A STUDY OF SPACE PLANNING IN PRIVATE AND GOVERNMENT OFFICE BUILDINGS IN ABUJA AND MINNA

BY Dr. (Mrs.) S.N. Zubairu
And
Arc. R.E. Olagunju
Department of Architecture
Federal University of Technology
Minna

FUT/UBR/SET/005

April 2003
ABSTRACT

Space Management involves the planning and management of both the quantity and quality of space in a building or buildings so that they are supportive to the changing demands of the organization occupying the building, through time, in a cost effective way. The first research in the field, carried out in Japan in 1987, revealed that there is a serious problem in connection with lack of adequate space management. This research into space planning in private and government office buildings in Abuja and Minna, was considered necessary to establish whether there are space standards in office buildings in Nigeria and to determine how effectively organizations plan and manage their office space.

A total number thirty organization in Abuja and ten organizations in Minna were studied in this research. The research methods used were the descriptive survey method and post-occupancy evaluation techniques. The results of the research indicated that space standards were practically non-existent and space planning was absent in most office buildings in Nigeria. Proposals for minimum space standards for different categories of workers were recommended. Among other recommendations were that office managers should be trained in Facilities Management, to enable them acquire the knowledge required to be able to manage their organization’s personnel and premises effectively.
ACKNOWLEDGEMENT

The authors wish to express their thanks to:

- The University Board of Research, Federal University of Technology, Minna, for graciously approving the research grant **UBR-G-01-SET-11** with which the work was carried out.

- The office managers and staff of the organizations in Abuja and Minna, who granted the time to be interviewed and responded to the questionnaires.

- Staff and students of the Department of Architecture, Federal University of Technology, Minna, who assisted in the collection and arranging of data.

- Dr. Wole Morenikeji, for assisting in the statistical analysis of the data.

.......................................................... ..........................................................
Dr. S. N. Zubairu Arc. R. E. Olagunju
# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abstract</td>
<td>i</td>
</tr>
<tr>
<td>Acknowledgements</td>
<td>ii</td>
</tr>
<tr>
<td>Table of Contents</td>
<td>iii</td>
</tr>
<tr>
<td>List of Tables</td>
<td>iv</td>
</tr>
<tr>
<td>List of Drawings</td>
<td>V</td>
</tr>
<tr>
<td>List of Plates</td>
<td>V</td>
</tr>
<tr>
<td><strong>Chapter One – Nature of the Research</strong></td>
<td></td>
</tr>
<tr>
<td>1.0 Introduction</td>
<td>1</td>
</tr>
<tr>
<td>1.1 Aims and Objectives</td>
<td>1</td>
</tr>
<tr>
<td>1.2 Research Methodology</td>
<td>2</td>
</tr>
<tr>
<td>1.3 Scope of Work</td>
<td>2</td>
</tr>
<tr>
<td>1.4 Laminations</td>
<td>3</td>
</tr>
<tr>
<td>1.5 Procedure</td>
<td>3</td>
</tr>
<tr>
<td><strong>Chapter Two – Literature Review</strong></td>
<td></td>
</tr>
<tr>
<td>2.0 Introduction to Space Management</td>
<td>5</td>
</tr>
<tr>
<td>2.1 Background of Space Management</td>
<td>5</td>
</tr>
<tr>
<td>2.2 Evolution of Office Spaces</td>
<td>7</td>
</tr>
<tr>
<td>2.2.1 Cellular Offices</td>
<td>7</td>
</tr>
<tr>
<td>2.2.2 The Workflow Office</td>
<td>9</td>
</tr>
<tr>
<td>2.2.3 Burolandschaft</td>
<td>9</td>
</tr>
<tr>
<td>2.2.4 The Group Room</td>
<td>12</td>
</tr>
<tr>
<td>2.2.5 Reversible Office Space</td>
<td>13</td>
</tr>
<tr>
<td>2.2.6 The Office Village</td>
<td>18</td>
</tr>
<tr>
<td>2.2.7 Lesson for Nigeria</td>
<td>19</td>
</tr>
<tr>
<td>2.3 The Space Planning Process</td>
<td>23</td>
</tr>
<tr>
<td><strong>Chapter Three – Case Studies</strong></td>
<td></td>
</tr>
<tr>
<td>3.0 Sample Size</td>
<td>25</td>
</tr>
<tr>
<td>3.1 Post-Occupancy Evaluation Results</td>
<td>26</td>
</tr>
<tr>
<td>3.2 Responses by the Office Managers</td>
<td>32</td>
</tr>
<tr>
<td>3.2.1 Space Planning in Nigerian Offices</td>
<td>32</td>
</tr>
<tr>
<td>3.2.2 Staff Strength of the Organizations</td>
<td>34</td>
</tr>
<tr>
<td>3.2.3 Determination of Adequacy of Office Space</td>
<td>36</td>
</tr>
<tr>
<td>3.2.4 Extent of the Practice of Facilities Management in Nigeria</td>
<td>36</td>
</tr>
<tr>
<td>Organizations</td>
<td></td>
</tr>
<tr>
<td>3.2.5 Staff Comfort</td>
<td>38</td>
</tr>
<tr>
<td>3.3 Office Layouts</td>
<td></td>
</tr>
<tr>
<td><strong>Chapter Four – Conclusion and Recommendations</strong></td>
<td></td>
</tr>
<tr>
<td>4.0 Conclusion</td>
<td>45</td>
</tr>
<tr>
<td>4.1 Recommendation</td>
<td>45</td>
</tr>
<tr>
<td>4.1.1 Establishment of Space Standards</td>
<td>45</td>
</tr>
<tr>
<td>4.1.2 Training of Facilities Managers</td>
<td>49</td>
</tr>
<tr>
<td>4.1.3 Staff Involvement</td>
<td>49</td>
</tr>
</tbody>
</table>
4.1.4 Regular Space Audits

