A PROJECT REPORT

ON

"E Governance Trends & Best Practices"

UNDER TAKEN AT

"HOWRAH MUNICIPAL CORPORATION, HOWRAH"

IN PARTIAL FULFILMENT OF
"POST GRADUATE DIPLOMA IN MANAGEMENT –
INFORMATION TECHNOLOGY "MIT SCHOOL OF
DISTANCE EDUCATION, PUNE.

GUIDED BY

MR. SOURAV MITRA (ASST. ENGINEER HMC IT DEPT)

SUBMITTED BY

Student Registration No.: MIT2018E01228

MIT SCHOOL OF DISTANCE EDUCATION

PUNE - 411 038

YEAR 2020 -2021



HOWRAH MUNICIPAL CORPORATION

4, MAHATMA GANDHI ROAD, HOWRAH – 711 101 Tel: (+91-33) 2638-3211-13; Fax: (+91-33) 2641-2613 L. T. Department

CERTIFICATE

This is to certify that Mr./Ms. Bajranil Mallick has completed the project report with us for his project report work on "E governance in Information Technology" in fulfillment for the completion of his / her Course with MITSDE on "PGDM in Information Technology" as prescribed by MIT School Of Distance Education, Pune.

This Project Report is record of authentic work carried out by him / her with guidance by our relevant department from Dated-5th May,2020.

Name and Signature of Guide

Sourav Mitra

Technical Assistant System Manager Howrah Municipal Corporation

I.T. Department

Howrah Municipal Corporation

DECLARATION

I hereby declare that this project report entitled "E Governance Trends & Best Practices" is a bonafide record of the project work carried out by me during the academic year 2020 -20 21, in fulfillment of the requirements for the award of POST GRADUATE DIPLOMA IN MANAGEMENT – INFORMATION TECHNOLOGY of MIT School of Distance Education, Pune.

This work has not been undertaken or submitted elsewhere in connection with any other academic course.

BAJRANIL MALLICK

(Students' Name and Signature)

Student ID: MIT2018E01228

Acknowledgement

First of all, I would like to acknowledge god for giving me sound health and mind to complete this report under extreme work pressure and crucial times . Secondly, MIT University for the academic life. I am deeply indebted of my internship supervisor for her whole-hearted guidance and supervision.

Her suggestions and comments to make the report a good one was a good source of strength for me. I am very much grateful to all the Account Directors, Account Managers, Account Executives and every one of my team at Howrah Municipal Corporation and all others members from client service department who have given their whole-hearted cooperation during my time period.

I would like to extend my gratitude especially to Mr. Sourav Mitra (Assistance Engineer IT), for their unforgettable guidance, mentoring and for their cooperation throughout the entire time period. Lastly, I would like to give special thanks and greetings to my fellow students and colleagues for giving me some required information, valuable advices and suggestions to complete the report in a comprehensive manner.

I thank them all from the core of my heart.

Sayon I adallina

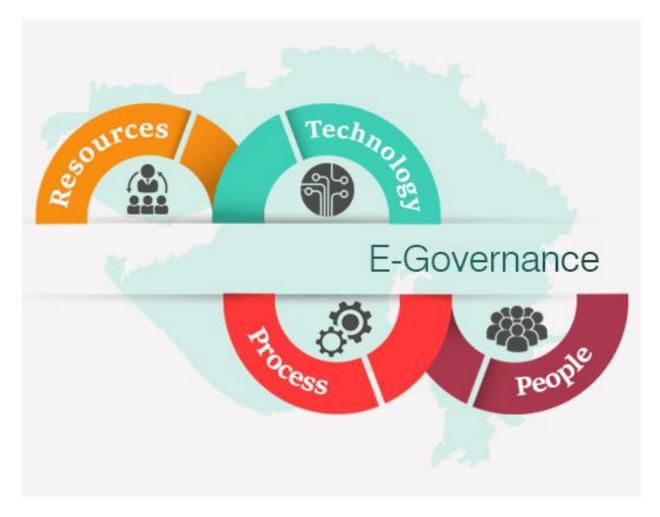
Table Of Contents

S. No.	Title	Page No.
1	Abstract	4
2	Objectives Of E Governance	5-7
3	Evaluation Of E-Governance	7
4	History Of E-Governance In India	8-10
5	Periods Of E-Governance	10 - 12
6	Need For Getting E – Governance	13
7	E – Governance Dimensions	13
8	E Governance Success Factors	14
9	E Governance Conceptual Models	15
10	Enterprise Architecture (Ea)	16
11	E Governance Adoption	18-22
12	Digital India	23-25
13	Some Major Mobile Applications Developed Are	26-39
14	E-Governance In Howrah	42-43
15	Performance and consistency 44	
15	Summary And Conclusion	48
16	Reference	49-50

Abstract

E-Governance can be characterized as the use of correspondence and data innovation for giving taxpayer supported organizations, trade of data, exchanges, combination of beforehand existing administrations and data entrances.

This study explains architecture phase and usage of the E-Government system; its main concepts, objectives, most common applications, famous worldwide experiences and the E Governance in Howrah Municipal Corporation, West Bengal. Its main objectives can be categorized according to the promising benefits each government provides to citizens, businesses and other governmental agencies. For the businesses side, governments mainly focus on offering opening communication between the public and private sectors government e-commerce and e-procurement initiatives and providing huge cost savings and lower transaction costs for most businesses.



Ref: https://www.toppr.com/guides/business-law-cs/elements-of-company-law-ii/e-governance/

Objectives of E Governance

The Objectives of E Governance lies in the use of Information innovation and procedures for better Government productivity and client benefits. This is to guarantee that the Govt. organization turns into a quicker and increasingly straightforward procedure. Because of the fast increment of the web and online digitization, Governments everywhere throughout the world are starting strides to include Information innovation in every administrative procedure. It likewise helps spares times and gigantic expenses.

There are different kinds of objectives each government aims at achieving within its internal architecture. These benefits can be: new ways to integrate data bases and networking websites, new tools to support horizontal services (like electronic payments, online auctions, customer relationship management and geographic information) and a new vision to realize important efficiency gains and work more effectively with each other. E-Government initiative is one of the most important topics relates to E-Government planning and implementation. Determining the initiatives of E-Government is assumed to be the common starting point for planning.

The possibility to expand the exhibition of Government segment and convey straightforward, quick and productive administrations to residents is high by actualizing E Governance activities throughout the years, the idea of E Governance has advanced into various measurements, which are examined and broke down in detail in the paper.

It makes the entire managerial procedure advantageous, proficient, straightforward, completely responsible and dependable. As a quickly developing economy and a rising world pioneer, E-Governance is an absolute necessity in a nation like India, both in Government and corporate part.

The paper is subjective in nature, in view of auxiliary wellsprings of information and explicit contextual analyses in E Governance usage. The paper produces rich bits of knowledge on E Governance Success Factors, E Governance Conceptual Models, E Governance Challenges and best practices over the all over World. Driven by the achievement of a couple of E Governance ventures in improving conveyance of administrations to residents and associations, an expanding number of governments are making ICT interests in the open division including India.

Some compelling instances of fruitful execution of E-Governance to the administrative capacity incorporate activities like; e-Mitra project(Rajasthan), e-Seva project(Andhra Pradesh), CET(Common Entrance Test).

