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Mass Housing in Nigeria, Customize the Brief: Provide a Desired House

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Abstract

The nature of the housing designs in mass housing schemes in Nigeria is a function of how architects were trained to handle mass housing designs. It is common practice to find that the houses in majority of the mass housing schemes in Nigeria are never owner specific. It is often assumed by architects working on mass housing schemes that the process of making the houses specific is cumbersome. The nature of the construction method of these mass housing schemes allows for the design briefs of the individual house to be different. This paper examines how design brief in mass housing in Nigeria can be customized. This is done through the development of a customization brief model with aid of a network of computers. It is expected that if the model is applied into mass housing in Nigeria, desired house by house owners in mass housing schemes would be met.

Keywords: architects, customization, house owner, mass housing, model

1. Introduction

A trip around the major cities in Nigeria with a view of examining the mass housing schemes will reveal great similarities amongst them regardless of the region. A large percentage of the mass housing schemes are generic within the estates and differences only show in terms of aesthetics value when compared with other estates. Nigeria is believed to be made up of people of different cultures and beliefs, these two factors can be expressed in different forms ranging living pattern, marriage type, and privacy demand. It is therefore logical to conclude that if some of these factors are to be addressed by the architect then the houses in mass housing schemes in Nigeria should not be the same. The problem of providing generic houses has contributed to the rate of housing modification witnessed in these housing schemes, despite these modifications architects working on mass housing schemes have continued the same trend. This trend raises two questions for the architects:

1. Whether the house owners in mass housing schemes are different from those of individually built houses?
2. Whether the house owners in mass housing schemes should get a desired house?

A cause of this problem could be traced to the design brief of these estates because the form of mass housing construction in Nigeria is notnprefabrication; hence there is no need for generic designs. An examination of these housing estates will show that the owners are not different from those who built their houses personally, because they all have specific needs and aspirations. In response to the second question, the houses are paid for by the owners over a period of time and the cost of modifying the house is also borne by them.

An examination of the curriculum of many schools of Architecture in Nigeria will reveal that the method adopted and taught to students in area of mass housing design is basically generic design principle, where emphasis is often placed on the initial cost of construction and not client needs. This method is adapted in the design brief of mass housing schemes provision. While in countries like the Netherlands, Portugal, Japan and Malaysia attempts are being made to ensure that the houses in mass housing schemes are client oriented. It is common in many mass housing schemes in Nigeria to find the individual houses appearing or being the same within the estate and similar when compared with other estates in the country. This trend creates the impression that the characteristics of house owners are the same in Nigeria. However Nigeria as a whole is characterised with different religions, household sizes, occupation, sense of beauty and cultures. An examination of the housing policies developed by the government over the years have often been considered a failure and a reason adduced for this is explained by Kadiri (2005) that the

repetition of the same house type throughout the country and in cities at state level in spite of the socio-cultural differences that prevailed was a major factor. An examination of the design process in mass housing in Nigeria by Adedayo (2011a) showed that the point of deviation between mass housing design and individual personally built house is at the briefing stage. It is this point that this paper seeks to explore and show how the design brief in the briefing stage in mass housing can become house owner oriented so that prospective house owners can have a customized (desired) house.

The foundation of this research is hinged on the works of Cuperus (2003), Duarte (2005), Niemeijer & Vries (2007), Hofman & Halman (2006) and Lim & Khalid (2003). These researches have sought to provide methods of providing customized housing units for the prospective house owners, the common factors in the options provided by these researches are the use of computers, internet and the house owners. An examination of the various methods suggested by these researchers show that they are location or country specific and are aimed to fit the mass housing provision method and process of their countries. In each of the researches the researchers examined the process of mass housing and sought to introduce the house owner into the process either before the construction of the house or during the design stage and in some cases like that of Cuperus (2003) at the briefing stage and this was motivated by the design constraints introduced by the government of Almere in the Netherlands. An examination of the mass housing process in Nigeria showed that the individual housing unit are built on-site individually hence in order to provide a desired house for the house owner, the design brief for each house has to be generated. This suggestion appears cumbersome but according to Niemeijer & Vries (2007), the use of computer programming will reduce or eliminate the problem. This work aims to show how the design briefs in mass housing provision in Nigeria can be customized using computers and ensure that it fits into the Nigerian environment.

