

**DESIRABILITY OF DEPLOYING INFORMATION
TECHNOLOGY (IT) IN DEVELOPMENT CONTROL
MECHANISM IN LAGOS STATE, NIGERIA.**

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ABSTRACT

This study aims at investigating the application of Information Technology (IT) in the development control strategies in Lagos State. The objectives are to investigate the level of computer literacy of staff in the State's Development Agencies and ascertain their mode of computer skill acquisition; investigate the development control activities presently being aided by IT; identify the factors militating against the application of IT in development control activities and the benefits of the application of IT in development control procedures. Using a survey design approach and random sampling technique, 50 questionnaires were distributed to staff of Lagos State Physical Planning Development Authority (LASPPDA) in its headquarter and nine district offices out of the existing twenty across the state. The study discovered that majority of them have acquired computer knowledge and skills through private arrangement while functions being presently carried out by the development control departments include digitizing of approved plans, application of remote sensing techniques in acquiring imageries, application of GIS monitoring development, preparation of internal memos and site visitation report with Microsoft office applications as well as development of AutoCAD and other drawing softwares in draughting site report drawings and development plans. Institutional support in computer skill acquisition was found to be low in making the employees more IT compliant especially in more technical areas where they are presently deficient in order to record greater success.

INTRODUCTION

The challenge of rapid urbanization growth in Nigeria calls for more proactive ways of managing this growth. According to Owei (2006) Nigerian urban centre is presently suffering from a crisis of management in every facet of urban life. There is hardly an area where this crisis is more manifested than in the area of development control. Poor spatial planning has turned many of our cities into formless jungle of concrete, with little or no breathing spaces in the midst of mindless sprawling development. The challenges of controlling the appropriate use of land in these cities have clearly overwhelmed the controlling authorities, as observed by experts. For instance, Adewolu (2010) listed the myriad of problems confronting the development plans for most cities in Nigeria to include poor attitude of development control officials; paucity of qualified personnel and lack of enabling environment. Others are lack of current base map/cadastral map and data base for easy of updating and retrieval of approved plans/land uses.

There is no doubting the fact that many of those problems can be easily overcome with the modernization of our development control strategies, especially in the area of ICT deployment to fast rack some of the processes that are manually undertaken presently. This would not only ensure efficient management of the limited number of qualified staff in planning authorities it would also ensure speedy processing of plans and other development control exercises. Canvassing the use of Information and Communication Technology (ICT) in the built environment disciplines, Anumba (2006) said this is indispensable in the present era of globalization where effective collaboration is needed among professionals across the world. Buttressing this view of point, Ayo and Gbadeyan (2006) identified many information and communication technologies of immense importance in the built environment to include

e-construction, geographical information system (GIS), computer aided design (CAD) and the global positioning system (GPS). He emphasized that these applications could be effectively utilized in the areas of modeling, designing, analyzing and visualizing structures. While few disciplines in the built environment have taken this advantage of modern technologies others like urban and regional planning are yet to catch up with the rest of the world in this direction hence, the persistence of some of the traditional problems of development control especially in developing countries like Nigeria. This paper is therefore concerned with the critical evaluation of the level of availability and utilization of ICT mechanism in the development control processes in the country, with the selection of Lagos as a case study.

LITERATURE REVIEW

There is no doubting the fact that development control is better understood through proper understanding of the concept of development. In the context of physical planning, development transcends mere erection of physical structures such as houses, shops, etc. but encompasses myriad of human activities that are land bound. Perhaps, one of the most comprehensive definitions of it was given by Nigeria Urban and Regional Planning Law of 1992 (S.91) as carrying out of any building, engineering, mining or other operations in, on, over or under any land, or the making of any environmentally significant change in the use of any land or demolition of buildings, including the falling of trees and the placing of free standing erections used for the display of advertisements on the land (FRN, 1992). The desire to regulate, harmonize and put under check these numerous activities of man through appropriate institutional mechanism gave birth to the idea of development control, which in the words of Adewolu (2010) is a statutory measure or guideline put in place to enforce compliance with

the norms of achieving orderliness as well as sustainable physical development. Therefore, it may not be out of place to say that development control is at the heart of physical planning itself. As physical or landuse planning involves a conscious direction of the use of land in an area towards the attainment of preconceived rationally desirable goal (Agbola, 2010), this is hardly achievable without the instrumentality of development control.

