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eGovernance in India - Time to Transform and Make it Participative

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Abstract

eGovernance has been the buzzword during the last decade and a number of innovative projects, making the best use of ICT tools, have been implemented in India. It is a known fact that majority of the projects are started with a lot of fanfare but fail in the long run. There are a number of eGovernance projects which have resulted in huge benefits to both the Government and the citizens. Over the years, the focus under eGovernance has shifted from pure automation to process re-engineering with emphasis on the “e” rather than the “Governance” aspect, which is the underlying principle for eGovernance. Some new ICT models of service delivery have emerged in the private sector, which have proved beneficial to both the citizens and entrepreneurs. These models could be adapted in the Government sector. This paper studies the various models of eGovernance, major ICT projects implemented across the country during the last 10 years, key-learnings and suggestive methodology to follow in future so that the citizens of India benefit the most from eGovernance initiatives through participative governance. The new generation will espouse the digital mantra of “Jan-Dhan, Aadhaar and Mobile”-the JAM trinity.

Keywords- eGovernance, digital India, citizen service, transformation, participative

I. Governance And E-Governance

India has the advantage that while industrial or green revolutions took place in other countries and we had to wait to reap their benefits, the ICT revolution took no time to reach India. We are soon going to have the largest mobile network, smart phones and Internet users in the World. Since the Y2K bug bit the advanced nations, India has been addressing the ICT requirements of other developed nations of the world on a regular basis.

The Government sector in India has been part of the ICT revolution and a number of initiatives were implemented as per technology advancements over the years. Starting with simple computerisation of repetitive tasks, the focus shifted to governance aspects and then from client/server technology to the Cloud of today. This shift came once the Internet was well in place around the year 2000. The word “eGovernance” is often confused with the word “eGovernment”. eGovernment refers to the processes and structures which are required for the delivery of electronic services to the citizens, employees

and businesses facilitating electronic transactions, which are a pre-requisite for eGovernance. But eGovernance is effectively the usage of electronic means in the interaction between the Government and citizens/ businesses/ employees and in internal Government operations to simplify and improve the democratic, government and business aspects of Governance [1].

Good governance is at the core of eGovernance too and it means the process of decision-making and the process by which decisions are implemented or not implemented. Application of advanced ICT tools is not going to benefit the intended users unless the objective is good governance. It is usually equated with SMART Governance and has the features given in Figure-1 [2].



Figure-1: Characteristics of good governance.

II. Methodology

To study the impact of eGovernance during the last 10 years in the country, various stage models are presented first to highlight the features of eGovernance vis-à-vis Good Governance. Every eGovernance initiative in the country is covered in the eTAAL¹ central portal where transaction count of all eServices is reflected by directly integrating the eTAAL portal with the individual services of all Central/ State Governments. Also, the national eGovernance plan of DeitY lists 31 Mission Mode Projects being implemented at Central and State levels. The implementation of some of these MMPs in States has been studied by covering G2C, G2B and G2E services offered and analysed in tandem with the eTAAL counts to review the status of eGovernance in the past decade and identify the issues and challenges which must be addressed to offer participative and transformed

¹ National e-Transaction count at <http://etaal.gov.in>

governance to the citizens. A suggestive ICT solution has been proposed under Way Forward, which may appear more theoretical at this time but is very much achievable, taking a clue from the success of Aadhaar, Jan-Dhan and DBT schemes. The UN's eGovernment Survey 2014 has been analyzed in view of the manifold growth of Internet penetration in India.

III. Models of E-Governance

A number of eGovernance models, proposed by different authorities, are available on the Internet since the year 2000. Comparative studies have been undertaken to evaluate these models. For the purpose of this study, these models are listed in Table-1, as the last decade has seen a number of eGovernance initiatives based on one or more of these models. Understanding these models will help in proposing the way ahead for us [3].