5.0 References

6.0 **Appendices**

6.1 Glossary of Facilities Management Terms

6.2 Questionnaires

6.3 SPSS Data analysis print-outs

<table>
<thead>
<tr>
<th>LIST OF TABLES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Table</td>
</tr>
<tr>
<td>3.1 Responses of office managers to space planning in their organizations</td>
</tr>
<tr>
<td>3.2 Response of the office managers to Facilities Management</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>LIST OF FIGURES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Figure</td>
</tr>
<tr>
<td>2.1 Cellular Offices</td>
</tr>
<tr>
<td>2.2 Typical Layout of Workflow Office</td>
</tr>
<tr>
<td>2.3 Burolandschaft Layout</td>
</tr>
<tr>
<td>2.4 Combi Office Layout</td>
</tr>
<tr>
<td>2.5 Reversible Office Space</td>
</tr>
<tr>
<td>2.6 Colonia Office Layout showing a mix of open plan and cellular known as Reversible space</td>
</tr>
<tr>
<td>2.7 The process of managing office space</td>
</tr>
<tr>
<td>3.1 Responses by managers on space standards and adequacy of space in their offices</td>
</tr>
<tr>
<td>3.2 Comparison of adequacy of space in private and public offices</td>
</tr>
<tr>
<td>3.3 Percentage of staff strength of the offices in the survey</td>
</tr>
<tr>
<td>3.4 Comparison of staff strength in public and private organizations</td>
</tr>
<tr>
<td>3.5 Comparison of knowledge of F.M between managers in private and public Offices</td>
</tr>
<tr>
<td>3.6 Comparison of practice of F.M between private and public offices</td>
</tr>
<tr>
<td>3.7 Comparison of comfort of staff in private and public offices</td>
</tr>
<tr>
<td>Plate</td>
</tr>
<tr>
<td>-------</td>
</tr>
<tr>
<td>2.1 Foot bridge across artificial pond at Colonia office</td>
</tr>
<tr>
<td>2.2 Exterior views of HMB office on the outskirts of Amsterdam</td>
</tr>
<tr>
<td>2.3 Interior view of SAS Headquarters Stockholm</td>
</tr>
<tr>
<td>3.1 Public Offices at Abuja</td>
</tr>
<tr>
<td>3.2 Another Public office at Abuja</td>
</tr>
<tr>
<td>3.3 Long dark corridor in a public office at Abuja</td>
</tr>
<tr>
<td>3.4 Well-landscaped exterior of F.C.D.A offices at Abuja</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Drawing</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.1 Ground and 1st Floor plans of HMB offices</td>
<td>21</td>
</tr>
<tr>
<td>3.1 Ground Floor plan of the offices of the Upper Niger Basin Development Authority, Minna</td>
<td>40</td>
</tr>
<tr>
<td>3.2 Second Floor plan of the offices of the Niger State Ministry of Works and Housing, Minna</td>
<td>41</td>
</tr>
<tr>
<td>3.3 Ground Floor plan of the offices of the Federal Ministry of Education, Zone 4, Abuja</td>
<td>43</td>
</tr>
<tr>
<td>3.4 Ground Floor plan of the offices of the Niger State Urban Development Board, Minna</td>
<td>44</td>
</tr>
<tr>
<td>4.1 Proposed minimum standard of office space for Chief executive officer, Minister or Commissioner</td>
<td>46</td>
</tr>
<tr>
<td>4.2 Proposed minimum standard of office space for deputy CEO or Permanent Secretary</td>
<td>46</td>
</tr>
<tr>
<td>4.3 Proposed minimum standard of office space for heads of departments or Divisions</td>
<td>47</td>
</tr>
<tr>
<td>4.4 Proposed minimum standard of office space for senior cadre staff</td>
<td>47</td>
</tr>
<tr>
<td>4.5 Proposed minimum standard of office space for medium cadre staff</td>
<td>48</td>
</tr>
<tr>
<td>4.6 Proposed minimum standard of office space for junior cadre staff</td>
<td>48</td>
</tr>
</tbody>
</table>
1.0 INTRODUCTION

In the planning of office spaces around the world, the introduction of Facilities Management has brought about proper use and benefits from buildings. Space Planning is a branch of Facilities Management; it is the first step in spatial organization or space management. Space Management can be defined as the planning and organizing of the space and equipment in a building in a cost-effective manner, to meet the changing requirements through time, of the organization occupying the building. Space management had not been initially given much attention by building professionals. The first research in Facilities Management carried out in Japan in 1987 revealed that the most common problem was in connection with space management (Kato et al, 1989). The research involved seventy leading companies with head offices in Tokyo. The findings indicated that 65% of the companies were not making effective use of their office space and space planning was generally poor. This study of space planning in private and government office buildings in Nigeria is necessary due to the need for space standards in office buildings for proper management of spaces. Also, it is important for policy formulation in respect of the day-to-day and long-term administration and control of manpower, energy and resources.

To achieve this goal, it is considered necessary to determine the nature of the office buildings, the type of work to be carried out within the building, and the required spaces for good working conditions. The results of this research will not only ensure proper utilization of space in office buildings but aid good health, effectiveness and efficiency of staff.

1.1 AIMS AND OBJECTIVES

i. To establish whether there are space standards in office buildings in Abuja, Federal Capital Territory (FCT) and Minna, Niger State.

ii. To find out how management plans for both the present and future requirements of their office spaces.
iii. To determine whether and how much space is under utilized, or whether there is overcrowding in the office buildings.
iv. To determine the level of aspects of facilities management procedures in office buildings in Abuja and Minna.

1.2 RESEARCH METHODOLOGY
As the study was designed to be comprehensive, it was planned with two methods to be employed. These are, descriptive survey method and post-occupancy evaluation techniques. The adopted procedures include the following:
i. Distribution of questionnaires to the key management staff and other workers to determine their level of satisfaction with their office spaces.
ii. Interviews with the key management staff to ascertain whether facilities management is practiced in the organization.
iii. Physical observation of the spatial arrangement of the office buildings.
iv. Study of the quality and quantity of space in the offices and the surrounding environment.

1.3 SCOPE OR WORK
The research was carried out within Abuja, the Federal Capital of Nigeria and Minna the capital of Niger State. A total number of thirty (30) organizations were visited by the researchers and the research assistants in Abuja while ten (10) were covered in Minna.

The investigation was a systematic attempt to study the possible, space management problems in office buildings in Abuja and Minna. Others include, management’s present and future projection for office space requirements, level of office space utilization and the level of facilities management in office buildings in Abuja and Minna.
Detailed physical measurement of the spatial arrangement of the office buildings of eight organizations was carried out. Photographs of the office buildings were taken not only to show clearly the appearance of the office building but also office furniture arrangement.
1.4 **LIMITATION**

During the course of the research, some problems were encountered. Among the limitation of the research work are the following:

i. Based on security reasons, the researchers and the research assistants were prevented from getting access to building plans and from taking photographs of some buildings visited.

ii. Some administered questionnaires were not returned. This was as a result of some workers unavailability in the office due to one reason or the other at the time of follow-up to collect the distributed questionnaires.

iii. Some workers equally gave false information as regards their level of satisfaction with their office spaces and environment. This attitude was observed to be as a result of workers fear of losing their jobs.

1.5 **PROCEDURE**

Before embarking on this research, the researchers first listed the various offices to be visited and these were grouped on the basis of their locations. This grouping enabled the researchers to visit and obtain data in one zone before moving to another zone. Despite the zoning/grouping mechanism employed by the researchers, they still found it difficult to meet with the time schedule of the programme. This was due to the fact that most of the organizations visited demanded that after giving them the introductory letter, the necessary protocols of bureaucracy must be followed. Hence after applying to the organizations for permission to conduct the research, it took two to three days before approval for distribution of questionnaires was given. Also, after the approval by the management, many workers were still reluctant to answer the questionnaires. Some gave excuses that they were too busy, while some were afraid to answer correctly and honestly for fear that they might get into trouble with the management. This led to some false information of the working environment by some staff. The researchers however observed and documented the actual condition of the working environment.
CHAPTER TWO – LITERATURE REVIEW

2.0 INTRODUCTION TO SPACE MANAGEMENT
Space Planning is the first step in Space Management, which is a very important branch of Facilities Management. Facilities Management itself, is a relatively new profession which developed in the 1980s in response to several forces namely, the rising costs of accommodation, new information technology, increased competition between organizations, and rising expectations from a better educated and more professional workforce. Facilities Management can briefly be defined as the management of building premises, together with the facilities, services and people within the premises. This involves space management, building maintenance, day-to-day administration of manpower, energy and related resources. It also involves regular feedback through post-occupancy evaluation (Barrett, 1995, Zubairu, 2001). The effective management of spaces in buildings has become more and more important with the increasing demand for office spaces in urban areas and the increase in cost of construction. There is a need to look into the development of space management over the years to really understand the issues being discussed in this research.

2.1 BACKGROUND OF SPACE MANAGEMENT
At the turn of the twentieth century, there were several studies into work methods and office productivity, which had an effect on office spaces. The first of these was by Frederick W. Taylor who is credited with being the founder of the movement known as scientific management. Taylor began his career in 1878 as a pattern maker with a steel company in Philadelphia, U.S.A. He carried out studies of factory workers and early offices. His writings dealt with (i) selecting, training and compensating the employee, (ii) designing the employee’s job and tools and (iii) assigning management the responsibility for taking initiative. Taylor’s work contributed to the improvement of working conditions and the introduction of health and safety regulations in America.

