Assessing Client Value System on End-User Satisfaction in Housing Delivery in Nigeria.

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Key words: Client, Value system, End-user Satisfaction, Housing delivery, Nigeria.

SUMMARY

The concept of value has been influenced heavily from an economic perspective and is expressed as the ratio of cost to benefits. In Nigeria, housing delivery constitute an important facet of government initiatives for providing shelter for her citizens; yet housing shortage has become a persistent problem to public servants in the country. This paper aims to ascertain client value system in housing delivery by assessing client value system in relation to end user satisfaction. This investigation was carried out using structured questionnaires administered to beneficiaries of housing schemes for public servants in Kaduna state, Nigeria. Samples were drawn from 212 units by probability sampling technique using random sampling. End-users satisfaction was assessed using a 5-point Likert scale of 1-Strongly agree, 2-Agree, 3-Uncertain, 4-Disagree and 5-Strongly disagree. 67 Questionnaires were administered and 77.61% responses were received. SPSS version 17.0 was used to analyze the data. Frequency distributions of responses were constructed and presented in tables. A descriptive table was constructed to determine client response and end-users satisfaction. The Assessment shows lack of a number of criteria in the client value system, considered beneficial to end-users. To ameliorate the problem housing shortages for public servants in the country, Federal and State governments (Client) are encouraged to embark on mass housing schemes bearing in mind the end-user (beneficiary) right from conception of the project. Recommendations hinge on some necessary actions that can improve end-user satisfaction on mass housing schemes.

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1. INTRODUCTION

Housing represents a critical component in the social and economic structures and constitutes one of the basic human needs of all nations (Kabir and Bustani, 2008). Housing delivery on the other hand, is an approach aimed at providing shelter for citizens in any country. In Nigeria, several housing schemes have evolved over the years; embarked upon by government and private corporations at various levels, in an attempt to provide shelter for its citizens; yet housing problems have become persistent especially for public servants in the country. Housing problem stems from quantitative to qualitative, the effect of which reflects on the social, economic as well as cultural statues of users and leads to pressures for cost reduction rather than value maximization for the construction industry (Kabir and Bustani, 2008).

The concept of value originated in the manufacturing sector as Value engineering (VE). The concept was used in this sector to optimised product design and improvement in mass production, relating customer satifaction indices (stated in customer requirements) to the product; thereby achieving customer cum product value. The use of VE and Value Management (VM) philosophy by the construction industry is credited to the work Lawrence Miles in the 1940's. Since that time, VM witnessed obvious development steps in the construction industry worldwide (Othman 2008). Despite the strides in attempts to achieve value within the construction industry, the ability of current VM practices to define the entire value for any construction project, have been queried with the evidence that client and end-user contributions in attaining value for projects, are inversely proportional to project progress (Thomson and Austin 2010). Construction industry efforts towards value attainment in terms of satisfaction, emphasizes more on the context of client's requirement (Austin and Thomson, 2010 ; Duffy, 1990) than the end-user; whereas client value system in housing delivery does not automatically translate to end user satisfaction; for the end-user, the value of a product is based on the satisfaction derived from using it and that, for a considerable period of time.

Notwithstanding the significance of housing delivery, supply on the one hand has been grossly inadequate and where available, this is carried out without consideration to the end-users' satisfaction so long as clients are satisfied vis a vis their value system hence, the following question is often asked: Are end-users' satisfied with houses delivered to them? Are their values for housing projects met? This and other related questions pose problems in defining end-user satisfaction in terms of housing delivery in Nigeria.

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2. HOUSING DELIVERY SYSTEMS IN NIGERIA

Housing is universally acknowledged as the second most essential human need after food and is a major economic asset in every nation. Buildings are at times designed and owned for such considerations as social status, recognition, corporate image booster and aesthetics etc. Housing development comprises building investment (public, private or combined) using scare resources such as land and fund to provide adequate and acceptable accommodation at affordable prices, to the society which considering their average incomes, are unable to obtain it in the open market (Husock 2000, Rigatti 2000).