Table-1: Stage Models of eGovernance

Stage Model	Year	Concepts
Gartner Group	2000	Information, Interaction, Transaction, Transformation [4]
Deloitte Research	2000	Information, Integration, Transaction, Streamlining
Layne & Lee	2001	Information, Integration, Transaction, Transformation
Hiller & Belanger	2001	Information, Interaction, Integration, Transaction, Streamlining, Participation, Involvement in decision-making
Scott	2001	Information, Interaction, Integration, Transaction, Participation, Involvement in decision-making
United Nations	2000-2008	Information, Interaction, Integration, Transaction, Participation, Involvement in decision-making
World Bank	2002	Information, Interaction, Transaction
Netchaeva	2002	Information, Interaction, Integration, Transaction, Participation, Involvement in decision-making
Accenture	2003	Information, Transaction, Transformation
West	2004	Information, Transaction, Streamlining, Participation, Involvement in decision-making

Siau & Long	2005	Information, Interaction, Transaction, Participation, Transformation, Involvement in decision-making
Anderson & Henriksen	2006	Interaction, Integration, Transaction, Streamlining, Transformation

An interesting fact noticed in these stage models is that most of the models include information, interaction, integration and transaction stages. The later models (including Gartner model of 2000) stress more on streamlining of processes, citizen participation in decision-making and transformation aspects. Therefore, it is an important point to make the citizen participate actively in the governance process and the Government needs to streamline and re-engineer its processes to provide efficient, timely, corruption-free and convenient services to citizens.

IV. Decade Of E-Governance in India

The year 2005 saw a number of Government websites already in place offering information and interaction to the citizens in the form of downloadable forms, functions, contact information, schemes, procedure to avail the benefits or services from offices, email based interaction etc. The payment gateways were becoming popular during this year. Therefore, the transaction stage was to come after 2005. The integration of services or data came after the transaction stage. Technology was changing fast at this point of time with cheaper computers, higher Internet band-width and accessibility, switch from VSAT based connectivity to fiber optics, cheaper and large capacity storage, conversion of client-server software into web-based software due to availability of additional features/ new software languages and connectivity.

The Government has been able to offer new services, like land record copies, welfare pensioners' pension through bank accounts, salary and pension into the bank accounts of employees, budget preparation to its distribution and final submission of bills, bill payments, bus and hotel bookings; by using online payment modes.

The Election Commission of India has done excellent work in generating the electoral rolls and keeping these updated on regular basis. The ECI has also developed ICT solutions for candidate nomination and results' compilation. However, ECI has been reluctant to use the same electoral rolls and other solutions for all kinds of elections in the country. The State Election Commissions of various State Governments are responsible for holding election to urban and rural bodies under the Panchayati Raj Act. These elections are also held every five years. Logically, when electoral India is one, it should be able to generate electoral rolls for all elections [5].

The year-wise progress against the stages of eGovernance

is given in Table-2.

Evaluation of successful projects has been undertaken to analyze the outcomes vis-à-vis the project benefits/targets. The NISG report says that only 15% eGovernance projects have been successful with 35% being total failure and 50% being partial failure². Similarly, majority of the websites or portals direct the citizens to other links for services which turn out to be systems which accept online applications but force the citizen to submit hard copies by post or in person and service delivery is through manual modes.

Table-2: Year-wise stages of eGovernance

Years	Concept	Services
Before 2005	Information and Interaction	Websites, Client-server technology based back-end office automation software for specific work areas within departments
2005 to 2010	Transactions	Introduction of payment gateways, web-based software for public and intra-office operations
2010 to 2013	Integration	Web-service based data exchange among various software and departments, web-portals, eProcurement
2014 to 2015	Participative and transformative	MyGov, Mobile Apps, inviting ideas from citizens, cloud based hosting of applications, Jeevan Pramaan, Direct benefit transfer scheme, AEBAS, ORS

Many initiatives to facilitate eGovernance have been initiated through central funding and these are listed in the Table-3 [6].