2. House Owners in Mass Housing versus Individual Housing

In Nigeria mass housing provision is driven by two major factors namely profit and politics as exemplified by the location of the houses and the overall cost the clients pay . These two factors are ways by which politicians in power empower their followers through the award of contracts for the construction of these houses at high costs using state funds. The allocation of the housing units is also based on political patronage. These two factors are fuelled by the level of corruption obtainable within the Nigerian system. In the run-up to the provision of the mass housing in Nigeria, the housing providers assume that the house owners are insignificant as they are not considered in the brief because it is believed that the client is not responsible for the initial capital for the house. These believe has been shown to be untrue by the researches of Tipple & Ameen (1999) and Makachia (2005), where house owners transform their houses to meet their needs. In the case of individually provided housing, the house owner is the one who initiates the housing design by inviting the architect to discuss with him. The house that usually results from this process ensures that the desires of the house owner are met and the house is customized. In this type of house it is uncommon to find housing transformation taking place. It is possible to assume that the house owners in both cases are different however; this is not the case. In individual housing the house owners' needs are similar to those of the house owners in mass housing schemes, these needs range from housing space in terms of sizes of rooms and number of rooms because of their varying family sizes. The need for aesthetics is a concern to both sets of house owners, the religion of the house owners also vary in both cases. The need of security is not limited to only the individual house owners in individual housing schemes, privacy is also of importance to both parties. The expressions of these issues are different from each individual and they vary in importance to the house owners.

In the case of the house owner in individual housing schemes the problems are tackled at the design brief stage and hence the houses are different from each other, however the situation is different in the case of mass housing schemes. The view of Cormier, Olewnik, & Lewis (2008), is that no two consumers are identical and that typically differences in personal preference occur even if they are subtle. The summary of these problems is that the house owners are different regardless of the type of housing schemes they find themselves; this gives reason for the need of customization of the brief in mass housing schemes because the brief in individual housing schemes are already customized before the construction of the house. The challenge therefore is how to meet this need in mass housing

schemes in Nigeria and this can be achieved through the customization of the design brief for the individual housing units in the mass housing schemes.

3. Individual House versus Mass Housing

In every mass housing scheme the major component in the housing scheme are the housing units, which is in line with what is obtainable in the case of privately commissioned housing. In mass housing schemes the housing units are usually generic in nature which is not the situation in personally designed houses. According to Pine (1993) generic products are a result of mass production principle adopted in any manufacturing or production industry of which housing is a part. The basic assumption in the production of a generic housing unit is that the house owner's needs can be standardised or generalised and a single design brief will suffice. This is not the situation in individual housing where the designed house is a solution to a particular house owner's needs and aspirations regardless of how subtle the need might be. This is why a visit to any residential area in Nigeria where the house owners built the houses themselves, will reveal that the houses are often not the same in planning and certainly do not appear the same. The houses in mass housing schemes do not meet the needs of the house owners while the reverse is what is observable when it is houses built by house owners personally. A major difference in the two forms of houses is that while the architect meets with the house owner in the individually built houses, the architect usually meets with the financing party (government/private developer) however in mass housing. It implies therefore that the brief in mass housing is never prospective house owner oriented.

The examination of the two forms of houses would reveal that the creation of identity is not achieved in mass housing schemes in Nigeria, while the reverse is the case with none mass housing scheme. In the individual housing, usually everything required by the house owner is provided for at the inception of the house while in the case of a mass produced housing the house owners have to make do with what is available like tenants. A comparison of similar housing units from both categories of the housing under discussion will show that for a basic three bedroom bungalow one will get different variations and combinations in the individual sponsored housing, with the variations might be as little as the number of toilets. In the case of mass housing the general idea is to just provide the basic function. In order to understand these houses there is the need to examine the design brief of the two categories of housing.