However, development control mechanism in many planning agencies and authorities in Nigeria has been seriously constrained over the years with a resultant negative implication on the state of urban and regional planning in the county. This situation has led to the proliferation of slums and unplanned developments in Nigerians cities (Kadiri, 2007). Experts have identified two categories of problems militating against development control which include: (i) negative perception by the public and (ii) inadequate working tools. According to Moore (1977) and Onibokun (1986) development control is about the most misunderstood and greatly loathed aspect of physical planning. Moore went further to observe that the system development control have been criticized from within, from above and from without, almost since the day it came into force. As regards, lack of working tools and enabling environment Wahab (1991) identified twelve challenges faced by typical development control agencies to include (i) inadequate finance (ii) lack of working tools (iii) inadequate personnel (iv) administrative bottleneck (v) inadequate public participation and (vi) political interference. Others are (vii) corruption (viii) poor attitude to work (ix) draughtsman's unprofessional attitude to work (x) problem of communication (xi) weak legislative framework and (xii) inactivity of other allied agencies. Supporting this view, Adewolu (2010) suggested that the operators of development control process must be amenable to positive and relevant changes in the modern society among others. Similarly, Falade (2011)

who noted that lack of data for planning and monitoring of urban development is the bane of physical planning in Nigeria canvassed the greater usage of information technology for planning purpose in the country. In the same vein, the Asian Development Bank (ADB) opined that effective urban governance depends on the adoption of e-government which it describes as the public sector's use of information and communication technologies like wide area networks, the internet and mobile computing to improve information and service delivery. As an important arm of public sector charged with the regulation of the detailed aspects of development, development control agencies need to key into the modern trend of urban governance. The extents at which they have bought into this idea, is yet to be fully explained in literature hence the need for this kind of research.

RESEARCH METHODOLOGY

The survey research approach was adopted by means of questionnaire administration by well supervised research assistants. The sampling frame for the study is 120 employees of the Lagos State Physical Planning Development Authority (LASPPDA) who are Town Planners. Though, Development Control Department exists as one of six departments of the Ministry of Physical Planning and Urban Development, Lagos State, LASPPDA which is also an agency of the Ministry is mainly saddled with specific functions in facilitating effective development control within the state. In order to supervise development more closely, LASPPDA has twenty district offices across the state. These are Alimosho district office, Agege district office, Oshodi district office, Isolo district office, Ifako-Ijaye district office, Amuwo-Odofin district office, Badagry district office, Ikorodu district office, Ilupeju district office, Lagos district office, Yaba district office, Surulere district office,

Shomolu district office, Kosofe district office, Epe district office, Eti-Osa district office and Ibeju-Lekki district office.

This study however employed random sampling technique in selecting nine of the district offices namely: Alimosho district office, Isolo district office, Amuwo-Odofin district office, Apapa district office, Yaba district office, Surulere district office, Shomolu district office, Kosofe district office, Eti-Osa district office and the LASPPDA headquarter. Five questionnaires were administered to randomly selected staff in each of those nine district offices and the headquarters, making a total of fifty questionnaires administered. Both simple and multiple responses approaches were adopted in the design of the questionnaire.

Using SPSS (15.0 version), the data collected analyzed at two levels. The first level is the univariate analysis which involves the use of tables and bar charts, while the second is the bivariate analysis. The bivariate analysis is the chi-squared (χ^2) test which was used in testing the validity of the hypothesis which states that computer literacy among LASPPDA staff is not adequate to justify the full deployment of IT in development control procedures.

RESULTS AND DISCUSSION OF FINDINGS

Computer Knowledge of the Staff

The study revealed high level of computer knowledge among the surveyed staff with about two-third of them (80%) having one form of computer skill or the other. Among these computer literate personnel who are forty in number, greater percentage of them (72%) acquired the skills through private efforts as indicated in table 1. This is an indication of poor institutional support for IT deployment in public service delivery, more so when this objective can hardly be achieved without adequately equipping those expected to drive this change.

Table 1: Mode of acquisition of computer skills by Staff

Mode of Computer skills acquisition	Frequency	Percentage
Self - Training	14	35.0
Privately arranged Tutorial Training	15	37.5
Government Sponsored	11	27.5
Total	40	100.0

Source: Author's field survey, May 2012.

Current Areas of Deployment of Information Technology (IT)

The study discovered that IT is being deployed in wide ranging areas of development control activities as revealed in table 2. However, its utilization in advance areas of physical development control such as GIS, remote sensing and AutoCAD drawing was found to be limited compare with other areas with little application to planning.

Table 2: Functions being carried out with the aid of IT

Function	Frequency	Percentage
Digitizing of approved plans	30	75
Application of remote sensing techniques in acquiring imageries	29	72.5
Application of GIS in monitoring development	20	50
Preparation of internal memos	40	100
Preparation of site visitation reports	40	100
Deployment of AutoCAD and other drawing softwares in draughting site plans	35	87.5

Source: Author's field survey, May 2012.

Table 3 shows that majority of respondents agreed that computer illiteracy of development proponents and agents who should patronize automated system is a major factor militating against IT application in development control activities. This might be correct when considering that internet penetration level, which is where computer literacy of the public is relevant, within Nigeria is still low. However, the position of Miniwatts Marketing Group (2012) that 45,039,711 representing 29% of Nigerian population are now internet users offers promise that can assuage fears about the adaptability of automated system within development control department. Another potent factor is the issue of inadequate skill which constitutes the second greatest impediment according to the survey.