In the late 1920’s another movement known as the ‘human relations’ movement emerged with the studies of Elton Mayo who was an industrial psychologist.
Mayo came up with some interesting results while studying workforce satisfaction at the Hawthorne Electrical Works in Chicago. He showed that assembly workers increased their output whenever lighting levels were changed, whether up on down. This came to be known as the ‘Hawthorne effect’ and was an early indicator that optimizing design conditions to meet physical comfort is less important than producing an environment that meets the psychological needs of the workforce, such as recognition and the sense of belonging to a group.

Immediately after World War I and before the depression of the 1930’s, business specialized and grew greatly and there began a modern trend towards more clerical workers and an office-building boom in America. The discipline of office administration began to emerge and several books and manuals were published such as ‘Office Administration’ by J.W. Schulze (1919) and ‘Office Management: its Principle and Practice’ by W.H. Leffingwell (1925). These books were mainly concerned with the effective operation of office systems and procedures but also discussed the effective planning and management of space. Later, others wrote on space management and office design specifically, for example Simpson (1981), Tweedy (1986), and Wineman (1986).

Tweedy (1986), identified the objectives of space management. They are:

1. To maximize efficiency and economy in the use of office space without overcrowding or wasting floor areas.
2. To ensure comfort and convenience of all office workers as well as visitors.
3. To establish efficient workflows patterns that are economical in application and that provide continuously balanced capability of equipment and personnel at each stage of workflow.
4. To design work centres and individual work stations that are conducive to efficient work methods, are in keeping with workflow processes, and permit an adequate measure of worker supervision.
5. To enhance interpersonal communication.
6. To establish flexibility in office layout for future re-arrangement of workstations, including the expansion or contraction of space requirements.
7. To ensure proper co-ordination of environmental factors namely heat, light, noise, ventilation and colour usage in the office space.
8. To create a favourable impression on visitors and customers.

The importance of Space Management began to be understood by office managers, and interior designers carried out research to determine how different colours on interior walls of offices affected the performance of workers. At the same time, architects and other building professionals started creating different office spaces as the effects of these new interiors were being observed.

2.2 EVOLUTION OF OFFICE SPACES

From 1930 to the late 1940’s, very little new office space was constructed due to the depression and World War II. More attention was focused on manufacturing; the restricted supplies of materials, equipment and manpower that were available were used to build factories, not offices. Consequently, standards of office housing deteriorated.

After World War II, there was another boom in office buildings. There were increasing demands of paperwork in business and in government, which sparked a spectacular growth in clerical operations. The different types of office spaces that have evolved from 1900’s to today are described below with a view to pinpoint their successes and failures and eventually determining what can be applied to office spaces, particularly in Nigeria.

2.1.1 CELLULAR OFFICES

Offices at the beginning of this century were generally small rooms arranged either on one side or both sides of a corridor (see fig. 2.1). The corridors were usually long and quite gloomy when the rooms were on both sides. Interior decoration was almost non-existent. The nature of work or communication between workers was not taken into consideration in the different office rooms.
Working conditions were quite poor and little thought was given to providing relaxation facilities for workers within the office building.
FIG. 2.1 CELLULAR OFFICES - In the 19th century and early 20th century, these were how most office spaces were built.
2.2.2 The Workflow Office

Workflow offices were large open plan office areas laid according to workflow principles (see Fig. 2.2). The traditional cellular office became less popular and many offices built in the United States of America in the 1950’s were open plan. In the workflow office, the work was analysed and organized into distinct tasks in order to reduce the movement of staff between different areas. As a consequence, it was necessary to standardize jobs and office technology, and formalize personal interaction. Paper flow, which was thought to reduce the movement of staff between different work areas, began to dominate the layout of offices (Larking, 1984). The workflow office was too regimental and boring the desks were laid out in a straight line; also, when errors arose and staff did not have the freedom to correct them or search for missing information, efficiency declined.

2.2.3 Burolandschaft

In response to the problems of the workflow office, a ‘human relations’ approach emerged whereby the formal structure governing relations between office works was relaxed and informal interaction encouraged. Instead of emphasizing the office as an information-processing centre, it was seen as a communications complex. Thus at the beginning of 1960, ‘burolandschaft’ emerged. These were deep open plan office floors (see Fig. 2.3) with apparently irregularly arranged workstations but which are actually positioned in a manner to enhance communication. They are carpeted, air-conditioned and decorated with a lot of indoor plants to liven up the environment. Burolandschaft is German for ‘office landscaping and the concept originated from Germany. The designers were two brothers called Schnelle and their organization was the Quickborner Team. The group came from a management rather than design background and they analysed the design of office buildings from the viewpoint of activities and communicational patterns. They argued that the narrow cellular building reduced communication, constrained organizational change and was inefficient in space usage (Fuller, 1973).
Fig. 2.2 – Typical layout of Workflow Office

During the first half of the 1900s, it became common for large open office areas, like the one illustrated here, to be laid out according to "workflow" principles. The work was analyzed and organized into distinct tasks in order to reduce the movement of staff between different areas. The design evolved, and an approach was found that prevented the need to correct errors or search for missing information.
The Quickborner Team, to implement these concepts, set up procedures which became the nucleus for the continuous planning of the office space. The main idea behind the American and German approaches was to have flexible office spaces and the building would provide this with clear open uninterrupted floor space. The result was big open spaces with few fixed components, complicated furniture systems and a major emphasis on a centralized facilities
management team who were continuously monitoring, re-planning and controlling the space.

The idea of open planning and burolandschaft was initially greeted with much enthusiasm and many office buildings of the 1960’s and early 70’s were designed and built like that. The most famous landscaped, open plan office is the Central Becheer Insurance Co-operative Society Office Building, Apeldorn, Holland (1975). In most open plan offices, the building did little to support and control space usage as had been the case before when the cellular spaces forced the users into groups to fit into the rooms. However, in Central Becheer, the architect, Herman Hertzberger made the building form more dominant. No space is fully enclosed but a clever and varied use of paths, low walls, voids and furniture, produces an office environment which has much of the planning continuity of the conventional open plan but an infinitely richer capacity to express a sense of space of each individual worker (Duffy, 1975).

Hertzberger’s solution, however, is only suitable for organizations with a social structure and working pattern similar to that of Central Becheer. It would not do for most government departments, which are very hierarchical in structure. Also, workers no longer want to work in deep offices far away from any window. Hertzberger’s experiment of opening the office to the street can only be possible for an open and benign organization in a quiet city. With the amount of violence in the world today, it is an experiment that is not likely to be repeated. However, in Central Becheer, Hertzberger re-established the importance of the building form and he showed how the building can be used to control space usage in the landscaped office.

2.2.4 The Group Room

By the late 1970’s, problems in the concept of open planning began to emerge. Managers, visitors and even staff felt over-exposed; the confidential nature of work was compromised; there were too many distractions – telephones, typing and conversation. Concentration was hampered and this affected productivity. In the 1980’s, there were innovations to office space. More emphasis was given to group spaces. There was what is described as the ‘combi’ office,
where everyone has roughly the same amount of cellular space opening on to a common resource area (see Fig. 2.4).
2.2.5 **Reversible Office Space**

Then more recently, there is the ‘reversible’ office space where buildings are planned to combine open and cellular layouts (Fig. 2.5). The emphasis now is on adaptability. Office buildings need to be able to adapt to the needs of a more enlightened workforce as well as the changing requirements of the organization.

