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# CITIZEN-CENTRIC APPROACH FOR E-GOVERNANCE: LOOKING AT THE SERVICE DELIVERY THOUGH THE EYES OF THE CITIZENS

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#### **ABSTRACT**

To bridge the gap between government and citizens, to provide effective and efficient services, to increase productivity and to extend other benefits to its citizens, the governments of various countries introduced e-Governance applications. The citizens are the power of nation and their satisfaction is ultimate. E-government has been in operation for over last decade but it has failed to contribute to improved public service delivery. The primary objective of most e-governments is to better serve citizens. The paper differentiates between citizen's intention to get government information and citizen's intention to conduct government transactions on e-government website. This paper also discusses citizens' egovernment adoption especially considering trust and risk issues. The government services to citizens should be given utmost importance, as and when it fails resulting in citizen unrest. The problem of this nature is to be minimized with the proposed basic government to citizens frame work which includes the elements of Planning, Social Audit, Professional Audit, Audits on Facilities, Performance Audit and Funding. This paper critically assesses key factors that influence e-government service adoption; reviews limitations of the research methodologies; discusses the importance of 'citizen characteristics' and 'organizational factors' in adoption of e-government services; and argues for the need to examine egovernment service adoption in the developing world. The paper concludes by drawing attention to emerging e-government challenges highlighting the need for a citizen-centric criteria-based definition of e-government. A citizen-centred criteria-based definition of e-government is proposed to assist egovernment practitioners by describing the scope and elaborating the e-government content.

**Keywords:** Citizen Centric E-Governance, Citizen Trust and Risk, Implementing Issues, Different Characteristics of Citizens

#### INTRODUCTION

As the government is for the people, by the people and to the people, serving citizens is the motto leading to the nation's development. E-government means different things to different people. There are as many definitions of e-government as there are individuals, organisations and forums defining it. Individuals at different levels of organizational hierarchy also have different perceptions of e-government. As a result egovernment scholars and practitioners alike often lack clarity as to the precise meaning of e-government, which adversely affects its practice and results in unintended consequences for the organizations and citizens. It is widely acknowledged that e-governance can be immensely useful in raising the efficiency of government functioning and improving public service delivery, as also in bridging geographical divide. Several e-governance projects are being run across the States in the country by various agencies both public and private sector. However, in spite of such efforts, there remain areas of concerns affecting the performance of e-governance in the service delivery. Among others, prominent areas are: lack of citizencentric approach in identifying citizens' requirements, portal design, process design, IT system architecture, besides inadequate capacity of delivery system to deliver, lack of responsive work culture and so on. For achieving optimal benefits of e-governance, a citizen-centric approach to service delivery is essential. This approach will enable governments to achieve essential efficiency gains and improve service delivery levels, raise citizen satisfaction with government services, and enhance quality of life. To reap the maximum benefits of e-governance, a citizen-centric approach to service delivery is essential if governments are to improve service delivery to citizens; reduce cost of government service delivery and

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improve delivery of public policy objectives. A citizen-centric approach will enable governments to achieve essential efficiency gains and improve service delivery levels, improve citizen satisfaction with government services and improve quality of life (Gupta). By placing consumer needs in perspective, e-Government is gradually shifting towards a novel architecture for service management and delivery, with customer-centred front offices and interlinked back office infrastructures, where data and information are exchanged and processed seamlessly (Al Sawafi, 2003).

## Citizen-Centric Government

Citizen-centricity is all about turning the focus of government around- looking at the service delivery though the eyes of the citizens rather than operational or other imperatives of the government system. It is hoped that a citizen-centric approach will enable government:

- to achieve essential efficiency gains and improve service delivery levels
- to increase usage of online services, thereby improve sustainability and encourage investment in egovernance
- to improve citizen satisfaction with government services
- to improve quality of life

Such initiatives deal particularly with the relationship between government and citizens:

- **Talking to citizens**: providing citizens with details of public sector activities. This mainly relates to certain types of accountability: making public servants more accountable for their decisions and actions.
- **Listening to citizens**: increasing the input of citizens into public sector decisions and actions. This could be flagged as either democratisation or participation.
- **Improving public services**: improving the services delivered to members of the public along dimensions such as quality, convenience and cost (Heeks, 2002).

## Defining E-Government: The Citizen-Centric Criteria-Based Definition

In order that any electronic intervention can qualify to be called e-government, it must meet the following criteria (Table 1) (Misra).