Over the years many housing programmes have been proposed and realised by the Nigerian government and other agencies within the country, in their effort to ameliorate housing delivery. Housing provision by government began before the country's independence in 1960. Before that period, housing was provided through communal systems in which communities tried to preserve their values while providing shelter as needed by the community (Ademiluyi, 2010). The period between 1928-date in the Nigerian housing sector, witnessed developmental strides in govermnent efforts towards improved housing delivery through legislations, reforms, strategies and policies (Ibem and Amole, 2010), though saddled with challenges imposed by rapid population growth and inadequate mechanisms for effective improvement. For example, over a period of 19 years (1975-1994) only 81,750 (42.70%) houses were delivered out of the 570,000 units proposed within that period (Kabir and Bustani, 2008). This figure represents less than 50% achievement over a considerable length of time. In addition to quantitative problems, housing quality in Nigeria and other developing countries is relatively poor and Government efforts to upgrade housing conditions are evolving slowly (Kabir and Bustani, 2008, Encarta 2009, Kowaltowski and Granja 2011). Hence it is evident that there have been continued efforts generally, but with little impact and progress (Ademiluyi and Raji 2008, Danmole 2004). Nigerian policy implementation and strategies for housing delivery have generally been deficient in meeting stakeholders housing needs. Presently, housing provision stands at a rate 2 dwelling units per 1000 people (Ademiluyi, 2010) as against United Nations recommended provision rate of UN is 8-10 per 1000 .

Housing delivery, often referred to as mass housing are is usually executed by Federal or state using government funding, while design and supervision makes use of professionals from federal or state ministries and agencies. Typically, similar designs are usually adopted regardless of population strata, location or size of housing projects and other requirements over the year. These efforts are often initiated by politicians who use housing as well as other visible urban infrastructure, such as hospitals, schools and transportation for low-income groups, for electoral gains. Kowaltowski and Granja (2011) noted that construction companies, working with local government housing agencies, frequently have a typical opportunistic value system connected to the political system and serve the local government's interests hence does not encourage innovation and change that could have positive impact on the users. Until recently, Private Partnership was not well employed in the Nigerian housing sector. Suppliers tend to emphasize more on provision without due consideration of user satisfaction whereas housing is far more than and shelter. Its nature and value are determined

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by the service it offers and the satisfaction derived from these services

3. THE CONCEPT OF VALUE IN CONSTRUCTION

Participant within the construction industry differ in their expectation with regards to value. Wandahl et al (2007), for example evaluated the centrality of the value component for participants in a building project pointing out divergence of value perception among these participants. To the client, value is attained when design, usability and quality justifies the amount of money spent whereas to the contractor as well as consultants, it is achieved in the fulfilment of client's requirements to the best of their abilities. Bell (1994), on concept of value, noted that historically the concept has been influenced heavily from an economic perspective and is normally expressed as the ratio of cost to benefits. Evaluating the varied perceptions of value, does not explore end-user value expectation and/or satisfaction of the the product; yet it is equally improtant to comprehend the concept as it affects all stakeholders in the construction industry.

Value Management (VM), is an emerging paradigm which focuses on continuely increasing the vlaue provided to the client. It aims at improving client value system and consists basically, processes, understanding of required performance (Kelly et al 2004) and the application of these into a complex whole. Understanding the full potential of the management concept of value requires integration and iteration of all the basic components relating to value theory, considering its complex nature. Borrowing form the lean concept, value can be said to be the desired end goal where end-user involvement can help shape services and achieve organisational objectives for delivering better, more responsive services. In construction, value is considered in terms of the deliverables that satisfy client's aspirations therfore, to meet the demands for value enhancement VM technology have been widely used especially in developed countries. For example, construction industry review committee 2001, cited in Shen and Chung (2006), in Hong Kong, advocates the use of VM in local construction to help achieve project objective for all stakeholders. However, VM concept is described as subjective since it delivers service to different stakeholders, at different levels (Thiry, 1997, Wandal et al 2007 Saifulnizam et al 2011); therefore understanding the concept of value implies differing between value systems in terms of worth and the principles reflected in attitude and social behaviour on the part of stakeholders, as well as the product processess (Wandal et al, 2007) and establishing well defined value parameters, specific to projects that can promote the bases of improved service delivery.