A famous example of reversible office space is the Colonia Headquarters building in Cologne, West Germany. Colonia is one of the biggest insurance companies in Germany and it needed a large office building to house its numerous staff that was dispersed in several different office buildings in Cologne. Consultations with the staff during the design process indicated that the majority of users preferred a building scaled down to human proportions and not a towering skyscraper. A site on the outskirts of Cologne was chosen and the buildings cover a large area overlooking green fields with a total gross external floor area of just under 70,000 m² of office space including 200 car packing spaces.

The architect, Thomas Beucker, designed the building rather like a college – a cluster of brick buildings round a landscaped courtyard. The courtyards are beautifully landscaped; an artificial pond lies adjacent to the restaurant, spanned by a footbridge over which workers can stroll across to the restaurant if they wish (see plate 2.1). The office spaces are designed to combine both open and cellular spaces in such a way that they can easily be interchanged (see Fig. 2.6). The configuration of the building does tend to limit the amount of flexibility but not severely.
Fig. 2.5 – Reversible Office Space
The Office Village

The most recent innovation in office buildings today is the concept of the office village. The idea behind this concept is to make the office environment similar to a small village community. Groups of offices are arranged along a common corridor or ‘street’ and facilities such as coffee shops, lounges, and restaurants, which make the environment more like a small village, are provided. Outstanding examples of this concept are the Nederlandsche Middenstandsbank (NMB) Headquarters in Amsterdam (see plate 2.2 & drg. 2.1) and the Scandinavian Airlines Systems (SAS) Headquarters in Stockholm (see plate 2.3). The legislative right of workers in West Germany, Holland and Sweden, to participate in the planning of their office environment has significantly affected the layout of offices in these countries. Workers demand that they be able to look out of a window either to the outside or to an atrium.

The directors of NMB wanted “to achieve a better balance between organizational and technical requirements on the one hand, and the needs of the staff both as bankers and individuals on the other” (NMB, 1988). They also needed a large amount of office space, 50,000 m² gross to house over 2,500 staff. But did not want a “steel and concrete monolith” (NMB, 1988). The architect, Ton Alberts, resolved these dilemmas using the office village concept and segmenting the building into clusters along a long ‘street’. The building is made up of ten towers together forming an irregular S-shape and varying in height from three to six floors plus two storeys of underground car park. Each storey provides office space for 55 to 65 staff, depending on the number of separate rooms needed, equipment in use and amount of storage space required. Where necessary, the partitioning walls can be extended upwards to reach the ceiling, thus creating rooms which offer their occupants full privacy.

Due to the shape of the building, none of the staff is more than seven metres away from a window so optimum use is made of daylight. The main circulation route or ‘street’ has been designed to be as varied as possible with different angular planes to internal surfaces, indoor plants, finishing and colour; cash tower has a different colour scheme. The street is rich in detailing and décor. Facilities that are provided in the building include four restaurants, dining rooms, small shops (travel and copier service) and conference rooms. The
building does not have any air-conditioning or automatic climate control system. Instead, natural ventilation and cooling systems are used; all the windows in the building can be opened. The building has a form which does not allow for much group space flexibility as might be desired, but it certainly has produced creative spaces which stimulate the staff, enhances their productivity and ensures that they enjoy their working environment.
Plate 2.1: Footbridge across artificial pond at Colonia offices, Germany.
2.2.7 **Lesson for Nigeria**
Office spaces have thus evolved through various forms and there now appear to be reversal towards cellular spaces, but not quite. It has been realized that there is no blanket solution or best type of office space. What is important is determining the type of space most suitable to the working methods of the organization and determining the type of office environment most of the users require, then striking a balance. Nigeria, and other developing countries, should avoid the mistakes made in the Western countries and not just copy an office form because it seems to work for a particular organization. One of the functions of space management is to determine the sort of space which an organization requires. This is the beginning of space planning.

2.3 **THE SPACE PLANNING PROCESS**
The process of managing office space should ideally start off from the initial planning process before an organization moves into an office building. To effectively manage office space, the manager, preferably a facilities manager, should first establish a property database. This would comprise of basic data such as: the floor plans of the building showing the different departments, the names, number and different cadre of staff in the organization, the equipment available in the building and the state of repair of services and equipment in the building as they relate to the organization. The data should ideally be structured in such a way as to be accessible to the various professionals involved in the management of the building. The easiest way would be using a computer-aided design software such as AutoCAD, where furniture layout can be put on a separate layer from the building structure for space planning, cabling and services can be accessed on a different layer for engineers and so on.

The next step is the space planning process which produces the data for effective monitoring of space use and involves:

1. Analysis of the organization to determine its structure, culture, nature of work, method of work, information technology
requirements, sizing of work groups, degree of privacy staff numbers and future staff projections.

2. Space analysis to determine the amount of space in the building(s), quality of space, servicing, information technology capability and occupancy costs.

3. Establishing of performance indicators; these include space standards and required ancillary and support space. The present and future space requirements of the organization have to be determined and a space budget agreed upon.

4. Layout planning is the last stage and involves the following:
   (i) Choosing a furniture system
   (ii) Zoning activities
   (iii) Determining work station arrangements
   (iv) Determining group spaces
   (v) Locating support areas
   (vi) Interior decoration

The results of the space planning process should then be used for a premises policy formulation. A premises policy is a written document outlining the plan for management of the building and should be in accordance with the business plan. This implies that it should be proactive and have the flexibility to cope with unforeseen changes. Fig 2.7 illustrates the process of space management, which once established, will be a continuous one from which feedback will enable the management to improve on performance.
FIG 2.7: The Process of Managing Office Space
CHAPTER THREE – CASE STUDIES

3.0 SAMPLE SIZE

The research was carried out within Abuja, the Federal Capital of Nigeria and Minna, the capital of Niger State. A total number of thirty (30) organizations were visited by the researchers and the research assistants in Abuja while ten (10) were covered in Minna.

The office buildings visited at Abuja are listed below:

1. Federal Ministry of Works and Housing headquarters, Mabushi
2. Federal Ministry of Works and Housing field offices, zone 4
3. Federal Ministry of Internal Affairs, zone 5
4. Federal Road Safety Corps annex, zone 2
5. Federal Capital Development Authority, Area II
6. Federal Ministry of Water Resources, Area II
7. Bwari Area Council
8. Abuja Environmental Protection Board, Area I, Garki
9. Kwali Area Council
10. Nigerian Customs Service, Wuse zone 3
11. Federal Ministry of Foreign Affairs, zone 3
12. Nigerian Educational Research & Development Council, Sheda
13. Universal Basic Education Office, Wuse zone 4
14. Federal Ministry of Education, zone 4
15. National Population Commission, Wuse zone 7
17. Public Complaints Commission, Maitama
18. Joint Admission Matriculation Board, Bwari
19. Federal Inland Revenue zone 5
20. Abuja Council for Arts and Culture
21. Aim Consultants
22. Cool F.M
23. Nigeria Motors Industry
24. Lento Aluminium
25. Pivot Electrical Engineering Company
26. Daltrade Group of Companies
27. Abuja Capital Motors
28. Arab Contractors
29. Mandilas Motors
30. Fedex Express

The offices visited in Minna are as follows:
1. Upper Niger River Basin Development Authority
2. Niger State Urban Development Board
3. Niger State Ministry of Works
4. Amites Computers
5. New Ventures
6. Federal Ministry of Environment
7. Niger State Housing Corporation
8. Niger State Water Board
9. Union Bank of Nigeria
10. First Bank of Nigeria

