

Public Sector Innovation through e-Governance in Pakistan

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Abstract: This study examines the process of innovation in the Federal Government Agencies (FGA¹) of Pakistan to enhance the efficiency and effectiveness of the public sector. This paper looks at the rationales for e-Governance implementation in Pakistan. The policy analysis here will look at how ICT policy is decided, who participates in the decision-making processes, who initiates radical change, and how information was shared. This research paper focuses on Government of Pakistan's experience with innovation in public service delivery. Innovation through implementation of e-Governance initiatives in the public sector is still an under-researched area in developing countries. It deals with governance, cultural and human issues which are very difficult to resolve. Research objective of this study is to provide a systematic understanding and e-Governance Implementation Model of how innovation in the public sector, particularly in ICT is carried out. The study concludes that the public sector needs to overcome its traditional characteristics of poor agenda setting and bureaucratic layers of decision-making processes.

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¹FGA is defined as a Ministry, Division, Commission, Statutory Body, Corporation, Institution established or controlled by the Federal Government of Pakistan.

1. Introduction

e-Governance offers a new way forward, helping improve government processes, connect citizens, and build interactions with and within civil society. e-Governance is the latest trend in the governance process all over the world. The aim, ultimately, is to simplify and improve governance and enable people's participation in governance through email and internet.

According to the United Nations e-Government Survey, measured for 192 countries, Pakistan's ranking of 137 in 2003, improved in 2005 and 2008 (with rankings of 136 and 131 respectively (Figure 1). However, in 2010 its ranking dropped dramatically by 15 ranks to 146. The majority of the high scorers in the 2010 e-Government development index are South Korea, United States and Canada, all high-income countries, who have the financial resources to expand and rollout advanced e-Governance initiatives, as well as to create a favorable environment for citizen engagement and empowerment. Meanwhile emerging economies such as China and India rank 72 and 119 respectively while even Bangladesh has a 12 point lead over Pakistan.

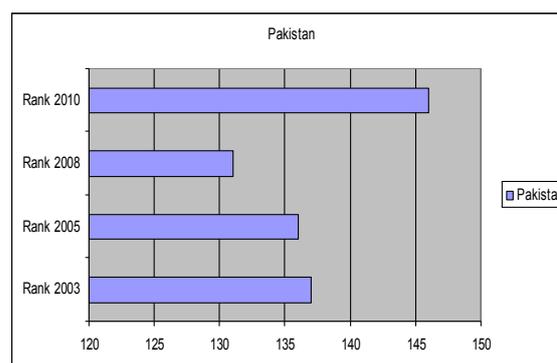


Figure 1. United Nations e-Government Development Index for Pakistan

Source: UN e-Government Survey from 2003 – 2010

After almost twelve years of various e-Governance initiatives, Pakistan seems to have failed to improve on the e-readiness criteria set by the United Nations indicators². There are many factors

² Among the criteria of e-readiness ranking set by United Nations (2010) are:

a. Internet Users/100 persons

that contributed to this poor ranking. The road-map of e-Governance has revealed the truth of what really is happening. The road map shows the poor realization of added value of public administration. The preliminary analysis has highlighted a common misconception of e-Governance: it is all about bringing in new technology to replace paper-based work routines and the belief that the IT community has to have a major role in it. Not surprisingly, the e-Governance is so far is all about adding electronic devices to government and has little actual added value to the public administration. Path dependency (in which one of the examples is that the Ministry of IT always determined the policies and strategic direction of IT diffusion in Pakistan), makes the situation even more difficult to change. To change this entire picture, an external shock in the form of policy change of the system or institution is thus fundamental.

Therefore, it is imperative to analyze the key actors and institutions that are involved in the introduction of e-Governance and the strategies that have been adopted in stimulating the e-Governance initiatives. The aim of this research paper is, therefore, to demonstrate how the rationales of e-Governance and group of actors that is responsible in formulating it, are key in the success or failure of e-Governance. In other words, the policy making process and the role of policy in e-Governance will be analyzed. e-Governance in Pakistan is going at a very slow rate and concentrated mainly at the infrastructure building and implementation of a few e-Governance initiatives.

2. Road Map of the ICT Policy Analysis

Federal Government Agencies do not have their own ICT policies and they follow the ICT policy of the Federal Ministry of Information and Technology. In this regard, three level of policy analysis framework are now explored as applied to this present research paper.

