

Making E-Governance Work for India

A Report of the Fourth Annual
Joint Roundtable on Communications Policy

Mahesh Uppal
Rapporteur



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The reader should note that this report is written from the perspective of informed observers at the conference. Unless cited to a particular person, none of the comments or ideas contained in this report should be taken as embodying the views or carrying the endorsement of any specific participant at the conference.

Foreword

India's enormity, diversity and distinctive cultural fabric have combined to present the country's government with unique challenges. How does the world's largest democracy reach citizens across geographic, linguistic and administrative lines in a cost effective way? More specifically, how does the Indian Government provide services to citizens while including them in the governing process?

The answer, most certainly, centers on electronic delivery of services and citizen interactions with government officials. It is providing government services to remote villages via Community Service Centers, or interacting with citizens on mobile phones.

This is e-governance, which provides the potential to reach India's remote villages with government services and information as never before, and as a by-product, to simplify cumbersome governmental processes.

These concepts captured the attention and deliberation of Indian government leaders, business executives, and other experts from India and the United States at the fourth annual Aspen Institute Joint Roundtable on Communications Policy, held in Goa between February 13 and 15, 2009. Jointly convened by Aspen Institute India and the Aspen Institute (U.S.) Communications and Society Program, the conference produced several constructive recommendations that participants then delivered to Indian Government officials in Delhi the following day.

The Indian Government's National e-Governance Plan aims, among other things, to "make all government services accessible to the common man in his locality through common service delivery outlets." It was clear at the Conference that the plan has achieved some success through a number of pilot projects. However, it was also evident that government alone cannot ensure "efficiency, transparency and reliability of such services at affordable costs." The private sector needs to engage in e-governance and play a role in expanding access across India. Thus, as the following report details, the Conference recom-

mended greater attention to public-private partnerships, policy reform, and infrastructural changes as ways to deliver more efficient and effective e-governance across India.

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**MAKING E-GOVERNANCE
WORK FOR INDIA**

Mahesh Uppal

Making E-Governance Work for India

Mahesh Uppal

Introduction: Citizens, Government and Governance

Governance is a recurring theme in current development and management literature. A World Bank document defines governance as “an exercise of political authority and the use of institutional resources to manage society’s problems and affairs.” While government is about the superstructure that has the authority, governance is about what government, its agencies, and other institutions do.

In India, governance is a mammoth and complex challenge. The country is large and diverse, with a multi-layered administrative system designed by the British—a legacy of its colonial past. It is home to scores of languages and hundreds of dialects and multiple cultures and religions. There is a very wide range of geographic terrains and climates. Physical infrastructure like roads, electricity and ports is sparse. Access to social infrastructure like schools, hospitals, courts and entertainment is a struggle for many people—especially the 70 percent who live in rural areas. Despite the fact that it is a fast growing economy with an expanding middle class, there is a persistent and pervasive poverty, especially in rural areas.

In this environment and reality, governance is about how effectively the government can imagine and design solutions to these challenges.

Governance has figured prominently in media discussions to explain the rather unexpected results of India’s elections of April-May 2009. There is the view that governance, not religious or caste identity, determined how Indians finally voted. Analysts had predicted a hung parliament, smaller parties with a religious, class or caste agenda to win enough seats to dictate who would form the next government, and a weak and short-lived government. The ruling coalition government led by India’s Congress party won decisively. Indian voters, who in the past threw out most incumbent governments, seemed more willing to reward tangible performance.

Even if a more detailed analysis proves that such an inference is too simplistic or even wrong, India's media and several politicians and bureaucrats are convinced of the emergence of a more informed voter for whom governance takes precedence over other things. As Mr. DV Singh, Additional Secretary, Department of Administrative Reforms and Public Grievances, Ministry of Personnel, PG & Pensions, Government of India, said in his opening address, democracy in India is maturing, and politicians realize that to be re-elected, government needs to deliver.

Governance deserves the new priority accorded to it. E-governance, a related concept, likewise deserves to be a priority given the growth of electronic access to information. E-governance was the focus of the Fourth Annual Joint Roundtable on Communications Policy, held in Goa between February 13 and 15, 2009. Aspen Institute India and the Communications and Society Program of the Aspen Institute U.S. jointly convened policymakers and industry experts from the U.S. and India to deliberate on the subject. Several senior members of the government—including those who participated in the 12th Annual National Conference on e-Governance held in Goa just preceding the Roundtable—participated in structured discussions over several sessions. The group broke into working groups to discuss important themes in greater depth and produced a set of recommendations that were shared with high-level government officials in Delhi on 16th February.

This report covers the issues discussed and presents additional material. It is not a detailed or complete record of proceedings but rather the rapporteur's synthesis of the prevailing ideas pertinent to e-governance in India as presented by the Aspen Institute Roundtable.

Using Information and Communication Technologies to Further Citizen-Government Engagement

Unlike traditional bricks and mortar agencies, digital delivery systems are non-hierarchical, non-linear, interactive, and available 24 hours a day, 7 days a week. The non-hierarchical character of Internet delivery permits people to look for information at their own convenience. The interactive aspects of e-government allow both citizens and bureaucrats to send as well as receive information.¹

According to UNESCO, a promoter of e-governance, “E-governance is generally considered as a wider concept than e-government, since it can bring about a change in the way how citizens relate to governments and to each other.”² Tracy Westen, Founder, Vice Chair and CEO of the Center for Governmental Studies, suggested at the meeting that this approach to e-governance seems like a more comprehensive formulation than the one in the United States where the approach is more fragmented and discussions about e-governance are rare. Dorothy Attwood, Senior Vice President, Public Policy & Chief Privacy Officer at AT&T, agreed that the U.S. lacks a broad organizing concept for e-governance. Charlie Firestone, Executive Director of the Aspen Institute Communications and Society Program, who was chairing the Roundtable, wondered if the focus on openness in governance by the new U.S. administration might change this.

E-governance has the opportunity to transform governmental processes.

The term governance has many layers of meanings, observed Aruna Sundarajan, CEO of the Community Service Centre Project with Infrastructure, Leasing and Financial Services. In practice, e-governance has many of the same features of e-government, but also has the opportunity to transform some of the governmental processes. As Shashi Tharoor, former Under-Secretary General at the United Nations, said, e-governance is focused on the citizen. Stacy Standley, Managing Director, BG India LLC, added that the key to such a system is the trust it can create among its users.

E-governance and E-government

Author Thomas Riley³ (see Table 1) summarizes the conceptual difference between e-government and e-governance. Most practitioners use the two terms almost synonymously, but many implementations of so-called e-government extend beyond the functions listed. Many so-called e-governance plans have yet to offer services that other countries offer in their e-government packages.

The real and perceived differences between e-government and e-governance tend to merge in discussions of e-democracy. While e-governance deals with how governments exercise authority, e-democracy is about the legitimacy of such authority and as Westen noted, encompasses e-governance.

Table I

Government	Governance
Superstructure	Functionality
Decisions	Processes
Rules	Goals
Roles	Performance
Implementation	Coordination
Outputs	Outcomes
E-Government	E-Governance
Electronic Service Delivery	Electronic Consultation
Electronic Workflow	Electronic Controllership
Electronic Voting	Electronic Engagement
Electronic Productivity	Networked Societal Guidance

Internet technologies have emerged as major enablers of e-democracy, especially at the local government level, and enable citizens to participate in or monitor governance on a real time basis. Governance, as Harvard University Law Lab Co-Director John Clippinger noted, is as much about civil society as it is about government. On the other hand, the use of these tools also makes e-democracy a much longer-term goal for developing countries where the majority of the population has no access to Internet at all.

Many developing countries see the use of Information and Communication Technologies (ICTs) for delivery of information and services to citizens not just as more efficient or convenient, but as the only realistic one for wider access to government functions. With physical connectivity a severe challenge, leaders see electronic connectivity as a kind of alternative to the missing infrastructure. In this sense, ICTs can bring those communities excluded from the periphery of government and other services into the mainstream. It can potentially help them to be more engaged in the democratic process.

