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# Inhibiting Factors For E-Government Adoption: The Pakistan Context

Muhammad Mustafa Kamal

*Brunel Business School Brunel University, Uxbridge, Middlesex, UB8 3PH, UK, muhammad.kamal@brunel.ac.uk*

Ray Hackney

*Brunel Business School Brunel University, Uxbridge, Middlesex, UB8 3PH, UK, ray.hackney@brunel.ac.uk*

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# INHIBITING FACTORS FOR E-GOVERNMENT ADOPTION: THE PAKISTAN CONTEXT

Muhammad Mustafa Kamal  
Brunel Business School  
Brunel University,  
Uxbridge, Middlesex, UB8 3PH, UK  
[Muhammad.Kamal@brunel.ac.uk](mailto:Muhammad.Kamal@brunel.ac.uk)

Ray Hackney  
Brunel Business School  
Brunel University,  
Uxbridge, Middlesex, UB8 3PH, UK  
[Ray.Hackney@brunel.ac.uk](mailto:Ray.Hackney@brunel.ac.uk)

## **Abstract**

*Developing countries are facing immense challenges in moving to electronic forms of government (e-Government) for integrated service provision. This research considers an Asian economy, within an underdeveloped context, through a particular focus upon Pakistan. This region, over many years, has experienced economic and political instability, poor governance and deteriorating government institutions. Consequently, there is a need to reconsider the tiers of government, in particular Local Government (LG), including their internal operational activities through the potentially beneficial adoption of e-Government systems. There is clearly a requirement to deliver end-to-end 'joined-up' public services in this respect to key stakeholders, e.g. citizens. This research identifies factors which inhibits e-Government adoption and proposes an achievable approach to enacting Information and Communication Technology (ICT) enabled delivery of services. The contribution is to identify the significant problems of meeting stakeholder demands which are attributed to several issues within LGs' organisational, social, operational, political, strategic, and technological structures.*

**Keywords:** *Local Government, e-Government, Pakistan, Inhibitors, Factors.*

**Paper Type:** *Research-in-Progress.*

# 1 INTRODUCTION

Government organisations have been marked of with bureaucratic and intrusive style of working (not only in the developing but in the developed regions too) – with issues such as dismal service levels, soaring costs and red tap continually deteriorating the overall reputation of government organisations (Janssen *et al.*, 2012; Bigdeli *et al.*, 2011; Kamal *et al.*, 2010). Janssen and Wagenaar (2003) report that governments' history with autonomous agencies and at times their overlapping functions and objectives has resulted in a sluggish progress. These views are further endorsed by Kamal *et al.*, (2009), who state that government organisations often operate as self-governing and autonomous bodies without understanding other organisations within the public domain. In recent years, however, government organisations have been vehemently encouraged to reform their murky outlook and operations thereby displacing away from conventional form of government to electronic government – also termed as e-Government (Kamal *et al.*, 2009; Irani *et al.*, 2008). In doing so, several governments around the globe are aggressively striving with a vision to achieve a government-wide transformation, in which both local and federal government entities area endeavouring to work with each other to deliver better services to citizens via a one-stop-shop environment for all services under the guise of e-Government (Reddick, 2009; Weerakkody and Dhillon, 2008). The latter argument is supported by Janssen *et al.*, (2012), who report that government organisations are vigorously persuaded to collaborate with other government bodies in distributed and loosely coupled networks by making use of each service, i.e. the sharing of services. This form of collaboration for service provision is an illustration that e-Government implementation efforts are and to a greater have shifted towards the shared service concept that inevitably supports in acquiring efficiency gains. Academics and practitioners have conceptualised e-Government as the rigorous or generalised use of Information and Communication Technologies (ICT) in government for the provision of public services, the improvement of managerial effectiveness, and the promotion of democratic values and mechanisms (Gil-García and Pardo, 2005; Gil-García and Luna-Reyes, 2003; Beynon-Davies and Williams, 2003).