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S.N	I. Criteria	Remarks
1	E-democracy	Promote e-voting and public participation in decision-making. Accept e-society.
2	E-citizen	Develop e-citizen's charter.
3	E-inclusion	Set up access points. Common services centres scheme is a good example
4	E-literacy	Promote e-literacy by enlisting support of civil service organizations
5	E-empowerment	Promote use Right to Information (RTI) Act through official websites.
6	Citizen-centric Government	Keep citizen at the centre stage of any e-government intervention.
7	Single portal	Cradle to the grave services for citizens.
8	Single sign on (SSO)	Only one user id and password.
9	All public services Online	Joined-up, seamless government without need to go elsewhere.
10	Efficient onsite search	Set up a specialty search engine.
11	Easy site navigation	Set up user-friendly web site so that citizens know where to expect what.
12	E-payment	Citizens must be able to conduct financial transactions online.
13	Participative e-government	Set up uncensored discussion forums on official web sites as a matter of policy.
14	Grievance redress	Every web site must have a time-bound grievance redress mechanism.
15	Anywhere e-government	Provide e-government through multiple channels including cell phones (m-government).
16	Anytime (24x7) e-government	Provide "always on" e-government including railway reservation.
17	Privacy and security	Assure citizens that their privacy is protected and transactions financially secure.
18	Legal support	Make computer-generated documents legally acceptable by legislation.
19	Customer relationship	Provide for customer-led i.e. customer relationship management (CRM).
20	Quality-marked e-government	Assure a minimum standard of quality.

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#### Citizen Trust and Perceived Risk in E-Government

Government-citizens' trust is an important catalyst of e-government adoption. Researchers studied the issue of trust from many angels. Al Sawafi (2003), for example, argued that in order for e-government to succeed and prosper, citizens must have a strong trust in the security of electronic communications. He further suggested that trust in digital technology requires a reliable, stable and up-to-date technology of embedding digital signatures. Palmer (2002) looked at the website quality as a factor of developing trusting intentions toward an e-government website. A survey released by the Council for Excellence in Government in the US showed that almost half of Americans strongly agree that government will provide them with better services if they submit personal information to government websites. However, nearly the same number believed they risk security and privacy by doing so (Soat, 2003).

In another study on the feasibility and technicality issues of e-government, Dawes *et al.*, (1999) concluded that while some web-based applications entail major security risks because they involve true interaction and exchange of information between the agency and the user, the typical agency starts out with-low risk applications such as information dissemination, downloadable documents, limited site search and e-mail. This does not mean, however, that governments can ignore security simply because it offers passive information. The research showed very clearly that a lot of perceived security issues are controllable. Citizen's trust in e-government has some unique dimensions, that is, the impersonal nature of the online environment, the extensive use of technology, and the inherent uncertainty of using an open infrastructure. The online environment does not allow the natural benefits of face-to-face communications and to directly observe the service provider's behaviour, assurance mechanisms on which humans have depended on for ages (Whinston and Zhang, 1999). This separation of time and space increases fear of opportunism.

To further complicate the situation, there is concern about the reliability of the underlying internet and related infrastructure with the extensive media coverage about privacy, security, and frauds on the internet. Overall, these unique differences decrease citizens' perceptions of control and increase their hesitation about adopting e-government. This provides a unique challenge for the government to find ways in which to initiate and foster electronic relationships with their citizens. The literature on trust dating from Deutsch (1960), generally suggest that trust is interwoven with risk, because it then reduces the risk of falling victim to opportunistic behaviour (Ganesan, 1994).

Risk has been called the element that gives the trust dilemma its basic character (Johnson-George and Swap, 1982). Trust is essentially needed only in uncertain situations since trust effectively means to assume risks and become vulnerable to trusted parties (Hosmer, 1995). If there was no risk and actions could be taken with complete certainty no trust would be required. Prior research has discussed the role of trust in reducing the risk of opportunistic behaviour in channel relationships and in inter-organisational exchanges. E-government websites are open to the public and accessible from anywhere in the world. That is why external risk must be considered to explain citizens' intention to use e-government services (Al-adawi *et al.*,).

## Assessment of Individual, Demographic and Non-Demographic Characteristics of Citizens

In adoption of e-governance individual characteristics of citizens can affect attributes of e-government, such as quality of website, access to e-government, measurement and assessment of benefits, infrastructure, intention to use e-government. The assumption is that the consumers find it difficult to separate how the service is being delivered (functional) from what is delivered (technical). In electronic governance trust and financial security are important barriers to adoption in comparison to other barriers such as experience, information quality, low stress and visual appeal.