2.1. Macro-level analysis

Macro-level analysis will show that the e-Governance started mainly due to global trends. Many countries around the world have embarked on

e-Governance in order to meet the pressure to modernize the government and also in meeting the demand from the increasingly ICT-literate society and enterprises. Pakistan is no exception, and predictable that there was a decision to embark on e-Governance in Pakistan. Since other governments were doing it, together with hearing the success stories in neighbouring countries such as India, China, UAE and Singapore, Pakistan could not afford to do nothing and be left behind.

To stop the analysis of policy making at the macro-level provokes the criticism. It is common knowledge that almost every country is moving in the same direction of utilizing ICT in its public sector to provide services to its citizens.

2.2. Meso-level analysis

This is considered as the main focus of the policy analysis of this study. It is here the *when, how and why* the idea of e-Governance started, by whom and what is wrong with the policy. This study is an analysis of the policy process. Gordon et al. (1997) stated that there lies a continuum of activities namely: *analysis of policy determination* and *analysis of policy content*. In the analysis of policy determination, the emphasis is upon the inputs and transformational processes upon the construction of public policy. It is investigating the forces that drive the policy formulation such as internal objectives, environmental forces or perhaps by internal perceptions of the external environment. Analysis of the policy content will look at the mission and objectives of the policy; is it being practiced and does the content meet the intended targets?

A statement appears in paragraph 3.21.1.2 of the IT Policy (2000) that says *'The e-Government model for Pakistan is a gigantic task. It may take 5-7 years because of financial constraints as well as inadequate professional know-how to undertake system re-engineering of different government departments and use of I.T. so that use of paper is minimized. Therefore, a modular approach will be adopted to achieve the goal of e-Government'*. Some of the reactions from the interviewees were: *go send the civil servant for training and employ various IT consultants to develop e-Government model. What happens next? Are they going to use the skills back in the office? Is the technology or system already available? Is there any application for develop model, this will be a complete waste of budget. An identification of training modules related to their working routine and the existence of the technology to be utilised combined together will produce a more positive return on the investment. Although the general problem is identified, the specific problems are not, and neither is there an evaluation of how to solve the problem.*

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- b. PCs/100 persons
 - c. Main Telephones Lines/100 persons
 - d. Cellular telephones/100 persons
 - e. Broad banding/100 persons
 - f. Their institutional capacity, leadership role and willingness to engage their citizens by supporting and marketing participatory decision making for public policy; and
 - g. The structures that are in place which facilitate citizens' access to public policy dialogue.

To make the situation even more complicated, the actions under IT Policy strategies infrastructure development # 3.7.2 appear very ambitious. For example, IT parks and incubators were to be established. There was no evidence that a study has been conducted on the capability of Pakistan to embark on these strategies. It is important how realistic the projects were and how Pakistan can compete with other established software parks such as Multimedia Super Corridor (MSC) in Malaysia. Were these actions simply put to make the content of the IT Policy trendy and in line with the global trends?

The government reports, however, identified critical gaps such as the need to have more IT manpower, skills, knowledge and competency for the success of e-Governance. If these have been identified as the constraints, why did the content of the IT Policy not reflect the reality of ICT innovation capability in Pakistan? In last eleven years to achieve all the goals was almost impossible when the infrastructure and human resources were not yet in place. The policy style here seems to be making grand plans at a political level; but not following through with planning and implementation.

Batini et al. (2009) emphasize the integration of back office processes for improving the quality of services, and say that a one stop shop should be available for the citizens in case of residency change, updating of new address on a driving license and in health services. e-Governance can help build trust by enabling citizen engagement in the policy processes, promoting open and accountable government and helping to prevent corruption. Policy makers cannot stand aloof from these trends, as they are forced to implement innovations as well as to explore new opportunities. New possibilities offered by ICT give government chances to rethink ways of working and providing services for citizens and businesses (Verdegem & Verleye, 2009; Bekkers & Homburg, 2007; Heeks, 2003; and Prins, 2001).

2.3. Micro-level Analysis

This analysis looks at the individuals involved in the implementation of e-Governance. This analysis principally asks what happens to policy at the point in time when it is finally delivered – e-Governance policy implementation. The role of the individuals and their influence in shaping the destiny of the policy are analysed here.