However, this unique context of e-governance presents some difficulty too. Developing countries that see e-governance as a way to deliver government services and address other inequities are in effect relying on

tools to which few ordinary citizens have access. According to Aruna Sundarajan, barely 15 percent of India's population has access to ICTs (excluding mobiles). This raises the fear that those with better access to ICTs may be the larger beneficiaries of e-governance.

Therefore, the challenge for developing countries is to leverage ICTs without the possible distortions.

International Experience

ICTs play an important part in the overall scheme of governance in many countries and are used by all major economies to deliver government services. Most industrialized countries have put in place major programmes for e-government. Citizens access more and more government information, services, and processes online. Whether it is for applying for a job or a passport, booking a driving test, setting up a company, paying taxes, or for using any of the dozens of other services, a citizen scarcely needs to leave home or office.

There are several measures of e-government.⁴ While delivery of major government services electronically is universally integral, countries differ in how they estimate the relative importance of factors such as infrastructure, interactivity, support for businesses, etc. Some countries offer a common portal for accessing government information. In other countries, more elaborate transactions are possible. Some have built in elaborate provisions for privacy and security of information. Similarly, some cater more deliberately to the needs of the disabled. A few provide options to personalize the portal to users' needs.⁵

As Krishna Giri, Managing Director-Asia Pacific Public Services at Accenture, noted, Sweden, Denmark, and Singapore are world leaders in the UN index of e-readiness of governments. He noted that Vietnam has also moved impressively. Significantly, all these countries have been innovative and used infrastructure, technology, and collaboration to achieve their high levels of e-readiness of government. The United States ranks high on the United Nations e-Government e-Readiness Index but the approach and success varies across states and cities. Tracy Westen

ICTs can bring those communities excluded from the periphery of government and other services into the mainstream.

mentioned at the Roundtable that the lack of a comprehensive e-governance strategy may be one reason for this uneven deployment of ICTs.

The UN e-Readiness Index also shows that most major economies—the U.S., Japan, UK, France, Australia—are on the list of the 50 countries that lead in e-government. The list has mostly small countries with high GDP and low population suggesting that ICTs are more affordable if the target population is low.

Unfortunately, this is not the case in developing countries like India. Its challenge is to design e-government programmes that can deliver value for money.

Table 2: UN E-Government e-Readiness Index (2008)

Rank	Country	Index
1	Sweden	0.9157
2	Denmark	0.9134
3	Norway	0.8921
4	United States	0.8644
5	Netherlands	0.8631
6	South Korea	0.8317
7	Canada	0.8172
8	Australia	0.8108
9	France	0.8038
10	United Kingdom	0.7872
11	Japan	0.7703
12	Switzerland	0.7626
13	Estonia	0.7600
14	Luxembourg	0.7512
15	Finland	0.7488
16	Austria	0.7428
17	Israel	0.7393
18	New Zealand	0.7392
19	Ireland	0.7296
20	Spain	0.7228
21	Iceland	0.7176
22	Germany	0.7136
23	Singapore	0.7009
24	Belgium	0.6779
25	Czech Republic	0.6696

India: the General and Unique in India's Governance challenge

A country of manifest contrasts, India's position in the Human Development Index rankings in 2007-08 was 128 out of 177 countries. According to the 2007-08 UN Human Development Report, based on data for 1996-2005, almost 80 percent of India's population lives on under \$2 a day. Roughly, 20 percent of the population is undernourished. The richest 20 percent consume almost 5 times more than the poorest 20 percent. Forty seven percent of children younger than 5 years of age are underweight and 26 percent die in the first five years. More than a quarter never go to school. Over half of India's women are illiterate, and one in 200 dies in childbirth. The majority of India's population lives in rural areas. Several of these are inaccessible by road most of the year, and many more so during the monsoons (the rainy season).

However, this disguises much of what makes India unique. As the world's largest democracy, Indian voters have successfully changed several governments at the national and state levels. There is a large and independent judiciary. The Indian economy is growing at over 7.5 percent each year and has a huge trained workforce, especially in the field of ICTs. India is one of fewer than ten countries that have a substantive space programme and nuclear capability. It attracts sizable foreign direct investment. In recent years, Indian companies have also been investing overseas on an unprecedented scale. Several Indians figure in lists of the world's wealthiest people.

Geography. Large parts of India, such as the mountainous regions of the Northeast, Himachal Pradesh, Jammu and Kashmir, as well as the forests areas of Madhya Pradesh, parts of Rajasthan, and many more areas are remote. Besides physical infrastructure, even telecommunications services are sparse and often absent. It can take up to weeks to reach government staff or agencies.

Languages. There are 22 national languages and over 800 dialects spoken. India has a rich heritage of literature and major languages have unique scripts. None of India's peers face comparable challenges.

Identities. India has a diverse population. Indians define their identity through their religion, region, caste, tribe, etc. These identities are a two-edged sword: they are a source of great richness, but they are also a source of political and other strife. Identity has often meant unequal treatment.

Several government rules—e.g. relating to quotas in education and employment—are often integral parts of debates about governance.

Democracy and Accountability. Despite a working democracy nearly 60 years old, the levels of accountability among politicians and government functionaries is perceived as low. It is rarely possible to meet public officials conveniently. Public officials usually have large portfolios that keep the more serious ones overworked most of the time. Appointments are rarely given and frequently not kept. The central government as well as state governments have an entire separate ministry for public grievances. This reflects the size of the problem.

Federalism. India's 28 states and 7 union territories enjoy wide-ranging powers on most major sectors related to governance excluding defence, foreign affairs, communications, and railways—which are central subjects. Land, agriculture, housing, transport, health, education, environment, roads, and power—which are inextricably linked to governance—are largely 'state subjects'. This, as Shashi Tharoor mentioned, could be a particular challenge for e-governance.

It is hard for the central government to make reforms without consulting the state governments. However, urgent reform of services related to land, water, transport, and taxes is often caught up in the push and pull of central-state politics. State governments often resist reform if it means a loss of control or revenue. State politicians frequently complain that the central government plays politics with development funds. On the other hand, unspent funds are frequently returned to the central exchequer at the end of the financial year.

It is clear that central and state governments must work closely together to implement major programmes. In practice, this can slow or sometime stop important measures. The need for concerted action led by an agency with nationwide authority can be at odds with an equally important feature of India's polity, viz. the federal structure.

Among the highest priorities of policy is governance that can enable inclusive growth. E-governance may well be the most promising route to get there.

India's National E-governance Plan

Early Attempts at E-governance

The National Informatics Centre (NIC), a part of the Government of India's Department of Information Technology (DIT), was set up in 1977. Its mandate was to develop information systems for government in the centre and states to assist with planning, monitoring and decision-making. The mandate also included setting up a nationwide communications network to enable effective sharing of information among government staff. The NIC was responsible for evolving standards for data collection, sharing and processing.

In the last decade or so, there have been several important initiatives to leverage ICTs to deliver government services to citizens. The initial focus was to use ICTs in small towns or rural areas to enable them to claim their entitlements—such as government allowances, and subsidies to disadvantaged communities or families.

These projects were largely initiatives of the states. Most projects were pilots and confined to small areas:

- The Gyandoot project in the state of Madhya Pradesh was one of the earliest attempts to use ICTs to deliver government services.
- The Akshaya project in Kerala had a computer literacy focus besides delivery of government services.
- The eSeva project of the government of Andhra Pradesh in south India was more ambitious. It attempted to expand the range of services and network government offices.

Agriculture, the mainstay of the majority of Indians is a risky business because of its over dependence on rain and other natural phenomenon leaving farmers with an erratic cash flow. Often the only way out is to mortgage assets like land. Without official land deeds, unscrupulous moneylenders are a farmer's only recourse. The Bhoomi Project in the state of Karnataka was instrumental in putting that state's land records online and providing them on demand to farmers and oth-

ers who needed them. It reduced long waits and rampant corruption. Several states have now replicated the Bhoomi project. The impact of these early e-governance efforts has been mixed. Akshaya and eSeva have been effective and are continuing. Bhoomi and Railways computerization have delivered considerable value. However, many consider Gyandoot a failure.

Challenges and Lessons

Scale and Scope: By far the biggest challenge from the first round of e-government projects was to scale the projects to a level where their benefits could reach a larger number of users. Most ICT projects were one-off efforts. They were limited to a specific concern, e.g. land records or government allowances. In most cases, the rest of the functions performed at the government level and even the department level followed the old-fashioned manual approach. Eventually, the cost—in terms of money, time, or management—of sustaining two separate systems was either the cause or sometimes the excuse for abandoning the project.

