

# Implementation of E-Procurement in Public Building Projects of the Federal Capital Territory Administration, Abuja

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The traditional procurement system adopted in the delivery of building construction projects by the Federal Capital Territory Administration (FCTA) is frequently challenged with problems of transparency, accountability, fraud, corruption, among others. These have negatively affected the outcome of many construction projects, and thereby calling for e-procurement technology. Thus, this study examined the approaches for implementation of e-procurement in building construction projects in FCTA, with a view to mitigating procurement fraud in the sector. The study adopted a survey design approach using quantitative research method. One hundred and twenty-seven (127) questionnaires were administered to procurement staff of the FCTA secretariat, out of which 125 questionnaires were returned and found valid for analysis. The collected data using a stratified sampling method were analysed using the Mean Item Score (MIS), Relative Importance Index (RII) and Kruskal-Wallis Test. The study found that Good governance in reduction of collusion among bidders (4.65); transparency and openness of information on public procurement (4.54); and Cost and time savings in sending tender evaluation reports to approving authority (4.51), were the main prospects of implementing e-procurement in the FCTA. Among the important action plans for effective implementation of e-procurement system included: Development of a plan and commitment of resources towards the e-procurement project, with RII value of 0.96; Development of Key Performance Indicators (KPIs) to measure success against identified procurement goals (RII: 0.87); and Securing executive sponsorship for the e-procurement initiative (0.87). There was consistency in the views of the majority of procurement staff with regards to the responses provided. The research concluded that implementation of e-procurement technology for building projects in the FCTA would translate into a major reduction in procurement fraud in the sector. The study recommended that both the Federal and State Governments should come up with policies and frameworks that will mandate FCTA construction projects to be procured through e-procurement platform.

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**Keywords:** Building Projects, Delivery, E-procurement, Implementation, Public Sector

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## Introduction

The traditional procurement system widely practiced in the Nigerian public sectors, which involves the normal advertisement, bidding, selection to the award process is heavily challenged with lots of setbacks and various forms of malpractices to include selective tendering process, sole source contracting, advertisement challenges, high incidence of vested interest, and limited and ineffective public bidding, and occasional cases of retrospective approval of contract

awards (Ajibike, 2019). These setbacks therefore necessitated procurement reforms in Nigerian public sectors (Ajibike, 2019; Gastor, 2019).

E-procurement system has been known as a web-based technology purchasing solutions aimed at simplifying commercial transactions within and between organisations and information technology solutions for ordering, logistics and handling, as well as payment systems

(Gunasekaran *et al.*, 2009). Various business concerns had found it appropriate to embrace the use of internet facilities to enhance the performance of tasks (Akintola and Oyediran, 2011; Mauti-Mose and Magutu, 2013).

The Federal Capital Territory Administration (FCTA) is among the government sector that is yet to key into the e-procurement system. The traditional procurement system adopted by the FCTA is often challenged with problems of transparency, accountability, fraud, poor legal framework and corruption, political interference by the executives, complexity of procurement regulations, and inadequate institutional and human resource capacity. These challenges have drastically affected the efficiency and effectiveness of the procurement process (Aliyu, 2015; Ajibike, 2019) and calling for a digitalised form of procurement system in delivering building projects within the FCTA. However, the FCT Secretariat is one of the government agencies considered to be late to adopt the e-procurement system in the delivery of building projects.

Previous studies on e-Procurement in construction focused on strategic, opportunistic and operational benefits of e-procurement (Eadie *et al.*, 2010; Farzin and Nezhad, 2010); the state of e-tendering in Nigeria; barriers to the uptake of e-tendering in Nigeria (Akintola and Oyediran, 2011; Bello and Iyagba, 2013). Few studies concentrated on the implementation of e-procurement, particularly in the Federal Capital Administration, Abuja. This study examines the implementation of e-procurement in building construction projects of the FCTA, Abuja with a view to mitigating procurement fraud in Nigeria. To achieve the aim, the following specific objectives were formulated to: examine barriers to the uptake of e-procurement in building construction projects of the FCTA Abuja; explore the prospects of e-procurement implementation in building construction projects of the FCTA Abuja; examine the challenges of implementing e-procurement in the building construction

projects of the FCTA Abuja; and explore strategies for effective implementation of e-procurement in the public sector of the FCTA Abuja.