When the policy has been delivered to the ‘junior-level bureaucrats’ or to the administrators, it is assumed that they will just simply do whatever they were told by the policy makers. Nevertheless this is not the case, and the policy even failed to be delivered as intended. According to Pressman and Wildavsky (1973) many policies fail to meet their

goals because of factors such as lack of coordination between government agencies, lack of clear direction, underestimation of ability to implement and weak control over resources.

Pressman and Wildavsky (1973) further stressed that implementation should not be divorced from policy. It must not be perceived as a process that takes place after, and independent of the design of policy. The great problem, they added, is to make the difficulties of implementation a part of the initial formulation of policy. In other words, the anticipation and solutions to the challenges implementation must be included during the initial policy making process.

Another alarming issue at this micro-level is the lack of IT resources. Mostly, government agencies are depending on the seconded IT staff from EGD to assist them in developing their e-Governance projects. No policy has been formulated on how to overcome the lack of IT resources in Pakistan. When there was a huge shortage of IT manpower in each federal agency and hence lack of qualified IT person, how could they design, monitor and review the e-Governance projects?

3. Critical Appraisal of e-Governance in Pakistan

The e-Governance in Pakistan was mostly driven by technology. There was no evidence of organizational restructuring and e-Governance policy to meet the demands and consequences of engaging innovation in the government agencies. This study now expresses its concern as to what the future of e-Governance in Pakistan might hold.

The situation in Pakistan implies that not everything can be done online. Only a few governments in the world have actually managed to achieve the fourth stage of e-Governance i.e. ‘transformation stage’ whereby the government is able to provide a one-stop service with the capability to interact with the citizens on decision making matters. Most governments are yet unable to achieve this final stage as it requires organizational changes that challenge the current bureaucratic culture of most government organisations. Various implementation issues arise in many e-Governance initiatives. As a result, many governments failed to reach the final stage of e-Governance. This study believes that this statement is only partially true. To conclude it this way indicates that all government organisations have one similar mission of transforming the governance style away from the traditional one.

Does Pakistan really want to achieve a new governance style that challenges its current institutional setup and its way of interacting with the citizens? However, there has been no evidence so far to indicate that different government organisations are contemplating to reengineer themselves to

transform the traditional set up of the bureaucracy. Organisational change has been very minimal in the government agencies during adoption of e-Governance. Evidence of innovation in policy was limited and policy making process has followed the same old style. Is Pakistan really serious in migrating its government organisations towards the new e-Governance by applying 'shock' to the current system? Perhaps, the answer is no and this can explain the slow nature of the e-Governance progress which so far has only concentrated on automation of the government agencies. It can be assumed that there is no priority for the Pakistani government to reform its governance, to empower the people and to have democratic interaction processes with the society.

4. e-Governance Implementation Model for Pakistan

How should the government agencies adopt e-Governance in order to achieve better success? This study now develops an e-Governance implementation model which is based on the empirical findings. e-Governance in the government organisations deals with governance issues. The most neglected aspects of the modernisation of government organisations' literature and policy aspects which are in fact the backbone for a meaningful adoption of e-Governance (Arfeen, 2011). The e-Governance implementation model is hereby proposed (see Figure 1.2):

4.1. Leadership for e-Governance Initiatives

Once a concrete and feasible aim to implement e-Governance has been identified, a leader must be appointed as a driving force for whole process. The leader must themselves understand the purpose of e-Governance initiatives, have a strong interest in it, have power to access resources and most importantly, believe that e-Governance is under their executive ownership. The presence of a strong leader can overcome the resistance and inertia in the government agencies to embark on e-Governance.

4.2. Change Management Strategy

The process of identifying the e-Governance initiatives to be implemented is actually a change management process. It is about bringing in change to the government agencies for many reasons. The right change management strategies at the initiation stage and also along the process enable the identification of bottlenecks or barriers of e-Governance. Lack of human resources, poor ICT infrastructure, and resistance to change can be anticipated which influence the strategy on how the adoption of e-Governance is to be carried out.

4.3. Visionary and Charismatic Leadership

The leader must understand the costs and benefits of technology in order to better explain to the stakeholders before, during and after the implementation period. A leader must be able to

persuade, motivate, and gain support from various levels of government. Top leadership involvement and clear lines of accountability for making management improvements are critical to overcoming organizations' natural resistance to change, marshalling the resources needed in many cases to improve management, and building and maintaining the organization wide commitment to new ways to doing government (McClure, 2001). The leader can have direct support from the Prime Minister. A dedicated full-time authority is also effective in ensuring any reform efforts in the government agencies take off³.