4. Design Brief in Personal Houses versus Mass Housing

The design brief in none mass housing scheme is considered as customized briefs because it is client specific and it is derived from interaction with the client. The process of generating design briefs is time related and hence in the case of mass housing where the number of clients is large the process becomes cumbersome and unachievable if the same method in single client design is adopted directly. This is supported by Niemeijer & Vries (2007), which stated that most architects working on mass housing projects in Holland still apply the traditional method of manually creating the designs which makes customization a cumbersome process. In solving the problem the use of computers was advocated by the researcher to customize the house through design. In the generation of a design brief for the personally constructed house the process in simple and straight forward and it involves a face to face contact between the house owner and the architect and it is usually in a discussion format. In other to create this discussion between the architect and the prospective house owner in such a way that it would not be cumbersome, the use of a network of computer was advocated by Niemeijer & Vries (2007) for the purpose of customizing the design. The aspect by which design brief in mass housing would be customized is shown in figure 1.0, which is from part of the general process proposed for the customization of housing unit which will guarantee a desired house.
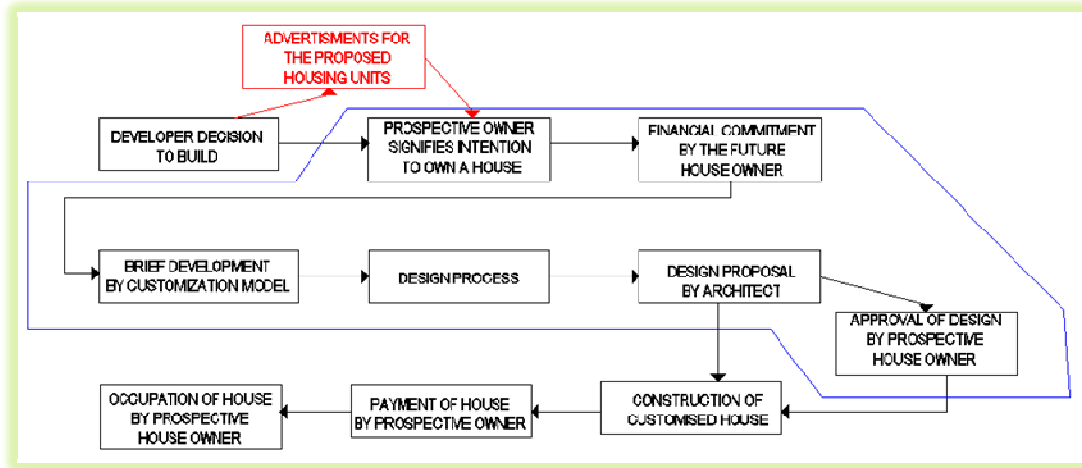
Figure 1. Proposed process for customized housing unit for mass housing in Nigeria

Source: Adedayo, 2011a

It can be observed that the process of providing a desired house that deals with the prospective house owner is what is traced within the blue line. The brief for the desired house is expected to be generated by the customization model which will be discussed later. It is expected that a programme written and run on a network of computers would serve as the interface for prospective house owner and the architect which will allow for the brief generated to be customized.

5. Research Method

This paper discusses part of the research findings of a PhD study in the area of mass housing with focus on meeting the needs of house owners. The research is undertaken in Kwara state in the north central geographical zone of Nigeria, this allows for significant mix of people from different parts of the country. It was established by the author that when house owners are not involved in the design process of their houses, the houses do not meet their needs and hence the houses undergo transformation (see Adedayo (2011b). The researcher sought to provide an answer to the question of how the housing unit in mass housing schemes in Nigeria can be customized to meet the needs and desires of the house owners. The researcher in an attempt to answer this question undertook a survey of the mass housing schemes in Kwara state Nigeria using the observation method. This method was suited for this research because it allowed the researcher to understand the changes and desires of the house owners as reflected on their houses. The changes observed on the housing units helped determine which aspects of the housing units that would be customize. The limitation with the adopted method for the research is that it is time consuming and requires the researcher to carry out a survey of the sample area personally so as to be able to verify the data collected by the research assistants that were trained to assist with the research. The research covered eight mass housing schemes all located in Ilorin, the capital of Kwara state, as shown in table 1.0;

Table 1. Mass housing Schemes in Kwara state, Nigeria and Locations

Housing Estate	Estate Location
Irewolede estate	Along Yidi road, Ilorin
Mandate III	Along Yidi road, Ilorin
Harmony estate	Along Shao road, Akarebiata, Ilorin
Royal valley estate	Sango, Ilorin
Mandate I	Along Hajj camp road, Ilorin
Mandate II	Along Hajj camp road, Ilorin
Kulende estate	Sango, Ilorin
Adewole estate	Adewole Street, Ilorin

Source: Adedayo, 2011a

The research lasted a period of 16 weeks from the date the first visit paid to Irewolede housing estate and the last visit to Adewole estate. A total of 1200 housing estates were examined across the 8 selected housing estates.

