

**ADAPTABILITY STRATEGIES AND SPACE COMPATIBILITY IN  
THE DESIGN OF A COWORKING ENTERTAINMENT FACILITY IN  
LEKKI, LAGOS**

**OLUSORE SHALOM PELUMI  
(13CA015705)**

**SEPTEMBER, 2021**

**ADAPTABILITY STRATEGIES AND SPACE COMPATIBILITY IN  
THE DESIGN OF A COWORKING ENTERTAINMENT FACILITY IN  
LEKKI, LAGOS**

**BY**

**OLUSORE SHALOM PELUMI**

**(13CA015705)**

**B.Sc Architecture, Covenant University, Ota**

**A DISSERTATION SUBMITTED TO THE SCHOOL OF  
POSTGRADUATE STUDIES IN PARTIAL FULFILLMENT OF  
THE REQUIREMENTS FOR THE AWARD OF MASTERS OF  
SCIENCE (M.Sc) DEGREE IN ARCHITECTURE, COVENANT  
UNIVERSITY, OTA, OGUN STATE, NIGERIA**

**SEPTEMBER, 2021**

## ACCEPTANCE

This is to attest that this dissertation is accepted in partial fulfilment of the requirements for the award of the degree of Master of Science in Architecture in the Department of Architecture, College of Science and Technology, Covenant University, Ota, Ogun State, Nigeria

**Mr. John A. Philip**

(Secretary, School of Postgraduate Studies)

.....

Signature and Date

**Prof. Akan B. Williams**

(Dean, School of Postgraduate Studies)

.....

Signature and Date

## **DECLARATION**

I, **OLUSORE, SHALOM PELUMI (13CA015705)**, declare that I carried out this research under the supervision of Dr. Adedapo A. Oluwatayo of the Department of Architecture, College of Science and Technology, Covenant University, Ota, Ogun State, Nigeria. I attest that the dissertation has not been presented either wholly or partially for the award of any degree elsewhere. All sources of data and scholarly information used in this dissertation are duly acknowledged.

**OLUSORE, SHALOM PELUMI**

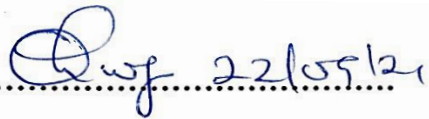
.....

Signature and Date

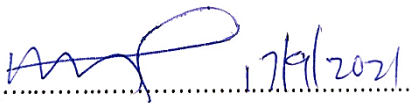
## CERTIFICATION

We certify that this dissertation titled “**ADAPTABILITY STRATEGIES AND SPACE COMPATIBILITY IN THE DESIGN OF A COWORKING ENTERTAINMENT FACILITY IN LEKKI, LAGOS**” is an original research work carried out by **OLUSORE, SHALOM PELUMI (13CA015705)** in the Department of Architecture, College of Science and Technology, Covenant University, Ota, Ogun State, Nigeria, under the supervision of Dr. Adedapo A. Oluwatayo. We have examined and found this work acceptable as part of the Master of Science in Architecture award requirements.

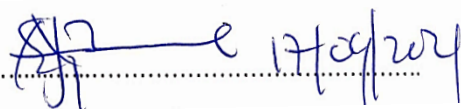
**Dr. Adedapo A. Oluwatayo**  
(Supervisor)

  
.....  
Signature and Date

**Prof. Akunnaya P. Opoko**  
(Head of Department)

  
.....  
Signature and Date

**Prof. Babatunde E. Jaiyeoba**  
(External Examiner)

  
.....  
Signature and Date

**Prof. Akan B. Williams**  
(Dean, School of Postgraduate Studies)

.....  
Signature and Date

## **DEDICATION**

This research is first dedicated to God, for making it possible for me to get to this point. It is dedicated to my parents and my inner circle for being my greatest supporters. I also dedicate this to all creatives out there making a mark even without having access to all the necessary resources.

## ACKNOWLEDGEMENT

First and foremost, I want to give thanks to God, Yahweh, for the strength, grace, favour and mercy to go through this programme, and bearing all my burdens through it all, thank you Father.