Developing number of nations are embracing e-government activities as a device to convey more noteworthy operational proficiency, cost reserve funds and straightforwardness (Schuppan, 2009). The UN E-government study 2014 (UN, 2014) found that Republic of Korea has held the best position in 2014 with its proceeded with administration and spotlight on e-

government development. Australia (second) and Singapore (third) have both improved their rankings extensively over their 2012 exhibition.



There are 4 sorts of e-Government benefits that are conceivable; Government to Citizens (G2C), Government to Businesses (G2B), Government to Employees (G2E) and Government to Government (G2G). In this position paper, I will concentrate on the Secure Portal opportunities for G2C. Progressively different administrative offices are offering types of assistance to its residents by means of committed sites.

As a resident requiring administrations from the nearby, state or national government, I depend on these different sites for data as well as to benefit administrations like documenting expense forms, reestablishment of tags/vehicle stickers, speak with the area for property charge issues and so forth.

In this position paper, I depict the requirement for a safe entryway, current example utilization of online administrations by US legislative organizations, a case of a perfect web understanding for a resident to utilize E-Government benefits, the difficulties and potential answers for making secure E-Government Portals for worldwide residents.

G2B e-Government focuses on strategies using ICTs to facilitate government interactions with the private sector, for example, to procure goods and services, sell surplus government goods and to coordinate transactions from private companies.

Government e-Government (G2G)

G2G e-Government involves sharing data and conducting Information exchanges between different governmental agencies or through intergovernmental relations. Transactions performed among Ministries, Government Departments and Agencies (MDAs) and Metropolitan, Municipal Corporation and District Assemblies (MMDAs) constitute this type of e-Government.

In many respects, the government to government communication represents the backbone of e-Government

Government-to-Employee e-Government (G2E)

This focuses on relationships within government among its employees to coordinate internal operations and improve the internal efficiency of business processes. It is an online interaction for government units to share information such as payroll, SSNIT information, Training materials and HR information with government employees.

Government-to-Citizen (G2C)

facilitates citizen's interaction with government, which is the primary goal of e-Government.



Ref: https://iipgh.org/new/wp-content/uploads/2018/10/E-Gov-650x571.png

EVALUATION OF E-GOVERNANCE

With the specialized advancement of web innovation in the nineties, there was worldwide movements towards expanded arrangement of IT by governments. The innovation just as e-administration activities rose far since that time. Internet offered great chances to worldwide populace to misuse their new method of access in wide extending manners.

Individuals have extraordinary desire to get data and administrations online from governments and corporate associations to assist their municipal, expert and individual carries on with, therefore making abundant proof that the new "e-citizenship" is grabbing hold. In India, the idea of e-administration during the seventies with an attention on improvement of in-house government applications in the territories of protection, financial checking, arranging and its arrangement to oversee information escalated capacities identified with races, registration, and assessment organization.

The National Informatics Center put forth extraordinary attempts to connect all the area home office in the time of eighties. Since the start of nineties, IT advances were upgraded by data and correspondence innovation to extend its utilization for more extensive sectorial applications with strategy accentuation on contacting rustic zones and taking in more prominent cooperations from NGOs and private parts.

The e-administration model can fill in as a source of perspective for governments to circumstance where a task fits in the general improvement of an e-administration procedure. An e-administration system is basic to achieve the corporate objectives. Activities have basic incentive for improvement when settled in vision and bolstered by arrangements. Anderson had portrayed the way toward executing e administration ventures. He has impression of Think enormous, start little, and scale quick.

Preparing to stun the world is crucial to set the general vision and destinations of e-administration. Beginning little is significant to construct quick achievement and keep a positive main thrust, both inside just as remotely. Scaling quick is just conceivable with a profound methodology that ensures every single fundamental asset are accessible in time.

HISTORY OF E-GOVERNANCE IN INDIA

The History of e-administration in India goes back to the year 1970. Remembering the expanding significance of hardware, the Government of India set up the Department of Electronics in 1970. The resulting foundation of the National Informatics Center (NIC) in 1977 was the first significant advance towards e-administration in Quite a while as it brought 'data' and its correspondence in center. Nonetheless, the central purpose for e-administration was given by the starting of NICNET in 1987 – the national satellite-based PC arrange. This was trailed by the dispatch of the District Information System of the National Informatics Center (DISNIC) program to modernize all region workplaces in the nation for which free equipment and programming was offered to the state governments.

NICNET was stretched out by means of the state capitals to all area central station by 1990. These means taken by the Government of India end up being instrumental in bringing the insurgency of e-administration in India. The consequences of these means are seen today when

we can enlist ourselves to any administration plan or program while sitting in our lounge room. We are one press button away from any advantage that is given by the administration plans or projects. Individuals living in distant are additionally ready to get to these administrations as a result of the portable cordial nature of the sites. This has end up being a defining moment in the administration division. Services and advantages are given as well as data. This makes it crucial and genuine. We can decide in regards to the legislature by admiring the data gave by it on the administration sites and on the off chance that we have any issue with the substance utilized by them, we can without much of a stretch report. Nowadays a great deal of care is placed into the criticism of the client or the customer. This accounts for the improvement. This is likewise now conceivable through e-administration that anybody can give input to the legislature through online entries just as the administration comes to back to them.

E-Governance was begun in India by AKSHAYA in Kerala. This venture included setting up around 5,000 multipurpose network innovation focuses called Akshaya e-Kendra's across Kerala. Run by private business visionaries, every e-Kendra set up inside 2-3 kilometers of each family unit, would take into account the prerequisites of around 1,000-3,000 families to make accessible the intensity of systems administration and network to basic man. This venture accentuated the job of private players in the e-administration in India. This helps making government working straightforward and responsible for their work.



https://lh3.googleusercontent.com/

Presently India has stepped forward towards the e-administration program. We are having this administration in about each segment. India has demonstrated the world that it has the proficiency of turning the chances against them. There are numerous projects and plans that are totally reliant on Internet and are pioneer in advancing e-administration, for example,

- E-Courts
- E-Biz
- Aadhar Enable Payable System (AEPS)

- Digital India Program
- MyGov Citizen Portal
- E-Kranti Scheme
- Digital Cloud For Every Indian
- My Governance
- Mobile Seva

Periods of E-Governance:

Gartner, a worldwide consultancy firm, has figured four-stage e-administration model. This can fill in as a source of perspective for governments to situate where a venture fits in the general advancement of an e-administration system. An exertion as gigantic as complete acknowledgment of e-administration must be tended to in these stage. This methodology would take into consideration retrospection

45after each stage, and the capacity to backtrack steps whenever required, inside a doable casing of time and cash. The plan and reason for each progression would need to serve the important needs of all G2C, G2B and G2G segments.

Stage I – This first stage calls for making the expectations and destinations of the legislature known. Improvement of a comprehensive government site, or a system of locales committed to various services and offices would make way for additional progressions. These destinations would pass on the administration's drives, giving data, for example, official locations, working hours, just as structures and applications to people in general, monetary surveys, corporate guidelines for business and budgetary assignments and spending as a source of perspective for government organizations. With this first stage, the exceptionally basic errand of building the foundation, for example, broadcast communications would be embraced.

