

PDF - A SURVEY OF THE LEVEL OF APPLICATION OF INFORMATION TECHNOLOGY IN NIGERIAN CONSTRUCTION INDUSTRY (A CASE STUDY OF SOME CONSTRUCTION FIRMS WITHIN ABUJA & KADUNA). A RESEARCH PROJECT MATERIAL ON QUANTIT - researchcub.info

CHAPTER ONE GENERAL INTRODUCTION

1.1 BACKGROUND

Quantity Surveying is not a new profession but a profession that has been with the human race since time immemorial. Although it was not formally developed in the pre-historic days, human find a way of making necessary estimates of cost of materials and the whole Endeavour in constructing their buildings. (Norley, 2015). However, a more formalized way of the profession was developed by the British in 17th century which provided a scientific and grandeur to the profession (Ofori, 2012).

It is also evident that we live in a dynamic world characterized by incessant technology change, the explosive growth of information and communication technology (ICT) otherwise shortened as information technology (IT) has had a deepening impact on business systems and processes (Rivard *et al.*, 2004). The advancement in ICT has made possible fundamental changes in the method of practice in all businesses and industries although at different levels including the construction industry (Li, 2000). The construction industry with the aim of levelling their colleagues in other industries have embraced the use of ICT such as internet, computing, telephoning, satellite communication, electronic mailing, and AutoCAD applications to perform most, if not all of their activities (Ibidapo, 2000). The quantity Surveyors' ability to avail themselves of these emerging opportunities provided by the advent of ICT depends on the soft ICT application in the industry with some noted ones like the expert systems (ES), artificial intelligence, knowledge-base systems (KBS), artificial neural networking (ANN), robotics and computer aided design (Arif and Karam, 2001). Rivard *et al.* (2004) opined that the evolution of ICT will have a profound impact on how organizations in the architectural, engineering and

construction industry operate in the way other industries such as manufacturing and banking have adopted and benefited from long ago. Honey (1998), noted that this is already the case in many of the developed countries around the world. In lieu of this, he reported that the turn of the last century has seen a reduction in paper-based operation in quantity surveying (QS) offices in UK while electronic led-processes are leading to less dependence on taking-off sheets and other ancillary stationery. The QS profession in Africa has also experienced significant changes over the past decade (Oladapo, 2006) and these changes have occurred primarily in response to changing industry/client demands, IT developments, increased levels

of competition for services and the vital role of the Quantity Surveyor in achieving improved and efficient service delivery. Hence, there is no doubt that the construction industry has to improve its information flow and project delivery mechanism as opined by Wager, 1998. Thus, as information flow increasingly become electronic, QS computing facilities, software and databases will need to develop in a compatible manner. Nigerian quantity Surveyors will need to adapt to changes in work patterns to improve their efficiency and develop new markets to maintain competitive advantage and enhance profitability through the adoption of IT.

1.2 PROBLEM STATEMENT

From the background information presented, it is evident that, the importance and emerging roles of Information Communication Technology (ICT) to the Quantity Surveyor (QS) in the construction industry cannot be ignored. However, one of the obvious contests of the Nigerian Quantity Surveyor today is that, majority of the surveying processes continue to rely heavily on traditional means of documentation and communications such as face-to-face meetings and exchange of paper documents such as Bills of Quantity, drawings, specifications and site instructions (Mohamed and Stewart, 2003).

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Anumba and Ruikar (2002) recounted certain flows within the construction industry which also applies to the Quantity surveying industry. They stated that the traditional information and communication are mostly characterized by manual and slow processes and hence,

- Producing numerous paper copies of documents and drawings.
- Management of a loose document is often time-consuming and tedious.
- Library archives of documents need to be maintained to effectively access data as and when required.
- The reliance on third parties, such as courier services, can lead to delays and losses.
- The added expense incurred in the delivery of project documents to project members who are geographically distributed

Yet, the traditional construction sector all over the world including that of the Nigerian Quantity Surveying industry are required to move towards innovation of their services to achieve more efficient processing systems and service delivery methods.

For this reason, the vast benefits offered by ICT in the construction industry though seems recognized, its adoption and use as normal part of the Quantity Surveying management and process is still low; and contractors among the major players, have often been cited as those who use ICT least of all (Peansupap and Walker, 2004).

While this situation could probably be true within the Quantity Surveying industry, specific details regarding the extent of application and problems facing the use of ICT among the Nigerian Quantity Surveying industry still remain unclear. This study seeks to assess the situation in Quantity Surveying industry in Nigeria.

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1.3 AIM OF THESIS:

The aim of the study is to identify effects of Information Communication Technology in the field of Quantity Surveying delivery in the Nigerian Construction Industry.

1.4 OBJECTIVES:

In achieving the aim of the study, the following objectives were outlined.

- To identify the ICT products / software used by QS in Nigeria,
- To identify the effect of the use of ICT in Quantity Surveying delivery in Nigeria and
- To identify the factors hindering the use of ICT by QS in Nigeria.

1.5 RESEARCH METHODOLOGY

A Survey was used to provide answers to the issues earlier raised in the review. This involves sampling registered Quantity Surveyors and obtaining their views on the existing trend in the industry and also on their practice, through the use of well-structured questionnaires. The sample population for this research work includes members of the Nigeria Institute of Surveyors (GhIS) who are registered and eligible to practice as Quantity Surveyors.

1.6 SCOPE OF THE STUDY

The scope of the study was based on existing quantity surveying consultancy firms and consortiums operating within Greater Accra region of Nigeria. This was due to the fact that most of bigger consultancy firms operating in Nigeria have their head offices based in Accra. The research also focused on selected QS in construction companies in Accra. The characteristics of the QS were those who have been operating within the last 10 years.

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1.7 ORGANISATION OF THE RESEARCH

The dissertation was organized in five chapters. Chapter one introduced the whole thesis, highlighting the main subject and problem statement; the aims and objective, scope, methodology adopted and research outline.

Chapter two focused on the literature review and touched on information and communication needs confronting quantity surveying service delivery, and the quest for improvements through the use of

information and communication technology (ICT) on the part of the Quantity Surveyor as a key Construction Management Professional.

The chapter also explained various factors, roles and barriers to ICT implementation in the construction sector. It further explored current drivers for use of ICT and various ICT tools and applications of the sector.

Chapter three was devoted to the development of the theoretical framework of the research, it explained the research methodology employed and also the statistical methods used in analyzing the results.

Chapter four presented the analysis of data obtained, discussions and interpretation of the findings of the survey.

Chapter five summarized the conclusions of the study and recommendations based on the findings of the study.

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