Ownership: As a previous Aspen Institute Roundtable report⁶ highlighted, several ICT projects in India never went beyond the pilot stage. In most cases, the projects lacked the supporting environment within the government itself. The earlier projects were inevitably pilots and their successes, though significant, were limited. Frequent teething problems caused many to lose momentum. Even when there were champions of ICT based interventions, access to computers, familiarity, and skills necessary to use them were largely absent.

Familiarity: Most people perceived ICTs as an unfamiliar and expensive novelty. Most Indian citizens have little access to or familiarity with computers. In rural areas, the problem is much more severe since even the small minority who can afford computers must go to a substantial town to buy or repair hardware or software.

The novelty of some of the initiatives also generated much hype. Aruna Sundarajan, Chief Executive Officer, Community Service Centre Project, Infrastructure Leasing & Financial Services (IL&FS), who has been involved in many of the key e-governance projects, told the Roundtable participants about instances where officials enamoured of

ICTs prioritised the few email requests over the many that came manually or in post. Doctors involved in telemedicine pilots had little time for the long lines of patients waiting in ordinary hospitals.

Mr. Jainder Singh, Secretary–Department of IT, Ministry of Information Technology, said at the 12th Annual National Conference on e-Governance which preceded the Roundtable that the Indian government soon realised that for e-governance to work, seamlessly and cost effectively, a “holistic view” was necessary. It identified the following requirements:⁷

- Need for political ownership at the highest level;
- An empowered team with tenure;
- Public-private partnership;
- Defined architecture, standards and policies to address issues of security, privacy, etc.;
- The need to develop infrastructure such as Data Centres, Wide Area Networks and the physical access points for delivery of government services where citizens live and which would be shared by all government agencies;
- The need to start with small pilots before scaling-up to all mid-path corrections;
- Priority to issues of re-engineering and management of change over purely technical issues.

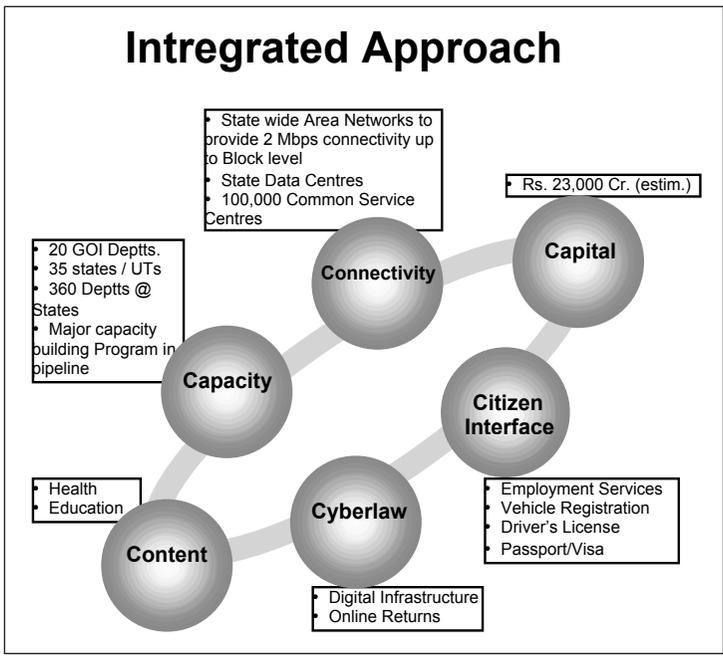
Highlights of the National e-Governance Plan (NeGP)

In 2006, India launched its new National e-Governance Plan. It dealt with issues of political ownership, continuity of authority, resources, scale and scope, and a framework for engagement with state governments. As Ms. Lekha Kumar, Director (e-Governance), Department of Administrative Reforms & Public Grievances, confirmed, her

department is working with the Ministry of Communications and Information Technology to ensure that administrative and technology dimensions of e-governance will receive attention.

At the core of the NeGP is the creation of service delivery points or Common Service Centres (CSCs) within a 2km radius of all citizens across India.

The government is collaborating with several private sector players during the years 2009-10 to set up over 100,000 CSCs equipped with appropriate ICTs equipment and connectivity. The goal is to make all government services available through the CSCs to “ensure efficiency, transparency, and reliability of such services at affordable cost to meet basic needs.”⁸



When fully implemented, CSCs will provide assisted access to government services including employment, taxation, registration of companies, pension records, land and property records, police, courts, municipal services, access to records and services of Gram Panchayats (or village councils) and many more services.

The State Wide Area Networks (SWAN) and State Data Centres (SDC) complement the CSC's delivery infrastructure. SWANs in each state will connect state headquarters to each block (typically a cluster of 50 villages). SDCs will provide secure storage of government and citizen data and applications by employing appropriate technologies including those for disaster recovery and support for remote maintenance and management.

The Plan's strength is its attempt to work strategically in an integrated fashion. The areas that will need attention fall mnemonically into the 6C's namely:

- Content – i.e. services and applications to which citizens need access;
- Connectivity – i.e. IT, telecommunications and Internet infrastructure;
- Capacity – i.e. training and capacity building that end users require;
- Capital – i.e. funds to build and initially operate the components;
- Citizen interface – the interface that will enable citizens to access the e-governance services effectively in his or her language or script;
- Cyber law – the legal framework for using IT based services including their status in law, privacy and security issues.

Creators of the NeGP recognize that early impact will help its credibility and ownership within the government and among citizens. As Jainder Singh, Secretary – Department of Communications and IT, Ministry of Information Technology and his Additional Secretary SR Rao highlighted, NeGP's 27 Mission Mode projects (listed in the adjoining figure) represent core services that citizens need urgently but struggle to obtain.

Without e-governance mechanisms, these services normally involve waiting for weeks and months, long travel, paying bribes, humiliation and other irritating and costly attributes. In the real world it can mean loss of opportunity/productivity or continued hardship if one needed to sell an asset in an emergency but could not for lack of paperwork. By

revising the procedures of government as well as providing electronic access, the NeGP can go a long way to meet a huge demand for government services across India, reduce transaction costs, save time, energy, and other resources and have happier citizens.

To achieve these goals, however, Mr. Jainder Singh and his colleagues emphasised, the government seeks augmentation of its capacities by partnerships with the private sector. To ensure demonstrable fair play, the government bases its choice of partners on an open competitive bidding process, which aims to avoid the relatively frequent controversies arising out of allegations of favouritism. The plans for and operation of the public-private partnerships (PPPs) in e-governance was a focus of much discussion at the Roundtable, summarized in later sections of this Report.

Central Government Projects

1. Banking—provision to all of services in government owned banks to be accessed from any branch and on the internet and nationwide clearance and settlement system
2. Central Excise & Customs—filing and payment of all taxes relating to excise and customs
3. Income Tax—filing and payments of income tax returns online
4. Insurance—education for citizens, issue of policies on line and a grievance redresses system
5. MCA21—online filing of documents, registration of companies and public access to corporate information through a secure portal
6. National Citizen Database (NCD) or Multipurpose National Identity cards (MNIC)—to create a nation wide database of citizens and to provide a unique ID for every citizen.
7. Passport, Immigration & Visa—online filing of applications and tracking their status
8. Pension—a portal for providing information and handling grievances

9. e-Office—to streamline intra government information transfer to make it more efficient and amenable to citizen services

Projects at State Level

10. Agriculture—information and advice to farmers on seeds, fertilizers, pesticides weather, crop management, marketing of agriculture produce
11. Commercial Taxes—electronic filing of returns, payment of taxes, clearance of refunds payment of tax etc
12. eDistrict—provision of Government documents for citizens including certificates for income, domicile, caste, Birth, Death, ration cards, etc., arms licenses, information on entitlements, e.g. schemes for aged, widows and Right to Information Act, payment of utility bills
13. Employment Exchange—information about job vacancies available
14. Land Records—copies of ownership records , crop, irrigation and soil details, help with mutation of ownership
15. Municipalities—citizens services at urban centres in states
16. Panchayats—issue of documents, information about meetings and decisions taken, funds received and method of utilization, digitization of village geography
17. Police—improving police effectiveness
18. Property Registration—payment of stamp duties; registration of documents and issue of copies of certified documents
19. Road Transport—driving licenses, car records
20. Treasuries—computerisation of state treasuries to integrate payments of salaries, expenses, reconciliation of accounts

