

## **GOVERNMENT INTERVIEWS**

### **Govt employee 1**

In considering e-government implementation, there is a need to set up a robust ICT infrastructure that is not owned by the private sector but by the government. In the case of developing countries, the private sector owns 75% or even 100% of the infrastructure whilst governments in developing countries do not have adequate resources to set up the infrastructure for e-government. If the use of existing infrastructure is considered, which in most cases is privately owned, it will be expensive and unaffordable. Lack of coordination in systems development lead to MDAs competing in putting up ICT infrastructure; hence, there is a lot of fragmented (Silo) efforts in the deployment of e-government in Zimbabwe. In most cases, MDAs are content in running silo systems and tend to “own” systems and departments they are responsible for. As a result, most government systems are developed independently and there is no consideration of interoperability. In most developing countries the issue of trying to bridge the digital divide is still a cause for concern. Most rural and semi-urban areas do not have internet connectivity and some do not even have electricity. In urban areas where there is connectivity, the issue of high bandwidth costs is prohibitive. In a bid to bridge the digital divide, the government of Zimbabwe had taken strides to establish community information centres (CICs) so that they serve as e-government access points to rural and semi-urban communities. Unfortunately, the high bandwidth costs and power outages are prohibiting the effective functioning of these CICs.

### **Govt employee 2**

Developing countries at times do not even have the requisite ICT infrastructure that is needed for collection, sharing and dissemination of data either vertically or external with other agencies. For instance our police stations; most of them are not even resourced with simple desktop computers, hence, it becomes difficult to implement e-government projects without the necessary ammunition. While the benefits of sharing information electronically by various government Departments cannot be understated as it has the advantage of cost savings, ease in doing business e.g. the single window concept spearheaded by Customs. In developing countries, Departments often operate in silos with each having its reporting structure and communication channels, most of the times authority has to be sought from the centre of power if the information is to be shared with other agencies. At times information is not easily conveyed to others under the pretext that

it is of a 'security nature' or the official Secrecy Act that officers are sworn in is sighted as the reason for not divulging. There are still some hurdles regarding the access to e-government services in Zimbabwe, such as the digital divide and poverty; thereby, posing serious challenges in the adoption and implementation of e-government. Due to the high cost of deploying e-government systems, many developing countries fall into a dilemma of funding e-government programs, investing in new technologies, even when a government entity has a plan for effective and accessible e-government.

### **Govt employee 3**

Oh, I would say that the absence of robust ICT infrastructure inhibits the government to roll out e-government projects country-wide. At the same time, resources differ from ministry to ministry because some ministries receive better budgets than others. Therefore, we cannot be at the same level in the implementation of e-government; eventually, different levels of e-government implementation by MDAs lead to service gaps. Lack of top management support ... has resulted in the unavailability of the requisite infrastructure; the top management is not 'aggressively' lobbying for adequate resources to facilitate the deployment of robust infrastructure. As well, implementers of e-government are not being fully trained due to a lack of resources; hence, several e-government projects in Zimbabwe are failing to take off according to the plan. The digital divide affects the success and adoption of e-government services. In developing countries, issues of service access and skills are paramount in determining the success of e-government services. Due to income inequality, many citizens don't have access to devices that can connect to the internet. Furthermore, most are unskilled or unlearned such that they cannot navigate to e-government service portals. In summary, these issues cause a digital divide in developing countries: poverty, income inequality, poor network coverage, education and digital illiteracy, poor technical skills.

### **Govt employee 4**

The infrastructure that has been regarded as obsolete in other countries, for example, copper, 2G and Wimax are being donated to Zimbabwe, of which it would not work as expected. I would consider the lack of financial support as one of the major obstacles to the implementation of e-government in many developing countries such as Zimbabwe since the implementation of e-

government is deemed expensive. E-Government projects also fail due to the inability of government systems to interoperate. Governments in developing countries lack a shared, holistic strategy for the implementation of e-government projects. Some Governments do not have a mandated unit that focuses on e-government resulting in silo disintegrated implementation of e-government projects. Consequently, it becomes difficult for the citizens to access the services as they have to individually know and remember every government site than to visit a single portal. In Zimbabwe, the Government's e-Government services are spearheaded by a single unit that created a single portal for all services. This unit is responsible to define the strategy and implementation program for the entire government and ministries resulting in a unified implementation.

