

The page features several decorative floral motifs in a light purple color. There are two large flowers in the upper left, one medium flower in the upper right, and a vertical column of five smaller flowers on the right side, all arranged in a descending staircase pattern.

Recommendations for Meaningful and Successful e-Governance in India

IT for Change



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Paper submitted to the Second Administrative Reforms Commission

June 2008



Parminder Jeet Singh

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IT for Change Policy Brief

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Published by:
IT for Change
Bangalore, India
www.ITforChange.net

Printed at National Printing Press, Bangalore

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Part 1 - Context and Background of the Recommendations

What is e-Governance?

E-governance is a new and evolving, and, often, a contested subject. It still means different things to different people. It is therefore important to understand what is meant by e-governance and relate it to the context of governance in India, before offering recommendations for meaningful and successful e-governance in India.

A good way to attempt such understanding is to figure out what e-governance is *not*. E-governance is *not* merely the use of information and communication technologies (ICTs) in the government sector; neither is its meaning exhausted by 'online provision of government services'. Using digital technologies for ensuring single-window delivery of a host of government services goes a step further because it takes into consideration the context of citizens who may not have access to the Internet. E-governance, however, is something much more than such common front-ends for different government departments.

The 'e' in e-governance clearly signifies that it has to do with the new ICTs. Beyond that, the meaning and purpose of e-governance has to be determined from the substance and objectives of the governance domain, in specific contexts. We have seen in the case of business - and it is increasingly evident in more and more other sectors - that the use of ICTs tends to transform organisational and social structures. The most successful business entities have used digital technologies to transform themselves in a manner that enables much more effective achievement of their business or enterprise objectives. Within the overall business objective of 'maximising profit' (or shareholder value), specific enterprise objectives differ for different businesses entities, and thus also their e-business visions and strategies.

Box 1: E-business is not necessarily being online

Wal-Mart to most people is a chain of brick-and-mortar shopping stores with little 'e-business' about it. There are others, however, who see Wal-Mart not as a chain of stores with an excellent logistics network, but as an outstanding logistics networks with front stores in different neighbourhoods; such is the dependence of Wal-Mart's business model on its e-enabled logistics system.¹ This is good example to illustrate why e-business should not be confused with online services, it is much more. It is the use of digital technologies to maximise achievement of organisational objectives, often in a transformational manner.

1 Gurstein, Michael. 2008. Towards a critical theory of telecentres: In the context of Community Informatics. In Information Society for the South Series, Volume 1, IT for Change. <<http://www.itforchange.net/content/view/223/40/>>.

Accordingly, it is most appropriate to define e-governance simply in terms of use of ICTs for achieving various objectives of governance systems. The Council of Europe (CoE) defines e-governance as “*the use of electronic technologies in three areas of public action: relations between the public authorities and civil society; functioning of the public authorities at all stages of the democratic process (electronic democracy) and; the provision of public services (electronic public services)*”.² This is a definition of e-governance in terms of what it does – which is to maximise achievement of organisational objectives. In terms of how it can be done, CoE speaks of “*the use of information and communication technologies in public administrations combined with organisational change and new skills...*”.³ Evidently, for any chance of real success, e-governance needs to be a transformational agenda cutting across organisational processes and requiring imbibing of new skills.

In the business sector it is now widely recognised that a real transformational impact of ICTs is obtained only if digital systems are used to re-engineer business systems and processes. Such re-engineering or restructuring of business requires taking a ‘back-to-basics’ approach i.e. re-examining the entire business operation in context of the most basic objectives of the enterprise. It is useful to draw appropriate lessons for meaning and successful e-governance from e-business in this regard.

Most governments with successful e-governance programmes use the term ‘transforming government’ or ‘transforming governance’- in characterising their e-governance activities. For instance, UK, USA, Canada, European Union, New Zealand, Australia, Finland France, and Denmark are a few of the top achievers that use these terms in their e-governance strategy documents. The Approach Paper of the Second Administrative Reforms Commission observes that, “*There is a need to restructure our political and governance institutions and rejuvenate our Republic...Otherwise, the growing cynicism and despair among large sections may shatter public confidence in democratic institutions*”.⁴ The Commission’s report on ‘Ethics in Governance’ observes that “*the focus should be on e-governance and systemic change*”.⁵ It is therefore a matter of highest political importance for India to give a serious consideration to the potential of e-governance for transforming its governance systems, and to put the needed political will, resources and energy into this task.

Box 2: Transforming governance

The number of governments that use the term ‘transformational’ to characterise their e-governance efforts keeps going up. Most of these governments have had a long experience in this area, and therefore can be expected to have this rhetorical sounding expression grounded in some reality. UK’s latest e-governance strategy document is titled ‘Transformational Government – Enabled by Technology’.⁶ The Public Governance Committee of the Organization for Economic Cooperation and Development (OECD) issued a report last year which is titled ‘E-Government as a Tool for Transformation’.⁷ New

2 <http://www.coe.int/T/E/Com/Files/Themes/e-voting/definition.asp>

3 *Ibid*

4 Reforms in Governance and Administration, <http://arc.gov.in/reforms.htm>

5 Second Administrative Reforms Commission – Ethics in Governance, <http://arc.gov.in/4threport.pdf>

6 UK government’s document ‘Transformational Government – Enabled by Technology’, at: <http://www.cio.gov.uk/documents/pdf/transgov/transgov-strategy.pdf>

7 www.oecd.org/dataoecd/11/36/38013687.ppt

Zealand has an e-governance strategy document called 'Enabling Transformation'.⁸ E-governance strategies of both US and Canada speak of 'transformation' in their. Australia sees "e-government as part of a wider transformation agenda".⁹ And the 'transformational' spirit goes down to the provincial levels; achieving 'full e-government transformation' is identified as the goal of e-governance by the West Australian administration. The 'transformation' term finds a central place in the e-governance strategy of many other countries as well.

e-Governance – The international scene

In all the countries mentioned in the last section, e-governance strategies are located within the respective overall governance reforms programmes. In most cases, they are already an indistinguishable part of an overall reform or 'modernisation' process. Much of this reform process is indeed built over the new digital opportunities; however, the distinction between the ends and the means is kept quite clear. Digital technologies do not drive governance reforms agenda of their own; they merely provide new opportunities for existing governance priorities.

In developed countries, e-governance has mostly been applied to achieve the objectives of the chief public sector reform ideology since the early nineties – the 'new public management' (NPM)¹⁰, or, as it is known in the US, 're-inventing government'.¹¹ These overall directions and frameworks of reforms are politically determined, and the use of digital technologies is merely making possible new *levels* of achieving these objectives.

It is important to note that even among developed countries, within a broad framework of NPM, governance reform programmes, and consequently e-governance, have significant difference of focus. For instance, while in the US the major objectives are cost saving, internal efficiency, private partnerships and performance measurement; in the UK, provision of personalised services is the top objective of governance reforms and a shared-culture within the government is seen as the main way to achieve it. Therefore, while there are many common elements in US's and UK's e-governance strategies, sufficient differences corresponding to the above difference in focus of governance reforms can be seen. Similarly, a higher level of welfare state ideology in the Nordic states shows corresponding reflection in the e-governance frameworks of these countries.

Box 3: e-Governance is regular governance reforms with new possibilities

In the US, 'Expanding e-Government'¹² is "integral to a five-part President's Management Agenda (PMA) for making government more focused on citizens and results". All of the PMA elements, including Expanding Electronic Government, adhere to three guiding principles: (1) Citizen-centered, not bureaucracy or agency-centered; (2) Results-oriented, producing measurable improvements for citizens; and (3) Market-based, actively promoting innovation. UK's e-governance strategy, on the other hand, puts a more central emphasis on personalised services, and shaping services around needs

8 www.e.govt.nz/about-egovt/strategy/strategy-nov-06.pdf

9 http://www.dbcde.gov.au/Article/0,,0_4-2_4008-4_113988,00.html

10 http://en.wikipedia.org/wiki/New_Public_Management

11 For a brief history of the 'reinventing e-government' initiative, see <<http://govinfo.library.unt.edu/npr/whoweare/history2.html>>

12 The President's Management Agenda, <http://www.whitehouse.gov/omb/budget/fy2002/mgmt.pdf>

of the citizens who may be heterogeneously placed. These have been identified as the most important public sector reform objectives, most recently expressed in the policy review document 'Building on Progress: Public Services'.¹³

An OECD review of e-governance in Finland observed that, "*the development of e-government in Finland has been shaped by overall reforms in the public administration...Public administration reform has provided an overall vision and objectives for improving public service quality and efficiency and for developing e-government goals and responsibilities in Finland*".¹⁴ A similar review in Norway asserts that "*public sector reform has been a main driver of the development of e-government*".¹⁵ 'OECD e-Government Studies : Chapter 4. Planning and Leadership' And in the case of Mexico, the OECD review poses the following as one of the most important challenges, "*How can the government improve the policy links between e-government and the other objectives of the reform agenda?*"

A visioning exercise for e-governance, done by EU members states, observed that the EU "*places eGovernment at the core of public management modernisation and reform, where technology is used as a strategic tool to modernise structures, processes, the regulatory framework, human resources and the culture of public administrations to provide better government, and ultimately, increased public value*".¹⁶

The context of governance reforms in India

Currently, the major thrust areas of governance reforms in India are self-governance and decentralisation (strengthening *Panchayati Raj* institutions); Right to Information (RTI); and, community participation and monitoring of development activity. In addition, social inclusion is a high political priority, which, in terms of reforming governance systems, involves reaching out – both in servicing and participation – to the disadvantaged sections of the society who, it is feared, may be left out of the current economic surge being experienced by a significant part of India. Governance reforms towards greater social inclusion can be expected to seek, on one hand, increased reach and capacity for serving disadvantaged sections, and on the other hand, developing means of improving accountability to them, as well as enhancing their participation. Overall, a greater move towards citizen-centric orientation and structures has also been a governance reforms priority, though, unlike some other reform areas listed above¹⁷, in this case, very little necessary institutional-legal or any other significant structural changes have been made to lead the necessary changes.

13 http://archive.cabinetoffice.gov.uk/policy_review/documents/building_on_progress.pdf

14 <http://www.oecd.org/dataoecd/20/50/13314420.pdf>

15 'OECD e-Government Studies : Chapter 4. Planning and Leadership'

URL: <http://www.ingentaconnect.com/content/oecd/16080246/2005/00002005/00000022/4205151ec004>

16 'e-Government in the EU in the next decade: The vision and key challenges', <http://ftp.jrc.es/21376-ExeSumm.pdf>

Decentralisation and Right to Information reforms are backed and largely propelled by strong legislative measures. Some provisions for 'community monitoring' are increasingly being incorporated in most government programmes.

17 While some urban citizens' and civil society groups have shown some enthusiasm for e-governance, most groups and organizations concerned with governance reform that work in rural areas, and with disadvantaged sections of the society, have largely ignored the potential for e-governance in India. Somewhat ironically, it is these disadvantaged groups that have the highest stake in governance reform in India.

Some of the priorities of governance reforms in India are aligned to the NPM thinking – citizen-centricity (especially in terms of citizen’s identity as a customer of government services), emphasis on performance measurement, increased internal efficiencies, private sector like management practices – using public-private partnership wherever appropriate and possible, and reducing costs. However, it is important to note that NPM thinking only represents one side of India’s governance reform priorities – mainly pertaining to, as mentioned, the customer identity of the citizen, and internal efficiencies of the government system. Most of the above described governance reform priorities and thrust areas in India pertain to the citizen’s identity as the ‘owner’ of governance systems, and accordingly deals with issues related to processes of participation (self-governance) and accountability (RTI and community monitoring). Equity and citizens’ participation and ownership are as much a concern as efficiency in current governance reforms in India, and these issues should have a central importance in developing e-governance strategy and frameworks. However, these all-important considerations have mostly been neglected or under-emphasised in the current e-governance frameworks.

The reasons for the different emphasis and directions of the Indian governance reforms vis-à-vis those in the developed countries are not difficult to appreciate. In developed countries, the context of governance reforms is a relatively mature institutional ecology of a welfare state absorbing 35-50 percent of the national GDP. Whittling down this huge proportion by increasing efficiencies is understandably the major concern of governance reforms in these countries. The governance systems and institutions in India, on the other hand, are still in the formative stages with regard to what can be called a modern welfare state. A primary task of the reform processes therefore is to *shape* these institutions, so as to enable them to function effectively. Such *shaping* needs to emphasise the element of citizen’s control and participation in a political evolution of governance systems, as much as it does internal system efficiencies and cost effectiveness.

To conclude, it is necessary that e-governance in India is located within the country’s politically accepted and articulated governance reform priorities. Very often, e-governance thinking and processes are imported uncritically from practices in the developed countries, and they come wrapped in priorities and ideologies of governance reforms of those countries. These priorities and ideologies may not be fully appropriate for India, nor represent the political will of the people. This has resulted in a certain chasm between e-governance and other thrust areas of governance reforms in India, at ideological, institutional and practical levels. E-governance can help achieve ‘new public management’ priorities of governance reforms, but it can as easily be employed for other objectives of governance reforms. In other words, the e-governance vision and strategy in India should be located within the overall vision and strategy of governance reforms in India. At the same time, however, we need to remain cognisant of the fact that with digital-based work processes opening up entirely new organisational and structural possibilities it is necessary to revisit overall governance reform strategies as well.