Stage II – Interaction This stage would take into account essential association with the administration. Other than facilitating web crawlers on the destinations for simple route, data specifying social records and employment form structures for the general population, grant and permit documentation for organizations and evaluation subtleties, accommodation of solicitations and endorsements to the inside by neighborhood government officials would need to be given. The undertaking of building the hidden framework would need to be continued through these two phases, taking into account fast usage of cutting edge applications as embraced by the resulting stages.

Stage III – Transaction this stage onwards would connote direct collaboration of the administration and important elements. With the framework set up, total online help suites can be advanced for general society, organizations and administrative offices. Administrations for the open, for example, bill and permit reestablishment, collecting conclusion and so forth

online acquirement assessment forms and so on for organizations, helpful spending readiness, charge records, and so on for legislative offices can be visualized here.

Stage IV – Transformation

This last stage would endeavor to accomplish the genuine vision of e-Governance. A solitary purpose of contact to constituent elements would give a coordinated stage to taxpayer supported organizations and association absolutely straightforward to residents and organizations.

Focus on 'virtual offices' the place government data is promptly accessible to all permitting a consistent interface to individual offices associated with the exchanges.

Best in class Intranets connecting government representatives in various offices extranets permitting consistent progression of data in this manner encouraging community oriented choices among government offices, NGO's and general society.

The accompanying elements must be considered while looking at the danger of actualizing e-administration.

- Political solidness: Democracy or tyrannical system
- Level of trust in government: impression of administration levels
- The significance of government personality: discontinuity or incorporation
- Financial structure: instruction, farming, industry or service
- Government structure: brought together or decentralized
- Various degrees of development: most fragile piece of the chain decides speed
- Constituent interest: push or pull.
- Improvement and Implementation of e-Governance

The model introduced can fill in as a kind of perspective for governments to situate where tasks fit in the general advancement of their e-Governance execution. The model can likewise bolster governments in characterizing an e-administration vision and procedure. A dream is a significant level objective, or desire level, of government with respect to the majority rule government, government and business parts of e-administration. A system comprises of plans that make an interpretation of the vision into SMART (Simple, Measurable, Accountable, Realistic and Time-related) ventures. A decent system is vital to keep the speed in the change of and execution process. Along these lines spending plans must be accessible, tedious legitimate changes ought to be started and brisk outcomes must be accomplished and conveyed to all partners, including the public.1. Think Big2. Start Small3. Scale FastFigure No. 3.1 Implementation ApproachA great methodology towards execution of e-administration is to consolidate momentary advances (extends) and long haul objectives (vision). Activities will have an increasingly auxiliary incentive for advancement when implanted in a Vision Strategy SMART Projects Relat

Advantages of a Secure Portal

The advantages of a Portal are huge. Entries go about as a one stop asset for data. Having a safe e-Government Portal will decrease the expenses for the administration in conveying ideal data to its residents. The residents will likewise profit by opportune and promptly accessible data just as a medium to benefit administrations. Having an online interface will decrease the requirement for committed administrative delegates to be accessible by different methods of correspondence like Phone or email to give data to residents. It will be a lot less difficult and practical for Governmental Representatives just as the Representatives in administrative enactment bodies like the Senate and the Congress to connect with the residents to pass data on significant enactments, Citizen things to do and so forth

Difficulties

The difficulties confronting secure e-Government Portals are many. One of the essential difficulties is to get an up front investment into a solitary IT establishment from the different offices and associations of a Government. The accompanying explanation by the Australian Prime Minister summarizes it ."Another test is the limit of divisions to effectively cooperate with one another in quest for entire of government objectives and all the more extensively, for the whole Service to work in association with different administrations, with business and with local gatherings as assets and duty are reverted nearer to where issues or openings exist." - Hon. Jon Howard, Prime Minister, Centenary of the APS Oration, 2001.

Objective of the study

- To survey the calculated advancement and comprehension of E Governance and its measurements.
- To survey the key achievement factors and best acts of E Governance.
- To give residents access to data and information about the E Governance process, about administrations and about decisions available
- To make conceivable the change from uninvolved data access to dynamic resident cooperation by:
- 1. Informing the resident
- 2. Representing the resident
- 3. Encouraging the resident to cast a ballot
- 4. Consulting the resident
- 5. Involving the resident
- 6.

Need for getting E – Governance

Dimensions and its prosperity factors

The possibility to improve the exhibition of open associations and convey proficient administrations to residents is high by executing E Governance activities (Irani et al., 2008). As per UNDP (2009), among the e-government pioneers, inventive innovation arrangements have increased unique acknowledgment as the way to renew slacking monetary and social divisions. Despite what might be expected, a few e-government activities have either had constrained achievement or fizzled by proof accessible from earlier investigations in E Governance space (Berman and Tettey, 2001; Heeks, 2003, 2005). With expanded effect of Globalization wonders in creating nations including India, worldwide associations, for example, the World Bank and World Trade Organization (WTO) have prescribed the utilization of ICT to disentangle customs forms and to encourage exchange (Lewis, 2009).

Methodology

The investigation is subjective and elucidating in nature and the majority of the information depends on optional wellsprings of review information. Such a methodology is embraced in the investigation as the zone of examination is wide and wellsprings of information are additionally spread over numerous areas. To show up at a definitive thought of the bigger picture on E - Governance and E - Society, examining the current review information and explicit effective contextual analyses of ICT based E Governance activities offers a superior outcome in finding the responses to the exploration question confined.

E – GOVERNANCE DIMENSIONS

The term E Governance and E Government are then again utilized in the past writing and in the paper too demonstrating a similar term. The order of Jansen (2005) which gives a three e government measurements: e-administration, e-organization, and e-vote based system is the most demonstrative since it joins all perspectives on e-government. The assessment of the e-society measurement characterized by Heeks (2001) shows that it has a similar significance as e majority rules system; as of the fourth component of internet business – expressed by Dawes (2002), it very well may be considered as a component of e-administrations.

Table 1 – E Governance Dimensions

Dimension	Meaning

E-service	Comprises the delivery of all types of electronic services .(Centre for Technology in Government, 2001; Dawes, 2002; EEurope, 2005; Fang, 2002; Grönlund 2000; Heeks, 2001; Kearns and Taylor, 2003; Prins, 2006; Schubert and Hausler, 2001; Turban et al., 2002; Wyld, 2004).	
E-administration	Includes various types of management work and internal processes and operations. (Centre for Technology in Government, 2001; Chadwick and May, 2003; Dawes, 2002; E-Europe, 2005; Fang, 2002; Grönlund 2000; Heeks, 2001; Janakova, 2004; Koh et al., 2006; Prins, 2006; Schubert and Hausler, 2001; Wimmer, 2002).	
E-democracy	Focuses on the political processes and interaction between the constituents and the government. (Centre for Technology in Government, 2001; Janakova, 2004; Dawes, 2002; Fang, 2002; Grönlund, 2000; Heeks, 2001; Prins, 2006; Schubert and Hausler, 2001; Wyld, 2004).	

E GOVERNANCE SUCCESS FACTORS

In a review on different districts worldwide and their E Governance models, the arrangement concentrate by Holzer (2008) distinguished the underneath factors as characterization measures (allude table 2).