4.4. Raise Awareness about e-Governance Initiatives

Awareness programmes are vital at the start and during the e-Governance implementation. Workshops, seminars and conferences should be conducted to the top-level management (including leaders), government officials, academia and the public to raise awareness about the real objectives, benefits and opportunities of the e-Governance initiatives. As shown by this study, there was a period of inertia in the early stage of e-Governance, as the government agencies were clueless about what to do.

When e-Governance began, it was followed by a period of transition, confusion and resistance to change. The government should have prepared its change management strategy here. Similarly, in Pakistan 66% of the population has still not used the internet. Without awareness and e-readiness of the users, e-Governance initiatives may fail. In other words, the government must ensure that e-Governance becomes a national priority.

4.5. Approaches to e-Governance

Centralised, decentralised and hybrid are three possible approaches to the management of e-Governance initiatives (Heeks, 2006). In the centralized approach decisions are taken at the top level. In the decentralised approach decisions are taken some level lower than the most senior. However, in the hybrid approach decision are taken at both top and lower levels, either separately or integrated manner. Hybrid approach is also known as federal or federated in some governments.

Large scale e-Governance initiatives in the government organisations must be policy driven i.e. coming from the insight of the policy makers (top-down). In other words, the primary source for policy advice must not come from the operational level.

³e-Governance in Pakistan, due to lack of champion, the ministries relied too much on the style of implementation of the MoIT which became a source of innovation for government agencies. The truth is that over-reliance on MoIT is a barrier to innovative culture of the government organisations, because other groups wait to follow a MoIT rather than developing their own ideas.

Giving the middle and front line workers the opportunity to shape the e-Governance initiatives (bottom-up) may bring a conflict of interest and ideas with the policy makers. Delays and even termination of an e-Governance initiative can occur leading to wastage of resources. The absence of top-level political commitment to adopt e-Governance would also cause the various committees to degenerate to a forum for recording events rather than taking decisions (Polidano, 2001). This is evidence in the case of EGD in Pakistan which has little power in influencing the e-Governance initiatives because of working as attached department under the federal Ministry of IT. Furthermore, allowing the IT people to lead e-Governance in Pakistan resulted in purely automation of processes and the purchase of irrelevant technologies. In a country like Pakistan where there is federal government, centralised e-Governance with hybrid approach is favourable as implementation should be easier to manage and align.

4.6. Start Small

Most of the time attention is given to technology as well as the governments' tendency to start all too often from existing ways of working (Van Deursen et al., 2006; Ebbers et al., 2008). eGovernment portals that are not available in the national and local languages (speaking by significant majority groups) are not going to be used by a critical mass of citizens: one can only assume that much, or even the vast majority of the population may be unable to comprehend the information and services provided (Davison et al., 2005). Indeed there is also evidence that eGovernment is for the educated minority in developing countries like Pakistan. This would be truly unfortunate situation, since it is often the less educated that have most to gain from online initiatives that empower them to make decision based on what is in their best interest, and would stand in stark contrast to the presumably universal principle of government: serving all citizens. e-Governance initiatives must start small and must not be too ambitious. It is better to follow the e-Governance development curve rather than to leapfrog the curve by doing everything at the same time. Chaos tend to occur especially when a country not ready in its technology, infrastructure and human resources.

4.7. Citizen Centric Approach

There must be citizen centric approach for improving the e-services otherwise desire results are impossible. Today, governments recognize that e-Governance is a key tool to support and enhance government functions and processes as a lever for new approaches to service delivery. Governments are turning their attention to this broader view rather than focusing on the tools themselves. They are shifting from a *government-centric* paradigm to a *citizen-*

centric paradigm, putting more attention on the context (e.g. social, organisational, and institutional factors) in which e-Governance is developing and on the outcomes for users (OECD, 2009).

4.8. Learn from Experiences of other Government Organisations

Some of the mistakes that happened in e-Governance initiatives are not unique such as the issue of duplication and lack of leadership. The government agencies should look around the best practices in formulating its strategies. Mistakes and bad practices ought not to be repeated. Gadot et al (2005) similarly mentioned that the link between information management and organisational performance is not country specific and should be studied in models that look at policy learning in globalizing government agencies, beyond cultures and region.