The primary task of formulating India’s e-governance strategy therefore is to re-visit specific governance reform objectives of India within a framework of a thorough appreciation and understanding of the new digitally enabled transformative possibilities. Such an exercise has to be done with a good deal of flexibility of inventiveness and innovation, going right to the core of governance structures, which as discussed is the real transformational opportunity in e-governance today. On the other hand, the exercise needs to be kept appropriately and solidly rooted in social, political and economic realities of India. Such an exercise, while building a broad strategic set of priorities and directions for e-governance in India, will also help in getting the required political buy-in from the highest level, for governance system reform in India. It will also draw

the required involvement of citizens' and civil society groups¹⁸ from all parts and sections of the Indian society in seeking and shaping such reform. Such an involvement can come only through an appreciation of both the unprecedented opportunity for comprehensive governance reforms in India through e-governance, as well as contextual appropriateness and real possibility of such reforms in the face of India's social, political and economic situation.

Box 4: Is India ready for e-Governance?

E-governance is seen by many as a luxury India that may not be in a position to afford. It is viewed by skeptics as taking attention away from more pressing governance issues that India faces today. It is often held that even if e-governance may offer some real possibilities in the future, the time may not yet be ripe for India. Two central concerns drive such viewpoints: (1) the financial costs of migrating to digital systems and, (2) the new exclusions that may be caused for people who are not 'digitally-literate'.

The issue of the 'financial costs to the system' has six important aspects that need a thorough and informed examination. Three of these are on the supply side of ICT adoption phenomenon.

1. Once the basic hardware and connectivity are provided - the costs of which keep falling dramatically - digital systems are about people and processes. Incidentally, India has one of the world's best human resources in IT and IT-enabled processes. Therefore, if taken up in a well thought-out strategic manner, appropriately leveraging local talent and local 'solutions', e-governance is not a very expensive proposition for India.
2. Since digital systems represent a society-wide transformation, and will inevitably be integrated in most areas, including governments, economies of scale ensure that costs fall rapidly as absorption goes up. There are some special economies of scale inherent to digital systems, as opposed to any 'physical' technologies and systems, a phenomenon which is behind the near magical reduction of prices as number of both the uses and users of these technologies go up. While avoiding technical discussions about the basis of this phenomenon, it is important to assert it, even as one can perceive it in the cost graphs of these technologies in the last few years. It is important to keep this important factor in mind while framing the cost implications of an e-governance strategy.
3. ICTs have a typical 'network effect' whereby if appropriate technology models based on community-based collaborative efforts are adopted – as in case of open source software and open, collaboratively produced content – the marginal costs to the social system as a whole become very low even in the mid-term. The public sector with its huge procurement 'muscle' as well as policy and practice-based standard-setting role,¹⁹ is uniquely placed to trigger and support such low-cost collaborative

¹⁸ Practice-based standard setting role refers to the fact that since most or all people and organisations have to necessarily deal with the public sector, sometime or the other, the digital systems that get used by the public agencies can in some measure set de-facto standards. Such de-facto standards setting power of the public sector can be used to promote exclusionary propriety systems, or further open collaborative systems which benefit all users equally.

¹⁹ There is a great degree of overlap in the way the terms IT (information technology) and ICT (information and communication technology) are used, though there is a good deal of substantive as well as contextual difference as well. The overlap of usage may however cause some confusion, also in the reading of this document, in which case it is best to consider the terms loosely as meaning the same technology space.

models of ICT production and use. It would, however, require a concerted effort, with clear strategic directions to do so. Support for such collaborative ICT ecologies while saving overall costs in e-governance, leads to creation of significant high-value public goods which is a legitimate area for public expenditure.

Three other aspects equally pertinent to the 'cost factor' are on the demand side.

1. Migration to digital systems is inevitable for most social and organizational systems. There certainly are costs involved in the transition, however these technologies provide such huge system-wide efficiency gains that even small organisations in the smaller towns of India have begun to see their overall cost saving and efficiency enhancing role. India's governance systems cannot remain out of sync with these society wide changes. In fact, they may need to lead and trigger these changes, especially in areas where market forces do not suffice for this purpose.
2. Costs are most relevant in relation to outcomes, and it is possible to leverage the 'transformative potential' of ICTs in the area of governance reforms – a high political priority for India – in such a manner so as to give a very favourable cost-benefit equation.
3. Since the area of e-governance is new and largely untested, the greatest amount of cost in e-governance is in taking wrong strategic directions. The 'failure-cycles' related cost factor therefore itself is a compelling reason for taking a high level strategic approach to e-governance, without constraining the required implementation flexibility, which has been argued for throughout in this document.

As for the concern about digital exclusion, it is important to note that e-governance does not mean that citizens necessarily have to interface with the government through electronic means, a point which has been made earlier. ICTs can in many ways greatly enhance physical, voice-based and/or paper-based interactions between citizens and the governments, increasing their reach as well as effectiveness.

Institutional frameworks for leading e-Governance

The earlier sections noted two key requirements for successful e-governance in any country. In this section, these key requirements will be used to develop the necessary characteristics of an appropriate institutional framework for e-governance. One such key requirement was stated to be that, since e-governance presents a major transformational possibility for governance systems of any country, realising this possibility requires a strategic plan for far-reaching structural changes across the government. In institutional terms, it means that successful and meaningful e-governance requires the highest levels of the government to take up the responsibility for visioning and strategy. The other key requirement that was identified is that since e-governance merely represents a set of organisational restructuring possibilities, its substantive objectives and content has to be determined by existing priorities of governance reforms. E-governance institutional framework therefore needs to be located within the wider institutional framework of governance reforms of any country.

In all the countries with an impressive record of e-governance mentioned earlier, these institutional requirements are, by and far, met. The office of the chief executive of the government generally has a direct and close association with its e-governance strategy (e.g.: US, UK, Ireland, Australia, Brazil, Mexico), along with a committed structure under it directly responsible for looking over government-wide e-governance efforts.

In these countries, as stated earlier, e-governance is a part of the overall governance reforms institutional framework. The respective department or agency in charge of governance reforms is also responsible for e-governance strategy and coordination.

Box 5: e-Governance is primarily about governance and not IT²⁰: So why should it be led by IT departments

The US federal government's e-governance effort is led by the President's office, through the Office of Management and Budgets.²¹ In UK, this responsibility is with the E-Government Unit in the Cabinet office.²² In Brazil, the Minister Chief of Staff of the Brazilian Presidency is responsible for implementing the country's e-government vision. In Ireland e-governance is directly under the Prime Minister's office.²³ In Mexico, recognising the need for greater institutionalisation of e-government, the e-government unit has recently been moved from the President's office to the Ministry of Public Administration.²⁴

In South Africa, e-governance is with the Department of Public Service and Administration - Office of the Government Chief Information Officer,²⁵ and in Australia with the Department of Finance and Administration – Government Information Management Office, overseen directly by a Special Minister of State.²⁶

In Denmark e-governance is a part of the Ministry of Finance's government modernisation programme,²⁷ in Korea it is with the Ministry of Government Administration and Home Affairs,²⁸ in New Zealand the responsibility lies with the State Services Commission,²⁹ in Finland with the Public Management Department,³⁰ and in Norway with the newly created Ministry of Modernisation.³¹

In fact there is no country with any serious e-governance effort where the IT Department is in charge of e-governance.

A central element of an appropriate institutional framework for e-governance, arising from its unique technology basis, is of the relationship between substantive 'governance reforms' domain and the technology

20 There is a great degree of overlap in the way the terms IT (information technology) and ICT (information and communication technology) are used, though there is a good deal of substantive as well as contextual difference as well. The overlap of usage may however cause some confusion, also in the reading of this document, in which case it is best to consider the terms loosely as meaning the same technology space.

21 <http://www.whitehouse.gov/omb/>

22 <http://archive.cabinetoffice.gov.uk/e-government/>

23 <http://www.taoiseach.gov.ie/index.asp?locID=175&docID=-1>

24 <http://www.funcionpublica.gob.mx/english/>

25 <http://www.dpsa.gov.za/>

26 <http://www.agimo.gov.au>

27 http://www.fm.dk/1024/default_eng.asp

28 http://www.mogaha.go.kr/warp/webapp/home/en_home

29 <http://www.ssc.govt.nz/display/home.asp>

30 http://www.vm.fi/vm/en/02_ministry/02_organisation_and_functions/06_public_management_department/index.jsp

31 <http://www.regjeringen.no/en/dep/fad.html?id=339>

domain. ICTs are very new organisational and work technologies, more so in case of developing countries. Those concerned with social domains, including of governance reforms, often take the convenient attitude that anything technology, including technology enabled organisational and social process changes (which is what e-governance essentially is about), should be left to the technologists. The latter, on the other hand, are often quite happy to try their hands on these 'new' and what are perhaps more exciting areas for them – that of social application of technologies. This misguided representation of e-governance as primarily a technology domain has resulted in significant distortions in institutional frameworks for e-governance, especially in developing countries.

Some basic technology conditions and technology skills are no doubt necessary for e-governance. However getting the technology right is just one enabling requirement, and it does not give a basis for those in charge of public sector technology to lead e-governance – its strategy and implementation, as often happens in countries with under-developed institutional capabilities in the area of governance reforms. For leading successful e-governance, it is important to have a clear understanding of the nature of technology requirements for e-governance. This will help ensure an appropriate management structure for public sector technology, and also institutionalising its relationship with the department or agency that is in charge of governance reforms.

These technology requirements for e-governance are of two kinds. The first kind consists of the convergent, across-the-system, technology requirements, often called the 'common infrastructure' for e-governance. This 'common infrastructure' includes aspects like technology standards and protocols; soft infrastructure, like software model and platform choice, security aspects, and generic software and applications that are widely used in, and across, a government system; and hard infrastructure, like connectivity networks and data centres. The second kind of technology requirement for e-governance is of some basic capacity and readiness in all parts of a governance system to shift to digital working. This includes some level of availability of technology for generic use – hardware, software and connectivity – and corresponding human capacities. Migration to basic digital systems, like e-mailing, is taking place across social organisations without any centralised strategies. Some very obvious automation of work processes – applying technology to existing processes – may also take place in this manner. Such automation mostly takes place within narrow 'departmental' visions of their immediate work processes, tasks, priorities and authority, and it does in itself enable some significant improvements in existing systems. For instance, digitised MIS³² allows for greater control and more effective management, with faster and more informed decision-making; and the ability to publish information on the web can be of some benefit to citizens.

It should be obvious that both these kinds of technology requirements – the provision of 'common infrastructure' as well as system-wide readiness for, as well as activity of, absorbing digital work processes – need to serve an overall vision and strategy provided by the agency responsible for e-governance. As discussed earlier, such an agency, in most developed countries, is anchored in the institutional framework of overall governance/ administrative reforms. These countries have set up a clear protocol between a nodal e-governance agency and parts of the government responsible for 'common infrastructure' and public sector technology expertise on one hand, and department level automation activity on the other (see the following box for examples of such institutional separation of responsibilities).

32 Management Information System

On the other hand, the part of government dealing with overall ICT policies, including industry policies and universal access policies (preferably, the two should themselves be separated), is different from the e-governance agency and the public sector ICT support agency or department. In the US, for instance, National Telecommunications and Information Administration (NTIA) is the federal agency that is in charge of domestic and international telecommunications policy.³³ NTIA is also the US President's principal advisor on telecommunications matters. One of the NTIA's goals is to make sure that everyone in the United States has affordable access to phone and cable service.³⁴ However it has nothing directly to do with e-governance in the US. Most other developed countries also have IT and telecom agencies with no role in e-governance, other than to reach basic IT and telecom to all citizens, which is something very different from e-governance *per se* (see Denmark's example in the box below). New Zealand's digital strategy charted by the Ministry of Research Science and Technology is based around the three enablers, *connection*, *content* and *confidence* - affordable high-speed *connection* for everybody, diverse high-quality *content*, and the building of capability and *confidence* to use digital resources in the society.³⁵ Australia too has a separate Department of Broadband, Communications and the Digital Economy,³⁶ which does not figure with any prominence in its e-governance institutional set-up.

Such logical and institutional separation of governance reforms aspects of e-governance from public sector ICT support, and general IT and telecom policies, alone can enable an e-governance approach that is centred on governance issues rather than on technology. Such separation ensures that social priorities determine technology use, and not the other way around – which is an oft stated dictum in context of technology induced social changes. The dangers of a technology-led approach to e-governance can be very far-reaching, and without going into a more detailed analysis one may only mention here that such an approach may not only under-optimize governance reform opportunities that have become available today, it may hardwire such values in new restructured governance systems which are not derived from political priorities of the country, and may even be alien to them. For instance, taking a market approach to governance is a hotly contested territory, and debated upon with regard to its possible benefits and disadvantages for core governance objectives of equity and social justice. The Approach Paper of the Second Administrative Reforms Commission, quoted earlier, cautions that, “...the assumption that market is the answer to all our challenges is a dangerous and irrational one”.³⁷ However, in e-governance such an approach is often taken uncritically and almost for granted, without much reflection at all.

