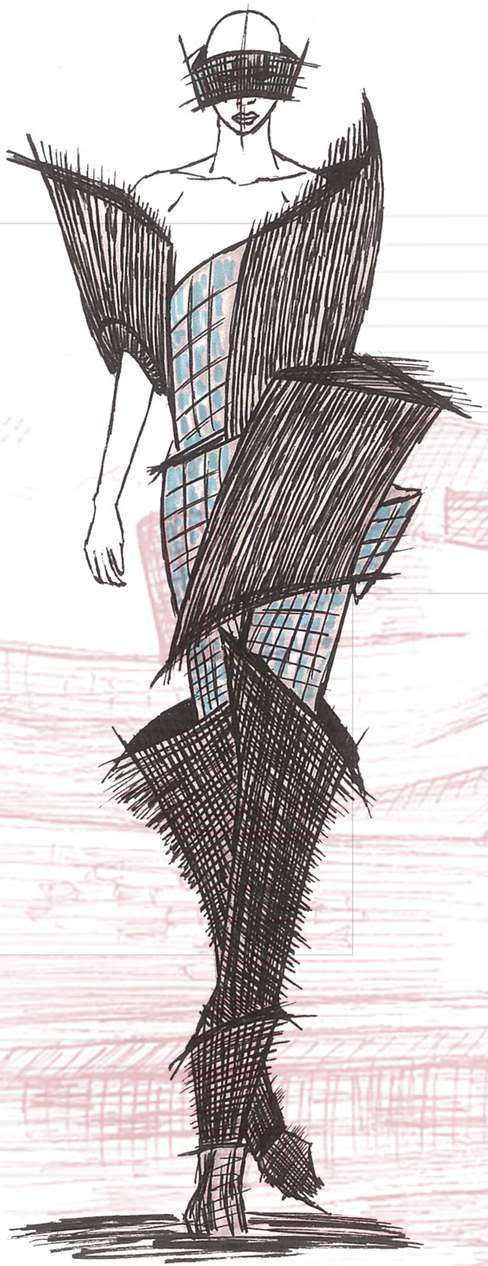


FORM FOLLOWS FASHION

TRANSLATING HAUTE COUTURE CRAFT INTO ARCHITECTONICS



FORM FOLLOWS FASHION

Translating Haute Couture Craft into Architectonics

A research report submitted to the School of Architecture and Planning, Faculty of Engineering and the Built Environment, University of the Witwatersrand, as a partial fulfillment of the requirements for the Master of Architecture Professional (M.Arch Prof.) postgraduate degree.

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Date: 24 February 2025

Declaration

I, **Mercy Ndanu Muting'a** declare that the contents of this research report are the results of my own unaided work. It has been submitted as a partial requirement for the Master of Architecture Professional (M.Arch Prof.) degree, Faculty of Engineering and the Built Environment, University of the Witwatersrand. No portion of the work referred to in the research report has been submitted in support of an application for another degree or qualification for this, or other university or institute of higher education.

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Form Follows Fashion

ACKNOWLEDGEMENTS

The development and completion of this research report would not have been possible without the assistance of a number of individuals.

Firstly, I would like to give praise and honour to God for bringing me thus far in my educational career. Thank you for the gifts of strength, perseverance, knowledge and wisdom that have empowered and driven me through the hardships of university.

Secondly, I would like to express my earnest gratitude to my research supervisor Adjunct Professor Hilton Judin for his scholarly support, advice, criticisms and corrections necessary for the development of this research report. Your patience and acquired knowledge were an integral part in the process of research and in the research report.

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ACRONYMS AND ABBREVIATIONS

BDP - Business Development Plan
BIM - Building Information Modeling
BRT - Bus Rapid Transit
CAD - Computer Aided Design
CBD - Central Business District
COJ - City of Johannesburg
GIS - Geographic Information System
HVAC - Heating, Ventilation, Air and Cooling
JDA - Johannesburg Development Agency
JHC - Johannesburg Housing Company
JPC - Johannesburg Property Company
IDP - Integrated Development Plan
MEP - Mechanical, Electrical and Plumbing
OCED - Organisation for Economic Co-Operation Development
SACN - South African Cities Network
UDF - Urban Development Framework

ABSTRACT

"Fashion is Architecture, it's just a matter of proportions"
~ Gabrielle 'Coco' Chanel (Leete, 2022)

Architecture, urban design and urban planning by definition can be opened up to interpretation, much like the reverence of an artist (Barzandeh, 2010). As jacks of all trades, these professions inspire and inform trends through the use and application of colour theories, materials, geometries, design principles and structural techniques (Carroll, 2000). In fashion design, a parallel industry and profession, these objectives, principles and techniques are applied in a similar way to varied subjects seeking to achieve and translate different visions (Barzandeh, 2010). Although seemingly geared in diverging directions, the collision of these industries clasps the potential to create innovative and impeccable end results.

Architecture and fashion design have been in prolific dialogue for millennia. They have always been tightly knitted in concept, theory and practice as they originate from the same root, which is art, as critic Noel Carroll described in his book 'Theories of Art Today'. (Carroll, 2000). Mark Gelernter, an academic and architectural historian asserts that architecture is habitable art while fashion is wearable art (Gelernter, 1995). Fashion designers have consistently appropriated architectonic components into their creations, while architects are increasingly applying elements found in fashion design into building forms (Leung, 2010). When viewed in isolation, these professions appear to be two distinct and separate industries and art forms. However, when these two fields come together, they give rise to a formidable proposition (Barzandeh, 2010).

In this new age, the social expression of fashion and architecture have seen revolutionary evolution, and the relationship between the two has become more apparent in each field. This thesis delves into the "dynamic connection" between fashion design and architecture, with a particular emphasis on the societal aspects of architecture and fashion design. It examines how these two fields impact individuals in society over time, influenced by factors such as technology, art, science, and culture. It creates and proposes a blueprint for a fashion institute and museum that recognizes the bold nature of fashion trends, the surface appearance of fashion design, and how it can be interconnected not only with architectural aesthetics but also with functional and spatial design aspects.

The objective of this thesis is not just to effectively address the functional, formal, and technological challenges of this relationship between fashion design and the built environment, but also to suggest an urban and architectural design approach or master plan that can be implemented in analogous locations across Johannesburg and Africa at large. As the late Virgil Abloh expressed, "Young architects can change the world by not building buildings". Young architects can change the world by creating successful and functional spaces through processes of interdisciplinary and collaborative efforts that respond to both contemporary needs and future issues.

KEY WORDS: Architectonics, Haute Couture, Architecture, Fashion Design, Urban Design, Master Planning, Urban Renewal

TABLE OF CONTENTS

CHAPTER 01
INTRODUCTION
1.1 Introduction
1.2 Rationale for Research
1.3 Problem Statement
1.4 Introduction to the Study Area
1.5 Structure of the Research Paper

CHAPTER 02
THE DIALOGUE BETWEEN FASHION AND ARCHITECTURE
2.1 Introduction
2.2 The Chronology of Fashion Design and Architecture
2.3 The Influence of Art on Fashion Design
2.4 The Influence of Science on Fashion Design
2.5 The Influence of Technology on Fashion Design
2.6 The Influence of Culture, Identity and Society on Fashion Design and Architecture
2.6 Haute Couture Fashion Design Principles in Architecture

CHAPTER 03
RESEARCH METHODS
3.1 Introduction
3.2 Research Approach
3.3 Limitations of the Study
3.4 Ethics Issues and Clearance

CHAPTER 04
FIELD RESEARCH AND DATA ANALYSIS
4.1 Introduction
4.2 Macro Context Analysis
4.3 Micro Context Analysis

CHAPTER 05
THE NEW FASHION KAPITOL
5.1 An Introduction to the New Fashion Kapitol - The Creative Nexus
5.2 Design Brief and Approach
5.3 Design Programing
5.4 Development and Design Rationale

CHAPTER 06
DESIGN DEVELOPMENT
6.1 Introduction
6.2 Design Charette and Concept Generation
6.3 Building Design Elements
6.4 The Proposed Development

CHAPTER 07
TECHNICAL SYSTEMS
7.1 Introduction
7.2 Building Technical Elements
7.3 Sustainability Principles

CHAPTER 08
CONCLUSION
8.1 Introduction
8.2 Summary of Findings
8.3 Achieving the Research Objectives
8.4 Challenges and Limitations of the Research



CHAPTER 01

INTRODUCTION

CHAPTER 01. INTRODUCTION



1.1 BACKGROUND TO RESEARCH

The interplay between architecture and fashion has become strengthened over time, as both industries share familiar principles and ideas rooted in art, form, structure, aesthetics and technology (Miles, 2008). However, according to the architect Barzandeh, their connection may not be as remote as one may think. Both industries convey aspects of individual, societal and cultural identity, embodying the values of their users and the zeitgeist (Barzandeh, 2010). Throughout history, their connection has been mutually beneficial, with clothing and buildings often mirroring each other in design, style and proportions (Karaminas, 2007). This correlation has been viewed as an intuitive one, given their shared purpose of providing shelter and form for the human body as well as their utilisation of 2-dimensional materials to create space and volume (Miles, 2008). Despite these parallels, they possess inherent distinctions. Both fields cater to human needs in-spite of varying proportions, sizes and forms (Gelernter, 1995). Fashion tends to be transient, reflecting the current trends, whereas, architecture traditionally embodies durability, grandeur and permanence (Barzandeh, 2010).

In recent times, the interaction between fashion and architecture has grown incredibly fascinating. Some in the fashion design realm argue that fashion exerts a significant influence on architecture, while others argue vice versa (Karaminas, 2007). Author and journalist in fashion, architecture, textiles and design Bradley Quinn (2010: 2017) states that art and architecture drawing inspiration from fashion design leads to instances where buildings serve as metaphors for garments. With advancements in materiality, technology and computer aided design softwares, the boundaries of both fields are expanded and even blurred, buildings are adopting more fluid forms, and garments are taking on more architectural attributes (Kinghorn, 1996). Architects are incorporating techniques traditionally associated with dressmaking such as layering, pleating, folding, weaving and draping, while fashion designers are turning to architecture for inspiration on constructing garments that explore novel concepts of volume and structure (Miles, 2008). Moreover, they are often drawing on the intellectual principles and concepts inherent in architecture to push the boundaries of fashion design.

Image 01. Architecture and Fashion, an effortless integration.

Adapted from: 7 Designs + Development, 2024 (https://www.7ddev.com/architecture-fashion-a-seamless-connection/)

This thesis showcases the forefront of fashion design and architecture, illustrating asymbiotic relationship that has enabled each field to innovate novel and captivating approaches for human presence in both public and private realms. Over the past twenty-five years alone, the fusion of fashion design and architectural design has opened up unwitted interpretations and potentials within both spheres of creativity (Miles, 2008). The potential for unexplored connections between them hints at promising prospects for the futures of both industries.

While recognising the established correlation between architecture and fashion, the main argument of this research paper delves into the depth of the influence this connection has exerted on each field. It explores the particular avenues through which this influence has positively affected users. This thesis proposes an inquiry into how fashion design has impacted architecture, focusing on fundamental fashion design principles such as pleating, weaving, draping, folding and layering. The objective is to translate these principles into an architectural framework, specifically in the design of a fashion design institute, archive and commerce center for the City of Johannesburg. Using the urban conditions of Johannesburg's Fashion District, this choice of case will be justified, probing the viability and applicability of haute couture craft in large scale architectural interventions.





Images 02 and 03. Fashion follows form

Source: 7 Designs + Development, 2024 (https://www.7ddev.com/architecture-fashion-a-seamless-connection/)

In the context of Johannesburg, a city rich with diverse cultures, histories, and a dynamic urban fabric, the intersection of architecture and fashion offers profound benefits. The city, known for its vibrant fashion district, can significantly leverage this relationship to enhance both its urban landscape and cultural milieu. The convergence of these two disciplines in Johannesburg can foster a unique identity for the city, intertwining its architectural and sartorial heritage.

The architectural landscape of Johannesburg, characterised by a blend of historical and contemporary styles, can be invigorated by incorporating fashion design principles. This integration can lead to the creation of dynamic, adaptive, and aesthetically engaging buildings that resonate with the city's diverse cultural expressions. Fashion-inspired architectural designs can bring a sense of fluidity, movement, and personalisation to urban spaces, making them more relatable and appealing to the city's inhabitants.

In the fashion district, this relationship can catalyse a renaissance of creativity and innovation. By drawing architectural concepts into fashion design, local designers can create garments and accessories that reflect Johannesburg's unique architectural motifs, textures, and colours. This cross-pollination can result in a distinctive fashion identity that celebrates the city's architectural heritage and urban vibrancy. Moreover, the fashion district itself can be revitalised through architectural interventions that provide innovative spaces for design, production, and retail, enhancing the overall experience for designers, shoppers, and visitors.

Culturally, the fusion of architecture and fashion can serve as a powerful medium for storytelling and expression. In a city marked by its historical struggles and triumphs, this interdisciplinary approach can provide new ways to articulate and celebrate its multifaceted identity. Architectural structures inspired by fashion can become landmarks that embody the spirit of Johannesburg, while fashion designs influenced by architecture can serve as wearable art that narrates the city's evolving narrative.

Furthermore, this synergy can contribute to the economic vitality of Johannesburg. By fostering a collaborative environment between architects and fashion designers, the city can position itself as a hub of innovation and creativity. This can attract investment, tourism, and talent, further bolstering the local economy. The creation of signature buildings and fashion collections that draw from this interdisciplinary approach can put Johannesburg on the global map as a city that champions cutting-edge design and cultural fusion.

In conclusion, the relationship between architecture and fashion holds transformative potential for Johannesburg. It offers an opportunity to re-imagine the city's built environment and fashion identity, creating spaces and designs that are not only visually stunning but also deeply resonant with the cultural and historical fabric of the city. As Johannesburg continues to evolve, embracing this interdisciplinary approach can pave the way for a future where architecture and fashion collaboratively shape the urban experience, enriching the lives of its residents and visitors alike.

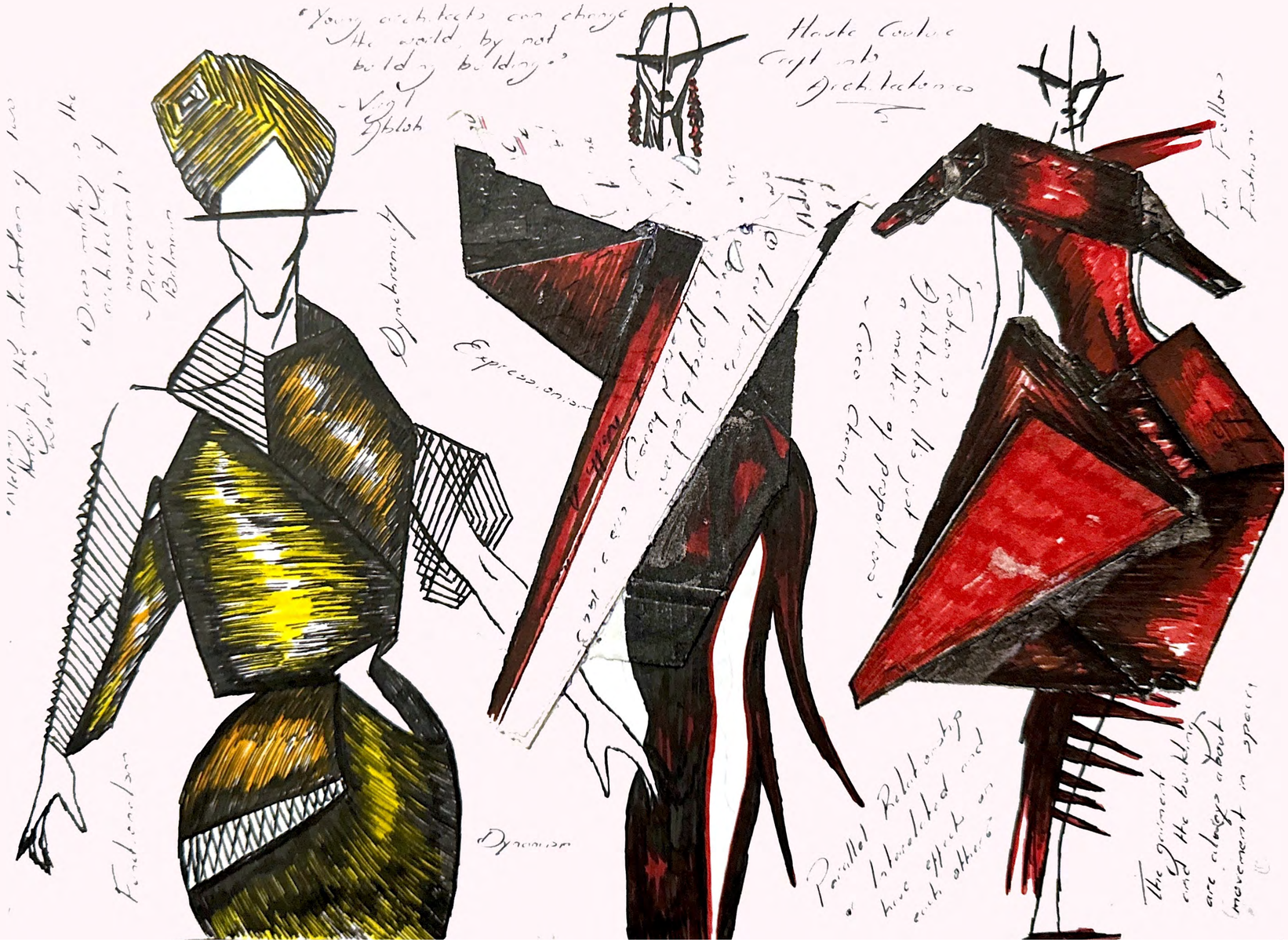


Image 04. Mind mapping. Authors own sketches

1.2 RATIONALE FOR RESEARCH

Amidst the landscape of Johannesburg's Fashion District characterised by economic expansion, unchecked population growth, environmental and building degradation, and social deterioration, it has become imperative to examine the current trajectory of urban revitalisation on the chosen site (Mutinga, 2018). This examination should align with a path towards innovation by integrating and employing fashion design principles while working towards an architectural solution. The case study facilitates a context-dependent acquisition of knowledge aimed at understanding the translation of haute couture craft into architectonics and the potential advantages it brings, thereby offering insights into the nature of master planning and urban renewal processes within the city (Basset et al, 2002; Flyvbjerg, 2006).

Subsequent assessment of the interplay between fashion design and architecture will enable the appraisal of the benefits associated with the merging of these agendas (Lee, 2011). This becomes particularly critical in the current chosen site marked by deteriorating conditions of the natural environment, emphasising the prioritisation of the city's economic, social and environmental well-being (Mutinga, 2018). This study aims to significantly enhance the knowledge and comprehension regarding the potential integration mentioned above, specifically within the framework of a densely populated and rapidly growing environment (Mutinga, 2018). Such insights will undoubtedly bolster the city's pro-growth strategies for inner-city district renewal, thus, contributing to long-term sustainability (Hannan, 2012).

1.3 PROBLEM STATEMENT

The central issue addressed in this research concerns the nature of the relationship between architecture and fashion design: are they interconnected and mutually influential? Thus, the core problem statement posed is: does architecture, influenced by fashion design exhibit qualities of fluidity, elegance and glamour? And is this of significance to the discipline? More importantly, what benefit does this mutual influence offer to the public in the Fashion District and in the city of Johannesburg at large? Can this integration foster cultural relevance and connect people and the public to the architecture and their city?

