

DIGITAL INDIA

CONTENTS

<i>Dedication</i>	<i>v</i>
<i>Foreword</i>	<i>ix</i>
<i>Reviews</i>	<i>xi</i>
<i>Preface</i>	<i>xiii</i>
<i>Acknowledgements</i>	<i>xv</i>
<i>How to use the book</i>	<i>xvii</i>
<i>Abbreviations</i>	<i>xix</i>

PART 1

e-Governance Concepts and Practices

1 Introduction	3
2 Historical Developments National e-Governance Plan	18
3 Digital India	24
4 State Enterprise Architecture	38
5 Planning for e-Governance projects	76
6 Initiating e-Governance Projects	90
7 Administering Contracts for e-Governance Projects	105
8 Legal and policy framework for e-Governance project implementations	126
9 Project Management, Monitoring and Control	157

PART 2

e-Governance: Managing Change and Case Studies

10 Change management during e-Governance Project implementation	185
11 Case Studies in e-Governance project implementation and lessons that can be learnt	233
12 m-Governance (Mobile Governance)	367
13 Moving beyond m-Governance –The Digi-road ahead!	383
14 Practical insights for change champions and project leaders	403
Annexure–1	
List of major re-usable e-Governance software solutions from NIC	415
Annexure–2	
General references and recommended reading	419

REVIEWS

It is a comprehensive book on e-governance at the appropriate time when the government is taking various initiatives under Digital India to transform the government service delivery to citizens. It is providing practitioner perspective to various stakeholders and extending very valuable tips on project management, monitoring and control. I hope the book will contribute significantly in efficient and effective execution of e-governance projects in the country for transforming the functioning of government entities and their service delivery model.

P K Purwar

CMD & Director (Finance)

Mahanagar Telephone Nigam Limited (MTNL)

An exhaustive body of work that still provides a concise introduction to application of digital technology in governance. A wide variety of topics are covered and this can become the treatise on developing digital systems in governance. The treatment of project management is particularly fresh and will benefit every project manager in today's context. A novel way of treating the subject with exhaustive pointers to specific solutions. Well done.

Lakshmi Narayanan

Founder, Cognizant Technology Solutions (CTS)

Introduction

Role of Government

The role of government in any country is to formulate policies and enact legal regulations to take the nation on the path of progress and to ensure that every individual's right to freedom and equality is protected. Through both short term and long term planning, governments create internal focus on development and ensure growth with equity among all sections of society. It is the duty of every democratic government to ensure that basic amenities are available to citizens. While building vital infrastructure for the nation's growth, good governments ensure that both the public and the private sectors play a dynamic role. It is also the mandate of every government to maintain law and order and safeguard national security.

Government vs Governance

Government is defined as 'A group of people that govern the community, or unit. It sets up and administers policy and exercises executive, political and sovereign power through customs, institutions and laws within the country'¹ (or state). There are various types of governments namely republic, monarchy or dictatorship etc.

Governance is defined by the World Bank as 'the manner in which power is exercised in the management of a country's economic and social resources for development'. Governance is also defined as 'establishment of policies, continuous monitoring of their implementation, by the members of the governing body of the organization. It includes the mechanisms required to balance the powers of the members with the associated accountability and their primary duty of enhancing the prosperity and viability of the organization'². This definition is applicable across several types of organizations—be it a company or a government. It is the process of governance simply.

In essence it can be said that the government is the 'structure' and governance is the 'process'. In order to enhance governance, governments across the world have been embracing the following goals and objectives:

- Service orientation—to make government more customer-friendly and service-conscious. Instead of being focused only on government departments, a move towards citizen-centric approach is desired and in a way demanded!

- Productivity enhancement—being more efficient and effective and to provide more services without having the need to increase taxes. Review of key processes, eliminating and streamlining wherever possible, are undertaken.
- Market alignment—making use of market-style strategies (similar to the way private enterprises are managed) and incentives to drive public policy, privatization. This also is aimed at attracting the investments in the state or Country to boost economic activity.
- Decentralization—breaking up the bureaucracy, empowering smaller agencies for effective performance delivery.
- Separation of policymaking and service delivery—This approach eliminates a potential conflict on intentions and improves policymaking and monitoring implementation. The service delivery is driven with a specific focus on the customer or end-user satisfaction.
- Once the above are in place, it generates a positive environment. The outcome would be driven by the existence of the following aspects that are critical.
- Accountability—This mainly shifts focus from processes and structures to outputs and outcomes. The government is accountable to citizens and the public in terms of results and benefits derived.
- Sustainability—The long term sustainability of initiatives are considered rather than quick fixes and populist measures.
- Transparency—Making government accountable by designing its operations more transparent thus reducing the opportunities for corruption and out of turn favors!
- Inclusive development—Providing development opportunities for all sections of society, especially benefiting rural and traditionally under-served communities across the country.