### **Challenges with the Current Paper-Based Procurement System in Nigeria**

McConnell (2010) summarised the problems of the paper based procurement system into four broad unique themes, namely: technology, process, people and compliance. Technological problems arise primarily as a result of limited use of technology solution in the traditional procurement process. These problems include: poor data quality, and absence of data harmonization. Process related problems include: slow manual processing, slow transaction processing, large volume of paper generated, increase handling errors, complicated procedures, difficulty expediting delivery, and many more. People related problems have overwhelming influence on technology and process related problems regarding the efficiency of every procurement system (McConnell, 2010).

In recent years, limited progress has been made in reforming the public procurement system. However, the reforms were considered inadequate and shortcomings persist (Ajibike, 2019). The operation of the Public Procurement Act (PPA) in Nigeria is faced with the following challenges: size and complexity of procurement, political interference by the executives, shortage of public procurement practitioners, extensive corruption, faulty implementation, complexity of procurement regulations, meeting the expectations of stakeholders, incompetency of the practitioners, procurement entities repulsive attitude, delay from Bureau of Public Procurement processes, procurement officials not part of decision makers, and many more (Ogunsemi, 2013). Ajiike (2019) added that the paper based procurement system was highlighted by reported cases of political influence and pressure from trade unions in the procurement process; fragmented procurement procedures, the absence of open, competitive tendering, especially for

foreign suppliers; and the lack of transparency.

### Barriers to the Uptake of E-procurement in Construction Projects

The barriers to the uptake of e-procurement in any public organisation could be grouped into internal and external barriers. While the internal barriers focused on resource constraints and organisational and management characteristics, the external barriers include external factors, such as technology, infrastructure and legislation, and the environment (Eei *et al.*, 2012). In the view of Hashim *et al.*, (2014), the conceived barriers to e-procurement uptake in Nigeria include: external environment (infrastructure, external pressure and socio-cultural factors); internal environment (size, resource availability, organisational culture and trained labour); perception (perceived benefits, risks, trust and cost); and attitude (age, occupational relevance, language and education). Arbin (2010) noted further that the main barriers to implementing e-procurement include management barriers, organisational barriers, IT barriers, and users' barriers. Table 1 highlighted some important barriers to the implementation of e-procurement system by different authors.

### Prospects of E-procurement Implementation in Construction

Sanewu (2016) summarises the prospects of implementing e-procurement system in construction work to include: capturing and reducing rogue spending (spending outside

of the procurement contracts); better analysis, better tracking of expenditure, and better contracting prices; cutting out distributors to drive down prices; and optimising logistics to reduce transportation costs. Furthermore, Eei *et al.* (2012) highlighted four basic cost saving advantages from the adoption of e-procurement system to include, order cost, administrative cost, lead-time order cost and opportunity cost of capital.

The main prospects of implementing e-procurement system include: cost savings and subsequent increase in return-on-investment; upgrade of store network productivity by giving ongoing information with respect to item accessibility, stock level, shipment status, generation prerequisites; assistance of collective arranging among store network accomplices by sharing information on request figures and generation plans that direct production network exercises; intense linkage of customer demand information to upstream (stock system organisation) limits (Silas, 2013; Eadie *et al.*, 2010).

### Action Plans for Implementation of E-procurement in Public Sectors

Government e-procurement projects have been particularly unsuccessful, therefore, before launching any e-procurement project, government must consider certain best practices as prerequisites to success (Amemba *et al.*, 2013).

**Table 1: Barriers to the uptake of e-procurement in public sectors**

Barriers to e-procurement implementation	References
Lack of management support	Greunen (2010)
High costs of implementation	Gunasekaran <i>et al.</i> (2009)
Lack of technical expertise	Greunen (2010)
Security of transactions	Greunen (2010)
Lack of common technology standards	Arbin (2002)
Time needed for the implementation process	Gunasekaran <i>et al.</i> (2009)
Resistance to change	Farzin and Nezhad (2010)
Lack of skilled personnel	Eadie <i>et al.</i> (2007)
Complicated procedures and extended relationships	(2010)
Internal and external compatibility	Greunen (2010)
Getting suppliers to update and control the E-catalogues and to monitor them	Arbin (2002)

These prerequisites according to Amemba *et al.* (2013) are: the government must possess the understanding of procurement laws; ensured honesty on procurement values; develop plans and commit resources towards the e-procurement project; take cognisance of spending and vendors; and creation of a series of master contracts or catalogue to reduce unnecessary spending.