### **Govt employee 5**

In most developed countries, the following factors affect connectivity resulting in e-government gaps:

Obsolete infrastructure for connectivity using old technologies like copper, 2G and Wimax; Poor network coverage. Coverage is only available in major economic cities; High deployment costs. Connectivity is very expensive to deploy in developing countries than in developed countries; Electricity load shading resulting in citizens failing to access internet services; Lack of funding for connectivity projects as developed countries have many competing priorities. There is a lack of funding for e-government projects as developing countries like Zimbabwe have many competing priorities to finance. I have noted that the abilities of government departments to place services online and to use technology for automating processes are hampered by budget politics; some MDAs are favoured when it comes to budget allocation. You would find that the Ministry of ICT, Postal and Courier Services which by its nature is supposed to champion the implementation of e-government in the country gets a minimum budget compared to other Ministries. The implementation of e-government in Zimbabwe faces some technological difficulties. These include, but are not limited to, the lack of shared standards and compatible infrastructure among MDAs.

### **Govt employee 6**

In cases where the government has the infrastructure, it is dilapidated and not able to match the needs of the modern-day e-government service provision such that due to large traffic they glitch and crash. In Zimbabwe, many different systems are operating in MDAs that do not talk to each other. For instance, there is SAP for accounting and many other specialists' systems for different functional areas like Human resources, procurement etc. and all these are not interoperable. One other drawback is the policy inconsistency that the government of Zimbabwe grapples with; so nobody takes the government seriously when it outlines policies. Many developing countries like Zimbabwe, suffer from the digital divide and they are not able to deploy the appropriate ICT infrastructure for e-government implementation. For example, the digital divide between richer countries and developing ones is large, with high-income economies having 416 personal computers per 1,000 people and low-income economies only 6 per 1,000. Those who do not have access to the Internet will be unable to benefit from e-government services. Therefore, not all people have suitable access to computers and the Internet, whether due to a lack of income, necessary skills, or internet access. Currently, the recommendations from the Ministry of Information Communication Technology, Postal and Couriers Services include making computers available in public locations such as Community Information Centres (CICs), libraries, post offices and shopping centres in remote or rural areas, could help in addressing the digital divide since the lack of Internet access among the society is considered being among the topmost barriers to e-government development and implementation.

### **Govt employee 7**

Interoperability is lacking in e-government systems as most systems exist in 'silos'. The same data is requested more than once in the same government offices, which should be availed by a click of a button (as a one-stop-shop), rather than being a repetitive process within the same government. Digitisation of public services is also hampered by the limited access to the internet which has remained relatively expensive and unaffordable in Zimbabwe. There is a lack of funding in Zimbabwe to acquire the necessary infrastructure required for the full implementation of the e-government; the central government seems to have many other priorities competing for the resources like the need to fund the everyday needs of the citizens. There is a lot of budgetary politics in the government of Zimbabwe; some government departments do not get sufficient

budget because they are neither preferred nor favoured. E-government services gaps sometimes exist for different reasons which include uncoordinated infrastructure deployment. Each Ministry or government department is concentrating on developing its system and deploying individual infrastructure without considering the need to coordinate such activities with other departments or even the private sector.

### **Govt employee 8**

The lack of government-owned infrastructure is not good for the performance of e-government and has led to many end-users ditching these schemes and opting for manual ways of doing expensive things. This scenario is prevalent even in systems domiciled within the same ministry. There is a silo mentality in systems development, every MDA is concerned with the services it offers; hence, ignoring the need for interoperability. As it stands, every MDA developing systems is putting in place its infrastructure. The silo approach to systems development is evident even in the same Ministry, that is, departments do not share Data Centre and Network infrastructure even though it is the most expensive part.