Box 6: Public sector ICT support for successful e-Governance

ICT is the very platform on which e-governance is built. Any e-governance institutional framework therefore has to ensure appropriate relationship between governance reform aspects of e-governance and 'public sector ICT support'.

33 <http://www.ntia.doc.gov/>

34 Details on the National Telecommunications and Information Administration Coupon Program, http://www.associatedcontent.com/article/530401/details_on_the_national_telecommunications.html

35 Revisiting New Zealand's Digital Strategy, <http://www.bonnington.org/?p=58>

36 <http://www.dbcde.gov.au/>

37 Reforms in Governance and Administration, <http://arc.gov.in/reforms.htm>

In the UK, the distinction between issues of 'service transformation' and process/ system restructuring on one hand and technical common infrastructure on the other is kept very clear. Under the overall remit of the E-Government Unit, the former is the responsibility of the 'Service Transformation Board' and the 'Chief Information Officers Council', while the latter is taken care of by the 'Common Infrastructure Board' and the 'Chief Technology Officers Council'. Evidently, the technology support groups are clearly there to serve the priorities of the 'business' groups.³⁸

In the US, while the federal e-governance strategy is provided by the Office of Management and Budget (OMB) under the President's Office, separate structures for public sector technology support to serve the e-governance strategy have been laid out. In 2006, OMB identified the Infrastructure Optimization Initiative (IOI) as an e-governance Line of Business (LoB).³⁹ The federal logistics support agency, General Services Administration (GSA), was selected as the managing partner for this LoB. A government-wide IOI Task Force was created to develop 'Common Solutions' to realise the goals and objectives of this LoB. Within GSA, the technology support activity is looked after by the 'Office of Technology Strategy'.⁴⁰

In Denmark, while the e-governance programme is a part of the Ministry of Finance's government modernisation programme, the Ministry of Science, Technology and Innovation contributes, via the government's ICT policy and the public sector ICT policy, "*to the realisation of government policy with respect to citizens, businesses and the public sector*".⁴¹ This Ministry is responsible to the public sector for technical development, including the compilation of standards and policies.

India's e-Governance institutional framework

Until 2006, when the National e-Governance Plan (NeGP) was approved by the Government of India, e-governance was mostly only mentioned as a part of IT policies of the Indian state governments. There has been a general lack of clarity among governments about e-governance possibilities from a systemic governance reform perspective. E-governance effort mostly hinged on digitisation/ automation of some existing departmental processes. Many of these automation activities became the basis of some degree of systemic reforms, for instance computerisation of land records, which enabled significant transformation in the processes of obtaining land records, providing convenience to farmers while reducing corruption. Some initiatives have set up a single-window for governmental services, and these have led to some degree of change in the perception of the nature of government-citizen interface, both in the eyes of the citizens and the government employees, apart from facilitating citizens in availing government services. However, the impact of such initiatives has mostly been limited to some simple 'pure informational processes' (e.g., records and certificates) and simple transactions (e.g., bill payments), and has not contributed to any systemic reforms.

Within government systems, digital MIS have been of significant help for quicker and more informed decision-making, as well as for monitoring governance processes and development schemes. Automation has also led to better financial and budgetary management, as well as improvement in managing personnel and

38 <http://archive.cabinetoffice.gov.uk/e-government/>

39 <http://www.whitehouse.gov/omb/egov/c-6-9-ioi.html>

40 Office of Technology Strategy, <http://159.142.162.71/Portal/gsa/ep/channelView.do?pageTypeld=8199&channelPage=%2Fep%2Fchannel%2FgsaOverview.jsp&channelId=-13315>

41 http://oldegov.dk.upsilon.t3c.dk/english/egovment/egovment_strategy/development_and_implementation/index.html

other resources. Some amount of web publication of government information (however, generally, not of the kind that is most sought after by the citizens and relates to their interests directly) and some downloadable application forms have added to the convenience of the citizen, and partly also increased accountability.

A few government officials, mostly on personal initiative, went further and put up online grievance redressal systems, with 'process view'⁴² features provided as the grievance application moved through the government processes. A very small number of online systems of tracking some other citizen-government interactions also do exist. Even fewer e-governance champions within governments dared to provide access to deeper layers of government information for citizens' scrutiny – like publishing all applications for social welfare entitlements online, in order to ensure transparency.⁴³ However, such one-off efforts, since they strongly challenge vested interests, have come against various forms of resistance in the absence of strategic directions and clear policies from higher administrative and political authorities. In most places, these governance reform innovations, which carried considerable potential for far-reaching systemic change, have either been discontinued with the departure of the 'champion' or are working in a very under-optimal fashion.

The contribution of government policy to e-governance, at this stage, had mostly been to the extent of ensuring some basic digital infrastructure in government offices,⁴⁴ which has been used by e-governance champions within governments to do some significant department level digitisation/automation activities. In many parts of the governments in India, such incremental bottom-up efforts at automation of some work processes continue to happen, in a manner which mirrors present processes while taking benefit of much greater efficiencies of digital systems. Policies enabling enlistment of external experts for e-governance projects have gone a long way in making many such department level projects possible. The staff of the National Informatics Centre (NIC), present in all districts, have also been a great help in these early stages, and have developed many useful applications to support process automation.

The National E-governance plan (NeGP), which was approved by the Government of India in 2006, is the first attempt at a national plan and structure for e-governance in India.⁴⁵ It consists of two main components – one is the 'core and support infrastructure' (common infrastructure), and the other is a set of Mission Mode Projects (MMPs) which are managed by various central government and state governments departments. The overall programme management responsibility for the entire NeGP is with the Government of India's Department of Information Technology (DIT). It manages the common infrastructure component directly, and through providing guidelines and assistance to the state government IT departments. On MMPs, NeGP has a very sketchy identification of key areas for e-governance, but no strategic vision or guidelines are provided. However the DIT, through the NEGP Project Management Unit, does the 'appraisal of proposals for Central/State MMPs and other projects'⁴⁶ for implementation methodology etc and identifies resources – and, most likely, also outsourcing partners – to provide assistance in project conceptualisation, development and implementation to various implementing agencies. Therefore, the DIT does have a great deal of influence and control over these projects.

42 Digital systems allow the whole work process to be viewed by anyone anytime.

43 For instance, Rural e-Seva project in West Godavari, Andhra Pradesh.

44 Very early in this decade governments promoted the target of spending at least 3 percent of departmental budgets on IT.

45 <http://www.mit.gov.in/default.aspx?id=144>

46 <http://www.mit.gov.in/default.aspx?id=827>

Such leadership of e-governance in India by a department whose primary mandate is technology related, without a strategic vision and a broader policy framework for governance reforms through e-governance, is a dubious way forward for meaningful and successful e-governance in India. In fact, it is already resulting in what may be called as a 'double abdication' of strategic responsibility for e-governance in India – on one hand, by the departments executing MMPs, because they may take it that it is the job of the DIT as the agency in charge of the project management structure to provide such overall governance reform vision and strategy, and, on the other hand, by the DIT, which, apparently considers it a department level activity to visualise what it wants to do and how, and concerns itself mostly with technical and project management support. This 'vision and strategy gap' in efforts at governance reforms and restructuring through e-governance in India together with a technology-centric leadership constitutes the two main shortcomings of its existing institutional structure. These shortcomings relate exactly to the two basic requirements, and the corresponding institutional needs, for successful e-governance that we identified in the last section on 'institutional frameworks for leading e-governance'. These are; (1) need for a strategic vision for across-the-government structural changes, anchored at the highest level, preferably in the chief executive's office, with a committed e-governance agency under it, and (2) subsuming e-governance under general governance reform objectives, and therefore the need to locate e-governance institutional framework within the wider institutional framework for governance reforms of any country.

The NeGP does, however, provide a well integrated and solid basis for technology and financial enablement of e-governance activity in India which was hitherto missing. It fulfills the critical 'common infrastructure' requirement for e-governance, which will be provided and managed by the DIT along with state IT departments. It also promises some steady financial support to department level e-governance projects, which can allow for a systemic approach to reform. However, as mentioned above, what is missing in the NeGP is a comprehensive vision and strategy for e-governance enabled structural reform/ transformation in governance systems in India. Putting in place a common infrastructure and streamlining regular department-led e-governance projects, which are mostly automation oriented, will together certainly produce some movement towards systemic changes. However, this level of reform will be too little, and vastly under-optimal, in relation to the real e-governance opportunities that exist today. More significantly, there is no guarantee that the ensuing structural changes will incorporate the values and objectives of governance reforms in India that have been politically determined and prioritised.

The recommendations of India's National Knowledge Commission (NKC)⁴⁷ on e-governance assert that simply digitising the existing governance processes will be of no use, and can even be counter-productive, and that government process redesigning should precede digitisation. If automation without process redesigning may be worthless, designing government processes and systems without incorporating core values and strategic objectives of the required governance reforms, as politically prioritised for India, may actually be dangerous. An important UN report on e-governance speaks of how "*ICT in the hands of public administration, represents a great power to transform*" and it can get used for both positive and negative social outcomes (see the box below).

47 <http://pib.nic.in/archieve/others/2006/may2006/nkc20060509.pdf>

Box 7: e-Governance – A double-edged weapon

The United Nations Department of Economic and Social Affairs (UNDESA) report, 'World Public Sector Report 2003: E-government at the Crossroads'⁴⁸ is worth quoting at some length on the issue of key 'higher level' policy choices involved in e-governance, which cannot be abdicated by any government.

"Right now, very few dispute the claim of the New Public Management reformers that efficiency and effectiveness is possible in government operations. Therefore, for many, building e-government applications for the sake of efficiency and effectiveness alone is a beneficial enough initiative. However, a discussion on the use of ICT to raise efficiency and effectiveness would not present the whole picture. It would also have to address the fundamental issue of the 'trade off' with which the introduction of modern ICT confronts any society."

"In the case of e-government, this trade-off and the concerns that it raises have to be considered early on and carefully. ICT alone, to say nothing of ICT in the hands of public administration, represents a great power to transform. This power can follow one of two logical paths. On one hand, it can follow people's preferences, i.e. it can recognise the supremacy of the societal context that is preferred and chosen by people and support and serve it. In particular, it can respect the values by which people prefer to live and factor them into ways in which the new technology is deployed. On the other, especially in the absence of policy guidance, it can be adopted by traditional political and commercial forces and through them establish its own supremacy, i.e. make people live with the changes that it introduces to the societal context regardless of whether these changes reflect what they want and involve those things to which they have the right. The turn that we make at this crossroad will lead us towards world making, or towards just measuring the tread marks left by the technology-led governmental bulldozer. This is a policy choice too."

India's NeGP describes its vision as, "*make all Government services accessible to the common man in his locality, through common service delivery outlets and ensure efficiency, transparency & reliability of such services at affordable costs to realise the basic needs of the common man*".⁴⁹

This vision mostly concerns one single important requirement of reforms in Indian government system – the need to increase the physical reach of the system to all parts of the country. This is sought to be achieved through technology-enabled points-of-presence called Common Service Centers (CSC).⁵⁰ On the other hand, it introduces almost as a necessary ingredient in service delivery, the concept of certain 'costs' to the citizens, without even using the qualifier, 'wherever applicable'. Coming from the IT department, the basis of such an approach is not difficult to understand. Technology is normally considered a paid-for service, and the same idea is extended to IT-assisted 'services' which e-governance is essentially seen to be. The conceptual basis of the above vision of the NeGP is that (1) ICTs can help government services reach where human intensive out-reach efforts have failed, and (2) the organisational systems around such IT-assisted service delivery are best developed by leveraging market forces, which have a common objective of

48 <http://unpan1.un.org/intradoc/groups/public/documents/UN/UNPAN012733.pdf>

49 <http://www.mit.gov.in/default.aspx?id=837>

50 <http://www.mit.gov.in/default.aspx?id=825>

using ICTs to extend markets to under-served areas. The technology/ infrastructure- and market-centric approach of the NeGP is evident.

Accordingly, the key component of the CSC programme is a private sector agency that covers 2-3 districts. This agency sets up CSCs, and also develops a host of services for delivery using these points-of-presence. Governance services are just a few among a bouquet of commercial services delivered by the CSCs, and much of the governance service redesigning consists in trying to shape government service transactions to align as closely as possible to normal commercial transactions, to enable them to fit in the CSC business model.

These conceptual notions of 'governance services' aimed at citizen-consumer, and the implementation 'strategy' based on such thinking, may have some justifications on efficiency grounds. However to consider them as the primary drivers of India's governance reforms through e-governance is too simplistic, at one level, and quite dangerous, at another. And this is precisely what is happening with the NeGP, and its flagship programme of CSCs, in the absence of any other more politically articulate and socially well-analysed and justified e-governance vision, strategy, guidelines and roadmaps.