Integrated Mission Mode Projects

21. Common Service Centres—the delivery of e-governance services
22. e-BIZ—business support services
23. e-COURTS—to support information needs of judicial administrations, litigants and judges
24. e-Procurement—support for government procurement
25. Electronic Data Interchange (EDI) For Trade (eTrade)—support for electronic clearance of import, export and other trade documents
26. National e-governance Service Delivery Gateway—core infrastructure for achieving standards-based interoperability between various e-Government applications across India
27. India Portal (www.india.gov.in)—common portal for government services

Interoperability of services

To deliver and operate the e-governance services, diverse actors—central and state governments, industry and civil society organisations—will need to come together to create the backbone e-Infrastructure envisaged in the NeGP. They will use several technologies and applications to deliver the end services. At the same time, as Mr. Rao underlined, the government recognises the need to ensure interoperability of applications and services. Towards this end, it has put in the public domain a draft policy on standards and interoperability. It will also create a usable interface to ensure continued development of services and applications. In order to achieve this objective the government has set up a National e-Governance Service Delivery Gateway (NSDG). This NSDG will act as core infrastructure for achieving standards-based interoperability between various e-government applications across India.

Milestones achieved in e-governance in India

There has been considerable progress on some of the mission mode projects. However, the implementation varies from state to state.

Banking and Taxation: In all of the e-government efforts, the greatest progress has been in the sectors of banking and taxation. Most transactions related to personal as well as corporate taxes are online. Indeed, corporate taxes can now only be paid online. The process of bringing all public sector banks online and offer core banking and any branch banking is in full swing. Roughly half the states have now computerized land records. Gujarat has computerized all its panchayats or administrative levels.

Indian Railways: The old reservation and ticket booking system, widely criticised for being slow and corrupt, has been overhauled to provide greater efficiency as well as unprecedented transparency. Rail travellers do not face the same long queues or demands for bribes. They can, instead, book tickets online with credit cards and have them delivered electronically or via courier service. As Vijay Thadani, Chief Executive Officer of NIIT pointed out, there has been continuing innovation in the system. For instance those who do not have credit cards or cannot access computers or Internet, can book through authorised agents. The system that first offered tickets only on the major trains, now works for the small ones too. The outstanding success of bringing railways online has helped many other e-governance projects to attract support and funding.

Stock Exchange: All transactions in stocks and shares are now electronic. Paper based share certificates are now discontinued.

Elections: ICTs have transformed elections in India. Unlike past years, there have been few complaints about abuse, or fairness and rarely any delay in declaring results. Over 400 million people voted—via electronic machines—in the recent elections.

Common Service Centres (CSCs): Three states, Haryana, Jharkhand, and Sikkim, have rolled out all of their CSCs. As of 2009, Punjab is yet to start the process and most of the other states are at varying stages of implementation.

The table below provides a list of services implemented as of mid-2009 in the NeGP. Significantly, the government put many of its services online, and is also changing the online processes taking into account the connection, speeding up and simplifying the transactions.

Table 3

Online Services under National e-Governance Plan	
Income Tax	Income Tax E-Filing of Income Tax Returns Online Registration of E-Return Intermediary Online Application for Permanent Account Number (PAN) Check Status of PAN Application Online Online Application for Tax Deduction Account Number (TAN)
Passport/VISA	Online Status. Enquiry of Passport Application
Company Affairs	Online Company Directory Lodge Investor Complaint Online
Central Excise	Registration for Service Tax Payers Registration for Central Excise Assesses Know your Service Tax Tariff Know your Service Tax Location Code e-filing of Central Excise Returns e-filing of Service Tax Returns
Land Records	Check your Land Registration Records
Road Transport	Obtain Driving Licence Vehicle Registration
Property Registration	Land/Property Registration
Agriculture	Check Agricultural Market Prices Online
Municipalities	Obtain Birth Certificate Obtain Death Certificate
Gram Panchayats (Rural)	Online Collection and Sale of Handicrafts by Rural Artisans
Police	Online Status of Stolen Vehicles
Employment Exchange	Register with State Employment Exchanges as a Candidate Register with State Employment Exchanges as an Employer
E-Courts	Cause list of Indian Courts Court Judgments (JUDIS) Daily Court Orders/Case Status

Review of India's e-governance initiatives

The NeGP is a work in progress with several services not yet rolled out. Mr. SR Rao, Additional Secretary, Department of IT, Indian Ministry of Communications & IT, told the Roundtable that researchers at the Indian Institute of Management in Ahmadabad have assessed three central and state government projects. The former included income tax, corporate affairs, and the passport and visa program. The latter: land records, land registration, and transportation (driver's license and vehicle registration). Researchers reported that citizens found they were making on average a quarter of the trips to complete the same task. The corresponding time savings were of the order of 20 to 40 percent. Citizens reported that the new method of service delivery was more transparent, allowed less corruption and saved significant amounts of time.

Rao said that the government's Public-Private Partnership (PPP) approach has already delivered significant savings. Originally, the government believed that the private sector would be unwilling to invest much towards the estimated US\$1 billion required to implement the CSCs. However, the private sector has paid to do so in most states except in a few depressed states where business felt that economic activity and opportunities were too low. The government will end up spending barely a quarter of its budget for the project.

E-governance is largely about access. Some have criticised the government vision of delivering government services to a citizen's locality and at a separate facility, rather than in the home. They argue that a citizen should be able to access services on computers or mobile phones anytime and any place. Barely 15 percent of Indians have access to any computers or ICT infrastructure. Less than 1 percent owns a PC. The delivery of services and applications has been a bigger challenge than anticipated.

- Few government departments are ready with the background work necessary to put them online. Almost all of them are behind schedule; some have barely begun the process.
- Only about 30 percent of the CSCs are in place. Of these, few have anything beyond the hardware and furniture. They lack applications and services, and connectivity has been a challenge.

While the creators of the NeGP appreciated the challenge of standardization of applications, services, and delivery, participants at the Roundtable observed, there seems little evidence of a concerted attempt to address the challenge. For instance, websites of government departments involved in the NeGP have little in common in their structure or format. English seems most prominent. Regional languages are rarely used, arguably putting at risk one of the central objectives of the programme of increasing citizen participation in government. NeGP's own website has several acronyms, such as MCA21, MMP, and SMP, which can prove confusing.

Maximizing Impact of E-Governance in India

Enhancing Scale and Scope of e-governance

Members of the Roundtable discussed several approaches to leveraging the infrastructure for all the value it can deliver.

India is unlike many smaller and wealthier countries with successful e-governance offerings. It has a resource crunch and mounting pressure to expand access to government services.

Mr. Stacy Standley, Mr. DV Singh and several others cautioned that costs or technologies are not the greatest barriers to e-government. However, cost is a formidable challenge.

Mr. George Paul, Executive Vice President of HCL, felt e-governance deserved to be treated as a right of every citizen. For the e-governance efforts to succeed and be sustainable on a national scale, they must offer increasing value at a lower cost. In other words, the scale as well as scope of e-governance must expand with time. The NeGP envisages that entrepreneurs will run CSCs, the primary delivery mode for e-governance. CSC managers will require practical understanding, entrepreneurship, and innovation to run the business profitably.

Content

E-governance infrastructure will achieve little without actual services or content. More services mean more value and better economies in

their provision. As Jed Alpert, Co-founder and Chief Executive Officer of Mobile Commons, put it, pull is better than push when it comes to services. That is, the services have to be equipped and optimized for citizens to access them at their own initiative, anytime, anywhere (pull), as opposed to a system where the service is pushed out from the top-down.

In addition to the services included in the initial NeGP, Roundtable participants suggested many other services could use the infrastructure. For instance, as Tanmoy Chakrabarty of Tata Consultancy Services said, users may wish to know what their Member of Parliament did with funds allotted to him/her for development of his/her constituency. He spoke of the mobile application that offers information about wave heights, fishing zones, and market prices. This enables fishermen in Andhra Pradesh to fish safely and lucratively. Access to such information could be of interest to fishermen in other regions as well. Other services like tourism, environment, business information and online banking could be useful.