Over the past few years, in developing countries e-Government implementation efforts have significantly transformed from cataloguing basic government information to providing integrated and interactive based services to citizens e.g. taking the cases of governments in the UK, Australia, Canada, Norway, and Sweden. Having already realised transaction based electronic services (e-Services), the UK local government in particular is now aiming to deliver a more integrated service delivery structure for e-Government (Kamal *et al.*, 2009; Reddick, 2009). Weerakkody and Dhillon (2008) also support that the UK local government has surpassed in successfully e-Enabling customer facing processes, whereas, currently the UK government is working towards reengineering and e-Enabling back office processes and Information Systems (IS) to facilitate more joined-up and citizen centric e-Government services; these efforts are referred to as the transformational stage of e-Government or t-Government. The extant theorised conceptions on e-Government seem very promising – undeniably several governments (specifically from the developed regions) have achieved productive results with the appropriate implementation of e-Government initiatives (Reddick, 2009; Beynon-Davies, 2005). On the other hand, majority of developing regions are still lacking far behind in this context. The latter argument is supported by Srivastava and Teo (2008) and Rehman *et al.*, (2012), who accentuate that most of the governments from the developing region are still facing troubles such as: (a) bureaucratic tendencies in governance systems, (b) centralised decision making patterns, (c) complexity of redundancies in the public sector, (d) lack of co-ordination and information sharing in public sectors, and (e) the lack of effective ICT infrastructure.

For example, Pakistan – a developing country, where over the past many years, economic and political instability and poor governance has deteriorated its government institutions with several factors still *inhibiting* e-Government adoption (Rehman and Esichaikul, 2010). Specifically, the LG has seen the same deterioration (including abolition of local government systems) and policymakers now face many urgent problems requiring immediate solutions (Kayani *et al.*, 2011; Qaiser and Khan, 2010). Consequently, there is a need to reinvent all the tiers of government, in particular the LAs and their internal operational activities and systems. The latter is required to deliver end-to-end integrated

public services to the key stakeholders in Pakistan through the use of appropriate ICTs. The main focus herein is to improve the quality of life of all stakeholders in Pakistan (Kayani *et al.*, 2011). However, it is highly acknowledged that all tiers of government institutions including LAs in Pakistan have significant problems in meeting citizens' demands (Kazmi, 2010). The latter can be attributed to several limitations in LAs' organisational (i.e. top management commitment), social (i.e. behavior and attitude), operational (i.e. resource commitment), political (i.e. government instability), strategic (i.e. planning and control), stakeholders (i.e. targeted users) and technological (i.e. ICT infrastructure) structures (Kayani *et al.*, 2011; Qaiser and Khan, 2010; Kazmi, 2010). It is evident from the literature that it is of high importance to investigate this area which results in research that contributes towards successful provision of seamless and end-to-end integrated services to citizens by LAs in Pakistan.

## **2 TOWARDS E-GOVERNMENT: A LITERATURE PERSPECTIVE**

The wider and more effective use of ICTs is central to current attempts to transform the performance of local government and moving towards electronic service provision (Beynon-Davies and Martin, 2010). Literature indicates that ICT has altered different aspects of life; how people live, how businesses run, and specifically how LGs interact with their citizens (Janssen *et al.*, 2012; Reddick, 2009; Weerakkody and Dhillon, 2008). Recently, however, the adoption and development of these technologies in private domain has put a massive pressure on public domain to keep up with the same pace (Kamal *et al.*, 2009). LGs have realised that it is essential to transform their administrative processes in order to improve the efficiency and effectiveness of interacting with their citizens – thereby transiting towards adopting e-Government practices. One such transformation is the use of ICT to facilitate government information sharing in a networked environment (Scholl and Klischewski, 2007). Regardless of huge government spending on ICT over the past several years, limited numbers of e-Government projects in the local as well as central domain have been successful (Heeks, 2003). The latter argument is supported by Rehman *et al.*, (2012) and Rehman and Esichaikul (2010), who assert that local e-Government projects failure rate is significantly high. The prime rationale correlated with this high failure may be due to the lack of knowledge and recognition of conceivably the key factors that impede e-Government adoption (Sang and Lee, 2009). To date, e-Government services have evidently been more about quantity rather than quality (West, 2008). One of the foremost vital viewpoints for successful e-Government adoption and implementation is the readiness of citizens to adopt e-Government (Shareef *et al.*, 2009).