The demographic characteristics of individuals such as age, experience, gender, education and voluntariness of use of technology also have an effect on adoption of e-governance. In an attempt to explore the possibility of gender difference in adoption of e-government services, a study in Turkey found that gender differences were huge in terms of perceived acceptance of Internet and e-government and concluded that gender gap existed in accessing the Internet and e-government. One possible reason for this difference could be due to 'cultural tendencies' that lead to adoption of different online

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communication styles by men and women. The individual characteristics of the adopters (socioeconomic characteristics, personality traits, and communication behaviour), holding the individual responsible for his her problems. The systematic barriers' to the Internet and e-government, such as; unequal Internet access; unequal access to e-government; problems with website accessibility and usability; prevent people from accessing and eventually adopting technology such as the Internet and e-government.

Apart from demographic characteristics such as; race, income, and education; non-demographic characteristics of an individual such as 'civic mindedness' play an equally important role in adoption of egovernment services. Their research suggests that the "three aspects (of civic mindedness, namely); social contact, prior interest in e-government, and media use of public affairs enhances civic engagement and increases the likelihood of use of electronic means by citizens to interact with government. Those persons with higher education and higher income are more likely to use e-government information and services. The use of ICT can benefit citizens, but sometimes individual characteristics of citizens can affect; adoption of technology, and e-government usage India.

# Components of Citizen-Centric Administration

The DARPG (Department of Administrative Reforms and Public Grievances) order constituting the second ARC (Administrative Reforms Commission i.e. appointed a commission of inquiry by DARPG) elaborates the concept of citizen-centric administration in five major components (Misra):

- (i) Accountable and transparent government,
- (ii) Result- oriented administration,
- (iii) Citizen centric decision making,
- (iv) User groups in decision-making,
- (v) Freedom of information.

These major components are elaborated as follows:

- (i) Accountable and Transparent Government: This consists of
- (a) Issues of delegation, accountability and transparency,
- (b) Move from processes accountability to productivity accountability and from transactional to transformative governance,
- (c) Reduce delays and ensure promptness in delivery of services
- (ii) Progressive Interventions to Make Administration More Result Oriented: These interventions include:
- (a) Process simplification,
- (b) Target group consultations,
- (c) Flexibility to implementing agencies customised to local needs
- (iii) Strengthening Citizen Centric Decision Making: This will include
- (a) Empowering the citizen through citizens' character, etc.
- (iv) To Facilitate Accessibility of User Groups to Decision-Making Processes: The operational details may include:
- (a) Setting up of information facilitation and solution centres,
- (b) Augmenting facilities for submission and redress of grievances and providing replies thereto,
- (c) Setting up consultative mechanism for receiving suggestions
- (v) Freedom of Information: This will include:
- (a) To review the confidentiality classification of government documents specially with reference to the Officials Secrets Act,
- (b) To encourage transparency and access to non-classified data,
- (c) Disclosure of information and transparency as a supplement to the Right to Information of the citizens.

## Benefits of E-Government to Citizens

- (i) 24x7(24 hours, 7 days a week) round-the-clock service,
- (ii) Economical (no need for physical visit to an office),
- (iii) Fast and efficient service (electronic),
- (iv) Transparent (no speed money),
- (v) Equitable (any one can access it),

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(vi) Convenience (can be accessed while on move or at home).

# Limitations of E-Government to Citizens

- (i) E-government is costly. It requires investment in information and communication technology (ICT) manpower and infrastructure.
- (ii) E-government takes time to design and implement. Any hurried attempt will give unsatisfactory results.
- (iii) Defining E-government is risky. It does not have any failsafe strategies.
- (iv) Though e-government may be widely subscribed but it has a number of people too who do not have faith in new technology.
- (v) E-government requires e-inclusion, that is, access to information and communication technologies (ICTs) but this may not be the case in most of developing countries.
- (vi) E-government requires e-literacy, that is, a certain minimum level of knowledge and skills on the part of citizens to access it (Misra).