### **Govt employee 9**

This infrastructure has not been improved for the past two (2) decades for it to support a seamless service. You will agree with me that departments often operate in silos with each having its reporting structure and communication channels; most of the times authority has to be sought for from the centre of power if the information is to be shared with other agencies. The biggest challenge is the lack of skills in government departments due to poor remunerations all the skilled IT personnel are either employed in the private sector or other countries. Most Government systems are not integrated hence there is no electronic sharing of information. This scenario is prevalent even in systems domiciled within the same ministry. There is a silo mentality in systems development, every MDA is concerned with the services it offers. For interoperability to be effective there must be enough stakeholder consultation including the beneficiaries to the system. Stakeholder consultation must be preceded by an exhaustive stakeholder mapping which helps in determining system linkages. Lack of exhaustive Stakeholder consultation has led to the limited interoperability of e-government systems. There

are several areas where this is common. These include Border posts where Government Agencies don't have a common system or even Integrated systems.

### **Govt employee 10**

In most developing countries, Customs or Revenue Authorities have ample resources because of the mere fact that they collect Revenue and fall under the Ministry of Finance. For example, in Chirundu ZIMRA is connected to the internet yet other Government Departments which are key in the liberalization of the One-Stop Border Post are not, hence, e-government gaps will exist as the saying goes; the whole is greater than the sum of its parts. The levels of income in Zimbabwe in which the majority of the working class earn an average of US\$1 a day make it difficult for citizens to pay for internet services or purchase data bundles to connect to the inter and access e-government services.

### **Govt employee 11**

Most of the employees seem to be relatively unprepared to fully implement digitalized systems as either they do not have relevant skills or they have failed to continuously update them to ensure that they keep up pace with the changes in the digital world. There is also relatively high staff turnover in the public sector due to lower remuneration levels and this makes it difficult to retain suitably qualified and competent employees who will be capable to spearhead the implementation of comprehensive digital e-government programs. In Zimbabwe, the Zimbabwe Revenue Authority has ample resources because of the mere fact that they collect Revenue and fall under the Ministry of Finance and Economic Development. For example, in the Chirundu Border Post, ZIMRA is connected to the internet yet other government departments which also play important roles in the operation of the "One-Stop Border Post" are not; hence, e-government gaps will exist as the saying goes; the whole is greater than the sum of its parts. Midway into the implementation of one policy, the government usually shift goals and launch another policy to the puzzlement of e-government designers; leading to 'half-done and later deserted projects. Lack of financial support is considered a major obstacle to the implementation of e-government in many developing countries such as Zimbabwe since e-government implementation is deemed expensive. It is necessary to ensure the availability of the existing and expected budgetary resources to achieve the goals. Since every government budget is already

overburdened with every possible expense budget makers can fit into it, the suggestion to expend the considerable sums that excellent e-government will cost is a non-starter, in budgetary terms, and budgetary politics. Due to the high cost of implementation and maintenance of computer systems, many countries fall into the dilemma of funding e-government programs, investing in new technologies, even when a government entity has a plan for effective and accessible e-government. It is noted that the abilities of government offices to place services online and to use technology for democratic outreach are hampered by budget considerations. Finally, the total cost, including the high cost of systems hardware and maintenance, software, training and education, are always seen as major barriers inhibiting agencies and governments from using the technologies.

### **Govt employee 12**

There is a lack of resources and commitment to acquire the necessary infrastructure required for the full implementation of the e-government, the central government seems to have many other priorities competing for the resources like the need to fund the everyday needs of the citizens. While our provincial and district offices are inter-connected and can interface on a real-time basis, all sub-offices except a few do not have access to the internet. This is a great challenge in terms of service delivery as the sub-offices cannot give the same service as other sister offices. In Zimbabwe, most rural communities do not have access to the internet due to the non-availability of internet services in those areas as a result of inadequate network coverage. There is a tendency to jump from policy to policy such that policy pronouncement becomes inconsistent with the goals and aspirations of e-government. Some government departments are allowed to out-source skills while others are not and whatever designs are created are not shared with line ministries. This results in different designs for different government departments. These can vary in advancement depending on the designer's skills and the resources provided. Designers employed by the government hardly have refresher courses leading to them lagging behind those in the private sector.