There may be some advantage in starting with building a technology-assisted common platform for service delivery and also in, wherever appropriate, leveraging market forces for organising 'delivery' of services. However, making these as central and essential pillars of e-governance, through a vision statement as mentioned above, can have far-reaching negative implications for governance institutions and practices, and for citizen's rights, in India. It sets up strong political directions for governance 'reforms' without adequate socio-political examination, and consequent legitimacy, which can potentially be difficult to reverse as they get hardwired into Indian governance systems through new ICT-based structures.

It is possible that putting a layer of common service delivery centers between government officials and the citizens can be of some use in measuring performance and extracting accountability, at least in some cases. However, no such implications are analysed and drawn in the NeGP which stays away from any social analysis – something quite odd for a major governance reform project to do. Connectivity among government offices through State Wide Area Networks (SWAN)⁵¹ and State Data Centres (SDC)⁵² – the two other central components of NeGP apart from CSCs – can be expected to provide some efficiency benefits to the working of government systems; however what is not described in the NeGP is how they can or will be used for greater transparency and accountability, and thus enhancing citizen's control and ownership over governance processes. Neither are other core technology-related e-governance activities like common portals, citizen's digital identity etc, which are very important aspects of e-governance, and also justifiably IT Departments' remit, exposed to enough research and analysis on social, political and 'governance' aspects. The sketchy description that is available appears to be driven by a simplistic technology-fascination, or at best by an assumption of technology-neutrality, a notion that finds little acceptability in any social analysis.

There is therefore a complete absence of any strategic vision or plan, or any social analysis at all, in the NeGP. It is unlikely that e-governance can succeed without such a vision, strategy and social-analytical basis, and unless implementation is done in a manner that stresses substantive aspects of governance reforms and not just technical and managerial issues. The NeGP makes no mention of the main arenas of governance

51 <http://www.mit.gov.in/default.aspx?id=824>

52 <http://www.mit.gov.in/default.aspx?id=845>

reform in India – self-governance institutions, right to information, community participation, citizen charters etc. – and no attempt to connect e-governance to policies and efforts in these areas.

Although there is an institutional structure for the NeGP in the form of an Apex Council under the Prime Minister and an Apex Committee under the Cabinet Secretary, there are no specific support structures for them. The DIT remains responsible for almost all the thinking, planning and work on e-governance. The Council and the Committee appears mostly for the purpose of rubber-stamping the DIT's plans which can enable speedy directions to and compliance from multiple agencies that are involved in the NeGP implementation. There is no system for developing and sharing strategic plans for furthering the governance reform agenda – either with higher political and administrative levels, or with the citizens and other concerned bodies at large. The first step of such political anchoring of, and democratic involvement in, a national e-governance plan will consist in interpreting and presenting e-governance in the terms and language of a far-reaching governance reform plan and not a technology initiative. Such a reinterpretation and presentation of e-governance alone can attract the interest and attention of the higher administrative and political quarters, as well as of citizens' and civil society groups. This important imperative is almost systematically avoided in the way e-governance is taking place in India. Significantly, the Department of Administrative Reforms (and Public Grievances) of Government of India, and the corresponding agencies at the state level, mostly have no role in the institutional matrix of e-governance in India, which remains strongly IT department centered.

Box 8: Looking ahead – The next steps in India's e-Governance

Many typologies of different stages of e-governance have been offered over the last few years. We present another typology building on the experience of e-governance in India, its current status, and the future possibilities and imperatives. Accordingly, we can see three phases of e-governance efforts in India.

Phase 1: It represents bottom up, un-coordinated activity of digitisation and automation, and in some cases some degree of system redesign. This activity has been happening as a normal process of adoption of digital processes in most organisations, and as driven by some entrepreneurial government officials, respectively. These efforts are important but they under-optimize the real opportunities of a system-wide reform through e-governance, as has been discussed in this document.

Phase 2: This comes with the NeGP whereby for the first time an India-wide plan and structure for e-governance is being developed. The accent is on developing a common 'core and support infrastructure'. This common infrastructure, including CSCs, help e-governance efforts to take the next big leap by opening new technological, infrastructural and – to a very limited extent – integrative avenues for bottom up e-governance efforts which were not available earlier. The NeGP also contributes to e-governance by ensuring a certain systemization of financial and project management support to a host of e-governance activities in the central and state governments. It is also likely to trigger some new activities with the assurance of financial and project management support.

Phase 3: This is the phase of strategically determined governance system-wide reform through e-governance, which meets the political imperative of a systemic change, already expressed and anchored in existing governance reform efforts towards citizen centric governance, self-governance and

decentralization, right to information and community participation/ monitoring. Normally such strategic determination should come as the first phase, but in the new and fast-changing context of ICTs and their current or potential impact on organisations and society, it may only be normal and appropriate that this phase comes after a certain amount of initial experience and learning in the field of e-governance has been built. It the principal argument of this document that such a stage has now been reached in India, and it should move on to this strategic phase of e-governance. This stage, while not supplanting the activities of phase one and two, should consist in laying the overall vision, strategy, guidelines and implementation roadmap, as derived from the political imperatives of governance reforms in India, within which activities described in phase one and two should take place.

Whereas no e-governance vision and strategy document has been provided by the DIT for the state governments, it has shared a set of guidelines for building capacity and institutional frameworks for governance activity.⁵³ These guidelines stress managerial and technical issues, and seek to replicate an IT department-centered institutional mechanism for e-governance at the state levels. One of the requirements of these guidelines however is for the states to develop an e-governance roadmap. Development of these roadmaps has mostly been outsourced to private consultancy companies, often from the technology sector. There has been no broader consultation with citizens' and civil society groups in developing these roadmaps, neither are the roadmaps easily available, over the Internet or otherwise, for reference. This is quite ironical for documents that seek to lay out the direction for governance reform through use of ICTs, whereby all-round transparency is one of the key new structural possibilities.

Expectedly therefore, the roadmaps that have been developed so far show a predominantly managerial and technical approach to e-governance, with little connection to critical issues of governance reform like self-governance, decentralisation, right to information, accountability, community participation and citizen centric governance. Moreover, these roadmaps often speak of governance priorities in a way very different from how these are traditionally seen by the Indian social and political system. For instance, more than one such state roadmap while analysing the education sector lays out as a priority that education be promoted as 'as one of the main revenue earning sectors'.⁵⁴ This will appear to be a very odd thing to say, much less a priority to articulate, in connection with the public education system for anyone with any degree of involvement with the education domain in India. Such a 'priority' of course has no basis in any education policy documents in India, which raises a very critical question about the substantive impact that haphazardly handled e-governance is likely to have on India. E-governance activities suggested by these 'roadmaps' for different departments mostly take forward narrow departmental visions of MIS and digital databases with the citizen seen exclusively as a consumer and beneficiary of government services. The 'citizen' is viewed as a passive receiver of services provided by governments, at the most giving some 'feedback' on these services. Any articulation of the issues of ownership and participation of the citizen in governance processes which, as discussed earlier, are the chief considerations underlying current governance reforms like self-government, right to information and community participation/monitoring, are almost entirely absent in these roadmaps.

53 <http://www.mit.gov.in/download/Capacity%20Building%20Guidelines-21st%20March,%2005.pdf>

54 <http://www.ocac.in/ViewDetails.aspx?glinkid=GL002&plinkid=PL044>

Such orientations of the state e-governance roadmaps is not surprising given that these are prepared by private sector agencies with little understanding of Indian governance context and priorities. The client departments, on the other hand, mostly see these documents not as substantive governance reform roadmaps but as a formal requirement for project funding under the NeGP. Apparently, apart from significant limitation of knowledge and experience of governance issues, private consultants do not take the 'risk' to explore and suggest real transformational possibilities. The state roadmaps also show extensive use of a facile cut-paste method employed by the consultants who prepare similar plans for different states. As a result, the MMPs under the NeGP, led by these 'roadmaps', are unlikely to go much beyond automation of some work processes. A certain degree of systemisation of such effort under the NeGP may however help sharing of 'best practices' across states and departments and some level of standardisation and inter-operability, which can *prepare the ground* for greater integration of work processes, in future.

To conclude, it is apparent that in India's e-governance institutional framework the accent is on technology/ infrastructure and on project management, and the strategic aspect which would align e-governance to the objectives of governance reforms in India, and thereupon develop an appropriate strategy and roadmap for e-governance, is absent. This is in sharp contrast to the e-governance institutional frameworks of almost all countries that have had any degree of success in this area. To fill this gap is the single most important and urgent requirement for meaningful and successful e-governance in India, the kind which can transform Indian governance systems in the desired directions.

Box 9: Governance of e-Governance – Getting the institutional framework right

International experience shows that whereas e-governance is expected to deliver transformational results, the manner of carrying out e-governance must be adequately strategic as well as imaginative. At a very basic level, e-governance activities have to be located in the overall governance reform efforts of a country, and not in its ICT policies and plans. The latter exist to serve the governance reform agenda, and not to lead it. Getting this relationship right has a cardinal bearing on the results that e-governance can deliver, whether it will serve a country's political agenda of systemic governance reforms as per well-formulated reform objectives, or only be a vastly under-optimal set of disjointed efforts underpinned by a techno-centric vision.

There are a couple of distinct areas in the e-governance landscape that governments need to understand in relation to each other, and accordingly develop appropriate 'governance' and institutional structures for and across these areas.

There are two areas which represent what is primarily and directly 'e-governance activity'.

e-Governance as systemic governance reform: This area is of the overall vision, strategy and roadmap for e-governance as taking forward governance reform priorities. We have seen that this has to be the responsibility of the agency/ department that look after governance reforms, preferably through a separate e-governance nodal agency, which must have close and clear support of the highest political and administrative authorities.

Distributed basic ICT/ e-Governance activities within various parts of the governments: This represents the bottom-up ICTs related efforts that must be carried on in and by government agencies in various governance domains, which range from getting basic ICT equipment and infrastructure,

developing capacities of the employees (not only about technology but also new tech-enabled work and organizational methods), to basic digitisation and automation of work processes, which is of obvious value as recognised at the agency level. These agencies will also be carrying out activities related to system-wide reforms as pertaining to their areas of responsibility and competence, within the frameworks and guidelines for process/ system changes provided by the nodal e-governance agency.

Then there are two essentially ICT areas that are related to and have a strong bearing on e-governance. Institutional frameworks for these areas need to serve the imperatives and requirements of the two kinds of e-governance areas/ activities described above.

ICTs for the Public sector: This concerns direct technology support for e-governance. It consists of (1) 'common infrastructure', and technology related 'shared services' (connectivity networks, data centres, common portal, payment gateways, citizen's digital identity, generic across-the-system applications etc), (2) development of inter-operability standards, and (3) providing technology advice to e-governance efforts.

ICTs for the society: At one level, successful e-governance is obviously premised on adequate availability of technology and related human capacities in the society. This is what is often measured by 'e-readiness' indices. This area is about overall ICT policies for the country that ensures basic infrastructure, capacity building and other requirements for an e-enabled society and citizens.

Both, 'ICTs for the public sector' and 'ICTs for the society', are important responsibilities of ICT ministries, and should ideally have separate sections/ departments since the two are quite different areas of policy and activity. In fact, 'ICT industry' which, especially in the context of India's global stature in the ICT sector, is another important area for ICT ministries and should be a third section/ department, quite distinct from the other two mentioned above. As should be obvious there are important differences in the context and needs of these three sectors within the ICT domain requiring different orientations, policies and actions on part of the governments. Lack of clear boundaries between them can lead to skewed priorities and policies in each of these key areas.

The sections/ departments that deal with 'ICTs for the public sector' and with 'ICTs for the society' need to have a close relationship with those parts of the government that are directly involved with e-governance. However, these ICT sections/ departments cannot lead e-governance. The strategic leadership of e-governance should be the responsibility of the Governance or Administrative Reforms Departments, preferable through a 'nodal e-governance agency'. Department level e-governance activities should be carried within an overall framework provided by this e-governance agency, and by using elements of a 'common infrastructure', and technology advice, provided the 'ICTs for public sector' section of the ICT ministry.

Part 2 - Recommendations

Listed below are a set of recommendations for meaningful and successful e-governance in India, building on the analysis done in Part 1 of this document.

Getting the strategic level right – The top view

Political assessment of the e-Governance opportunity to reform Indian governance system – Developing the e-governance policy framework for India

At present, digitization in governments is mostly seen as a simple extension of digitisation in various organisational and social processes throughout the society. Such autonomous digitization of work processes without any strategic vision for government wide reforms may lead to some systemic changes with positive outcomes – better decision-support systems enabling quicker and more efficient working in the governments, and some degree of improved information availability to the citizen. However, it will fall well short of the required level of governance transformation that may be needed to save our Republic (see the quote from the Approach Paper of the Second Administrative Reforms Commission on page 2 of this document). On the other hand, there is a danger that through the system/process re-engineering that is being done in this ad-hoc manner, some aspects of the Indian governance system may actually regress a few steps on some of the priorities of Indian governance reforms – like inclusion, participation, equity, welfare-ism and social justice.