1.3.1 RESEARCH AIM AND QUESTIONS

RESEARCH AIM

This research paper seeks to understand how precisely this relationship between fashion design and architecture is manifested. The primary focus is examining the influence of fashion design on architecture, and how this relationship shapes the contemporary architectural landscape.

RESEARCH QUESTIONS

A. Metaphoric questions

- Is the connection between architecture and fashion design merely parallel, or do they exhibit interdependence and influence on each other?
- Under the influence of fashion, does architecture acquire increased fluidity and allure?

B. Architectural questions

- Can haute couture crafts and techniques such as pleating, folding, layering and draping, typically employed in crafting 'structural' garments, be used as a method the facade and structural elements of a large-scale architectural intervention?
- How can we re-purpose waste generated by the fast fashion industry into innovative construction materials and alternative products?
- Can this offer ideas for adaptive reuse in Johannesburg, for re-purposing of vacant buildings, recycling materials in the building industry and reviving a failing district?

1.3.2 RESEARCH QUESTIONS, SUB-QUESTIONS AND OBJECTIVES

In an attempt to achieve the overall aim set out by the research, four objectives have been generated, underpinned by a contextual understanding of the research, its rationale, the problem statement as well as the research questions. These are:

Objective 01
To analyse the similarities between fashion design and architecture, and chart their evolutionary trajectory.

Objective 02
To identify and discuss the potential limitations arising from this relationship.

Objective 03
Translate three haute couture principles into architectural design strategies, using them both tectonically and aesthetically.

Objective 04
Propose and design a fashion design institute, archive and commerce centre with a building program that benefits the occupants on different levels according to their needs, and offers upliftment, revitalisation and renewal to the Fashion District.

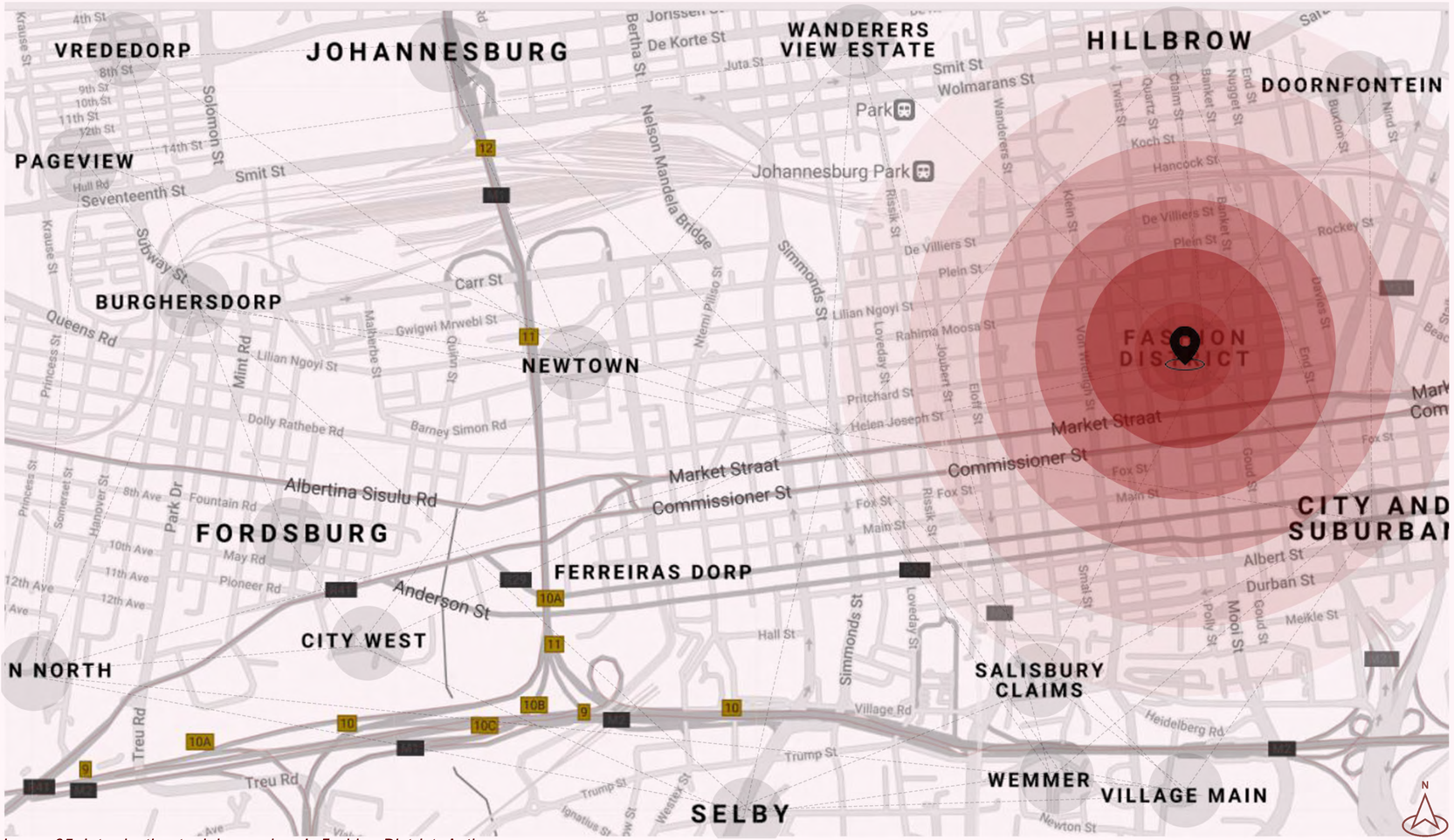


Image 05. Introduction to Johannesburg's Fashion District. Authors own.

(Base map adapted from: https://www.google.com/maps/place/Fashion+District,+Johannesburg)

1.4 INTRODUCTION TO THE STUDY AREA

1.4.1 JOHANNESBURG'S INNER CITY

Johannesburg has been impacted by rapid urbanisation and is marked by social expansion, unchecked population growth, environmental degradation and social decline (Hannan, 2012). Over time, as the Organisation for Economic and Co-Operation Development' (OCED) report of 1983 states, the inner city has borne the brunt of these effects, with the older urban core exhibiting pockets of underutilised land and distressed, deteriorating areas that detract from the city's overall image, productivity and livability (OCED, 1983). This trend has occurred as a result of the relocation of the majority of the economic and social activities to newer nodes in the North that offer improves economic, social and environmental prospects within the city (Mutinga, 2018).

1.4.2 JOHANNESBURG'S FASHION DISTRICT

The Fashion District is located in a vibrant section of Johannesburg, designated specifically for the advancement of the fashion industry and is historically linked to the city's and the country's garment sector (Johannesburg Development Agency (JDA), 2018). Illustrated in *Image 06*, it is positioned in the Eastern quadrant of the inner city, comprising of 26 city blocks, bordered by Market, Kerk, Von Wielligh and End Streets.



Image 06. Johannesburg's Fashion District. Authors own.

(Base map adapted from: https://www.google.com/maps/place/Fashion+District,+Johannesburg)

In the 1990s, the City of Johannesburg (COJ) and the JDA designated the area as the Fashion District, aiming to transform the locale into the focal point of South Africa's fashion industry, serving as a hub and node for garment design, manufacturing and showcasing (JDA, 2018). This initiative was also expected to boost the country's commerce as well as facilitate cross-border trade and investment, while creating an aspiration for the district to ignite public interest in domestically produced clothing while spurring both national and international tourism (JDA, 2018; Mpati, 2021).

The area is a sprightly hive of activity, housing approximately 1000 operations and enterprises that directly and indirectly offer services to varied stakeholders in the fashion industry, including other service providers, suppliers, designers, manufacturers, merchandisers and distributors (JDA, 2018).

Within the Fashion District, the chosen site of study, illustrated in *Image 07* is located at its heart, The Fashion Kapitol. Occupying a significant portion of a city block. The Fashion Kapitol was the site of an Urban Design Framework (UDF) and Business Development Plan (BDP) initiated by the Johannesburg Development Agency in 2004. It comprises of 30 shops and boutiques, offices, studios, restaurants, a small public square, an outdoor ramp, an amphitheater and an arcade that connects Pritchard and Market Streets (JDA, 2018). This development targeted three main markets: fashion-savvy suburban shoppers, downtown shoppers employed in the central business district and tourists, with the aim of creating a safe, secure and attractive public space and building that affords access to economic and social activities (JDA, 2018; Mpati, 2021).

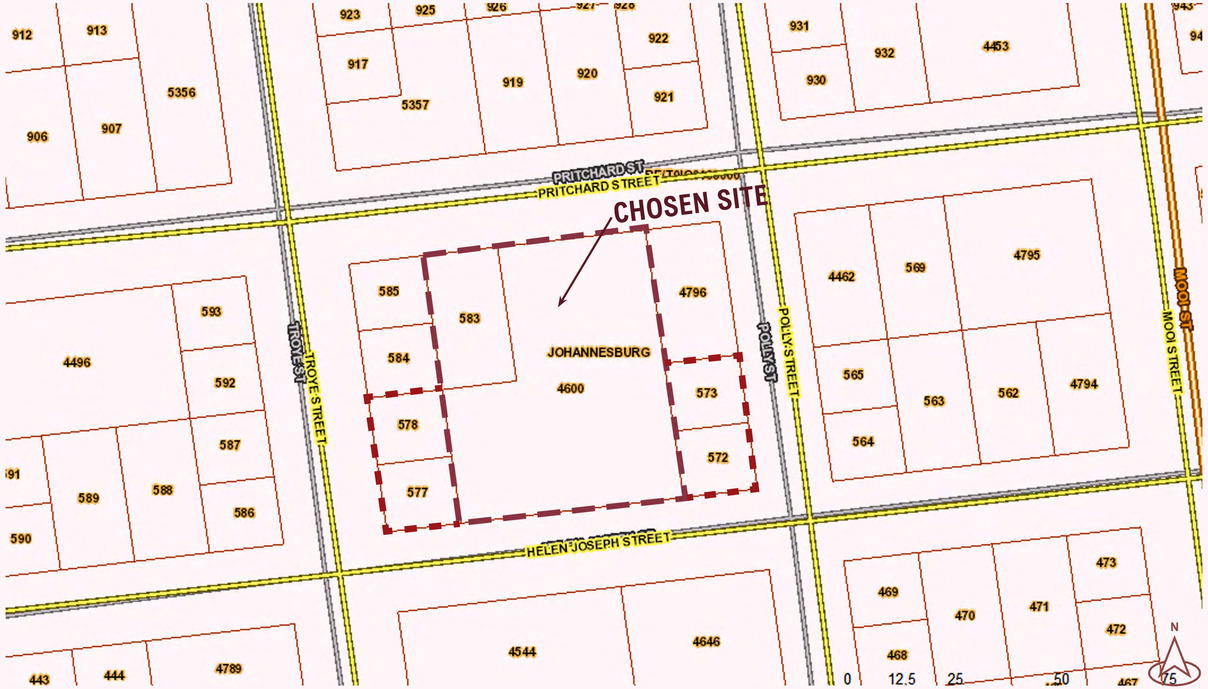


Image 07. The chosen site of study within Johannesburg's Fashion District. Authors own.

(Base map adapted from: https://www.google.com/maps/place/Fashion+District,+Johannesburg)

01. STRENGTHS - Access to public transport - Proximity to bordering districts and CBD - Existing economic and social fabric - Existing tourism sector	**02. WEAKNESSES** - Urban decay, abandoned lots and 'low quality buildings' - Lack of investment in historic areas and sites
03. OPPORTUNITIES - Existing development plans and frameworks for reference - Synergy of adaptive reuse and new buildings	**04. THREATS** - Safety and security - Local mentality of wanting to move 'North' and abandon the 'South'

Table 01. SWOT analysis of on chosen site. Authors own.

Table 01 illustrates a SWOT analysis done to identify the areas to capitalise on and those to mitigate on the site.

1.4.3 ARCHITECTURE AND FASHION DESIGN WITHIN THE CONTEXT

Like many urban areas in South Africa, Johannesburg's Fashion District has experienced significant transformation over time, with regeneration efforts introducing a sense of evolutionary change by revitalising these urban spaces (Mapetla, 2006). This transformation arises from the deterioration of urban environments and the shift of capital investment away from the city centre, as previously mentioned (Peyroux, 2006). Stakeholders such as the JDA, the Johannesburg Housing Company (JHS) and the South African Cities Network (SACN) have implemented regeneration programs aimed at enhancing the public urban environment through economic and social revitalisation, employing various strategies in the process of urban regeneration (Mutinga, 2018). It is within this context that this thesis questions the relationship between fashion design and architecture, and the implementation of haute couture craft is explored to understand its role and impacts as a strategy for large scale architectural interventions and urban design master planing.

1.5 STRUCTURE OF THE RESEARCH PAPER

This section outlines the organisation of the research report, providing a structured roadmap for readers to navigate the comprehensive investigation into the interplay between architecture and fashion design, particularly within the context of Johannesburg and its Fashion District. The report is systematically divided into several key chapters, each addressing specific aspects of the research topic. This research report is structured into eight chapters.

Chapter 1 introduces the context and the focus of the research. It explains the importance of the integration of fashion design in architectural processes particularly in the context of Johannesburg's Fashion District. It introduces the selected study site as a suitable location, explaining the importance and the need for this integration in the study area.

Chapter 2 undertakes an in-depth discussion, understanding the theoretical and practical bases of fashion design, architecture and urban design through an exploration of the evolving nature of their relationships globally over time, from the post-war period. Through this analysis of the concepts that underpin these key notions, the conceptualisation of their integration is discussed, and the role of urban design in this explored. This, in part addresses the first objective stipulated in the section 1.3.2 above.

Chapter 3 discusses the research methods that have been employed in the data collection, substantiating their applicability and appropriateness in this particular case. The chapter proceeds to create an integrated model that examines the spatial integration of the aforementioned key concepts, addressing the first objective.

Chapter 4 employs these research methods in a thorough investigation of the existing physical conditions at the chosen site of study, both at a micro scale and at a macro scale. Through this site analysis, the possible role for this integration is explored for both present and future generations. This chapter addresses the second objective comprehensively.

Chapter 5 addresses the third objective, focusing on the possible implications of the integration of fashion design and architecture by translating three haute couture principles into architectural design strategies, using them both tectonically and aesthetically. This has been done using the information gathered in the previous chapters.

C*hapter 6* summarises the research findings according to the three objectives by proposing and designing design a fashion design institute titles "The Creative Nexus" that benefits the occupants and users on different levels according to their needs. This chapter addresses the fourth objective of this research report.

Chapter 7 disuses The Creative Nexus further by proposing technical and construction systems for the scheme.

Lastly, *Chapter 8* as a conclusion summarises the research findings according to the four objectives, answering the overall research question. It concludes with a number of suggestions or the future direction of sustainable urban regeneration for Johannesburg



CHAPTER 02

THE DIALOGUE BETWEEN FASHION AND ARCHITECTURE

CHAPTER 02. THE DIALOGUE BETWEEN FASHION AND ARCHITECTURE

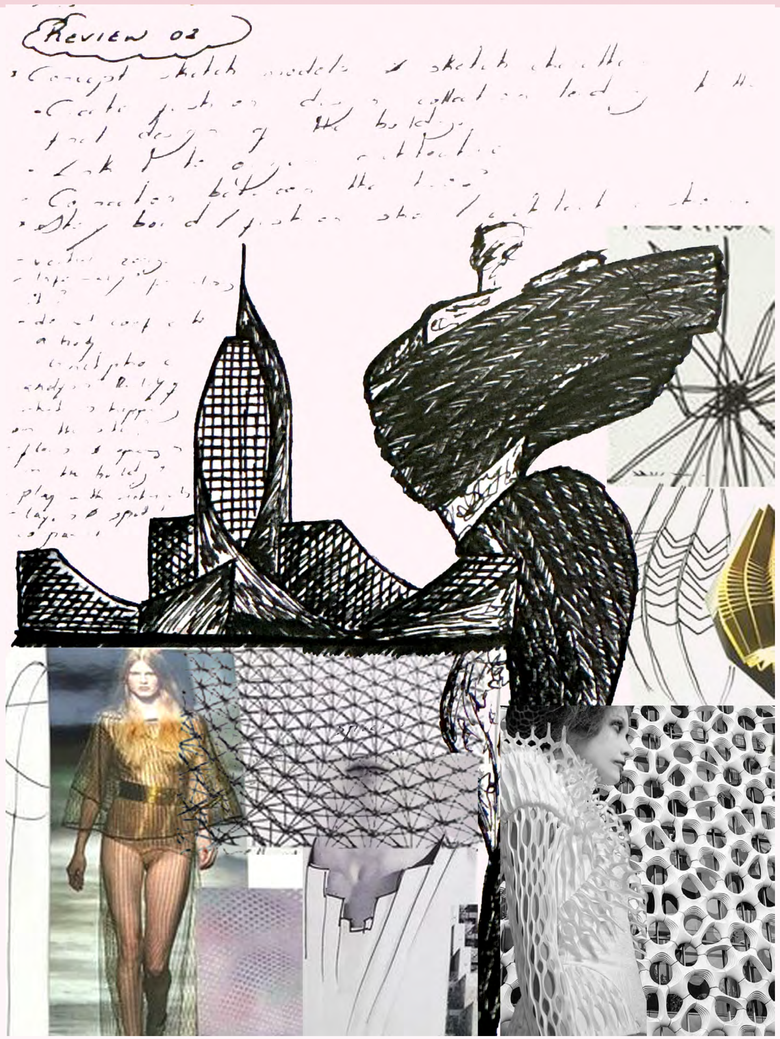


Image 08. Authors own sketches and collage

2.1 INTRODUCTION

Fashion design has long been a crucial element in Architecture, particularly within the philosophies, theories and principles guiding the practice (Jabareen, 2006). Given the rapid urbanisation and globalisation affecting cities today, it is essential to focus on enhancing urban conditions through strategies aimed at the comprehensive improvement of an areas social, spatial, economic and environmental conditions (Abidin, 2016). While it is argued that all facets and dimensions of architecture should be considered in concept and design development processes, this research report focuses on the aspect of fashion design, viewing it as a key factor in shaping better design outcomes and improving urban environments not only for aesthetic qualities, but also functionality, structural integrity and the overall support for present and future populations.

According to professors of sociology, history and socio-ecological transformation Littig and Grießler (2005), the methods for achieving the ideal integration between fashion design and architecture should be grounded in practical understanding rather than solely theoretical approaches, considering the current dynamics of an area. Urban designer Ali Madanipour (2006) emphasises that art and the expression of it is a crucial tool in architecture as it influences the social, economic, environmental and spatial aspects of buildings and of urban environments. Consequently, this research highlights the necessity of investigating how the principles employed in fashion design can be integrated into architectural processes.

The objective of this chapter is to evaluate both theoretical and practical approaches that will aid in shaping the conceptual framework, and ultimately the proposed Creative Nexus building design. It aims to illustrate the integration of fashion design and architecture, emphasising the role that this potentially plays in building design and inner city master-planning. Additionally, it will examine the impact of this integration through case studies from various examples both local and international.

This literature review is divided into four sections:
The first discusses the evolving nature of fashion design and architecture throughout history, exploring their achievements in social, spatial, environmental and economic aspects. Lastly, it discusses contemporary fashion design and architecture, and the success of their integration at the turn of the 21st century. The second section of the literature review focuses on defining the concepts of fashion design and architecture in a in-depth discussion. It further discusses their integration in architectural and urban regenerative processes, developing a conceptual framework. The third section of the literature review analyses the role of this integration in sustainable inner city regeneration, with a focus on the chosen area of study, understanding its different elements, importance, criticisms and limitations. Lastly, the literature review discusses three principles of fashion design: layering, pleating and folding, generating a conceptual framework that will be applied in the final architectural intervention within Johannesburg's Fashion District

Image 09. A simple timeline of the parallel relationship between fashion design and architecture throughout history.

