, the Union Government announced its decision to roll-out such Aadhar-enabled DBTs for 33 different schemes of 14 ministries/departments.⁵¹

46 Lips, A.M.B. 2006. E-Government Under Construction: Challenging Traditional Conceptions of Citizenship. In: V.Koutrakou and P.Nixon (eds) Ctrl, Alt, Delete: Re-booting the State via e-Government. London: Routledge and Chattapadhyay, S. 2014. Information, infrastructure, inclusion: Research Notes on Materiality of Electronic Governance in India. <http://itforchange.net/inclusionroundtable2014/blog/view/94/information-infrastructure-inclusion-research-notes-on-materiality-of-electronic-governance-in-india> Retrieved 15 January 2015.

47 The Jan Dhan Yojana is a financial inclusion scheme that aims at enabling members of marginalized households to open zero-balance bank accounts.

48 Press Information Bureau (2014), Wiping every tear from every eye: The Jan Dhan Yojana, Aadhar, and Mobile Numbers Provide the Solution, <http://pib.nic.in/newsite/PrintRelease.aspx?relid=116028> , Retrieved 20 November 2015.

49 Singh, S. (2014), Panel rejects Govt claim that IT Act protects citizen privacy, <http://www.thehindubusinessline.com/info-tech/panel-rejects-govt-claim-that-it-act-protects-citizens-privacy/article5685809.ece> , Retrieved 20 November 2015.

50 Menon-Sen, K. (2015), Aadhar: Wrong Number or Big Brother Calling, Socio-legal Review, Vol 11(12).

51 Ramachandran, R. (2015), Narendra Modi government pushes for UPA's direct benefit transfer scheme, http://articles.economictimes.indiatimes.com/2015-01-28/news/58546672_1_bank-accounts-beneficiaries-dbt , Retrieved 20 November 2015.

4 The contribution of NeGP to e-service delivery

This section is a review of the impacts of the NeGP in its entirety. In 2011, the Prime Minister's Committee on NeGP (the highest policy decision making body on the NeGP) constituted an expert group to review the NeGP, under the chairmanship of Dr. Sam Pitroda⁵² and an expert committee on HR policy in e-governance under the chairmanship of Mr. Nandan Nilekani.⁵³ In 2013, both groups submitted their reports. A SWOT analysis of the NeGP drawing upon the reports of both the expert groups, conducted by the Department of Electronics and Information Technology, revealed that the NeGP succeeded in creating a climate in which central and state government, and other governmental agencies, expanded their forays in e-service delivery:⁵⁴

"The environment created by NeGP has spawned a very large number of eGov projects, though outside NeGP, thus expanding the portfolio of services available online. 24 out of 31 MMPs have gone live and produce(d) over 11 crore (110 million) transactions p.m. Basic ICT infrastructure is available in all States".

Two such innovations designed outside the framework of the Mission Mode Projects in the area of women-directed service delivery are detailed in Box 1.

BOX 1 TWO PROJECTS IN THE AREA OF WOMEN-DIRECTED PUBLIC SERVICE DELIVERY, OUTSIDE THE MMP FRAMEWORK

- a Mission Convergence was launched by the state government of Delhi in 2008, as an effort at creating a government-NGO partnership for gender-inclusive service delivery at the last mile.

The key innovations deployed in the project are detailed below:

- Developing a digitalized inter-departmental database of beneficiaries for enabling the back-end convergence of over 40 different schemes spread across 9 departments. This beneficiary identification process was based on a vulnerability index that took into account not just income poverty but other significant factors of marginalization such as social identity and location of residence.⁵⁵
- Using a pre-existing network of Gender Resource Centres that had been set up in partnership with NGOs, under an earlier governmental programme, in slum pockets and other marginalized urban neighbourhoods in Delhi, as last-mile service delivery points for interfacing with citizens. The rationale guiding this decision was that the NGOs operating the Gender Resource Centres were already sensitive to the local context and attuned to the nuances of gender discrimination – and hence would adopt more inclusive practices of service delivery.

⁵² https://en.wikipedia.org/wiki/Sam_Pitroda , Retrieved 20 November 2015.

⁵³ https://en.wikipedia.org/wiki/Nandan_Nilekani , Retrieved 20 November 2015

⁵⁴ Department of Electronics and Information Technology (2014 circa), e-Kranti: National e-governance Plan 2.0, Draft Detailed Project Report, http://deity.gov.in/sites/upload_files/dit/files/DPR_on_e-Kranti.pdf , Retrieved 20 November 2015, pp 5.

⁵⁵ Menon-Sen,K. (2015), op.cit.

- Setting up a monitoring system sensitive to the 'NGO' mode of functioning, through the establishment of District Management Units, comprising representatives from civil society organizations (with the exception of those running the Gender Resource Centres) and retired government servants, and housed in the office of the apex official of the district.

Mission Convergence has been the subject of case study research that have focused on documenting good practices in the area of building a gender-inclusive service delivery model on scale.⁵⁶ However, studies have highlighted that political pressure from local Municipal Councilors has interfered with the effective functioning of Mission Convergence – and that building a 'tamper-proof' digitalized beneficiary database in and of itself, does not lead to greater effectiveness in last-mile service delivery.⁵⁷

- b Another pilot initiative is the Poorna Shakti Kendra programme of the National Mission for Empowerment of Women, Government of India that has attempted to build focal points for the convergent delivery of all services directed at women, in select villages.

This rapid increase of supply-side innovation that the NeGP triggered, did not automatically add up to a robust e-service delivery system at the grassroots, as the 2014 SWOT analysis of the NeGP by the Department of Electronics and Information Technology has also noted:⁵⁸

“...NeGP has not become a national movement and could not produce the expected impact on the common man, especially in the rural areas. Emphasis on Standards and interoperability is weak. The degree of process engineering is quite low. Problems of connectivity in rural areas continue to plague the program. Adoption of PPP model has not been adequate. Monitoring and Evaluation systems are weak. There is no accountability for producing timely implementation and for producing qualitative outcomes. Allowing NeGP to proceed along the current direction and at the current pace may result in mass scale disillusion leading to e-governance losing its appeal for transformation of the public sector”.

The transition to digitalized service delivery systems without adequate attention to process re-engineering and standards can, as detailed in Box 2, impact quality and effectiveness of service delivery in many ways.

⁵⁶ NISG (2014), Mission Convergence – Government of National Capital Territory, <http://nisg.org/files/documents/UP1418304587.pdf>, Retrieved 20 November 2015 and Singh, P.J., Gurumurthy, A. and Nandini, C. (2012), Exploring an institutional model for community knowledge centres – A research study for the Karnataka Knowledge Commission, op.cit.