### **Govt employee 13**

Power supply availability is a challenge in Zimbabwe; most places do not have a reliable power supply infrastructure for offices. For instance, places like rural Binga, Mutoko, and Guruve just

to mention a few are not adequately covered with electricity networks; this makes it difficult to provide e-government services. Every government department has its system which is not integrated with other departments; thereby, creating e-government service gaps. There is only too much rhetoric and very little traction on the factors obtaining on the ground in the implementation of e-government projects. Digital services must be accessed by every citizen in the country. This works well in a country where there is a high rate of internet penetration. With 33% internet penetration as of January 2020, most citizens can't afford to access services using digital platforms. There is a wide gap between the populace with most urban dweller having access to digital platforms as compared to the rural population. This then means that digital services will not have a big impact on the citizens. These digital services require a strong infrastructure backbone. They are also more effective when systems are integrated since they will provide one-stop access to secure and accurate information.



## **BUSINESS INTERVIEWS**

### **Bus 1**

In the case of Zimbabwe, the private sector owns approximately 75% of the total infrastructure deployed across the country whilst the government does not have adequate resources to set up the infrastructure for e-government. If the use of existing infrastructure is considered, which in most cases is privately-owned, it will be expensive and unaffordable. Interoperability has been one of the biggest hindrances in providing “one-stop services” in Zimbabwe since the majority of e-government systems are deployed in silos with each government department implementing its system. Many communities in Zimbabwe suffer from internet connectivity; therefore, citizens in those communities are not able to access e-government services. There are some ICT skills gaps among designers of e-government. Those selected to champion e-government projects usually lack the depth knowledge of e-government design.

### **Bus 2**

Governments in developing countries have not invested in ICT infrastructure and rely largely on infrastructure from private players which becomes expensive for them to sustainably run e-government schemes. In cases where the government has the infrastructure, it is dilapidated and not able to match the needs of the modern-day e-government service provision such that due to large traffic they glitch and crash. Most infrastructures in developing countries are not timely updated to suit the current needs in terms of numbers and the needs of the end-users. The lack of government-owned infrastructure coupled with dilapidated setups is no good for the performance of e-government and has led to many end-users ditching these schemes and opting for manual ways of doing expensive things. The infrastructure is outdated and sometimes obsolete. Some of our gadgets hinder the electronic exchange or transfer of information as they are not compatible with the technology used in e-government projects. Government policy on the implementation of e-governance is there but lacks will and desire on deployment and development. The reason for slow or rather sluggish implementation is because of fear of its people due to somewhat populist policies. The policy violates the fundamental constitutional rights of the citizens hence its failures. Lack of human resources pose challenges to e-governance adoption. Very few people are techno-savvy, they lack the necessary skills to adapt and use new technologies.

**Bus 3**

Most of the infrastructure in Zimbabwe is not timely updated to suit the current needs of the end-users. Government departments in Zimbabwe are not willing to share data; as a result, the users need to mobilise between departments to get the required service. Interoperability has been one of the biggest hurdles in providing e-government services in Zimbabwe as systems are procured in silos. As far as connectivity is concerned, it is true that we still have some marginalised communities in Zimbabwe especially the rural and semi-urban communities. One of the reasons why e-government service gaps exist in Zimbabwe despite intensive efforts in implementing e-government projects is the issue of skills gap among designers of e-government.

**Bus 4**

Government departments operate in silos where ministries have isolated databases and independent systems. The development of such complex systems is mostly outsourced from consultants who have expertise in developing similar systems in other countries. The development of such complex systems is mostly outsourced from consultants who have expertise in developing similar systems in other countries.