3.1 POST-OCCUPANCY EVALUATION RESULTS

An indicative Post-occupancy evaluation (POE) was carried out in some of the offices in the study. The physical evaluation of some of the offices visited are summarized below:

1. Federal Ministry of Education
   i. Overcrowded offices
   ii. Very dirty environment (pool of water on floor and carpet)
   iii. Poor ventilation
   iv. No annual budgets to maintain the offices
   v. Broken furniture lying along the corridors

2. Kwali Area Council
   i. Overcrowded offices
   ii. Adequate cross-ventilation
   iii. Poorly kept environment (bushy and shrubs not trimmed)
   iv. Annual maintenance very minimal
3. Nigerian Educational Research and Development Council  
   i. Tidy corridors  
   ii. Enough space in the offices  
   iii. Adequate yearly budget for maintenance

4. Federal Ministry of Works and Housing headquarters  
   i. Overcrowded offices  
   ii. Inadequate natural lighting  
   iii. Annual budget to maintain offices but budget is inadequate

5. Federal Civil Service Commission  
   i. Artificial ventilation  
   ii. Clean environment  
   iii. Inadequate lighting in corridor  
   iv. Unpleasant odour in corridor  
   v. Inadequate budget for maintenance

6. Federal Ministry of Foreign Affairs  
   i. Overcrowded offices  
   ii. Artificial lighting  
   iii. Artificial ventilation  
   iv. Neat and tidy environment

7. Federal Capital Development Authority  
   i. Overcrowded offices  
   ii. Artificial lighting  
   iii. Artificial ventilation in some offices  
   iv. Inadequate annual maintenance budget

8. Federal Road safety Corps  
   i. Overcrowded offices  
   ii. Insufficient parking spaces  
   iii. Poor natural ventilation  
   iv. Staircases too small  
   v. Broken furniture
9. Nigerian Football Association
   i. Entrance porch very small
   ii. Overcrowded offices
   iii. Artificial ventilation
   iv. Artificial lighting

10. Aim Consultants
    i. Offices are spacious and furniture well-arranged
    ii. Offices are artificially ventilated and artificially illuminated
    iii. Interiors are neat and tidy
    iv. Exterior is not well landscaped
    v. There are no defined parking spaces for visitors

11. Arab Contractors
    i. Office space are well-arranged
    ii. The corridors and lobbies have artificial lighting
    iii. The interior and exterior spaces are clean and tidy
    iv. There are no defined parking spaces for visitors

12. Daltrade Group
    i. The office spaces are overcrowded
    ii. The offices are artificially illuminated but many of the light bulbs have fused so the interior is not well-lit
    iii. The exterior is not well-kept
    iv. There are no defined parking spaces for visitors

13. Cool F.M.
    i. Offices are spacious and well-arranged
    ii. The offices are artificially ventilated and artificially illuminated
    iii. The offices are open planned with low partitions to demarcate sections
iv. There are inadequate parking spaces for visitors

14. First Bank
   i. Open plan offices with low partitions to demarcate sections
   ii. The offices are artificially ventilated and artificially illuminated
   iii. Inadequate seating for customers
   iv. Access road is in a very poor condition

Plates 3.1, 3.2, 3.3 and 3.4 illustrate overcrowded offices poorly lit corridors and a well-landscaped exterior. The general observation is that the spaces in the offices of the private organizations are better organized than the offices of the public establishments. The public offices are typically overcrowded and poorly maintained. The exteriors of majority of the offices, both public and private, need greater attention to landscaping. Most of the offices have inadequate parking spaces.
Plate 3.2: Another public office at Abuja. Small cubicles are congested with desks and other office equipment.

Plate 3.3: Long dark corridor in a public office at Abuja.
3.2 RESPONSES BY THE OFFICE MANAGERS

The office managers in the forty organizations visited were generally cooperative in their responses to the questions about the problems being faced in the management of their office spaces.

3.2.1 Space Planning in Nigerian Offices

The responses of the office managers to some of the questions in the questionnaires on space planning are displayed in table 3.1 below.

Table 3.1: Response of Office Managers to Space planning in their organizations

<table>
<thead>
<tr>
<th></th>
<th>YES</th>
<th>NO</th>
</tr>
</thead>
<tbody>
<tr>
<td>Any space standards?</td>
<td>38%</td>
<td>62%</td>
</tr>
<tr>
<td>Is space adequate?</td>
<td>38%</td>
<td>62%</td>
</tr>
<tr>
<td>Will staff strength increase in the near future</td>
<td>90%</td>
<td>10%</td>
</tr>
<tr>
<td>Will office space increase with staff strength</td>
<td>80%</td>
<td>20%</td>
</tr>
</tbody>
</table>
Table 3.1 above and Fig. 3.1 on the next page illustrate that out of a total of forty office buildings surveyed, 76% or about three-quarters, did not have any minimum space standards for their staff. The establishment of space standards is a basic requirement for sensible space planning. As could be expected with the absence of space standards, 62% of the office managers interviewed, did not have adequate office space for the staff of their organization in the building.

Fig. 3.1 Responses by managers on Space Standards and Adequacy of space in their offices

A cross-tabulation was made between the responses from private and public offices for comparison purposes. The results indicate that the managers in the private organizations were happy with the office space as opposed to 15% of managers in public establishments (see fig. 3.2)
Fig. 3.2: Comparison of Adequacy of space in private and public offices

The chi-square was used to test if this result was statistically significant and it was confirmed to be significant (see appendix for computer print-out). Majority of the public offices, 80%, did not have minimum amount of office space required for the number of staff on the premises. Conversely, only 15% of the private companies did not have the minimum required amount of office space for their staff. This indicates that private organizations are more sensitive to the importance of space planning and comfort of their workers than public organizations.

3.2.2 Staff Strength of the Organizations

The staff strength of the various organizations that were visited was assessed. The majority of the organizations, 50%, had staff strength of over 200. The distribution of the staff sizes is illustrated in figure 3.3 below. A cross-tabulation of staff strength by type of organization, was done to see whether it was the public or private organizations that had the larger staff strength. The results indicated that 65% of the public offices had staff strength of over 200 while only 20% of the private organizations had staff size of over 200. Eighty-five percent of the public organizations had a staff size of over fifty persons while only 40%
of the private organizations had over 50 staff members. Figure 3.4 illustrates the disparity in staff sizes in public and private organizations. Clearly, the public offices have the greater workforce and therefore the greater need to properly plan the office space to accommodate the large number of staff in a comfortable and performance-enhancing environment.

Fig. 3.3 Percentage of Staff Strength of the Offices in the survey

Fig. 3.4: Comparison of Staff Strength in Public and Private Organizations
Ninety percent of the organizations plan to increase their staff strength in the near future, but only 80% have plans of increasing their office space area.

Managing the number of staff in an organization is an integral part of Facilities Management. To be able to adequately plan the office space arrangement, the present and future staff strength must be known and the planning process must be proactive.

### 3.2.3 Determination of Adequacy of Office Space

The office managers were asked how they were able to determine the adequacy of their office spaces. Thirty-seven percent stated that they have a minimum office space for each member of staff. Thirty percent responded that they fix in as many desks as possible, in the offices to contain their staff. Thirteen percent stated that they have a fixed number of staff in each office. The remaining 13% had no comment regarding determining adequacy of office space. Among the problems being faced by the office managers in their buildings, the most prevalent was lack of space as indicated by 85% of the managers. Lack of privacy was another major issue in the offices as well as inadequate furniture. Surprisingly, untidy environment was not considered to be a major problem. Natural ventilation and natural lighting were also not considered to be very important. When asked about what plans they had to improve on the situation of lack of space, privacy and furniture, 65% of the managers hope to acquire more office space and purchase more furniture, while 13% state that they cannot improve the situation.