Other fundamentals, according to Amemba *et al.* (2013) are: establish the business case and identify the benefits that an agency expects to generate; employees must be granted responsibility with care as not every employee will be capable of managing a budget; and finally, security issues must be taken seriously.

### Research Methodology

This study adopted a survey design approach the self-administration of well-structured questionnaires. The population for this research constitute the procurement units of the 12 branches of the FCTA secretariat, Abuja, comprising a total of 187 procurement staff.

The sample frame for this study include the procurement units of the 12 organisations, as follows: FCT Procurement, FCT Secondary Education Board, FCT Universal Basic Education Board, FCT Education Secretariat, FCT Transport Secretariat, FCT Agricultural Secretariat, FCT Area Council

Service Commission, FCT Water Board, FCT Inland Revenue Services, FCT Environmental Protection Agency, FCT Health Secretariat, and Abuja Metropolitan Management Council (AMMCI).

The group of respondents in the stated organisations include: Procurement Officers, Quantity Surveyors, Architects, Builders, and Services Engineers. These are the professionals working directly in the procurement units of the stated organisations. The sample size for this research was developed from the number of 187 procurement staff members of the population as shown in Table 2. The value of 187 (population) was subjected to Krejcie and Morgan table for determining sample size at 5% limit of error and at 95% confidence level. The value of 187 was reduced to 123 depicting the minimum sample of questionnaire to be administered. Therefore, 123 represents the sample size for the study.

For the purpose of this study, stratified sampling technique was adopted. This was done by grouping each set of procurement staff (procurement officers, Quantity Surveyors, Architects etc.) in stratum. Simple random technique was adopted for the selection of members in each group or strata to ensure that every group is represented and have equal chances of being selected within the population.

**Table 2: Sample breakdown of the study**

S/N	Organisations	Procurement officers	Quantity Surveyors	Architecture	Builders	Engineer	Population Size	Sample size
1	FCT Procurement	12	2	0	0	0	14	
2	FCT Secondary Education Board	5	5	6	4	6	26	
3	FCT Universal Basic Education Board	4	5	5	4	5	23	
4	FCT Education Secretariat	7	7	7	2	15	38	
5	FCT Transport Secretariat	4	0	0	0	0	4	
6	FCT Agricultural Secretariat	4	2	2	1	2	11	
7	FCT Area Council Service Commission	4	2	1	0	0	7	
8	FCT Water board	5	2	0	0	2	9	
9	FCT Inland Revenue Services	2	1	0	0	0	3	
10	FCT Environmental Protection Agency	5	1	0	0	0	6	
11	FCT Health secretariat	2	2	2	1	1	8	
12	Abuja Metropolitan Management Council (AMMCI)	8	9	10	5	6	38	
	<b>Total</b>	<b>62</b>	<b>38</b>	<b>33</b>	<b>17</b>	<b>37</b>	<b>187</b>	<b>127</b>

A structured questionnaire was designed in two sections. Section ‘A’ comprised the general information of the respondents. Section ‘B’ comprised the structured questions on a 5-Point Likert scale. The collected data was analysed using both descriptive statistics (Mean Item Score {MIS} and the Relative Importance Index {RII}) and inferential methods using the Kruskal-Wallis Test.

The Mean Item Score (MIS) was used to determine the average mean and was also used to rank the following factors: barriers to the up-take of e-procurement in the FCTA; the prospects of e-procurement implementation; and challenges of implementing e-procurement. The Relative Importance Index (RII) was used to analyse the important strategies for implementation of e-procurement in the FCTA. Furthermore, Kruskal-Wallis Test was used to test the difference in respondents’ views on the factors.

