

## INTEGRATING MIXED-USE DEVELOPMENTS TO ACHIEVE URBAN REVITALIZATION AND SUSTAINABLE LIVING ENVIRONMENT IN PORT HARCOURT

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**Abstract.** Mixed-use developments are becoming increasingly essential in achieving a sustainable and attractive environment in many cities today. This is because they promote social equity, economic vitality and environmental quality. This article discusses the concept of mixed-use developments for urban revitalization and sustainable living environment in Port Harcourt. The city of Port Harcourt, formerly known as the garden city is now characterized by its weakened vibrancy and huge deterioration of the entire city landscape. The absence of modern city planning and proper architectural designs over the years has overturned the solid and true well-earned name in the historic times. Today, urban cities in Nigeria suffer from little or no investment actions in proper urban developments and the continuous duplications of single use buildings. The aim of this proposition is to study the developmental practicability of a Mixed-use development. A Mixed-use development combines different uses in one structure or neighbourhood and has worked in so many developing cities all over the world. The contention being made is straight forward; if it can work there, then why can't it work here? The aim is to promote and motivate adequate urban community revitalization through the use of mixed-use spaces to curtail excessive land use thus creating a sustainable living environment.

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## INTRODUCTION

There are so many difficulties encountered in Port Harcourt due to the rapid urban growth in the city. Some of the threatening challenges include inadequate housing and basic amenities (electricity, water and waste disposal), people living in substandard environments, insufficient social amenities, poverty experienced by residents and the environment itself. The most persistent problem in Port Harcourt is lack of adequate infrastructure. There are other problems which include poor transportation network, low productivity and high rates of unemployment and underemployment.

Research studies showed that the quality of life and the environment has been on a rapid decline as compared to the rapid population growth in the city. These numerous urban problems could not be addressed in a single use development. Practically this study focuses on bringing about proper developments in order to revive, energize, strengthen and revitalize the cityscape for better economic, cultural and social welfare of its residents. The argument is that integrating mixed-use developments with proper planning can bring good effect and impact to the physical composition of our environment.

An investigation of the potential of a mixed used development as a driving force for upgrade in the quality of our livelihood would be viewed from different perspectives.

- 1.) Reacting to the urban environment by restoring the damaged name of the physical city.
- 2.) Encourage and Stimulate community revitalization
- 3.) Creating a city that is economically, environmentally and socially sustainable, and which meets the challenges of population growth.
- 4.) Attracting Economic Investments into the City

The integration design approach is one of the Design Principles which cuts across many urban areas around the globe. Mixed use development as a new theory claims to have solutions to the urban issues associated with single use development. The essential feature of a mixed-use development is that it brings back space to the city.

Mixed use developments are very vital in the creating diverse and sustainable urban cities and environments. Designed effectively, they can produce vibrant new neighbourhoods for residents, opportunities for business and employment growth, and thriving public spaces.

A mixed-use development is critical to achieving urban revitalization through the integration of a range of land uses in the heart of the city. It has been seen that development with a combination of different uses brings vitality to the city, adds life and safety to the streets and opens up opportunities which can be accessed easily by many residents, visitors and workers.

Mixed use developments can raise social cohesion, highlight cultural values and generate a considerable amount of environmental welfares.

### **The Concept of Mixed Use**

The best explanation of the concept of Mixed use was described as Alan Rowley as an “aspect of the internal texture of settlements” (Rowley, 1996 pg. 86). This settlement texture determines the character/quality of an area and is defined by grain, density and permeability (Rowley, 1996).

Another explanation was made by Eric Hoppenbrouwer and Erik Louw (2005) in an effort to expand upon Alan Rowley’s explanation. According to Hoppenbrouwer and Louw(2005), the typology of urban mixed use “is in the time dimension, where the theme of the whole building or premises are transformed or changed to another theme”.In his explanation he stated that the function component of mixed use development refers to individual land uses, utilizing residential and office. It is flexible to expand and integrate other uses.

### **Why Mixed Use: The Integrated Approach**

#### **Definition**

Mixed use development is a kind of urban development that combines several uses in one building or structure or group of structures – residential, cultural, commercial, office, and entertainment uses in any fusion. These functions and activities are fully integrated and provide complete pedestrian networks. (Grant, I. T., 2002)

Mixed use development, as defined in the mixed-use handbook, means any combination of commercial (e.g. Retail, office and entertainment) and non-commercial uses, such as residential uses, mixed vertically or

horizontally. Mixed use development handbook characterizes mixed use development as one that provides three or more significant revenue-producing uses fosters integration, density, and compatibility of land uses and creates a walk-able community with uninterrupted pedestrian connections. (Levitt, R L. and Schwanke D., 2003).

