

E-Governance and Effective Deliverance of Information and Services to Citizens Architecture

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Abstract– By Progression of information technology resources in India, great opportunity comes to deliver information and services to citizens and business. Proper distribution and delivery of government information and services towards citizens is, one of the significant objectives of E-Governance. This paper explores the concept of E-DISC architecture. The E-DISC stands for *Effective Deliverance of Information and Services to the Citizens*. It is going to provide a required solution of E-Governance to deliver effective and accurate information and services to the citizens in India and its strategy towards practices in the field of E-Government as well as difficulties and challenges towards deliverance of Information and services to citizens. A large number of developing countries feel to ensure advantage of the new electronic resources or new architecture for deliver information and service to the public according to citizens' suitability. The purpose of this paper is to gain a better understanding of E-Government in India with the concept of E-DISC architecture and ICT (Information Communication and Technology) and how to deal with challenges and barriers for successful E-DISC architecture implementation. The obtained results prove that the utilizing and by increasing interest in the new electronic, information, and communication technologies (ICTs) and E-DISC architecture in this digital era, government can improve the quality of governance and can also improve the performance of delivery of information and services to the public and acknowledged the awareness of the E-Governance system.

Keywords – E-Governance, E-DISC, Deliverance, ICT

I. INTRODUCTION

E (Electronic)-Governance is a new way to govern processes in which ICT can play an active and significant role. This Architecture provides a great solution for delivery of E-Government. E-Governance or E-Governance refers to the use of information and communication technologies (ICT), such as the E-Governance, wide area networks, mobile phones etc. to deliver services to citizens that have the ability to transform relations with clients, businesses, and other arms of

government. By arrival of Information and Communication Technology (ICT) in the modern years has presented an opening for the central and state governments to change the way organisations control and leverage and value their information assets. The application of ICT within and by the government obtains tools to the citizen so that potentially transform can be made to deliver services; reform and solution for archives good governance. "E-Governance offers a large opportunity for serving the citizens in better way. ICT promises lots of advantage in governance process but at the same time require efforts for changing process, building infrastructures, capacity enhancement etc." [1]

The basic premise of this E-DISC architecture is working architecture of e-Mitra (is a project which is implemented in all the districts in urban areas across the Rajasthan state of India under which various types of services are being provided through Kiosks). In e-Mitra various types of services provided to the citizens with in one roof or within single window. Single window is the gateway point of citizens from where citizen contact to delivery of various service. The Primary objective of the E-DISC architecture is to provide appropriate solution to effective delivery of integrated services of government departments to the citizens in an efficient, convenient and citizen friendly manner through ICT for accountability, transparency, affordability and accessibility from the citizen's point of view. To become E-DISC architecture successful entire data connectivity required such as on World Wide Web and one specific server is allotted to the every department which is concerned to E-Governance, this departmental server govern the E-Government working of citizens.

According to Kumar (2002), a single window payment gateway called "FRIENDS" (Fast, Reliable, Instant, Efficient network for Disbursement of Services) brought about a significant change in Tiruvananthapuram in Kerala particularly in the rural areas for sugar factories; co-operative

credit societies and grameena banks. After the success, governments like Kerala and Andhra Pradesh have adopted Computer Aided Administration Registration Department (CARD) software for implementation of E-Governance projects. Tamilnadu plans to implement paperless district offices based on the architecture of Andhra Pradesh's file management system.

II. E- GOVERNANCE: A CONCEPTUAL FRAMEWORK

E-Governance, or electronic government, is the effective application of information and communications technology (ICT) to deliver government information, services and invention to citizens and business with accuracy and also provide inside help to process of government workings. In fact, the proper combinational application of ICT and process E-Government service delivery is called as E-Governance thus E-Government processes to accomplish safe and reliable information lifecycle management life cycle of the information involves various processes as capturing, preserving, manipulating and delivering information. Some authors are also used the word SMART for working of E-Governance. In the term SMART, S Stands for Simple, M stands for Moral, A stands for accountable, R stand for Responsive, T stands for Transparent. E-Governance has different interpretations. It implies a smoother interface between the government and the citizen governance is nothing but good governance. The 'e' is only a tool. E-Governance is to enhance the use of the information technology and to help enhance lives of the citizens. E-Governance enables active citizen involvement by informing the citizens, representing the citizens, encouraging them to vote consulting them as required and encouraging their participation (Patel 2001). A public organization – is part of a broader governance system. It is a means to a goal. Government is seen predominantly as a public organization set up by a society for the purpose of pursuing that society's development objectives. This comprises articulating the society's development-related demands, proposals and needs, aggregating them and implementing responsive solutions. Enjoyment of public consent constitutes the source of government's legitimacy. Transparency is a condition sine qua non for government's accountability vis-à-vis its oversight body. [6]

E-Governance is about delivering improved services to citizens, businesses and other members of the society through drastically changing the way governments manage information [2]. However, the E-Government challenge is not a technological one; rather, it is to use technologies to improve the capacities of government institutions while improving the quality of life of citizens by redefining the relationship with them [3]. The World Bank has identified three distinct aspects of governance: 1 the form of political regime; 2. the process by which authority is exercised in the management of

a country's economic and social resources for development; 8. the capacity of governments to design, formulate and implement policies and discharge functions (World Bank, 1997). Christopher Baum defines E-Government as the "transformation of public sector's internal and external relationship through net-enabled operations, information technology and communications to optimize government service delivery, constituency participation and governance" (Kumar 2004).

