E-Government Perspectives:
Evolution, Strategies and Practices

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Abstract- **The United States is one of the leading global leaders in e-Government and has consistently emerged as one of the top 10 countries from 2003 to 2012 on E-Government Development Index (EGDI). The paper focuses on theoretical insight and perspectives on different aspects of e-Government from the days of its evolution. The paper provides an insight of e-Government perspectives and discusses evolution of e-Governance, policy frameworks and strategies, dimensions of e-Government dominance at federal, state and local level, critical success and failure factors in the United States.**

I. INTRODUCTION

The role of Information Technology (IT) has played a pivotal role in municipal sector to bring functional, managerial and service oriented reforms at various governance levels [1]. The use of IT in public administration and municipal reforms is broadly recognized and intermittently referred as e-Government or e-Governance. "E-Government development very often aims to improve public service delivery capability, as well as public administration, governance, transparency, and accountability through the development of e-Government service delivery capability" [2]. E-Government involves multitude of approaches as a framework for good governance. According to [3], good governance include: "E-organization- internal government efficiency and effectiveness; E-services - external efficiency and effectiveness in providing services; E-partnering: external efficiency and effectiveness in working with public and private organizations; E-democracy: citizen participation in government decision-making".

At a local level, the municipal service delivery is largely dependent and defined by the level of urban governance. The governance issues are closely associated with each other in terms of simple governance to improved governance like good governance and the use of appropriate technology like ICT. "The e-Governance programmes in municipalities have traditionally evolved from an urge to make municipalities perform better for delivery of services to citizens and achieving overall performance in its functions" [4]. In-spite of several measures, the adoption level or the desired outcomes through several ICT reforms, is still at minimal level as compared to the needs/ gaps in delivery of municipal services. The technological interventions through e-government in all spheres of municipal government and touching areas of citizen centric services would highly impact given that appropriate measures are adopted at various levels to bridges the gaps of service delivery.

II. EVOLUTION OF E-GOVERNMENT

The finalization of standards in IT sector and advent of internet World Wide Web (WWW) shaped the evolution of e-government from early 1990s to 1996 [5,6,7,8]. The state level earliest e-Government applications in public administration is seen by Central Post Office during 1995 by the State of Florida. The 1998 Government Paperwork

Elimination Act, was one of the key drivers which enabled transition of processes more inclined towards web centric services. Several initiatives in e-Governance witnessed it's emergence across U.S and Europe during 2000-01, which included: Red Tape Cut, government programmes on internet, regulation of e-Government works, and development of e-Government economic growth indicators [9]. Previous research on e-Governance highlights the focus on use of IT for office automation and public administration within various levels of government. The trends in the recent literature discusses larger dimensions of e-Government like: internal and external municipal/ governance domain environment, citizen services, and change management [10].

The scholars have characterized e-government evolution in several stages. According to [11], the evolution of e-government can be considered in various functional and technological dynamics which include: simple web interface to sophisticated integrated service provision across different spheres of government. These dynamics can further be understood in terms of functional stages like: static/ basic informational presence, detailed informational/ extended presence, communicative/ dynamic interactive sophistical level, and functional transaction sophistical level with seamless interoperability in internal and external environment. The trends in e-government show a higher level of sophistication in lesser time for national government, and are lesser sophistication for state, and followed by local government. The evolution of e-government sophistication takes more time for local government due to the fact that national governments have better financial and technical resources. The ability to move rapidly towards the sophistication level is more with national governments as compared to local governments. This brings a larger disparity among the federal, state and local governments in United States.

"There were several views and perspectives of institutions, experts and researchers on concept of electronic government, as the concept of e-Government or e-Governance is relatively new in the field of ICT knowledge, being discussed since last one decade. The different perspectives on e-government and e-governance are reflective of the numerous functions and possibilities as adopted by institutions and cities worldwide. Both the concepts of e-government and e-governance refers to 'government' as a superstructure that deals with decisions, rules, implementation and outputs of its policies; whereas 'governance' refers to functioning based on processes, goals, performance, coordination and outcomes. The governance is seen as the larger facet of government. E-government is the most frequently cited term in comparison to e-governance, online government, one-stop government and digital government" [12]. The 'government' is referred "as a superstructure that deals with decisions, rules, implementation and outputs of its policies; whereas 'governance' refers to functioning based on processes, goals, performance, coordination and outcomes" [13]. The functional processes sets the distinction between e-governance and e-government. The e-governance broadly largely covers aspects of e-consultation, and e-controllership, e-engagement. While the e-government is broadly associated with e-service delivery, e-workflows, e-voting and e-productivity [14]. The e-government is largely seen as a public administration domain which fits as a sub-set of e-governance efforts [15].