Table-3: eGovernance Facilitators

NeGP	The NeGP has been formulated by the Department of Electronics and Information Technology and Department of Administrative Reforms and Public Grievances in the year 2006. It aims at improving delivery of Government services to citizens/businesses and to ensure efficiency, transparency and reliability of such services at affordable costs at the door-step of the citizens.
SWAN	State Wide Area Networks to connect all Government offices for reliable connectivity for back-office ICT operations
SDC	State data centres in all States for local hosting of web-applications with DR sites

MMPs	Central: eOffice, IVFRT, UID, Pension, Banking, Posts State: MCs, CCTNS, PDS, Health-MCTS, NRHM, ePanchayat, eDistrict, NLRMP
CSC	Common Service Centres at Panchayat level in rural areas of the country.
Mobile Seva	The m-App Store currently hosts over 240 live mobile applications to provide various services to citizens on their mobile phones/ tablets.
Recent Initiatives	MyGov citizen portal of Prime Minister of India, Digital India, Jeevan Pramaan, AEBAS, Aadhar Enabled Payment system (AEPS), eKranti for linking remote villages with Internet, Meghraj-Cloud, Online OPD reservation system in Hospitals.

The UN survey on eGovernment 2014 puts India in the middle category with scores between 0.25 to 0.50 in the eGovernment development index which comprises of 3 indexes of online services (OSI), telecommunication infrastructure (TII) and human capital index (HCI). India has good scores of 0.54 and 0.47 in OSI and HCI but a low of 0.14 in TII [7]. However, the Internet user base in the country is growing fast with an increase in the smart phone users who use Internet from mobile phones which will naturally push the TII up. The number of internet users in India would have reached 354 million by the end of June 2015. The latest figure indicates that India has more internet users than the population of the US and has become the second largest country in terms of the number of internet users after China. According to a report published by the Internet And Mobile Association of India (IAMAI), the internet users in India have grown by 17% in the initial 6 months of this year, adding 52 million new users. Almost 60% users access Internet through their mobile phones now. This will definitely improve India's rating in the eGovernance in near future.

In the last 3 years (since eTransaction count was started in the year 2012-13), the electronic transactions have tripled in the year 2015 as compared to the year 2013 and are steadily increasing, as shown in Figure-2.



Figure-2: Electronic transaction count for last 3 years.

² Website at http://www.nisg.org/docs/539_Report.pdf

V. Issues and Challenges

Some key issues, posing serious threat to the success of eGovernance initiatives, are listed below:

Digital Divide: You are reaching the national capital in an airplane or train and need a taxi to reach your place of stay. Minutes before disembarking, start the taxi booking application on your smart phone and the taxi is waiting for you at the departure terminal. The App even tells the number of small or big taxis available near your GPS location, the time it will take to reach you, your telephone number to the taxi driver. You don't have cash or change to pay to the taxi driver. No issue. It is automatically deducted from the amount you may have added in the taxi App. The bill / receipt is mailed to your Email account. Unbelievable some years back! But do we have such facilities in the majority of rural areas or smaller towns? No. Although, the Government has set up Common Service Centres in all Panchayats of the country, their actual functioning and the services offered, need to be revamped to address the digital divide, which is the objective of these CSCs.

Lack of opportunities and/or interest for citizen participation: Except for the recent initiative of the Hon'ble Prime Minister <http://mygov.in>, there is reluctance both on the part of the Government as well as the citizens to be active partners in the Governance process. The "e" in Governance is capable of providing easy citizen participation in the Government decision-making process. As of now the citizen participation is through elected members of Lok Sabha, Vidhan Sabha and Panchayati Raj Institutions. The elected members make all the decisions once they get elected and citizens keep waiting for the next cycle of election to have their active say, even if it is a small request/requirement for construction of a bridge at a particular place on a river flowing from their own village.

Internet connectivity: It remains one of the major issues and will remain so for the coming years too as the new applications are becoming more bandwidth hungry because of new features and functionalities being offered to citizens by private players. Connectivity along the National highways and in the urban areas is best, but the smaller towns/ villages are still out of this net.