P. Ravindranath, Director, Strategic Development, Government and Public Affairs, Hewlett Packard India, cautioned that in view of the complex environment, government applications may take longer to reach the citizens.

It would make eminent sense for the government to facilitate diverse content in the NeGP infrastructure. Such content could be a mix of pure governance services and content of interest to different communities and groups. Tracy Westen noted free voicemail could be a powerful catalyst for bringing e-governance to the general public. He also recalled how cities, such as Santa Monica, California have found that free voicemail enables homeless to apply for jobs and leave a call-back number, which they can access from any public telephone.

John Clippinger spoke of providing tools for applications that civil society could use readily. For instance, many Internet technologies today enable computing and other design to be decentralized and more participatory.

To popularize e-governance, and cross-subsidize its cost, Roundtable participants suggested that education and entertainment applications should be a priority as they are likely to be useful, popular, and profitable. Vijay Thadani, for example, pointed out that edutainment (educational content presented in an entertaining fashion) could help

to improve the business case of e-governance infrastructure. Several studies have found that rural users see computer-based education as an important investment. Parents with modest incomes often spend good money to enable their children to acquire computer skills or knowledge of standard software packages or to play games. NIIT has found significant demand for computer based learning courses in smaller towns and villages.

Stacy Standley highlighted the potential of television and radio and the role Doordarshan and All India Radio could play by leveraging their infrastructure and content. The popularity of Indian film-based content or of cricket is testimony to this. The state-owned media like Doordarshan could consider offering their publicly funded content—especially entertainment—to be bundled with other services that may be useful, but otherwise dull. This might help to create a ‘pull factor’ cheaply. Mr. SR Rao cautioned that too much emphasis on entertainment risked detracting from the more urgent e-governance initiatives.

Ellen Blackler, Executive Director, Public Policy at ATT, suggested that healthcare services could make the Internet much more relevant to the average user who might be less familiar with its many possibilities. Ajai Chowdhry, Chairman & Chief Executive Officer, HCL Infosystems, agreed but thought telemedicine may be a more challenging task. He described the web portals that HCL has created for major temples that allow devotees living far away to participate in religious services in real time. These have been popular and lucrative. Such content could offer new options to leverage the infrastructure in CSCs.

Aruna Sundarajan, CEO of the Community Service Centre Project, spoke of the interest in using community radio through the CSCs to broadcast information through a loudspeaker to generate curiosity amongst villagers who do not otherwise access the Indian government to make their content available on YouTube. The Gujarat government is reportedly developing two channels, one for tourism, and another for agriculture. Harish Krishnan, Director, Global Policy and Government Affairs of Cisco Systems, described how the government of Karnataka has worked with Cisco to create IT applications for better traffic management, creation of green buildings, or to help with safety and security. Such content would also make the case for e-governance more compelling.

Addressing Language and Literacy Issues

As Ms. Sundarajan and Mr. Rao emphasised, the 22 national languages and over 800 dialects spoken in India compound the already huge challenge of delivering governance services to all citizens. None of India's peers face comparable challenges.

E-Governance solutions will work best if the citizen can access them in a language in which he or she is most comfortable. NeGP emphasizes the need for localized content, which would inevitably require it to be in a local language. In many states, citizens access several applications e.g. land records, in local languages. State agencies commission most such software. In many areas such as banking, the government does mandate that all software must be bilingual and support Hindi or a local language in addition to English. However, in most other areas, this is not the norm.

One expects that many e-governance services would have common functionality but differ in user interface. Generally, there are baseline software programs that offer the promise of support for multiple languages to address India's multi-lingual and federal state challenges. While this would forestall the avoidable costs incurred by state governments in commissioning new applications simply to support their regions, the technology is in its infancy and not completely reliable.

Machine translation for Indian languages is a far from trivial task. However, researchers have accomplished much already. The Indian Department of Information Technology (DIT) has an active programme, TDIL (Technology Development for Indian Languages), whose mandate includes "creating and accessing multilingual knowledge resources and integrating them to develop innovative user products and services." The DIT has also created an independent agency—the Centre for Development of Advanced Computing (C-DAC)—that seeks to "achieve rapid and effective spread of knowledge by overcoming language barriers using Natural Language oriented computing and Multimedia Technologies."

22 national languages and over 800 dialects spoken in India compound the already huge challenge of delivering governance services to all citizens.

C-DAC has done impressive work in producing fonts for Indian languages. Several major software companies use their solutions. The National Centre for Software Technology (NCST) and the various Indian Institutes of Technology (IIT) especially at Kanpur, and Indian Institutes of Information Technology (IIIT) especially Hyderabad, have also made several important strides in this area. However, there is still concern that the support for machine translation is piecemeal. Much more work is necessary to provide support across all languages. The huge potential of language technology expertise seems largely under-utilized. The idea of a National Localization Resource Centre has reportedly been discussed, but progress is slow.

The “people power” of India is a great asset for using crowd sourcing to create local content.

Vanu Bose

One approach to localizing content that has enormous potential, given Web 2.0, is crowd sourcing. This is where an undefined group of contributors work to a common goal e.g. customisation of software, solving a complex goal. Players are using crowd sourcing for digitising historic texts or for subtitling videos. Facebook is using crowd sourcing to translate its offerings into other languages. The success of the Wikipedia project has demonstrated that such effort can deliver not just speed through large-scale mobilization of contributors but also quality through effective peer review.

Vanu Bose, President and Chief Executive Officer of Vanu Inc, suggested that India’s greatest resource, its people, could form the basis of a major solution to the machine translation problem. The “people power” of India is a great asset for using crowd sourcing to create local content. For instance, people across India could collaborate to create a translation infrastructure in India using voice-based Wikis. Individuals could then fill the gaps left by machine translation. Anyone with access to Internet whether in rural or urban environment could participate in the translation task in “bite-sized morsels” and enable a rich translation resource to emerge in a short time.

If the e-government programme was to prioritise the creation of a “translation infrastructure” across all Indian languages, it will make it

easier to standardize user interfaces across the country and make it more accessible to indigenous people at relatively low cost. Such an infrastructure, once in place, would enable any application or software, built on specified standards, to be customized relatively simply for any Indian language or dialect irrespective of which language or dialect the author used to write it. The Roundtable strongly recommended that the wiki or crowd sourcing of translations, built on top of machine translations, be viewed as a necessary element of the e-governance infrastructure.⁹

Infrastructure & Technology

Creation of a nationwide physical infrastructure for e-governance is a daunting task especially because of its huge fixed cost. Networks and hardware are expensive as are the 100,000 or more CSCs being set up across India. Therefore, measures to reduce the costs of infrastructure or to enable it to be used more efficiently would further advance the e-governance agenda. This is especially important if the costs in question are common for most infrastructure creators. Fortunately, there are several options, some of which apply to entrepreneurs who are setting up CSCs and others to governments and regulators.

Power. The complex challenge facing developing countries is rarely computers or telecommunications per se but power to run the equipment. Rural areas have little reliable power and solar technologies are still expensive. Due to this, many ICT facilities remain unused in rural ICT projects.

Rahul Bedi, Director of Corporate Affairs, South Asia at Intel India, suggested that some current practices in fact exacerbate the shortage of power by wasting it. Sometimes over-specified equipment that is in use today often requires more power to run even if it is sometimes cheaper. The functions required, say browsing or editing, may not actually need the higher-powered devices. The new lightweight and functional “netbooks,” and “nettops” using low-power processors such as Intel’s Atom, offer an opportunity to reduce power requirements. Wi-Fi and other wireless access technologies like 3G and BWA could also be invaluable in reducing the costs of power in rural areas. These and other technologies that significantly reduce the costs of power required at CSCs would go a long way to making them more sustain-

able. The Roundtable recommended close attention to these issues as the CSCs roll out.