Table 2 - Indicators of E-government success

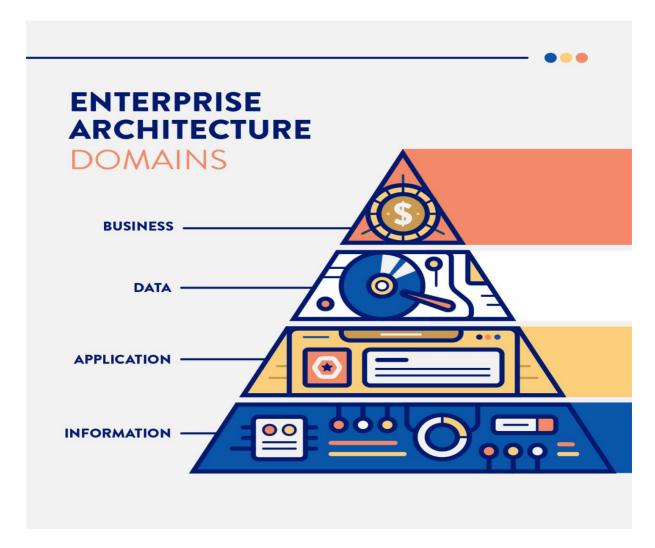
S.No	Indicator
1	Information Dissemination, means and methods.
2	Two-way communication, the nature of the relationship.

3	Services that will be available to the citizen or any stakeholder.
4	Integration.
5	Political participation. To what extend the citizens will be involved in the political matters, and how it would affect it.
6	Security, how secure transactions will be.
7	Usability, how usable (easy to use) will the transactions will be, and if they are user-friendly or not.

SAI India (2015), one of the main IT Auditors advocate that effective e administration usage is around four principle segments End clients need distinguishing proof, Business Process Modification, Use of Information Technology and in particular submitted government plan. Insufficiencies in any of these would bring about e administration ventures neglecting to accomplish their destinations. Likewise in their review of different E Governance ventures in India, it was seen that there appears as inconsistency in the personal stakes by different partners of E Governance activities.

E GOVERNANCE CONCEPTUAL MODELS

With regards to recognizing a portion of the profoundly examined E Governance calculated models, the paper returns to a portion of the significant structures and models appropriate for ICT based E Governance activities. Effective e-government ideas ought to depend on unbending standardization, liberal laws and guidelines, supportive innovations, and advancement of business esteems, frequently terms as the four mainstays of e-government. (Administration of Jordan, 2006; Rainford, 2006). On these lines, a portion of the significant ones incorporate the Enterprise Architecture (EA) based structures which has the most noteworthy validity to improve administration conveyance and can be applied for ICT based E Governance; and the most thorough and all encompassing ones being the Zachman system talked about in further areas.



Ref: https://clevertap.com/blog/enterprise-architecture/

Enterprise Architecture (EA)

As per Saha (2012), Enterprise Architecture (EA) is the intrinsic structure and the board approach basic for authoritative cognizance prompting arrangement, spryness, and affirmation. Organized Enterprise Architecture approach is frequently used to plan and execute proficient and successful change endeavors. Notwithstanding, the most grounded driver for Enterprise Architecture is to improve administration conveyance and generally speaking execution inside the association's business sections.

Ordinarily, EA comprises of an assortment of interconnected design spaces (likewise called perspectives or points of view). The five areas of EA that to a great extent speak to the present status of training in the order of EA are Policy and Strategy design, Business Architecture, Data/data engineering, Application design and Technical engineering.

Zachman's (1987) structure recognized the sorts of work items required for individuals to comprehend and consequently assemble a given framework or substance. The Zachman structure energizes a non-unbending way to deal with the advancement of frameworks. Rather than a progression of steps, the methodology is sorted out around the various perspectives, or points of view, of the different players. This system accommodates six windows from which to see the venture, which Zachman terms —perspectives on how a given element works.

Grass root E Governance Frameworks

A three prong approach may streamline appointment of neighborhood e-government at the grass roots, for example, a legitimacy is made between get to strategies (planned for improving access to ICTs for all residents), content arrangements (coordinated to improve the utilization of ICTs in the city organization and semi-open spaces) and foundation approaches (to improve the arrangement of broadband framework) (Berg, Meer, Winden and Woets, 2006).

In this regard, joining of gatherings effectively included at the grass roots administration procedures ought to be included. Sharma and Gupta (2003), advocate an e-government structure that may take a four layer operational technique as in table 3 underneath.

Table 3 − 4 Layer E Governance Framework

Operational Strategy	Actions
Development	Network layer: Information infrastructure, servers, LANs, WANs, intranet, Internet
Deployment	Integration layer: Database development, e-mail, e-forms, e-portals, networked enabled system, legal boundaries, policy issues
Delegation	Management layer: skill development, business process re- engineering, demand supply management
Dissemination	User application layer: G2G, G2C, C2G, G2B, B2G, G2NG, NG2G, G2O, O2G

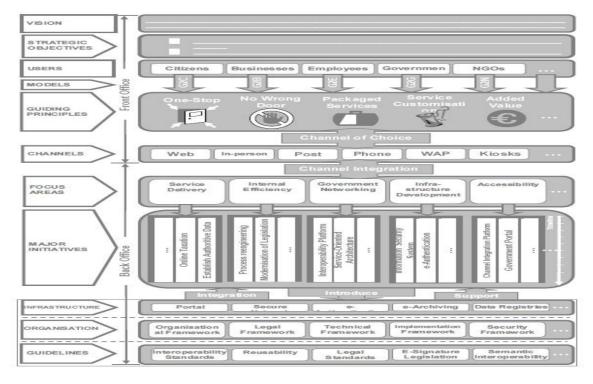


Fig.1 - Strategic framework of e-government' (Abdelbaset Rabaiah and Eddy Vandijck in 2009)

Abdelbaset Rabaiah and Eddy Vandijck in 2009 proposed the 'Key structure of e-government'. This model is the consequence of survey of e government procedures of 20 nations notwithstanding European Union. They contended that the structure should go about as a scaffold among nearby and focal government. Furthermore, the system proposed is a conventional one (fig.1) to be adjusted for any nation's E Governance needs at the key and usage level.

E Governance Adoption

Best Practices & initiatives

NeGP is a Top Down Approach. Some governments have opted for centralized, well –defined and controlled national strategy to launch the country into e-Governance. Typically, large countries have chosen a more decentralized approach, allowing bottom –up initiatives, letting individual departments drive their own projects. Many of these countries like India went for national programmes after a number of years of decentralized effort.

Many of the industrialized countries went for centrally coordinated strategy only when integration across agencies was needed for offering services through a portal. For decades, their agencies were offering services from departmental counters which were online with back-end-databases. Whereas in developing countries, most agencies are moving from totally manual

systems to some form of computerized delivery under the e-Governance initiatives2.Bottom Up Approach are being successful in developed nations as they are e-prepared and e readiness is better than developed nations. Both the approaches come with both merit and demerit. Top Down approach i.e. centralized plan such as NeGP is difficult to implement and consume huge time and resources whereas Bottom Up approach results in replication of programs at different levels and wastage of funds. NeGP has been formulated after taking lessons from past e - Governance initiatives. For such a big country like India, there was a need of one India Plan for transforming governance to e -Governance which was fulfilled by NeGP.

The National e -Governance Plan (NeGP) is an initiative by the Government of India to connect e -Governance systems throughout the country and create a nation –wide network for electronic delivery of Government services.

The National e-Governance Plan (NeGP), takes a holistic view of e-Governance initiatives across the country, integrated them into a collective vision, a shared cause. Around this idea, a massive countrywide infrastructure reaching down to the remotest of villages is evolving, and large scale digitization of records is talking place to enable easy, reliable access over the internet.