Mixed land use enables for a wide range of land uses including residential, commercial, and industrial integrated in one structure or area. This can be a single structure, a collection of several buildings, or an entire neighbourhood development area combining together retail outlets, outdoor/indoor restaurants and apartments/condos. It can bring a lot of life to a city corner while allowing for greater density. It brings people to live together, work, and relax in the same space.

These kinds of developments are usually located within the Centre of the city. The residents will live close to where they work, spend their leisure times, and therefore, reducing the need of a car. This means fewer cars on the streets and more pedestrian or bicycle-friendly environments.

A mixed-use development can take four general forms (Rabianski J. S & Clement J. S 2007).

- Firstly, a mixed-use development is in the form of a single high-rise structure situated on a single site and has two or more than two uses integrated in the structure. This form of the mixed-use development has retail on the street level with offices over the retail and either residential units or hotel space over the office space.
- Secondly, a mixed-use development could take the form of two or more high-rise structures on a single site where

each structure holds a different use. An office building, residential building and a hotel are the common integrations. Different forms of retail can also exist on the ground levels of each use.

- Thirdly, the mixed-use development can be a combination of different low-rise structures on a single site with retail on the ground level and residential units above in one structure and office space above in another structure.
- Fourthly, a mixed-use development can be a single mid-rise structure on a single site especially in an urban setting with retail on the ground level and residential or office above. Each of the four forms of the mixed-use developments can be built in an urban or suburban setting and could be considered an infill/expansion project.

Therefore, it is worthy of note that a mixed-use development is identified as being a popular scheme because it provides the following benefits:(American Planning Association, "Planning and Community Health Research Centre).

- Decreasing traffic bottlenecks.
- A wider housing variety and mass
- Reduced driving and walking distances between residential, businesses, and leisure activities
- More compact development
- Stronger neighbourhood character
- Pedestrian-friendly landscaped environments and greenery

The essence of mixed use developments is that it brings people closer to the things that they need on a day-to-day basis. It provides more

options for both residents and workers. Mixed use developments if designed well, can greatly increase the convenience and enjoyment in people's day-to-day lives.

Additionally, mixed-use developments can also make more efficient use of land and public infrastructure. The right mix of uses can be extremely efficient in using resources such as roadways, parking, water and even sewer.

### **The Role of Mixed Use Development in Port Harcourt City**

This project establishes a framework to not only deal with the current problems of this area, but also improve its formal and functional character in a way which will be proportionate to the development of the city and resulting demands in future.

#### **Social Role**

- Due to the convergence of the city's people to an area, contact increases and consequently creates social link and relationships i.e. social proximity encourages positive interaction and diversity.
- Security is achieved due to securing the permanent movement in the area.
- It enables more and better integrated social housing.

#### **Economic Role**

- It encourages a mixed land use thereby creating job opportunities near to homes and reducing the energy wasted in daily moving between home and work.
- Raising the value of residence.

- It enhances economic viability of development.

### **Environmental Role**

- It can increase the density of land use in addition to integration since it has mixed uses.
- Reduction on the dependence on cars, reducing road crowd, traffic congestion and air pollution respectively.
- It increases energy efficiency.

To ensure proper organization of the mixed used development in Port Harcourt City, there must be proper incorporation of all component uses. Also, day and night activities need to be balanced so that everything on the site does not shut down at the end of the workday i.e. Building a day/night balance.

### **Urban Revitalization**

Urban revitalization is a process by which a part of the city in social, urban or economic crisis undergoes a transformation, more or less deep, in order to reverse the trend of environmental declination. This is a set of initiatives aimed at reorganizing an existing city structure, particularly environments in decline due to economic or social reasons. The idea of urban revitalization is to balance the ever-increasing population in an Urban City. Using Port Harcourt as our focal point, this would best be done by integrating mixed use development. Urban revitalization will help to recreate the lost identity of Port Harcourt city.

### **Mixed Use Developments :Sustainable Living Environments**

The essential feature of a mixed use building is that it brings back space in the city, and so enhances its liveability. According to the



Mixed Use Handbook, sustainable mixed use developments are those that address social, environmental and economic issues at a master planning and individual building level. Mixed use integrates both domestic and non-domestic activities such as office, retail, community, etc. It is based on creating communities or urban villages that reduce the need to travel, thus creating a more vibrant area for the residents or users of the space.

The most important goal of mixed use developments is creating 'environmental sustainability' by bringing working, living and leisure activities into one area thereby reducing environmental impact. It also brings about economic sustainability by allowing businesses to be established and grow. Thirdly, it creates social sustainability and provides good quality place making with a community focus.