It is therefore required that a thorough political assessment of the context, opportunities and the challenges of e-governance in India is made. This exercise needs to be done in a broad consultative manner - including, but not exclusively, through online means - with governance and social development experts as well as citizens' and civil society groups, and not only with technologists and technology firms. This is a task which can be spread over a year or so, and should culminate in a document stating the overall context and vision for e-governance in India. The outcome document of this exercise should lay the ground for a comprehensive e-governance policy framework for India.

Connecting e-Governance to India's governance reform agenda

The single most important aspect of the political examination of the e-governance opportunity spoken of above will be to see the new possibilities opened up by digital technologies in the light of the existing governance reform agenda and efforts in India – for example, in the areas of self governance and decentralisation, right to information, citizen centric administration, and community participation and monitoring of government and development activity. For this purpose, while technologists and experts in new information systems and digital work processes may need to present the new set of *possibilities*, the role of governance and social experts, and the political levels, will remain central in choosing the right way to go. A comprehensive governance reform policy framework needs to be developed taking account of the new digital possibilities, connecting them to India's context, while also examining and learning from the international experience in this area. E-governance policy and efforts need to be placed within an overall vision and strategy for broader governance reforms.

Putting in place an appropriate institutional framework for leading e-Governance in India

Apart from the strategic vision and an overarching policy framework, the nature of institutional framework for leading and implementing e-governance in India will determine the outcomes of e-governance. If e-governance has to be led by a social- and governance-centric thinking, and not a technology and infrastructure-centric one, it is important to map all the areas of governmental activity implicated in strategising and implementing e-governance and the nature of their inter-relationships from a governance outcomes perspective. This mapping is then to be used to provide an appropriate institutional framework for e-governance in India. Four such activity areas implicated in e-governance are:

- (a) Providing strategic and policy directions for e-governance in India, along with coordination and implementation of e-governance activity, within an overall governance reforms framework.
- (b) Continued distributed digitisation activities autonomously taken up by various government agencies. This includes issues of basic ICT infrastructure, capacity building, simple e-enabled work processes like e-mailing, e-lists, digital databases etc. This will also include some level of simple automation of work processes – like MIS. Taking up internal pilot projects to examine and demonstrate new ICT-enabled possibilities will also come in this category.
- (c) Undertaking technology support functions; developing ‘common infrastructure’ (data centres, connectivity networks etc); giving technology advice and helping in technology capacity building; laying standards; and, providing common technology ‘solutions’ like some common software and applications, and other similar ‘shared services’.
- (d) Ensuring appropriate ‘ICTs for people’ policies that ensure widespread availability and uptake of ICTs among the people. It will have components of connectivity, software, hardware, content and capacity building policies for an e-enabled citizenry and society.

In developing countries like India, where a major function of the government is to provide for, ensure and support various social and economic development activities, use of ICTs for Development (which has emerged as a distinct area of theory and practice, called ICTD) itself is an important e-governance space.

All the five (four plus ICTD) areas above require different governance structures. Overall strategic e-governance policies and activities need to be led by a specialised nodal e-governance agency⁵⁵ (NeGA), both at the centre and state levels, anchored in the respective Departments of Administrative Reforms, with close institutional linkages with the office of the Chief Executive (Prime Minister or the Chief Minister).

The technology support functions for e-governance should be done by an ‘ICTs in Public Sector’ division within the Ministry of IT and Telecommunications (MITT). ‘ICTs for People’ should be another division in this ministry which looks into ensuring universal availability of ICTs for citizens of India. These two divisions of the ministry should be separate from that dealing with IT industry related policies.

55 Such an agency has also been recommended by the National Knowledge Commission in India, <http://pib.nic.in/archieve/others/2006/may2006/nkc20060509.pdf>

Box 10: Ministry for IT and Telecommunication should lead structural change in government systems by example

One of the principles of customer-centric restructuring that e-business has enabled is to reconfigure business entities from being vertically structured as per 'production' logic – by categories of products – to horizontal structuring as per 'consumer' logic – by categories of consumers. It will be appropriate that the Ministry of IT and Telecom (MITT) be the first government agency that goes for a restructuring that makes it layered along the logic of the respective constituencies served – public sector, general citizens and the industry, rather than of 'services' produced – relating either to telecommunication or to IT. In any case, with the Internet fast emerging as the chief telecommunication infrastructure, it is increasingly difficult to tell the difference between telecom and IT. In times to come things will only move further in this direction. To give an example of the already problematic boundaries, the National E-governance Plan (NeGP) is with the IT department, though one of the central components of the plan is State Wide Area Networks, which is really a telecom infrastructure. It shows how servicing each constituency, in the this case IT needs of the public sector, cuts across both IT and telecom components, even as the distinction between the two itself is becoming vague.

It will be most appropriate for MITT to re-christen itself as Ministry for Information and Communication Technologies, and have separate departments for 'ICTs for people', 'ICTs for the public sector' and 'ICT industry'.

Coordination of domain department level e-governance activities should be done by appointing a Chief E-Governance Officer (CeGO) (or Chief Information Officers - CIO)⁵⁶ and a Chief Technology Officer (CTO) for each department, looking after substantive governance process and system issues, and technology issues, respectively. A council of all CeGOs/ CIOs and another one of CTOs should connect with the NeGA and the 'ICTs for the Public Sector' division of MITT, respectively, to provide inputs into country/state-wide e-governance and public sector ICT strategies as well as take strategic guidance in these areas..

NeGA should also have an ICTD division which should provide specialised services, including policy inputs and disseminating best practices, in the area of ICTD across India.

Preparing a roadmap for governance reforms in India

Within the policy framework for e-governance discussed above, it will be necessary to develop a comprehensive and detailed roadmap for e-governance in India. Such a roadmap will undertake a detailed micro examination of all aspects of governmental activity in India, with the distinctly specific context and objectives of each activity, and place it in the context of the new e-governance possibilities. Since such a roadmap is recommended to be steered by the nodal e-governance agency referred to earlier, some issues that are likely to be covered by this document are discussed in the following sub-section on the role of the nodal agency. In fact, all subsequent sections and sub-sections of this document are in the form of an indicative outline of the key issues that will need to be addressed by this roadmap document.

⁵⁶ Though widely used in countries who adopted e-governance early, this term is not entirely appropriate since e-governance is much more than information related activities in a department. Now with public information officers in the 'Right to Information' institutional set-up, such a usage will be even less appropriate, and confusing.

The role of the Nodal e-Governance Agency (NeGA)

Ideally, as argued earlier, the strategic levels of e-governance activity should be anchored within the framework of general governance reforms. In fact, the context and opportunity of new digital possibilities for far-reaching structural changes should be leveraged for setting up an active and well-resourced high level governance reforms agency, and not really just an e-governance agency. This single agency should organise the overall governance reforms effort in India, because all reforms - whether in self-governance, right to information, citizen-centric administration, community participation or e-governance – are linked and would best be pursued as a concerted activity – both in terms of policies and practice. In speaking about this proposed governance reforms agency's e-governance functions we will however, for the purpose of this document, continue to use the provisional term NeGA.

NeGA will act at two levels. It will explore, shape and apply the best e-governance possibilities to the current areas of governance reforms listed above, in order to strengthen them. As with most e-governance activity, it is likely that for the best transformative impact this will require considerable re-thinking and restructuring of governance reform activities in each of these areas, and not just uncritical application of ICTs as tools to the existing activities already underway. It is in this context that it is imperative that reforms be coordinated through a specialised overall governance reforms agency. Such an institutional framework is required both at the central government and state government levels.

At another level, NeGA will envision structural changes going well beyond the present reform efforts, though mostly directed by values articulated in them. The current directions of governance reforms were determined within the limitations of the present technological or techno-social⁵⁷ possibilities of organisational and social systems built over existing ICTs of paper, pen, print and post. Digital systems open up completely new and previously unthought-of possibilities. It is therefore important that this agency has the expertise to appreciate and thoroughly understand the full range of these new ICTs based possibilities, and also present them to others involved in governance reforms. E-business theory is rich in such possibilities for business. Similar possibilities, which will include some adaptations from e-business theory as well, need to be evolved in all their practical ramifications for e-governance in the context of developing countries like India. NEGA should develop and document these possibilities, along with their contextual complexities, and build capacities throughout the governance systems to adopt them in their activities.

Positing new means against existing objectives— System design principles for e-Governance

One of the main tasks of the NeGA will be to posit these new ICT-based possibilities discussed above against the main values and objectives of existing governance reform efforts to develop high level system design principles for system transformation through e-governance in India. These principles should continuously evolve as new governance objectives are articulated, as new techno-social possibilities arise, and as new e-governance process re-engineering possibilities are learnt and established from ongoing e-governance projects all over India. These system design principles will in turn inform a strategic framework for implementation of e-governance reforms throughout India.

57 The term 'techno-social' refers to social processes that still have a strong felt influence of new technologies, as is the case of most Internet related activities we do today. Soon however, as these techno-social processes get 'normalized' by adoption, absorption and habit, they begin to be seen as merely social, as, to take an example, all the print technology-based processes appear to us today.

To illustrate the point, some techno-social system/process design possibilities relevant to e-governance that arise from the unique characteristics of the new ICTs are: instant information sharing, mass bottom-up communication, dynamic and multi-level networked relationship management, full remote work process view, and from-vertical-to-horizontal restructuring of organisations.

The following are some illustrative system design principles for e-governance restructuring that employ the above new system/process redesign possibilities within the normative framework of the key objectives of governance reforms in India (the techno-social system redesign possibilities that are employed for each principle are mentioned within brackets):

- a) Making government systems citizen- and community-centric (from vertical-to-horizontal organisation restructuring).
- b) Facilitating decentralisation (instant information flow from across the enterprise to lower levels, process view to higher levels for real time monitoring).
- c) Empowering frontline staff (same as above).
- d) Facilitating citizen's right to know (open information architecture, remote full work process view).
- e) Facilitating citizen participation at all levels of governmental functioning – from policy making to implementation (effectively structured mass bottom-up communication).
- f) Building open and co-constructed citizen/ community-centric public information systems (same as in d. and e. above, and new digital possibilities for effective decentralized information storage and manipulation).
- g) Enabling community monitoring (same as in d., e. and f. above).
- h) Enhancing accountability and grievance redressal in a comprehensive and effective manner (same as in a., d. and e. above).
- i) Increasing government's capacity to serve through networking and partnerships – developing effective community, civil society and private sector partnerships (dynamic and multi-level networked relationship management).
- j) Challenging the feudal culture of 'exaggerated hierarchy and deference'⁵⁸ within governments (new electronic means of communication and collaborative work like e-mails and e-lists; collaborative, non-hierarchical work processes that can result from openness of digital systems; wide information and process visibility throughout the enterprise; greater regular interaction and working with partners outside governments in a networked partnership based work ecology).

Planning e-Governance – Think structural change

Effective transformation in governments will require system-wide structural changes. There are a great number of political difficulties in getting on with such changes in the short to medium term; resistance from vested interests being the more obvious one. While governance systems are in any case slow to respond to

pressures of any structural changes, the needed and recommended changes here are especially far-reaching and, *inter alia*, will have a strong impact on the present Westminster model of Indian government system with strong vertical compartmentalisation within the governments, and the corresponding ministry-centered political accountability systems. However, greater horizontal sharing of activities and responsibilities is an important, and in some ways central, aspect of governance restructuring in the digital age. Sooner or later, every governance system will have to come to terms with it. Recognising these organizational restructuring trends early will help mediate this transition better, and provide better control of the directions of transformation. On the other hand, systematic understanding of these trends and the opportunities inherent in them, combined with the necessary political will and astuteness, can help plan a comprehensive governance transformation that is a high priority in the minds of the citizens, especially those from the more marginalized and disadvantaged sections of the society.

Some illustrative directions of e-governance based restructuring are presented below.

Common service delivery platforms

An important system redesign opportunity for governments - through vertical integration and horizontal separation based organisational restructuring possibility - is to have a common specialised service delivery agency front-ending for many government agencies that 'produce' various services for citizens. This agency can easily deliver all those services, or parts of services, that are generally of a transactional nature and do not need much domain expertise. (It is a domain and service specific decision as to how much - if at all - can the 'production' and 'delivery' aspects of a governance service be separated.) The NeGA can take up this work of creating and supporting such a common service delivery agency at the central government level, and the corresponding nodal agencies can take it up in the states, while also exploring the obvious possibility of common delivery channels for both state and central government services. Though fairly advanced models for such agencies are available in some countries (Centrelink⁵⁹ in Australia, for instance), it will be a complex and drawn out process to move towards such a common service delivery mechanism that does 'substantive' delivery work. In India, many 'single-window' service delivery initiatives have been around for many years, for instance, e-Seva of Andhra Pradesh,⁶⁰ and FRIENDS of Kerala,⁶¹ and over the last few years many more state governments have set up such common citizen-government interfaces.