The data generated was entered into the computer and analysed, Microsoft Excel was used to produce chats. The customization of the brief was done with the assistance of a programmer, while selected pages of brief customisation model are presented for discussion in this paper. In developing this model for the customization of design brief in mass housing scheme in Nigeria certain working assumptions were made. These assumptions are;

1.   Multiple registrations would be attempted by people.
2.   Prospective house owners' decisions would be enhanced with visual aids.
3.   The level of computer literacy amongst prospective house owners is low.

6. Discussion of Results

The model serves as a tool for interaction between the architect and the prospective clients in mass housing schemes. It is to gather information regarding the house type required by the clients so that the architect can adopt the brief which is the final output of the model. The benefits of this model are to the architect and the prospective clients because it allows the architect to meet the needs of the client while for the client it reduces the overall cost of getting a desired house. The developed model for the customization of brief is one that requires the presence of the prospective house owner at the housing provider's office as this would eliminate impersonation The discussion of this customization of brief will focus on the model itself and not the administrative process of how to become a prospective house owner as this is subject to different approaches by housing providers within the country. The discussion covers registration within the model to the stage where the brief is generated for the architect and the prospective house owner. The results would show that the brief can be customized and it is upon this customized brief that the house would be constructed.

Figure 2. Prospective house owners registration page   Source: Author, 2012

The displayed page of the model in figure 2.0 shows the registration of the prospective house owner. The intent of this page is ascertaining the identity of the person and also a unique pin number would be generated for the individual. The information required here are personal can only be accessed by the model administrator. The information would also assist in the allocation of plots to the house owners so as to avoid allocating plots close to facilities that might be considered offensive to the prospective house owner based on religious ground. The "User ID" and "Password" will be generated upon successful completion of registration and this can be modified by the prospective house owner and used on subsequent occasions.

This page in figure 3.0 is where the customization of the brief begins with the selection of the task that the prospective house owner wants to perform. The choice of editing building plan at the left side of the page will give the opportunity for the individual to select the house type of choice from the various ones in the data base of the housing provider. The client can edit already submitted details and the opportunity to change the password is also available.
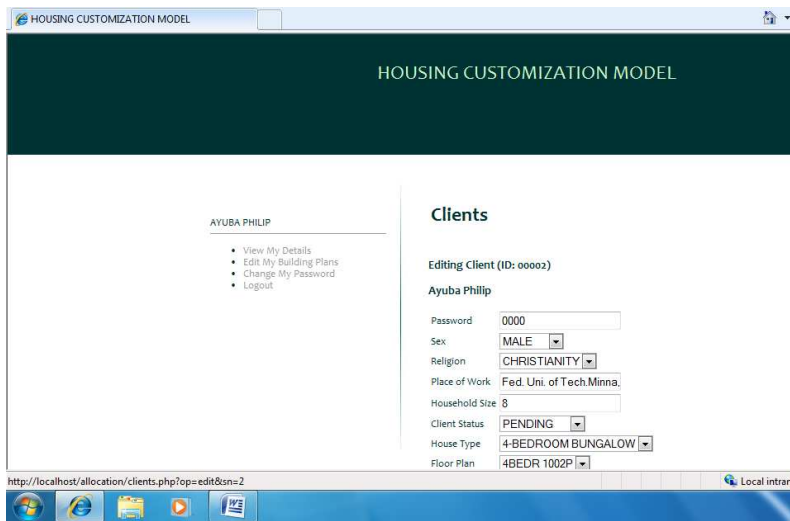
Figure 3. Housing unit editing page   Source: Author, 2012