⁵⁷ Menon-Sen, K. (2015), op.cit.

⁵⁸ Department of Electronics and Information Technology (2014 circa), e-Kranti: National e-governance Plan 2.0, Draft Detailed Project Report, http://deity.gov.in/sites/upload_files/dit/files/DPR_on_e-Kranti.pdf, Retrieved 20 November 2015, pp 5.

BOX 2

THE DIFFICULTIES OF PPP MANAGEMENT IN DIGITALIZED SERVICE DELIVERY SYSTEMS: THE CASE OF THE NATIONAL RURAL EMPLOYMENT GUARANTEE SCHEME MIS, ANDHRA PRADESH

The National Rural Employment Guarantee Scheme guarantees 100 days of work to all rural households on demand, or an unemployment allowance if such work cannot be provided. Under the scheme, the village local government/ Panchayat assesses the demand for work in a particular year and initiates a process of community planning to identify key public works that can be undertaken, to generate wage-work opportunities for scheme-applicants. This Scheme has been a game-changer for poor women, and there is strong evidence of it enhancing women's economic empowerment, control over financial resources and autonomy.⁵⁹

However, subversion and manipulation of funds committed to the programme has been noted. The Government of Andhra Pradesh set up a Directorate of Social Audit to put in place annual social audits of the scheme in all the districts of the state as a step towards greater accountability, and developed a comprehensive digital backbone for the scheme implementation.

This Management Information System, with wage records and muster rolls, has instituted an electronic wage payment system using biometric authentication. It provides district-wide data of scheme implementation. The MIS was the product of a PPP and has been appreciated for supporting the community audit

process. A key informant⁶⁰ interviewed for the research flagged that there are frictions between the state and the private sector agency managing the MIS, as the private sector partners were not prompt in responding to requests from the government agency for wage payment transaction records, and there were instances of inaccurate data. Without clear rules about data management underpinning the partnership, de facto control of the data is vested in the private partner. The state agency finds itself in a position of dependency vis-a-vis the private partner, lacking bargaining power in the PPP.

As part of a longer-term strategy to address the current inadequacies in the management of e-service delivery projects by state agencies, the Department of Electronics and Information Technology launched an upgraded version of NeGP – 'NeGP 2.0' which it rechristened e-Kranti (literally e-revolution), in 2014.

⁵⁹ Rukmini, S. (2015), MGNREGS reduced poverty, empowered women, <http://www.thehindu.com/data/mgnrega-reduced-poverty-empowered-women-ncaer/article7530923.ece>, Retrieved 20 November 2015.

⁶⁰ Discussion with Ms. Sowmya Kidambi, Director, Society for Social Audit, Accountability and Transparency, Department of Rural Development, Government of Andhra Pradesh, September 2014.

5 e-Kranti/ e-revolution: Revamping e-service delivery and integrating it within an ambitious umbrella programme for a 'Digital India'

E-Kranti, the re-booted national e-government plan seeks to: “redefine NeGP with transformational and outcome oriented e-governance initiatives, enhance the portfolio of citizen centric services...promote rapid replication and integration of e-governance applications and leverage emerging technologies (such as cloud and mobile)...and provide integrated services via inter-operable systems, and build sustainable organisational and human resource capacities”.⁶¹

E-Kranti, as part of its proposed portfolio expansion, is planning to initiate 11 new Mission Mode Projects, one of which will be in partnership with the Ministry of Women and Child Development. This proposed MMP aims at the ICT-enablement of existing services for “welfare and support...training for employment and income generation, awareness generation and gender sensitization”, currently being undertaken by the Ministry.⁶²

E-Kranti further lays down some key priorities such as emphasis on transformative process re-engineering, designing integrated rather

than individual e-service projects, and utilizing the possibilities of cloud technologies in designing e-governance applications.⁶³

On the whole, e-Kranti is an improvement over NeGP 1.0, for the following reasons. NeGP 1.0 was a stand-alone programmatic framework for building a common technical support structure for e-government, through back-end digitization and the creation of digitalized service delivery platforms.

E-Kranti, on the other hand, positions e-service delivery as one dimension (albeit a crucial one) within a larger umbrella programme called Digital India, for transforming India “into a digitally-empowered society and a knowledge economy” with 3 inter-related objectives:

- 1 on-demand provisioning of governance services through digital platforms,
- 2 universalizing access to digital infrastructure, and
- 3 the digital empowerment of citizens.⁶⁴

Launched in 2014, Digital India seeks to build on existing e-government initiatives, as well as initiate new programmes as required, across these 3 axes. The programme addresses some of the problems of NeGP 1.0, with a strong focus on connectivity infrastructure development and citizen participation dimensions along with the supply-side e-service delivery architecture. However, the gender blind-spot remains, as Digital India does not have an explicit vision for women's empowerment and gender equality. e-Kranti, addresses the 'service delivery on demand' axis

⁶¹ Department of Electronics and Information Technology (2014 circa), e-Kranti: National e-governance Plan 2.0, Draft Detailed Project Report, http://deity.gov.in/sites/upload_files/dit/files/DPR_on_e-Kranti.pdf, Retrieved 20 November 2015, pp 7.

⁶² Department of Electronics and Information Technology (2014 circa), e-Kranti: National e-governance Plan 2.0, Draft Detailed Project Report, http://deity.gov.in/sites/upload_files/dit/files/DPR_on_e-Kranti.pdf, Retrieved 20 November 2015, pp 74.

⁶³ Department of Electronics and Information Technology (2014 circa), e-Kranti: National e-governance Plan 2.0, op.cit.

⁶⁴ Department of Electronics and Information Technology (2014), Digital India Presentation, <http://pib.nic.in/archive/others/2014/aug/d2014082010.pptx>, Retrieved 20 November 2015.

of Digital India. We now proceed to examine how Digital India addresses its other stated objectives.

5.1 UNIVERSAL ACCESS TO DIGITAL INFRASTRUCTURE IN DIGITAL INDIA'S VISION

As far as the area of universalizing access to digital infrastructure is concerned, Digital India has attempted to push the pedal on the following preexisting initiatives:

- The Common Service Centre scheme described above,
- The Mobile Seva service delivery gateway launched in 2011 that enables government departments to deliver services to citizens over mobile and tablet interfaces,
- The National Optic Fibre Network scheme,⁶⁵ launched in 2012, that seeks to establish a country-wide high-speed optic-fibre network, to provide broadband access to the 250000 Gram Panchayats (village local self-governments) in the country.