I would like to thank God for his son, Dr. David O. Oyedepo, for creating and providing this platform and citadel of learning, Covenant University. Thank you so much sir, for you have been an inspiration to keep focusing on what is true. I would like to appreciate the efforts of the Vice Chancellor of Covenant University, Professor Abiodun H. Adebayo, the Registrar Dr. Oluwasegun P. Omidiora, the Dean, School of Postgraduate Studies, Professor Akan B. Williams, Sub-Dean School of Postgraduate Studies, Dr. Emmanuel O. Amoo, and the Head of Department of Architecture, Prof. Akunnaya P. Opoko for their commitment towards the successful completion of my Master's Degree programme. I would be forever grateful.

To my supervisor, Dr. Adedapo A. Oluwatayo, I just want to say thank you for your guidance and assistance, thank you for being patient with me, and I appreciate all that you did for me from the inception of the project till the conclusion, thank you so much and God bless you. I would like to say thank you to my studio supervisors and all the lecturers in the department for all the contributions and support you have given through this journey: Dr. Oluwole Alagbe, Dr. Bukola Adewale, Dr. Abraham Owoseni, Dr. Eghosa Noel Ekhaese, Dr. Oladunni Izobo-Martins and Dr. Isidore C. Ezema.

I would like to appreciate Orange VFX Studios, Workcentral Nigeria, and Magic Carpet Studios, for welcoming me into your space, providing me with a smile and the data necessary for this project. I truly appreciate your assistance with this project.

I would like to say thank you to my parents, Pastor Israel and Mrs. Olubunmi Olusore, for their love and support, from the beginning of this journey till this point, thank you and love you. I want to say thank you to Mr. Yinka Oluwatimehin, for sponsoring me through this journey, providing the funds necessary and making it possible to reach this point, God bless you sir.

Thank you Joys Olusore, Osaze Iyen, Jedidiah Philip, Chinenye Obiakor, Korede Omotoye, Isaac-Laughter Opeyemi, Naomi Airen, my fellow course mates, my friends and family, for the helps you provided and being there for me in my times of need through this journey, thank you so much.

# TABLE OF CONTENTS

<b>CONTENT</b>	<b>PAGE</b>
<b>COVER PAGE</b>	
<b>TITLE PAGE</b>	<b>i</b>
<b>ACCEPTANCE</b>	<b>ii</b>
<b>DECLARATION</b>	<b>iii</b>
<b>CERTIFICATION</b>	<b>iv</b>
<b>DEDICATION</b>	<b>v</b>
<b>ACKNOWLEDGEMENT</b>	<b>vi</b>
<b>TABLE OF CONTENTS</b>	<b>vii</b>
<b>LIST OF FIGURES</b>	<b>x</b>
<b>LIST OF TABLES</b>	<b>xi</b>
<b>LIST OF PLATES</b>	<b>xii</b>
<b>LIST OF MAPS</b>	<b>xiv</b>
<b>ABSTRACT</b>	<b>xv</b>
<b>CHAPTER ONE: INTRODUCTION</b>	<b>1</b>
1.1 Background to the Study	1
1.2 Statement of the Research Problem	2
1.3 Research Questions	4
1.4 Aim	5
1.5 Objectives	5
1.6 Justification of the Study	5
1.7 Scope of the Study	5
1.8 Client	6
1.9 Users	6
1.10 Definition of Terms	6
<b>CHAPTER TWO: LITERATURE REVIEW</b>	<b>8</b>
2.1 The Coworking Concept	8
2.1.1 The Coworking Workspace	8
2.1.2 Types of Coworking Workspaces	9
2.1.3 Challenges with Coworking spaces	14
2.2 Adaptability Framework	17
2.2.1 Concept of Adaptability	18
2.2.2 Approaches to Adaptability	21
2.2.3 Adaptability Types and Strategies	35
2.2.4 Design Resources for Adaptability	40
2.3 Achieving Space Compatibility in a Coworking Entertainment Facility	44
2.3.1 Concepts tied to Space Compatibility	44
2.3.2 Elements of space compatibility	45