These results highlight the importance of having minimum space standards. Once established, the office manager can use them as a guideline for space planning and to provide concrete evidence to the directors of the organization, whenever the minimum requirement is exceeded, that further space is required to accommodate increasing staff numbers.

### 3.2.4 Extent of the Practice of Facilities Management in Nigerian Organizations

One of the aims of this research is to determine the extent to which Facilities Management (F.M) is practiced in organizations in Nigeria. Table 3.2 indicates
the percentage of responses of the office managers as to whether they knew about F.M. and whether they practiced it in their organizations.

Table 3.2: Response of the Office Managers to Facilities Management

<table>
<thead>
<tr>
<th></th>
<th>YES</th>
<th>NO</th>
</tr>
</thead>
<tbody>
<tr>
<td>Knowledge of Facilities Management</td>
<td>79%</td>
<td>21%</td>
</tr>
<tr>
<td>Is Facilities Management Practiced?</td>
<td>56%</td>
<td>44%</td>
</tr>
</tbody>
</table>

Table 3.2 indicates that seventy-nine percent of the managers claimed to know what is meant by Facilities Management (F.M), while 56% indicated that they practiced some aspects of F.M mainly maintenance of the building and its services. There was no annual budget for F.M but rather annual budgets for maintenance. None of the managers mentioned space planning or space management as being practiced in their organization. A cross-tabulation was made between the responses from public and private organizations to see whether there was any difference in knowledge of Facilities Management and its practice in the two types of organizations. Figures 3.5 and 3.6 illustrate the results. Figure 3.5 illustrate that majority of the managers in public offices, 95%, had some knowledge of Facilities Management; in private organizations, only 70% of the managers had some knowledge of Facilities Management.
Fig. 3.5: Comparison of Knowledge of Facilities Management between Managers in Private and Public offices

Fig. 3.6: Comparison of Practice of Facilities Management between Private and Public offices

Fig. 3.6 illustrate that 71% of managers in private organizations and 56% of managers in public organizations indicated that they practiced Facilities Management (F.M) in their office buildings. This means that even though 95% of the officers in public offices had knowledge of F.M many of them did not utilize that knowledge in the management of the premises.

3.2.5 Staff Comfort
Twenty questionnaires were randomly distributed to members of staff in each of the organizations visited during the research. A total number of 352 questionnaires were returned and 53% indicated that they were comfortable with their working environment. This response was found to be contrary to the
physical observations of the researchers, who found that many of the offices were overcrowded and in need of renovation. It was apparent that the staff responded in the affirmative mainly out of fear that they might lose their job or because they have never known or seen anything better. A comparison was made between the responses of staff in public and private organizations on their level of comfort – the results are illustrated in fig. 3.7.

![Fig. 3.7: Comparison of staff in Private and Public offices](image)

Fig. 3.7: Comparison of staff in Private and Public offices

The results illustrate that in the private organization, 64% of the staff were comfortable while 36% were not comfortable with their office environment. In the public organizations, 57% of the members of staff were comfortable while 43% were not.

3.3 **OFFICE LAYOUTS**

Majority of the offices had cellular office space layouts (see drawings drg. 3.1, 3.2, 3.3 & 3.4). The architect that designed the Upper Niger River Basin Authority, drg. 3.1, was able to create variety in the arrangement of the cellular offices to avoid the dull and rigid linear layouts of many cellular office. The courtyards were also well landscaped producing a nice and aesthetically pleasing environment which enhances productivity.
The Ministry of Works and Housing, Minna (drg. 3.2) is a typically cellular office space layout. The main axis corridor is however, rather long and gloomy in the poorly lit sections. The drawing office is larger than the single offices but for better communication, the architects, quantity surveyors and drawing offices, should all have been open plan with low-level partitions separating them.

Drg. 3.1: Ground Floor plan of the offices of the Upper Niger River Basin Authority, Minna
The Federal Ministry of Education, Zone 4, Abuja (drg. 3.3), is also cellular office space layout. It is doubtful whether the nature of work and levels of communication between staff was taken into consideration in the design. The Niger State Urban Development Board, Minna offices (drg. 3.4), are typically cellular office spaces. There are two spacious courtyards separating the front and the back sections. Proper landscaping of the courtyards would have enhanced the environment within the office complex.

In most of the offices visited, there is an apparent space deficiency mainly due to lack of ancillary and support spaces – these include group spaces, insufficient meeting rooms, goods area, store rooms, rest rooms and cafeteria.
or restaurant. The lack of catering facilities in the office complexes, gives staff a good excuse to leave the building to get something to eat. In the government offices working hours start between 7.30a.m or 8.00a.m and end at 3.30p.m or 4.00p.m without an official lunch break. However, many members of staff tend to leave the buildings for about thirty minutes to one hour in the morning to get some breakfast, and for about an hour around noon to get some lunch. This leads to an estimated loss of about two hours of working time each day.

The general condition of offices is rather drab. In many offices, curtains need to be replaced, and furniture is not properly maintained. There are several cases, especially in the junior offices, where broken chairs that could be easily fixed, are left in their bad condition. Numerous broken louver windows are yet to be replaced as well as cracked floor tiles. There are few indoor plants to help liven up the interior atmosphere of the offices. It is necessary for office managers to realize that productivity is enhanced, when the office environment is enhanced, as has long been established by Elton Mayo in his Hawthorne experiment in the late 1920s.
Drg. 3.3: Ground Floor plan of the offices of the Federal Ministry of Education, Zone 4, Abuja

Drg. 3.4: Ground Floor plan of the offices of the Niger State Urban Development Board, Minna
CHAPTER FOUR – CONCLUSION AND RECOMMENDATIONS

4.4 CONCLUSION
In office buildings today, the emphasis is on creating an environment that will enhance the productivity of the workers. This can only be achieved through effective space management. Many offices are overcrowded particularly those belonging to public organizations. Most offices lack group spaces, cafeteria and adequate meeting rooms, storerooms and rest rooms. Space standards, which are the basic building blocks for adequate space management, are practically non-existent from the results of this research and it is quite clear that space planning is absent in most office buildings in Nigeria. Facilities Management, though acknowledged by majority of the office managers, is not really practiced in Nigeria as only the maintenance aspect of Facilities Management is carried out and even that is not effectively practiced in most of the offices visited. Most of the office layouts in Nigeria are either cellular or open plan. The office workers are rarely consulted as to their requirements before the office building is designed. Nature of work of organization and lines of communication must clearly be established in order for the office layout to enhance office productivity. This can only be achieved when there is proper consultation with staff at the design stage of the building. It is therefore essential that both government and private organizations should ensure that their office spaces are properly managed. This will make the staff to be more productive and could also save the organizations money when office spaces are properly and effectively utilized.

4.1 RECOMMENDATIONS
The following steps are recommended to correct the present lack of adequate space management in office buildings in Nigeria:

4.1.1 Establishment of Space Standards- To prevent overcrowding in offices and to improve the quality of workplaces, it is proposed that formal written space standards be established Drawings(drg) 4.1 to 4.6 illustrate proposed minimum office space standards for different category of staff. Drg. 4.1 proposes a minimum office space of 35 square metres for chief executive officers of organizations, showing the possible furniture arrangement within this space. Drg. 4.2 suggests a minimum office space of 30 square metres for the deputy
chief executive officer of the organization. Drgs. 4.3 – 4.6 propose minimum space standards for heads of departments and lower cadres of staff.
Drg. 4.3. Proposed Minimum Standard of Office Space for Heads of Departments or Divisions - 20m².