Progress on the ground on the NOFN scheme has been plagued by “delay in timely delivery of material, not having daily monitoring at the Panchayat (village self-government) level, missing coordination between state-run entities involved in rolling out, and (lack of) proper and timely allocation of funds”.⁶⁶ To address these issues/ concerns, the Government of India set up an expert committee earlier this year, to look into the question of speeding up the implementation of the scheme. In addition to reworking the timelines for implementation and setting a new milestone

of December 2017, the Committee has recommended that state governments be encouraged to develop their own models for rolling out the broadband network, in partnership with private players where necessary.⁶⁷

The completion of this scheme is clearly an important milestone for enhancing the maturity of the e-government ecosystem, considering the poor status of last-mile rural connectivity. But in and of itself, in its present form, the scheme may not be able to build an inclusive, infrastructural backbone that can enable women and other marginalized groups to access the benefits of e-government. As a key informant from the Department of Telecommunications⁶⁸ contacted for this study observed:

“While imagining a broadband infrastructure, it is important for us to go beyond a unitary imagination of the broadband at the last mile as an undifferentiated pipe – and think about the different types of services that will run on it. In specific, capacities to handle data-rich services need to be assessed and adequately planned for. Also, it may not be correct to assume that the last-mile broadband retail will be automatically taken care of, by market forces, once the basic infrastructural network up to the Panchayat level is provided by NOFN. As at this point, in rural areas, demand for broadband may not be large enough to attract private players, and so, other creative models for last mile retail involving women's collectives, Gram Panchayats, local cable operators, need to also be examined. Finally, there needs to be investment in developing relevant content services for the rural population using the digital opportunity, in addition to providing for the infrastructure.”

⁶⁵ Since renamed BharatNet. http://articles.economicstimes.indiatimes.com/2015-04-02/news/60756567_1_national-optical-fibre-network-broadband-network-digital-india-programme

⁶⁶ Parmar, B.(2015), NOFN: Will government be able to achieve the targets for the NOFN roll-out?, <http://telecomtalk.info/nofn-will-government-be-able-to-achieve-the-targets-for-nofn-roll-out/131930/>, Retrieved 20 November 2015.

⁶⁷ <http://www.thehindu.com/business/Industry/national-optical-fibre-network-revamp-on-cards/article7261346.ece>

⁶⁸ Name with-held, on request.

One scheme that has attempted to demonstrate a model for the development of such 'relevant content services', for rural women – is the Sanchar Shakti initiative of the Department of Telecommunications (DoT). Under this scheme, DoT enters into pilot projects with private sector partners, for providing subsidized mobile-based value-added services such as information about crop prices, governmental programmes, health and social issues etc., to members of women's collectives, in select locations in the country, for a period of 12 months. The subsidy is drawn from the Universal Service Obligation Fund.

The key intended results envisaged by the architects of the scheme, were to "create a demand for information/VAS/ICT services in rural areas (enable the) digital inclusion of rural women, reduce the exploitation and harassment (of women and marginalized groups) due to information asymmetry in rural areas (with respect to) their ... entitlements from the government and equip them to demand greater accountability from the local government machinery".⁶⁹

The scheme seems to have been partly successful in meeting these objectives. As an independent evaluation of one of the pilot projects undertaken under Sanchar Shakti observed:⁷⁰

"(The design of the scheme) cater(s) to a limited set of needs, bringing benefits, but not adequately covering what may be needed to change the information power equations in the local context. The women (beneficiaries) may have queries, and may have citizenship based needs that are not possible to address without human facilitation that entails other resources and investments. A service provider approach may stop at a point from where other pathways for women's information needs may have to

be explored such as institutionalized mechanisms at the grassroots for supporting women in acting upon the information received, by demanding their rights and entitlements."

5.2 EMPOWERMENT, THE DIGITAL INDIA WAY: MAKING CITIZEN PARTICIPATION EFFECTIVE

Digital India focuses on the following pathways for realizing the vision of a digitally empowered citizenry:

- Using digital opportunity for enhancing informational transparency
- Promoting dialogue between government and citizenry
- Universal digital literacy

Using the digital delta for enhancing informational transparency: The push for open data

The Indian government's forays in the realm of Open Data predate Digital India. In fact, the Open Government Platform, was considered "an open source data and content management system that can be customized easily to develop open data portals for various types of agencies, including national government"⁷¹ and was one of the numerous Indo-US collaborations that emerged from the 2010-11 visit of the US President Barack Obama. The development of this platform in 2011 coincided with the drafting of the National Data Sharing and Accessibility Policy, and "the dominant focus of the Policy (was) towards describing the desired functioning of the Open Government Data Platform of India".⁷²

⁶⁹ <http://usof.gov.in/usof-cms/usof-sanchar-shakti.jsp>, Retrieved 20 November 2015.

⁷⁰ Gurumurthy, A. (2014), Evaluation Note on the Azamgarh pilot project of the Sanchar Shakti scheme, pp 2.

⁷¹ Chattopadhyay, S. (2014), Opening government data through mediation: Exploring the roles, practices and strategies of data intermediary organisations in India, http://ajantriks.github.io/oddc/report/sumandro_oddc_project_report.pdf, Retrieved 20 November 2015.

⁷² Ibid

The first version of this common data platform (<http://data.gov.in/>) built on an Open Source technical architecture, was launched in May 2012, and an upgraded version in February 2014. All ministries, departments, subordinate offices, organizations, and autonomous bodies (agencies from now on) of the Government of India are required to share all publicly generated non-sensitive data⁷³ on this platform, in human-readable and machine-readable formats.⁷⁴ Though the launch and up-grade of the Open Government Data portal (OGD) and the adoption of the National Data Sharing and Accessibility Policy are significant milestones in the journey to enhancing transparency of government systems, there is much scope for improvement, as detailed below.

- 1 There are implementation lags in enforcing the NDSAP.⁷⁵ As a recent 2015 research study on OGD reflects, “of the total 52 ministries,⁷⁶ only 32 have uploaded datasets of which 7 have uploaded less than the mandatory 5. Moreover, it remains unclear whether the remaining 25 ministries that have fulfilled the mandatory requirement, have in anyway uploaded all the remaining datasets.”⁷⁷
- 2 The NDSAP does not establish adequate linkages with older legislations for informational transparency in governance – such as the provision of the Right to Information Act 2005⁷⁸ that mandates every governmental agency to declare the total list of datasets maintained by it (in text, audio or video formats), on its website.

⁷³ Data whose sharing is not prohibited by central government acts.

⁷⁴ Agarwal, N. (2015), Open Government Data: An answer to India's growth logjam, <https://www.dropbox.com/s/met5t8bujeydpse/OG3.pdf?dl=0> , Retrieved 20 November 2015.