To transit from conventional form of LG to local e-Government; however, LGs need to transform their organisational structure and communication channels between and among different government entities in order to deliver services towards citizens in an efficient manner (Bigdeli *et al.*, 2011). In the Western developed countries, the association between local governments and their constituents is in continuous progression. For example, in the 1990s, the democratic discrepancies and gaps amid the government and its citizens became evident to government representative and policy-makers. Torres *et al.*, (2006) reports that local government service provisions become a key issue in reconstructing the authenticity of government through the development of transparency, openness, and accountability. The earlier discussions are a manifestation that the adoption and implementation of web-based technological solutions to deliver government services is now a global trend in public administration. Brock (2009) also highlights that governments have implemented technological solutions and information systems with the intention to encourage two-way communication between local government officials and citizens – i.e. promoting citizen participation with government. Literature indicates that the maturity of developed countries is much higher than developing/under developed nations as much as e-Government maturity is concerned. There is evidence to suggest that an effective and efficient local government signifies a vital influential factor in the overall authenticity and steadiness of institutions of a democratically elected government (Beynon-Davies and Martin, 2010). It is argued that merely allocating new responsibilities to LG officials, without pertinently focusing on the institutional incentives to always be receptive and sympathetic to citizens' needs and responsible for outcomes, would not benefit to both – the local government system and the citizens. Thus, decentralisation reforms can provide solutions to the critical issues in management of law and

order, price regulation, poverty alleviation, access to social services, efficiency in government spending, taxation, etc (Kayani *et al.*, 2011; Kazmi, 2010; Arif *et al.*, 2010).

### **3 PAKISTAN AND E-GOVERNMENT CONTEXT**

In 1947 – the birth year Pakistan, there were few developed systems in local government, which were primarily from the Punjab province (Cheema and Mohmand, 2003). From 1958 to 1969, Pakistan's first Martial Law (i.e. military rule) came into picture, establishment of a military government and the development of elected system of local government also took place. The military government realised that there was a need of citizens' participation in their own affairs, which gave rise to the 'democratic system' (also known as democracies) all over the country. In urban areas, town committees were developed for towns having population of less than 14,000. Town committees were performing 37 functions including promotion of social welfare, health issues and maintenance of infrastructure. Urban areas consisted of union committees. The union committees had six to ten elected members. The chairman of union committee was elected from ex-officio member of municipal committee which was appointed by the provincial government. In rural areas, the first tier of government was the union council which consisted of a group of villages. In the democratic system, a district council was created. All chairmen of union councils, town and union committees were members of district council, which eradicates the distinction between urban and rural areas. The district council had 28 obligatory, 70 optional functions and also powers to levy taxes. The basic purpose of district council was to coordinate activities of local councils and municipal committees. The basic democracies system served as an 'electoral college' to elect the President and assemblies. However, after the regime of General Ayub Khan, the system went into disfavor. The first general elections of 1970 resulted in the formation of new government system in Pakistan. The proposed elections were suppose to be held under the 'People's Local Government Ordinance' of 1975 promulgated by Pakistan's first democratically elected government and meant to elect town and municipal committees (and councils in the rural area), were never held.

Under the regime of General Zia, the Marital law was revised in 1979 under the ordinances of provincial local government, which remain operational till 14th August, 2001. In this ordinance, there were four levels of municipal government in the urban areas i.e. town committees, municipal committees, municipal corporations and metropolitan corporations. In the rural areas of Pakistan, there was three tier system of local government in operation. These three tiers were union councils, tehsil councils and district councils. However, the provincial government abolished the middle tier i.e. tehsil level. Since 1985, there had been five general elections enabling people to choose members of national and provincial assemblies. In the absence of elected assemblies, local governments were popularly elected bodies. After election of senators and members of provincial and national assemblies, the role of local governments had been marginalised. These elected representatives had taken over functions performed by local governments. By keeping in consideration the short comings of local government system under ordinance of 1979, new government plan was developed. The plan integrated the rural with urban local governments and bureaucracy into one coherent structure in which district administration and police are answerable to the chief executive of the district. Local government's in Pakistan are formed on three levels district, tehsil and union council level. They are based on five fundamentals devolution of political power, decentralisation of administrative authority, decentralisation of management functions, diffusion of power authority nexus and distribution of resources at different levels. In August 2001, new elections were held under the new Local Government Ordinance. Elected local government was successfully setup at all tiers and devolution of administrative and bureaucratic presumably came to an end. The then elected local government in Pakistan successfully completed its tenure with new local government elections held in 2005. A major paradigm shift took place after devolution plan 2001. Powers have been decentralised at grass roots level, which enhanced efficiency and effectiveness to some extent. There are over five thousand local governments in Pakistan. These local governments are led by democratically elected local councils which are headed by a person called Nazim (i.e. a city supervisor, administrator or a mayor).