Political leadership: Aadhaar coverage should have been 100% by today but for the resistance from some State Governments or political parties. National interest is deliberately ignored for smaller political gains.

New Set of Rules and Acts: Government process re-engineering is an integral part of eGovernance. But do we need another set of rules or acts to match every GPR being introduced to facilitate citizens? As a result, the number of new rules and acts are confusing everyone. Simple Government orders should suffice for stakeholders. Google Maps, which is such a popular and useful tool

now, could never see the day of light, had it not resisted the objections of World Governments.

Lesser industry partnership: The National Informatics Centre provided the initial support to Central & State Governments in all their computerisation activities since the year 1975. However, due to wide-spread use of ICT in Government sector after the year 2000, private sector is now actively associating itself with various eGovernance initiatives. But their role is either advisory (consultative without accountability) or limited to software solutions.

Plenty of eGov champions: Due to short tenure postings, everyone needs a new eGovernance initiative every year during one's short tenure of posting. The larger good is ignored for smaller, short term gains resulting in a number of small eGov initiatives which routinely go out of service after the eGov champion gets transferred.

Lack of citizen literacy: Education itself will address a number of eGovernance issues and the citizens will become more demanding. As of now they are either careless or become too aggressive in their actions. A case in point is that of change of vehicle number plates with high security plates. No one has questioned why these plates are not fixed on all vehicles all over the country or why they needed to be changed at all.

Resistance to change: Government officials still resist any attempt to introduce ICT systems in their work place. Earlier Bank employee unions resisted the efforts of management for computerizing their operations. Today, banking is streamlined and customers are better served.

Missing back-end office automation: ICT solutions have evolved over the years and integration of various services with front end citizen interfaces has been possible. However, in the absence of robust back-end computerisation of individual office functions, such schemes often fail.

Inter-operability: It has been an issue but now it is being addressed through web-services. Still, heterogeneous systems necessitate adherence to eGovernance standards.

VI. Futuristic EGovernance Model

Every citizen of India has a right to be part of the Governance process and every citizen is being given a unique ID in the form of Aadhaar or NPR. The citizens move from one place in the country to another for livelihood, studies, family circumstances etc on regular basis. The corresponding addresses of citizens change on regular basis. This requires changes in driving license, vehicle registration, PAN card, election ID card, ration card, Aadhaar itself, Passport etc. Similarly, citizens need to apply for various certificates/services or seek permissions from Government offices and they need to pay bills on regular basis. They also have grievances or issues which require redressal. During the last decade, online services have been introduced in silos for different

kinds of services.

The ideal scenario is to ensure that all online services take the unique ID (Aadhaar or NPR) of the citizens as the first step to get their name, father/mother/husband/wife name and present correspondence address from a central database. This ID is embedded in every service/job application/ permission/ certificate and a copy of the service delivered is stored in the Digital Locker (or other similar wallet) of the citizen. This record will be useful for the citizen and the Government alike. Further, expanding the example of the change of address of a citizen, the citizen need only apply for change in address

of the unique ID (Aadhaar or NPR) and all documents issued under the new scheme will have linkage to the correct new address and paper copies need not to be re-issued.

Taking this scenario further, citizens need only to give their unique ID and verify it through their biometrics, as is being done in the Aadhaar Enabled Biometric Attendance System. In some cases, this unique ID will be fetched directly from the vehicle number or driving license. The Figure-3 demonstrates the information flow in this model.