⁷⁵ Agarwal, N. (2015), op.cit.

⁷⁶ Central government ministries covered by the NDSAP.

⁷⁷ Agarwal, N. (2015), op.cit.

⁷⁸ As Sumandro Chattapadhyay (2013) observes, an office memo circulated by the Department of Personnel and Training on the guidelines for implementation of suo motu (that is, proactive) disclosure of information under section 4 of the RTI Act 10, has mandated the disclosure of multi-media information held by public agencies (such as, video recordings of meetings and consultation sessions) and adoption of ‘open standards’ for sharing information and data. See Chattapadhyay, S. (2013), Towards an expanded and integrated open government data agenda for India, <http://dl.acm.org/citation.cfm?doid=2591888.2591923> , Retrieved 20 November 2015.

- 3 Decisions about the extent of granularity that is permissible in open data sets, must be taken, with the recognition that privacy of socially disadvantaged individuals, such as marginalized women, are not compromised because of open data publishing. For example, the state government of Karnataka published personal information collected about women from the backward classes, as part of a Socio-Economic Caste Census exercise, on the website of the Backward Classes Commission, a decision that invited adverse comment from the High Court of Karnataka, for the privacy violations involved.⁷⁹

ICT possibilities for furthering state-citizen dialogue

The major initiative under the Digital India umbrella has been the creation of a digital portal in early 2014 (<https://mygov.in/>) where citizens from across the country can “come together to share their expert thoughts, ideas and suggestions with the government in areas related to various policies, programs, schemes etc...and work hand-in-hand with government.”⁸⁰ This portal thus attempts to explore the e-consultation possibilities offered by new digital technologies on a wide range of areas – spanning open discussions on proposed policies and bills, to suggestions on naming government schemes and services that are going to be shortly introduced, to invites to citizens for developing governance apps such as the wire-frame for the Prime Minister's Office's proposed mobile-app. Even gender issues such as girls' education have been discussed on the portal. However, as online deliberations are not tied to a concrete policy formulation/revision process, the portal does not succeed fully in its objective of enhancing citizen-voice in policy forums.

⁷⁹ Gowda, A. (2015), Karnataka government risks women safety, puts out personal data in caste census, <http://indiatoday.intoday.in/story/karnataka-government-caste-census-women-privacy-violated/1/450140.html> , Retrieved 20 November 2015.

⁸⁰ <https://mygov.in/mygov-faq/> , Retrieved 20 November 2015.

In a context where only 15% of the population has Internet access⁸¹ and a significant proportion of the population is textually non-literate, citizen participation in online spaces tends to exclude marginalized women. Numerous civil society interventions have demonstrated the need for context-appropriate hybrid strategies to support women's local engagement with government such as: participatory mapping using GIS tools to create evidence-based dialogue between women's collectives and local government,⁸² digitalized news portals to enhance community reporting experiments with marginalized women, and so on.⁸³ Significant e-government innovation is still absent in this area, except for one initiative of the Government of Kerala, the Sree Sakthi portal, that is detailed in Box 3.

BOX 3 **THE SREE SAKTHI DIGITAL PORTAL OF MISSION KUDUMBASHREE, GOVERNMENT OF KERALA**

The Sree Sakthi digital portal (<http://www.sreesakthi.org/web/sreesakthi/home>) was launched in 2012, by Mission Kudumbashree, a state-wide programme that has focused on building women's self-help groups and enabling them to access livelihood and income generation opportunities, from 1998. In specific, this portal aims at equipping the state-wide network of women's collectives constituted under the programme to engage in trans-local peer dialogue for furthering their empowerment journeys. The portal emerged due to the efforts of a senior female bureaucrat at the helm of Kudumbashree,⁸⁴ who was keen to explore possibilities for

strengthening the programme, by moving beyond a narrow focus on livelihoods. In an interview in May 2015 for this study, she reflected upon the contextual forces that motivated her to come up with, and push for the Sree Sakthi Portal:

“The common criticism against the Kudumbashree programme from women's rights activists and feminist groups was that it was focusing only on livelihoods and micro-finance issues, and not on strategic gender issues. Though as a government programme it has constituted over 200,000 women's self-help groups across the state, the trainings imparted to women mostly tended to be sessions where women were ‘talked down to’.

My team and I wanted to move beyond this to create an environment which would enable the members of the collectives to challenge received ideas, and also help women leaders from within the collectives emerge as gender resource persons. This ideation led to the design of the Gender Self Learning programme – a participatory community-based training model that focused on catalyzing continual capacity-building processes among women's collectives. Initially, to design the content of the programme, the Gender Team of Kudumbashree went around the state, having free-wheeling discussions with collectives in each district – to understand their priorities and needs. That is how the idea of the portal emerged – as the extension of a space for dialogue. Along with developing the portal; we also computerized the village level offices of the programme that were being managed by representatives of the local women's collectives”.

The portal now enables women from different locations of Kerala state to discuss and debate a number of women's rights issues – ranging from political participation and VAW to health. Women with low levels of digital literacy are assisted by office-bearers of

⁸¹ World Economic Forum (2015), The Global Information Technology Report 2015: ICTs for inclusive growth, op.cit.

⁸² http://43.254.42.216/mwvvc/index.php/IT_for_Change/Journey#Kamalahalli_Panchayat:_Power_of_data_forces_Panchayat_members_to_address_irregularities_in_the_allotment_of_subsidies_under_a_rural_sanitation_scheme, Retrieved 20 November 2015.

⁸³ <http://khabarlahariya.org/>, Retrieved 20 November 2015.

⁸⁴ Ms. Sarada Muraleedharan, Executive Director, Kudumbashree, 2008-2012 and currently the Joint Secretary, Ministry of Panchayati Raj, Government of India.

Kudumbashree in using computers at the village level offices to participate in discussions. Also, when the portal was launched, a cascade model of trainings was adopted to introduce all members of Kudumbashree women's collectives to the basic features of the portal.