The ultimate objective is to bring public services closer home to citizens, as articulated in the vision statement of NeGP.

Vision

"Make all Government services accessible to the common man in his locality, through common service Delivery outlets, and ensure efficiency, transparency, and reliability of such services at affordable costs to realize the basic needs of the common man"4. The National e -Governance plan has been formulated by the Department of Information Technology (DIT) and Department of Information Technology (DIT) and Department of Administrative Reforms and Public Grievances (DAR & PG).

The union Government approved the National e-Governance Plan (NeGP), comprising of 27 Mission Mode Projects (MMP's) and 10 components on May 18,20065. The growing number of e-Governance projects in the country resonates how various governments both the central and state governments are serious and emphasizing on e-Governance programs. Under the 12thFive Year plan the Indian Government earmarked some Rs 23,000 crore for various e-Governance programs.

Mission Mode Projects- Central Government Category

SI. NO.	Projects	Line Ministry/ Department Responsible
1.	Income- Tax	Ministry of Finance/Central Board of
		Direct Taxes
2.	Passport Visa &	Ministry of External Affairs/ Ministry of
	Immigration	Home Affairs
3.	MCA 21	Ministry of Corporate Affairs
4.	Insurance	Department of Banking
5.	National Citizen	Ministry of Home Affairs/ Registrar
	Database	General of India(RGI)
6.	Central Excise	Department of Revenue/ Central Board
		of Excise & Customs
7.	Pensions	Department of Pensions & Pensioners
		Welfare & Department of Expenditure
8.	Banking	Department Of Banking
9.	e- Office	Department of Administrative Reform &
		Public Grievances

Mission Mode Projects- State Government Category

SI.	Projects	Line Ministry/ Department Responsible
NO.		
1.	Land Records	Ministry of Rural Development
2.	Road Transport	Ministry of Road Transport & Highways
3.	Property Registration	Department of Land Resources/ Department of Information Technology
4.	Agriculture	Department of Agriculture & Cooperation
5.	Treasuries	Ministry of Finance
6.	Municipalities	Ministry of Urban Employment & Poverty Alleviation
7.	Gram Panchayats	Ministry of Panchayati Raj
8.	Commercial Taxes	Ministry of Finance
9.	Police(UTs initially)	Ministry of Home Affairs
10.	Employment Exchanges	Ministry of Labour & Employment
11.	E- District	Department of Information Technology

Mission Mode Projects- Integrated Services Category

SI.NO.	Projects	Line Ministry/ Department
		Responsible
1.	EDI(E- Commerce)	Ministry of Commerce & Industry/
		Department of Commerce
2.	E- Biz	Department of Industrial Policy &
		Promotion/ Department of
		Information Technology
3.	Common Service Centres	Department of Information
		Technology
4.	India Portal	Department of Information Technology
		& Department of Administrative
		Reforms & Public
		Grievances.
5.	EG Gateways	Department of Information
		Technology
6.	E- Courts	Department of Justice, Ministry of
		Home Affairs
7.	E- procurement	Ministry of Commerce & Industry/
		DGS&D

What is the implementation strategy and methodology of NeGP:-As NeGP has to be implemented in a wide area, it requires lots of infrastructural development namely, common support infrastructure. Development of State Wide Area Network (SWAN), State Data Centres (SDCs) and Common Service Centres (CSCs) are required in this context. A well defined governance with various departments involved in implementation of NeGP such as DIT etc should have their own set of work so that they can play their role. Its implementation is decentralized as it has central state and integrated projects so all levels of governments are involved in this. This can be more clearly depicted by the table which gives the list of Central, State and Integrated MMPs.

Digital India

After NeGP the Government of India has introduced another big e -Governance Plan known as Digital India. It is a Rs. 113,000 crore Plan that aims to usher in a digital revolution by moving everything online, from education to Public services to bureaucracy. Aptly Called 'e-Kranti', it comes under the Narendra Modi Government's 'Digital India' initiative and is quite simply the world's most ambitious broadband project. It seeks to provide digital access to all citizens, from rural and elderly to the poor10. The Digital India Plan of Government of India stands on nine pillars.



www.digitalindia.gov.in

The National E Governance Project (NeGP) initiative by Government of India gives valuable insights into adoption factors of E Governance Implementation. Some of the major milestones of NeGP from user perspectives includes, Services of various departments of central and state governments like 'Copies of Record of Rights for Land Records,' issuance of job cards for

availing employment under NREGS, issuance of various types of certificates — birth/death/income/caste/domicile, etc., applying for various benefits under social services schemes such as pensions — widow/handicap/old age, etc., scholarships, education assistance, etc., information about market prices of agricultural produce and commodities and even diagnostic assistance for diseases through Telemedicine, are available electronically from any place, at any time.

NASSCOM (2015), has given a lot of inputs to improve the success rate of E Government implementation in Indian context. These can be taken forward in similar E Governance implementation initiatives across the Globe and especially developing and highly populated countries where the information requirements and needs are similar. NASSCOM's study recommends that the government take specific steps to ensure smooth rollout of E Governance initiatives. Some of these are given in table 4



Table 4 – NASSCOM Recommendation for Government on E Governance

S.No	E – Governance Recommendations
1.	Outlining RFPs, contracts, MSAs for different category of projects, and preparing and reviewing these by joint government-industry teams, including representatives from the banking sector, consultants, Department of IT and Department of Expenditure.
2.	Creating contracts that incorporate 'Conditions of Precedent' and obligations of government departments and agencies.
3.	Defining SLAs and events of default for both vendor and government departments and agencies.
4.	Publishing best practices of Infrastructure Concessionaire Agreements and Model Documents for the infrastructure sector, into eGovernance PPP Projects.
5.	Providing toolkits for PPP, BOOT Projects and Business Model options to guide departments.
6.	Standardizing on suppliers' debriefing, post project awards, as with pre-bid meetings.

Some of the best E Government practices (country wise) and their policies was summarized by the UN E Governance survey of 2014 (UN, 2014) to serve as an advisory for future IT based initiatives and for striving Governments like India.

The various focus areas of this summary focuses on Citizen consultation, Transparency in public administration, Prioritized development, Mobile Participation, Integrated financial management information system, Smart ID Cards, Life-saving SMS service, SMS-based literacy programme for women, Mobile government for poverty eradication and economic growth, etc...

Pradeepkumar S.F. and Vijaykumar .N (2011) have analysed and identified the areas of failure in E Governance projects in developing countries like India and advocate the PPP (Public-Private Partnership) models for planning, design and implementation of Flagship E Governance initiatives.

Some major mobile applications developed are

• Kisan Suvidha: This app provides information on five critical parameters- weather, input dealers, market price, plant protection and expert advisories.



• Pusha Krishi: This app provides information on latest technologies to farmers.