<b>CHAPTER THREE: RESEARCH METHODOLOGY</b>	<b>47</b>
3.1 Research Philosophy	47
3.2 Research Approach	47
3.3 Research Design	48
3.4 Study population	49
3.5 Choice of Sampling Method	50
3.6 Sample Size	50
3.7 Methods of Data Collection	51
3.8 Methodology by Objective	51
3.9 Validity and reliability of Research	53
3.9.1 Ethical Considerations	53
<b>CHAPTER FOUR: RESULTS AND DISCUSSIONS</b>	<b>54</b>
4.1 Survey Analysis	54
4.1.1 General profile of respondents	54
4.1.2 User perception of Space Compatibility	60
4.1.3 Adoption of Adaptability Strategies	62
4.1.4 Influence of Adaptability Strategies on Users' Perception of Space Compatibility	65
4.2 Case Study Analysis	76
4.2.1 Case Study 1: Orange VFX Production Office	76
4.2.2 Case Study 2: Workcentral Nigeria, Ogunlana Hub	83
4.2.3 Case Study 3: Workcentral Nigeria, Alaka Hub	91
4.2.4 Case Study 4: Magic Carpet Studios	102
4.3 Site Analysis Results	112
4.3.1 Site Selection and Location	112
4.3.2 Site Conditions and Features	113
4.3.3 Environmental factors	114
<b>CHAPTER FIVE: DESIGN CRITERIA AND APPROACH</b>	<b>119</b>
5.1 Project Goals and Objectives	119
5.1.1 Project Goals	119
5.1.2 Project Objectives	119
5.2 Functional and Space Requirements	119
5.2.1 Spaces, Sizes and Relationships	120
5.2.2 Performance Requirement	122
5.3 Technological and Environmental Criteria	124
5.3.1 Materials and Finishes	124
5.3.2 Services	124
5.4 Legal and Planning Regulations	125
<b>CHAPTER SIX: DESIGN PHILOSOPHY, PROPOSAL AND CONCEPT</b>	<b>126</b>
6.1 Design Philosophy	126
6.2 Design Concept	126

6.3 Site Zoning	126
6.4 Bubble Diagram	127
6.5 Circulation Pattern (pedestrian and vehicular)	129
6.6 Conceptual Plan	129
<b>REFERENCES</b>	<b>130</b>
<b>APPENDIX A: LETTER OF INTRODUCTION</b>	<b>136</b>
<b>APPENDIX B: QUESTIONNAIRE</b>	<b>137</b>
<b>APPENDIX C: OBSERVATION GUIDE</b>	<b>140</b>
<b>APPENDIX D: DRAWINGS</b>	<b>142</b>

## LIST OF FIGURES

<b>FIGURE</b>	<b>TITLE</b>	<b>PAGE</b>
Figure 2.1:	The Approaches of Adaptability	21
Figure 2.2:	Kimono folds to fit user's shape	23
Figure 2.3:	Le Corbusier's (1964) Maison Domino (plan libre)	24
Figure 2.4:	Plan of Kahn's served (white boxes) and servant (coloured plug on) spaces	24
Figure 2.5:	Five components of a moveable architecture.	27
Figure 2.6:	Movable Connection Types	28
Figure 2.7:	Actuator role in the movable system	28
Figure 2.8:	The Shearing Layers of Change based on Brand (1994)	33
Figure 2.9:	The adaptable futures framework	36
Figure 2.10:	Framework showing the Adaptability Strategies	37
Figure 2.11:	Strategies in relationship to other dimensions	37
Figure 2.12:	Space compatibility elements	45
Figure 4.1:	A pie chart showing the gender percentage of respondents	54
Figure 4.2:	A bar chart showing the age percentage of respondents	55
Figure 4.3:	A pie chart showing the marital status percentage of respondents	56
Figure 4.4:	A pie chart showing the level of education percentage of respondents	56
Figure 4.5:	A pie chart showing the work status percentage of respondents	57
Figure 4.6:	A bar chart showing the percentage of respondents and how long they have used these facilities	58
Figure 4.7:	A pie chart showing the profession percentage of respondents	58
Figure 4.8:	A pie chart showing the percentage of respondents gotten from various facilities	59
Figure 4.9:	A pie chart showing the percentage of respondents based on building types	59
Figure 4.10:	Site view of Orange VFX Production Office	77
Figure 4.11:	Site view of Workcentral Ogunlana Hub	84
Figure 4.12:	Site view of Workcentral Alaka Hub	92
Figure 4.13:	Site view of Magic Carpet Studio	103
Figure 4.14:	Wind rose for Lekki showing how many hours per year the wind blows from the indicated direction	117
Figure 4.15:	Showing the Average wind speeds per month	118
Figure 4.16:	showing the average temperatures and precipitation levels	118
Figure 6.1:	showing the privacy (left) and noise (right) zonings of the site	127
Figure 6.2:	Site circulation pattern	129
Figure 6.3:	Site layout	129