Authors own, adapted from (Elassi, H. 2019).



2.2 THE CHRONOLOGY OF FASHION DESIGN AND ARCHITECTURE

The work of both fashion designers and architects in directly or indirectly influenced by cultural, political, environmental and religious factors (Harmankaya et al., 2014). This can be demonstrated by examining historical buildings and clothing from various societies over time, providing insight into the developments and improvements made throughout history on wearable and habitable elements (Dereboy, 2004).

The initial connection between clothing and shelter dates back to the Stone Age where individuals draped animal skin and hides on their bodies as clothing, and used the same to construct shelters (Leung, 2010). The columns constructed by the ancient Greeks resembled the folds of drapery and their cylindrical shapes appeared to mimic fabric wrapped around the human body while embracing human proportions in their sizes and shapes (Dereboy, 2004).

During the Middle Ages, arches were a significant feature of Gothic churches and buildings. As a result, both fashion and architecture of the time emphasised vertical, pointed and soaring designs (Loschek, 2009). This influence was evident in sharply pointed shoes, sleeves and head decorations that directly mirrored the Gothic architectural style (Leung, 2010). In the 18th and 19th centuries, some architects adopted post-modernism's stylized neoclassical elements in revival styles (Dereboy, 2004). However, at the turn of the 20th century, these were supplanted by the organic curvilinear forms influenced by Art Nouveau (Leung, 2010).

In the 20th century, the advent of new building materials particularly lightweight steel, and glass revolutionised the architectural construction industry. This shift led to the prominence of clean, modern and simple designs epitomised by the International Style seen in the works of architects such as Mies Van der Rohe and Le Corbusier (Leung, 2010). In embracing modernist ideals, both fashion design and architecture moved towards greater simplicity, eliminating ornamentation and emphasising more simpler forms (Dereboy, 2004; Leung, 2010). As a result, there was a heavier emphasis on function as opposed to form.

Conversely, the principle of form following function has been reversed with the adoption of deconstructivist styles (Loschek, 2009). Both the architecture and fashion industries began to explore new ways of expressing design in the late twentieth century. Advancements in technology spurred a significant revolution in both fields, introducing new forms and materials through innovative design processes and ideas (Leung, 2010). Garments became more structural and sophisticated, while building forms became more organic and sculptural.

Currently, in the early twenty-first century, architects and fashion designers are increasingly focusing on green designs. In architecture, this means a greater emphasis on nature and environmental impact, while in fashion, it involves the use of recycled materials (Leung, 2010). Rapid technological advancements are enabling both fashion and architecture designers to integrate high technology into their creations gearing innovations towards transformable garments and buildings that may become the new trend for the twenty-first century (Dereboy, 2004; Leung, 2010).

2.3 THE INFLUENCE OF ART ON FASHION DESIGN AND ARCHITECTURE

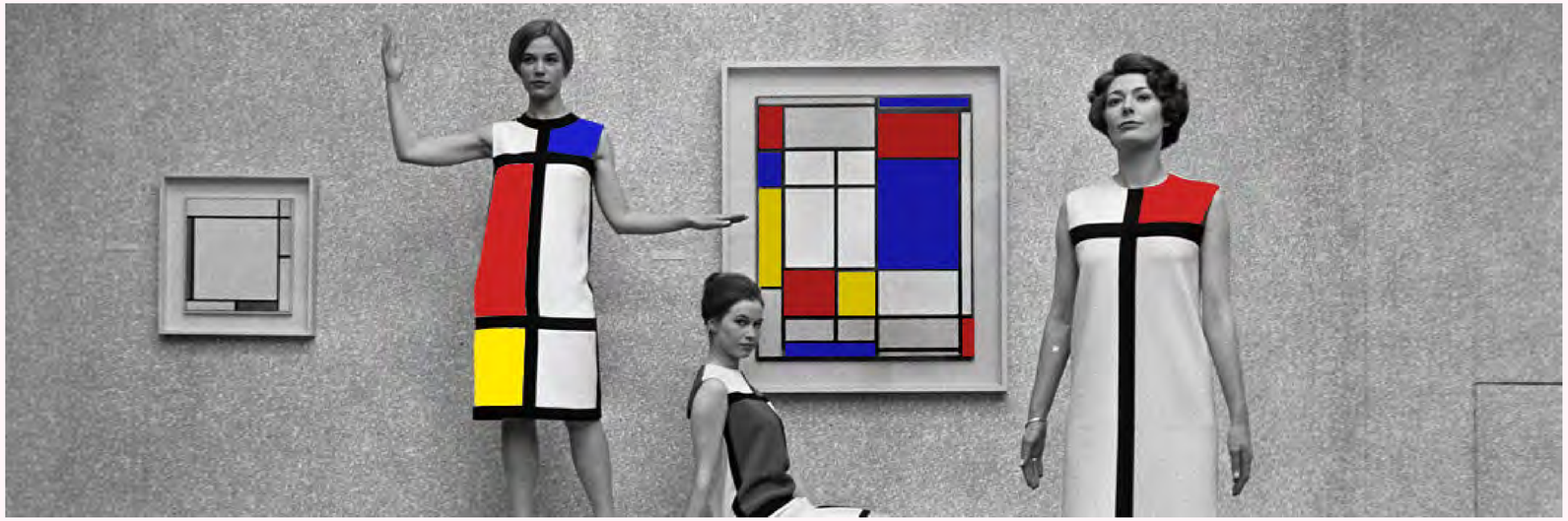


Image 10. Art inspired fashion design. Source: (Collier & Dobson, 2024. Available from: https://www.collierdobson.com/blogs/news/how-art-has-influenced-the-fashion-world)

Art is the manifestation of emotions. Maude states that feelings are expressed through lines, colors, movements, sounds, or words in humans (Maude, 1996). In other words, art is the expression of emotions (Thompson, 1999). Throughout history, it is evident that human life is influenced and enriched by art, from the songs people listen to, to the fashion they wear daily. The term ‘art’ refers to the aspects of artistic activity deemed to have special and specific importance (Tolstoy, 2010).

Thompson noted that art involves creating a lasting object or temporary action that not only provides active enjoyment to the creator but also delivers a pleasurable experience to numerous spectators or listeners, independent of any personal benefit (Thompson, 1999). According to Maude, art is the transmission of an emotion felt by the artist, marking the beginning of a fruitful theory in aesthetics (Maude, 1996).

It is believed that art possesses a technical aspect that is most apparent in architecture and sculpture, less so in painting and music, and least evident in poetry (Tolstoy, 2010). At the start of the 20th century, the influence of art on architecture became more noticeable. There are instances where paintings and sculptures have directly influenced architectural design. Their independence from each other has created an intellectual and artistic equality, enabling

architects, painters, and later photographers, filmmakers, and video artists to learn from one another's work (Woods, 2009). Many architects approach architecture as if it were a form of art.

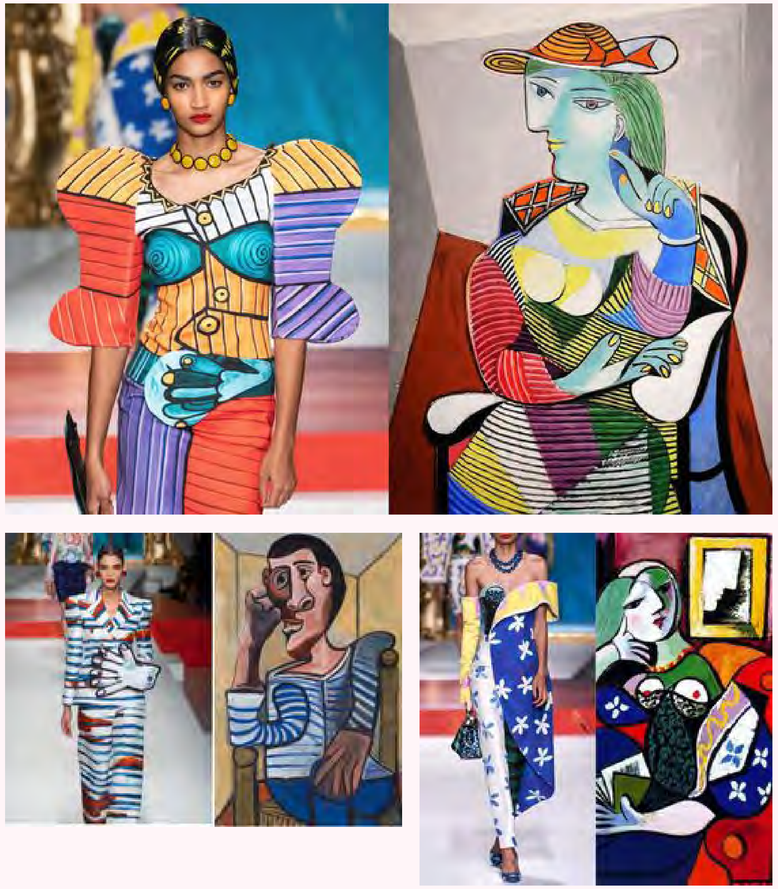
Blending art with architecture and intertwining their respective theories enhances their strength and depth (Tolstoy, 2010). While architecture primarily addresses functional concerns, art is more focused on visual aesthetics. Combining them adds significant value, as art serves as a language of emotions and facilitates their transmission, imbuing architecture with these expressive qualities (Woods, 2009). Architects, through their buildings, communicate and share their emotions and those of their clients, using lines, colors, and forms within the structure to convey these feelings.

Similarly, the principles of art are applicable in the field of fashion design, as fashion, like architecture, is rooted in art and aesthetics (Hedayat, 2012). Fashion design itself is considered an art form, involving the creative process and aesthetic considerations. Influenced by culture, fashion design serves as a primary non-verbal communication system. Fashion designers, akin to artists, infuse their designs with their emotions, enabling viewers to experience the same sentiments evoked during the design process (Hedayat, 2012). The pursuit of beauty in form, concept, and expression, which is the pinnacle of art, is evident in clothing (Woods, 2009). The significance of garments lies in their form and the messages they convey to viewers.

Many designers in both fashion and architecture draw inspiration from art, incorporating it into their creations. This practice, known as "Art Crossing," involves using art as the central concept and designing garments or buildings accordingly (Hedayat, 2012). For example, as illustrated in *Image 10* above, Yves Saint Laurent drew inspiration from Mondrian's painting for his fall/winter 1965 collection, exemplifying the integration of art into fashion design (Hedayat, 2012). In architecture, this artwork served as inspiration for Gerrit Rietveld, who designed the Schröder House in 1924, applying the same principles found in Mondrian's art and the De Stijl movement (Hedayat,2012).

Andy Warhol's pop art style has also had a profound influence on both fashion design collections and architectural designs, creating a vibrant intersection of art, culture, and commercialism. Warhol's bold use of color, repetition of imagery, and incorporation of everyday objects and celebrity culture into his work have inspired fashion designers to experiment with graphic prints, bright hues, and unconventional materials. For example, designers such as Versace and Moschino have drawn directly from Warhol's iconic prints and aesthetic sensibilities, incorporating them into their collections to create striking, visually impactful garments that challenge traditional fashion norms (Hendrikse, 2015; Blanchard, 2017).

In architecture, Warhol's influence can be seen in the embrace of pop culture motifs, the use of large-scale murals and graphic elements, and the integration of art into public spaces and building facades. This approach not only enhances visual appeal but also creates a dynamic, culturally relevant environment that engages and resonates with the public (Hopkins, 2016). Warhol's legacy in both fields underscores the potential for art to transcend boundaries and inspire innovation across different forms of creative expression.



Images 11-13. Pop art in the world of fashion design.
(Source: Vogue Runway, 2024. Available from: https://www.vogue.com/fashion-shows/spring-2020-ready-to-wear/moschino/slideshow/collection#2).

2.4 THE INFLUENCE OF SCIENCE ON FASHION DESIGN AND ARCHITECTURE

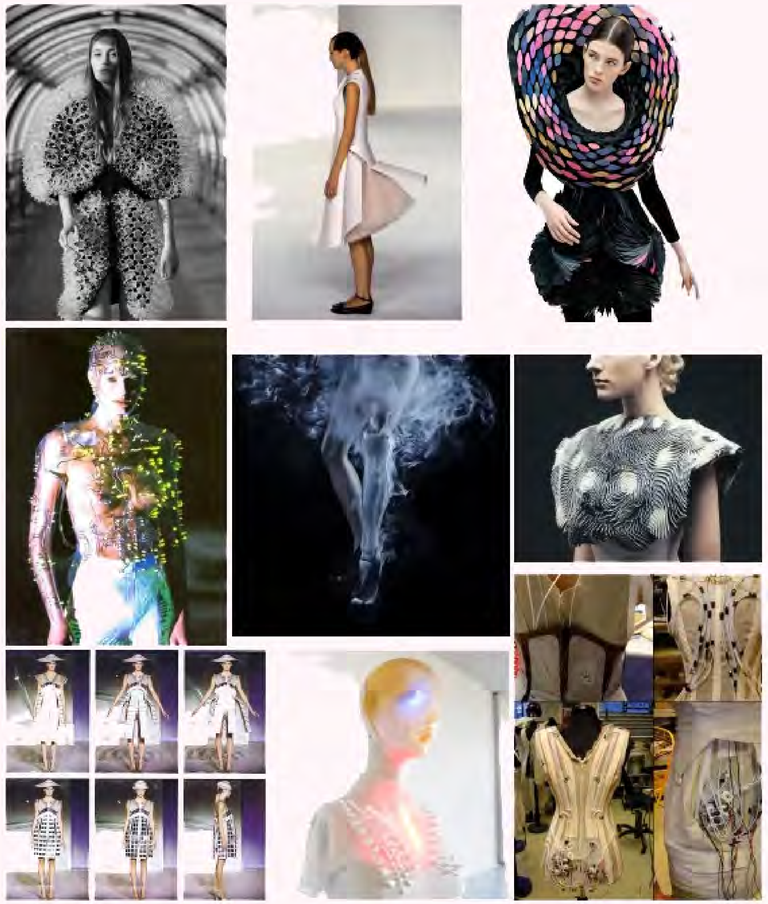


Image 14. The intersection of science, biology and fashion design.

(Source: Anderson, 2020. Available from: https://lstarkweather.medium.com/fashion-scientists-3dfcb7a1553a).

Technology and science exert a pervasive influence on various aspects of people's daily lives, spanning from architecture to fashion design, and from communication to domestic routines and education (Wilson, 2002). This influence extends the collective awareness of individuals globally (Ascott & Shanken, 2007). Wilson (2002) distinguishes technology as the practical application of knowledge ("knowing how"), while science is characterised by understanding principles ("knowing why"). Engineers and technologists are primarily concerned with practical implementation and process refinement rather than theoretical comprehension.

In contemporary times, science has enabled scientists to develop new materials, which are then utilized to manifest their concepts on building facades or within garments (Hedayat, 2012). One emerging material making its mark on fashion runways and in architectural endeavors is the "Media Façade." These facades are constructed using small LED lights capable of displaying any imagery envisioned by the designer or user Wilson (2002). LED lights are integrated into building facades (*Images 15*) to reflect natural light during the day, while computer programs control them at night, enabling users to customize desired color schemes (Wilson, 2002; Hedayat, 2012). In the realm of fashion, Hussein Chalayan designed a garment (*Image 16*) using LED lights typically utilized in advertisements (Interactive Architecture, 2007).



Image 15. Claire Daine's 2016 Met Gala Cinderella light up dress by Zac Posen.

(Source: Chi, 2016. Available from: https://www.vanityfair.com/style/2016/05/met-gala-2016-red-carpet).

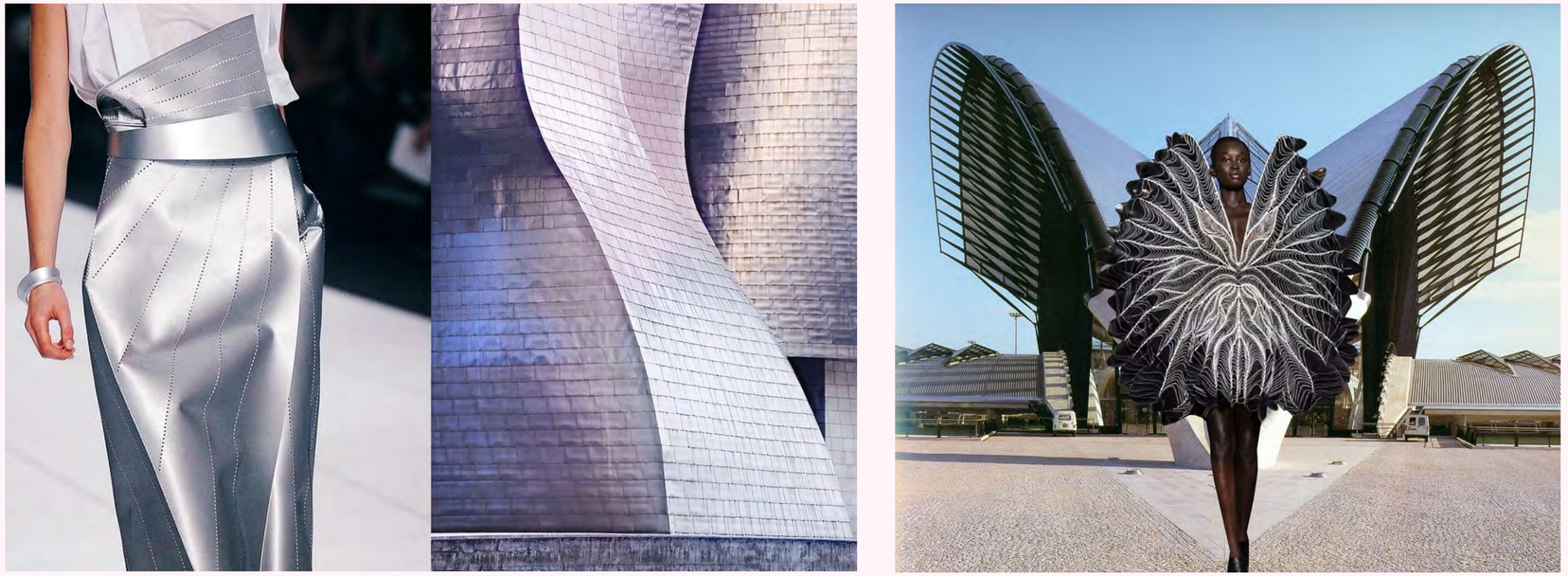


Image 16. The role of science and lighting in architecture.

(Available from: https://www.arch2o.com/how-lighting-can-give-your-building-a-new-soul-4-led-lighting-applications/).

The fusion of architecture and science has the potential to catalyse new advancements in daily human life (Ascott & Shanken, 2007). Rather than simply applying scientific principles to architectural designs for aesthetic purposes, there is a need for close collaboration between architecture and science to forge novel approaches (Hedayat, 2012). For instance, the integration of acoustic science and architecture redefined the roles of architects and scientists, transforming the modern experiences of occupants in rationalised concert halls, apartments, and offices (Galison & Thompson, 1999).