The outcome of Mean Item Score on a Five-Points Likert scale, according to Morenikeji (2006) was decided which was further adapted and converted to RII on a scale 0-1 as shown in Table 3.

**Results and Discussion**

**Demographic Information of the Respondents**

One hundred and twenty-seven (127) questionnaires were administered and 125 questionnaires were returned and considered valid for analysis. Table 4 shows that 80.80% of the respondents were males while 19.20% were females. On professional background, majority of the respondents (40.80%) were procurement officers, 24.80% were Quantity Surveyors, 16.00% were Engineers, 9.60% were

Architects; and 8.80% were Builders. In a related development, 17.60% of the respondents had working experience of less than 5 years; 29.60% of the respondents had experience of 5 to 10years; 27.20% of the respondents had experience of 11 to 20years; 18.40% had experience of 21 to 30 years; and 7.20% had experience of above 30 years.

In terms of academic qualification, majority of the respondents (51.20%) had BSc/MTech; 28.00% had HND; 16.80% of the respondents had MSc/MTech; and only 4.00% acquired other qualifications.

**Barriers to the Uptake of E-Procurement in Building Projects of the FCTA**

Table 5 reveals the 8-important barriers to the uptake of e-procurement for execution of building projects in the FCTA Abuja. These factors include: Lack of technical expertise; unreliable power supply; inadequate government supports; poor ICT and internet infrastructure; high costs of implementation; resistance to change; poor financial base; and lack of top management support. These factors were deemed by the respondents to be the key barriers, because they had their MIS values between 4.50 and 5.00 which was considered very high. These results are in line with the findings of Eei *et al.* (2012) who grouped e-procurement implementation barriers into internal barriers (focusing on resource constraints and organisational and management characteristic) and the external barriers to include technology, infrastructure and legislation. The results are also in line with the findings of Arbin (2010) and Greunen (2010) as highlighted in section 2 of this study.

**Table 3: Decision rules for determining the level of importance of a factor**

SN	Cut-off Points for MIS	Cut-off Point for RII	Decision
1	4.50-5.00	0.90-1.00	Very High
2	3.50-4.49	0.70-0.89	High
3	2.50-3.49	0.50-0.69	Moderate
4	1.50-2.49	0.30-0.49	Little
5	0.1-1.49	0.10-0.29	Very Little

**Table 4: Respondents demographic information**

	<b>Variables</b>	<b>Frequency</b>	<b>percent</b>
Gender	Male	101	80.80%
	Female	24	19.20%
	<b>Total</b>	<b>125</b>	<b>100%</b>
Profession/Responsibility	Architect	12	9.60%
	Builder	11	8.80%
	Engineer	20	16.00%
	Quantity Surveyor	31	24.80%
	Procurement officers	51	40.80%
	<b>Total</b>	<b>125</b>	<b>100%</b>
Years of Experience	Less than 5years	22	17.60%
	5-10years	37	29.60%
	11-20years	34	27.20%
	21-30years	23	18.40%
	Above 30	9	7.20%
	<b>Total</b>	<b>125</b>	<b>100%</b>
Academic qualification	ND	0	0.00%
	HND	35	28.00%
	BSc/BTech	64	51.20%
	MSc/MTech	21	16.80%
	Others	5	4.00%
	<b>Total</b>	<b>125</b>	<b>100%</b>

The Kruskal-Wallis Test conducted at 95% confidence level reveals that there is no significant difference (showing consistencies) in 72.73% of the responses within the groups and thus accepted. Only 27.27% of the respondents showed a significant difference in the perception with p-value of less than 0.05. Therefore, this concludes a consistency in the views of the respondents with regards to the barriers to the uptake of E-procurement in the FCTA

#### **Prospects of E-Procurement implementation in construction projects of the FCTA**

Table 6 shows the key prospects for the implementation of e-procurement in the FCTA namely: Good governance in reduction of collusion among the bidders; transparency and openness in public procurement; good governance in pre-qualifying process; and cost and time savings in sending Tender Evaluation Report to approving authority and in pre-tender meeting, with MIS values ranging from 4.65 to 4.51.