Incidentally, the above factors are a must for a democratic country. A country that is focused on economic development and the betterment of its society, would be keeping these as the main agenda for action in its fiscal development plan.

Stakeholders and their changing expectations

The government has various categories of stakeholders to whom it provides different services. These could be broadly classified as citizens (G2C), businesses (G2B), employees (G2E) and other governments (G2G).

Citizens: One of the main stakeholders is the citizens. The citizens have a greater awareness and better access to information due to various technology advancements. Thus they have expectations of effective services from the government. Additionally, due to the demographic profiling, India is a country having a large number of younger population, which is preferring online services and quick turn-around for their needs.

Businesses: The business environment is extremely dynamic and they keep evolving in line with global developments. Indian businesses are no exception. There is a need from the businesses for a faster turn-around time for starting up business or for normal operations, one stop solution and an encouraging environment for growth of businesses. Various state governments compete with each other in ensuring to provide a 'business-friendly' environment in their state, to attract investments.

Employees: The government has to employ, engage and enhance its employees for better performance and effectiveness in service delivery. All the services the government provides right from pre-recruitment to, post retirement cycle for its employees would be covered under this category. It even extends beyond the lifetime of employee, as the Government provides widow pension and medical benefits etc.

Governments: Government to government services could be under several categories: Interactions can be between the departments of the same state government, between state government and central government, between governments of two countries etc. These services may be in the forms simple information exchange to major bilateral agreements for strategic cooperation.

The expectations and the need for the stakeholders are changing continuously to more effective ways of governing. This means there needed to be a paradigm shift in governance from a vicious circle of systemic issues-complexity of operations-inefficiency-high cost to a more virtuous circle wherein reduced complexity-affordability-sustainability play a vital role. In order to achieve these, it is important not only to carry out the administrative reforms but also use technology as an enabler for faster turn-around – thus giving birth to e-Governance (e-Gov).

e-Governance defined

The principle of e-Governance may be the same, but several bodies have defined it using different languages. For the sake of academic understanding, it is good to look at some of them.

It is the transformation of government to provide efficient, convenient and transparent services to the citizens and businesses through Information and Communication Technologies.

e-Governance is the transformation of public sector internal and external relationship through Internet-enabled operations, information and communication technology in order to optimize government service delivery and governance.

e-Governance or 'electronic governance' is basically the application of information and communications technology to the processes of government functioning in order to bring about 'Simple, Moral, Accountable, Responsive and Transparent' (SMART) governance³.

World Bank defines it as: 'e-Government refers to the use by government agencies of information technologies (such as wide area networks, the internet, and mobile computing) that have the ability to transform relations with citizens, businesses, and other arms of government. These technologies can serve a variety of different ends: better delivery of government services to citizens, improved interactions with business and industry, citizen empowerment through access to information, or more efficient government management. The resulting benefits can be less corruption, increased transparency, greater convenience, revenue growth, and/or cost reductions.'⁴

UNESCO defines it as: 'Governance refers to the exercise of political, economic and administrative authority in the management of a country's affairs, including citizens' articulation of their interests and exercise of their legal rights and obligations. e-Governance may be understood as the performance of this governance via the electronic medium in order to facilitate an efficient, speedy and transparent process of disseminating information to the public, and other agencies, and for performing government administration activities.'⁵

The words described to define e-Governance may differ from one another. However there are certain key elements that are common and that actually qualify e-Governance. The key elements are given below:

- Delivers key and tangible business benefits (e.g. reduces the overall cost for the stakeholders, enhances revenues for the department etc)
- Involves new operational framework (e.g. improved processes and organization structure to deliver services like Public Private Partnership (PPP) models)

- Fosters efficient and effective communication internally and externally (e.g. transparency)
- Application of information and communication technology and use of electronic delivery channels (e.g. Internet/mobile or applicable emerging technologies)

It is important to note from the above that e-Governance is not mainly about computers and internet but it is about bringing in a change in the operational framework and thereby delivering tangible benefits to the stakeholder. In that process, use of technology becomes incidental.