E-Governance is defined as the application of electronic means in [4] the interaction between government and citizens, and government and businesses, as well as [5] internal government operations to simplify and improve democratic, government and business aspects of governance (Backus 2003). The ICT is widely used in various fields. E-Government is a very new domain in recent years. When we use the E-Government system to process data, we need to choose what data is useful and what kind of new information we can get. ICTs are defined by Stevenson in his 1997 report to the UK government and promoted by the new National Curriculum documents for the UK in 2000 as: "The study of the technology used to handle information and aid communication" [7].

Advances in electronics have fortunately provided the Information and Communication Technologies (ICT) with the internet and other communication channels like to delivery s services. ICT is rapidly extending its reach to multimedia technology, networking, e-learning concepts, and mobile communication, and has brought about a change in pedagogy and shift in the teaching learning process. (The Hindu Dated June 5, 2006) But what we are interested in, more than the study of technologies is the application to improve and "channel" information through any means of communication, based on different infrastructure. So it is important to understand what information is and what communication is. The World Bank defines ICTs as a generic term, which includes Information Technology (hardware and software) and the telecommunication infrastructure, equipment and services. E-Governments in the world have been using ICTs such as internet, websites, computers and mobile phones to deliverance various government information and services in an efficient, equitable and transparent approach with better governance. Information and communication technologies (ICTs) are playing increasingly important roles in the day-to-day lives of people, revolutionizing their work and leisure, and changing rules of doing businesses. Development of ICT leads up to E-Governance, which has now become the most talked word around the world. In this paper, we have done the study on the various E-Government projects across India with a view to explore the natures of implementations of these projects, benefits imparted from them to citizens and their up-and down-sides.[15] ICT are being increasingly used by the governments to deliver its services at the locations convenient to the citizens.

The ICT applications attempt to offer the services of central agencies for example district administration, cooperative union, and state and central government departments to the citizens at their village door steps. These applications utilize the ICT in offering improved and affordable connectivity and processing solutions. Several Government-Citizen (G-C) E-Government pilot projects have attempted to adopt these technologies to improve the reach, enhance the base, minimize the processing costs, increase transparency, and reduce the cycle times. According to J. Habib Sy, "ICTs refer mainly to people and the way they relate to each other either individually or in a group rather than the technology. Technology, in this context, is neither a necessary and sufficient condition for social progress nor a means for leapfrogging". [8]

III. E-DISC: SOLUTION OF E-GOVERNANCE

Vital consideration behind E-Governance includes enhancing transparency, generating accountability and awareness in the system in order to give faster and quality service to the citizen. It would enable citizens to have the choice of accessing government information and services. The concept of E-Government has evolved from the domain of e-business where enterprises need to collaborate with partners, suppliers and customers for the effective delivery of e-services. While cross organizational process and information systems integration barriers are seen in the literature as presenting the main technical challenge for realizing fully integrated E-Government services, this research found that a legacy of bureaucracy and established illogical routine tasks were preventing the government from expediting their E-Government initiative in the UK. [16]

According to Belanger France and Hiller S. J. (2006) the three main target groups that can be distinguished in E-Governance concepts are government, citizens and businesses. Abbreviations such as B2B (Business to Business) and B2C (Business to Citizen) are used, like in e-commerce concepts, The most common interactions in E-Governance, G2C, G2B and G2G, are presented schematically in Fig. 1.

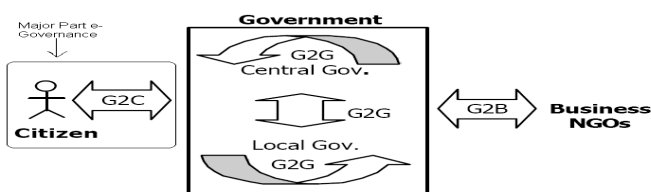


Fig. 1 G2C, G2B, G2G interactions

In the above Figure 1, we indicated by rounded rectangle the highly major part out of three target group of E-Governance is citizens because these are the ultimately end-user and the biggest part of the E-Governance. As various service and solution for grievances and application have to be provided by the government towards the citizens and general public related to administrative level, economic level, utility bill deposition (water, electricity, telephone bills etc) and revenues collection and production related and land record

related.