4. CLIENT VALUE SYSTEM IN HOUSING DELIVERY

The extend to which a subject is percieved demonstrates the meaning attached to it.Value generally, has been found to have two-sided meanings: what something is worth and the principles people apply to make decisions (Wandahl 2004). Bearing in mind these paradigms, value system as a whole is a complex system (Kelly et al 2004) comprising component that can often be conflicting, yet must be interdependent where it to achieve a common goal. The Kelly and Male 2004 proposed a client value system model which explains the client value system with respect to projects as being intrinsic or extrinsic. This forms the basis for a broad

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classification of the entire components contained in the client's value system. Earlier, Kelly and Male (2002, argued that value can only be completely managed from the client's point of view, by breaking down all the components associated with the value concept. The study indicated differences in interpretation of value component between public and private sector client. The submissions emphasizes constructing client value system on basic knowledge of facts and not on the basis of emotions hence the need to understand and establish the client value criteria in measurable terms in order to define appropriately what the project means to the client and to determine their relative importance in order to transmit their value criteria (intrinsic value) to the design team and translate it into practical aspects (Extrinsic value) of the project, as affecting stakeholders who have the most to lose or gain in the project.

Although clients seek better outcomes from their investment due to improved expectation in project delivery (Saifulnizam et al, 2011), housing delivery should not be limited to satisfying client requirements. Designers and public housing authorities should analyze conceptual reasons for all satisfaction levels in housing production (Feciková, 2004).

5. END USER SATISFACTION EVALUATION CRITERIA

Housing delivery problems include the inability of construction projects to achieve users' satisfaction to a reasonable extent. In the past, not much effort was made to find out which specific factors are important to user satisfaction for product improvement but today, although it has become an acceptable norm and there exists increasing recognition that customers are important in assets management, housing producers have been unable to effectively capture users' habits, traditions or reflect these in the product processes resulting to mismatch in product performance with user objective (Othman 2008).

5.1 Post- Occupancy Evaluation

Using value management evaluation criteria can help to improve building performance while contributing to user satisfaction. Post-occupancy Evaluation (POE), a well established building performance evaluation approach, attempts to provide a link between building production and use by employing the use of occupants' feedback mechanism (Ilesanmi 2010, Hendrickson and Wittman 2010). Hence end-user satisfaction although subjective, must be brought to bear in order to harmonise values of all stakeholders in housing production and use. In developed countries this provision is made, through regulatory frameworks requiring housing producers to establish user requirement by incorporating them at decision making stages, thereby producing tenant involvement statement to the appropriate regulatory agency as a means of verifying their commitment in ensuring user satisfaction in product delivery (HouseMark Report, 2010)

End-user' satisfaction is a subjective and multidimentional concept. Studies on end-user' satisfaction evaluation of public housing programmes, emphasize the need to identify what works well and what does not; as well as consequent impact of such programmes on the life of beneficiaries and surrounding. For the end- users, evaluation is essential in determining their environment against an image of what they would like it to be. The evaluative pattern is

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primarily influenced by objective and subjective factors (Ilesanmi 2010, Ibem and Amole, 2010). Studies carried out satisfaction in housing indicates that user satisfaction has little impact on improvement in design and implenentation input. Desired value in the construction industry is derived from different stakeholders by identifying opportunities and exploring them to attain housing delivery objective considering every stakehoder's role in the process (Kowaltowski and Granja 2011). However, there seems to be lack of effective ingtegration of client value system and end user satisfaction generally. Although both aspects of value contain objective and subjective elements, their evaluation criteria differ and are measured by differing parameters hence achieving client value system cannot aoutmatically translate to achieving user satisfaction. Evaluation by actual building users is important for design improvement therefore if innovations must be achieved in housing projects, user contribution must be sought from conception of any (Ilesanmi 2010). Liu (1999), recommended that residential buildings should not only be fit for the purpose of the users but must be able to perform functions relative to resident's satisfaction.

In Nigeria, government initiative in fulfilling campaign promises of housing provision underscores the significance of users' satisfaction evaluation; what is important is to have their promises fulfilled in any form of design, at any location and with whatever facilities they can lay their hand on at the time of construction.'