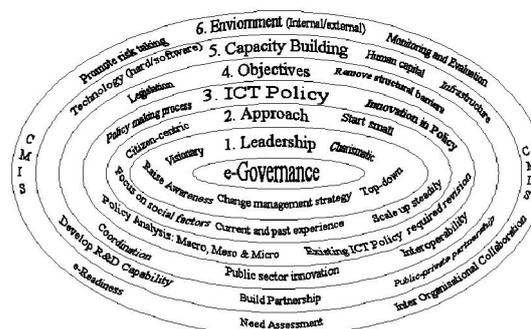


Figure 1.2: e-Governance Implementation Model

4.9. Policy and Guidelines

e-Governance initiatives failed due to poor goal definition and poor alignment of actions to goals. There is no connection between goals and means in the policy design (as in the case of 'ICT Policy and Action Plan' as well as 'e-Government Strategy and 5-year plan'). Sometimes even symbolic policies are adopted to (appear to) address a problem without actually offering the means that could achieve the stated objectives (Winter, 2003). As a result of this, policy setting and formulation must be conducted through a meticulous process of consultation with various stakeholders in the government agencies, educational institutions, private organisations, citizens and other stakeholders. Policy, organizational, operational, technological, economical and social issues must be identified and prioritised together with future requirements or anticipations on the political, social and economical environment of the country. The objectives of e-Governance must be stated explicitly and be understandable to everyone involved. Simultaneously, the goals must be linked to explicit actions such as projects and ideas to specific

goals. There should be detailed implementation guidelines, and strategies to overcome the identified challenges for change and barriers of e-Governance in the government agencies of Pakistan.

4.10. Required revision of ICT Policy

Policy making process must take into account the consequences of adopting old policy. A policy may have been present in the government organisations for quite some time without proven benefits. It is then vital to ensure that poor practices are identified and not repeated again in the new e-Governance journey. Path dependency, which can be mitigated by strong leadership, must be dealt with to prevent failures.

4.11. Innovation in Policy

In relation to the above point, there is a strong urgency for a government to exercise innovation in policy, policy making process and also policy monitoring and evaluation. Bad policies can be terminated, for example by using evidence-based policy making process and path dependency analysis which is supported by a solid policy evaluation strategy.

4.12. Objectives

Unclear objectives of e-Governance implementation lead to an eventual failure. e-Governance initiatives especially on a large scale must be initiated when there is a problem or anticipated problem that needs a solution. It should not be based on outside influence that pushes a government to blindly imitate. e-Governance initiatives to solve the internal problem tends to have small scale impact. Questions must be asked such as *does (Pakistan) really need e-Governance initiatives and why?*

4.13. Eliminate Structural Barriers

Red-tape and bureaucratic procedures must be eliminated in order for adoption of e-Governance to diffuse quickly into the government agencies. Rigid recruitment processes should be replaced with flexible recruitment practices with promotion to be based on skills and competence. Too many layers in the e-Governance initiatives and its budget approval have been shown by this study to create huge setbacks.

4.14. Technological and Human Capacity Building

e-Governance initiatives requires strong human and technological base. It is somewhat sensible not to embark on e-Governance before these two important capabilities are strengthened. In the case of Pakistan, this study proposes that the e-Governance has a 'cooling-off period' where infrastructure (computerisation of government agencies and building database) and human capacity building (IT skills and software engineers) are

expanded before the implementation of application systems can re-start.

4.15. Partnership with Private Organisations

A government must create synergy with different stakeholders involved in the e-Governance initiatives. Partnerships with the private organisations benefit the government in terms of getting the expertise and technology not available in the government agencies. Models of partnership (outsourcing) must be carefully scrutinized with strict regulations in order to protect the interest of the government and also the private organisations in long-run.

4.16. Develop R&D Capability

Strong R&D capability is crucial in e-Governance initiatives. This can be achieved by building strategic linkages with universities, and software industry. Miles (2001) stated that historically the public sector has often been the vanguard innovator for major new technologies and the driver for enabling research in academia. In other words, collaboration and coordination between various government agencies and stakeholders must be stimulated for a better cross fertilisation of ideas, solutions and knowledge (Ndou, 2004). Investment in national R&D resources must be done to strengthen the higher education and research system to improve human capital in strategic areas of importance. Furthermore, R&D funding schemes must be formulated to promote strong interest from academia and industry.