A big majority of the transactions at these 'service delivery centres' consist of utility bill payments, while the remaining mostly concern government records and certificates. A good amount of process restructuring has been taking place to enable single point receipt of applications and delivery of records/ certificates, and it has often resulted in much greater convenience for the citizen, and reduced avenues for corruption. However, the challenges of integrating offline processes (which may still 'expose' citizens to situations involving 'arbitrary' discretion on the part of government servants) with online or 'single-window' processes (that are fairly standardised to remove discretionary elements) are only beginning to be felt strongly.

59 <http://www.centrelink.gov.au/>

60 <http://www.westgodavari.org/>

61 <http://www.friendscentre.net/>

For instance, online registration of First Information Reports, attempted by 'Integrated Community Service Centres' project of Himachal Pradesh⁶² may look like a simple and straight-forward process. However, anyone with basic knowledge of Indian police systems knows that, on one hand, if such a system really works, it will 'transform' Indian policing, and on the other hand, in the short- to mid-term, the system is as likely to just collapse and not be able to cope. This is due to the reason that the Indian policing system, like most other government systems of the country, simply does not have the capacity for even beginning to service all legitimate demands of the citizens. Very similar challenges present themselves in the case of welfare and development delivery services. Firstly, these services are mostly very domain-knowledge intensive and personal context specific, making it difficult to 'standardise' the citizen-government interactions involved, except for the superficial layers. In addition, there is a severe lack of capacity to service all legitimate demands of the citizens, as in the case of police systems. At present these systems are 'maintained' mostly through the expedience of 'denying' acknowledgement of citizen's service demands. However, with online or (specialised agency mediated) single-window systems, this may not remain possible, presenting a very complex and far-reaching challenge for the entire governance system.

Integration of work processes across different departments and agencies to give a really joined-up response to citizen's service requirements is also non-existent, and the challenges of such integration have not even begun to be explored. Going beyond utility bill payments and delivering government records and certificates in the service delivery area will apparently require a major 'transformation' in our e-governance thinking and practices, and is unlikely to be merely the automatic next step in e-governance's evolution in India.

Meanwhile, most e-governance efforts concerning service delivery today are almost entirely devoted to extending reach, seeking simplistic solutions rather than looking into these real governance challenges. For increasing reach, the main process redesign efforts are of (1) 'simplifying' and 'standardising' citizen-government interaction-instances, and (2) as far as possible, monetising service delivery to enable use of market forces for delivery. We have earlier discussed how this kind of thinking is at the heart of India's primary e-governance programme, the CSCs of NeGP, which is by default setting the values, standards and guidelines for e-governance in the country.

The implications of such standardisation and monetisation of citizen-government interactions to enable 'increased reach' through market-based 'common delivery channels' is not examined critically. For instance, how can these channels effectively deliver welfare and development services to disadvantaged people who, on one hand, have little money to pay for services, and on the other hand, require greater personalised attention and assistance, which raises the cost of the transaction for the private intermediary? For inclusive and progressive e-governance, governments will need to adopt a much more nuanced view of the opportunity in common delivery platforms considering the full range of key governance imperatives. Greater reach and convenience are just two such imperatives, but equally or more important are the issues of inclusion, welfare-ism, social justice, equity and social development.

Taking into consideration these key governance imperatives requires a strategic approach that is not technology-led and market ideology dominated. It is therefore important that an overall framework of guidelines and a set of process/ system redesign possibilities for common e-enabled delivery platforms and/or agencies are developed by NeGA, which then is contextually adopted by different government departments.

62 Presentation of the project details at the 2006 review workshop of the 'ICTD project' funded by UNDP and Government of India, and managed by the National Institute for Smart Government.

Such a common service delivery agency does have many advantages for improving our governance system: (1) it puts a layer between service providers and ‘consumers’ of services, a structure that can be used for greatly enhancing accountability and performance monitoring; (2) it can specialise in requirements of effective interactions with the citizen, and thus greatly facilitate the process, both in terms of efficiency for the governments, and convenience and satisfaction of the citizens; and (3) it can greatly increase the reach of service delivery and reduce costs through leveraging the advantage of shared infrastructure and facilities.

A shared culture of citizen centric orientation – for instance, working through a common service delivery agency described above – requires a ‘joined-up government’⁶³ with a high degree of structured collaboration between different government departments to fulfill specific citizen needs. A project of developing an effective common service delivery agency will trigger activity towards such sharing and collaboration, and is a good way to start moving in this direction of a joined-up government. To achieve this, however, the nodal agency will have to work actively towards developing system possibilities as well as incentives for departments and agencies to join-up for a common response to citizen’s needs.

ICTs for taking ‘power’ and control to the edges⁶⁴ – The self-governance imperative

The modern nation state, which emerged out of a feudal political system, is built on strong notions of a centralised control. Such control was found necessary to provide some degree of coherence, integrity and ‘security’ to a political system that increasingly pervaded greater and greater aspects of the society over a relatively large geographical area. New ICT-based systems can allow meeting the objectives of such coherence and integrity while still enabling shift of greater ‘power’ of self-governance to the edges of the political system. The two imperatives involved in moving towards more decentralised political systems are: (1) affording all the centralised control that is legitimately needed in the system; (2) providing capacity and resources at the ‘local level’ for self-governance, including access to system-wide information necessary for decision-making.

ICT-based systems can meet the ‘control’ imperative in the same manner as multi-national corporations today effortlessly manage globally distributed activities. And the requirement of ‘local capacity and resources’ can be met by building information systems and work processes that empower local levels both by developing all round capacity, and by providing access to vital information resources necessary for local decision making. ICT systems can also build local capacity for both managing resources and micro-planning, and thus facilitate transfer of a greater amount of fiscal resources to the local levels which can be spent as per locally developed plans.

Box 11: ICTs for self governance – A governance system driven from the ‘edges’

DRISTI (Decentralised Rural Information Services and Technology Initiatives) project of the West Bengal State Rural Development Agency is a comprehensive digital support system for rural self governance institutions. It works both to: (1) provide system-wide information to the self-governance tiers, enabling them to take informed decisions, and (2) to ensure capacity building and resource support.

63 Presentation of the project details at the 2006 review workshop of the ‘ICTD project’ funded by UNDP and Government of India, and managed by the National Institute for Smart Government.

64 Control from the edges is a key design principle of the Internet. The socio-technical paradigm of the Internet can potentially be employed for developing social models with greater control from the edges instead of centralising control.

The State's Department of *Panchayat* and Rural Development has developed a comprehensive digital household information system with strong provisions of public scrutiny and correction, enabled by its open online availability at the *panchayat* level, where computers have been provided. *Panchayats* are also able to see the basis of decisions and allocations as per various schemes. These decisions are now made at the block level, as per actual number of beneficiaries reflected in the household data, rather than the earlier processes of district- and block-wise quota based on outdated data, which always left a large number of genuine beneficiaries excluded. In fact, use of this new household data in generating statistics over any number of different variables has allowed conception of new welfare schemes that target different kinds of social vulnerabilities. Further, since a full view of all data fields for each individual is available at the *panchayat* levels, data correction and validation is quite easy, and done at regular intervals. The *panchayats* also have a clearer view of the data about their area to enable informed understanding and decision making. This data is also regularly validated at the village community levels.

"Block maps and *Gram Panchayat* Maps showing all the detailed attributes is available at the the Block and *Gram Panchayat* levels and also publicly through the departmental website – www.wbprd.nic.in. This will support the decentralised planning and implementation process at the village, *gram panchayat* and *panchayat samiti* levels. The people's representatives at *gram panchayat* and *panchayat samiti* will be able to plan for the local area at ease with the help of the GIS based maps prepared for the two levels".⁶⁵

Another very effective part of DRISTI is the completely digital *panchayat* accounting system, and the automation of the process of issuing of most *panchayat* level certificates. Such an accounting system greatly capacitates *panchayat* offices for complex accounting and audit requirements of managing funds from different government schemes, while also ensuring easy remote monitoring by higher levels. These features together greatly reduce the 'fiscal risk' that is seen as associated with higher degrees of decentralization, and movement of most financial powers to self-governance levels, and consequently represent a great enabler for further decentralization. Issuing regular records and certificates to citizens through a digital system reduces the amount of human intensive work otherwise required, while ensuring higher levels of transparency and accountability.

Establishing such digital systems that are mainstreamed into key governance functions early at the *panchayat* level itself sets up a very good traction and momentum for system-wide e-governance in India. Starting at the most 'difficult' levels is therefore often a better strategy rather than starting at the 'easiest' levels. And such bottom-up e-governance designs also ensures that e-governance helps empower people and levels of governance closest to them, rather than result in further centralising power. Such initiatives with clear and direct benefit to the people also help builds the necessary political constituency for e-governance reform which is very important to drive the kinds of far-reaching structural changes that e-governance promises.

Before citizen centric comes frontline staff-centric – The blind-spot of the Indian governance reforms

Political decentralisation has been articulated as a major governance reform priority in India, but unfortunately not much is spoken about bureaucratic decentralisation. It is difficult for a governance system to become citizen centric before it becomes frontline staff-centric, a need that is widely understood and articulated in e-governance strategies worldwide.⁶⁶ While it is important that the government's centralised institutions cede power to the people and local governance systems, it is unlikely that the spirit of this political imperative can take strong roots without first power getting shifted within government systems to lower field levels. One of the main problems in doing so has been the difficult issue of ensuring accountability from a very large and very distributed government machinery. However, no meaningful governance reforms can be done by bypassing the frontline staff of the governments, and this imperative should be centrally articulated in all e-governance strategies and activity.

Most existing e-governance efforts cast the frontline staff as 'the major governance problem' and seek technology-assisted and market-enabled citizen interface 'solutions' to bypass and, perhaps eventually, replace the frontline staff, to the extent possible. As discussed earlier, this is a simplistic strategy which has no answers to the real structural issues and imperatives of governance. If taken to its logical conclusion it can do much more harm than good to inclusive and progressive governance in India.

Bureaucratic decentralisation requires enabling the front-end staff to make informed decisions, while providing effective means to the higher levels for *ex ante* monitoring for performance, financial and policy controls. Work processes reengineering using ICTs can easily meet all these requirements. Instead of bypassing and/or replacing the frontline staff, e-governance should therefore be used to empower them with capacity and resources, including vital information resources. At the same time, it is now possible to extract greater accountability from the frontline staff through use of ICT-based systems that make managing distributed activities much more effective. New ICT-enabled accountability and management processes while being more effective in their primary objective, also release frontline staff from much of laborious report-writing which actually eats up most of their work time. This enables them to contribute more effectively to real governance tasks, while also increasing their self-esteem.

Empowered frontline staff can provide quicker as well as more personalized service to the citizens. Empowerment of the frontline staff in the above manners should therefore be one of the cardinal pillars of governance reform through e-governance. Aimed chiefly at combating corruption, many governance reforms at present seek to remove as much discretion from frontline governance processes as possible. While this may have some positive impact, reducing discretion has the effect of making governance delivery highly inflexible, which is itself a big problem with Indian governance systems. ICT-based system redesigning can improve the effectiveness of frontline staff, allowing them to make flexible decisions as per citizen's and community's context – which is a central requirement of citizen centric governance – while at the same time improving the monitoring of the performance as well as integrity of frontline staff.

66 For instance, see the UK government's document 'Transformational Government – Enabled by Technology', at: <http://www.cio.gov.uk/documents/pdf/transgov/transgov-strategy.pdf>

An e-enabled push model for operationalising RTI

ICT-based work processes enable full 'process view' to anyone, anytime and from any place, forming the basis of developing open work processes for governments in full public view. Such 'public' functioning of governments, unless there is a clear and strong justification to the contrary, will represent the real and full realisation of the citizen's right to information (RTI). ICT-enabled work processes open to full public view – i.e., in the digital public domain – should become a central system principle for e-governance based system redesigning.

The need and the opportunity is to go beyond just giving access to existing information processes associated with government's work which are mostly oriented for effective management from the top – taking the shape of MIS, and to serve the needs of the public audit system, which is itself a very viscous and opaque space with little accountability of its own. The government work and information processes should, instead, now be redesigned to primarily generate information oriented to citizen's point of view. And such information should be presented and made accessible in the manner that most suits the requirements of the citizens and the community.

RTI in its true meaning does not only require access to all public information, but also the full ownership of it, and the right to validate and co-construct it.⁶⁷ This requires building of open and co-constructed public information systems – which is an important possibility of ICT-based systems – that are oriented primarily both to the needs of, and possibilities of inputs from, the citizens and the community. These new public information systems will be dynamically co-constructed by the community – as is already happening in some ICTD and e-governance initiatives, some led by NGOs and others by government departments (see box below). Appropriate methods of validation and legitimization – and also standardisation for different specific purposes – will have to be developed for these new public information systems, and this is an area in which a lot of exciting research is being done, and new practices are shaping up around the world.

Box 12: Owning 'public information' is important for owning governance

Abhiyan is a network of many NGOs in the Kutch district of Gujarat, which are involved in the area of local development.⁶⁸ Its *Setu*⁶⁹ centres help coordinate various development activities among these NGOs and with government agencies, while also providing important information to people and local development workers. Over the last two years, *Abhiyan* has set up computer-enabled *Mahiti Mitra*⁷⁰ Centres to assist in their development work. *Abhiyan* develops local information systems on digital platforms, which include people and resource mapping, done in a participatory way. These are used for micro-planning. These information systems use government data, information produced by other development agencies, as well as participatory data facilitated by its workers. Information from these diverse sources is combined to produce dynamically co-constructed local development information systems.