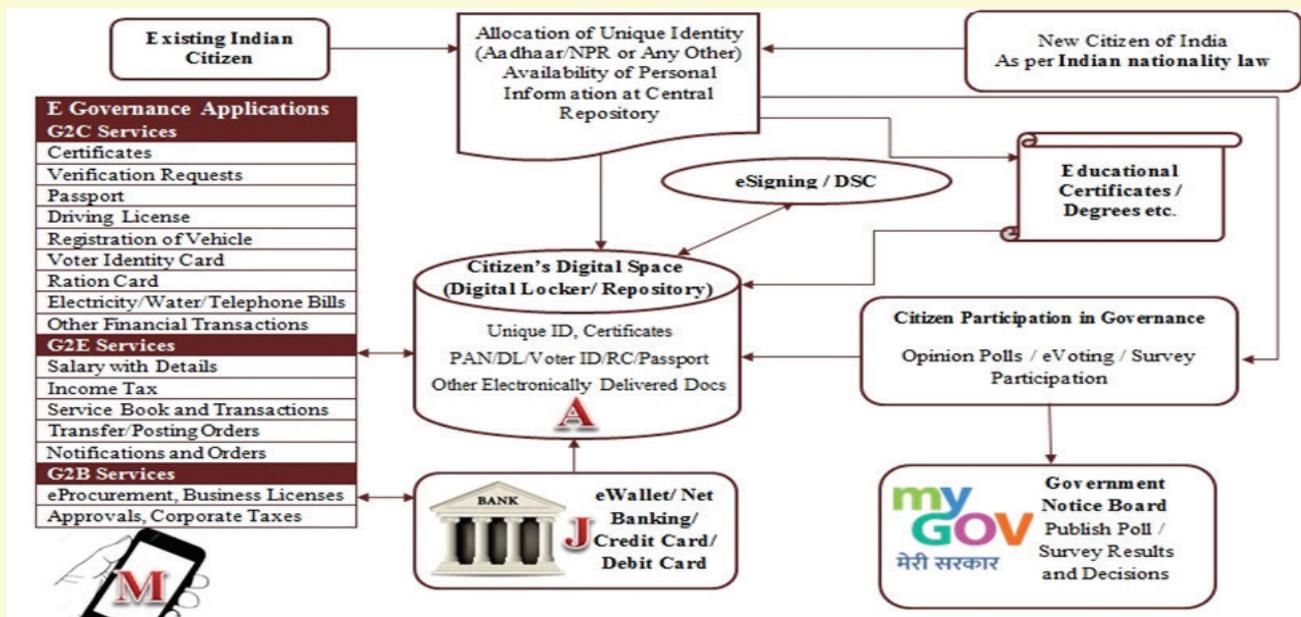


Figure-3: Futuristic paper-less eGovernance model.

There will be requirement of payments for various services like bill payments, application fee, service charge, toll tax payments etc. In case a bank account of the citizen is linked (as done in case of gas subsidy), the payments to Government and citizens by the Government can simply be routed through this bank account. No paper money will be required. A person driving on the national highway will not have to take money out. The vehicle registration number having linkage to the unique ID of the citizen (who will have the linked bank account number and mandate to auto-pay) will ensure toll payment reducing the stopping time. There will be absolutely no need of any paper documents ever!

Citizens will also be able to participate in the Governance process through online surveys, opinion polls, location based questionnaire to select groups. The Government will need to publish the results of such surveys and inform the citizens about the basis for its decisions. Because of the unique ID, the chances of fraud or mis-representation will be negligible. In effect, Government will disappear from people's everyday lives and will be visible through the delivery of its services and their outcomes as per the

requirements of the citizens [8].

VII. WAY FORWARD

The futuristic eGovernance model introduced in the last section may take some time to become fully operational. However, there are certain points which will have to be adhered to by the Government systems so that the overall direction of the eGovernance in the coming times is in synchronization with the futuristic model.

Offer platforms to citizens to participate in Governance: Invite suggestions from citizens on Email and publish of these on the website. Increase the citizen participation by conducting opinion polls or online surveys for citizens.

Take a final call on Unique ID of citizens.

Address digital divide: Efforts to address the digital divide need to be strengthened and supported by the Governments at all levels because 69% of the citizens are still living in rural areas despite a proportionate increase in the urban population during the last census of 2011 ¹.