Post Offices and Schools. The cost of rollout of India's e-governance programme can be brought down significantly if existing infrastructure could be used more efficiently. Ajai Chowdhry, Chairman and Chief Executive Officer of HCL, and others spoke about the large network of post offices and local schools across India. The government should consider using these venues to house CSCs, where possible. Recalling that HCL has helped to upgrade hardware and communications in many post offices, Mr. Chowdhry suggested that adding the remaining equipment in those locales could lead to considerable savings.

E-governance is less about the 'e' or technology and more about governance.

Shashi Tharoor

Leveraging Different Technologies. Shashi Tharoor observed that e-governance is less about the 'e' or technology and more about governance. In the final analysis, whatever the strengths, and features of the technology, it cannot guarantee the success of any e-governance programme or service. However, bad choices of technologies or too much reliance on a particular technology can compromise the success or sustainability of e-governance applications. Therefore, care is still necessary. The Roundtable recommended consideration of the following aspects of technology in the e-governance infrastructure.

Importance of Access on Mobile

Mobile support for e-governance applications is important. DV Singh, Shashi Tharoor, SR Rao and Jed Alpert, in particular, spoke of the success of mobiles in providing connectivity and services on an unprecedented scale. Ajai Chowdhry suggested that mobile support for e-governance was critical for maximum impact. Aruna Sundarajan felt 3G support for rich media applications would have a transformational impact, although Harish Krishnan, cautioned against over-hyping 3G.

With a convenient size or form-factor and ever more powerful processors, mobile phones can now provide the functionality of computers. They can also support the bandwidth that can enable much

richer browsing than ever before. Therefore, with support for mobile platforms, users can potentially access e-governance services without travelling to a CSC. Aruna Sundarajan of ILFS pointed out that with the advent of 3G, much richer services can reach the mobile user.

India's citizens—especially the majority who are poor and live in rural areas—can access services in the e-governance plan only if the telecommunications network is omnipresent. Such a network would need to offer reasonable bandwidths that can support voice and data. There is a great demand in rural areas for entertainment. With adequate network access and familiarity, the convenience of electronic transactions will be difficult to resist.

India's citizens can access services in the e-governance plan only if the telecommunications network is omnipresent.

The CSC model of providing services in the citizen's locality will come under considerable pressure. Broadband access will be indispensable to ensure that the system can support future growth in the number of users and in newer services. The physical accommodation as well as data capacity of the CSC can be under constant pressure once users begin to experience the many services—including but not limited to governance—that connectivity will enable.

In the end, the CSC model will work better for providing access to services that need the high bandwidths that a shared facility can justify. In the medium term, it may be the only choice for people without mobiles. But adoption of mobile phones by the urban poor has shown to every sceptical politician or business that the poor see enough economic value in the mobile phone to prioritize it over much else.

The mobile platform has also been popular with innovators who have used it to deliver a wide range of services and transactions beyond simple voice and SMS. This makes mobiles a cheap and powerful way to avoid legacy issues that users often encounter with installed hardware and software. There is growing evidence that citizen activists, non-profits and others are using mobiles to intervene in the governance process. The ability to use the mobile phone to send or respond with voice, text, and images allows them to carry out more focused and effective advocacy.

Role of Mobile Financial Services

The poor use mobile phones to improve livelihoods and their social lives. However, the revenues generated for telecom operators from this group are low. Rural areas are sparsely populated and the terrain is challenging. For higher revenues, larger volumes will be needed. With a better business model, mobile phones could expedite access to e-governance.

Success will require mobile companies to work with regulators and government to enable mobile phones to offer rural users more services that have value and therefore can justify a fee. One such service is mobile banking, which can help address the huge unmet demand in rural areas for banking services. Several studies have demonstrated the role that mobile phones can play in expanding access to micro-finance and e-commerce. If regulators facilitate mobile financial services, with adequate security and privacy provisions in place, they will fill a critical gap and improve the business case for mobile phones in rural areas. This in turn will increase the likelihood of extending e-governance services to those same areas.

As Harish Krishnan of Cisco pointed out, however, personal computers or PCs and other desktop devices will be more convenient, if not indispensable, for some applications. For example, a mobile phone may not be the best way to access land records or watch feature films. Also, if government or others can work only with paper documents, e.g., printed copies of land records, then it is unlikely that they can rely on mobile phones alone, even if they support some kind of printing. Desktop PCs will be more appropriate.

Designing Conducive Policy and Regulation

Proactive policy and regulation can go a long way to securing the success of the e-governance program. For instance, the Universal Service Obligation Fund (USOF) controlled by the government of India provides subsidies for adding rural telecommunications infrastructure such as towers and optical fibre. Subsidies from the USOF for e-governance efforts across India could provide additional incentives for stakeholders. This could come in the form of support for applications critical for sustainability of e-governance offerings.

Wireless communications are impossible without access to radio frequency spectrum, a limited resource in great demand. The many new services, productivity gains and cost savings that wireless technologies and market competition can bring to users require that governments must be strategic in allocating and pricing spectrum.

Regulators can play a critical role in devising a transparent system, which enables adequate and affordable access to spectrum in priority areas such as rural telecommunications.

Their role would be crucial in developing markets for data services for which demand is currently low, but will inevitably rise, as more useful content is made available. But according to Roundtable participants, this will require regulation to reconcile India's unique developmental agenda with interna-

tional best practices. Such a system would have appropriate incentives for efficient use of the resource and a transparent mechanism for allocation and pricing of spectrum that supports innovation in technology.

Government policy can help bring scale economies and thus reduce costs. For instance, people across the world use services like VoIP (Voice over Internet Protocol) to make cheap or free phone calls using the Internet. As of 2009, these are unfortunately not fully available in India. Rahul Bedi and Harish Krishnan pointed out that Internet Service Providers (ISPs), though keen to provide them, can offer VoIP only partially, which makes the business unviable. VoIP is especially valuable in rural areas where almost all calls are long distance. This is because people with whom they want to be in touch are often away to make livelihoods in other parts of India.

Given the centrality of Internet access in delivering e-governance, Roundtable participants felt that policy makers need to work towards making the ISP business more viable. This does not require subsidies or concessions but removal of restrictions and bringing conditions for ISPs in line with their peers elsewhere in the world.

For instance, ISPs cannot currently resell bandwidth that they buy from telecom operators and put it to optimal use. Similarly, the infra-

**Governments
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pricing spectrum.**

structure of government-owned Bharat Sanchar Nigam Ltd—created from public funds—is unavailable to ISPs to expand their reach. The Telecom Regulatory Authority of India now recognises this. If the government were in accord with this thinking regarding sharing of these publicly funded local facilities, the Internet would grow and help build usage of e-governance services.

Members also noted that there are some incentives—like certain tax write-offs—that telecommunications operators enjoy, but those who put up the rest of infrastructure (like towers) do not. This is inconsistent and hurts those who have a critical role in expanding access to the infrastructure.

Ensuring Sustainability

‘Non essential’ services such as entertainment or banking may not seem to be a part of e-governance, but in India’s model for its roll out via CSCs, operators will use profits from these services to cross-subsidize the commercially less attractive e-governance services. The inclusion of banking and financial services as Mission Mode projects will not just meet an important need, it will also aid the NeGP’s sustainability. Providing governance services alone would not sustain a commercial enterprise. In a sense, the commercial success of the CSCs may eventually decide whether e-governance services can continue. Participants therefore believe that CSCs set up by private entrepreneurs need to run sustainable businesses in the following respects:

- *Financially*—if funds are available to deploy services and meet their operational expenses;
- *Technologically*—if there is access to appropriate technology e.g. Internet;
- *Socially*—if the services are in tune with and meet local needs;
- *Commercially*—if the overall business is profitable enough to justify running it.

While these criteria still may not ensure their success, e-governance services in India’s entrepreneur driven model would not be sustainable if any of these is not satisfied. To expect that intent would be to risk

distortions, like CSC managers allowing less lucrative e-governance services to deteriorate. Accordingly, participants suggested, success of e-governance requires that CSCs have a sustainable business model.

Portal to poll community needs. To get a clear picture of potential demand and revenue, Roundtable participants agreed that a good community needs assessment would be essential. They suggested that an interactive polling portal that allows users to share their priorities and choices would help to keep the system relevant and useful by fine-tuning the output of NeGP. With innovation, NeGP can provide more powerful and creative services and try other business models. A portal-based community needs assessment will prevent many avoidable mistakes and mitigate other possible risks of mistakes in e-governance implementation.