Though government-initiated citizen participation initiatives are not yet mature, civil society organizations, especially feminist groups, have been actively using social media and social networking spaces as vibrant arenas for their activism.⁸⁵ However, until recently, the scope of citizen engagement and political voice on these forums was restricted by law; Section 66 A of the Information Technology Act 2000, that made cyber-communication of a "grossly offensive" nature, punishable with 3 years imprisonment and a fine. When it was introduced, this provision of this section was presented as a safe-guard against online hate speech and cyber-abuse, and also as a means of addressing online gender-based violence, as India does not have specific laws safeguarding women from online violence and harassment. However, the ambiguity around the definition of 'grossly offensive' created a grey area, which could allow for attempts to silence activists and members of the public who strongly critiqued their actions.⁸⁶ Only rarely did the legislation help women fight online violence.⁸⁷ In March 2015, the Supreme Court struck down Section 66 A for being 'unconstitutional' holding that it was arbitrary and disproportionately restrictive of the right to free speech.⁸⁸

Universal Digital Literacy

Universal digital literacy has received a massive push under Digital India, through the adoption of a scheme entitled "Digital Saksharata Abhiyan" (National Digital Literacy Mission), that aims at training 50 lakh (5 million) people across the country, in "digital literacy ... which would enable the beneficiaries to use IT and related applications to participate effectively in the democratic process, and enhance their livelihood".⁸⁹ The scheme, launched in 2014-15, is being implemented through a public-private partnership model across the country. State governments are required to appoint partner agencies who will oversee the entire implementation, right from appointing training centres at the local level to supervising the work of the training centres, and ensuring the maintenance of training standards at all centres under their purview. A bidding process is prescribed for the selection of partner agencies, and selected partners are to be paid a piece-rate compensation for successful completion of the qualifying exam by training participants.⁹⁰

At this nascent stage in the roll-out of the Digital Saksharata Abhiyan, one innovative experiment in Kerala demonstrates a possible pathway for designing an effective women-directed digital literacy intervention, under a partnership model. See Box 4 for details.

⁸⁵ Subramanian, Sujatha (2014), From the streets to the web: Feminist Activism on Social Media, <http://cscs.res.in/dataarchive/textfiles/from-the-streets-to-the-web-feminist-activism-on-social-media-sujatha-subramanian-ta-ta-institute-of-social-sciences>, Retrieved 20 November 2015.

⁸⁶ Deccan Herald (2015), Six controversial arrests made under Section 66(a), <http://www.deccanherald.com/content/467477/six-controversial-arrests-made-section.html>, Retrieved 20 November 2015.

⁸⁷ Raza (2012), Dear Sibal, Here is why Section 66 A does not 'protect' women, <http://tech.firstpost.com/news-analysis/dear-sibal-here-is-why-section-66a-does-not-protect-women-212326.html>, Retrieved 20 November 2015.

⁸⁸ Justices J. Chelameswar and Rohinton F. Nariman, cited in (Hindu 2015), SC strikes down 'draconian' Section 66 A, <http://www.thehindu.com/news/national/supreme-court-strikes-down-section-66-a-of-the-it-act-finds-it-unconstitutional/article7027375.ece>, Retrieved 20 November 2015.

⁸⁹ <http://www.ndlm.in/overview-of-ndlm.html>, Retrieved 20 November 2015.

⁹⁰ <http://www.ndlm.in/training-partners.html>, Retrieved 30 November 2015.

BOX 4

THE E-JAALAKAM INITIATIVE: DIGITAL LITERACY AS CITIZENSHIP EDUCATION

E-jaalakam (literally, e-window) is a path-breaking digital literacy initiative that has been developed by the Department of Economics, St. Teresa's College, Ernakulam district, (Kerala state), in partnership with the Kerala State IT Mission, an autonomous nodal IT implementation agency of the Department of Information Technology, Government of Kerala. This initiative, launched in 2012, focuses on using women undergraduate students of the college as Master Trainers to conduct digital literacy trainings for women and girls in neighbouring communities, through a cascade model. The Kerala State IT Mission has supported the college in the development of the training material and in developing the curriculum for the training of the Master Trainers. What makes this initiative stand out is its recognition of digital literacy as a pathway that enables women to attain full digital citizenship.

As the architect of this initiative shared in a key informant interview conducted for this research,⁹¹ "The focus of e-jaalakam is to ensure that women and girls know enough about computers and the Internet to access information about various schemes and services, and are familiar with all the government websites. Part of the task is also to change the way women think of their relationship with government. In one of our early trainings, one girl asked me 'Why should I care about all these schemes and services? Someone else at home will take care of it anyway'. I told her, 'It is precisely to counter such a perception about governance being a male preserve that girls should get into e-government transactions'." This initiative won the Chief Ministers' Award for Innovation in Public Services 2013.

For more details see:

<http://www.itmission.kerala.gov.in/e-jaalakam.php>

The Digital Saksharata Abhiyan (DISHA) has been recently extended to cover all Accredited Social Health Activists (front-line health workers who are in charge of delivering maternal and child health care services at the last mile) and workers of the government-run child care centres/creches, across the country.

A key informant from the Department of Electronics and Information Technology⁹² contacted for this research study reflected on the rationale for extending the scheme to female front-line health and child care centre workers, thus:

"Out of the 50 lakh (5 million) individuals we reach out to through the digital literacy scheme DISHA, we recognize that it is important to ensure that women are covered. Women need to be digitally literate to effectively access their entitlements. It is well-known that when women benefit from public services, the whole household benefits. As a conscious strategy to reach out to more women in our digital literacy efforts, we are extending DISHA to cover Accredited Social Health Activists (ASHAS) and government creche workers, as women community workers are directly engaged in the delivery of public services specifically targeted at women..."

It is important to recognize that the importance of digital literacy efforts directed at women, was acknowledged, even prior to Digital India. For example, in 2013-14, the Gender Budget Cell of the Department of Electronics and Information Technology identified digital skills training as a key priority area for undertaking gender budgeting exercises. Around the same time, a pilot project (entitled

91 Dr. Nirmala Padmanabhan, the Head of the Department of Economics, St. Teresa's College, Ernakulam, Kerala.

92 Name withheld, on request.

'e-vidya') was undertaken as a partnership project between CSC e-governance Services India Ltd and the National Mission for Empowerment of Women (NMEW) for providing training on basic computer concepts to 25,000 women across 6 states in the country. This was completed in September 2013; and NMEW is taking stock of the lessons from the pilot, presently.

The key informant from the Department of Electronics and Information Technology, also shed light on this trajectory in the evolution of digital literacy programmes:

"In the Department, we are cognizant that digital skills training enables women's empowerment by opening up their access to the employment opportunities offered by the IT sector. Also, this is a space that has traditionally been dominated by men...and skills training programmes specifically focused on women hence become crucial, and so, we have been prioritizing this area".