The intersection of science and fashion is a burgeoning area of study. In recent years, various intellectual processes have begun to reshape the significance of fashion, notably advancing its scientific aspirations (Seymour, 2009). Similar to architecture, fashion design has undergone significant improvement under the influence of science. Cultural sciences, art theories, design theories, media studies, sociology, and gender studies contribute vital insights to innovative research trajectories, facilitating progress from costume studies toward a scientific understanding of fashion (Loschek, 2009). Science is now central to fashion innovation, with chemical compounds, metals, industrial finishes, and the balance between acidity and alkalinity all emerging as influential elements (Kadel, 2010). The transformative power and inspiration derived from science in fashion and architecture have led to the creation of numerous unforgettable designs. These include the incorporation of smart textiles such as responsive fabrics embedded with sensors and responsive fibers that allow designers to monitor health, change colour or adapt to environmental conditions.



Images 17 and 18. Science in fashion design and architecture.

(Source: CUUB Studio, 2024. Available from: https://www.cuubstudio.com/blog/the-fusion-of-architecture-and-high-fashion/)

2.4 THE INFLUENCE OF TECHNOLOGY ON FASHION DESIGN AND ARCHITECTURE

In today's world, technology permeates every field, leaving its imprint on various aspects of life (Wilson, 2002). These technological intersections have, in some respects, simplified people's lives, yet in many cases, they have introduced challenges that people struggle to adapt to (Loschek, 2009). The influence of technology extends to the realms of fashion and architecture, prompting designers to become more creative and innovative (Kadel, 2010). With the aid of technology, designers in these fields have crafted extraordinary garments and buildings, elevating design standards worldwide.

Fashionable wearables are garments, accessories, or jewelry that blend aesthetics and style with functional technology (Seymour, 2009). The incorporation of new technologies, unconventional materials, and electronics in fashion design has sparked a significant transformation in the clothing industry, heralding a new era. Looking ahead, it is foreseeable that electronic devices will become integrated into clothing. Terms such as "wearable computing," "wearable technologies," "smart clothes," "smart fashion," "interactive wear," and "e-dresses" denote functional electronic objects seamlessly integrated into garments. Portable devices are evolving into wearables, and clothing is evolving into a user interface, essentially serving as an electronic interface (Loschek, 2009).

Images 17 and *18* below illustrate the dynamic and ever-growing relationship between fashion design and technology. With the rise of augmented reality (AR), shoppers can now virtually try on clothes from the comfort of their homes, creating a more interactive and personalised shopping experience. Virtual fashion shows have also emerged, allowing designers to showcase their collections to global audiences without the limitations of physical space. This shift not only democratises access to fashion but also reduces the environmental impact of traditional runway shows. Additionally, 3D-modeled clothing templates are revolutionising the design process, enabling designers to create and visualise garments digitally before they are produced.

Image 19.
Virtual fashion show.

(Source: Lifestyle and Design Cluster, 2024.

Available from: https://ldcluster.com/portfolio-item/digital-fashion-summit/)



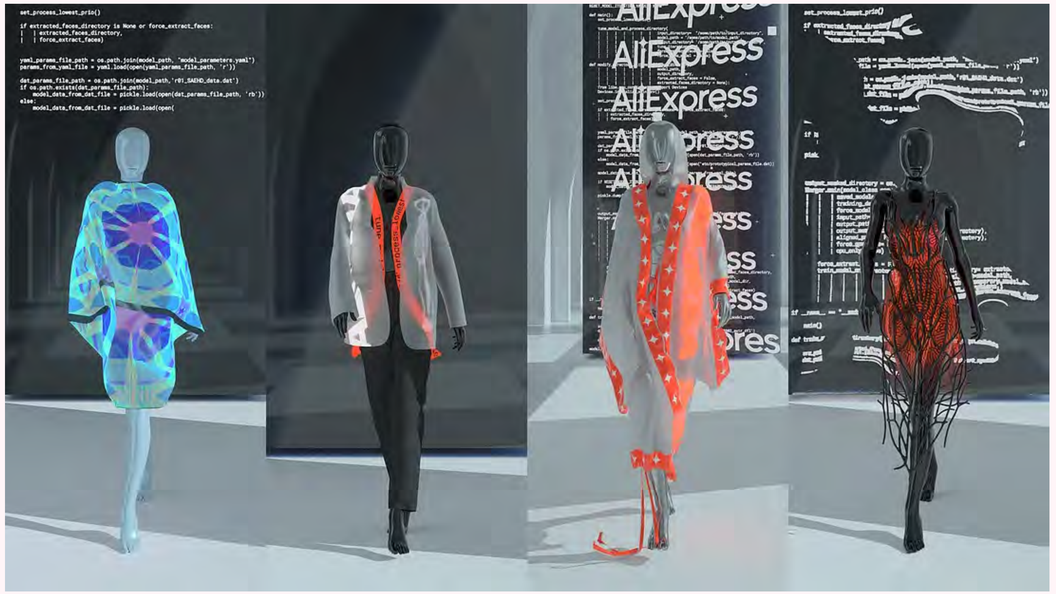


Image 20.
The fusion of fashion design and technology.

(Source: Secret, 2023.

Available from: https://ellasecretcloth.medium.com/the-influence-of-technology-on-fashion-trends-in-2024-65620784b70a)

This technology reduces waste and speeds up production timelines, making the design process more efficient and sustainable. AI-powered styling apps further enhance the consumer experience by offering personalised fashion recommendations based on individual preferences and trends. Together, these technological advancements are not only transforming how fashion is designed, produced, and consumed but also paving the way for a more innovative and sustainable future in the fashion industry.

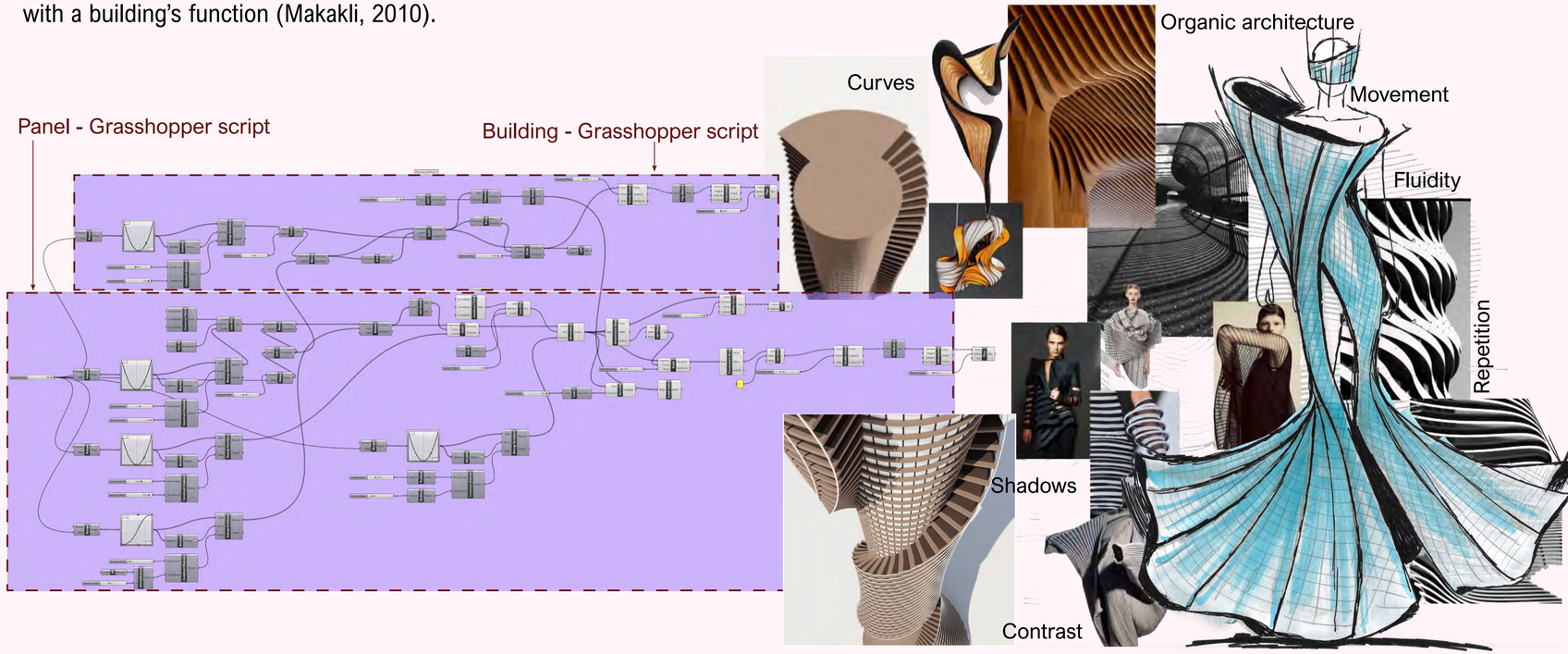


Image 19. Virtual Fashion show and Styling. (Source: Barr, 2020. Available from: https://www.independent.co.uk/life-style/fashion/fashion-3d-show-runway-online-hani-fa-instagram-live-congo-a9530551.html)

Image 20. The use of computer aided software to generate a building form that inspires and is inspired by fashion. Source: Authors own assignment from the course ARPL 7001A_Advanced Digital Applications.

The relationship between architecture and technology is undeniably profound, though their roles are distinct. Architecture is often viewed as a philosophical contemplation of how buildings impact human consciousness, while technology is primarily concerned with applying scientific methods to realize architectural concepts (Zunde & Bougdah, 2006). In the nineteenth century, architecture tended towards monumental designs, shunning industry and technology (Makakli, 2010). However, with the advent of the industrial revolution and the introduction of materials like steel and glass, architectural paradigms shifted. Industrialised iron, a hallmark of the Industrial Revolution, revolutionised design possibilities, liberating architects from traditional constraints and fostering new rational designs aligned with a building's function (Makakli, 2010).

The twentieth century witnessed a symbiotic relationship between technology and architecture, with technological advancements enabling the creation of new building materials and freeing architects from previous engineering limitations (Kinghorn, 1996). This transformation imbued architecture with a sense of optimism, as rational design was believed to foster a rational society (Zunde & Bougdah, 2006). Today, architects harness digital technologies such as computer aided programmes (CAD) and Building Information and Modelling Applications (BIM) to represent and construct their ideas, facilitating new modes of design and construction (Afana, 2011). Nanotechnology has further expanded possibilities, offering more efficient and intelligent materials.



Illustrated in *Image 20*, computer-aided technologies such as Revit, Rhino, and Grasshopper, as well as rendering softwares such as Lumion and Enscape play pivotal roles in shaping a buildings form, functionality and aesthetic representation. This research project employs the use of these technologies in generating a master plan for the integration of fashion design and architecture in the chosen area of study. Revit enables precise architectural modeling, allowing for detailed documentation and seamless coordination across various design disciplines. Rhino, known for its versatility in handling complex geometries, is essential for sculpting intricate forms and exploring innovative design concepts. Grasshopper, as a visual programming tool within Rhino, enhances the design process by enabling parametric design and algorithmic exploration, leading to more responsive and adaptive architectural solutions.

Beyond digital modeling, technologies like laser cutting and 3D printing are integral to the physical manifestation of design concepts. Laser cutting facilitates the creation of accurate and intricate model components, allowing for tangible representations of the master plan at various scales. 3D printing pushes this further by enabling the production of detailed, scale models that help visualise complex geometries and spatial relationships, providing valuable insights during the design process.

Image 21 illustrates a step-by-step process of the generation of a building form on Rhino and Grasshopper, an assignment submitted as part of the requirements for the ARPL 7001A course.

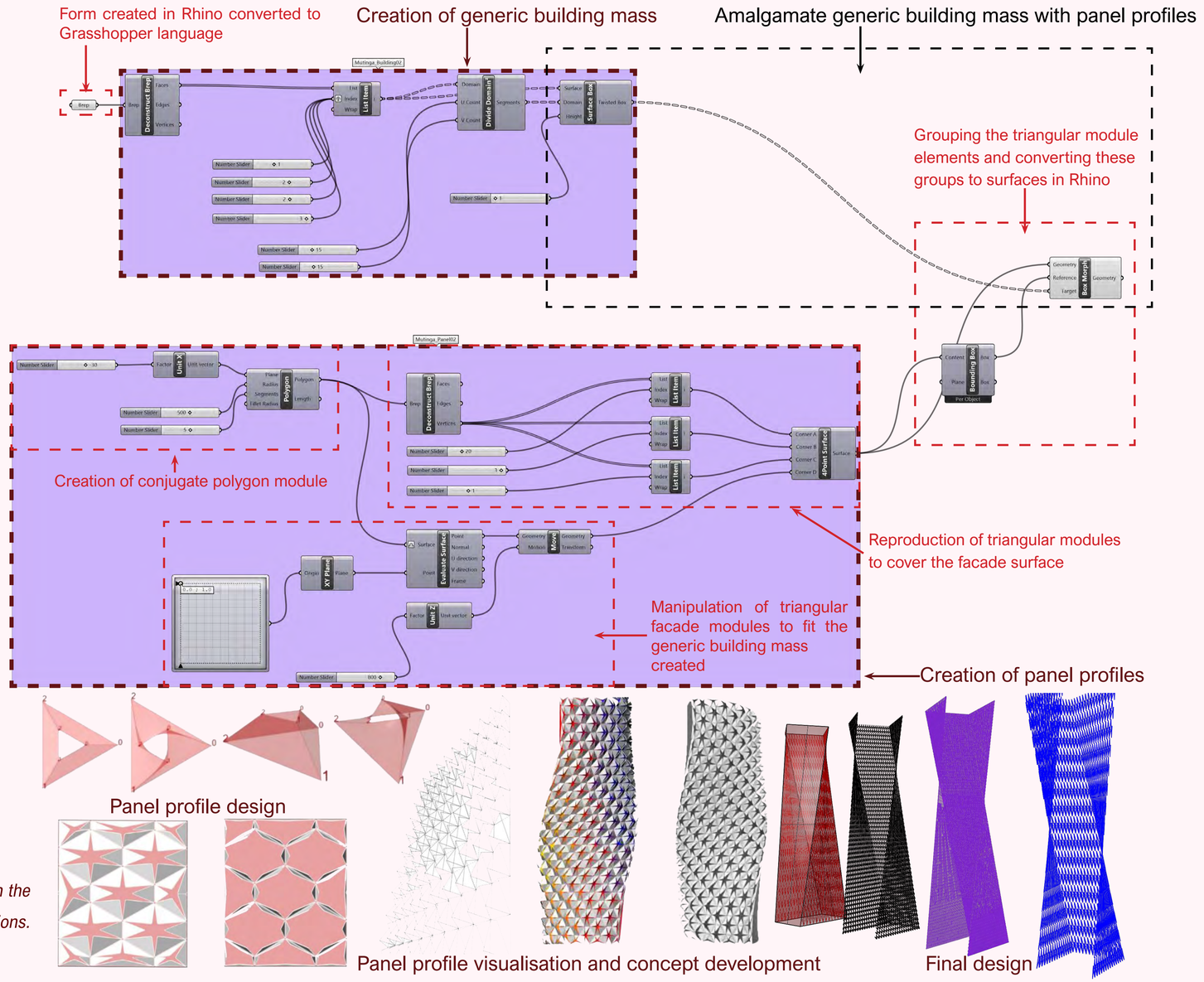


Image 21. Building and panel generation in Rhino and Grasshopper. Source: Authors own assignment from the course ARPL 7001A_Advanced Digital Applications.

In the digital age, architects must be attuned to technological and environmental considerations, leveraging these advancements to address evolving human needs effectively Kinghorn, 1996). Technical innovations build upon cultural traditions, striving to enhance aesthetics, ergonomics, engineering, communication, and construction practices (Afana, 2011). New structural techniques and materials, propelled by technological advancements, empower architects to pursue bold and creative designs. Digital technologies enable complex forms to be conceived and executed with ease, revolutionising architectural design possibilities (Hedayat, 2012).





Images 21 and 22. A fractal parametric city by Zaha Hadid. (Source: OpenArt, 2024. Available from: https://openart.ai/discovery/sd-1005963784155824218).

Architects such as the late Zaha Hadid embrace technology, integrating it into their designs to create futuristic and intricate structures (Braham and Hale, 2007). Hadid's influence extends to fashion design, where she applies similar concepts to clothing, showcasing her innovative approach across disciplines. In essence, technology has become integral to architectural systems, driving innovation and pushing the boundaries of design and construction (Hedayat, 2012). This symbiotic relationship facilitates the adoption of innovative approaches and promotes collaboration between the fashion design and architecture.

2.5 THE INFLUENCE OF CULTURE, IDENTITY AND SOCIETY ON FASHION DESIGN AND ARCHITECTURE

Architecture and fashion design both fundamentally start with an exploration of humanity, focusing on individuals as integral parts of society. These explorations often involve the study of physical aspects such as human proportions, as well as behavioral studies that examine how people interact within their communities. Architect and former editor of progressive architecture Thomas Hawk Creighton foregrounds in his book "*Building for modern man: a symposium"* that designers analyse these behaviors to create designs that are both relevant and successful, understanding that "man and the society within which he moves are always theoretically the concern of the designers" (Creighton, 1969). The design process varies across different societies, influenced by numerous factors.

As Creighton (1969) notes in his book, "There are people, the human groups of men, women, and children. Their races, age, occupations; their creeds, their costumes; the way they dress, how they play, what they eat; how and where they now live—these factors affect life, and they affect design." Additionally, the size and density of these social groups play a crucial role in shaping the final design. As these populations grow, the complexities and challenges of living spaces increase, leading to the emergence of new social groups and consequently new societal needs (Creighton, 1969). Consequently, designers, through collaborative work, transform places and objects into unique solutions that respond to these human needs.

2.5.1 CULTURAL HERITAGE AND ITS GLOBAL INFLUENCE ON DESIGN

Culture not only provides a foundation for fashion and architectural design but also fosters the evolution of these disciplines through the continuous exchange of ideas across borders. In fashion, designers often reinterpret traditional cultural elements to create innovative pieces that appeal to a global audience. For instance, the incorporation of African prints and textiles in high fashion has become a symbol of cultural pride and global influence, showcasing the richness of African heritage while appealing to contemporary tastes worldwide (Eicher & Evenson, 2014).



Image 23. Culturally-inspired fashion at Virgil Abloh's Louis Vutton Mens FW'21 collection. (Source: Nhalungo, 2021. Available from: https://industrieafrica.com/blogs/imprint/op-ed-louis-vuitton-mens-fw-21-designer-virgil-abloh-cultural-appropriation-ghana-kente).

This global exchange is equally evident in architecture, where the blending of cultural influences results in iconic structures that transcend their geographical origins. The Louvre Abu Dhabi, for example, designed by Jean Nouvel, merges modern architectural techniques with traditional Arabic design elements, creating a structure that resonates with both local and international audiences (Frampton, 2007). This cross-cultural dialogue in design not only enriches the aesthetics of fashion and architecture but also contributes to a deeper understanding and appreciation of diverse cultures.



Image 24. The Louvre Abu Dhabi, a cultural icon. (Source: Turner, 2023. Available from:https://www.absoluteproduct.com/article/spotlight-louvre-abu-dhabi?siteregion=GB).

2.5.2 IDENTITY AS A NARRATIVE IN DESIGN

Identity in fashion and architecture extends beyond mere aesthetics, serving as a narrative that communicates individual and collective stories. In fashion, garments are often designed to reflect the identity of the wearer, whether it be through the use of specific colours, materials, or cuts that signify cultural or personal identity. Designers like Vivienne Westwood have used fashion as a platform to express political and social identities, challenging conventional norms and encouraging self-expression (English, 2011).