6. DATA AND METHODS

The research was designed to use a survey method to investigate a population of occupants of Civil servants' housing units in Kaduna State. The population from which the samples were obtained was 212 unit civil servants' houses constructed by the State government in 2005, comprising three bedroom, two bedroom and one bedroom prototype units, in six (6) locations within the metropolis. Samples were drawn from all the locations by probability sampling technique hence random sampling was used.

Separate structured questionnaires were used to obtain data from occupants (end- users) and the State Property Development Company (client). 67 questionnaires were administered to the end-users while the client, was required to respond to only a set of questions. End-Users' satisfaction criteria were assessed on a 5-point Likert scale while data from the client was based on feedback from the end- user as well as the client's criteria for meeting end user need. 51 questionnaires representing 77.61% were responded. Frequency tables and percentages were used to explain the results of the study obtained by the use of Statistical Package for Social Sciences (SPSS) version 17.0

7. RESULTS

7.1 Client Value Criteria

Table 1. dispicts a summary of the client value criteria cnsidered under the study. It indicates

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that client capital was adequate for the project while the actual cost of the project was within the budget at completion. This confirms the client's ability to met required value criteria of cost. The project completion period was within the time frame considered adequate by the client. The results aslo show important aspects of end-user criteria considered by the client while initiating the housing scheme. There is an indication from the client perspective that end-users were invloved and their contribution were documented although the contriutiobn was not significant.

Table 1. Client Value Criteria

Value Criteria	Remark
Location and the design of the building	Important
Bases for spaces provision	Adopted from past project
Electricity Supply	Important
Water Supply	Important
Functional drainage	Important
Quiet environment	Important
Clean environment	Important
Warm (friendly) Environment	Important
Conducive Environment	Important
Distance to nearest bus stop	Important
Distance to nearest school	Important
Distance to nearest hospital	Important
Distance to work places	Important
Criteria for allocation to the end user	Considered average income
End user involvement at conceptualization stage	Important
Input of the end user preference	location
Capital Budget	Adequate
Actual cost of project	Within Budget
Completion Period (Months)	10-12 Months
Number of Houses occupied (%)	Above 50 %
Payment response by end users (%)	Above 50 %

Source: Field Survey, 2010

Having considered the client value criteria, certain end-user criteria were examined and compared with the client value system. The following results were obtained:

7.2.1 Types of Building

Table 2. shows the percentange number of occupants in the buildings types provided. Consideration for occupation was basically for medium and low income earners although the basic categories of income earners were all captured. It implies that government initiative in housing delivery is geared more toward meeting the housing needs of medium and low income earners of as is also required by global developmental goals.

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Table 2. Type of Building

	Frequency	Percent	Cumulative Percent
1-Bedroom	16	31.4	31.4
2-Bedroom	25	49.0	80.4
3-Bedroom	10	19.6	100.0
Total	51	100.0	

Source: Field Survey, 2010

7.2.2 Space between one building and the next

Table.3 shows that space between one building and the next is at a minimum distance of 5m regardless of the category of the occupant whether high, medium or low income groups. 2.3% of the distances could not be adequately classified due to irregularity of the space pattern. This indicates that clients fulfil their aspirations within any available location at the time of construction, regardless of users' space requiremnt.

Table 3. Space Between a Building and the Next

	Frequency	Percent	Cumulative Percent
5m	34	77.3	77.3
10m	2	4.5	81.8
15m and Above	7	15.9	97.7
5	1	2.3	100.0
Total	44	100.0	

Source: Field Survey, 2010

7.2.3 Family size

Table 4 dipicts that the highest number (58.0%) of family size group is in the range of 1-5 members indicating the posibility of inadequate accomodation spaces within the building because only 4.0% of the total number of users have large family size of 11 and above meaning the only relatively adequate accommodation for these families must be 3-bedroom houses.

Table 4. Family Size

	Frequency	Percent	Cumulative Percent
1-5	29	58.0	58.0
6-10	19	38.0	96.0
11 and Above	2	4.0	100.0
Total	50	100.0	

Source: Survey 2010

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7.2.4 End-users' contribution to Housing delivery

Users' sugestions were analyzed and results show that 56.4% of the end user suggested that family size should be given top priority over other issues. This result contradicts the client claim of seeking user contribution as indicated on Table 1. Hence the urgent need to meet housing needs of Nigeria's fast growing population.