67 The genesis of the RTI movement in India in the activities of *Mazdoor Kisan Shakti Sangathan* in Rajasthan points to this fuller implications of RTI, whereby information kept by labourers was used to challenge 'official' information that misrepresented facts in order to cheat them out of their rightful wages.

68 Information collected through field visits.

69 Meaning, bridge.

70 'Information friend'.

Abhiyan administers a scheme under which villages are given some untied funds and encouraged to develop their own plan for spending it using analytical information extracted from these information systems. Significantly, even government agencies have at times relied on these participatory information systems to target their schemes, especially when they do not have the required information and *Abhiyan's* composite information systems are readily available.

Abhiyan's example provides significant pointers to possibilities for co-constructed open public information systems which completely change the concept of 'public information' as is understood today. Significantly, even within governments there is an increasing tendency to use digital information systems across different departments, while earlier most of them did this activity in silos. As information gets used across departments it gets co-constructed in many creative ways, accumulating increasingly greater 'value'. It should be obvious that such multifarious possibilities are only possible over digital platforms, and all the above 'innovations' have come through a shift from paper based systems to digital systems.

Public information agency – A new role and orientation

Actualising the right to information, in its fullest implications as discussed above, through a truly open and participative public information system that is community-centric, has the corresponding institutional requirement of a specialised public information agency that provides a 'joined up' information system across all areas of the government's functioning. Creation of such an agency represents another key governance transformation possibility through the system design principle of horizontal structural separation and vertical 'collapsing'.

The imperative for such a specialised agency comes from the fact that; (1) public information, in the new ICT-enabled dynamic information ecology, is both used and constructed simultaneously across the full range of government's activity, and can no longer be maintained in silos, and (2) increasingly, information based governmental processes, in their new dynamism and richness, requires specialised attention, expertise and approach. A new kind of orientation and competence is also required to appropriately handle information produced outside government systems, and partner with such information-contributors.

Such an agency should be built over the existing information departments (whose present activities have lost much of their significance in the new ICT-enabled information ecology) within governments, and connect, on one hand, with the RTI institutional infrastructure that is emerging within each department and agency, and on the other with 'information' and 'data' producing agencies, like statistical and planning divisions. The nature of production, owning, sharing, as well as delivering information has completely changed in an ICT-dominated ecology, and these processes are today both much more interrelated and much more dynamic. All government agencies dealing with these 'informational' activities, including the information departments, have to completely re-invent themselves for this purpose, and become more joined-up, as they become more community-centric and community-participative. The meaning of 'public information' changes from 'information designed for public consumption' to 'information belonging to the public, developed collaboratively, and made available to all'.

It should also be the responsibility of this specialised public information agency to open up ICT based community points-of-presence for both making information available, as well as allowing public participation in developing this information. These points-of-presence can be shared with those of the common service delivery agency, especially in remote areas, without compromising on the values and objectives of public ownership of public information systems. Many ICTD and e-governance projects already have community telecentres where such 'public information' is made available.

Ensuring popular participation in governments beyond election time

'Enhancing participation' needs to be an important system design principle for all e-governance reforms. Co-constructed and open public information systems of the kind discussed above allows communities to participate in decentralised planning processes. Policy level participation is also facilitated by many ICT-enabled processes, and there are already many good examples of this all across the world. Such avenues of popular participation should become an integral part of all planning and policy making processes in the new governance system design. Unfortunately, for all the talk of e-governance, hardly any government department has used simple and easily available ICT tools for policy, plan or programme related inputs, and this, paradoxically, is equally true for e-governance policies and programmes. As long as the basic attitude to openness and participation does not change, simply using ICTs is unlikely to produce any governance reforms. NeGA's guidelines must make it mandatory to incorporate these participation tools in any e-governance redesigning and restructuring, unless some compelling reason against them can be established.

A grievance redressal system that works – Decoupling it from executive parts of governance systems

The major problem with the present grievance redressal systems and anti-corruption systems is that the internal systems within an agency are too close to the 'action' to be able to have any worthwhile reliability, and the outside systems are too 'distant' to be able to function with any degree of effectiveness without the 'unreliable' dependence on internal systems. Consequently, these grievance redressal and anti-corruption systems are either entirely defunct or do little more than *ad hoc* hit-and-run activity, helping some fortunate few citizens, and 'catching' some 'unfortunate' few corrupt public servants, while the mainstream governance activity goes on unchanged as ever.

Through e-governance system redesigning, a composite grievance redressal and anti-corruption system should be built as a horizontal layer across government departments, since, as discussed earlier, such horizontal separation and vertical integration is an important structural possibility in the digital age. Such a system can converge with and under the Lokpal's office,⁷¹ connecting with department-based internal systems. This system needs to be specialized to provide effective means of governance system-wide monitoring and grievance redressal, as well as for checking corruption, with a clear understanding that there is a strong connection among all these elements.

Increasing government's capacity through ICTs – Networks and partnerships oriented governance

ICT-based systems are very useful for managing partnership and networks – on the same principles that multi-national companies manage their globally distributed activities, including outsourced ones. Such systems can enable governments to structure more viable and effective partnerships, internally within the government, and outside - with communities, NGOs, and business entities - which is an opportunity that should be explored at all possible points in governance system redesigning. However, there are many important governance, organisational and behavioural issues implicated in developing and sustaining effective partnerships at the scale and complexity that governance systems may have to contend with in the digital age. This is an important area for NeGA to research and develop guidelines for.

71 Lokpal in India is the equivalent of 'ombudsman office' in many developed countries, and was recommended by the First Administrative Reforms Commission.

Such new partnerships, and networks, can greatly increase the capacity of the state to fulfill its full mandate with respect to all citizens of India. Without compromising on its full range of responsibilities, in many areas the government's resources can get used more effectively to facilitate community based efforts – producing larger and better net outcomes, as well as ensuring greater participation in governance. A recent report of UN-DESA, 'From E-government to Connected Government', quotes Robert D. Atkinson, from 'Network Government for the Digital Age' to emphasize that, "*Connected or networked governance revolves around governmental collective action to advance the public good by engaging the creative efforts of all segments of society. It is about influencing the strategic actions of other stakeholders*".

Box 13: ICTs for networked governance – Most effective use of public resources

The *e-Krishi* project of Kerala state government provides an e-enabled platform for farmers to connect to buyers of agriculture produce, as well as to government's support services. It encourages farmers to organise into *bhoomi* (land) clubs to facilitate such market linkages in a manner that is empowering to the primary producers. So, rather than get into direct procurement role, which does have important relevance in some other contexts, the Kerala government through *e-Krishi* uses the possibilities opened by digitally-enabled systems to facilitate collaborative processes on one side, and market forces on the other. The e-enabled system aims to provide the maximum benefit to the farmers from the agriculture ecology; leveraging the best attributes of government, community and private sectors, and avoiding the respective pitfalls: of inefficiency, of poor organisational capacity, and tendency towards exploitative greed.

The *e-Krishi* project is also called 'Market driven Agricultural Initiative through IT-enabled Agri Business Centres' and seeks to "*address the existing gap in agriculture information flow and transaction management....The project envisages facilitating and enabling farmers and other Stakeholders through Agri Business Centres to interact with Agricultural Service Providers in the Private, Government and Non Government sectors. The project will provide a web based solution enabling the small and medium farmers as well as owners of large landholdings.*".⁷²

From strategy to implementation – It is still not about wires and software

A centralised overall vision and strategy only creates an enabling environment and is not meant to constrain bottom-up initiatives and experiments in the area of e-governance. Neither does it purport to encroach upon the mandate and responsibility of state governments and different departments to conceptualise and steer e-governance reforms in their respective areas of work. As the nodal agency, NeGA should develop a framework for encouraging and supporting demonstration and pilot projects, as well as mainstreamed activities of department-based system reforms, while systematically capturing the lessons learnt. However, such projects and activities have shown a strong need for overall e-governance related advice and guidelines, which should be provided by this nodal agency, and its equivalent at state levels, rather than by the IT departments. The latter should focus on their 'common infrastructure' and technology advise functions, which are of central importance for successful e-governance.

72 <http://210.212.239.29:8888/site/about/index.html>

The implementation framework – Clear areas of competencies, with effective means of collaboration

The nodal agency may itself have to take up direct system redesign and implementation work in some areas like generic government work processes. Some technology intensive projects like common citizen identity, on the other hand, may best be handled by IT departments. However, most e-governance planning and activity should be handled largely from within the respective departments relying on the general frameworks for e-governance provided by the nodal agency. Specific overall system design related or issue-based help and advice may also be sought from this agency, for which there has to be clear processes and resources in place. Advice from IT departments on technology issues would also often be required, which should be appropriately facilitated. An adequate framework for such consultations and collaboration, with clearly marked out spheres of competencies should be laid out, anchored in NeGA.

Crucial role of ICT departments for enabling e-Governance

The IT (and telecommunications) departments will be expected to carry out projects of building common technical infrastructure to make e-governance possible. This includes logical infrastructure like interoperability standards; soft infrastructure like software platforms, security applications, networking platforms and data storage; and hard infrastructure like providing connectivity. Apart from the above technical support to public sector activities, these departments also have the responsibility of ensuring universal connectivity to the citizens, whose 'connection' to the governance system is a primary condition of effective and participative governance.

This however does not mean that government-citizen interactions are limited to, or even mostly conducted through, a digital interface. As mentioned earlier, ICTs are to be used to make interaction with government agencies more convenient to all citizens, whatever their skill levels. ICT-based systems can greatly help enhance face-to-face, telephone-based, as well as paper-based interactions, and appropriate interfaces need to be provided for different groups and sections of citizens.

Meanwhile, as an essential governance infrastructure, provision of effective access to ICTs and public information, and appropriate systems for participation and service delivery built over ICTs, for all citizens should be seen as a core responsibility of the governments. We have discussed earlier that ICT departments have two different, though connected tasks of 'providing ICT support for the public sector' and 'reaching ICTs to people', both of which are central to realising the potential of e-governance.

Acknowledgement of ICTs as a vital and basic e-governance infrastructure has important implications for ICT policies. It provides the imperative and the basis for adopting a public goods approach to ICT infrastructure. Consequently, telecommunication departments need to prioritise provision of sufficient connectivity in all parts of the country not only as an important economic infrastructure, as it is primarily seen today, but also as a necessary governance and developmental infrastructure.

Increasingly, connectivity networks do not just mean the behemoth centralised telephone and telegraph networks of the past decades. They are becoming more of a localised activity, and community networks are becoming popular all over the world.⁷³ This seen along with the new recognition of their role as important

73 For instance see 'Community based networks and innovative technologies – New Models to serve and empower the poor', by Sean O Siochru and Bruce Giraldo, UNDP. Available at: http://propoor-ict.net/content/pdfs/Community_Nets.pdf. Muni Wifi, or municipality Wifi, is also becoming a powerful movement in developed countries.

governance and developmental infrastructure, whereas governance and development are both now universally accepted as local-community anchored activities, makes it necessary to examine the possibility of shifting some or most of the telecom related responsibilities and powers to state and local governments, as also a great degree of deregulation of local connectivity networks.

Box 14: 'Open technology' policy options for more participatory e-Governance

A basic characteristic of the new ICTs is that they bring great efficiency to all the processes in which they are adopted. However, there is another equally if not more important unique feature of the new ICTs – that, they are also potentially very democratizing technologies. Evidently, this feature should be of special significance in e-governance strategies and plans.

The democratic potential of the new ICTs is in many ways linked to policy choices of technology and socio-technical models. There is a great contestation going on in many ICT spaces between closed, propriety models on one side and open, collaborative models on the other. Propriety versus open source software is a more well known issue, but similar binaries obtain in areas of connectivity, content, and now even in hardware. More open, commons-based and collaborative models together constitute what may be called as the 'open ICT ecology'.

Adopting such open technology models can enhance the participatory and democratic nature of governance processes, rather than possibly reducing it with over-reliance on closed and propriety models, and market-centred approaches, in e-governance. With considerations of ICTs as essential governance and development infrastructure becoming more and more mainstreamed, they can be expected to have important implications on a host of ICT policies.

Taking governance change seriously – 'Own' before you 'outsource'

E-governance plans should encourage pilots and demonstration projects, since innovation is at the very core of new ICT-enabled opportunities. Meanwhile, every department and agency should draw up its overall e-governance strategic vision, which lays out overall system goals with sufficient flexibility of innovation, and iterative changes. Such a vision and strategy will develop appropriate system design principles (or sub-system design principles, in relation to overall Indian governance system) which will be informed by the common strategic framework developed by the nodal agency but be contextual to the objectives and activities of the concerned department.