## LIST OF TABLES

<b>TABLE</b>	<b>TITLE</b>	<b>PAGE</b>
Table 2.1:	Change Drivers accumulated from the literature	20
Table 2.2:	Summary of characteristics for spatial strands	25
Table 2.3:	Types of moveable structures	27
Table 2.4:	Summary of characteristics for physical bits approaches	30
Table 2.5:	Open Building's 'two-fisted' approach	31
Table 2.6:	Leupen (2005) Layer functions	34
Table 2.7:	Summary of characteristics for Building configuration approaches	35
Table 2.8:	Building Parameters from Literature	41
Table 2.9:	Critical Design Parameters in Literature	41
Table 2.10:	Categories and sub-categories developed to organise design guidelines	42
Table 2.11:	Overview of design tactics from the Literature	43
Table 2.12:	An overview of professions in the entertainment industry	46
Table 3.1:	Research design by objectives	49
Table 3.2:	List of Selected Coworking Spaces in Lagos	50
Table 3.3:	List of Identified Entertainment Studios in Lagos	50
Table 3.4:	Showing selected samples of coworking and entertainment spaces in Lagos.	51
Table 3.5:	Showing the reliability statistics for questionnaire instrument	53
Table 4.1:	Percentages of space requirements	60
Table 4.2:	Descriptive statistics and frequencies on users' perception of space compatibility of the office spaces	61
Table 4.3:	Descriptive statistics and frequencies of adaptability strategies	62
Table 4.4:	Result of regression analyses of the influence of adaptability strategies on space compatibility	68
Table 4.5:	Descriptive statistics and assessment of adaptability strategies employed in Orange VFX Production Office	81
Table 4.6:	Descriptive statistics and assessment of adaptability strategies employed in Workcentral Nigeria Ogunlana Hub	88
Table 4.7:	Descriptive statistics and assessment of adaptability strategies employed in Workcentral Nigeria Alaka Hub	99
Table 4.8:	Showing an assessment of adaptability strategies employed in Magic Carpet Studios	110
Table 5.1:	Spatial program of primary spaces	120
Table 5.2:	Spatial program of secondary spaces	120
Table 5.3:	Spatial program of technical spaces	121
Table 5.4:	Spatial program of support spaces	122
Table 5.5:	Spatial program of administrative spaces	122

## LIST OF PLATES

<b>PLATE</b>	<b>TITLE</b>	<b>PAGE</b>
Plate 2.1:	Showing a view of a conventional/open coworking space	10
Plate 2.2:	Showing a view of a high-end / full-service workspace	11
Plate 2.3:	Showing a view of a corporate/professional workspace	11
Plate 2.4:	Showing the private workspace of PUMA	12
Plate 2.5:	Showing a view of a minimal workspace	13
Plate 2.6:	Showing a view of a shared artist workspace	13
Plate 4.1:	A panoramic capture of the building accommodating Orange VFX	76
Plate 4.2:	Floor plan layout of Orange VFX Production Office	77
Plate 4.3:	Building stairs that serves as entrance to the office space	78
Plate 4.4:	showing the Reception	79
Plate 4.5:	Panorama view of the open office space	79
Plate 4.6:	Panorama view of shared office space	80
Plate 4.7:	Office Corridor (left) and Office Kitchen (right)	80
Plate 4.8:	Panorama view of the exterior of workcentral ogunlana hub.	83
Plate 4.9:	Floor plan layout of Workcentral Nigeria Ogunlana Hub	84
Plate 4.10:	A panorama showing the open office space	85
Plate 4.11:	A panorama of the reception	85
Plate 4.12:	Showing the corridor (left), the glass partitioning (middle), and the steel structural column (left)	86
Plate 4.13:	Panorama showing the shared office space	87
Plate 4.14:	Showing the exterior structure of reception	87
Plate 4.15:	Showing the electrical fittings	87
Plate 4.16:	Exterior view of Workcentral Nigeria Alaka Hub	91
Plate 4.17:	Panorama view of buildings in the Alaka Hub	91
Plate 4.18:	Floor plan layout of Workcentral Nigeria Alaka Hub (Ground Floor - Left; First Floor - Right)	92
Plate 4.19:	Panorama view of the coworking (open office) space	93
Plate 4.20:	Coworking (Open Office) Space	93
Plate 4.21:	Panorama view of the reception	93
Plate 4.22:	Panorama view of an arranged shared office space	94
Plate 4.23:	Panorama view of a shared office space (not arranged)	94
Plate 4.24:	Panorama view of the meeting room	94
Plate 4.25:	Panorama view of the conference room	95
Plate 4.26:	Panorama view of the kitchenette space	95
Plate 4.27:	Showing the corridor (left) and the convenience (right)	95
Plate 4.28:	The vertical circulation (stair) (left) and storage under the stairs (right)	96
Plate 4.29:	View through a window showing the roof over the ground floor	97
Plate 4.30:	Drainage and Piping on site (left), Floor Electrical Outlet (middle), and Wall Electrical Outlet (right)	98
Plate 4.31:	An outdoor sit-out spot.	98