On the whole, the most significant shift enabled by Digital India has been its assertion of the importance of demand-side issues in e-governance debates. However, gender related articulations and concerns seem to elude the programme vision and its implementation. In fact, one of the officials interviewed for this research, when asked about the programme's strategic perspective on gender, said: " In Digital India, we are committed to inclusion; this means like accessibility for the disabled, we will also think about women."⁹³

While some top level officials in the system do seem to see targeting women as useful and even important, these sentiments and the islands of innovation spurred by individual leadership in governance hardly amount to a coherent framework for

gender mainstreaming. These lacunae are also compounded by overzealousness to simplify targeting through a unique identity system without privacy safeguards. As key components of Digital India, such as digital literacy, are beginning to be rolled out on a nation-wide scale in right earnest, the complete lack of vision about equipping women and the marginalized towards digital citizenship poses additional concerns.

6 VAW and e-government strategies

In 2012, the media and civil society outrage that followed the brutal gang rape of a young college student in a moving bus in the national capital New Delhi brought VAW renewed attention in policy and programming. The most obvious illustration of this was the establishment of the 'Nirbhaya Fund'⁹⁴ in 2013, a 10 billion INR corpus intended to support governmental and NGO initiatives that seeks to further the safety and dignity of women. In the current context, where using the IT opportunity in every sphere is the dominant mantra, this spotlight on VAW has also spawned a lot of interest in the area of designing digital solutions for women's safety, among government, private and civil society actors. The most common manifestation of this trend has been the development of mobile apps for women in distress. As one commentator observes, "safety apps are dime a dozen in India"⁹⁵ and private mobile companies, civil society organizations as well as government agencies, have taken to the business of app-development, with little assessment regarding their efficacy.

In addition, some state governments such as Andhra Pradesh⁹⁶ and Orissa⁹⁷ have introduced another innovation, which are Internet-enabled kiosks to enable women to report incidents of GBV to the police. Finally, there are two central government proposals in this area, which have been in the pipeline for some time:

- A directive to all mobile phone manufacturers to provide a mandatory SOS alert button on their handsets.
- A scheme covering 32 cities with a population of over one million, for fitting public transport vehicles in these cities with a GPS tracking device, to enable law enforcement agencies to effectively respond to women in distress situations.

An overview of the existing and proposed government-led IT initiatives for addressing VAW reveals that they are not geared to address the core systemic issues that contribute to the problem of gender-based violence, that of the widespread incidence of sexual harassment, lack of basic infrastructure like street lighting in public spaces, absence of gender sensitive policing, etc. Further, policy interventions do not tackle new threats to women's safety and bodily integrity in the online public sphere although there is an urgent need for proactive awareness and education, especially for young people.

As feminist critics have pointed out, an over-valorization of apps reflects a narrow approach that reduces the question of GBV to merely one of dealing with 'stranger danger',⁹⁸ instead of challenging hegemonic gender structures which normalize everyday violence against women. Also, in a context where only 3 out of every 100 individuals have mobile broadband subscriptions, apps-based approaches target only a small proportion of the population, leaving out those women who are most vulnerable to GBV.

The Society for the Elimination of Rural Poverty (SERP) in Andhra Pradesh has demonstrated an alternative approach to ICT programming in the fight against VAW. SERP's main strategy is

⁹⁴ named for the pseudonym that the media used for the victim in the Delhi case, a word that literally translates as 'Fearless')

⁹⁵ Dhar, S. (2014), Women's Safety Schemes go mobile in India, <http://www.ipsnews.net/2014/11/womens-safety-schemes-go-mobile-in-india/>, Retrieved 21 November 2015.

⁹⁶ DNA (2015), Andhra Pradesh Police may set up more kiosks to lodge complaints online for women, <http://www.dnaindia.com/india/report-andhra-pradesh-police-may-set-up-more-kiosks-to-lodge-complaints-online-for-women-2118715>, Retrieved 26 August 2015.

⁹⁷ Dash, J. (2014), India's abused women break their silence using ATM-type kiosk, <http://in.reuters.com/article/2014/11/04/odisha-abuse-iclik-idINKBN0IO0BQ20141104>, Retrieved 21 November 2015.

⁹⁸ Bachan, K. (2012), Can mobile phone apps prevent violence against women?, <http://lindaraffree.com/2012/01/23/can-mobile-phone-apps-prevent-violence-against-women/>, Retrieved 21 November 2015.

to utilize a Self Help Group approach for the economic and social empowerment of poor women. Tackling Gender Based Violence is considered a critical part of this strategy, and hence, in all the villages it works in, SERP created Social Action Committees of women volunteers willing to challenge domestic violence, human trafficking, sexual assault, child marriage, and other such rights-violations against women in their local communities. The Social Action Committee volunteers have been trained to liaise with district-level institutions such as Family Counselling Centres, Free Legal Aid Cell and alternative dispute resolution mechanisms to assist women who are facing GBV. In 2012, SERP created an IVR-based reporting and tracking mechanism to support the work of the Social Action Committee in timely reporting of GBV instances in their local communities, and coordinated assistance for individual victims, from the district machinery.

7 The e-government policy gap

India does not have a cohesive policy document on e-government. The closest contender for a policy document on e-government is the National IT Policy 2012, which sets itself the ambitious goal of enabling the “application of technology-enabled approaches to overcome monumental developmental challenges in education, health, skill development, financial inclusion, employment generation, governance etc. to greatly enhance efficiency across the board in the economy”. As a result of its attempt to chalk out a multi-pronged strategic approach for transforming India into a knowledge economy, the policy is able to devote only very little space to discuss the e-government agenda.⁹⁹

Some of the key priorities for e-government outlined in this policy are: implementation of the National e-Governance Plan, mandatory provision of all Government Services through electronic mode within a fixed time frame by enactment of the Electronic Delivery of Services (EDS) Bill,¹⁰⁰ establishment of common service delivery platforms by leveraging technologies like cloud computing, evolving standards for seamless interoperability of data and applications, promoting open standards and open technologies, enhancing institutional framework for capacity building/ training across all levels of government, citizen-engagement frameworks, and promotion of PPPs.

The policy document thus leaves a lot to be desired in terms of re-shaping e-government priorities, merely reinforcing the existing

⁹⁹ Department of Electronics and Information Technology (2012), National Policy on Information Technology, http://deity.gov.in/sites/upload_files/dit/files/National_20IT_20Policyt%20_20%281%29.pdf, Retrieved 21 November 2014.

¹⁰⁰ Drafted in 2011, the Bill seeks to provide a legal framework to promote “efficient electronic delivery of government services” by mandating the digitalization of all public services, except those that cannot be digitalized, within 5 years of its enactment. Its blanket approach to digitalization and inadequate attention to the fine print of ensuring citizen accessibility in the transition to e-services, has been critiqued by civil society. At present, the debate on the Bill is in a limbo in Parliament.

logic of e-government programming initiated under NeGP 1.0. It has not fulfilled the purpose of a policy framework. Not only is it silent on the question of an inclusive and accountable e-governance system, but it also completely ignores the idea of gender equality.