Success of e-governance requires that CSCs have a sustainable business model.

Improving Management and Capacity Building

Mr. Jainer Singh drew attention to the need for training in the use of ICTs. The majority of users—whether government bureaucrats or rural citizens—need this support. This requires design of robust, powerful, but simple and intuitive interfaces for applications and services. A challenging task, this deserves focus, resources, and above all priority.

Capacity building is as important an issue for government staff as well. There is a need for a higher degree of interdepartmental coordination. Old mindsets and fear of change frequently prevent government staff from pursuing e-governance aggressively. All of this requires working with experts in human resources.

However, capacity building must be kept in perspective. Elaborate training is rarely necessary. As the absorption of mobile phones has proved, people have innate strengths that they can call upon to learn technologies. Similarly, participants recalled that stockbrokers had little problem moving to the new 100 percent paperless stock market.

Leveraging Public-Private Partnership for E-Governance

Importance of PPP: Bringing all resources to bear

The public-private partnership (PPP) is a powerful device to roll out e-governance speedily and effectively. E-governance projects often involve large numbers of users and can be cumbersome and expensive. Private players bring investment, flexibility, and expertise.

The private sector also brings unique strengths because of their experience in the marketplace. Competition requires them to deliver results with tight budgets and schedules. They normally have higher levels of commercial flexibility in what they do than government bureaucracies. Their participation can therefore contribute to make e-government deployment cost-effective and efficient. Private players also must have a higher level of customer focus to survive in the market. They can therefore play an important role in making e-governance services citizen-friendly. Accordingly, the government of India has invested significantly in partnerships with the private sector to augment its own limited resources and skills.

At the same time, governments bring to the partnership a level of trust that private players do not necessarily have on their own. Tracy Westen suggested that the larger involvement of the Indian government in the implementation of e-governance programmes might be an advantage. A government presence prevents the dominance of private interests visible in delivery of similar services in the U.S. The government can subsidize services that may be beneficial and necessary even though they are not profitable (e.g., voter registration systems in elections).

The Challenges Faced

Krishna Giri, Managing Director-Asia Pacific Public Services at Accenture, said that in his experience with several PPP projects across the world, PPP is rarely easy in practice. Despite their potential and relevance, unfortunately many, if not most, public-private partnership projects fail. A large number of PPP projects require renegotiation in two to three years because players cannot deliver on their commitments.

While both sides bring complementary strengths to the table, they frequently err in estimating the challenges faced by either. In most cases there are differing levels of commitment by different parts of government. In projects where top leadership lacks such commitment, the private partner, a commercial entity, can face delays in feedback, approvals and payments.

Krishna Giri said governments frequently draft one-sided agreements with private players, which, they both later discover, cannot meet their commercial agenda or cash flow needs. Governments are too frequently driven by which private player can deliver at the lowest price and downplay other important factors such as for example, quality, 'after-sales' support, etc. Often private players overestimate the profitability of their projects and must abandon or reduce commitment to the project, thereby putting several other deliverables at risk. Tanmoy Chakrabarty, Vice President and Head of Global Government Industry Solutions Unit at Tata Consultancy Services, said governments often failed to appreciate the PPP issues in e-governance because they are behind most private players in their usage of IT. A social audit, he said, would throw more light on these issues.

Furthermore, PPP agreements frequently do not carry the right incentive structure. The carrot and stick approach is rarely in evidence. The agreements carry heavy penalties for private sector failure to deliver on commitments. It is rare that they have rewards for superior performance or faster delivery. This is no less of a problem for government staff. There are few incentives for them to take initiative or work towards the success of PPPs and little support when projects begin to fail. Indeed perceived commitment to private sector partnerships sometimes raises suspicions of a conflict of interest, which even if not proven, can hurt their career path.

In addition, PPP agreements can stress too much on timely delivery but less on the associated quality of work. This inevitably leads to problems in ensuring reliability and continuity of services and leads to a loss of trust in the system itself, which hurts e-governance much more.

Whatever the nature of PPP arrangements, government will have a role in expanding infrastructure. For this, it will have to remain the player of last resort. Unless government steps in, e.g., by expanding the scope of the Universal Service Obligation Fund to include support

for such infrastructure, the long-term sustainability of the programme may be difficult.

Krishna Giri suggested that PPP can work better, in a more considered system, with a better incentive structure. All partners—both private sector and bureaucrats—will need these incentives. In addition, government staff would need the relevant training and empowerment to work effectively in complex negotiations that PPP frequently involves.

Singapore, Sweden, Denmark, Canada and UK have been especially successful in their handling of PPP projects. International experience shows that the challenge in PPP is rarely in the initial period; problems surface down the line in subsequent years. Mid-path corrections at that stage are expensive, if they are possible at all. Given the different motivations of government and private players, failure is common. Backup plans and other risk mitigation strategies are therefore critical.

Reinventing PPP

India faces a unique dilemma. Unlike in most other countries, India's NeGP depends crucially on the success of PPP since it needs the partnership for both technical and business expertise. The organization also relies on private funds to create the massive infrastructure required for e-governance. Success will require a much higher level of comfort between the government and its partners. Indeed, the stakes are high enough to require appropriate incentives for public servants to help move faster on a strategic policy objective like e-governance.

As Mr. Subodh Kumar of the Department of Telecommunications reminded the group when they met with him in New Delhi following the Aspen Roundtable in Goa, governance issues themselves sometimes come in the way of success of PPPs. In a litigation-prone and contentious environment governments tend to over specify PPP arrangements to prevent controversies later. To avoid allegations of favouritism, they auction virtually all contracts based solely on price and leave little flexibility to renegotiate if circumstances change. This in turn favours reckless bidders who may delay or risk the whole programme. PPP conditions therefore frequently hurt serious players more.

With so much at stake, India will need to review its PPP arrangements more comprehensively. It will need to reconcile the many different interests at work. This will require clarity of purpose and considerable creativity.

Conclusion and Recommendations

The Government of India's National e-Governance Plan (NeGP) is visionary, ambitious, practical and detailed. It recognizes the importance of public and private agencies to come together to deliver the full potential of a participative democracy visualized in India's Constitution.

E-governance is an opportunity to offer services online and transform government. A working e-governance infrastructure can improve delivery and extension of government services to people who never had them at all. Indeed it can transform the processes themselves, and can ultimately lead to a more legitimate and engaged democracy. For e-governance to succeed, however, all stakeholders must perceive its value and have an incentive to collaborate. Meaningful engagement between citizens and government will also require transparency and innovation at all levels.

The rollout of effective e-governance requires concerted action by stakeholders at all levels. Some very specific steps could make a significant difference. They could reduce costs by bringing economies of scale and scope. They could help remove challenging bottlenecks that prevent citizens from benefiting from the full potential of the e-governance programme. And, they could help meet even more challenging policy goals by enabling access to people who are difficult to reach.

The recommendations below are structured around four 'organizing principles', viz. Partnerships, Infrastructure, Applications, and Reform.

For e-governance to succeed all stakeholders must perceive its value and have an incentive to collaborate.

Partnerships

India's e-governance strategy is different from others in its critical dependence on the private sector at many levels. For instance, the Common Service Centres (CSCs) could be set up and staffed by private entrepreneurs. Much of India's telecom infrastructure has been created by private players. This places additional demands on government to ensure that the agenda of public and private stakeholders is effectively reconciled. Without a robust effort to do so, citizens' access to critical services could be compromised.

The Roundtable explored the role of public-private partnerships in fortifying governance through strategic use of Information and Communication Technologies (ICTs). For long-term sustainability, only 'win-win' arrangements, where both sides have incentives and mutual accountability, will suffice. Government agencies dealing with private companies would do well to recognize the potential of "carrot and stick" approaches, not just for private players, but also for creating incentives and accountability within their own staffs.

The Roundtable suggests that e-governance would expand best if:

- *Government focused its public-private partnership strategies on acceleration rather than for initial funding of e-government infrastructure.*

The private sector can bring much more to e-governance efforts than contribute funds to augment government resources. For instance, the private sector is more often used to optimize costs and time by effective monitoring of processes.