**Bus 5**

The government does not invest much in the infrastructure that supports e-government. There is a need for software, hardware and databanks to that effect but it is not well supported from the government side. I think this should be supported through policy that drives this innovation but the approach the government gives to it in my opinion is a bit casual. Lack of access to the internet is also another factor; the charges for internet connectivity and data are beyond the reach of many ordinary citizens. For instance, the minimum package (home basic 10 gigabytes) provided by TelOne costs US\$15 against an average monthly salary of US\$30. There is only too much rhetoric and very little traction on the ground. Because everything will now be digitally stored and recorded, there is also fear of losing control as we are obsessed with control.

**Bus 6**

The country lacks adequate electricity supply; electricity load shedding is very high in Zimbabwe, resulting in citizens failing to access internet services and online services such as e-

government. Government departments lack top-notch skilled and experienced employees to drive e-government schemes. The top-notch ICT skilled employees are snatched by the private sector or usually find their way out of developing countries. This is why we find private companies with better e-services than governments from developing countries. Collaboration and cooperation between all partners is a critical factor in the e-government implementation process to gain a successful e-government system through the provision of the requisite resources, plans, skills and experiences that the government may not otherwise have. Government should encourage all sectors to participate in e-government and implementation and development and not duplicate existing functions such as erecting infrastructure like base stations that can be shared by service providers and provide cheaper services to the ordinary Zimbabweans.

### **Bus 7**

In terms of the ownership of ICT infrastructure, the private sector has more ownership compared to most government departments. Government departments operate in silos where ministries have isolated databases. Accessibility of services will depend on the availability of devices at affordable prices. However, most citizens are unable to buy laptops, computers and smartphones to access e-government services due to inhibiting costs. On average, the cheapest laptop in Zimbabwe costs approximately US\$450 whereas the Smartphone costs about US\$50, while the average salary of the majority of citizens ranges between US\$30 and US\$35. It's true that we still have some marginalized communities in Zimbabwe especially the rural folk when it comes to digitalization. The majority of rural Zimbabwe communities does not have electrical power.

## **CITIZENS INTERVIEWS**

### **CIT 1**

Lack of infrastructure through the lack of government in investing in the required infrastructure. Government departments lack top-notch skilled and experienced employees to drive the e-government schemes. The top-notch ICT skilled employees are snatched by the private sector or usually find their way out of developing countries. This is why we find private companies with better e-services than governments from developing countries. Therefore developing countries need to compete in the job market and offer better remuneration and working conditions that keep the best ICT employees working for their governments and drive e-government services. As it stands the state of affairs of these departments leaves more to be desired and it's not achieving what it is set to achieve for both the government and its end users.

### **CIT2**

Lack of or deficiencies in ICT infrastructure is one of the major challenges for e-government implementation in Zimbabwe. Some of our gadgets hinder the electronic exchange or transfer of information as they are not compatible with the technology used in e-government systems. Zimbabwe has very good e-government systems on paper, but the country lacks the expertise and experience when it comes to the practical implementation of e-government. The other challenges with most e-government schemes are that they are developed at the national level and lack of engagement of the users who are supposed to benefit from such schemes. The users are not engaged; hence the failure of the users to embrace these schemes. There is a tendency to jump from policy to policy in most developing countries such that they are not constant on one cause. Midway into the implementation of one policy, governments usually shift goal posts and goals and launch another policy to the confusion of many leading to half-done and later deserted projects. Policies are usually there but policymakers fail to communicate the policy to the lower-level employees and end-users for implementation. The end-users and the employees eventually resist these schemes and they die a natural death when they could have been used effectively and efficiently to achieve goals.