## Issues Regarding Implementing E-Governance for Citizens

The G2C (government to citizens) category of e-Governance includes all the interactions between government and citizens that can take place electronically. It enable citizens to pay taxes, receive payments and documents, interact with government at any time from any location, improved accounting and record keeping, reduced processing time etc. On the administrative side the information can be stored in databases and backup copies in various locations with security of transactions. Presently, many government agencies and departments are scheduling for more diversified, innovative e-services like electronic voting. These activities though booming, causing negative affects with irksome situations along with some implementation issues.

- **Population Explosion:** India is fifth biggest country in area and stands second with dense population of 1,015 millions. Increased population increases the need of citizens and can be answered through computerization of the public needs through e-Governance applications. This satisfies to some extent but it is not in a position to meet the demands of the huge public.
- **Poverty:** About 30% of the Indian population is below poverty line. They don't even have proper food, clothing and house to reside. It is becoming meaningless to computerize the government activities, which are not in reach of poor citizens.
- **Illiteracy:** Literacy rate is around 60% and rest 40% are dependent on farming, labour works and can't even read or write and hence the online activities are not in approach of the illiterate public.
- Villages: India is with more than 600,000 of undeveloped villages with 72% of rural population. The urbanization and other development activities are far away from the near feature which ripples the G2C activities.
- **Corruption:** Improper utilization of funds, Corruption, favouritism, unnecessary involvement or negligence of officials and political leaders is hampering the growth of G2C implementation.
- **Telecom Problems:** The infrastructure of telecommunication services are to be developed and existing system should be improved with advancements like ubiquitous, broad band and other future technologies.
- **Unaffordable Cost:** The cost of telecom and internet activities is not within the reach of general public. Lack of financial elements like affordability with public, telecom rationing system, free browsing centres etc is limiting the progress.
- **Funding Problems:** India is a developing country requiring a greater financial support to launch G2C projects. Insufficient allotments of funds for investigating the project, analysis, developing, launching and maintaining is one of the major issues.
- Lack of Reliability: Reliability of the political parties and the stability of government is the foremost factor for G2C development. Various G2C projects are proposed to initiate but nagging owing to lack of political reliability, regional discriminations etc.
- Lack of Technical Skills: Lack of technical knowledge to our politicians, authorities is other aspect hampering the progress of G2C activities.

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- **Computer Illiteracy:** Though some section of Public is educated, they lack technical knowledge and are far away from minimum computer and internet operating skills.
- Category of Citizens: The G2C activities should target the category of citizens to whom they are designed for. Improper target designing leads to ambiguity of application leading to its failure.
- **Human Touch:** Value should be given for human touch and feelings rather than totally concentrating on the technical aspects and designing activities. Importance for human feelings, pleasing interactions and concern towards citizens are missing elements.
- Economic And Financial Issues: Short of financial clarity, economic transaction over internet on government tariffs, customs and taxation policies creating mishap to G2C application utility. Proper regulatory agencies, online economic strategies correlating traditional strategies are missing creating issues.
- Lack of Trust: The key financial barrier of G2C is electronic payment systems. Suspicious of fraud in money transfer activities and the incidents of cyber crimes, online bank thefts supported it.
- Lack of Online Support: Public require online support in clarifying their doubts while working with G2C applications. Lack of privacy, protection, confidentiality, online documents and other transactional activities of some applications are creating ambiguity.
- Apart from the discussed issues the factors like pseudo e- Governance applications, regional, religious, linguistic and other social factors are catalyzing the G2C issues.

## Proposed Framework Elements to Control the E-Governance Implementation Issues

The discussed problems can be minimized with the proposed G2C frame work which includes the elements of Planning, Social audit, Professional audit, Audits on Facilities, Performance Audit and Funding.