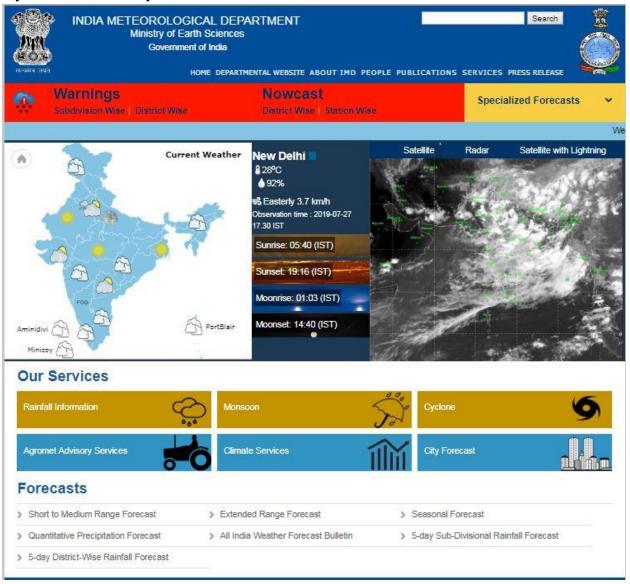
• Crop Insurance: Famers can learn about insurance premium, notified area, etc. on their mobile.



• Agri Market: Farmer can learn about the prices of various crops in the mandis near him.



• India Weather: This app provides current weather updates and weather forecast for upto 4 days, across the country in more than 300 cities.



The major Web portals developed include the following

Farmers' Portal: Farmers' Portal is a one-stop shop for farmers where a farmer can get
information on a range of topics including seeds, fertilizer, pesticides, credit, good
practices, dealer networks and availability of inputs, beneficiary list .mKisan Portal: This
is a unified platform using which officials and scientists can send targeted text and voicebased advisories to the farmers on a host of issues related to agriculture and its allied
sectors.



Ref: https://mkisan.gov.in/images/poster.jpg

• Crop Insurance Portal: This provides complete information related to Crop Insurance Scheme currently being implemented in the country.



Ref: https://i.ytimg.com/vi/5jCHwJyZslY/maxresdefault.jpg

• Anticipatory Guarantee System of India (PGS) Portal. This is a portal for encouraging participatory approach to certification of organic farming in the country.



• e-Mandi: The Government has launched the e-Mandi portal to make procurement of agricultural products smoother, and to provide competitive remuneration, especially for small and marginal farmers.



Ref: http://emandi.upsdc.gov.in/emandi/public/

Land Records: Major services of this portal include real-time availability of land records, issuance of Record of Rights along with cadastral maps, issuance of certified copy of deed, issuance of non-encumbrance certificate, payment of stamp duties, etc. Twenty-six states have computerized their land records and provide computerized copies of Records of Rights, on demand. These states have also placed their land record data in the public domain.



Ref: https://www.upcmhelpline 1076. in/wp-content/uploads/2018/10/West-Bengal-Land-Records. jpg

• School Education Mission Mode Project (MMP): The MMP is focused on Primary, Secondary and Higher Secondary education. It will be a driving force for the implementation of the National Policy on Information & Communication Technology (ICT) in School Education.

NEGP - Mssion Mode Projects MMPs MMPs identified on the basis of high citizen / business interface - projects cover range of key services offered by department ·Central State Integrated •India Portal Agriculture Income Tax Common Service Land Records Central Excise Centers Transport Passports/Visa & EG Gateway Treasuries **Immigration** • E Courts Commercial Taxes • MCA 21 E-Office Gram Panchayats National ID •E Procurement Municipalities Pensions Registration Police Industry Initiative •Emplmt. Exchange Banking Insurance

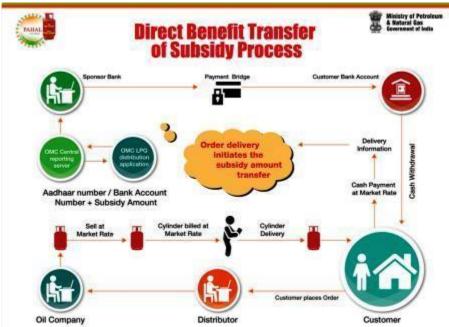
Ref: https://image.slidesharecdn.com/mmp-100721233817-phpapp02/95/mission-mode-project-mmp-4-728.jpg?cb=1279756515

 National Scholarships Portal (NSP): This portal is a one-stop solution to implement endto-end disbursement of scholarships to beneficiaries. The process includes student registration, application, approval and disbursement. 76 schemes of 22 Ministries/Departments of the Government are being on-boarded on the portal.



Ref: https://preptube.in/scholarship/wp-content/uploads/2019/07/National-Scholarship-Portal-Image-696x325.jpg

• Aadhaar & Direct Benefit Transfer (DBT): 103+ crore citizens have already enrolled in this scheme. Twenty-seven plus crore bank accounts have been seeded with Aadhaar numbers. Seventy-four Government Schemes are on DBT, where Rs. 1.2 lakh crores transferred through DBT.



Ref: https://static.vikaspedia.in/media/images_en/social-welfare/DBTSP.jpg

• Central Excise and Customs: Facilitates trade and industry by streamlining and simplifying customs and excise processes, and by creating a climate for voluntary compliance.



Ref: https://www.taxscan.in/wp-content/uploads/2016/09/CBEC-Tax-Scan.jpg

• MCA 21: The major services delivered under the aegis of the Ministry of Corporate Affairs through MCA21 include viewing of public records, issue of certified copy of documents, change in registered office, change in director(s), annual filings, application for change of name of a company, incorporation of a company and name allocation to a new company.



Ref: https://images.livemint.com/rf/Image-621x414/LiveMint/Period2/2016/04/28/Photos/mca21.jpg

 Passport Seva: Project focuses on reforming passport services in India through simple, efficient and transparent processes, right from processing of passport to delivery of services.



Passport Seva

Consular, Passport & Visa Division

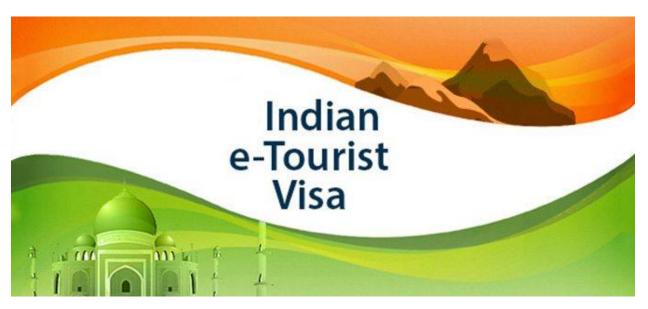
Ministry of External Affairs, Government of India



Ref:

https://www.thehindu.com/news/cities/Hyderabad/article22897984.ece/ALTERNATES/LANDSCAPE_1200/01HYADILABAD

• e-Tourist Visa: Tourists can apply for visa online, pay visa fee online and receive e-Tourist Visa online. Around 8.45 lakh e-Tourist Visas have been issued since Nov, 2015.



Ref: https://etn.travel/wp-content/uploads/2016/10/0a1-51.jpg

• e-Courts: The services delivered through the e-Courts MMP include automated case filing, automated registration of case, automated workflow for court, generation of automated cause list, judicial service centers in all Courts, automation of case management system, allocation of cases, etc.