### **CIT3**

Generally, governments in developing countries like Zimbabwe ... rely largely on infrastructure from private players which becomes expensive for them to sustainably run e-government schemes. In Zimbabwe, approximately 70% of the population lives in rural areas and those areas are not adequately covered in terms of the distribution of electricity and network coverage as compared to towns. Therefore, people in rural areas may face challenges in accessing e-government services as a result of the lack of the internet to connect to e-government platforms. Zimbabwe is not in the drought of skilled personnel in the ICT field to design e-government schemes. Some are not even employed; therefore, there is a pool of skilled personnel to dwell into the system development. However, the challenge is that government departments do not offer motivating remuneration and working conditions that are conducive to drive the implementation of e-government to success. Most skilled employees end up leaving for greener pastures in the private sector and abroad. The cornerstone of the successful implementation of e-government is to ensure that citizens are part of the design phase. E-government design should be equally driven by the users; otherwise, e-government projects will be deployed with service gaps. Even so, the opinions of citizens in the design of e-government are not incorporated.

### **CIT 4**

Electricity power outages and lack of the ICT infrastructure make e-government a difficult goal to achieve. E-government systems in Zimbabwe hardly share data; they are designed to serve the purpose of the department. This makes each department collect and use the information they need only and not allowed sharing it. Several communities in rural areas are still underserved as far as internet connectivity is concerned; hence, they do not have access to the internet. There is an assumption that the designers of e-government systems know all the needs and expectations of the users in advance.

### **CIT 5**

More often than not, one would realise that e-government systems in Zimbabwe rarely share critical data; each government unit prefers to operate autonomously. Government departments do not have adequate ICT skilled manpower to keep up with technological developments. The e-government design phase is not engaging with the citizens; that is why it is not easily accepted.

**CIT 6**

Zimbabwe like any other developing countries does not priorities procurement of infrastructure to enable effective deployment of e-government projects since priority is given to food security. Currently, there is no ICT infrastructure in certain rural areas such as Binga, Gokwe and Mwenezi just to mention a few. There is a lack of knowledge on the development of e-governance systems.

**CIT 7**

Even in town, there are continuous electricity/power cuts, this makes services not available on time. Access to e-government is a challenge in Zimbabwe and other developing countries. The end users are not consulted during the design phase; hence, at times they resist the adoption of e-government schemes.

**CIT8**

The main problem which is being faced by Zimbabwe in the implementation of e-government is the lack of requisite infrastructure. E-government systems in Zimbabwe fail partly because they have been designed in such a way that they do not communicate with other systems deployed across ministries. Most government departments use legacy systems that cannot easily integrate with other systems. Most people in rural areas are poor and lag in terms of digitisation. Some of them could not afford a Smartphone, not even talking about the data bundles.

**CIT9**

In Zimbabwe, I think e-government service gaps exist because of skill gaps among e-government designers. Most of the e-government designers have limited knowledge and experience; hence, developing systems that are not perfect and which do not meet the needs and expectations of the users. The skills gap will always be there by our maturity in terms of e-government and poor remuneration. Lack of ICT skilled personnel who are competent in designing e-government systems.

## **EXPERT REVIEW**

### **Expert 1**

The multi-dimensional model is a true representation of the real-world from the viewpoint of the intended use and the model is relevant to the Zimbabwean context. Also, the measurement dimensions included are appropriate for the model to assess e-government service gaps in the context of a developing country. The highlighted moderating variables namely; infrastructure, interoperability, digital divide, human capacity and policy issues are some of the factors that seriously enhance e-government service gaps; therefore, they inhibit the smooth deployment of e-government projects. The model is logically constructed and it combines dimensions that are drawn from different e-government assessment typologies. Besides, the constructs of the model are arranged sequentially starting from independent variables, followed by moderating variables and then dependent variables. The other factors enhancing e-government services gaps are not explicit e.g. institutional and financial capacity may also be considered as moderating variables as well. In my view, the lack of funding is also significant in enhancing e-government service gaps. The availability of sufficient funding is a significant factor towards the successful implementation of e-government because there is a strong correlation between funding and ICT infrastructure development, addressing the digital divide and human capacity development.