The details for the generation of the brief are what would be inputted in this page as can be observed from figure 3.0 that the boxes to the right is meant for such purpose. While inputting the details the prospective house owner can view the pictorial selection of the plan or elevations. The choice of finishes and specification of materials for selected aspects of the building of which the interest of the prospective house owner is required can also be made.
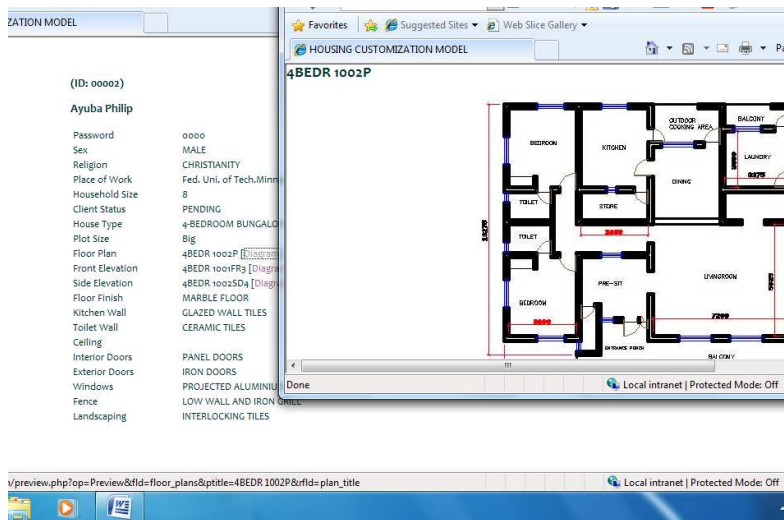

Figure 4. Prospective house owner preview of selected floor plan   Source: Author, 2012

This view in figure 4.0 is what would be displayed when the house owner chooses to view the diagram for the floor plan that has been selected. It allows for the individual to examine it with the help of an assigned trained person from the housing provider so that he/she is sure that the plan is satisfactory to him/her. It is also possible for the client to print this page for further consultation with his/her family members. It is possible for the client not to like the selected floor plan at this stage, he has the opportunity to go back and make another selection that suits him. When this process is completed the selection of corresponding elevations is the next step.
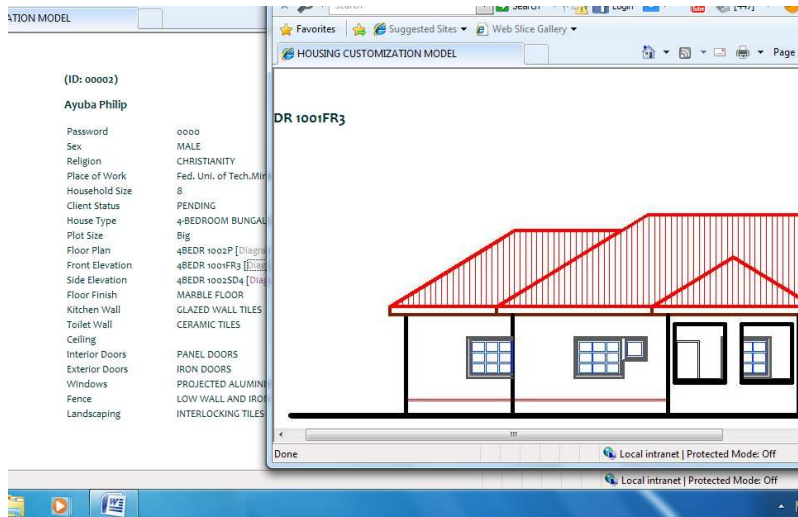
Figure 5.   Prospective house owner preview of selected front elevation   Source: Author, 2012
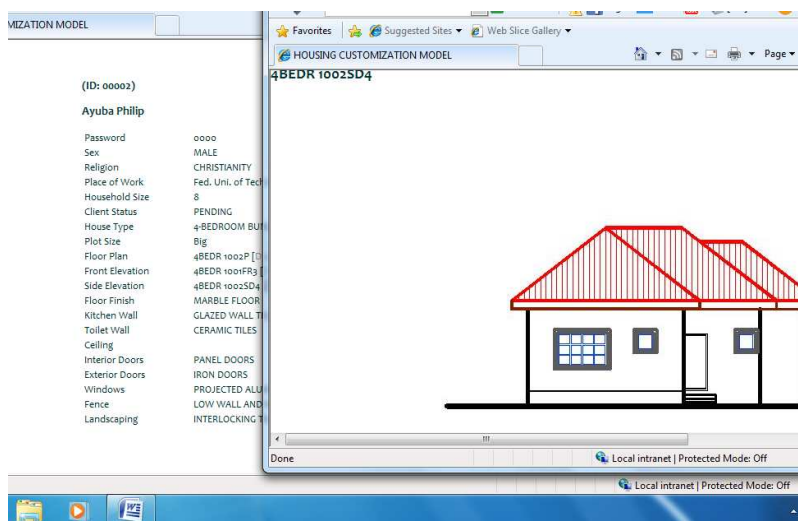