Benefits from e-Governance

The basic premise of e-Governance is to bring in effectiveness in service delivery to the stakeholders. In view of this, the advantages are many and these often occur over a period of time depending on the way e-Governance is administered and sustained. Figure 1 gives an overview of such benefits, in a nutshell.

Government service categories

The government in general may be considered to serve four types of stakeholders. These are:

- G2C (Government to Citizen): This deals with the relationship between government and citizens. G2C allows citizens to access government information and services instantly, conveniently, from everywhere, by use of multiple channels.
- G2B (Government to Business): This consists of e-interactions between government and the private sector enterprises. The opportunity to conduct online transactions with government reduces red tape and simplifies regulatory processes, therefore helping businesses to become more competitive.
- G2G (Government to Government): This may be at several levels – between departments within the State, between different states or between state government and central government or between two government agencies, one in the country and the other abroad. Governments depend on other levels of government within the state to effectively deliver services and allocate responsibilities. In promoting citizen-centric service, a single access point to government is the ultimate goal, for which cooperation among different governmental departments and agencies is necessary. G2G facilitates the sharing of databases, resources and capabilities, enhancing the efficiency and effectiveness of processes.

- G2E (Government to Employees): This covers the relationship between the government and its employees – spanning from pre-recruitment to post retirement including the family pension benefits.

Good governance and e-Governance

Governance itself is defined as ‘the process of decision-making and the process by which decisions are implemented (or not implemented)’⁶. Having defined governance this way, the cited paper goes on to list the characteristics of good governance. The characteristics are participatory, consensus oriented, accountable, transparent, responsive, effective and efficient, equitable and inclusive and follows the rule of law. It assures that corruption is minimized, the views of minorities are taken into account and that the voices of the most vulnerable in society are heard in decision-making. It is also responsive to the present and future needs of society. Figure 2 indicates the eight characteristics of good governance for ease of understanding. Thus good governance and e-Governance are closely linked and depend on each other in some ways.

The four pillars of e-Government

e-Government is to be built on a strong foundation with all relevant elements to make it function effectively. As it is said, e-Governance is effective governance, easy governance and also economical governance. The foundation of e-Government has to be on strong legal and policy framework. The four pillars on which the e-Government would rest are people, process, technology and the resources. The same is depicted in Figure 3.

In general, whenever an e-gov project is taken up or executed these four pillars and their corresponding needs have to be addressed. As the legal and policy framework is the foundation, adapting them to suit the requirements of e-Governance is essential. These processes would be covered elsewhere in the book.

e-Governance evolution model

Evolution of e-Governance has been closely linked with the development and evolution of internet. It is also not out of place to mention that the evolution between the two have been almost parallel in some sense.

Figure 4 gives the evolution model of e-Governance. As depicted in the Figure 4 the first stage of e-Governance is just publishing of information about the department. It is a one way communication – just to pass on the information. It is as good as a notice board, but electronic in nature.

The next stage is where there is a possibility to send a query and get a response, leading to an interaction stage. The example could be in the website of Indian Railways, someone is seeking information of a train between two locations on a particular date and the portal would display all the trains between the two locations.

If one train and a particular class of travel (II AC) is chosen, the portal would display the availability of seats, thus the Interaction.

The next stage of evolution includes cash transaction between the user and the department offering the e-Governance service. Continuing the same example of railways above, the user may book for travel based on availability for which the payment will have to be made through an online transfer. This is a case of transaction in e-Governance application. Under this category, there are a lot of departments that enable payment through online modes – like the utility services (state electricity boards, water consumption charges, property tax etc).

The advanced stage of evolution is the transformation stage. In this stage, multiple departments are seamlessly integrated to provide service to the citizen. For example, suppose a citizen is accessing the portal of the tourism department of a state to plan the vacation. Once the citizen chose the location to have the vacation and booked hotel through the state tourism portal, the portal may re-direct to the state transport for booking the travel and then to a taxi hiring portal for local conveyance etc – all these under one sign-on in the state tourism portal. Here several departments like the tourism, transport etc are accessed – thus easing the job of the citizen for his requirement.

Typical challenges confronting e-Governance

As described all through, e-Governance is likely to provide a lot of advantages to the stakeholders and enables the government in multiple ways. But it is not without its own challenges – that are unique sometimes. Typical challenges are briefed here.