Other factors considered to be high are: secrecy of bidders' information; cost and

time savings in issuance of notification of award; transparency in public accessibility to the information of tender process; improvement of the entire tendering process; and efficiency in reduction of errors with MIS values of 4.17 to 3.93. The results on cost saving corroborate the findings of Eei *et al.* (2012) who highlighted four basic cost saving advantages from the adoption of e-procurement system to include, order cost, administrative cost, lead-time order cost and opportunity cost of capital. The result is also in line with Silas (2013) and Eadie *et al.* (2010).

The Kruskal-Wallis Test conducted at 95% confidence level reveals that there is no significant difference (showing consistencies) in 75.86% of the responses within the groups and thus accepted. Only 24.14% of the respondents showed a significant difference in the perception with p-value of less than 0.05. Therefore, this concludes a consistency in the views of the respondents with regards to the prospects of e-procurement implementation for building projects in the FCTA.

**Table 5: Barriers to the uptake of E-Procurement in FCTA Abuja building projects**

<b>Barriers to the uptake of E-procurement</b>	<b>MIS</b>	<b>S.D</b>	<b>Ran k</b>	<b>Kruskal Wallis Test P-value</b>	<b>Decision</b>
Lack of technical expertise	4.76	0.4292	1	0.996	Accept
Unreliable power supply	4.68	0.5840	2	0.640	Accept
Inadequate government support	4.65	0.7703	3	0.624	Accept
Poor ICT and internet infrastructure	4.65	0.7437	3	0.245	Accept
High costs of implementation	4.64	0.4824	5	0.950	Accept
Resistance to change	4.64	0.4824	5	0.950	Accept
Poor financial base	4.64	0.4824	5	0.977	Accept
Lack of top management support	4.61	1.1361	8	0.540	Accept
Lack of common technology standards	4.37	0.4852	9	0.999	Accept
Unavailability of e-procurement applications software	4.23	1.2541	10	0.001*	Reject
Lack of skilled personnel	4.15	0.9252	11	0.972	Accept
Fear of job loss and end into corruption	4.13	0.5972	12	0.974	Accept
Unreliability of the technology	4.01	0.8586	13	0.913	Accept
Reduction in the level of personal contacts	3.80	1.2949	14	0.0008	Reject
Cost of e-procurement technology	3.73	1.3170	15	0.051	Accept
Time needed for the implementation process	3.67	1.5046	16	0.000*	Reject
Complicated and extended procedures	3.63	0.4852	17	0.722	Accept
Lack of confidentiality and flexibility	3.62	1.4756	18	0.000*	Reject
Lack of uniform standard for e-procurement implementation	3.52	1.3218	19	0.000*	Reject
Illegality of e-procurement contact	3.47	1.6724	20	0.000*	Reject
Lack of national ICT policy	3.42	1.0168	21	0.305	Accept
Security of transactions	3.15	0.7833	22	0.968	Accept

\*P-value <0.05.