Since the general elections in 2008 in Pakistan, there has again been a vigorous debate on the reformation of local government system (Arif *et al.*, 2010). Primarily, this discussion engaged stakeholders from different government tiers i.e. federal government ministries, parliamentarians, provincial departments, and members of provincial assemblies. Later on, as central and provincial positions were acknowledged through media reports, several other voices were coupled to the debate, including nazims, local government council members, academics, policy analysts, columnists, media commentators, and representatives of civil society organisations. However, there is one voice that is significantly missing – *the voice of citizens* who seek good governance and seamless service provision from LGs in Pakistan (Ahmad *et al.*, 2012). Literature indicates that an effective and efficient local government signifies a vital influential factor in the overall authenticity and steadiness of institutions of a democratically elected government (Beynon-Davies and Martin, 2010). The authors then argue that merely allocating new responsibilities to LG officials, without pertinently focusing on the institutional incentives to always be receptive and sympathetic to citizens’ needs and responsible for outcomes, would not benefit to both – the local government system and the citizens. Thus, decentralisation reforms in Pakistan can provide solutions to the critical issues in management of law and order situation, price regulation, poverty alleviation, access to social services, efficiency in government spending, taxation, etc. (Kayani *et al.*, 2011; Kazmi, 2010; Arif *et al.*, 2010).

#### 4 E-GOVERNMENT INHIBITORS IN PAKISTAN

As noted, developing countries are facing challenges of transition phase and there is a need to reinvent government systems in order to deliver public services to its stakeholders through the use of ICTs. Pakistan, like other developing countries is also facing a lot of challenges. Pakistan is a slow-paced country as it is quiet evident from the statistics of United Nations report (UN Report, 2010). According to the UN Report (2010), Pakistan is ranked at 146<sup>th</sup> position out of 194 countries of the world. E-government development index of Pakistan is also quiet low (Table 1).

Country	World e-Government Ranking		
	2005	2008	2010
Maldives	77	95	92
Sri Lanka	94	101	111
India	87	113	119
<b>Pakistan</b>	<b>136</b>	<b>131</b>	<b>146</b>
Bhutan	130	134	152
Bangladesh	162	142	134
Nepal	126	150	153
Afghanistan	168	167	168

Table 1. E-Government Rankings in South Asia (Source: UN, 2010)

In developing countries, one of the most vital reasons for the low-level adoption of e-Government (as evident from the e-Government rankings in Table 1) services is that the needs and requirements of citizens are ignored (Ahmad *et al.*, 2012). These findings illustrate that like other South Asian countries, Pakistani e-Government services are still in the developing stage. There is a need to expedite the process of e-Government implementation in the country. By keeping in consideration the local context of Pakistani society, the authors present a list of issues that inhibit the local government in adopting e-Government practices in Pakistan. It is asserted that these issues may be helpful for LG representative and policy-makers to identify other major issues for the implementation of e-Government at the LG level in Pakistan. The following inhibitors resulted from the analysis of the relevant literature on e-Government in Pakistan (e.g. Ahmed, 2001; Alsawafi and Sridhar, 2003; Qaiser and Khan, 2010; Kazmi, 2010; Yaghoubi *et al.*, 2010; Kayani *et al.*, 2011). The latter research

studies highlight the significance of the following inhibiting factors in the context of Pakistan. Yet this current research needs to corroborate their conceptual findings in the context of Pakistan.

#### **4.1 Organisational**

Implementation of e-Government requires commitment from the top level management. Besides the top level commitment, huge capital investment and operational expenditures are also required for the smooth execution of e-Government project. Governments generally show resistance in releasing the financial assistance to initiate e-Government project, which is one of the hindering step in moving ahead for development (Qaiser and Khan, 2010).

#### **4.2 Strategic**

Planning and control are also considered as one of the most important issues. E-Government systems need rigorous planning to avoid the failure of e-Government projects. A society's e-Readiness is also one of the most considerable issues. There is a need to ensure that e-Government systems are used by their potential users. Alsawafi and Sridhar (2003) point out that 'e-Government vision requires a community that is information and technologically literate to access the information they require'. Bui *et al.*, (2003) define e-Readiness as 'the aptitude of an economy to use ICT to migrate traditional businesses into the new economy'. In addition, some of the more important parameters of e-Readiness are:

- Knowledgeable citizens, awareness about available e-Government services, skill set for using available e-Government services and digital infrastructure i.e. Internet and laptop access to the citizens.
- According to the results of one study conducted in Pakistan, insufficient access to the Internet, low level of security, inadequate understanding of advantages of e-Government and lack of implementation of IT policy were identified as barriers for implementation of e-Government (Kayani *et al.*, 2011).