Process challenges: e-Governance necessarily involves process improvement, as part of the reforms. This would actually ensure the benefits for the user community, be it businesses or citizens. It actually translates to reducing the number of steps that are involved in rendering the service, making the entire process simple etc. Sometimes, the process improvements will also involve amendments to the prevailing rules and regulations. Thus the basic requirement for e-Governance is the process improvement and it takes time to get this done. But it is not impossible as seen by the results thus far in the implementation of e-Governance programs.

Lack of preparedness: Transforming the governance to e-Governance requires a lot of changes associated with it. This may be in the form of changing the way of working, way of doing the transactions and building in revised systems to provide the services. In terms of all these the preparedness plays a major role. Referring to Figure 3, the preparedness spans across all the four pillars of e-Governance, namely the people, process, technology and resources.

Proper and detailed planning, executing and monitoring of e-Governance project would help to overcome the preparedness challenge. Appropriate change management plan and capacity building activities will take care of the people

dimension to a large extent. Carrying out process improvement and amending the prevailing rules and regulations to suit the revised way of working will address the process angle. To address the technology aspect, efforts should be taken in respect of choice of technology, ensuring connectivity and associated areas. The last area, namely resources may refer to the funding and having the right people to do the transformation agenda. This may be addressed by resorting to seek funding by creative means (public private partnership, funding through World Bank etc) while for the people, enlisting the expertise from private consultants from the industry.

People challenges: The people challenges refer to not only the employees of the departments of the government but also the users and other stakeholders in the entire exercise. Whenever such e-Governance programs are rolled out it creates an uncertainty in the minds of the employees about their future and 'fear of the unknown'. This can be addressed by their involvement in the project right from early stages, which may make the transition easier. With respect to the other stakeholders, an appropriate planning has to be done after listing and analysing the stakeholder needs.

Rural challenges: India is a country with over six lakh villages. Various governments from the time of independence have attempted to address the growth and inclusion of the villages into the mainstream of the country, but with limited success. The challenges of rural Indian villages range from non-availability of potable water to not having electricity to absence of basic health care and so on. In the context of e-Governance the major challenges encountered in rural areas are mainly lack of connectivity of internet, absence of skilled / semi-skilled manpower, and electricity etc. These are being addressed by the government in a focused manner through several programs across the country.

Critical success factors for e-Governance programs

Some of the major challenges have been listed in the previous section. These have to be recognized and addressed while planning and executing e-Governance projects. However, based on the experience of several projects, some lessons have been captured as critical success factors that drive the e-Governance programs. These are listed below and details are provided where necessary.

- Strong political and administrative leadership– conviction and commitment from the leaders, make a defining difference. In many cases, it is one of the main factors that make the program succeed
- Clearly identified goals and benefits – in order to gain clarity quantification or qualification of the tangible and intangible benefits become mandatory

- Significant process reengineering required – improvement in the way processes are done and the new ways of doing them should be different – they need to be effective and efficient
- Detailed project management – drawing a detailed plan with specific milestones, deliverables and measurable outputs becomes a need. Not only monitoring of progress is enough, but also taking appropriate decisions at relevant points is essential
- Ownership by people who are most affected – involvement of relevant stakeholder's right from the beginning of the project and taking the necessary steps to address the concerns play a major role in enlisting the support to ensure success
- Adopt established standards / processes and protocols – minimize customization. Resorting to proven methods of working is preferred. This relates to choice and use of appropriate technology, standards and protocols while designing the e-Governance systems
- In-source analysis, outsource design, software development, data preparation, training, etc. – as needed, the expertise have to be taken from where it is best available – be it in private or government
- Manage change process-unfreeze, move, refreeze – this is a major activity and it needs a separate plan and execution Invest in training all stake holders on application and its use – in other words, capacity building within the government department and also the user community is a must for the success of the program
- Explore Public Private Partnership (PPP) – with several development programs competing for resource allocation (funds), it is a challenge for the government to fund them all. New and innovative business model options have to be explored to fund the programs
- Create awareness of how things have changed for the stakeholders – communication of achievements, changes and the benefits gained thereof is of paramount importance. India being a country of multiple languages, the communication needs to be customized for different regions highlighting the benefits accrued
- I Think big, start small, evaluate and learn, scale up and evaluate – keeping the big picture of national development agenda in mind, various programs have to be conceived. While implementing them, it is preferred to do a step by step approach so that the impact it creates can be assessed and next steps taken. This systematic approach helps to deal with the large scale departmental/organizational change one step at a time – giving time for the

implementors (government) and the users (stakeholders) to fine-tune, improvise and adapt to the new systems and processes.

To continue reading buy the book for 595...