### **Expert 2**

The ... model is relevant to developing countries. I would say it is relevant for all countries irrespective of their developmental status because it provides attributes that can be used to assess e-government projects at different levels of maturity. Thus, the fact that developed countries have attained higher levels of e-government maturity does not imply that e-government service gaps do not exist in these countries. What I can say is that the model will be usable in testing e-government service gaps in a developing context where ICT literacy is still very low since it is easy to understand and apply. The proposed model comprises most of the appropriate dimensions which make it nearly comprehensive for assessing e-government service gaps in developing countries like Zimbabwe. Dimensions that relate to system functionality and service delivery are clearly defined. The model also highlights the factors that can enhance e-government service gaps and these are common in developing contexts, hence, Zimbabwe is not an exception. Again, the model captures most of the parameters required for the successful

implementation and evaluation of e-government projects in different phases of maturity. Also, The inclusion of the digital divide as one of the moderating variables is commendable because it would not be possible to assess and address e-government service gaps without giving due attention to lack of access to the internet, especially in the context of a developing country. The digital divide in the context of a developing country can be unpacked to include factors such as, among others, limited access to internet infrastructure and connectivity, low income, lack of digital literacy etc. Also, I have noted with concern that the independent variables that feed into system functionality security are missing. The model cannot be comprehensive without including the security element. Generally, for users to be satisfied with an e-service they should be assured that the information they provide to the system will be used only for the intended purpose especially in developing countries where privacy concerns are very high. Again, compatibility is another issue that needs to be included in this model. Users of e-government use different gadgets; so there is a need for assurance that they may be able to have access to the system using their different gadgets anywhere.

### **Expert 3**

In both theory and practice, I would say that the measurement parameters defined in the model are relevant in determining service gaps within an e-government system, more so, in a developing context in which most systems are in emergent phases. I found the model useful in the developing context as it aims to provide the basis for designing and deploying e-government systems that are responsive, integrated, easy to use, reliable, efficient, sufficient and accessible; making it useful for improving user satisfaction. Also, the model included all the measurement dimensions and concepts to provide an understanding of e-government service gaps on part of the policymakers, coordinators and implementers. It also takes a holistic approach to assessing e-government services gaps by including measurement dimensions for testing e-government service gaps while taking into consideration factors enhancing service gaps in developing contexts. The policy issues will focus on the vision, strategy and leadership which are all essential elements in the implementation, scaling up and evaluation of e-government projects. Just like any ICT system, the ultimate goal of the e-government is user satisfaction and the model is very explicit on the metrics for determining e-government system performance i.e. the mismatch between actual performance and expected performance of e-government system



makes it easy the identification of e-government service gaps. The performance metrics will also assist in coming up with e-government systems that reflect on users' needs. On the moderating variables; funding is a major issue in my opinion. Can I take it that it is included under infrastructure? My view is that as a developing country, funding is the basis of the entity automation to enable system integrations. While other government departments are automated, to what extent are the other key entities automated to allow for integrations to take place? It might mean that some might have to start from scratch. What does this mean for the system integration because, in my opinion, this is a major area for e-government interoperability?

#### **Expert 4**

The model is very much relevant as it seeks to provide measurement parameters for ascertaining the existence of e-government service gaps. The model is usable in all phases of e-government implementation; that is, the design phase; scaling up e-government projects; and the post-implementation phase. This makes it ideal for developing countries like Zimbabwe which is still behind in implementing e-government projects. The model is systematically constructed showing how unobservable variables such as system functionality, service delivery, service gaps, factors enhancing service gaps and user satisfaction will be measured. The proposed model managed to identify factors enhancing e-government service gaps that are consistent with the political (policy), socio-economic (digital divide) and technological (infrastructure, interoperability) status of the country. The multi-dimensional approach adopted by the researcher also takes into consideration human capacity, policy issues at the national level as well as ICT infrastructure which are common problems affecting the successful implementation of e-government projects in most developing countries. You may have to recheck if the model will pick up services that have not yet been provided. It is important to know quantitatively that out of the total number of services that can be provided online, what per cent has been availed. We may call that completeness or adequacy of the services. Also, on the factors enhancing e-government service gaps, I believe that human factor should be modified to "human capacity development" because the design and usage of e-government also depend on developed human capacities, which in any case seems to be lacking in developing countries like Zimbabwe.