Similarly, in architecture, identity is conveyed through the design of spaces that reflect the historical and cultural context of a community. The use of indigenous materials and architectural forms in the design of the National Museum of the American Indian in Washington, D.C., for example, reflects the cultural identity and heritage of Native American tribes, creating a space that is both symbolic and functional (Smith, 2001). In this way, both fashion and architecture serve as mediums through which identity is expressed, preserved, and celebrated.



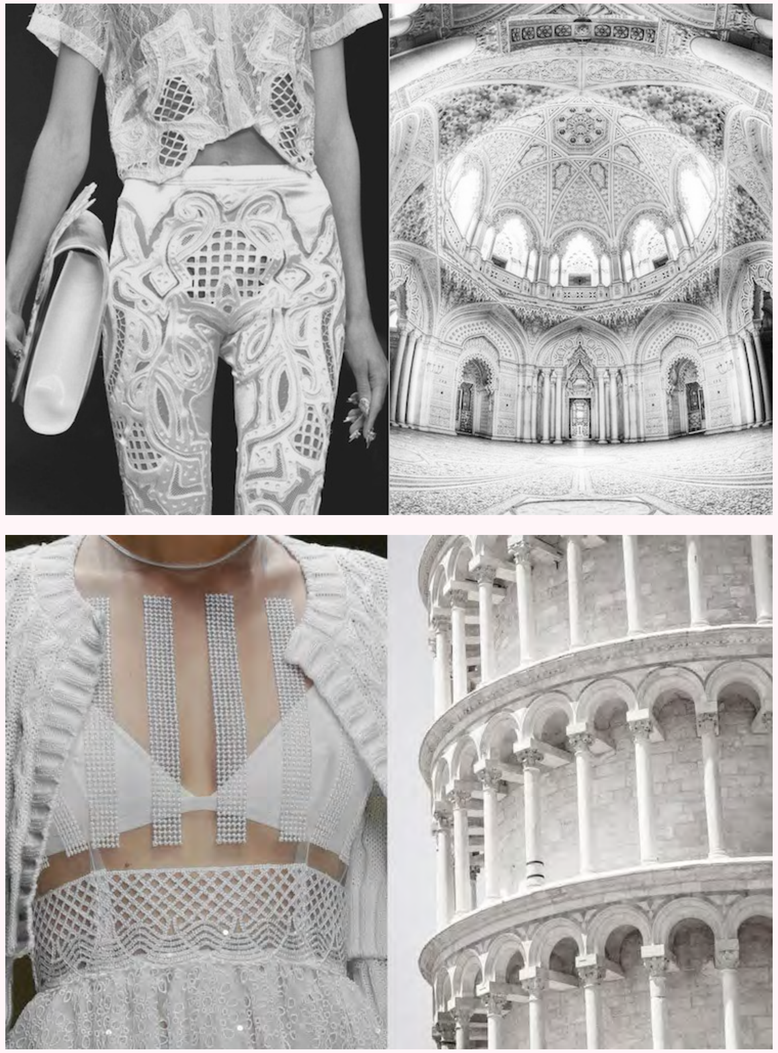
Image 25. Vivienne Westwood organises demonstrations to highlight her concerns on climate change. (Source: Vecchi, 2023. Available from: https://www.istitutomarangoni.com/en/maze35/industry/will-fashion-carry-on-vivienne-westwoods-activism).



Image 26. National Museum of the American Indian, Washington DC.. (Source: Lawrence, 2022. Available from: https://www.opb.org/article/2022/11/11/new-dc-memorial-honors-native-veterans/).

2.5.3 THE INTERPLAY BETWEEN CULTURE, IDENTITY AND SOCIETY IN DESIGN

The interplay between culture, identity, and society in fashion and architecture creates a complex and rich landscape for design innovation. Culture provides the context, identity offers the narrative, and society drives the trends, together shaping the creative output of designers in both fields. This intricate relationship ensures that fashion and architecture remain relevant and reflective of the times, constantly adapting to the changing needs and values of society. For example, the increasing emphasis on sustainability in both fashion and architecture reflects a societal shift towards environmental consciousness, with designers incorporating eco-friendly practices into their work (Black, 2008). At the same time, cultural and identity-driven designs continue to push the boundaries of creativity, ensuring that fashion and architecture remain not only functional but also meaningful and expressive. In this way, the relationship between culture, identity, and society serves as a driving force behind the evolution of design, fostering innovation while preserving the essence of what makes each discipline unique.



Images 27 and 28. What happens to architecture when form follows fashion? (Available from: https://www.arch2o.com/what-happens-to-architecture-when-form-follows-fashion/#google_vignette.)

2.6 HAUTE COUTURE FASHION DESIGN TECHNIQUES IN ARCHITECTURE

In my examination of fashion and architectural design, I have identified three primary design techniques in fashion that could be adapted to architectural forms: wrapping, folding, and transforming. Wrapping and folding involve the conversion of a flat piece of material into volumetric form, techniques that have been utilised in several architectural projects. Transformation, a more recent trend in fashion design, incorporates high technology into fabrics to enable the garment to change into various forms.

In applying these techniques to architecture, I intend to incorporate design elements that can adapt to users' preferences, thereby creating multi-use spaces suitable for different occasions. The objective of this thesis is to investigate the feasibility of the integration of fashion design and architetcure, and to develop transformative methods in mixed-use inner city building construction. Consequently, this approach will revolutionise the conventional design and approach to inner city regeneration projects and master planning, as well as sustainability and innovative approaches to architecture.

2.6.1 WRAPPING

Wrapping, in both fashion design and architecture, transcends its basic function as an external covering or protective layer. The wrapping technique in fashion design emphasises the relationship between the exterior form and the interior space around the human body, where body movement plays a critical role in shaping the spatial experience. Renowned fashion designer Yeohlee Teng has advanced the concept of wrapping, drawing inspiration from traditional wrapping styles from diverse cultures such as Greece, China, Japan, and Malaysia. By creatively reinterpreting these historical influences, Teng has established a distinct trend within the fashion industry (Colchester, 2007; Steele, 2011).

Her designs integrate architectural principles such as lighting, shadow, shape, materiality, colour, cultural context, and economic considerations, blending these elements in a way that bridges fashion and architecture (Quinn, 2012; Torre, 2011). The design principles that Teng employs, traditionally rooted in architectural practice, have been effectively adapted to fashion. In her work, architectural characteristics—typically associated with the sheltering and protective aspects of buildings—are scaled down to create garments that are both functional and aesthetically pleasing (Kawamura, 2005; Loschek, 2009).

One of Teng's collections, particularly her zero-waste designs, exemplifies the seamless application of continuous wrapping techniques, where fabric is wrapped around the body with minimal waste (Fletcher, 2008; Rissanen & McQuillan, 2016). This method stands in contrast to designs involving multiple layers, which could be seen as a discontinuous form of wrapping. Although both fashion and architecture serve the protective function, the zero-waste approach may find more effective application in architectural contexts than in garment design. In architecture, however, the wrapping of forms must also account for the intended function and practical use of interior spaces (Till, 2009; Frampton, 2007). The dynamic form of a wrapped object can significantly influence its shape, functionality, and utility.



Yeohlee, spring 2004



Yeohlee, spring 2009



Yeohlee, fall 2011



Yeohlee, fall 2018

Images 29 - 32. Pieces from Yeohlee Teng's collections over time.
(Source: Borrelli-Persson, 2021. Available from: https://www.vogue.com/article/in-advance-of-her-2021-cfda-award-an-intreview-with-yeohlee-teng)

The Jinling Art Museum in Nanjing, China, designed by the architectural firm AZL Architects, is an exemplary case of how the wrapping technique can be effectively employed in architectural design, construction, and execution. The museum is characterised by its striking façade comprised of custom made ceramic tiles which wrap the building in a continuous, flowing form. This design approach not only enhances the aesthetic appeal of the structure but also serves functional purposes, integrating the building harmoniously with its surrounding environment while encapsulating the rich history, culture and traditions of Nanjing (Barandy, 2024).



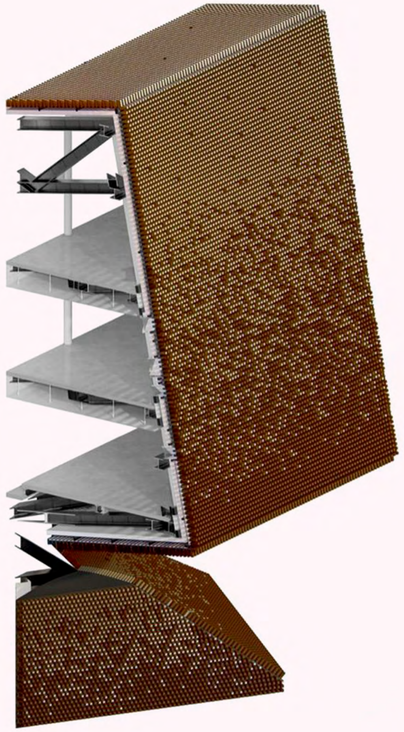


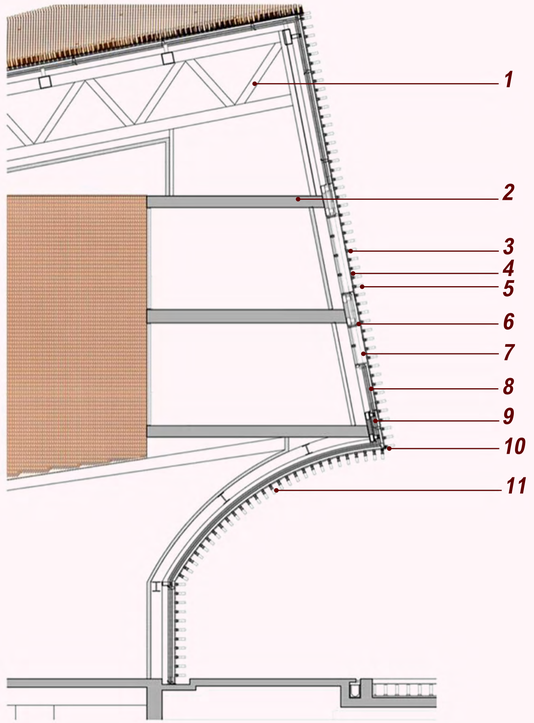
Images 33 and 34. The Jinling Art Museum, Nanjing China. (Source: Barandy, 2024. Available from: https://www.designboom.com/architecture/jinling-art-museum-azl-architects-nanjing-china-08-13-2024/)

In terms of design, the wrapping technique is evident in the museum's exterior, where a perforated metal skin envelops the entire building. This metal skin functions as a second layer, creating a buffer zone between the interior spaces and the external environment. The wrapping not only provides a unique visual identity but also regulates the building's microclimate by controlling the amount of sunlight that penetrates the interior, thereby reducing the need for artificial cooling and lighting (Barandy, 2024). This dual-purpose design exemplifies how wrapping can be utilized not only for its aesthetic qualities but also for its environmental performance.

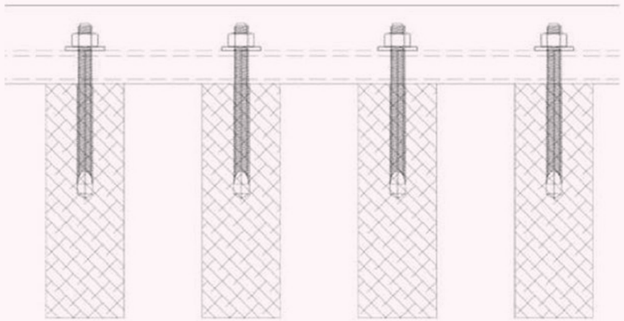
During construction, the wrapping technique required careful consideration of materials and fabrication methods. The metal skin had to be precisely engineered to achieve the desired fluidity and continuity in form. Advanced technologies, such as computer-aided design (CAD) and digital fabrication, were instrumental in translating the conceptual wrapping design into reality. The use of laser cutting technology allowed for the creation of intricate patterns in the metal panels, which contribute to the building's dynamic appearance while also enhancing its functional properties, such as ventilation and light diffusion (Barandy, 2024). These technological interventions underscore the importance of wrapping as both a design and construction strategy.

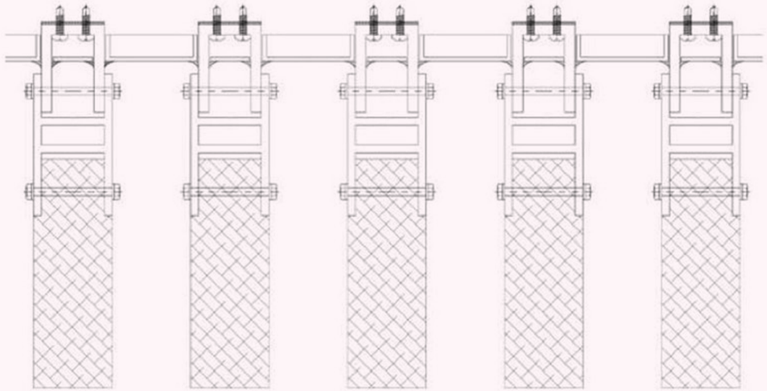
Images 35 and 36. The construction of the Jinling Art Museum, Nanjing China. (Source: Barandy, 2024. Available from: https://www.designboom.com/architecture/jinling-art-museum-azl-architects-nanjing-china-08-13-2024/)

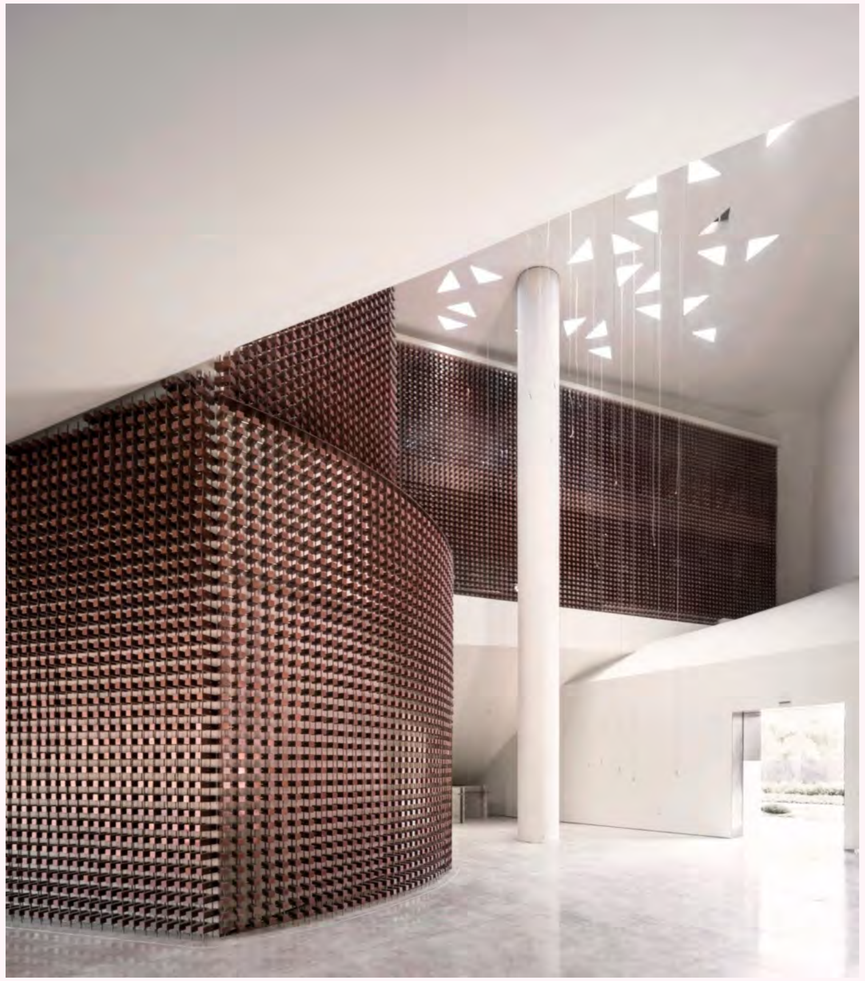


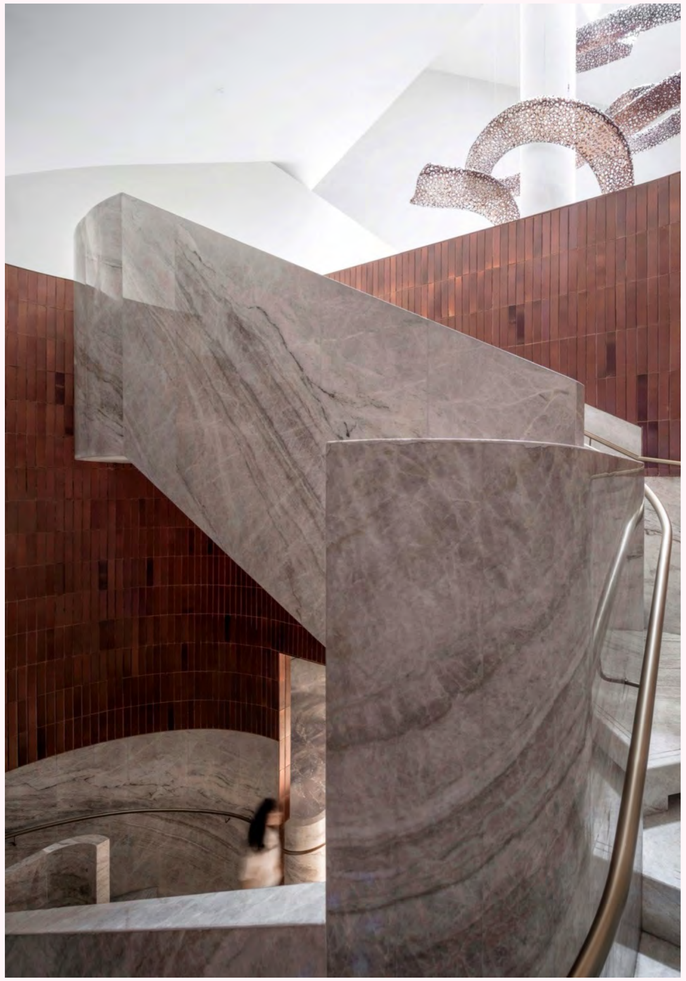


1. Steel truss
2. Concrete floor slab
3. 6mm aluminium alloy pintle
4. 3mm aluminium alloy veneer
5. Back bolts to fix the tiles
6. 60 x 60 x 4mm galvanised square steel pipes
7. Aluminium alloy triangle window
8. 110mm thermal insulation rock wool
9. Fire blocking
10. 8mm steel angle piece
11. U-shaped slot to fix ceramic tile









Images 37 and 38. Interior views of the Jinling Art Museum, Nanjing China. (Source: Barandy, 2024. Available from: https://www.designboom.com/architecture/jinling-art-museum-azl-architects-nanjing-china-08-13-2024/)

The execution of the Jinling Art Museum further highlights the effectiveness of wrapping as a technique in architecture. The continuous metal skin seamlessly integrates the building's various components, from the main structure to the service areas and even the landscaping elements. This holistic approach to wrapping ensures that the museum is perceived as a cohesive, unified entity rather than a collection of disparate parts. Moreover, the wrapping technique facilitates a fluid transition between interior and exterior spaces, inviting visitors to experience the museum in a more immersive and engaging manner (Barandy, 2024).

The Jinling Art Museum serves as a powerful example of how the wrapping technique, often associated with fashion design, can be successfully adapted to architecture. By employing wrapping not just as an aesthetic gesture but as a functional and constructional strategy, the museum embodies the potential for innovative architectural designs that resonate with both cultural significance and environmental sensitivity. The building's design reflects a deep understanding of the interplay between form, function, and context, demonstrating how wrapping can be used to create architecture that is both visually captivating and pragmatically effective.