**Table 6: Prospects of e-procurement implementation in FCTA Abuja**

Prospects of E-procurement implementation	MIS	S.D	Rank	Kruskal Wallis Test	
				P-value	Decision
Good governance in reduction of collusion among the bidders	4.65	0.702	1	0.695	Accept
Transparency and openness of information in public procurement	4.54	1.123	2	0.504	Accept
Good governance in pre-qualifying process	4.53	1.085	3	0.663	Accept
Cost and time savings in Sending Tender Evaluation Report to Approving authority for approval	4.51	1.084	4	0.702	Accept
Transparency in secrecy of bidders information	4.17	1.223	5	0.929	Accept
Cost and time savings in issuance of Notification of Award & communicate with renderer	4.13	0.981	6	0.921	Accept
Transparency in Public accessibility to tender information process	4.02	1.189	7	0.721	Accept
Cost and time savings of pre-tender meeting	3.96	0.816	8	0.225	Accept
Improvement of the entire tendering process	3.96	0.816	8	0.225	Accept
Efficiency in Reduction of errors	3.93	1.373	10	0.903	Accept
Transparency in scope of online vigilance and monitoring	3.92	1.169	11	0.654	Accept
Cost and time savings in Contract agreement	3.88	1.274	12	0.135	Accept
Process improvement in Managing capacity of large bidders	3.86	1.164	13	0.135	Accept
Transparency in real time access of information and bidding	3.85	1.132	14	1.929	Accept
Efficiency in positive change of staff concentration	3.85	1.321	14	0.628	Accept
Process improvement in e-contract management system	3.83	1.303	16	0.000*	Reject
Cost and time savings in advertisement of tender notice	3.76	1.357	17	0.000*	Reject
Process improvement in Automatic generation of necessary report	3.72	1.341	18	0.000*	Reject
Guaranteeing of best quality with little price	3.62	1.369	19	0.000	Reject
Cost and time savings intender collection from multiple locations	3.52	1.049	20	0.861	Accept
Efficient selection criteria of bidders	3.52	1.049	20	0.861	Accept
Process improvement in Accuracy of purchase decisions	3.52	1.329	20	0.000*	Reject
Cost and time savings in preparation of tender documents	3.45	1.321	23	0.172	Accept
Process improvement in workflow management	3.43	1.444	24	0.000*	Reject
Cost and time savings in tender Evaluation Report process	3.42	1.249	25	0.760	Accept
Good governance in competition among the bidders	3.42	1.249	25	0.760	Accept
Process improvement in Automation of procurement process	3.26	1.307	27	0.116	Accept
Efficient and flexible Procurement process	3.11	1.325	28	0.102	Accept
Efficiency in cash flow improvement compared to manual	3.02	1.239	29	0.003*	Reject

\*P-value <0.05.

### Challenges of Implementing E-Procurement in the FCTA Public Sector

Table 7 shows the top challenges faced in implementation of the e-procurement system in execution of building projects in the FCTA are: inadequate technological infrastructure of tenderers, and inadequate financial resources and backing, with MIS values of 4.93 respectively. This is in line with McConnell (2010) who highlighted that technological problems arise primarily as a result of limited use of technology solution in the procurement process. These problems include: poor data quality, and absence of data harmonization. Other important challenges are: internal user resistance to learn multiple procurement

systems (MIS=4.44); lack of competent employee on e-procurement (MIS=4.34); and lack of interest in e-procurement (MIS=4.11).

The Kruskal-Wallis Test conducted at 95% confidence level reveals that there is no significant difference (showing consistencies) in 80.0% of the responses within the groups and thus accepted. Only 20.0% of the respondents showed a significant difference in the perception with p-value of less than 0.05. Therefore, this concludes a consistency in the views of the respondents with regards to the challenges of implementing E-procurement for building projects in the FCTA.

**Table 7: Challenges of implementing e-procurement in the FCTA**

Challenges of implementing E-procurement	MIS	S.D	Ran k	Kruskal Wallis Test P-value	Decision
Inadequate technological infrastructure of tenderers	4.93	0.3828	1	0.058	Accept
Inadequate financial resources and backing	4.93	0.3828	1	0.058	Accept
Internal user resistance to learn multiple procurement systems and procedures.	4.44	0.9025	3	0.835	Accept
Lack of competent employee on e-procurement	4.34	0.8554	4	0.402	Accept
Training of contractors	4.22	1.0109	5	0.109	Accept
Most information is considered as confidentiality	4.16	1.0610	6	0.000*	Reject
Protection against hacker, virus e.t.c.	4.13	1.0508	7	0.160	Accept
Lack of interest in e-procurement	4.11	1.2135	8	0.055	Accept
Inadequate technological infrastructure to implement the process	4.08	0.9917	9	0.103	Accept
Insufficient training on procurement and other indirect costs	4.04	0.9632	10	0.121	Accept
Organisation culture, bureaucratic inertia or processes.	4.01	1.1503	11	1.137	Accept
Stakeholders Awareness	3.76	1.0359	12	0.025*	Reject
Lack of change management, top management support	3.71	1.1917	13	0.023*	Reject
Awareness Acceptability of new system by all stakeholders	3.54	1.4172	14	0.174	Accept
Logistic support –Scanner, printer etc.	3.44	1.8220	15	0.402	Accept