#### **4.3 ICT Infrastructure**

E-government infrastructure is another crucial issue which is very costly to build from the scratch (Kazmi, 2010). In most of the countries, infrastructures are outsourced to lessen the financial burden of the governments (Huff, 2001). Besides the ICT infrastructure, security, privacy and online legislation are considered as basic infrastructure requirement. Governments must provide high level of security on their websites. In this way, they will be able to develop and maintain citizens' trust and also their willingness to use e-Services provided by the government. On one side, Internet is providing open and easy access of information to the citizens. On the other hand, it is also opening the gate of privacy concerns. The individuals' right to privacy may include to left citizens' alone and also let them be free from any kind of interference (Laudon and Trevor, 2008). Privacy breaches are also getting very common and they are also major issues to be deal with, especially for the satisfaction of stakeholders needs.

#### **4.4 Political**

Large scale projects mostly face the challenges of political instability because government, in Pakistan can change at any time. The change of government strongly affects the project execution. In some cases, projects are completely stopped or they are executed with totally change planning when new regime takes over. These changes affect the overall execution timeline of projects and sometimes results in projects being significantly delayed or abandoned (Rehman and Esichaikul, 2010; Rehman *et al.*, 2012).

## 4.5 Operational

Resource commitment is also one of the important issues for successful implementation of e-Government in Pakistan. Resource commitment is measured in terms of human resources, equipment and financial resources. Without these resources, successful completion of projects is impossible. Sustainability of projects requires sustainable supply of resources. This applies equally to the resource of political support (Ahmed, 2001). Equipment shortage is considered as major constraint in the progress of project and also it creates delay in meeting the project deadlines. Therefore, the overall project slips behind the schedule or the project is completely stopped. A large number of skilled human resources are also required for execution of such large scale projects.

## 4.6 Stakeholders

Perhaps the most important external factor for the successful implementation of e-Government is the user. Teicher and Dow (2002) stated that 'unlike businesses, which may choose to ignore some market segments, governments must attempt to serve all citizens on similar terms'. Many researchers realise that users' involvement in building e-Government is very important. E-Government is not about technology, it is all about the citizens' who are actually making e-Government happen. Government should understand citizens' needs and they should consider that they are consumers of government services and government efforts should move in a direction in order to satisfy citizens' needs (Alsawafi and Sridhar, 2003).

## 4.7 Social

Beside the above mentioned issues, behavioural concerns lie at the top of other issues. Government need to put a lot of effort to convince citizens' towards the usage of e-Government services by highlighting the usefulness and ease of use associated with the usage of such services. In this way, available e-Services utilisation can increase (Yaghoubi *et al.*, 2010).

In Pakistan, there is need to have administration reforms for the wide spread of e-Government programs i.e. trainings to boost the skill set of the citizens especially in the rural areas. To comply with citizen requirements and harness the full potential of ICT to transform their transactions with service users and citizens, LGs in Pakistan should focus on reforms such as: (a) restructure their IT infrastructures, (b) undergo structural and operational changes to accommodate changing citizen needs, (c) improve decision-making process while adopting IT, (d) maintain consistency and quality of information across all interaction channels of the organisation, (e) follow an efficient methodical process while adopting IT, (f) IT skill building training for the citizens', (g) increase awareness about computer literacy, (h) train people about the usage of Internet, and (i) to promote usage of available e-Government services (Kayani *et al.*, 2011; Kamal *et al.*, 2011). As part of the solution to the abovementioned inhibitors and other issues, the authors propose an integrated LG systems architecture as present in Figure 1. The authors intend to further explore the validity of this architecture in the context of LG Pakistan as part of future research. This architecture is an extension to the electronic local government organisation design presented by Beynon-Davies and Martin (2010). The authors assert that the by implementing the proposed LG systems architecture in Pakistan local government entities, the technological infrastructure will significantly improve and offer better end-to-end integrated services to all four key stakeholders (i.e. four dimensions of Government-to-Government [G2G], Government-to-Citizens [G2C], Government-to-Employee [G2E] and Government-to-Business [G2B]) of government. However, as this is a research-in-progress paper, the authors focused on validating their proposed LG systems architecture through a qualitative case study based research in Pakistan.