Drg. 4.4. Proposed Minimum Standard of Office Space for Senior Cadre Staff - 9m².
This is a proposal which may be increased or reduced, depending on the size and importance of the organization, and the image it wants to portray to the outside world. These standards will provide a guide and basic framework, which will prevent the tendency for policy-makers to squeeze staff into small spaces in an attempt to save money on rent. The standards for workforce area within the various levels should be based on function. The workplace standards should include storage space for individuals. Members of staff who handle a lot of paper work should have sufficient filing cabinets to prevent the piling up of files on the floor, which have led to difficulties in tracing files and sometimes loss of files. The government however has to set the minimum standard. This can be achieved by legislative means. A law stipulating minimum space standards for
different categories of staff can then be used as a base line to ensure that all offices provide comfortable and humane working conditions for its staff.

4.1.2 **Training of Facilities Managers**

The managers that were interviewed responded that they had some knowledge of Facilities Management (F.M), but from their detailed response, it was clear that their knowledge of F.M was limited to building maintenance. It is therefore recommended that organizations which send their premises managers for training in F.M. This will ensure that they acquire knowledge of all aspects of F.M including space management. The Federal Government of Nigeria, through the National Universities Commission (N.U.C), should encourage Universities to establish courses in Facilities Management to facilitate the training of managers in this discipline.

4.1.3 **Staff Involvement**

There is a necessary for staff to be involved in planning processes which relate to the quality of the office environment. For the establishment of standards for quality of workplace, it is recommended that a committee comprising the facilities managers and representatives of staff from the various divisions, should establish these standards namely: types of furnishing for various levels of staff and environmental conditions in offices, these should be considered in line with what is financially feasible bearing in mind that a good working environment enhances productivity.

4.1.4 **Regular Space Audits**

It is recommended that annual occupancy space audits be carried out by each organization. Space audits involve the F.M team going round the entire premises to establish whether the organization is getting value for its money per square metre of space. The amount spent on annual rent is compared to the profits of the organization. If the organization owns the building, an estimate can be obtained as to how much it would have been paying if it were renting the building. Profits may not necessarily be financial but may be assessed against the achievements of the objectives of the organization e.g philanthropic and social welfare organizations. The space audit will also determine whether space standards are being upheld and to ensure that overcrowding or space wastage doe not occur.
5.0 REFERENCES

Blackwell Science Ltd. Oxford


NMB (1988), Corporate PR and Publicity Dept. Publications Section, Amsterdam


Appendix 1 – Glossary of Facilities Management Terms

Appendix 2 – Questionnaires

GLOSSARY OF FACILITIES MANAGEMENT TERMS

Ancillary Area – This is the area for activities required to support more than one workplace. It comprises space shared and managed by a group filing, terminals or meeting space. It may be enclosed (e.g. computer room), or open (e.g. project space).

Area Efficiency – The core efficiency or core as percentage of GIA indicates the efficiency of the building for the landlord while usable area efficiency or MUA as a percentage of NIA indicates the efficiency of the building for the tenant.

Core Area – The area containing lifts, stairs, plant, ducts, WCs, and the area of internal structural elements. On entrance levels it includes foyers, lobby areas and other common areas.

Designed Office Area – This is the NIA less designed primary circulation and less support area. This can be expressed as the sum of workplace and ancillary areas.

Designed Usable Area – This is the NIA less designed primary circulation. Some judgement is often required in interpreting the boundaries of designed primary areas.

Gross External Area (GEA) - The total floor area of a building from the outside face of the external walls.

Gross Internal Area (GIA) – The total floor area within the inside face of the external walls of the building (and the inside face of atrium walls if any).
Maximum Usable Area (MUA) – This is the net internal area less the primary circulation area and is often described as Net Usable Area (NUA).

Minimum Primary Circulation (MPC) – This is the minimum circulation to satisfy the fire authorities and most cases would be covered by assuming routes 1.5 metres wide joining vertical cores and fire exits with no point further than 12 metres from a primary fire route.

Net Internal Area (NIA) – This refers to the gross internal area less the building core areas. The NIA is also frequently described as the Net Lettable Area (NLA).

Potentially Highly Serviced Area – This is the net internal area that is within 6 metres of the core. These areas readily allow extra servicing from the ducts in the core.

Secondary Circulation – This is the route from primary circulation, between ancillary activities and workplaces. For ease of planning, it is often included in workplace standards but it is a valuable definition when measuring efficiency of space usage.

Support Area – This the space required for functions which support the operation of the whole or substantial part of the building or organization e.g. canteen, main meeting rooms, workshops, library, cleaning and goods areas.

Workplace Area – This is the space allocated to members of staff to undertake their work. It comprises desk, filing and meeting place for one person; it may be enclosed or open plan.

QUESTIONNAIRES FOR WORKERS IN OFFICES
Please tick your answer in the appropriate box

1. How long have you worked in this building?
   (a) 0 – 5 years
   (b) 6 – 10 years
   (c) 11 – 25 years
   (d) Over 15 years

2. What category of staff are you?
   (a) Senior
   (b) Junior

3. Do you feel comfortable with your working environment?
   (a) Yes
   (b) No

4. If no, what are the problems being faced?
   (a) Lack of space
   (b) Lack of privacy
   (c) Untidy environment
   (d) Insufficient natural ventilation
   (e) Insufficient natural light
   (f) Inadequate furniture
   (g) Others please specify