IV. E-GOVERNMENT STRATEGIES AND PRACTICES

A. E-Government Strategies

The tasks force's initiatives launched in 2001 by United States focused on improving the effectiveness and efficiency of the federal structure. The efforts aimed at improving citizen service delivery, government

administration and business centric environment. This resulted in the e-Government Strategy for reforming government and emphasized through its vision that "government needs to reform its operations – how it goes about its business and how it treats the people it serves" [16]. The three guided principles of the vision were centered on: citizen centered approach, result and market oriented approach, and innovation oriented approach. The citizen centric transformation approach enabled the strategy to work in key focus areas namely: Individuals/ Citizens, Business, and Inter-Intra Governmental relations. These focus areas broadly covered the domains of Government to Citizens (G2C), Government to Business (G2B), Government to Government (G2G), and Internal Efficiency and Effectiveness (IEE) [16]. The transformation of service delivery intended to bring high quality one-stop-point of government services, elimination of redundant collection of data, enable better performance measurement, improve administrative savings, better use of modern technology for improved administration, effectiveness, efficiency and satisfaction. The four major reasons identified by the federal government which impacts the improvements in productivity, quality and customer service includes: program performance value, technology leverage, islands of automation, resistance to change.

B.   E-Government Practices: Federal, State and Local

   The existing literature on e-Government best practices discusses much of the practices adopted at Federal and State level. There is little discussion about the practices adopted at local level. However, many cities have very well aligned on similar lines of State and Federal e-Governance systems. The perspectives by various international agencies / survey findings reveal more details at Federal and State level. At the federal level, the top five federal agencies having high visibility through websites include: White House Portal, Department of the State, Department of the Treasury, Department of Agriculture, and Environment Protection Agency. The distinct feature of the White House Portal is about the large quantity of online services, live videos of press briefings, updates on national issues, question and answer forum with different White House officials, radio address and speeches, multilingual translations (Spanish), tool bar for navigation for every page throughout the site, and a clear privacy policy at the end of the webpage (www.whitehouse.gov). The Department of State provides options and services like: easy navigation, organized format, index of services, recent news releases, audio and video news releases, tool bar for retreating back to the portal pages, live chat, free subscription of State magazine, multilingual options (Spanish), and copyright information (www.state.gov). The Department of Treasury provides number of online service, the popular being the online tax filing. The site makes online information and services easily accessible, besides translation features in Spanish, press releases and databases, subscription services for treasury newsletter and webcast link (www.ustreas.gov).

   According to [17], the top five states which excelled in websites for different functionality were: Utah, Maine, New Jersey, North Carolina, and Michigan. The website of these states provides interesting features which make them top ranking websites. In the case of Utah, some of the notable features are: easy navigation, online services, tool bars, links to executive, judicial, and legislative pages, and privacy policy (www.utah.gov). In the case of Maine, besides these similar features, the site appears to be uncluttered, informative and easy to use (www.state.me.us). The New Jerseys site allows citizens to scroll list of links for every online service. The other facilities includes: billboards, content personalization, and other transit related information to citizens

(www.state.nj.us). The North Carolina provides distinct color coded featured tabs for citizens, business and government employees. The other useful features include multilingual site in Spanish, jobs section, and email alert options. The Michigan site provides features like eStore, internship links and becomes unique among other state portals. The citizen feels a democratic involvement with concise depth and breadth of services while being useful and coherent (www.michigan.gov).

In 2003, the FirstGov (http://www.firstgov.org) was one of the earliest initiatives from United States towards citizen centric e-Government system. The previous sites were lacking in citizen participation, and a comprehensive, well thought out e-strategy made a significant presence in structuring e-government programme implementation. A well regulated and administrative reforms for the integration of e-networking taking the aspects of government and citizen functionalities improved the cost effectiveness and efficiency. A dedicated portal was launched "regulations.gov" for citizen participation and commenting on federal regulations. The FirstGov consisted of 180 million pages and acted as one stop for employment, government and channeled users for accessing various functions available for citizens, business, government and other stakeholders. The FirstGov became an e-Government trend, and through this single gateway one could have access to national, state, regional and local government information and services [18] [19].