- Planning: Determining the goals and the means of achieving these goals with time bounded scheduling is done in this phase. Every e-governance activity commences with planning and is followed by organizing, leading and controlling. Top management of concern departments is responsible for preparing a master schedule plan which sets both the long-run and short-run directions. The current changing global scenario, citizen behaviour, social trends, economic policies, government stability, environment of implementations, psychological aspects, beliefs of the society are to be considered in scheduling.
- Social audit: Social audit is the most important of various framework elements because G2C is the process designed for public benefit and hence it is the responsibility of government to make people participate in its design and implementation. Social audit is a process in which the people work with the government to monitor and assess the planning and implementation of application which ultimately leads to citizen satisfaction. The failure of various e-governance applications can be controlled with citizen partnership leading to success and prosperity of society. This will bring the views and facts of the people to government, makes people participate in the task of confirmation and acceptability by government. Features of social audit are collecting the evidence, community participation, fairness, stakeholder involvement, no allegations, repeat audits and results sharing.
- **Professional audit:** G2C Work audit is a series of activities performed on ongoing implementations of a scheme or group of schemes that provide a specific service to public. The applications are interactive or transaction based. This means information is collected or provided by the customer and a service is then delivered. The goal of Professional audit is to provide a start-to-finish solution to the customer with satisfaction. The professional audit procedures involve the auditing of designing, developing, implementing, training, marketing, maintenance of G2C applications.
- Audits on Facilities: This includes all the physical and abstract elements which are involved in developing and implementing the e-Governance applications. The telecommunication network, electricity, kiosks, different source of access media like mobiles telephony, radios, computers and television etc can be considered as infrastructure. The comfort, convenience, ease of use and pricing are the core factors that drive the citizens to e- Governance. The expenditure or the efforts, invested or likely to invest on the infrastructure creation for the e- Governance project should be considered. The major considerable points in providing facilities are identification, assessment and safe guarding infrastructure.

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• **Performance audit:** Time is precious for every individual and the performance of application bothers more. It concerns the efficiency, effectiveness, economy of a particular government activity. The performance is directly related to downtime of e-Governance application. The measure of performance of e-Governance projects is the citizen satisfaction in terms of comfort. The different elements responsible for performance are network, security, cables and connectors, servers, applications, service providers, e-commerce. The said elements are associated with negative effects like hardware problems, software problems, human error and service provider error. The poor performance leads to loss of revenue and productivity (Prem *et al.*, 2010).

## Some Other Requirements for Implementing Successful E-Governance across the Nation Are:

- E-Governance framework across nation with enough bandwidth to service a population of one billion.
- Connectivity frameworks for making the services reach rural areas of the country or development of alternative means of services such as e-governance kiosks in regional languages.
- National Citizen Database which is the primary unit of data for all governance vertical and horizontal applications across the state and central governments.
- E-governance and interoperability standards for the exchange of secure information with non-repudiation, across the state and central government departments seamlessly.
- A secure delivery framework by means of virtual private network connecting across the state and central government departments.
- Data centres in centre and states to handle the departmental workflow automation, collaboration, interaction, exchange of information with authentication (Kanungo).

Hence there should be some means of estimating the revenue loss and productivity loss incurred due to low performance. The cost overruns due to improper project planning, unfair expenditure and saving, maintenance cost, unexpected transaction costs, corruption, funding polices of government are to be considered. Heavy investment is needed in the initial stages of G2C projects. This is the direct expenditure. Long term funding arrangements are to be done with bonds, leasing that guarantee long-term funding and smooth expenditures for large investments by spreading expenses over several periods. While funding the Government should consider the project not only in financial terms, but also in terms of social outcomes and social benefits.

# Recent Implemented E-Governance Projects in India

Following are some of the recent e-governance projects implemented by various state governments (Kanungo).

#### **Table**

	FJ		
State/Union	Initiatives covering departmental automation, user charge collection, delivery of policy/		
Territory	programme information and delivery of entitlements		
<b>Andhra Pradesh</b>	e-Seva, CARD, VOICE, MPHS, FAST, e-Cops, AP online-One-stop-shop on the Internet,		
	Saukaryam, Online Transaction processing		
Bihar	Sales Tax Administration Management Information		
Chattisgarh	Chhattisgarh Infotech Promotion Society, Treasury office, e-linking project		
Delhi	Automatic Vehicle Tracking System, Computerisation of website of RCS office, Electronic		
	Clearance System, Management Information System for Education etc		
Goa	Dharani Project		
Gujarat	Mahiti Shakti, request for Government documents online, Form book online, G R book online,		

Haryana Nai Disha Himachal Pradesh Lok Mitra

Karnataka Bhoomi, Khajane, Kaveri

Recent implemented e-governance projects

Kerala e-Srinkhala, RDNet, Fast, Reliable, Instant, Efficient Network for the Disbursement of Services

(FRIENDS)

Madhya Pradesh Gyandoot, Gram Sampark, Smart Card in Transport Department, Computerization MP State Agricultural Marketing Board (Mandi Board) etc

census online, tender notice.