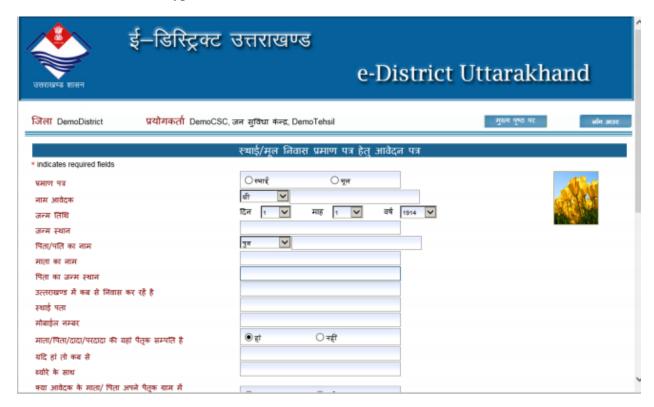
Ref: https://districts.ecourts.gov.in/sites/default/files/new_2.gif

• Common Services Centers (CSC) 2.0: Under the Digital India Programme, the CSC aims at establishing at least one CSC in each of the 2.5 lakh Gram Panchayats (GP) level, to deliver various G2C, B2C and B2B services online.



Ref: https://lh3.googleusercontent.com/-_BeZqLnb-6Q/XgixeCsaXDI/AAAAAAAAAAAF3w/HC0P7lRP6aAUUquZPl9Ix_oqhdTrKb6IgCLcBGAsYHQ/s640/1577628018693784-0.png

• e-District: e-District services have been launched in 555 districts of the country; this delivers various types of eGovernance services at district level.



Ref: https://www.indiafilings.com/learn/wp-content/uploads/2019/02/Uttarakhand-e-District-Portal-Image-5.png

 Mobile Governance: The Mobile Seva platform delivers Government services over mobile devices using mobile applications installed on the user's mobile handsets. About 2521 Government departments and agencies at central, state and local levels have been integrated with the Mobile Seva platform.



Ref: https://static.toiimg.com/photo/63102105.cms

• e-Hospital – Online Registration System (ORS): It includes online appointment and registration by new patients, viewing of lab reports, checking the status of blood availability and integration with payment gateway (PayGov). Forty-three hospitals have been integrated on the platform.



Ref: https://lh3.googleusercontent.com/proxy/jBeMlvaina_U2cgS-KNeUC2I9_Ieg8eNMkQowzBB2DotOXhtTj8AGct2lNYN03UnzKYOwAayGYoo8REomD_6b MVK0ZcMpQSPi437GVXl2D6CelEbNyXulaI

Jeevan Pramaan: Digital Life Certificate for Pensioners scheme known as Jeevan
Pramaan envisages digitizing the whole process of securing the life certificate. With this
initiative, the pensioner is no longer required to physically present himself or herself in
front of the disbursing agency or the certification authority. Jeevan Pramaan is a
biometric enabled digital service for pensioners. 16.30 lakh pensioners have registered
for the scheme.





Jeevan Pramaan







Digital Life Certificate For Pensioners

Jeevan Pramaan Centre

Iris Scanner Available

Digital Seva, Gita Bhawan (Opp. Canara Bank), Abhaya Sundari Girls School Road, Hirapur, Dhanbad - 826001. Jharkhand

Email: jeevanpramaancentre@gmail.com

jeevan-pramaan-centre.business.site

Get Directions

Digital India

https://lh3.googleusercontent.com/spph-TmrSAbYxz1ybEO57I8FldlEDe2weSoKghNaKv5AsW5BbFO4eaEq5A_vTJjwSB0zj-UCPQ=w1080-h608-p-no-v0 Vikaspedia: It is a multilingual collaborative content creation platform that promotes
access and sharing of e-knowledge for empowerment of underserved communities.
 Vikaspedia facilitates societal empowerment through provision of relevant information in
various domains including Agriculture, Education, Health, Social Welfare, Energy and eGovernance in 22 scheduled languages of the country, besides English.



Ref: https://www.brandsynario.com/wp-content/uploads/Vikaspedia-The-New-Indian-Local-Language-Wikipedia.jpg

• MyGov: MyGov aims to establish a link between the Government and citizens towards meeting the goal of good governance. MyGov encourages citizens as well as people abroad to participate in various activities like 'Do', 'Discuss', 'Poll', 'Talk', 'Blog', etc. There are multiple theme-based discussions on MyGov where a wide range of people can share their thoughts and ideas.



 $Ref: https://yt3.ggpht.com/a/AATXAJyvejkaldYTAxmb73IPgh7iOXwy1eDZpXMrBHtC\\ = s900-c-k-c0xffffffff-no-rj-mo$

E-Governance In Howrah

Howrah is a geographically compact district in West Bengal, but it has vast cultural and administrative complexity. The history of the city of Howrah dates back over 500 years, and over the years the city has grown both in size and in character. It has a cosmopolitan population, immensely contributing to its cultural complexity, largely because of its bustling business and industries. The district has 2 subdivisions, and 14 community development blocks, and 2 ULBs (Howrah Municipal Corporation, and Uluberia Municipality).

The district administration has the complex task of engaging the population though its regulatory, developmental functions of service delivery, and emergency response functions. It is in the execution of these complex responsibilities that e-governance comes in handy, structuring a direct linkage with the public. I would like to place on record, my sincere appreciation of the district e-governance team, and, NIC Howrah, in developing various e-governance tools, including the district website.



Ref: http://howrah.gov.in/index.html

Vision And Mission

- 1.To make Howrah in to a knowledge society with sustainable human growth, social harmony and high quality life for all.
- 2. The Government considers its mission to achieve this vision through proactive measures meant to accelerate the process of transforming the state in to a knowledge society.
- 3.In keeping with democratic traditions of the country, the Government will ensure that all sections of society are included in this process of transformation and will adapt conscious, positive steps to confirm the inclusion of the disadvantaged section of society in the transformation process.
- 4. The Government will make use of ICT to ensure transparency, efficiency and quality of services to the citizens of the state.
- 5.The Government shall promote appropriate applications of ICT to rejuvenate and strengthen primary, secondary and tertiary sectors of districts's economy.
- 6. The government will strive to improve the standard of living people through the use of ICT in all sectors.
- 7. The Government shall make all efforts to provide the infrastructure for the rapid growth and adoption of ICT in the state.
- 8.Government shall Endeavour to create a favorable climate in the state for increased economic activity and investments in the ICT, ITES and knowledge based industry sectors.
- 9. The Government recognizes that Howrah's highly skilled and well-educated workforce is a differentiator as an investment destination.
- 10. The Government realizes that free software presents a unique opportunity in building truly egalitarian knowledge society. The Government will take all efforts to develop free software and free knowledge and shall encourage the appropriate use of free software in all ICT initiatives.

The process of computerization involves introduction of technology in organizations which are primarily social systems. The development of IT based systems involves a process of socio-technical change.

Human factors are therefore central to the induction of computers. The introduction of new technology is likely to affect existing inter-personal and inter-group equations within

organizations. The dynamics of such changing equations can adversely affect the acceptance of new methods of working. Care will have to be taken to deal with these issues with empathy and sensitivity. It would therefore be necessary to associate experts from the behavioral and organizational fields with the programme of governmental computerization.

Training of employees

Large-scale training of Government employees at all levels is contemplated as part of the approach. However, there is a possibility of rapid 'de-skilling' in the post-training phase, unless facilities for computer and internet access are made available to employees. This aspect would have to be kept in mind while planning for the introduction of Information Technology in different departments.