Table 5. End-Users' Contribution at Conception.

	Frequency	Percent	Cumulative Percent
Consider Family size only	22	56.4	56.4
Consider Grade level only	8	20.5	76.9
Consider all Factors	2	5.1	82.1
Consider Family size and Grade level only	2	5.1	87.2
Consider Family size and Location only	5	12.8	100.0
Total	39	100.0	

Source: Survey 2010

7.2 End-User Value Criteria

Table 6 displays a summary of the End-User responses with respect to their value criteria grouped under Environment, Amenities and travel time. The results shows that end-users enjoy quiet, clean and conducive enviroments in these communities and they are satified with the quality of the provision. However, the end-users are not satisfied with the user interactions, which the client stated as one of the important client criteria. This may be as a result of the close proximity of houses which encourages infringement on each others pricvacy by occupants.

Amenities set to assess end-user satisfaction by the study, consist of electricity and water, using constant supply as a standard requirement; others include: functional drainages and adequate security. It was observed that End-users are not satisfied with the provision of all the aminities, implying shortage or inadequate supply of electricity and water while, drainages may not deliver the desired function and inadequate security.

Journey time consist of time taken by the end-user to reach the nearest social services like bus stop, school, market, hospitals and work place. The result indicates that only shools and bus stops are relatively easily accessible but market, hospitals and work places are not easily accessible conversely, the client considers all these important.

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Table 6: End-User Value Criteria

	N	Minimum	Maximum	Mean
Environment				
Quiet	43	1	5	2
Clean	43	1	3	2
Warm	40	1	4	4
Conducive	44	1	5	2
Amenities				
Constant Electricity supply	48	1	5	4
Constant water supply	44	1	5	4
Functional storm and soil water drainages	48	1	5	4
Adequate Security	46	1	5	4
Journey Time				
Short distance to Bus Stop	48	1	5	2
Short distance to School	45	1	5	2
Short distance to Market	47	1	5	4
Short distance to Hospital	46	1	5	4
Short distance to work place	45	1	5	4

Source: Field Survey, 2010

8. CONLUSION

The paper examined the socio-economic and environmental context of housing delivery initiatives in Kaduna and found that end- users are not completely satisfied with some social amenities, housing providers, term important value criteria. The paper demonstrated the low level of involvement and insignificant contribution of end-users in housing delivery including the existence of housing shortage for large family units. These are important component of end user value criteria. It also revealed that allocation of housing scheme to users does not adequately assess proximity to basic social services. Hence it is suggested that housing delivery with reference to value in both client and end-user perspectives in developing countries, be properly and adequately addressed to meet the value criteria of all stakeholders. There is the need to explore the use of VM in housing provision for effective delivery of project objectives and fulfillment of user satisfaction in Nigeria. Assessing client value system, serves as an important feedback mechanism for continuous improvement if value must be effectively achieved in housing delivery.

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REFERENCES

Ademiluyi, A. I. and Raji, B. A. (2008) Public and Private Developers as Agents in Urban Housing Delivery in Sub-Saharan Africa: The Situation in Lagos State. Humanity & Social Sciences Journal, 3 (2), 143-150.

Ademiluyi, I. A. (2010), Public Housing Delivery Strategies in Nigeria: Historical Perspective of Policies and Programmes. Journal of Sustainable Development in Africa. Vol. 12, 6, 153-161.

Bell, K. (1994), The Strategic Management of Projects to Enhance Value for Money for BAA PLC.

Danmola, O. T. (2004), Housing Provision in Nigeria: The Cooperative Alternative. Building Quarterly, University of Lagos, Akoka-Yaba, Lagos, Nigeria. June 2004.

Duffy, F. (1990), Measuring Building Performance, Facilities, Vol. 8, No. 5, Pp. 17-21.

Encarta, 2009. A Computer Base Microsoft Software.

Fecikova, I. (2004), An Index Method for Measurement of Customer Satisfaction. The TQM Magazine, 16 (1), 57-66.