### **Creating a Sustainable living environment for Mixed Use developments in Port Harcourt**

In the future, major changes will be coming in how buildings are powered. In creating a sustainable living environment, the first step is finding the right mix of uses. Mixed use developments minimize the need for automobiles or other vehicles, thereby maximizing opportunities for its citizens. Where there are synergetic uses, you don't have to go far to get what you need. In terms of mixed use and urban development design, one has to keep in view, situations that are already existing/ the mixed use typology. As every city is unique, so is its urban typology and pattern. When one learns from the various mixed use precedence, it allows for the creation and continuation of authentic urban spaces.

Mixed use buildings will contribute to the process of giving the public domain back to the people and enhanced the quality of life of the residents of Port Harcourt city. This is because buildings with multiple functions boost the synergetic effect. Intelligently designed mixed use buildings adapt themselves to their use and users. Establishing mixed use developments in Port Harcourt will give back space to the city through creation of public areas within and outside the buildings such as parks, gardens, etc.

The following design response to the issues concerned with making mixed-use developments in Port Harcourt environmentally sustainable have been highlighted as follows:

1. Energy and Carbon Reduction Strategy- Passive measures and daylight access
2. Energy and Carbon Reduction Strategy- Active measures
3. Energy Recovery and Re-use
4. Speculative Buildings
5. Potable water use reduction strategy
6. Visual Sustainability

### **Principles of Mixed Use Development**

Mixed use development creates a sense of identity and place for residential use, and more populated and safer city environment.

The key to successful mixed-use development is adherence to a number of basic principles combined with an assessment of the economic and amenity synergies between prospective uses. These principles include:

- Physical factors
- Economic and market factors

- Design factors

### **Basic Planning Considerations**

Basic planning considerations for mixed use developments include the following parameters:

- The cultural, political, and social aspects of the city where the building will be located.
- A strong relationship within the city
- Sustainability
- Safety and security issues

In establishing an effective mixed-use structure, the following must be taken full consideration in order to ensure safety, functionality and aesthetic appeal of the spaces.

### **Integrated Theme**

The mixed-use development should have an integrated architectural theme that includes complementary materials, colours, and design details. The site should exhibit a unified theme that includes landscaping, amenities, signage and lighting.

### **Aesthetics and architectural enhancements**

The design of the structure should complement and enhance the design of the surrounding buildings and neighbourhood. This architectural continuity is critical to the success of the design.

### **Effective functional design**

It must incorporate an efficient functional layout that best utilizes structural systems to reduce costs while providing a pleasant patron experience.

### **Vehicular parking**

The function of a parking structure is critical to its success. It must have parking efficiency, entrance/exit locations, turning radii must be efficient and good traffic/ pedestrian circulation.

### **Safety and security**

Safety is a major concern in all areas today, particularly in parking facilities where people are often walking alone or at night. Therefore, it is of critical importance to incorporate the highest level of security features into every aspect of planning and design. The following are some of the most common strategies:

#### **Passive security measures**

- Maximize visibility and openness
- Increased lighting levels
- Floor to ceiling heights
- Access control
- Safe and inviting appearance

### **Building Design**

For a mixed-use development, the following architectural principles should be considered and incorporated in the overall design of buildings:

- Scale
- Visual order
- Balance
- Rhythm
- Proportion
- Colour and light

- Scale

## **CONCLUSIONS**

In considering the future of Port Harcourt City, one of the greatest considerations is how to achieve a sustainable living environment. Mixed use developments help residents to establish frequent contact and long term relationships with others. In response, the mixed use development must adapt, offering greater flexibility and efficiency, while helping the citizens to reach for a richer, healthier and better future.

The effort made to design mixed-use developments to revitalize the city of Port Harcourt is important because it can help the government to have a framework as a basis for starting these kinds of development in the City. Mixed use developments will boast a sustainable community, continuous connectivity and an environmentally friendly atmosphere since it integrates mixed use functions such as offices, residential, retail and supporting facilities.

Without proper revitalization of the city, there will be no proper development of the urban space that exists. This will make the city lose attraction and the activity of visitors.

## **RECOMMENDATIONS**

We live in a dynamic, ever changing world. Increasingly, today's cities need smartly designed buildings and spaces that can perform many functions. Properly planned mixed use developments are recognized as an excellent way to achieve urban revitalization and promote sustainable living environment, as well as creating attractive and

vibrant communities by providing several uses within a development. Mixed use developments help residents to establish frequent contact and long-term relationships with others. In response, the mixed-use development must adapt, offering greater flexibility and efficiency, while helping citizens to reach for a richer, better and healthier future.

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