2.6.2 FOLDING

Many architects and fashion designers continually seek new and creative methods for designing their creations. However, simple folding remains a popular method for designers to explore. Fashion designers often experiment with folding techniques because garments are easier to construct compared to buildings (Vysivoti, 2008). Folding can produce a more striking visual effect as opposed to a smooth surface, which is why garment designers favor this technique (Vysivoti, 2008).

Japanese fashion designer Issey Miyake not only utilises folding but also pleating, achieving both an elegant visual effect and a functional connection with the human body (Leung, 2010). His folding technique revolves around the spaces between the garment and the human body, designing clothes that reflect body scale and movement (Miyake *et al*., 1998). His garments often convey a sense of smoothness, playfulness, and flexibility.

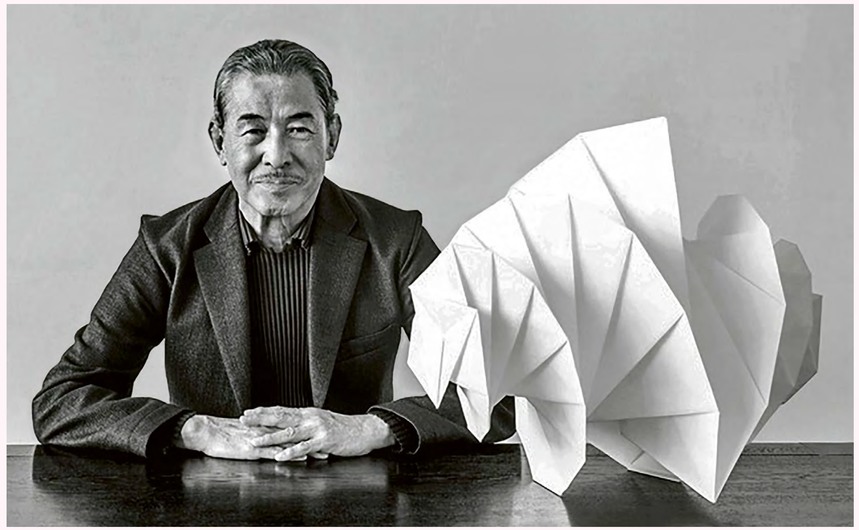


Image 39. Japanese fashion designer Issey Miyake. (https://arquitecturaviva.com/articles/issey-miyake



Image 40. Issey Miyake's garment construction through origami techniques. (Source: Fitzgerald, 2012.)

Since the turn of the 20th century, numerous modern architectural buildings have utilised the folding technique to shape space, with some even integrating it into the structural design itself (Vysivoti, 2008). This technique emphasises human scale, nature and culture, creating dynamic building forms that reflect these elements (Leung, 2010). The Air Force Academy Cadet Chapel in Colorado Springs, USA is a quintessential example of how the folding technique can be masterfully employed in architecture. This iconic structure, recognised for its striking and innovative design, exemplifies the use of folding to create both a dynamic form and a powerful spatial experience.



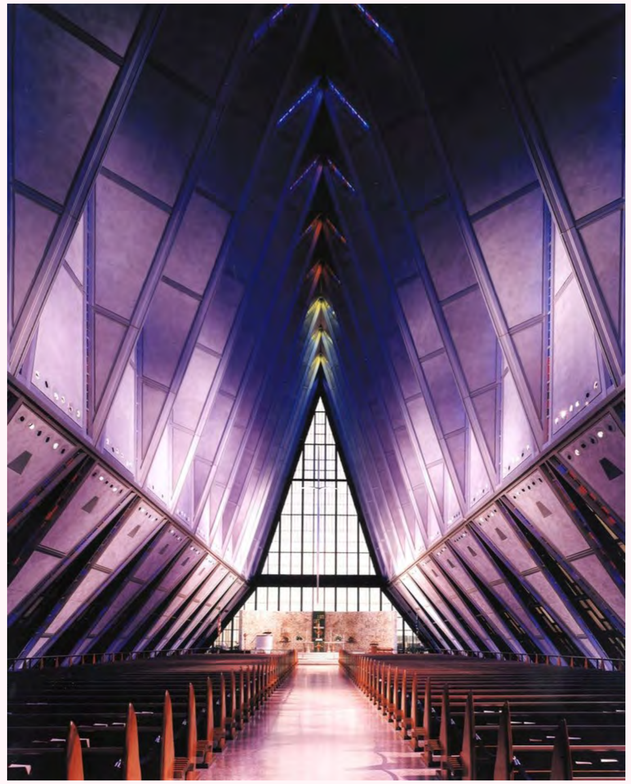
Image 41. The Air Force Academy Cadet Chapel. (Source: Perez, 2010. Available from: https://www.archdaily.com/63449/ad-classics-usafa-cadet-chapel-skidmore-owings-merrill-2.)

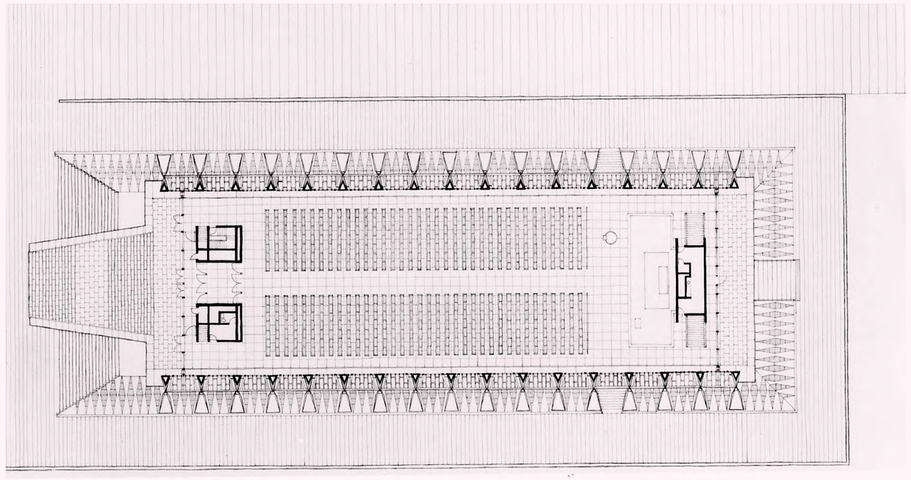
Designed by Walter Netsch in 1962, the buildings distinctive feature is its series of 17 spires, which are formed by repeating triangular aluminium panels that converge towards the sky (Perez, 2010). These panels are a direct application of the folding technique, where the rigid material is manipulated to create a sense of upward movement and spiritual ascension. The repetition and angularity of the folds not only contribute to the building's visual rhythm but also serve structural purposes, distributing the weight and forces throughout the chapel's frame (SOM Journal, 2015).

The folding technique employed in this building is not merely aesthetic; it is integral to the building's structural integrity and function. The folded planes of the chapel create a strong, self-supporting structure that eliminates the need for internal supports or columns, allowing for an uninterrupted interior space (SOM Journal, 2015). This design choice enhances the sense of openness and reverence within the chapel, as the soaring ceiling seems to lift the eye and the spirit upward.

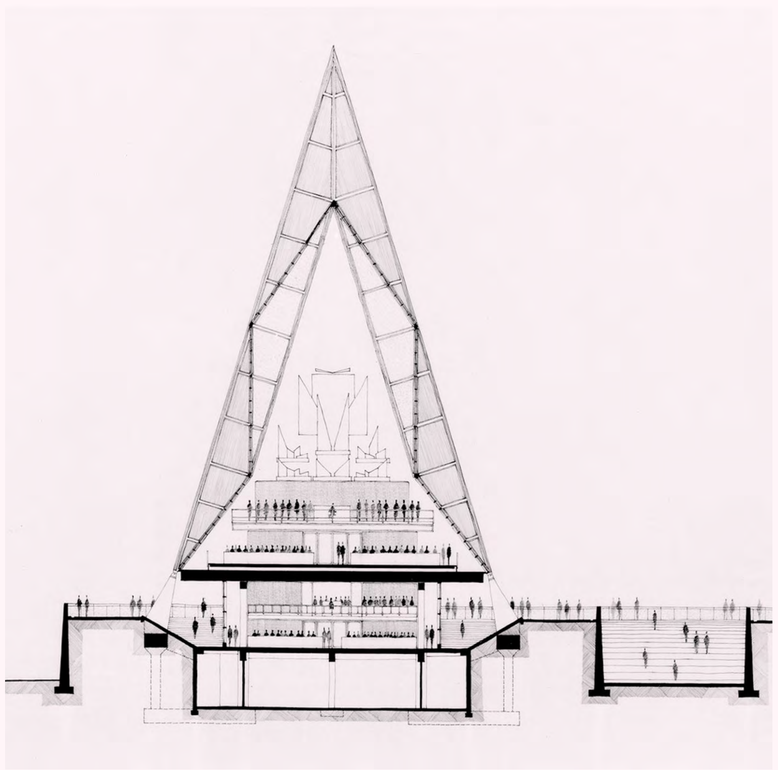
The interior of the chapel is equally influenced by the folding technique. The sharp angles and the interplay of light and shadow created by the folds add to the ethereal quality of the space. The stained-glass windows, which are embedded between the folds of the aluminium panels, allow natural light to filter into the chapel in a way that accentuates the geometry of the space, further enhancing the spiritual atmosphere (Perez, 2010).

Moreover, the use of folding in the Cadet Chapel goes beyond its structural and aesthetic functions. It also reflects the symbolic aspirations of the Air Force Academy, embodying the ideals of strength, precision, and upward striving that are central to the institution's mission (SOM Journal , 2015). The folded form of the chapel, with its sharp, soaring lines, can be seen as a metaphor for flight and the aerodynamic principles that govern aviation, aligning the building's design with the identity of the Air Force (Perez, 2010).





Images 42-44. The Air Force Academy Cadet Chapel. (Source: Perez, 2010. Available from: https://www.archdaily.com/63449/ad-classics-usafa-cadet-chapel-skidmore-owings-merrill-2.)



2.6.3 TRANSFORMATION

Transformation entails altering the form, appearance, or structure of an object. In the context of modern technology, transformational materials have the ability to undergo physical changes in response to environmental stimuli (Brownell, 2008). These changes can occur automatically, driven by the inherent properties of the materials, or they can be initiated by the user (Leung, 2010). Similar to intelligent materials, transformational materials provide a range of benefits, including waste reduction, enhanced ergonomics, solar control, illumination, and distinctive phenomenological effects (Quinn, 2002). These materials are capable of performing multiple functions where only one might traditionally be expected, delivering unexpected advantages and altering our perception of the world.

In the past, many individuals sought to implement the concept of transformation, but achieving it was challenging due to limited resources. For instance, garment materials were utilized in building contexts, such as tents. British-Cypriot Fashion designer Hussein Chalayan, in his early collection “Before Minus Now,” manually converted a café table into a wearable skirt (Chalayan and Evans, 2005). Through research and the innovative use of technology, he later developed an automatically transformable garment, representing a significant breakthrough in applying technology to design with the aim of enhancing human life (Leung, 2010).

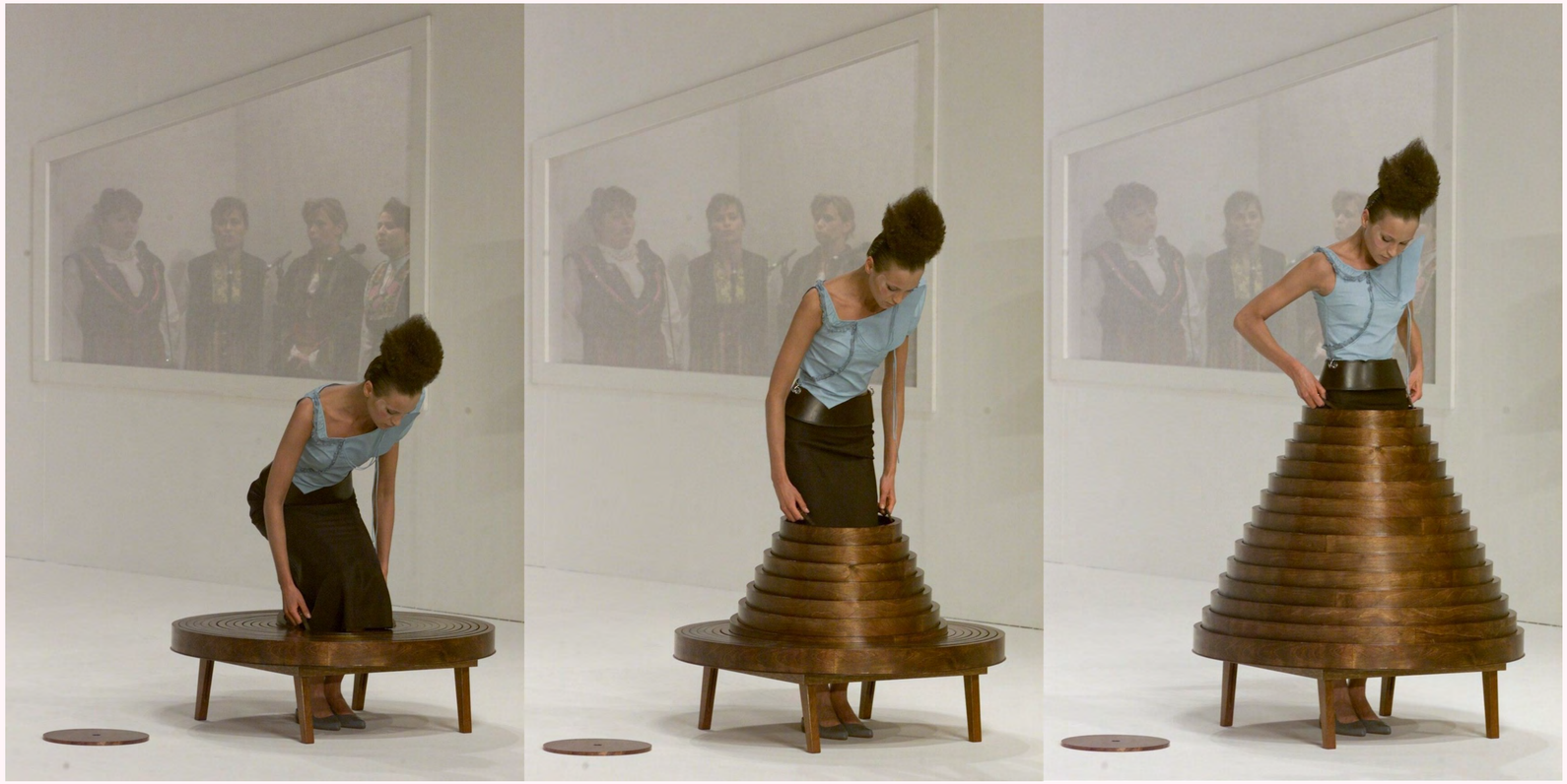


Image 45. Hussein Chalayan’s coffee table dress. (Source: Hess, 2019. Available from: https://www.anothermag.com/fashion-beauty/11507/hussein-chalayan-best-shows-coffee-table-dress-airplane-dress-led-dress.)

However, architectural transformation is apparent in examples like smart houses, automatic shading systems, and rotatable homes. This suggests that, with technological advancements and specialised designs, architecture is evolving toward transformable structures that cater to users' preferences. The Zeitz Museum of Contemporary Art Africa (MOCAA), designed by Heatherwick Studio, stands as a remarkable example of architectural transformation that leverages advanced technologies and specialised designs to meet the needs of its users and its context.

Located in Cape Town, South Africa, the museum was ingeniously repurposed from a historic grain silo complex, originally built in 1921 (Archdaily, 2017). This transformation involved converting the 42 concrete cylinders, each 33 meters high, into a cutting-edge museum that now houses one of the largest collections of contemporary African art in the world (Ghisleni, 2024).

Heatherwick Studio's approach to the Zeitz MOCAA project exemplifies how architectural transformation can breathe new life into an existing structure while respecting its historical significance. The most striking aspect of the design is the central atrium, which was carved out of the dense grid of concrete tubes (Ghisleni, 2024). Using advanced technology, including 3D modeling and precision cutting, the design team was able to sculpt a visually stunning, cathedral-like space that serves as the museum's heart. This atrium is not only a feat of engineering but also a poetic reinterpretation of the building's industrial past, blending old and new in a way that is both functional and symbolic (Archdaily, 2017).





Images 46-47. The Zeitz Museum of Contemporary African Art. (Source: Ghisleni, 2024. Available from: https://www.archdaily.com/879763/zeitz-museum-of-contemporary-art-africa-heatherwick-studio).



The museum's design also responds to the context of its location in the V&A Waterfront, a vibrant and historically rich area of Cape Town. The transformation of the grain silo into the Zeitz MOCAA involved a delicate balance between preserving the original structure and introducing new elements that cater to contemporary needs. The advanced technologies used in the project allowed for the retention of much of the original concrete while introducing large, glass windows that flood the interiors with natural light. This creates an inviting environment for visitors while offering breathtaking views of the city and the harbor.

Furthermore, the specialised design of the Zeitz MOCAA addresses the cultural and social context of its new function as a museum. The building's transformation was not merely physical; it also involved a shift in purpose, from a utilitarian industrial facility to a cultural landmark. The design facilitates this new role by creating spaces that are adaptable to various exhibitions and events, ensuring that the museum can serve as a dynamic center for art and culture in Africa.

Images 48. The Zeitz Museum of Contemporary African Art Cape Twon, South Africa. (Source: Ghisleni, 2024. Available from: https://www.archdaily.com/879763/zeitz-museum-of-contemporary-art-africa-heatherwick-studio).