Plate 4.32: Outdoor activity at the Alaka hub.	99
Plate 4.33: An exterior view of Magic Carpet Studio	102
Plate 4.34: An exterior view of Magic Carpet Studio from within the site	102
Plate 4.35: Floor plan layout of Magic Carpet Studio (Ground floor - Left; First floor - Right)	103
Plate 4.36: Panorama of colaboratory space	104
Plate 4.37: Panorama of meeting room	104
Plate 4.38: Panorama of general office space	104
Plate 4.39: Panorama of 2D animation stuudio	104
Plate 4.40: Panorama of sound studio	105
Plate 4.41: Panorama of ‘unfinished’ shared office space	105
Plate 4.42: Panorama of kitchen	105
Plate 4.43: The corridor of the studio	106
Plate 4.44: The vertical circulation (stairs) (left) and a relaxation space under the stairs (right)	106
Plate 4.45: Relaxation space located under the stairs	107
Plate 4.46: showing the ceiling finishes for the meeting room (left) and general office space (right)	107
Plate 4.47: Electrical fitting	108
Plate 4.48: Panorama of the external environment	109
Plate 4.49: Outdoor relaxation spot (sit-out)	109
Plate 4.50: Adaptable wall table top	111
Plate 4.51: The proposed site	113
Plate 4.52: Showing Palm Springs Road, the Access Road and Proposed Site (L-R)	114
Plate 4.53: Showing vegetation on the site	115
Plate 4.54: Showing the vegetation on the site	115
Plate 4.55: Showing the drainage system around the site	116
Plate 6.1: Bubble diagram of building spaces	127
Plate 6.2: Bubble diagram of ground floor spaces	128
Plate 6.3: Bubble diagram of typical upper floor spaces	128

## LIST OF MAPS

<b>MAP</b>	<b>TITLE</b>	<b>PAGE</b>
Map 4.1:	Site Location at Palm Springs Road, Lekki, Lagos, Nigeria	112

## ABSTRACT

Coworking spaces have grown to become significant in the business world, with such spaces being adopted more often by the information technology industry. However, the entertainment industry is experiencing an increase in the number of freelancers. This has led to a dearth in suitable infrastructure in the Nigerian context. Adaptability of spaces is often considered an important feature that makes the building useful for changing work environment. To what extent are such spaces compatible with their users' requirements? Very little study exists on the extent to which adaptability strategies influence users' perception levels in relation to compatibility within coworking and entertainment spaces, particularly in the Nigerian context. This study therefore aims at designing a coworking entertainment facility for freelancers in the entertainment industry in Lagos, Nigeria using adaptability strategies that are found to influence the level of compatibility between and within spaces positively. The study adopted a questionnaire survey and case studies of existing coworking and entertainment facilities in obtaining data on the adaptability strategies and the users' perception of compatibility in such spaces. Compatibility looked at areas such as user's satisfaction with spaces relating to their jobs, activities and the requirements. Quantitative data were analysed using frequencies, percentages, mean ranking and regression analyses. Qualitative data were content-analysed. Results show that the ability of spaces to accommodate users' job requirements, while achieving a level of security and providing alternative spaces for their activities were influenced by the adaptability strategies applied by the coworking and entertainment spaces studied. Such adaptability strategies include "use of non-fixed objects", "variety of room sizes", "frame construction", and others. The design adopted these adaptabilities strategies that influenced these space compatibility dimensions positively.

**Keywords:** Adaptability, Coworking, Space Compatibility, and Entertainment Studio