The present approach relies significantly on web and mobile technologies for setting up distributed data warehouses in different departments for providing seamless access to information both within and outside Government. Since the level of familiarity with web technologies is at present low, a detailed and well thought out plan will have to be worked out for training and supporting use of such technologies across the board



Ref: https://i.pinimg.com/originals/b7/98/b5/b798b50440e6212366d6a99cfc86acda.jpg

Performance criteria

It is not possible to measure the cost benefit of computerization in quantifiable terms. However, the most important performance criteria for computerization would be levels of public satisfaction with service delivery, improvements in productivity and efficiency, and increased skill levels of Government employees in handling Information Technology. Further, demonstrable leadership of Government in the use of Information Technology would also be a factor to be taken into account

Transparency and Consistency

An interface presumes that information is available transparently to all citizens. Access to information will naturally result in pressures from the public to improve existing services.

Transparency would also dictate a reduction if not elimination of discretion in dealing with the public. As a further corollary, it would also mean that Government would be required to provide the wherewithal to extend benefits to all eligible persons uniformly.

Not infrequently, programmes for the benefit of specified target groups are ill-designed and a large number of eligible persons are denied benefits for want of adequate financial provisioning. Care will have to be taken to ensure that adequate financial provisions are made for programmes under implementation.

The culture of promising what can be delivered and delivering on what is promised has to be intrinsic to a regime relying upon Information Technology.

Summary and Conclusion

The administrations offered by e-Government are classified into three stages: distributing, connecting, and executing. Government sites are principally being utilized to get data; to date constrained advancement has been made in interfacing with residents and online business exchanges (Accenture, 2004). From the UN (2012) report plainly national salary positively

doesn't, without anyone else, comprise or ensure propelled e-government advancement, as prove by numerous anomalies featured in Figure 2. A few nations have altogether propelled their e-government advancement positioning notwithstanding their moderately low national pay, similarly as there are numerous nations which are slacking in spite of their generally high pay and in this way have great open doors for future improvement.

In spite of the fact that there are blended bits of knowledge in understanding the bits of knowledge on E Governance, it is best left to the Government and residents to put to best utilize the advantages and favorable circumstances of E Governance activities.

There is consistently scope for additional improvement in all E Government activities, which needs the dedication of the actualizing Government, administrators and the interest of end clients in the individual activities. E administration is a complex advance in making straightforwardness in running Governments, settling on educated choices, development of E Society profiting the residents, organizations and clients.

References

[1]Accenture (2004) "The Government Executive Series-eGovernment Leadership: High Performance, Maximum Value", Retrieved Feb 26, 2015 from: http://www.accenture.com/Global/Research_and_Insights/By_Industry/Government/HighValue.htm

[2] Austin City Council (2008). Audit Report 2008: City of Austin's E government Initiative, Office of the City Auditor, Austin, Texas.

[3]Berg, L. van den, Meer, A. van der, Winden, W. van & Woets, P. (2006). E-governance in European and South African Cities: The Cases of Barcelona, Cape Town, Eindhoven, Johannesburg, Manchester, Tampere, The Hague, and Venice, Ashgate Publishing, Ltd., 2006.

[4]Berman, B.J. and Tettey, W.J. (2001). African States, Bureaucratic Culture and Computer Fixes. Public Administration and Development, 21, 1, 1–13.

[5]Dawes, S. (2002). "The Future of eGovernment". Center for Technology in Government. Accessed (19th Feb 2015) at http://www.ctg.albany.edu/publications/reports/future of egov/future of egov.pdf

[6] Government of Jordan (2006). Jordan e-government-2006: EGovernment Strategy, Jordan e-Government Program, Ministry of Information and Communications technology (MoICT), Government of Jordan.

[7]Heeks, R. (2001). "Building eGovernance for Development: A Framework for National Donor Action". eGovernment Working Paper, No 12. IDPM, University of Manchester, UK.

[8] Heeks, R. (2001a). Understanding e-Governance for Development. I-Government Working Papers No. 11. Institute for Development Policy and Management, University of Manchester, 2001. (download available on www.man.ac.uk/idpm).

[9] Heeks, R. (2003). Most eGovernment-for-development Projects Fail: How Can Risks be Reduced? Institute for Development Policy and Management, University of Manchester, Manchester.

[10]Heeks, R. (2005). e-Government as a Carrier of Context. Journal of Public Policy, 25, 1, 51–74.

[11]Holzer. M, Kim. S., (2008). "Digital Governance in Municipalities Worldwide. National Center for Public Performance.

[12]Irani, Z., Love, P.E.D. and Jones, S. (2008) Learning Lessons from Evaluating eGovernment: Reflective Case Experiences that Support Transformational Government. The Journal of Strategic Information Systems, 17, 2, 155–164.

[13] Jansen, A. (2005). "Assessing E-Government Progress – Why and What". Department of E-Government Studies, University of Oslo. Paper presented at NOKOBIT 2005, Bergen, 21-23 November 2005. Accessed (19th Feb 2015) at http://www.afin.uio.no/forskning/notater/7_05.pdf

[14] Lewis, G. (2009) Impact of ICT on Customs. World Customs Journal, 3, 1.

[15]NASSCOM (2015). Taking eGovernance to the Next Level. Retrieved (3rd Mar 2015) from: http://www.nasscom.in/taking-egovernance-next-level?fg=125156

[16] Pradeepkumar S.F. and Vijaykumar .N (2011). E – Governance Projects: Exploring the Ways to Success. SETLabs Briefings. Vol.9, No.2., pp-19-20. Accessed (29 Feb 2015) from: http://www.infosys.com/infosys-labs/publications/Documents/e-governance/e-governance-projects.pdf

[17] Rabaiah, A. Vandijck, E. (2009). A Strategic Framework of e-Government: Generic and Best Practice Electronic Journal of e-Government., Volume 7, Issue 3, (pp241 - 258).

[18]Rainford, S. (2006). e-Sri Lanka: An Integrated Approach to eGovernment Case Study, a report of the ICT Agency of Sri Lanka.

[19]Saha, P. (2012). Enterprise Architecture for Connected E-Government: Practices and Innovations (pp. 1-591). Hershey, PA: IGI Global. doi:10.4018/978-1-4666-1824-4.

[20]SAI India. (2015). Why E Governance Projects Fail. Retrieved Online (3rd Mar 2015) from: http://intosaiitaudit.org/muscat/India-Why_EGovernance_Projects_Fail.pdf

[21]Schuppan, T. (2009) E-Government in Developing Countries: Experiences from sub-Saharan Africa. Government Information Quarterly, 26, 1, 118–127.

[22]Sharma, S.K. & N.D. Gupta, J.N.D. (2003). Journal of Electronic Commerce in Organizations, 1(4), 1-15, Oct-Dec 2003.

[23]UNDP (2009). United Nations Development Programme (UNDP). Human Development Report 2009. New York: U.N. Publications, 2009.

[24]UN (2014). United Nations E-Government Survey 2014: E-Government for the Future We Want. Division for Public Administration and Development Management (DPADM) of the United Nations Department of Economic and Social Affairs (DESA). United Nations New York, 2014. Accessed (8 April 2015) from:

http://unpan3.un.org/egovkb/Portals/egovkb/Documents/un/2014-Survey/E-Gov_Complete_Survey-2014.pdf

[25]Zachman, J.A., (1987). A Framework for Information Systems Architecture. IBM Systems Journal, 1987. 26(3).

[26] HMC official website http://howrah.gov.in/index.html