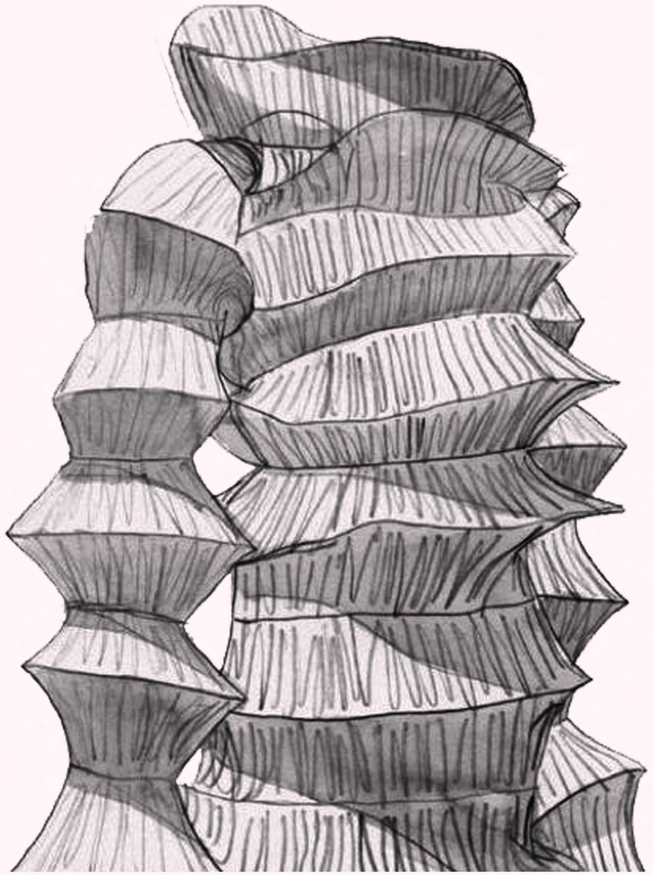
2.7 CONCEPTUAL FRAMEWORK - THE INTEGRATION OF FASHION DESIGN AND ARCHITECTURE

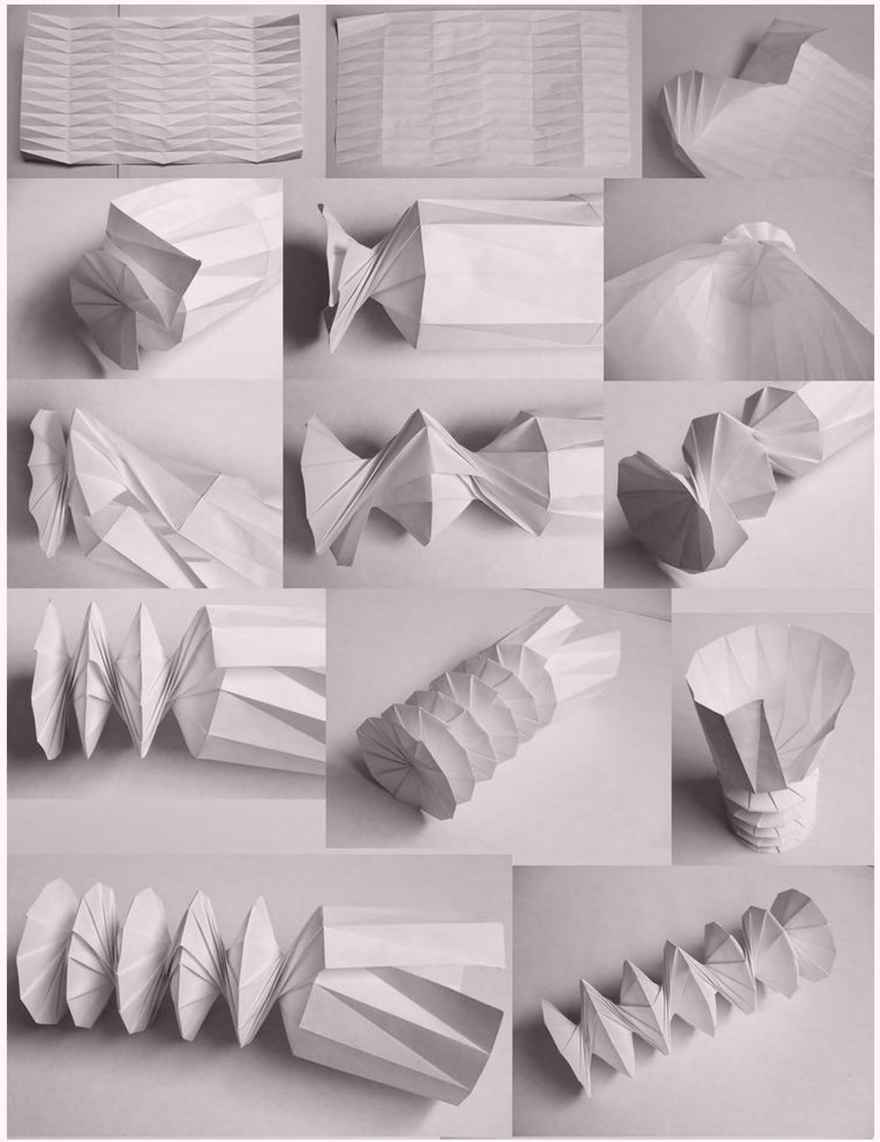
The conceptual framework proposed here seeks to bridge the realms of architecture and fashion design, leveraging principles from the latter to enrich architectural expression. By integrating elements of fashion design; wrapping, folding and transformation, architects can create buildings that evoke dynamism, individuality, and aesthetic allure. This framework advocates for a holistic approach that blurs the boundaries between architecture and fashion, resulting in innovative and emotionally resonant built environments.

Key Components of the Framework:

1. Form and Silhouette:

- Drawing inspiration from fashion silhouettes and garment structures to inform architectural form.
- Exploring the use of asymmetry, layering, and drapery techniques to create sculptural building volumes.
- Emphasising the interplay between light and shadow to accentuate architectural contours and lines.





Images 49 - 50. Exploring folding in fashion design to create silhouettes that transform into architectural building volumes.

Image 49, Authors own, sketch adapted from Issey Miyake's 1994 Flying Saucer Dress.

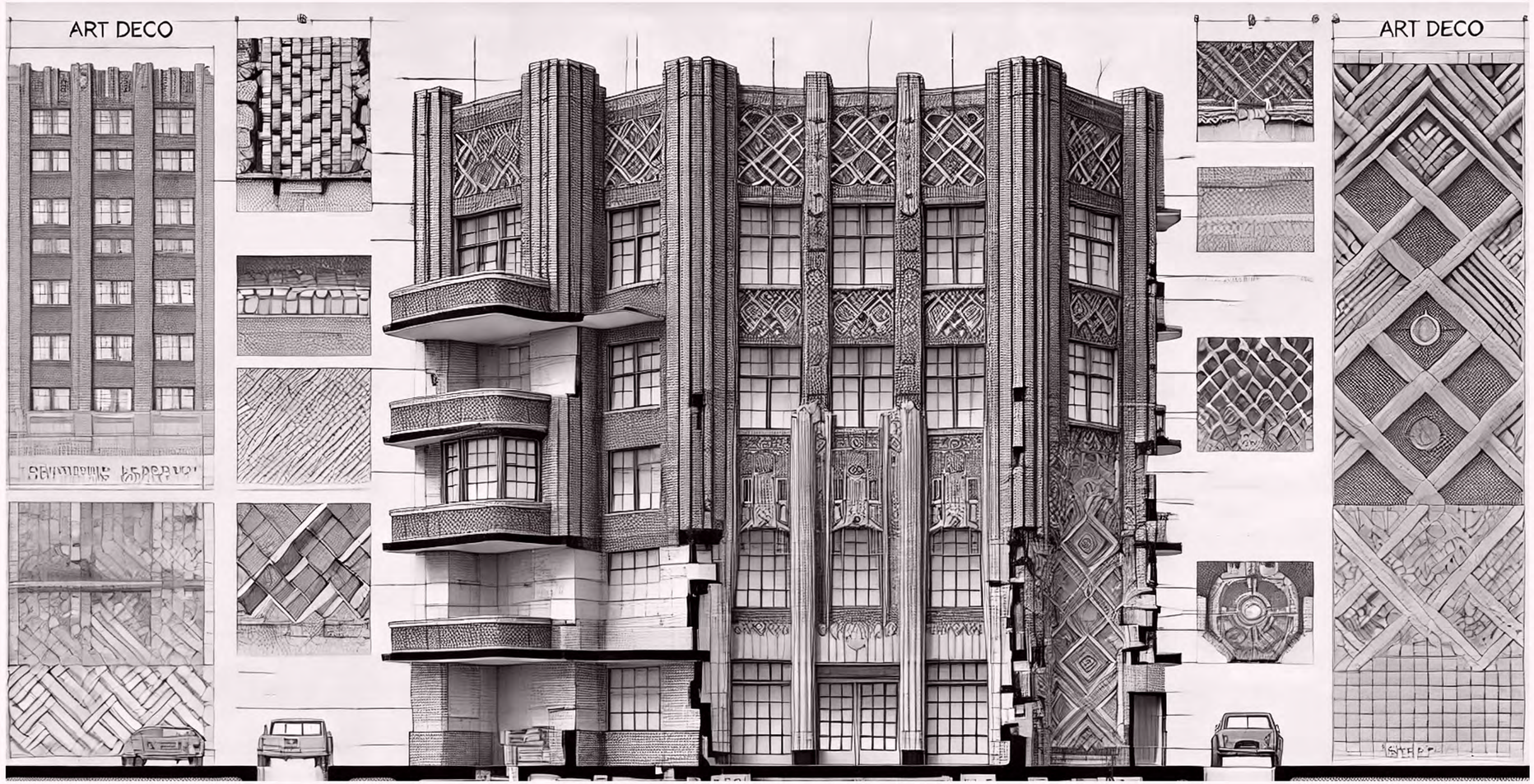
Image 50, Turshin, 2021. (Available from: https://www.linkedin.com/pulse/origami-future-tech-industry-merely-form-art-madiha-turshin/)



Image 51. Fashionable Architecture - experimenting with with textures and materials in fashion design and architecture. (Available from: https://fashionablearchitecture.tumblr.com/).

2. Materiality and Texture:

- Experimenting with unconventional materials and textures borrowed from the realm of fashion.
- Incorporating textiles, fabrics, and innovative surface treatments to add richness and tactility to architectural surfaces.
- Blending contrasting textures to create visual interest and evoke sensory experiences within the built environment.



3. Pattern and Ornamentation:

- Translating motifs, patterns, and motifs from fashion design into architectural ornamentation.
- Using digital fabrication techniques to integrate intricate patterns into building facades, interiors, and structural elements.
- Exploring the symbolism and cultural significance of patterns to imbue architectural spaces with narrative depth and visual intrigue.

Image 52. Patterning and architectural ornamentation in art deco facade exploration. Authors own.

4. Movement and Dynamics:

- Infusing architectural spaces with a sense of fluidity and movement inspired by fashion design.
- Designing spatial sequences that encourage exploration, interaction, and engagement.
- Incorporating kinetic elements, such as movable partitions or responsive facades, to create dynamic architectural environments.



Image 53. Parametricism in fashion design and architecture. (Available from: https://parametric-architecture.com/ai-immersed-artistry-studio-hera-kim/.)

5. Colour and Palette:

- Adopting a nuanced approach to colour selection inspired by fashion trends, seasonal palettes, and cultural influences.
- Using colour psychology to evoke specific moods, emotions, and atmospheres within architectural spaces.
- Experimenting with colour gradients, ombre effects, and chromatic layering to add depth and dimensionality to architectural compositions.



Images 54 - 57. Fashion and Architecture: exploring the influence of colour. (Available from: https://mymodernmet.com/architecture-fashion-design/).

6. Personalisation and Customisation:

- Embracing principles of customisation and personalisation borrowed from the fashion industry.
- Offering users opportunities to tailor architectural elements to their preferences, lifestyles, and identities.
- Introducing modular and adaptable design strategies that allow for user-driven variations and modifications over time.



2.7.1 INTEGRATION WITHIN AN AFRICAN CONTEXT

When applied to African space and architecture, particularly in regions such as Johannesburg, this framework gains additional layers of significance. African cultures are rich with traditions in pattern, colour, and material use, which can deeply influence both architectural and fashion design. By merging these cultural elements with the proposed conceptual framework, architects can create buildings that are not only visually stunning but also culturally resonant and contextually appropriate.

For example, in African architecture, the use of local materials and traditional techniques such as weaving and wrapping can be reinterpreted through modern fashion principles to create structures that reflect both contemporary design and cultural heritage. The blending of traditional African patterns and motifs with modern architectural forms can produce buildings that resonate with local identities while also contributing to the global architectural landscape.

The potential for personalisation and customisation within this framework allows for the adaptation of architecture to different African societies, where diverse cultural practices and social dynamics require flexible and responsive design solutions. By integrating the ethos of fashion—individuality, expression, and innovation—into African architectural practices, architects can create spaces that are not only functional but also culturally meaningful and reflective of the continent's dynamic identity.

This framework encourages architects to explore interdisciplinary collaborations, embrace experimentation, and push the boundaries of conventional design paradigms to create built environments that are both dynamic and culturally relevant, particularly within the rich and diverse contexts of African societies.

Images 58. An Afrotopia of fashion and architecture. (Available from: https://iqoqo.org/africa-fashion-brooklyn-museum/).

2.8 CONCLUSION

In conclusion, this chapter has highlighted the potential for a harmonious relationship between fashion design and architecture, demonstrating how the principles and techniques of one field can significantly enhance the other. By tracing the historical development of both disciplines and analysing contemporary examples, we have shown how form, function, and expression are deeply interconnected in the built environment.

The study of wrapping, folding, and transformational techniques reveals that the boundaries between fashion and architecture are fluid, with each discipline continually drawing inspiration from the other to foster innovation. From the ancient practices of clothing and shelter to the futuristic concepts of transformable garments and structures, the parallels between these two fields are extensive and multifaceted.

Furthermore, the integration of art, science, and technology has proven to be a pivotal factor in the convergence of fashion and architecture. Advances in materials, fabrication techniques, and digital technologies have broadened the scope of design possibilities in both arenas, empowering architects and fashion designers to stretch the limits of creativity and functionality.

The conceptual framework proposed in this chapter provides a guide for architects to incorporate fashion design principles into their work, advocating for a more holistic and interdisciplinary approach to architectural design. By adopting elements such as form, texture, pattern, movement, colour, and personalisation from fashion, architects can create spaces that are not only visually captivating but also deeply resonant with human experience.

In a broader cultural context, especially in Africa and within the Johannesburg fashion district, the intersection of fashion and architecture offers rich opportunities for expressing and preserving cultural identities. African culture, with its diverse and vibrant traditions, serves as a profound source of inspiration for both architecture and fashion. In Johannesburg, the fashion district stands as a testament to the dynamic interplay between culture, identity, and design, where the fusion of fashion and architecture can result in spaces that are both culturally meaningful and aesthetically innovative.

Ultimately, the fusion of fashion and architecture has the potential to elevate not only the aesthetic quality of architectural spaces but also their functionality, sustainability, and cultural relevance. As we continue to explore the synergy between these two disciplines, we stand on the brink of unlocking new pathways for creativity and innovation, poised to shape the future of architectural design in ways that are both profound and unexpected.



CHAPTER 03

RESEARCH METHODS

CHAPTER 03. RESEARCH METHODS

3.1 INTRODUCTION

Research facilitates the interpretation of theory by offering a rational approach to comprehending a subject more thoroughly (Cilliers and Cilliers, 2016). As advocated by Bryman (2008) and Creswell (2003), employing multiple research methods incorporates triangulation which enhances the result validity by corroborating information from diverse data methods. This thesis encompasses the essential methods and approaches for conducting the intended study along with techniques for capturing and analyzing data (Mutinga, 2018). Additionally, ethical considerations are highlighted to justify the study's appropriateness and acknowledge the challenges it presents.

3.2 RESEARCH APPROACH

This research paper adopts an inductive approach, entailing a detailed observation, the formulation of abstract generalisations and ideas, and the identification of initial relationships among them (Mutinga, 2018). Drawing from prior research, there is a recognition of the industries of fashion design and architecture, prompting interest in the correlation between the two. This observation has stimulated the generation of ideas and the application of logic in devising strategies aimed at enhancing innovative and architectonic architectural strategies, thereby fostering the interrelationship of the two fields (Cilliers and Cilliers, 2016).

However, recent observations and interviews conducted in the area reveal nuances not fully captured in previous research. For example, while earlier studies focused on the theoretical intersections between fashion and architecture, the current findings highlight a current growing trend of practical collaboration where local designers are increasingly involved in architectural projects, contributing not only to the aesthetic aspects but also to sustainable practices through the use of up-cycled materials. Additionally, there is evidence of a stronger community-oriented approach in these collaborations, which aims to address social and economic challenges specific to the area, suggesting a more integrated and socially responsible practice than previously documented. These findings add a new dimension to the existing body of research, emphasising the importance of local context and community engagement in the ongoing evolution of the relationship between fashion and architecture (Cilliers and Cilliers, 2016).

This thesis also contemplates constructivist perspectives rooted in interpretive epistemology. As evidenced in the literature review, there has been as specific focus on comprehending the nexus between fashion design and architecture, along with the examination of the repercussions of the outcomes of this interplay on physical spaces and human activities (Cilliers and Cilliers, 2016; Mutinga, 2018). To mitigate the adverse effects of these intended outcomes on the built and natural environments as well as on the lives of the local residents, the implementation of an urban design framework is considered with strategies aimed at advancing the primary goals of urban vitality and city resilience (Culwick and Bobbins, 2016). These theoretical principles are constructed based on subjective realities negotiated across various urban contexts, social settings and demographic groups (Abidin, 2016).

This study with undertake the following types of research:

1. Applied research that will address practical contemporary issues such as those present of the site, with the aim of enhancing human living standards (Cilliers and Cilliers, 2016).

2. Explanatory research that aims to elucidate the processes involves in achieving this interplay between fashion design and architecture, as well as identifying any existing gaps in the intention (Creswell, 2003; Cilliers and Cilliers, 2016).

3. The use of qualitative data where a combination of both primary and secondary data will be used for a comprehensive analysis of the research topic allowing for a deeper understanding of the broader socio-economic and environmental dynamics within the study area (Creswell, 2003; Dunning et al., 2008).

3.2.1 SITE SELECTION

To facilitate the efforts of the integration between fashion design and architecture, it is deemed optimal to select a location that embodies both concepts. From the standpoint of fashion design, selecting an area that was socially and economically geared in the advancement of the said industry was ideal and paramount (Lee, 2011; Ellis and Levy, 2009). Johannesburg's Fashion District exemplifies these attributes, with a history of frameworks and initiatives by the JDA and the COJ aimed at catalysing the fashion industry of the city and of the country at large. The key issue in this research paper is to examine the translation of haute couture crafts into architectonics and the selection of the Fashion District as a case study illuminates and amplifies the significance of the hypothetical model through architecture (Abidin, 2016; Lee, 2011).

The chosen site also qualifies as a crucial case for investigation due to the number of unsuccessful interventions initiated by various stakeholders in the past, probing the questions: why did these interventions fail? and what can be done differently to ensure the implementation of a successful urban design framework and model for the area?

Image 16 illustrates the location of the selected site in the larger context of Johannesburg and the Fashion District.

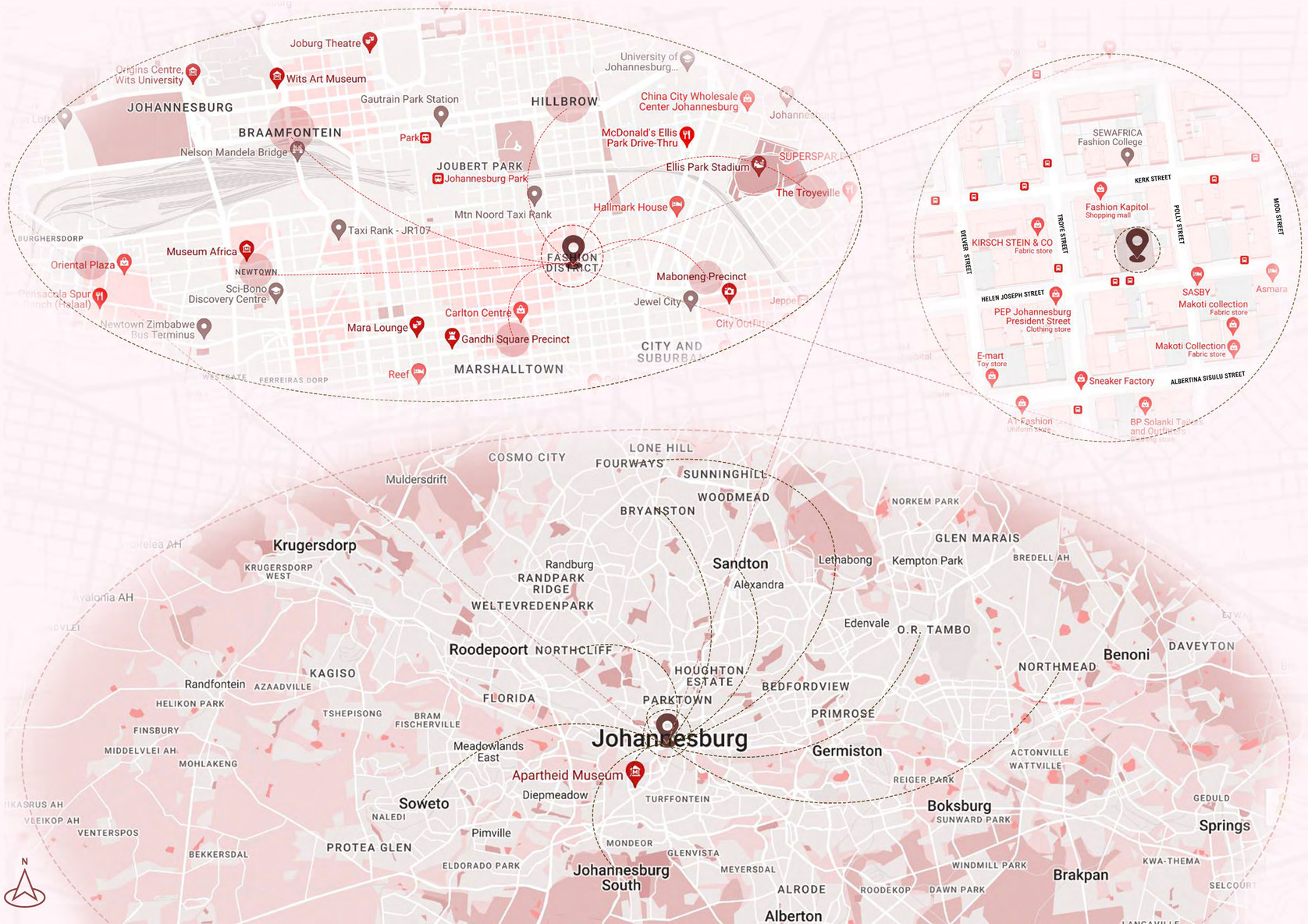


Image 59. The selected site of study.
(Authors own, adapted from: Google Maps, 2024).