4.17. Scanning of the Environment

It should be considered as most important step in any e-Governance process for government organisations. Analysis of the political, economical and social environment significantly contributes to the objectives, the policy to be formulated and the change management strategy to be undertaken. The outcomes of the analysis support the formulation of strategic and regulatory frameworks, human capacity building, technology and infrastructures.

4.18. Risk-taking Environment

Support from the top-level management must be given to encourage the government agencies and individuals to be more creative and take more risks. 'Smart failures' should be tolerated in the government agencies. e-Governance awards and recognition or incentives must be established for the innovators in the government agencies. Innovators must be protected and provided with resources such as funds and given ample time for them to work on their e-Governance initiatives and perhaps a reduction in other responsibilities.

4.19. Need Assessment

Need assessment of the e-Governance is essential to enable the government to assess the

current level of human capacity and technological infrastructure. Similarly, stakeholder analysis would enable the investment in e-Governance to be more justifiable and relevant to the demand of the citizens.

4.20. Monitoring and Evaluation

e-Governance initiatives can not be evaluated only at the end of the process. This is a wrong approach as constant monitoring and evaluation can identify whether or not to proceed. Duplication of data centres could have been prevented if earlier evaluation was conducted. Earlier evaluation also ensures that the scarce human resources can be re-deployed. Concrete performance indicators or measurement of productivity gains must be established, although this can be very tricky in the government agencies.

4.21. Inter Organisational Collaboration

Information and policy in the e-Governance implementation must be made transparent and available to government agencies involved. The government must foster partnerships and strong collaboration among the government agencies to promote information sharing, build cohesion and minimize the silo mentality. Although inter organisational collaboration is probably a new practice in the government agencies, this must be encouraged.

The overall proposed e-Governance implementation model above has been summarised in Figure 1.2. It is normative and tries to include the essential elements missing in the Pakistani experiences. The e-Governance implementation model is derived from the combination of the evidence from Pakistan and the literature of e-Governance initiatives. Important features such as problem identification, capability assessment, identification of policy options, consistent evaluation process, and CMIS have been included in the e-Governance implementation model. Most importantly, the model also goes beyond the rational policy making process model. Other features such as leadership, building partnership, scanning the environment, human capacity building, incorporation of good practices, the promotion of risk taking environment and complaint handling systems have been included to certify the e-Governance implementation model as an ideal conceptual model that can act as a useful reference before embarking on an e-Governance journey.

5. Validation of e-Governance Implementation Model

The e-Governance implementation model was derived from the extensive research, fieldwork and literature review. Validation process is crucial to confirm validation of the model. During the development phase, the model critical elements were

considered like; simplicity of the model, applicability, doable, flexible, renewable and expandable. The newly developed e-Governance implementation model was passed through this process in the form of a validation. Selected ICT experts, e-Governance practitioners (peer review) and officials of government agencies were involved for the validation process. The overall outcome of validation indicates that the model is highly satisfactory from all perspectives (factors) mentioned earlier.

The completed validation process shows high acceptability from the ICT experts of the federal government agencies in Pakistan. The model was found applicable for to the current needs at federal and provincial level government agencies in Pakistan.

6. Conclusion

The above situations resulted in confusion in understanding what the government really wants in e-Governance. Due to this, conflicts of interest occur when the junior-level bureaucrats finally implement the ambiguous policy. Poor priority in e-Governance by the policy-makers resulted in no leadership, poor coordination, sharing of knowledge and policy at every level in the public sector. The lack of key performance indicators and evaluation strategy add further mess to the e-Governance process.

This paper developed the e-Governance implementation model which highlighted the priority areas for a government to consider the aspect of policy – the decision making process, the content of the policy and its enforcement – meticulously before embarking on e-Governance journey. e-Governance initiatives in the federal government agencies of Pakistan is not merely about technology but has to be about governance. The validation of model foresees that model will be implemented in the near future at federal and provincial level in the government agencies of Pakistan. It is sincere hope, the Government of Pakistan will be able to improve allocation of resources and responsibilities to promote delivery of services to public sector organizations.

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