Some of major are such as deposition of utility bills like water, electricity and telephone bills, deposition of government revenues and application for allotment of land from government departments under administrative, application for government. Land for non agriculture purpose /by registered organization/ co-operative society application for govt. land for the purpose of agriculture by co-operative societies, application for govt. land for the purpose of non-agriculture, application repair road/ city and road lights and nagarpalika/nagar panchayat area maintenance, to give the permission for cutting trees and permission of road cutting. Permission for consolidation of land for agricultural purpose allotment of various types of government certificates and NOCs , renewal of various license , issue and newel rasan card , add and remove the name from rasan card , certificates for reservation categories candidates etc. E-DISC architecture describe how the services and information can be delivered to citizens in effective manner. The actual parameter of effectiveness is how much suitability and satisfaction of measured by the citizens after receiving the information and services.

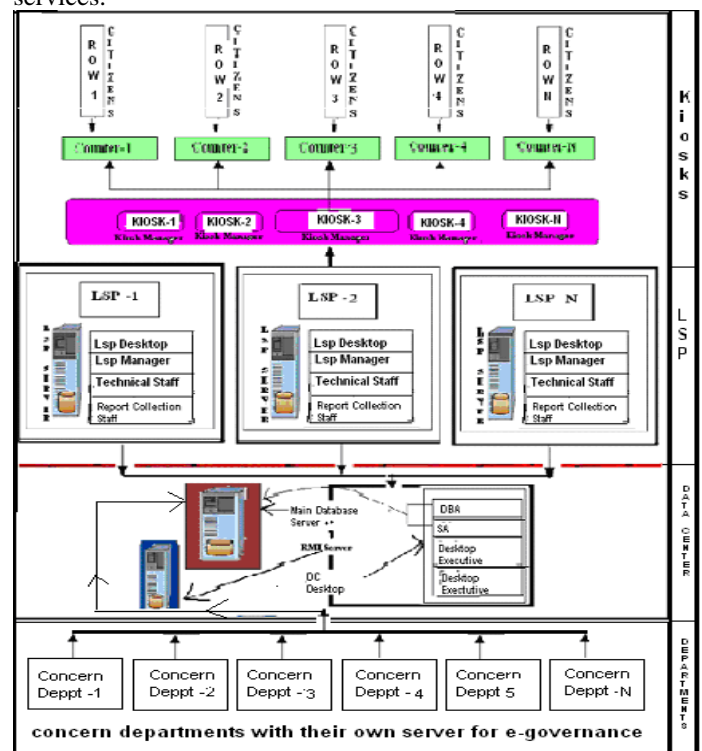


Fig. 2: Architecture of E-DISC Architecture

As the architecture describe the Local Service Providers (LSPs) provided services to the citizen and public information services, application and grievance related services to the citizen. Actually counter of Kiosks deliver the service to the citizens as means we can say the main key factor of E-DISC architecture is the person who is seating on the counter of the kiosk as in e-mitra project in Rajasthan. E-DISC technical architecture includes three main objects such as DC, LSP, and Kiosk. First: District data center (owned by

State Government, operated and managed by a private sector partner as Total Solution Provider (TSP)), Second LSP built, owned and operated by private partners and third Kiosks (built, owned and operated by individual entrepreneurs through LSPs). As we can say there is three level or stages then after the actual service and effective service delivery possible, so the duties and responsibilities are also plays different role the E-DISC architecture as using Client Server architecture for Centers and Kiosks.

As the E-DISC architecture working showing in fig. 2 the end user or citizens comes in row-wise in at the kiosk/center and mention about the grape the service or information as the written information at the center. Counter operator do the concern entry on the computer after the submission click of the entry, local database maintains some data and send request to the RMI (Remote Method Invocation) through LSP server and RMI send the request to the main database the generate token and send unique token entry number to specific entry and RMI give the response with token entry unique number and print at the level of counter. If the unique token number properly generate then only the data has been stored at the main server otherwise entry transmits as rollback and nothing data has stored. For effective delivery of service we should have to be creating user or citizen friendly environment at kiosk level and LSP level because these are the main concern and give the proper training and guideline serves ethic values while dealing with citizens and the E-DISC architecture says that that if the proper gives ethical values and behavioral training for how to behave with citizens while deliver the information and services kiosk level and regular checking and with technical testing mechanism and observe regular the behavior of counter operator at kiosk and working staff at LSP level, then really the effective information and service deliverance possible. Write the proper notification of liabilities and responsibilities of both citizens and delivery staff at kiosk and LSP centers.

As Showing in fig. 2 E-DISC Architecture the end user or citizens comes in row-wise in at the kiosk/center and mention about the grape the service or information as the written information at the center. The work flow of E-DISC architecture is citizen to kiosk (C TO K) , kiosk to LSP (K TO LSP) and LSP to Data Center (LSP TO DC) and Data Center (DC) to Concern Department (DC TO CD). Here it should be noticed that concern department just view only those the reports which is concern to their department through Data Center Permission.