Ideally, e-governance system designs should be developed for the complete departmental activity rather than as any part of it. However, in cases where the latter is necessary, the system design should still be developed at the highest strategic levels within the department, through intensive collaborative and reiterative processes, acknowledging the structural importance of any governance system change through ICTs. It should not be done through a perfunctory system requirement document developed by the technology staff, and/or the private sector consultant, who too are mostly from technology companies.

E-governance initiatives should clearly prioritise overall governance system objectives and domain knowledge over knowledge of technical system designing and development, and for this, as required, assistance and guidance may be sought from the nodal e-governance agency. At the same time care should be taken in choosing appropriate external consultants. The expertise required for process redesign to maximise governance system objectives is very different from technology expertise. In most cases, however this difference is not

appreciated and private consultants, mostly technology companies, are given the task to provide both. Apart from the fact that there is little real governance expertise in technology companies, there is a very significant conflict of interest involved in taking their advice, especially if the same company also provides technology support for the e-governance project.

Co-constructing government systems – The participation principle

Every e-governance software and application structurally changes governance processes to a significant extent. It is therefore important that such structural changes in governance have the due legitimacy. E-governance redesigning cannot just be a bureaucratic activity. It should be done with clear political supervision, in the full spirit of participatory decision making, and should involve citizens' and civil society groups. It is especially important that people and agencies involved with governance and administration reforms within governments, and outside, have an opportunity to examine, comment upon and participate in this crucial activity of governmental process redesign. The fear among many well-meaning bureaucrats of 'undue political interference' leading to a stalling of reform if 'pre-consultations' are opened too wide may be well-founded to some extent; but the opposite danger that governance process change may not reflect the priorities of governance reforms as collectively understood, and politically articulated, is as real, and of greater significance.

Extensive open reviews and consultations – similar to those expected in drafting important policies – should be carried on throughout the process of development, and in the final stage before adoption, because often system designs and applications may go through significant changes during the phase of development. Structural changes in governance systems should be viewed in their full socio-political significance. If this is mostly not done at present, it is due to characterisation of the important political processes of e-governance reforms as largely technological and project management issues. India's National e-governance Plan is by and far built over such a characterisation of e-governance. This contributes to insulating e-governance from political and democratic examination, a tendency that should be reversed, and the political nature of e-governance reforms strongly asserted.

Aim for end-to-end systemic change through ICTs

ICTs are essentially system technologies, and are best leveraged through a systemic approach to their application. As mentioned earlier, while demonstration and pilot projects are necessary – and they can only be taken up without affecting the mainstream departmental activities – once enough learning has been built it should be used for putting together a full system redesign, as a higher level of e-governance activity. After testing parts or whole of this new system in a controlled manner, the final going for a 'system shift' mostly requires a complex 'full switchover' operation. This mostly needs to be backed with statutory provisions which should to be worked over with great care and meticulousness, and some amount of political astuteness.⁷⁴ A basic objective of systemic governance reforms is to plug gaps in the existing systems which allow for leakages, corruption and inefficiencies, as well as poor participation. All of these system misfeatures have strong vested interests associated with them. It is the experience of most successful e-governance projects, which could achieve systemic changes, that complete one time 'full switchover' – rather than

74 Karnataka's successful Bhoomi project (<http://www.revdept-01.kar.nic.in/>) has some important lessons for how to make such 'full system switchover' at one go, with political and legal backing.

running the old and new process in parallel – provides a much better chance of successful anchorage of the new systems.

It is important to clarify here that a ‘system switchover’ does not mean a switchover to a new ‘digital systems’ from an old ‘manual systems’. Such a wrong reading of ‘system change’ involved in e-governance plagues many technology-led e-governance initiatives, and correspondingly, causes apprehensions and non-engagement among many actors with non-technology background involved with governance reforms. A system change here means a switch over from an old ineffective governance system which everyone wishes to change, to a new one which incorporates some digital processes, as appropriate, to make the whole system more effective. The new system will still overwhelmingly consists of non-digital work processes, which however may be considerably changed for more effectiveness, employing new system redesign possibilities.

Ease of interaction with governance systems for all citizens, more so for those who are disadvantaged and marginalised, is a central effectiveness issue for any governance system. New ‘reformed’ governance systems cannot be said to have become more effective if they do not significantly enhance access by and participation of all citizens.

The above imperative of ‘system switchover’ requires that the new system has end-to-end capabilities to account for all processes involved in the implicated governance activities. Any loose ends will get used to subvert the new system and continue existing corrupt and/or inefficient practices, perhaps with some modifications and adaptations. This requires intensive effort at system designing, anchored at the highest strategic level of the concerned department. Such a level provides a complete view and understanding of the complexities of the activities which are sought to be mapped on to the new system. This level also has the full responsibility for all aspects of the implicated governance activities and can be expected to account for all issues, have the required authority to effect change, and be committed to the complete success of the effort.

A full system change, comprehensively covering all work processes end-to-end, will obviously require a great amount of process engineering around ICT-based systems. It will involve integration of ‘offline’ processes like physical and financial activity/ progress, and work flow/ transactions with (automated) ‘online’ processes of information flows and report generation. Through such an integration, information systems automatically match physical systems, and thus features of efficiency, transparency and accountability, inherent in, or easily obtained through, digital information systems, can simultaneously be imposed on the complete system of activities. This can greatly reduce system gaps that get exploited by vested interests to rig the system to their advantage. Such a comprehensive interlinked system redesign is important to achieve the objectives of far-reaching and systemic reforms that are sought through e-governance.

Box 15: e-Governing the largest social welfare scheme ever in India – Some key lessons on how to e-reform Indian governance

The complete operation of National Rural Employment Guarantee Scheme (NREGS) in the state of Andhra Pradesh is backed by ‘end-to-end’ digital systems. Every single transaction - every transfer of funds, every job card made, every work allocation, every payment, the full muster roll and each wage payment - gets recorded on the system the moment it is completed. In fact, it is not possible to do any of these transactions without the digital system recording it and projecting it in the public domain

for anyone to see, anywhere, anytime. Every work process is in full public view, ensuring complete transparency and accountability, which represents the push model of right to information that has been spoken of earlier in this document.

The Principal Secretary in-charge, K. Raju,⁷⁵ who conceived and developed the project along with an internal team, has an interesting way of describing the value that this pioneering e-governance project provides. In our interview with him, he picks from a statement attributed to an ex-Prime Minister of India – oft quoted in describing the extent of leakages in India’s governance systems – that only about fifteen percent of all welfare allocations actually reach the intended beneficiaries. Raju then turns to the monitor in front of him with the NREGS digital system open through a public domain website (<http://nrega.ap.gov.in>) and asserts that each *paisa* of the more than a thousand crores of rupees of the scheme funds spent in Andhra Pradesh can be traced to its specific recipient. And this can be seen by anyone over the Internet. The wages get transferred directly to each labourer’s bank account. All labourers have been provided with bank accounts in local post offices. Raju agrees that it cannot be entirely ruled out that some funds are still mis-used, but now at least any member of the public, after seeing all information on the Internet, can raise the objection that, for instance, the said bags of cement listed in a particular contractor’s bill of costs were never bought or used; or that the said wages shown to be paid to a specific individual were never paid. All work processes, with complete, 360 degree, information on government’s work, are now available in the full view of the citizen – the real owner of governance processes and activities – who can thereby assert her ownership by using this information to seek accountability.

Since the governance system around implementation of NREGS in Andhra Pradesh is not designed by any technology-enthusiast out to prove technology, but by persons rooted in the governance needs and contexts of India, it goes much beyond putting all official information out there for public scrutiny, to seek real and sustained community participation through partnerships with NGOs and CBOs.⁷⁶ Local youth and civil society groups trained by Mazdoor Kisan Shakti Sangathan (MKSS) – the organization that pioneered social audit of public works in India - conduct ‘social audits’ in the villages whereby information gathered through people’s testimonies is matched with that of official records taken from the website. Interestingly, this ‘people’s version’ of the ‘information’ is also put up on NREGP’s website as ‘social audit reports’, alongside the information generated by government’s systems. This is an outstanding example of co-construction of what may be called as ‘public information’, thereby getting the citizens directly involved the in ownership of governance processes.

Soumya Kidambi of MKSS describes how “the time taken for a social audit has been considerably reduced because we now have consolidated muster rolls that are generated by the system”. “This had to be done manually initially, but ever since we worked on the software to put this part in we get it generated from the system and all we have to do is cross check it with the muster rolls before going to the village to do the verification.”

75 The information on the project is largely based on an interview with Mr. Raju. Many elements in this document, especially its last section, also take liberally from our discussions regarding this project.

76 Community based organisations.

The system, while empowering the citizens – as beneficiaries and owners of the government’s work – also enables self-governance bodies to run the scheme effectively. It provides them across-the-system view and all the needed information for implementation. All work processes are transparent and accountable which ensures regular, and ‘no-leakage’, transfer of funds, as well as all the information needed – like access to all guidelines etc – for taking decisions at the local governance levels. There is automatic alert / rejection by the system if some guidelines are not met, and automatic keeping of all records and sending reports, instead of necessitating a lot of time in manual record-keeping. This enables real time monitoring of all necessary compliance and comprehensive MIS for scheme managers at the higher levels.

The empowerment of the frontline staff through provision of all needed information for decision-making, resource support for building capacity, and great amount of time-saving in not having to perennially enter records and send reports, is also obvious, and strongly intended by the system. There are, in fact, no reports sent in the whole programme as all information is online, and the system allows for generation of any kind of report at anytime, by anyone. Given the fact that a major part of frontline staff’s time and energies in India are spent in making and sending various kinds of reports, one can see great possibilities of some key structural shifts that such digitally-enabled systems can trigger in our governance systems.

While at present the physical system-digital system interface is at the block levels, Raju says that he looks forward to making this happen at the village level itself, further empowering the people and the local self governance levels. The only issue here is about connectivity at the village level, which he hopes will be available soon. With such a revolutionary welfare programme being managed in such a ‘transformative’ manner, producing enormous ‘value’, it is obvious that the governance and development implication of ICT policies, including, but not limited to, connectivity policies, should be prioritised. Also the ‘cost factor’ of such basic ICT provision at the local levels should be seen in terms of the across-the-system value that it generates.

The NREGS e-governance project of Andhra Pradesh illustrates most of the points made in this document about meaningful and successful e-governance in India. Since an elaborate description of this is not possible here, a broad brushstroke of the issues is attempted below. The project dispels the notion that e-governance is a luxury for India with such high levels of poverty and backwardness, and that it can cause further ‘exclusions’ of the disadvantaged people. The various new ‘inclusions’ that this project enables are very clear. It also illustrates that e-governance is not about every citizen being computer literate and computer-enabled, which is a very widespread misgiving.

The project meets almost all values and objectives of governance reforms in India, which we argued should guide system designs for e-governance. It brings all work processes in complete public view (public domain), thereby actualising the real spirit of the right to information. All public information is not only open to the public but the system provides a provision for public to validate or challenge this information. The ‘citizen’s version’ through social audit reports are also available on the NREGS website itself. Community monitoring is therefore enabled through built in facilities in the governance system – both by providing public information readily that can easily be examined by the citizens, as well as listing the social audit report on the official website itself.

We have also seen that the project empowers both self governance bodies and the frontline staff, through information provision and resource support, as well as releasing their time from drudgery of manual recording and sending of reports.

And, it is an end-to-end system covering all major work processes and activities, with the digital part of the system in automatic sync with the physical part. This ensures that the natural transparency and accountability enforcing power of a digital system, with most of the work processes in public view (public domain), is at once extended throughout the system, including its offline parts.

Raju says that the team did mull over whether to run manual and digital systems in parallel for some time, so that there could be a soft run and a testing phase for the system. However, it decided against it. NREGS's first work order and the first pay slip, in the districts which first piloted the digital system, were issued through the digital system, with no provision of doing it any other way. Raju is glad that they took this decision. The end-to-end system established from the very beginning did not allow vested interests to build any 'business models' around any vulnerabilities and leakages in the system. As a result, he claims that, 'professional' contractors and brokers who mostly run such public work programmes in India have largely just stayed away from the NREGS in Andhra Pradesh. This has enabled both a full realisation of wages to the labourers, and a full extent of public work, as documented, done through local village level 'genuine' contractors.

The project design was led and fully owned by the government officials of the Department of Rural Development, and every phase, and every minute detail, of the software developed by a private vendor thoroughly reviewed over long sessions. In this process the department also solicited advice and partnership of the MKSS that has been the most active organization in India on right to information and right to livelihood issues. After all, it was not to be a 'toy' demonstration or pilot project; the department had put its entire stake in implementing the most ambitious welfare scheme in India ever into successful operation of the new digitally-enabled system. Such a level of complete and strategic ownership was the single most important element in our view for the outstanding success of this pioneering e-governance project.

IT for Change (ITfC) is a non-profit organisation based in India.

ITfC seeks to interpret the context and the opportunity of the new ICTs, and broadly, the emerging information society, through the lens of the global South. Our approach is guided by the ethical cornerstones of development – equity, social justice and empowerment.

We strongly believe in the need to emphasise the political narratives that are often sidelined in debates on the information society, which is largely being shaped by neo-liberal ideologies.

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This paper has been written and published with support from

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