- *Government adopted reforms in procurement policies.*

Several policies adopted by government may be more suited for procurement of goods rather than for offering services in partnership with private players. The new regime should strike the right balance with government's role as a client, a stakeholder, and a partner.

- *Contracts were consistently enforced for effectiveness and timeliness.*

Contracts can be effective tools for ensuring the appropriateness, timeliness, and quality of deliverables identified in them. If they

are enforced fairly and consistently, they can provide adequate incentives for the relevant parties to deliver on their commitments. If not, they do not just compromise services and their users or cause losses; they also deter serious players from participating. This makes failure of PPP a self-fulfilling prophesy.

Infrastructure

Multiple Languages. There is a formidable challenge in delivering e-governance services to people in the many languages and dialects spoken throughout India. There should be a national level initiative to create a ‘translation infrastructure’ that can provide multiple language capability to applications and services, irrespective of the language interface used in their creation. Software alone cannot accomplish this, but by using India’s strongest asset, its people, a “wiki” style solution is possible. By employing agreed standards that the NeGP already prioritizes, such a common shareable infrastructure and approach could save much time and money for developers of applications for the e-governance system.

Energy. ICTs can potentially reduce energy costs and improve the quality of the environment. By the use of new computer chips and other energy-efficient measures, now commercially available and built to international standards, power saving equipment can be installed in the approximately 100,000 kiosks or Common Service Centres being set up under NeGP. This will make CSCs more economical and sustainable in rural areas where power supply is insufficient and unreliable. Additionally, by reducing energy needs, this equipment could make solar energy more viable.

Leveraging current networks. The existing national network of post offices and schools can be leveraged creatively to deliver diverse goods and services in the NeGP by modifying provisions that hinder or prevent public or private agencies from housing these networks there.

Applications

The utility and credibility of the e-governance programme requires ready availability of government services in CSCs. But the CSCs, run

by private entrepreneurs, will need to cross-subsidize these services with profits from other e-services. And unless CSCs maintain sustainable businesses, it is likely that their provision of e-governance services will degrade. Focused measures are essential for faster development of applications of interest to rural populations—such as mobile finance, education, and entertainment—where demand and interest is high. A polling portal, which elicits responses from the public, could help to identify the nature and size of demand for these or other services.

Reforming government policies and processes

The role of government extends beyond enabling many processes for e-governance and using the latter's infrastructure to deliver public services. It should help to create an environment conducive for non-government stakeholders to provide and support the many services of interest to citizens. Government's procurement norms—targeted on securing the lowest price from suppliers—must be brought in line with world best practices to include quality of service. They should include safeguards against delays and breach of promise for private suppliers.

The government could appoint a Countrywide Information Technology Officer (CITO) to streamline processes and norms within and across the Department of Administrative Reforms and the Ministries of Communications & IT (MOCIT), and Rural Development. The CITO could spur co-ordination and innovation across government and also monitor quality of service, deadlines, etc.

MOCIT should remove existing barriers and anomalies in policies that are hurting the growth of Internet and broadband services that citizens will need to access most services. Accordingly, the Roundtable proposes the following reforms:

- Internet Service Providers (ISP) face controls on services like Internet telephony. These services need to be fully deregulated. Similarly, ISPs find it difficult and expensive to access existing infrastructure created by BSNL using public funds. Providing access to this publically funded infrastructure, perhaps through unbundling of the local loop, is a critical first step.

- The unspent resources of the Universal Service Obligation Fund (USOF) are currently available to telecommunications operators setting up rural infrastructure, but not to other players that are contributing to the same effort. USOF benefits should be extended to all engaged in building rural infrastructure, e.g. towers, to bring it in line with CSC goals.

In sum, the Roundtable appreciates the aspirations and first steps that the Government of India and many of the States have already undertaken for e-governance. By pushing forward with modest reforms in communications policy, procurement, and PPP policies, and by combining innovative ideas with the creativity and industry of the Indian people, this laudable effort will be more likely to succeed in the long run.



Meetings in Delhi with Indian Government Officials

Immediately after completing its meeting in Goa, many of the Roundtable participants traveled to New Delhi to present their recommendations to government representatives. The group held meetings with:

Mr. Ashwani Kumar, *Minister of State, Ministry of Commerce & Industry*

Mr. Jainder Singh, *Secretary – Department of IT, Ministry of Information Technology with members of his staff including the Additional Secretary, Mr. S.R. Rao.*

Mr. Subodh Kumar, *Additional Secretary – Department of Telecom, Ministry of Communications*

Mr. Prithviraj Chavan, *Minister, Ministry of Personnel, Public Grievances & Pensions*



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9. After the Roundtable, Intel kicked off a team as part of their social entrepreneurship program to explore the creation of the translation infrastructure. This team has been exploring various options through which existing technologies can be coupled with the power of the citizens and help create a business model which can be scaled across the country.

APPENDIX



Aspen Institute India in partnership with the
Aspen Institute Communications and Society Program

Joint Roundtable on Communications Policy

E-Gov India: Public Private Partnerships to Bring Government Closer to the Indian People

February 13-15, 2009 • Goa
February 16, 2009 • New Delhi

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About the Author

Mahesh Uppal is the Director of Com First (India) Private Ltd., a niche consultancy company based in New Delhi, India, that specializes in policy, regulation, and strategy.

He has 20 years of experience in telecommunications. He advised several national and international corporations on emerging regulatory issues such as spectrum, competition, and industry structure. He also has consulted for international development agencies including the World Bank, the International Telecommunication Union, the United Nations Development Programme, the Canadian International Development Agency, and the International Development Research Centre. He also advised several governments on telecommunications policy and regulatory issues and worked with civil society organizations in India to build capacity in dealing with consumer issues in a market-driven telecommunications environment.

He was actively involved in the formative years of regulation and competition in India's telecommunications sector. He contributed extensively to the process of creating the Telecommunications Regulatory Authority of India (TRAI), India's first market regulator.

He was educated at St. Stephens College in Delhi, the Indian Institute of Technology in Kanpur, and City University in London. He was part of the research staff at the Indian Institute of Science, Bangalore; Heriot-Watt University, Edinburgh; Cambridge University; and Sussex University at Brighton in United Kingdom.

About Aspen Institute India

www.aspenindia.org

In collaboration with the Confederation of Indian Industry (CII), the Aspen Institute launched its newest international partner with the opening of the Aspen Institute India in New Delhi on February 3, 2004. Aspen Institute India is a nonprofit organization dedicated to in-depth discussion of global issues; development of leadership based on values; and a high-level exchange of opinions, information, and values.

The Institute focuses on the most important problems and challenges facing Indian society, the business community, and the individual, inviting top industrial, economic, financial, political, social, and cultural leaders to discuss these issues in reserved settings that encourage frank and open debate.

Aspen Institute India pursues its objective by organizing value-based leadership seminars, policy programs, and public activities.

About the Communications and Society Program

www.aspeninstitute.org/c&s

The Communications and Society Program is an active venue for global leaders and experts from a variety of disciplines and backgrounds to exchange and gain new knowledge and insights on the societal impact of advances in digital technology and network communications. The Program also creates a multidisciplinary space in the communications policymaking world where veteran and emerging decision makers can explore new concepts, find personal growth and insight, and develop new networks for the betterment of the policy-making process and society.

Ongoing activities of the Communications and Society Program include annual roundtables on journalism and society (e.g., journalism and national security), communications policy in a converged world (e.g., the future of video regulation), the impact of advances in information technology (e.g., “when push comes to pull”), advances in the mailing medium, and diversity and the media. The Program also convenes the Aspen Institute Forum on Communications and Society (FOCAS), in which chief executive-level leaders of business, government, and the nonprofit sector examine issues relating to the changing media and technology environment.

Most conferences utilize the signature Aspen Institute seminar format: approximately 25 leaders from a variety of disciplines and perspectives engaged in roundtable dialogue, moderated with the objective of driving the agenda to specific conclusions and recommendations. In 2007, FOCAS emerged as a larger event.

Conference reports and other materials are distributed to key policymakers and opinion leaders within the United States and around the world. They also are available to the public at large through the World Wide Web at *www.aspeninstitute.org/c&s*.