8 Lack of political will and weak institutional mechanisms for gender

A key informant interview conducted for this research in May 2015 with an official from the Ministry of Women and Child Development¹⁰¹ reveals that a gender review of the National IT Policy is probably underway, but the extent to which such a process can succeed in incorporating women's empowerment and gender equality efforts as a key priority area for e-government is questionable, for two reasons:

- 1 The Ministry of Women and Child Development lacks a clear policy vision of leveraging the potential of ICTs in furthering its existing efforts. While it is true that recently the Ministry has taken up a Mission Mode Project for the digitalization of its various services, there is no strategic vision about how to leverage the digital opportunity for women's empowerment and gender equality. This Project being taken up by the Ministry is more a result of the Department of Electronics and Information Technology's push for overall digitalization of government departments and agencies, and ensuring that the Ministries not covered in the previous round of MMPs can be checked off on their list, this time around. Whilst it is true that the representatives of the Ministry have recently made public statements in global forums on the potential of ICTs in furthering the gender equality agenda,¹⁰² there is no push to incorporate the e-government agenda systematically into preexisting policy frameworks on women's empowerment such as the National Policy for the Empowerment of Women (2001).

¹⁰¹ Name with-held on request.

¹⁰² http://articles.economicstimes.indiatimes.com/2015-03-12/news/60047988_1_gender-equality-gender-budgeting-gender-perspective

- 2 The more worrying issue is the inadequate budgeting to tackle gender-based exclusion, and the intensification of this trend in recent years.¹⁰³ An analysis of the 2015-16 budget of the Government of India reveals that the specific allocation to the Ministry of Women and Child Development has decreased by over 50%¹⁰⁴ when compared to the revised budget of 2014-15; and further, there has been a cut of over 20 per cent, Rs. 20,000 crore (200,000 million), in the gender budget.¹⁰⁵

Against this macro context, addressing the women's empowerment agenda in e-government policy and programming seems to be an uphill task.

9 Conclusions

E-government development in India is currently poised at a critical milestone. This section attempts to bring together the key analytical threads from the previous sections to take stock of where the agenda of gender equality and women's empowerment stands in relation to e-government development.

a **No strategic vision on gender equality and women's empowerment in e-government**

India does not have a cohesive policy document on e-government at this juncture except the programmatic document of 'Digital India' (2014), encompassing:

- On-demand provisioning of governance services through digital platforms
- Universalizing access to digital infrastructure
- Digital empowerment of citizens

While Digital India marks a clear departure from previous piecemeal approaches to using ICTs in re-engineering governance and administrative systems, it overlooks completely the significance of e-government for gender equality. It does not spell out a strategic vision for furthering gender equality and women's empowerment in, and through, e-government.

b **Ad-hoc approach to addressing the question of gender-inclusive service delivery**

E-government for women's empowerment is not an idea that has been institutionalized; it is an experimental trend that women's rights champions in public administration have set. There are islands of innovation in e-service delivery such as the Mission

¹⁰³ See the work of development economists Jean Dreze and Amartya Sen.

¹⁰⁴ Though two women-centred initiatives were announced in the 2015-16 budget with much fanfare – the 1000 crore allocation to the preexisting Nirbhaya Fund and 100 crore for the newly launched Beti Bachao, Beti Padhao (Save girl child, Educate girl child) fund, on the whole, the total allocation to the area of women and child development has been slashed by over one-third when compared to the previous year.

¹⁰⁵ Patel, V. (2015), Union Budget 2014-15: What is in store for women?, http://www.academia.edu/14066145/Union_Budget_2014-15_What_is_in_store_for_women_by_Prof._Vibhuti_Patel, Retrieved 21 November 2015.

Convergence initiative of the government of Delhi and the Sree Sakthi portal of the government of Kerala; and the Ministry of Women and Child Development's Mission Mode Project for digitalizing its services. However, these initiatives do not add up to a clear direction on gender mainstreaming in e-service delivery. Such an ad-hoc approach cannot hence bring about sustained, large-scale gains for the gender equality agenda.¹⁰⁶

c Absence of effective PPP frameworks in e-government can compromise last-mile service delivery and citizen interests in governance

Currently, the Indian state has opted for PPP arrangements for last mile service delivery through the Common Service Centre scheme. Village level entrepreneurs and corporate franchisees running last mile service delivery centres have to balance commercial considerations with service delivery. The absence of a citizen entitlements perspective and of gender and social inclusion mandates are a significant reason why the scheme has failed to reach public information and services to women and other socially marginalised groups. Concerns about PPP frameworks with respect to public interest, transparency and accountability have also come up, as in instances of data management and control, and conflict of interest in policy development and service quality monitoring.

d Connectively is largely seen as a technical issue

State policy on connectivity infrastructure and broadband continues to cast connectivity as a technical issue, divorced from the question of creating empowering cultures of use at the last mile. The Sanchar Shakti pilot project that has used the Gender Budget of the Universal Service Obligation Fund, to bring

meaningful connectivity to rural women (through mobile-based informational services) is an exception, and has not been scaled up.

e Online citizen engagement is not tied to concrete processes of policy consultations, and the feedback loop is not effectively closed

Online citizen engagement is a relatively nascent area for e-government programming in India, with the citizen portal mygov. in being launched only in 2014. However, there is no clear process for encouraging women's participation or for closing the feedback loop with citizens, on the policy issues debated or discussed on the portal.

f Digital literacy programmes recognize the need for specifically targeting women, but are narrow in their scope

In 2014, the Indian state launched the Digital Saksharata Abhiyan (DISHA) that aims at equipping 5 million people across the country, in digital skills. A sub-component of this programme specifically targets women community workers. The active participation of girls and women as equal digital citizens depends on wider policy coherence on capacity development, education, employment, political participation and the role of e-government. While Digital India does speak of creating a 'IT-ready workforce from India's small towns and villages in 5 years', the thinking on these lines is not gendered nor geared to take on the aspirations of young women and men.

g The absence of data privacy legislation puts marginalized women at greater risk of social discrimination

Currently, the Indian state is building a national citizen identity card scheme, with a unique identification number, to create a de-duplication mechanism for direct benefit transfers. However, in the

¹⁰⁶ Subramanian, M. (2007), Theory and practice of e-government in India: A gender perspective, <http://dl.acm.org/citation.cfm?id=1328097>, Retrieved 21 November 2015.

absence of data privacy legislation, the risk of tracking, profiling and surveillance of citizens at the margins, increases.

h **Open data policy frameworks exist, but implementation lags behind**

India has made some initial strides in the area of evolving Open data policies through the launch of the Open Government Data portal (OGD) and the adoption of the National Data Sharing and Accessibility Policy (NDSAP). However, progress in implementing these policies has been very slow, and partly this is because NDSAP stops short of laying down concrete guidelines for developing a full-fledged programme for Open Government Data.¹⁰⁷ Without such a push, there is no progress on overcoming the shortcomings of legacy data systems such as: lack of interconnections between data sets of different departments, interoperability issues, and department-centric rather than citizen-centric focus in presentation. The promise of open data for monitoring gender outcomes of policy and programme implementation cannot be realized in this context.