\*P-value <0.05

#### **Action Plans for Implementation of E-Procurement in the FCTA**

Table 8 shows the top action plan for implementation of e-procurement in the FCTA namely: Government must understand procurement laws and honesty on procurement values; and development of a plan and commitment of resources towards the e-procurement project, with RII values of 0.956 each. Other action plans deemed high by the respondents are: development of Key Performance Indicators (KPIs) to measure success against identified procurement goals (RII: 0.87); Securing executive sponsorship for the e-procurement initiative (RII: 0.87); documentation of important benefits that will come from implementing an e-procurement system (hard, soft and intangible benefits) (0.86); and identifying the process and system solutions that will be required to bridge gaps (0.86). These results

are in line with the findings of Amemba *et al.* (2013) who highlighted identification of process and system solutions that will be required to bridge gaps, and understanding of e-procurement laws by government and honesty on procurement values as important plans for implementation of e-procurement technology.

The Kruskal-Wallis Test conducted at 95% confidence level reveals that there is no significant difference (showing consistencies) in 80.0% of the responses within the groups and thus accepted. Only 20.0% of the respondents showed a significant difference in the perception with p-value of less than 0.05. Therefore, this concludes a consistency in the views of the respondents with regards to the strategies for implementation of e-procurement in the FCTA.

**Table 8: Action plans for implementation of e-procurement in the FCTA Abuja**

Action plans for effective implementation of e-procurement	RII	Rank	Kruskal-Wallis Test	
			P-value	Decision
Understanding of procurement laws and honesty on procurement values by the government	0.956	1	0.234	Accept
Development of a plan and commitment of resources towards the e-procurement project	0.956	1	0.114	Accept
Development of Key Performance Indicators (KPIs) to measure success against identified procurement goals	0.868	3	0.229	Accept
Secure executive sponsorship and an internal champion for the initiative	0.864	4	0.269	Accept
Documentation of important benefits that will come from implementing an e-procurement system (hard, soft and intangible benefits)	0.858	5	0.0068	Reject
Identify the process and system solutions that will be required to bridge gaps	0.856	6	0.027*	Reject
Assess and document your desired future procurement strategy	0.830	7	0.012*	Reject
Review and select the optimal e-procurement solution for your needs	0.812	8	0.001*	Reject
Assessing and documenting the current procurement process	0.796	9	0.001*	Reject
Identify the gaps between where you are now and where you want to be	0.790	10	0.277	Accept
Measure and deliver the benefits	0.726	11	0.131	Accept
Create a business case that addresses the most critical pain points of your buying organisation	0.716	12	0.283	Accept
Create an implementation plan that reduces maintenance times and resource demands on ICT department.	0.678	13	0.206	Accept

\*P-value <0.05.

### Conclusion and Recommendations

In order to mitigate the problems of transparency, accountability, fraud, corruption, among others in the traditional procurement system for building project delivery in the Federal Capital Territory Administration Secretariat, Abuja, the study examined the procedures for implementation of e-procurement in building construction projects of the FCTA secretariat. Based on this purpose, the study found lack of technical expertise, unreliable power supply, inadequate government support, poor ICT and internet infrastructure, and high costs of implementation as the major barriers to the uptake of E-procurement in FCTA building projects. Among the top prospects of e-procurement implementation in the study are: good governance in reduction of collusion among the bidders, transparency and openness of information in public procurement, good governance in pre-qualifying process, cost and time savings in sending tender evaluation report to approving authority for approval. The study also found that, inadequate financial resources and backing, inadequate technological infrastructure of tenderers,

internal user resistance to learn multiple procurement systems and procedures, and lack of competent employee on e-procurement as the major challenges of implementing e-procurement in the FCTA. Among the important action plans for effective implementation of e-procurement system include: understanding of procurement laws and honesty on procurement values by the government; development of a plan and commitment of resources towards the e-procurement project, development of Key Performance Indicators (KPIs) to measure success against identified procurement goals, and securing executive sponsorship for the e-procurement initiative.

There is consistency in the views of the majority of procurement staff with regards to the responses provided. The study concludes that implementation of e-procurement technology for building projects would translate into a major reduction in procurement fraud in in the FCTA. The study recommends that the Federal and State Governments should come up with policies and frameworks that will mandate FCTA construction projects to

be procured through e-procurement platform. The results of this document are hereby recommended to the FCTA for proper implementation of the e-procurement.

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