Figure 6. Prospective house owner preview of selected side elevation   Source: Author, 2012

The same principle that is obtainable in figure 4.0 also applies for the selection of elevations as shown in figures 5.0 and 6.0. The elevation of a building is a key aspect of housing design that house owners pay attention to because it often reflects their identity. This is the aspect that was most affected by the decorative changes witnessed in all the mass housing schemes visited. This principle is what is obtainable with all the other aspects of the model that requires visual confirmation of the choices the prospective house owner makes.
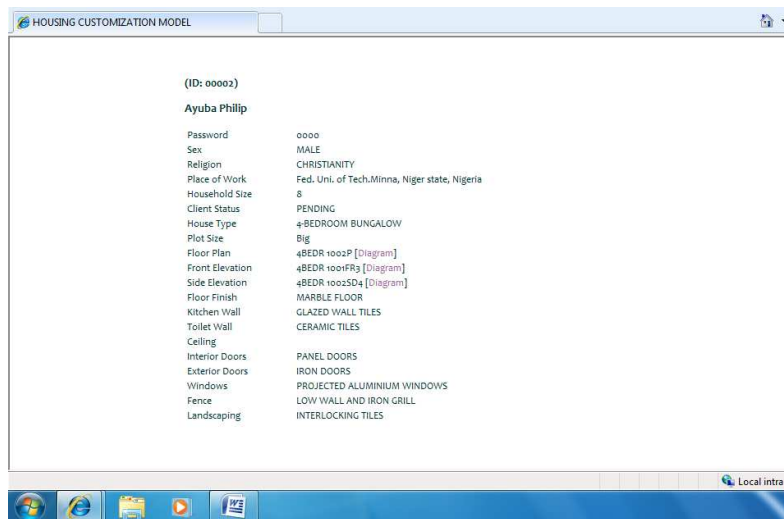
| Figure 7. Customized design brief | Source: Author, 2012 |

This window displayed in figure 7.0 is what is referred to as the customized brief upon which the desired house can now be built. However; it is must be noted that this can only be used by the specific housing provider where the prospective house owner has registered because the information within the brief can only be printed out from their database.

Conclusion

The housing transformation witnessed in many mass housing estates in Nigeria has shown that it was wrong to ignore the clients in mass housing schemes. The process of producing design brief by architects working on mass housing schemes was identified as a factor responsible for the nature of the housing units in mass housing schemes. In Nigeria this process is what the customization model sought to correct by creating a medium that allows for multiple clients to interact with the architect virtually and assist in generating individual design brief. This was done taking into account the peculiar nature of Nigeria. The benefit of the approach is that housing units developed from the process will address the client's needs and aspirations and hence reduce post-construction changes resulting from design brief. It will also assist in reducing the overall cost of the house from the owners view point.

The use of computers became the necessary medium for achieving this because of the capacity that a network of computers with the right programme running offers, this is line with view of Pollard (2008) that stated that mass customization goes around the concept of "build to order", which is to make products customer specific. It also aligns with the view of Niemeijer & Vries (2007) that the use of a computer programme should allow for changes to be made such that it would not take as much time as that of the manual process. This customized brief should therefore be the foundation of desired house for the house owners in mass housing schemes.

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