10 Recommendations

- a Institutionalization of gender equality and gender justice in e-government requires a strong policy and legislative framework. The Digital India programme is not an effective substitute. A policy framework on e-government must be a comprehensive document that strategically outlines the vital role that e-government can play in redressing women's historical exclusion from governance and democracy. The Ministry of Women and Child Development should come out with policy guidelines on 'women's empowerment and e-government' to further women's rights mandates in the information society context.
- b The programmatic framework of Digital India must be reviewed from a gender perspective, and a concrete strategy for furthering women's empowerment and gender equality in and through each of the 3 critical pillars of Digital India – service delivery, connectivity and citizen empowerment – must be formulated. The Ministry of Women and Child Development must be central to this exercise. Coordination mechanisms for integration of the strategic directions thus identified into existing components of the programme and collaboration with the Monitoring Committee on Digital India, the inter-ministerial committee that has already been set up, are important.
- c Gender mainstreaming in e-service delivery should be recognized as a process of designing last-mile service delivery systems that prioritize women's rights and entitlements in relation to information and services. In the design of such systems, commercial considerations and centralized monitoring should not over-ride the equity imperative. In the case of the Common Service Centre scheme, officials of the Department of Electronics and Information Technology and State Designated Agencies involved in monitoring and review, and village level entrepreneurs involved in day-to-day implementation, need capacity-building in

¹⁰⁷ Chattopadhyay, S. (2014), op.cit.

gender-based planning and budgeting and in evaluating gender outcomes.

- d PPPs in e-government should be based on partnership agreements that clearly specify accountability mechanisms for ensuring service quality and data protection. Penalty / recourse in the event of corporate non-compliance with the terms of such agreements are vital to the foundations of a citizen-responsive and women-friendly e-government.
- e Developing broadband infrastructure at the last mile must be seen as an exercise in building empowering cultures of Internet use among marginalized women and other socially vulnerable groups. Gendering the implementation of the Bharat-Net/ National Optic Fibre network, especially by involving women's collectives and organizations in developing last-mile connectivity models is an important way forward. The participation of local government in these models is key to develop creative and context-specific ways to enhance women's and girls' access to online spaces and local public services. Use of mobiles by some state governments for SMS updates in food security¹⁰⁸ and wage payments in employment guarantee programmes¹⁰⁹ show possibilities for effective targeting of women. As mobile-based connectivity improves, it can be a game-changer for bringing women into e-government, more centrally.
- f Online citizen-consultations must be backed by policy instruments that specify follow-up measures that ensure citizens' 'right to be heard'. Historically, women have been marginalized from public policy debates. In developing country contexts, agile design, using hybrid methods, is essential to use emerging

opportunities for online participation to bring women and girls into discussions in the public domain.

- g In digital literacy programmes, curriculum design, module development and teaching-learning processes must be informed by the understanding that digital literacy for women (and men) is not merely an exercise in skills-training, but a strategic pathway for digital citizenship. The involvement of women's organizations in linking digital literacy to social, economic and political empowerment of women can transform the current focus on technical skills. Successful government-civil society partnerships in this area such as Kerala's e-jaalakam need to be replicated on a larger scale.
- h Tackling Violence against Women through techno-solution approaches such as safety-apps may tend to promote simplistic and individual interventions to complex, social realities. There needs to be adequate investment in systemic solutions to enhance institutional capacities to ensure public safety. Data systems for a coordinated response to women's safety can promote effective policing, inter-agency coordination and women-friendly law enforcement.
- i The unique identification number-based direct benefit transfers system that India is currently building must be underpinned by a robust privacy and data protection legislation that protects marginalized women.
- j An effective Open Government Data programme that enables rapid and effective integration of existing databases held by different departments is an urgent imperative in India, for a gender sensitive and citizen-responsive e-government. Such a programme should focus on moving from 'department-centricity to citizen-centricity' in the production, publication and use of data-sets, so that such data can be used for local development and women's empowerment.

¹⁰⁸ Such as the state government of Chattisgarh for example. In fact, the SMS alerts on delivery of food grains to Fair Price Shops is part of the Mission Mode Project on the Public Distribution System. See PIB(2014), End to end computerisation of good governance, <http://pib.nic.in/newsite/printrelease.aspx?relid=114041>, Retrieved 26 November 2015.

¹⁰⁹ Such as the state government of Orissa. See http://www.business-standard.com/article/economy-policy/mobile-based-wage-payment-for-nrega-workers-114022401028_1.html, Retrieved 26 January 2015.

- k Gender-disaggregated data systems in digitalized service delivery, online access, connectivity and public access need much improvement to support gender-responsive e-government programming.

ANNEX ON METHODOLOGY

DESK RESEARCH: KEY GOVERNMENTAL WEBSITES

<http://deity.gov.in/>

<http://www.ndlm.in/>

<http://www.csc.gov.in/>

<http://mission.delhi.gov.in/>

<http://www.sreesakthi.org/>

<http://www.serp.ap.gov.in/SHGAP/>

<http://mygov.in/>

KEY INFORMANT INTERVIEWS

Name	Institutional affiliation	Date of interview
Name withheld	Department of Women and Child Development, Government of India	May 2015
Name withheld	Department of Telecommunications, Government of India	March 2015
Name withheld	Department of Electronics and Information Technology, Government of India	March 2015
Name withheld	Department of Electronics and Information Technology, Government of India	March 2015
Ms. Sarada Muraleedharan	Executive Director, Kudumbashree, 2008-2012 and currently the Joint Secretary, Ministry of Panchayati Raj, Government of India.	March 2015
Dr. Nirmala Padmanabhan	Head of the Department of Economics, St. Teresa's College, Ernakulam, Kerala.	October 2014
Ms. Sowmya Kidambi	Director, Society for Social Audit, Accountability and Transparency, Department of Rural Development, Government of Andhra Pradesh.	September 2014