…………………………………………………………………
……………………………………………………………………………………………
……………………………………………………………………………………………
……………………………………………………………………………………………
……………………………………………………………………………………………
……………………………………………………………………………………………
……………………………………………………………………………………………
……………………………………………………………………………………………
……………………………………………………………………………………………
……………………………………………………………………………………………
……………………………………………………………………………………………
……………………………………………………………………………………………
……………………………………………………………………………………………
……………………………………………………………………………………………
……………………………………………………………………………………………
……………………………………………………………………………………………
……………………………………………………………………………………………
……………………………………………………………………………………………
……………………………………………………………………………………………
……………………………………………………………………………………………
……………………………………………………………………………………………
……………………………………………………………………………………………
……………………………………………………………………………………………
……………………………………………………………………………………………
……………………………………………………………………………………………
……………………………………………………………………………………………
……………………………………………………………………………………………
……………………………………………………………………………………………
……………………………………………………………………………………………
……………………………………………………………………………………………
……………………………………………………………………………………………
……………………………………………………………………………………………
……………………………………………………………………………………………
……………………………………………………………………………………………
……………………………………………………………………………………………
……………………………………………………………………………………………
……………………………………………………………………………………………
……………………………………………………………………………………………
……………………………………………………………………………………………
……………………………………………………………………………………………
……………………………………………………………………………………………
……………………………………………………………………………………………
……………………………………………………………………………………………
……………………………………………………………………………………………
……………………………………………………………………………………………
……………………………………………………………………………………………
……………………………………………………………………………………………
……………………………………………………………………………………………
……………………………………………………………………………………………
……………………………………………………………………………………………
……………………………………………………………………………………………
……………………………………………………………………………………………
……………………………………………………………………………………………
……………………………………………………………………………………………
……………………………………………………………………………………………
……………………………………………………………………………………………
……………………………………………………………………………………………
……………………………………………………………………………………………
……………………………………………………………………………………………
……………………………………………………………………………………………
……………………………………………………………………………………………
……………………………………………………………………………………………
……………………………………………………………………………………………
……………………………………………………………………………………………
……………………………………………………………………………………………
……………………………………………………………………………………………
……………………………………………………………………………………………
……………………………………………………………………………………………
……………………………………………………………………………………………
……………………………………………………………………………………………
……………………………………………………………………………………………
……………………………………………………………………………………………
……………………………………………………………………………………………
……………………………………………………………………………………………
……………………………………………………………………………………………
……………………………………………………………………………………………
……………………………………………………………………………………………
……………………………………………………………………………………………
……………………………………………………………………………………………
……………………………………………………………………………………………
……………………………………………………………………………………………
……………………………………………………………………………………………
……………………………………………………………………………………………
……………………………………………………………………………………………
……………………………………………………………………………………………
……………………………………………………………………………………………
……………………………………………………………………………………………
……………………………………………………………………………………………
……………………………………………………………………………………………
……………………………………………………………………………………………
……………………………………………………………………………………………
……………………………………………………………………………………………
……………………………………………………………………………………………
……………………………………………………………………………………………
……………………………………………………………………………………………
……………………………………………………………………………………………
……………………………………………………………………………………………
……………………………………………………………………………………………
……………………………………………………………………………………………
……………………………………………………………………………………………
……………………………………………………………………………………………
……………………………………………………………………………………………
……………………………………………………………………………………………
……………………………………………………………………………………………
……………………………………………………………………………………………
……………………………………………………………………………………………
……………………………………………………………………………………………
……………………………………………………………………………………………
……………………………………………………………………………………………
……………………………………………………………………………………………
……………………………………………………………………………………………
……………………………………………………………………………………………
……………………………………………………………………………………………
……………………………………………………………………………………………
……………………………………………………………………………………………
……………………………………………………………………………………………
……………………………………………………………………………………………
……………………………………………………………………………………………
……………………………………………………………………………………………
……………………………………………………………………………………………
……………………………………………………………………………………………
……………………………………………………………………………………………
……………………………………………………………………………………………
……………………………………………………………………………………………
……………………………………………………………………………………………
……………………………………………………………………………………………
……………………………………………………………………………………………
……………………………………………………………………………………………
……………………………………………………………………………………………
……………………………………………………………………………………………
……………………………………………………………………………………………
……………………………………………………………………………………………
……………………………………………………………………………………………
……………………………………………………………………………………………
……………………………………………………………………………………………
……………………………………………………………………………………………
……………………………………………………………………………………………
……………………………………………………………………………………………
……………………………………………………………………………………………
……………………………………………………………………………………………
……………………………………………………………………………………………
……………………………………………………………………………………………
……………………………………………………………………………………………
……………………………………………………………………………………………
……………………………………………………………………………………………
……………………………………………………………………………………………
……………………………………………………………………………………………
……………………………………………………………………………………………
……………………………………………………………………………………………
……………………………………………………………………………………………
……………………………………………………………………………………………
……………………………………………………………………………………………
……………………………………………………………………………………………
……………………………………………………………………………………………
……………………………………………………………………………………………
……………………………………………………………………………………………
……………………………………………………………………………………………
……………………………………………………………………………………………
……………………………………………………………………………………………
……………………………………………………………………………………………
……………………………………………………………………………………………
……………………………………………………………………………………………
……………………………………………………………………………………………
……………………………………………………………………………………………
……………………………………………………………………………………………
……………………………………………………………………………………………
……………………………………………………………………………………………
……………………………………………………………………………………………
……………………………………………………………………………………………
……………………………………………………………………………………………
……………………………………………………………………………………………
……………………………………………………………………………………………
……………………………………………………………………………………………
……………………………………………………………………………………………
……………………………………………………………………………………………
……………………………………………………………………………………………
……………………………………………………………………………………………
……………………………………………………………………………………………
……………………………………………………………………………………………
……………………………………………………………………………………………
……………………………………………………………………………………………
……………………………………………………………………………………………
……………………………………………………………………………………………
……………………………………………………………………………………………
……………………………………………………………………………………………
……………………………………………………………………………………………
……………………………………………………………………………………………
……………………………………………………………………………………………
……………………………………………………………………………………………
……………………………………………………………………………………………
……………………………………………………………………………………………
……………………………………………………………………………………………
……………………………………………………………………………………………
……………………………………………………………………………………………
……………………………………………………………………………………………
……………………………………………………………………………………………
……………………………………………………………………………………………
……………………………………………………………………………………………
……………………………………………………………………………………………
……………………………………………………………………………………………
……………………………………………………………………………………………
……………………………………………………………………………………………
……………………………………………………………………………………………
……………………………………………………………………………………………
……………………………………………………………………………………………
……………………………………………………………………………………………
……………………………………………………………………………………………
……………………………………………………………………………………………
……………………………………………………………………………………………
……………………………………………………………………………………………
……………………………………………………………………………………………
……………………………………………………………………………………………
……………………………………………………………………………………………
……………………………………………………………………………………………
……………………………………………………………………………………………
……………………………………………………………………………………………
……………………………………………………………………………………………
……………………………………………………………………………………………
……………………………………………………………………………………………
……………………………………………………………………………………………
……………………………………………………………………………………………
……………………………………………………………………………………………
……………………………………………………………………………………………
……………………………………………………………………………………………
……………………………………………………………………………………………
……………………………………………………………………………………………
……………………………………………………………………………………………
……………………………………………………………………………………………
……………………………………………………………………………………………
……………………………………………………………………………………………
……………………………………………………………………………………………
……………………………………………………………………………………………
……………………………………………………………………………………………
……………………………………………………………………………………………
……………………………………………………………………………………………
……………………………………………………………………………………………
……………………………………………………………………………………………
……………………………………………………………………………………………
……………………………………………………………………………………………
……………………………………………………………………………………………
……………………………………………………………………………………………
……………………………………

QUESTIONNAIRES FOR OFFICE MANAGERS
Please tick your answer in the appropriate box

1. How long have you worked as a Manager in this building?
   (e) 0 – 5 years  
   (f) 6 – 10 years  
   (g) 11 – 25 years  
   (h) Over 15 years

2. What is your staff strength?
   (a) 0 – 10
   (b) 11 – 20
   (c) 21 – 50
   (d) 51 – 100
   (e) 101 – 200
   (f) Over 200

3. Do you have a minimum office space for each member of staff?
   (a) Yes
   (b) No

4. If no, how do you determine the adequacy of office space?
   (a) Fix in as many desks as possible
   (b) Fit in a fixed no. of staff in each office
   (c) We do not determine the adequacy of office space
   (d) Other method not mentioned .............

5. Do you intend to increase your staff strength in the near future?
6. Do you plan to increase office space when you have additional staff intake?
   (a) Yes   
   (b) No    

7. Are you renting this building?
   (a) Yes   
   (b) No    

8. Are you happy with the space arrangement in your offices?
   (a) Yes   
   (b) No    

9. If no, what are the problems being faced?
   (a) Lack of space   
   (b) Lack of privacy 
   (c) Untidy environment  
   (d) Insufficient natural ventilation  
   (e) Insufficient natural light  
   (f) Inadequate furniture  
   (g) Others please specify .........................................................  
                                   .................................................................

10. How do you hope to improve on the situation?
    (a) Rent or acquire more office space
11. Have you heard of Facilities Management?
   (a) Yes □
   (b) No □

12. If yes, do you practice any aspect of Facilities Management in your office?
   (a) Yes □
   (b) No □

13. If yes, What aspect?

   ........................................................................................................................................
   ........................................................................................................................................
   ........................................................................................................................................