Table 3: Factors militating against the application of IT in development permit procedures

Factors militating against IT application	Frequency	Percentage
Inadequate computer literacy by the staff	15	29.3
Inadequate computer literacy by clients	24	48.8
Inadequate provision of IT facilities by government	5	9.8
Fear of job loss	6	12.2
Total	50	100

Source: Author's Field Survey, May 2012.

Benefit of IT Penetration in Development Control Activities

Table 4 shows the benefits of information technology in development control. Apart from the benefit that relates to corruption reduction, which only half of the respondents agreed with, the other positive impacts were significantly concurred with.

Table 4: Benefits of IT penetration in development control activities

Benefit	Frequency	Percentage
Reduces the level of paper works thereby making offices to be neater	30	75
Facilitate efficient service delivery	36	87.5
Reduce corruption	20	50
Makes planning agencies more public friendly	30	75
Information dissemination through e-mails and social media reduces pressure on planning ombudsman	30	75

Source: Author's field survey, May 2012.

Formulation and Testing of Hypothesis

H_0 : Computer literacy among LASPPDA staff is not adequate to justify the full deployment of IT in development control procedures.

H_1 : It is.

Table 5: chi-square test statistic on computer literacy among LASPPDA staff is not adequate to justify the full deployment of IT in development control procedures.

Event	Observed N	Expected N	Residual N
Computer Literate	40	25	15
Computer Illiterate	10	25	-15
Total	50		

Table 6: Chi-square test results on computer literacy among LASPPDA staffs is not adequate to justify the full deployment of IT in development control procedures

	Computer literacy of respondent
Chi-square (a Df)	9.000
Degree of freedom	1
Asymptotic Significance	.000

0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 13.3.

Hypothesis Interpretation

The test assumes the level of significance $\alpha = 0.05$. As shown in table 6, the asymptotic significance of χ^2 at 1 degree of freedom for this test statistics = 0.000. Since asymptotic significance value is less than that of level of significance, the null hypothesis, which states that computer literacy among LASPPDA staff is not adequate to justify the full deployment of IT in development control procedures is thereby rejected. This however implies that computer literacy among LASPPDA staff is good enough to allow the full application of IT in development control processes. This is given credence by table 2 and table 3 above that give complementary information of functions being presently carried out with IT and computer packages understood by respondents respectively.

CONCLUSION AND RECOMMENDATION

This study notes that Lagos State is not actually in dearth of human capitals that are IT qualified to ensure effective deployment of IT in the Development Control Department and offices in the state. The result of hypothesis testing confirms that computer literacy among LASPPDA staff is above average. But majority of the staff in LASPPDA acquired computer

knowledge and skills through private computer training initiatives because the state government has been somewhat lethargic in the exposure of Development Control Department staff to IT.

The functions being presently carried out by the development control department includes digitizing of approved plans, application of remote sensing techniques in acquiring imageries, application of GIS in monitoring development, preparation of internal memos with Microsoft office applications, preparation of site visitation reports with Microsoft office applications and the deployment of AutoCAD and other drawing softwares in draughting site report drawings and development plans. IT proficiency of staffs is mostly in Microsoft office package and the internet. The knowledge of more technical packages that are useful to planning and development control like GIS and AutoCAD among staff is still superficial. Computer illiteracy of developers/development agencies who should patronize automated system is a major factor militating against IT application in development control activities.

However, the benefits of IT penetration in development control activities cannot be over-emphasized as it reduces the level of paper works, thereby making offices to be neater; reduces the population of various planning information seekers; and file monitoring agents in the planning offices; reduce corruption, makes planning more public friendly, reduces pressure on planning ombudsman and affords more proactive sensitization to the teeming public bent on developing lands.

Though, there is evidence that Lagos State Government has been somewhat involved in building the capacity of its staff in information technology, there is need for more efforts from the state in focusing more on the more planning oriented and technical aspect of IT such as the remote sensing and GIS techniques through constant and vigorous

exposure of planning staff to relevant workshops. The staff should also be willing to learn and adapt to emerging paradigms. The present level of computer literacy can afford beyond the present functions being aided by IT in Lagos State. For instance, the relatively deep knowledge of the internet and data processing by staff can make feasible the automation of building permit processing through online development permit applications, movement and processing of application files from one department to the other through a local network and the communication of application file's work stages to development proponents via e-mails. The present computer literacy level of staff can also be harnessed in the area of proactive sensitization of the public about planning standards and development control activities. The impressive numbers of Nigerian internet users, which Miniwatts Marketing group (2012) puts at 45,039,711 and the over 4,369,740 having accounts on cheap social media like facebook and twitter, can be leveraged upon by authority saddled with development control in taking sensitization efforts to the blogosphere, where current and potential developers on the social network sites can be better enlightened about planning standards. More fundamentally, it is not enough for planning students to be merely taught ICT related courses in schools, but there is need to integrate into the curricular a course that will essentially harmonize all the different applications of IT planning and be taught by lecturers in the department of planning.

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