IV. CHALLENGES AND DIFFICULTIES IN IMPLIMATION OF E-DISC

The various types of challenges and difficulties are comes in front of successful implement E-DISC architecture concern to E-Governance. The some challenges and problems are although related to government itself, which are really very problematic such as budget lacking, slow and leisurely decision of making process, misuse of the rights by higher authorities, corruption, dishonesty , less transparency, high

costing and skill deficiency.

As describe by Belanger and Hiller (2006) there are some limitations to achieve e- government objectives and apply in every decision making and planning process. Rules, regulations and procedures, technical potentials and consumer feasibility, includes in limitations. Rules, regulations and procedures refer to the action taken according to the law. Regulations and polices are within the control of E .government. Technical potential deals with hardware, software and experts to implement the project. Inadequate funds or a lack of skilled personnel may delay E-Government implementation; therefore it is important to have appropriate investments for better E-Government implementation. Some major challenges are:

- a) The transferring the old records and files into new medium of ICT, create uncertainty and delay.
- b) Belief of citizens on private partners such as Local Service Providers (LSPs) and Kiosks of the E-Governance.
- c) Satisfaction of citizens compare to previous style of work compilation and various work at single place.
- d) Not easy to ensure the government office environment as user friendly manner and beneficial.

Various difficulties to implementation of E-DISC architecture such as:

- a).Finance problems by Lacking in support in government funds
- b).Lacking of rights between government and LSPs.
- c).Deficiency of proper execution guide lines at both conceptual and technical level.
- d).Lacking of records format standards: consistency in records and database formats and the acceptance of a single data format is very difficult.
- e). Not have enough government resources.
- f). Disclose the privacy of citizen as sharing information, facts and data between government and private bodies.
- g). Difficulties in integration of departments at single level
- h).Not easy process to decide the common goals and objectives variation always comes.
- i).Securities of government revenues and maintain the rights which are given to LSP by the government.
- j).Concern departments are not easily ready and work on extra burden of E-Governance server while it's beneficial to their departments.
- k).Some departments are treaded as extra expenses of E-Governance working server.

V. E-DISC: STRENGTH AND RAPID

It has to take as greatness of ICTs due to make the services meaningful and in citizens beneficial was rapidly grown step by step very fast. Citizens have to spend much efforts and time to take these services even though Information and Services provided by governments are insufficient, variable and expensive. E-DISC provides multiple services at single window to facilitate immediate delivery of services to citizens to help save their money, effort

and time, where earlier citizens have visited several offices to take different services. Brief and great example is Lokmitra and e-Mitra: Project in Rajasthan provides multiple services from different government departments through e-counters connected to a central server. In the Panchmahal District of Gujarat, the district administration publishes information about developmental projects/ programs and performance of key departments. Its portal even provides the facility to download various forms and accepts a few of these online. Similarly, under Gyandoot in MP, citizens can access information regarding prices of cereals agricultural machinery and equipment in local and outside markets. Citizens can seek advice, opinions and solutions to their problems from agricultural, animal husbandry, health and legal experts. They can obtain income, domicile, and caste certificates. Students can obtain examination result and question banks from the internet. (S. N. Sangital, Bikash Chandra Dash2)

Time to time checking the technical aspect and adopt of this type of testing and checking as a process is very helpful to become successful of E-DISC architecture. To be built commercial type of managing appropriate skill. Proper education, training and provide guidelines: For successful implementation of E-DISC. Permit people to utilize E-Government portal for various use. Implement accurate and proper Integration of application and functions. Transparent: E-Government sites should be simplified so that finder can easily find and understand required information. (ibid) Systems should be secure and be able to protect private information recorded. Human Resources and Learning: (OECD, 2001) mentioned a Lack of IT skill makes in-house development impossible. In order to reduce this problem many countries have started training programs. Choose persons as staff members who have good IT skills and qualified by focusing on technical training, seminars and workshops.

VI. CONCLUSION

The communication of ICT and government is re-invocation and create huge potentiality, efficient, effective, receptive and citizen-conversational information and services. E-DISC architecture of E-Governance is proper distribution of government information and serves government services to citizens. This architecture can be composing as large level to become main concern in India. This architecture clears the concept and theoretical framework effective, accurate and successful deliverance of E-Government information and services towards the citizens as more efficient then their concern department gives. Against this architecture various types of issues and challenges comes but if proper training and proper technical testing process adopt as significant point of view the, this architecture really serve services in very effective manner. By utilizing and by increasing interest in the new electronic, information, and communication technologies (ICTs) in recent time, government improved the quality of E-Governance and delivery of information and services with cost-effective way.

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