By 2005, the strength of United States online presence gained in two aspects: web portal for information at one place and dependence on integrated portal which facilitated consolidated information for the citizens/ users. Some of the examples in these directions include web federal web portal for forms, payments, and regulations through the portals namely: http://www.forms.gov, http://www.pay.gov, and http://www.regulations.gov. By 2008, additional features included in the USA.gov included: RSS (Really Simple Syndication), comprehensive mobile government page, e-rulemaking (consultation), blogs, wikis, etc. By 2010, administration in the social security emerged as one of the top governmental portal with highest user satisfaction evaluated in terms of: service functions, ease of navigation, information content and portal performance. The portal led to increased customers and emerged as one stop portal for essential primary resource information on social services in the country. The well-developed portals provided multitude range of e-services for their citizens and favoured high level of interactivity and decision making process. The portal provided links to more multitude of government services and transaction functionalities for various stakeholders like: citizens, government/ public sector departments, institutions, other private sector/ business entities. The portal offered services in various languages, and also catering to international users for information related to conducting business, employment/work, studies, travel and tourism. Besides these initiatives, several tools were introduced to provide citizens an opportunity to comment and share their own experience, such as: Facebook, Twitter, YouTube etc. [18], [19].

The 2012, witnessed the shift of e-Government strategic approaches and focused on user-centric solutions, to synergize public administration processes and systems across various spheres of governance. This spanned across various multitude of domains to synergize user experience in a seamless environment. The web 2.0 technology was used to enable cross-government collaboration, facilitate discussion, disseminate information and solve government's most pressing problems. The IT dashboard system tracked the IT spending and became one of the most successful web-based transparency and accountability tools. The system enabled citizens to understand

government's public money spending with performance, multiple performance measures about how public money is spent effectively by government and provides comprehensive visualization tools which enable citizens to hold government accountable for its spending and performance.

C. Factors Affecting Success and Failures

The policy environment in U.S is considered to be one of the factors for success of e-governance. Several policies in areas of: privacy, electronic freedom, security, infrastructure and among others fostered effective e-government implementation. The Federal Spending in IT transformed the government into citizen centered e-government with much focus on internet initiatives [20]. The other success factor for e-Governance is infrastructure investments. The U.S being the largest developed country has one of the largest National e-Government Infrastructures (NeIs) among other developed countries. The orientation of strategy is also considered the factor for driving e-Governance successfully at various levels. The e-government implementation strategy of the U.S is market oriented aimed at supporting citizens specific requirements accessed by clear and specific results. [21] highlights that "in the USA, the Standish Group has been at the forefront in analyzing and classifying technology failures: its 1995 report of 8400 IT projects in the public and private sectors in the United States found that 31 per cent were cancelled before completion; 53 per cent were completed, but over budget and with less than full functionality. Only 16 per cent of the projects were completed on time and within. Problems such as late delivery, budget overruns and limited functionality have an impact on costs and therefore reduce net benefits."

According to [22], the e-government failures have five principal modes: "financial/ economic sustainability failure, cultural/ social sustainability failure, technological sustainability failure, political / institutional sustainability failure, environmental sustainability failure". The e-government failures because of uncertain environmental factors at various stages of the e-government implementation cycle is also discussed by [23] [24] [25]. The [26] states, a number of aspects contribute to successful functional implementation of e-government programs at state level. The e-government formulation and implementation process include some of the critical factors like: strategies; outsourcing; funding; political will, administration, leadership, technology, and among other critical aspects relation to performance and capacity building. The diverse approaches in e-governance indicate different approaches to the success formula to achieve e-government goals. Outsourcing is often associated with number is dimensions like: capacity to develop, implement and manage services in-house, financial factors, political interventions, and cost savings.

According to study by [1], "the lack of technical, personnel, financial capacities are perceived to be major barriers to the development of e-government in many municipalities". The personnel, technical and financial capacity include multitude of issues like lack of: technical human resources; technical knowledge and expertise, infrastructure upgrade and maintenance, security issues, financial resources and legal issues. There are various impediments in areas of successful design, development and deployment of e-government services. The successful strategy must include provisions for "overcoming the cititical barriers such as: legislative, administrative, technological, cultural and social barriers" [27].

V. CONCLUSION

Looking at the perspectives of e-government in United States, it is observed that multitude of programmes in a staged process are initiated across federal, state and municipal level. The initiatives in different areas of service delivery show the convergence of citizen centric services, business and other sectors for provisioning of efficient governance systems at local, sub-national and national level. The primary initiative being provision of online information through the national level portals, and later providing multitude of services through multi-delivery citizen centric channels. The isolated standalone approach gets replaced by the integrated approach of connected governance. The adoption of technological means from enhancing the user base in several areas of delivery channel subscriptions like mobile, internet, kiosks among others has diffused e-government at a very rapid pace. More emphasis is laid on the transactional presence of services, with enhanced interoperability among various entities of different spheres of governance. The evolutionary concept of e-government and e-governance touches upon strategic dimensions of public administration and governance which cuts across socio-economic, political, functional, and technical dimensions of public management.

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