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For success of an e-governance project and superior service delivery, it is imperative that the government agency focuses on whole citizen experience. Focusing on the citizen is essential for long term success. The govt. agency needs to integrate information from all points of citizen interaction. The overall architecture for e-Governance needs to ensure that the architecture components are extensible and scalable to adapt to the changing environments.

## Future Directions for Citizens to Participate in E-Governance

Govt. leaders in India are starting to realize that e-governance is the key to drive today's economy with an increased participation from citizens. Providing services online is no longer going to remain optional for local and central government as demand for providing services @ internet speed has been coming from the citizens. In this era of accountability and performance measurement, government will face increasing pressure to make the services more accessible to their citizens. The pressure comes directly from the new legislatures and govt. policies to implement high-end technologies in governing the nations; but also indirectly and perhaps more intensely from citizens. The citizens now day are not using govt. services in isolation, but are simultaneously making transactions and interacting with the corporate world (Kanungo).

E-Government has been largely inspired by the achievements and evolution in the field of e-Commerce. The shift from a centuries-old perception of the state as an overlaying, rigid administrative structure to a view of government as a service provider and of the citizen as the government's customer has been a significant step for modern public administration. Currently the growing trend for customer empowerment in the financial world seems to inspire new visions for e-Government in the 21<sup>st</sup> century. It is increasingly acknowledged that, in order to achieve the full potential of e-Government, a new paradigm of governance is needed, namely one centred on citizen empowerment and increased citizen engagement in government activities. This paradigm entails transforming societies from mere administrative structures into knowledge communities that build upon knowledge, information, and the active involvement and participation of both the governing and the governed. With a view to this partnership-based model of governance, the challenge for e-Government is twofold, namely to enable and support "knowledgeable citizens" and also to develop and make available the means for them to take active part in government.

In the case of e-Government this entails employing the means provided by modern ICT technologies to strengthen citizen-to-government relations, namely fostering citizens' engagement and participation to:

- allow citizens to be informed about local policies, to enter into dialogue with decision makers and participate in decisions;
- allow citizens to express their opinion on certain subjects (e.g. citizen panels for consultation strategies, electronic referendums etc);
- allow citizens to become proactive, making suggestions to decision makers about topics of potential interest to the community (e.g. electronic petition systems);
- enhance the opportunities for consultation and dialogue between government and citizens;
- enhance citizens' opportunities to participate in the democratic process;
- enable government to seek the views, knowledge and experience of people;
- broaden consensus on developing policies (policy deliberation);
- strengthen the connections between people in the community, allowing special interest groups to emerge and flourish;
- Increase the level of collaboration among citizens and administrations from different regions.

As governments continue to shift their activities online, e-Participation becomes a key element for supporting democratic decision-making. To achieve effective e-Participation, e-Government policies should be underpinned by five principles: inclusion (a voice for all), openness (electronic provision of information), security and privacy (a safe place), responsiveness (listening and responding to people), and deliberation (making the most of people's ideas. This new vision of technology assisted and/or enhanced participation in government implies a profound change in citizen-to-government relations, as well as in citizen-to-citizen (C2C) communication and collaboration (Pappa and Stergioulas, 2006).

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#### Conclusion

This paper draws attention to the importance of individual characteristics of adopters and lays emphasis on its significance. This paper suggests that individual characteristics of citizens are important to study the factors that influence e-government adoption and understands to address the needs of citizens. Also, these factors can be influenced by varied cultural background of citizens. Precession and smooth transactions of government to citizens' services can be attained with the proposed framework elements leading to successful functioning. The constant vigilance of framework elements amalgamated with standards will lay a pavement for G2C applications to reach the desired bench mark levels of services. The success of G2C implementations of e-Governance, not only make the public enjoy but also helps in progress of Nation. Successful consumer-centric service provision is one of the challenges facing governments today. The improvement of customer services implies the redesigning of public services from a customer's point of view as part of an overall transformation of government from an "administrative" to a "service-oriented state". In order to achieve its full potential, e-Government needs to abandon its initial technological bias and focus on socio-cultural transformations. Technology is key – but not without educated individuals using it or streamlined business processes. Both "providers" and "customers" should have a positive attitude towards the introduction of e-Government services. Those citizens, who in general seem to be very positive towards e-Government, recognise the benefits to be gained from the use of such systems, and have high expectations for the future. By placing consumer needs in perspective, e-Government is gradually shifting towards a novel architecture for service management and delivery, with customer-centred front offices and interlinked back office infrastructures, where data and information are exchanged and processed seamlessly.

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