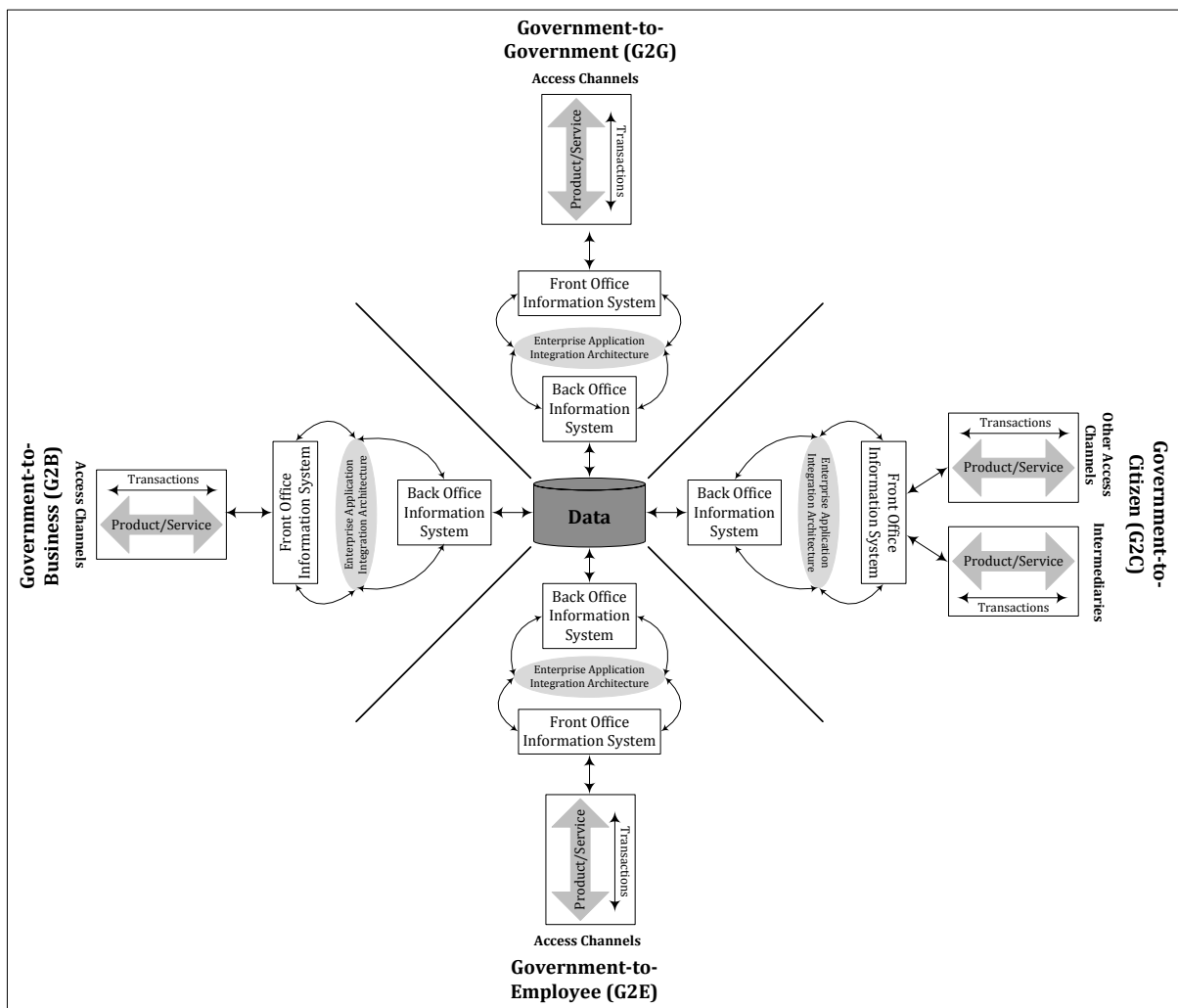


Figure 1: Proposed Integrated Local Government Architecture

## 5 CONCLUSION

While developed countries have continued to take advantage of the e-Government systems to automate their business processes, enhance service provision; services offered by developed government organisations have remained deficient over the years. The concept of e-Government has emerged as a credible solution to improve such services as it allows people to access public services from within their own homes or offices. The increased usage of e-Government services can bring much more benefits such as operational excellence, cost and time savings, increased efficiency, effectiveness and quality of public services. This paper presented a case that focuses on identifying issues that inhibit e-Government adoption in the context of Pakistan. The literature highlights that there is a low level of adoption of e-Government services in developing countries such as Pakistan. One major reason is that the citizens lack knowledge about the new e-Government services. The key conceptual findings (i.e. issues/inhibitors) can be useful for the policy-makers and decision makers to know about the needs of the citizens. In addition, understanding of issues/inhibitors may drive the policy makers to formulate and develop appropriate strategies to improve their service delivery. The Pakistani government should also raise awareness throughout the country regarding their e-services through different advertising channels.

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