No need to visit offices: Besides the time and money

¹ Census of India 2011 website at <http://censusindia.gov.in>

of citizens being saved, lots of corrupt practices will be stopped and government functioning will become better.

More mobile apps: These are easy to use as you don't need to remember multiple Ids or passwords and the interface is easy to use.

Let's not overdo it: Every bank is asking for Aadhaar of account holders. Whosoever gives it, gets another surprise when the gas subsidy goes to the latest bank account which gets linked to the Aadhaar of that individual.

Industry participation in service delivery: It is being done in the case of VISA issuance by US Embassies in India or by the CSCs for Government services on payment basis to ensure quality service at lesser cost and time.

Make it simple: All good and popular things are simple. The Google maps are so easy to use because of its interface. Processes need to be changed so that anyone can understand and make use of it. The online tourist permits for visiting Rohtang Pass in Himachal Pradesh get exhausted within 15 minutes of their being opened to public. There is a limit on the number of vehicles visiting Rohtang on daily basis. The service is mostly used by taxi drivers. They just need a mobile phone and Internet to get a permit on their mobile phone, which can be shown at the Barrier as proof of permit (where there is no connectivity as of now to verify its validity through web)².

Transform service delivery system: Try changing application and approval process for every service being offered to the citizens by issuing necessary orders and integrate service delivery systems, including participation of citizens, businesses, as per Gartner model in Figure-4.

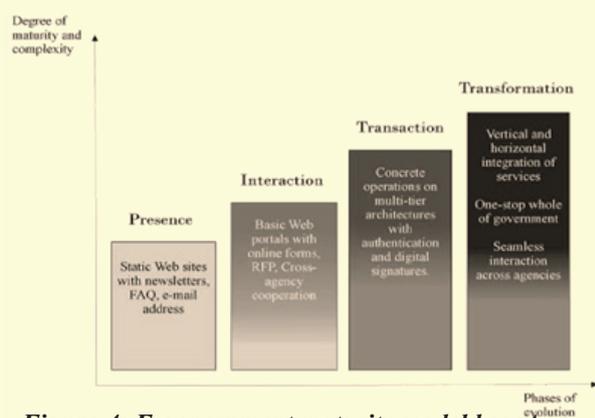


Figure-4: E-government maturity model based on Gartner Research 2000 [4].

Ensure ICT based locks and controls in SW: The MIS can generate all kinds of reports. But in case no one is looking at these reports, then controls need to be built into the software solutions so that there are in-built locks to keep a check on the in-efficient and corrupt officials by stopping their access on the ICT systems.

Capacity building of officials, including change

² Online permits website at <http://admis.hp.nic.in/ngtkullu>

management on wide scale: This will be a basic requirement all the time whenever new or improved ICT solutions are to be implemented in the Government.

No option for dual systems: There should be no option for employees to continue with or go back to manual systems after the ICT systems are implemented.

Continuity of champions: Some minimum tenure of eGov champions should be fixed to enable them to properly implement the eGov initiatives.

VIII. Conclusion

India has been witness to the ICT revolution and the Government sector has tried to make its best use for eGovernance initiatives in silos in the last decade. It is high time now to transform it and make it participative as per 4th phase of the Gartner study [1]. The Central and State Governments need to work together to simplify the processes and deploy single point online interface for citizens to apply, enroll, verify, pay bills, seek permissions, receive payments into their bank accounts, without visiting offices. These services should be made available through mobile apps too. The common service centres in rural areas should offer access to citizens on nominal charge basis. In built controls or locks within the back-end office computerisation should ensure that corrupt or delaying practices are brought to the notice of higher authorities by the ICT systems without human intervention. Participation of citizens in the governance process should be encouraged through online surveys, opinion polls and results/decisions taken on the basis of these surveys need to be published online. A single unique ID will pave the way for participative and transformative Governance in India. E-Commerce has done it in the private sector. eGovernance will change the role of Government, its objectives and the way it functions in India.

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