Hendrickson, D. J. and Wittman, H. K. (2010), Post-Occupancy Assessment: Building Design, Governance and Household Consumption. Building Research & Information 38(5), 481–490.

Husock, H. (2000), How Charlotte is Revolutionizing Public Housing. City Journal, Spring 2000, http://www.city-journal.org/ html/Issue10-2, Accessed 8 March 2012.

Ibem. E. O. and Amole O. O. (2010), Evaluation of Public Housing Programmes in Nigeria: A Theoretical and Conceptual Approach the Built & Human Environment Review, Vol.3, 88-117.

Ilesanmi, O. A. (2010), Post–Occupancy Evaluation and Residents' Satisfaction with Public Housing in Lagos, Nigeria. Journal of Building Appraisal. Vol. 6, 2, 153-169.

Kabir, B. and Bustani, S.A. (2008), A Review of Housing Delivery Efforts in Nigeria www.gla.ac.uk/media/media_129767_en.pdf accessed 16 February, 2012.

Kelly, J. Male, S. (2002), A Technique for Understanding the Customer's Project Value Criteria. Proceeding of SAVE International Conference, Denver, Colorado, May 2002, 95-105.

Kelly, J., Male, S and Graham, D. (2004), Value Management Of Construction Projects,

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Oxford: Blackwell Publishing.

Kelly, J., Male, S. and Graham, D. (2004), Value Management of Construction Projects, Blackwell Science Publishing.

Kowaltowski, D.C.C.K and Granja, A. D. (2011), The Concept of Desired Value as a Stimulus for Change in Social Housing in Brazil. Habitat International, 35, 435-446.

Liu, A. M. M. (1999), Residential Satisfaction in Housing Estates: A Hong Kong Perspective. Automation in Construction, 8 (4), 511–524.

Othman, A.A.E. (2008), Incorporating Value and Risk Management Concepts in Developing Low Cost Housing Projects. Emirates Journal for Engineering Research, 13 (1), 45-52.

Rigatti, D. (2000), Order and Structure, Design and Use in Housing Estates. Urban Design International 5, 161-175.

Saifulnizam, M., Coffey, V. and Preece, C. N. (2011), Value Management: An Extension of Quantity Surveying Services in Malaysia. International Construction Business & Management Symposium (ICBMS 2011)

Shen, G. Q. P. and Chung, J. K.H. (2006), A Critical Investigation of the Briefing Process in Hong Kong's Construction Industry, Facilities, Vol. 24 Iss: 13/14, Pp.510 – 522.

Thiry, M. (1997), Value Management Practice. Project Management Institute, Sylva, NC, USA.

Thomson, D. S. and Austin, S. A. (2010) Construction Value Management Revisited: The Designer's Role. https://dspace.lboro.ac.uk/ 16 February, 2012.

Value for Money and Tenant Involvement, Marianne Hood OBE, November 2010 www.housemark.co.uk, accessed 16 February, 2012.

Wandahl, S. (2004), Value Carriers in a Construction Project- How Different are They? In Proceedings if 12th Annual Conference on Lean Construction. Edited by Bertelsen, S. and Formoso, (Helsingør: Denmark), 126-140.

Wandahl. S., Faber. L.and Bejder. E. (2007), A Diverse Understanding of Value in the Building Industry: Proceeding of the Construction and Building Research Conference of the Royal Institution ff Chartered Surveyors, Georgia Tech, Atlanta USA, 6-7 September 2007.

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BIOGRAPHICAL NOTES

Ladi Kevin was born in 1969 in Kaduna State, Nigeria. Miss Kevin studied Quantity Surveying at the Federal University of Technology Minna. She earned a Masters degree in Construction Management at Ahmadu Bello University, Zaria, Nigeria in 2009. She is currently a Ph.D (Quantity Surveying) student at Ahmadu Bello University, Zaria, Nigeria. Miss Kevin began a working career after her first degree in 2001, with the Kaduna State Ministry of Works and Transport. She left the Ministry in 2010 to join the academia and lectures courses at the Department of Project Management, School of Entrepreneurship Technology, Federal University of Technology, Minna, Niger State.

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