3.2.2 SITE STUDY STRATEGY

In alignment with the conceptual framework and with the aim of accomplishing the research objectives outlined in the topic analysis and literature review, the research methodology has been categorised as the spatial integration of fashion design and architecture. To investigate the current spatial attributes in the Fashion District, these guiding questions have been formulated aide in data collection:

- What is the spatial provision for architectonics and fluid architecture in the Fashion District?
- What is the relationship between haute couture craft and architectonics in the existing buildings in the Fashion District?
- What gaps are revealed from the spatial integration of fashion design (haute couture crafts) and architectonics (architecture)?

To explore the spatial amalgamation of fashion design and architecture, it is essential to visualise and superimpose the existing patterns of urban design frameworks and initiatives (Davies et al., 2006). GIS software will be employed to identify and map these spatial integrations and provisions, and a composite map will be produced and analysed. This will ascertain whether there are functional and spatial connections between fashion design and architecture (Abidin, 2016).

When delineating the elements of haute couture and architecture, it is crucial to grasp the definition of spaces and buildings categorised within the context of Johannesburg. This research paper employs the Skin + Bones Parallel Practice exhibition guidelines outlined by Miles (2008) and organised by the The Museum of Contemporary Art (MOCA) in Los Angeles as a foundation for constructing an architectonic typology specific to the study area. This choice is informed by Barzandeh's (2010) assertion that this typology offers a comprehensive and adaptable framework suitable for diverse urban environments.

Table 02 outlines the techniques to be utilised for collecting data pertaining to the aforementioned three inquiries, and the specific types of data needed.

All data obtained will be handled and treated as confidential, and stored in secure files.

SPATIAL INTEGRATION	METHODS	DATA
What is the spatial provision for architectonics and fluid architecture in the Fashion District?	Mapping out and generating architectonic components. Analysing previous interventions and schemes.	GIS, satellite maps and images. Secondary data and documents.
What is the relationship between haute couture craft and architectonics in the existing buildings in the Fashion District?	Identifying urban renewal actions and qualitatively analysing the spatial patterns in fashion design and architecture.	Urban design frameworks, policies and development schemes by local authorities and stakeholders
What gaps are revealed from the spatial integration of fashion design (haute couture crafts) and architectonics (architecture)?	Qualitatively analysing the gaps discerned in No. 2 above	An integration of the architectonic map with the urban renewal actions.

Table 02. Techniques for data collection. Authors own.

3.2.3 TARGET POPULATION, SAMPLING METHODS AND SAMPLE SIZE

According to Zikmund (2002), the sample represents a subset of the broader population that will participate in the surveys, and sampling refers to the procedure of selecting individuals from that population to be selected. A number of sampling techniques and methodologies such as systematic sampling, snowball sampling and quota sampling have been used successfully over time (Taherdoost, 2016). However, this research thesis will employ the use of stratified sampling.

This research employs a stratified sampling method that entails dividing the population into distinct groups based on their occupation. These occupations are: Small business owners, fashion designers, educators, students and consumers. This sampling technique is commonly employed in populations exhibiting significant variability, ensuring that each stratum is adequately represented (Zikmund, 2002; Taherdoost, 2016). This research paper will utilise the sampling technique, as the study participants are affiliated with the fashion industry.

For this study, approximately 15 to 20 participants will be selected for data collection via interviews, questionnaires, and surveys.

3.2.4 SURVEY METHODOLOGY

Building on the site study strategy discussed earlier, a blend of survey methodologies has been implemented. To align with the conceptual framework and achieve the research objectives outlined in the literature review and topic analysis, the research methods have been categorised as an exploration of the spatial integration of fashion design and architecture. In examining the existing spatial relationship between fashion design and architecture within Johannesburg's Fashion District, three key questions have been posed to guide data collection:

- What is the spatial provision for this integration within the Fashion District, particularly at the selected site?
- How do urban regeneration programs, fashion design, and architecture spatially relate within the Fashion District and the chosen site?
- What gaps are identified in this integration?

Qualitative research methods will be implemented in data collection. These aim to understand phenomena in-depth and from the perspective of the participants. These methods are often exploratory and involve collecting non-numerical data. The qualitative research methods to be used are:

1. Semi-Structured Interviews

These will be conducted to gather detailed information from participants. This will consist of a set list of questions that are asked in the same order to every participant. This method will ensure uniformity and make it easier to compare responses. The flexibility to explore topics that arise in the conversation will also be allowed to encourage deeper insights while maintaining the consistency and structure of the set questions.

2. Non-Participant Observations

This method will involve observing the participants and groups without getting involved in their activities, minimising the researchers impact on their behaviour.

3. Case Studies

This will involve a detailed examination of multiple cases of similar projects both locally and internationally, providing insights and allowing for an in-depth understanding of complex issues relating to the topic at hand, and solutions used to mitigate these issues.

4. Context Studies

GIS software has been employed to identify and map the study site and its surrounding context. This analysis helps determine whether the integration of fashion design and architecture is both functionally and spatially connected (Aibidin, 2016). Through this process, key practices relevant to the successful implementation of such integration within Johannesburg's Fashion District are highlighted.

5. Photography

This will involve the use of photographs related to the topic of research during interviews and discussions to prompt discussion, as well as taking of photographs around the site to capture data digitally.

6. Social Media Analysis

This will involve the analysis of posts, comments, images, and videos to understand social trends, public opinions, and individual behaviours. It will also involve the adaptation of ethnographic research techniques to study communities and cultures created through online interactions to gather data on the topic of research.

3.3 LIMITATIONS OF THE STUDY

Johannesburg inner city is commonly regarded as unsafe, particularly for women and foreigners. Therefore, my visits will be confined to daytime hours, and I will be accompanied by one or two individuals for safety reasons. I will also employ an interpretor to mitigate the issue of language barriers. Additionally, photographs will be captured in secure areas to minimise the risk of theft incidents.

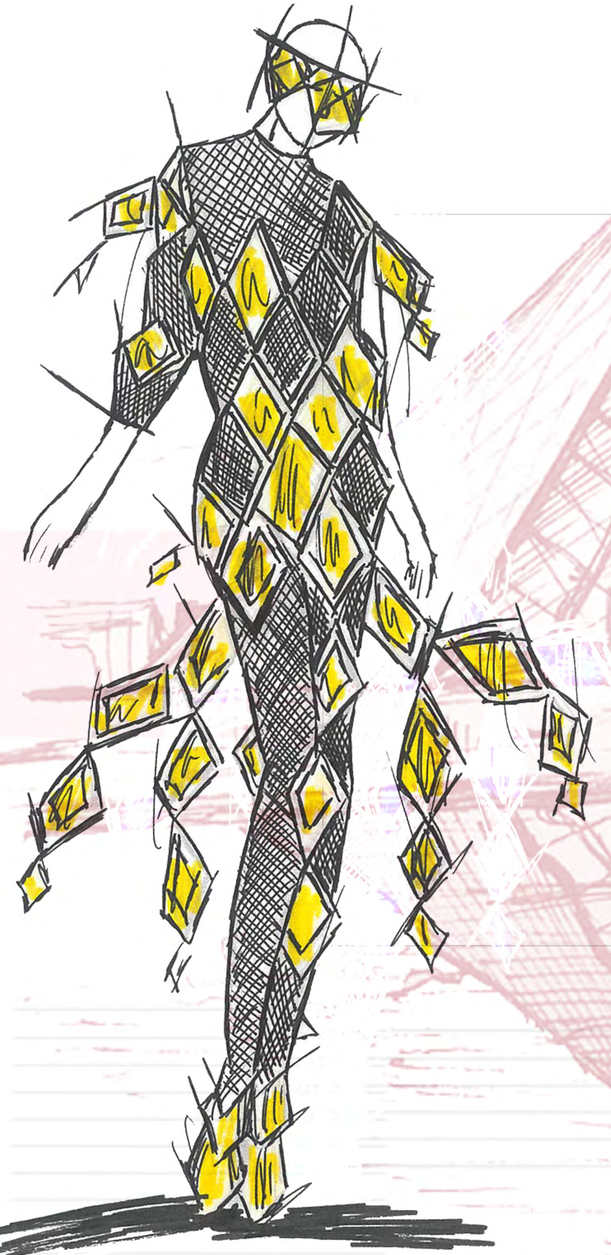
Access to GIS data, past urban design frameworks and development initiatives might pose a challenge, potentially necessitating an additional step in the data collection process that involves seeking permission from city officials to access the required data.

3.4 CONCLUSION

This chapter commenced by introducing the research process and proceeds to discuss the research approach to be adopted in this paper. To scrutinize and delve into the hypothesis model formulated in the conceptual framework outlined in the preceding chapter, a series of inquiries were devised to fulfill the objectives. These inquiries were crafted to comprehensively explore the interconnectedness of fashion design and architecture and their potential integration within Johannesburg's Fashion District.

Given the qualitative and inductive nature of this study, a specific case study area was chosen to assess the applicability of the aforementioned hypothesis model. Johannesburg's Fashion District was identified as the focal point for the case study due to its prevalent socio-economic challenges and profound history. These circumstances render the area particularly critical in the imperative for sustainable urban regeneration practices, specifically the amalgamation of fashion design with architectural initiatives.

Referring to the theoretical hypothesis model, a primary methodology of documentary analysis has been proposed, focusing on spatial integration. This approach is devised to explore the fusion of green infrastructure and urban regeneration by visually representing it through the utilisation of maps.



CHAPTER 04

FIELD RESEARCH AND DATA ANALYSIS

CHAPTER 04. FIELD RESEARCH AND DATA ANALYSIS



4.1 INTRODUCTION

It can be argued that historical urban developments in Johannesburg's inner city, especially within the Fashion District, have often been carried out without sufficient consultation or understanding of the importance and impact of context and location in architecture, urban planning, and urban design. Post-Apartheid initiatives have mainly focused on constructing urban infrastructure considered 'world-class' and improving the built environment to promote economic growth, social activity, and attract investment. As a result, there has been little consideration given to the actual site context, including its natural and built environment, and the overall well-being of the area.

This chapter explores Johannesburg's Fashion District through both macro and micro site analyses, focusing on the spatial dynamics between existing site conditions — both natural and human-made —urban regeneration efforts by the JDA and the COJ, and architectural practices. The study identifies potential gaps within these spatial relationships and examines whether current architectural and urban design initiatives in the area address these gaps by introducing new principles or enhancing existing ones. Additionally, this chapter analyses and discusses the data collected during the on-site research processes, which included semi-structured interviews with questionnaires, photography, and observation as outlined in the previous chapter.

Image 60. 3D view of Johannesburg inner city. (Authors own, adapted from: https://www.3dcadbrowser.com/3d-model/johannesburg-city-south-africa-2020.)

The chapter is organised into three sections, each crafted to address the second research objective and its related questions to support data collection.

The first section outlines the study area, placing it within both the broader context of Johannesburg and the more localised context of the district. By leveraging GIS data, satellite imagery, and official urban planning policies from the City of Johannesburg, an inventory of the current conditions within the study area is established, laying the groundwork for the subsequent field research and analysis.

The second section offers a comprehensive collection and analysis of the on-site research data, considering both the structure of the questionnaires and the responses received. The findings are then discussed in relation to existing research and available literature, where relevant, to highlight similarities and differences between this study and previous studies.

The third section concludes by investigating the historical urban regeneration efforts in post-Apartheid inner city Johannesburg. City plans, policies, and archival records are referenced, and a map is created to illustrate the specific areas outlined in the JDA's UDF for the Fashion District. These findings are then overlaid onto the baseline analysis from the first section to ascertain the spatial correlation between the identified urban regeneration initiatives and the existing site, aiming to identify the strengths and weaknesses of these policies as well as the causes of any shortcomings.

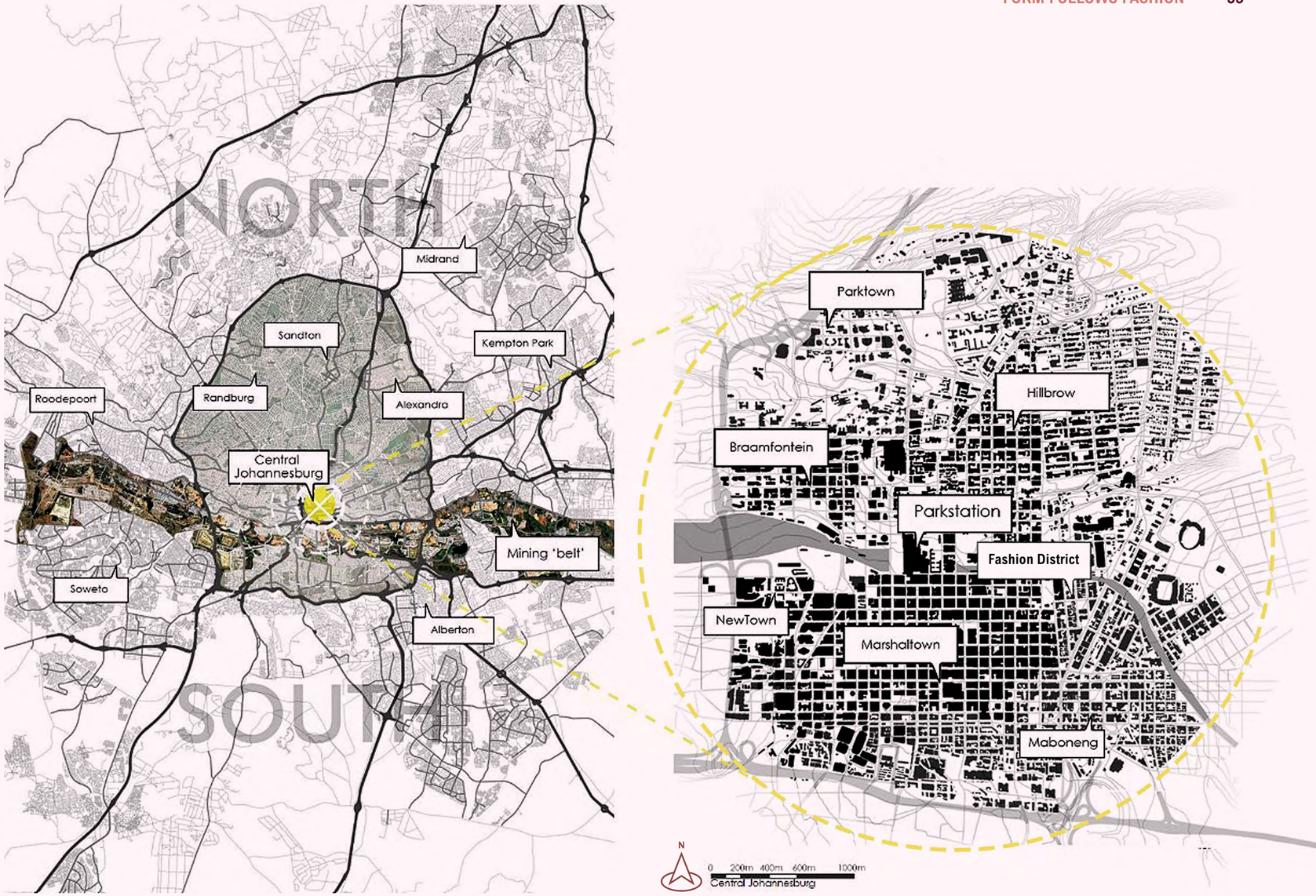


Image 61. Johannesburg's Fashion District within the greater context of the COJ. (Authors own, adapted from:https://issuu.com/andrew_proudman/docs/andrew_proudman_the_design_of_an_active_landscape.)



Image 62. Johannesburg's Fashion District within the greater context of the COJ. (Authors own, adapted from: Google Earth 2024.)

4.2 MACRO CONTEXT ANALYSIS

4.2.1 LOCATION ANALYSIS

Nestled within the heart of Johannesburg's venerable central business district (CBD), the Fashion District epitomizes a multifaceted nexus of societal, historical, cultural, educational, and economic significance. Its roots intertwine deeply with the storied past of the COJ, weaving a tapestry of narratives that span generations. Here, a plethora of amenities, institutions, and opportunities converge, forging robust connections that bridge the divide between the bustling CBD and its surrounding neighborhoods.

The district pulsates with life, pulsing with the energy of creativity and enterprise. It serves as a vibrant epicenter where commerce and culture intersect, offering a dynamic landscape where innovation thrives. At its core lies the illustrious Fashion Kapitol, an iconic landmark synonymous with the district's identity, alongside the prestigious Fashion Ramp and a constellation of other revered cultural sites.

Beyond its tangible landmarks, the Fashion District embodies a repository of social and political histories, preserving the legacy of South Africa's tumultuous journey towards freedom and democracy. It stands as a testament to the resilience and spirit of its people, reflecting the diverse tapestry of identities that define the nation.

4.2.1 MOVEMENT AND INFRASTRUCTURE ANALYSIS

Public transportation services in Johannesburg are widely considered to be both efficient and effective, meeting the needs of daily commuters with a satisfactory level of quality. The system's primary goals—accessibility and mobility within and across the Johannesburg CBD—are largely met, offering a reliable means for residents and visitors to navigate the city.

The city's public transportation network is integral to the urban fabric, facilitating economic activity by connecting various parts of Johannesburg and ensuring that people can move freely and efficiently. The emphasis on accessibility means that the network is designed to serve diverse populations, including those who rely on public transport as their primary mode of travel.

Moreover, the system's effectiveness is not just about operational efficiency but also about how well it integrates with the city's broader urban planning goals. A well-functioning transportation network contributes to reducing traffic congestion, lowering carbon emissions, and improving overall urban livability. In the context of the Fashion District, public transportation plays a critical role in supporting the areas' economic vitality and social cohesion.

However, while the system is generally adequate, there is always room for improvement. Enhancing service coverage, increasing frequency, and further improving the quality of the infrastructure can ensure that the network continues to meet the evolving needs of the city's population.

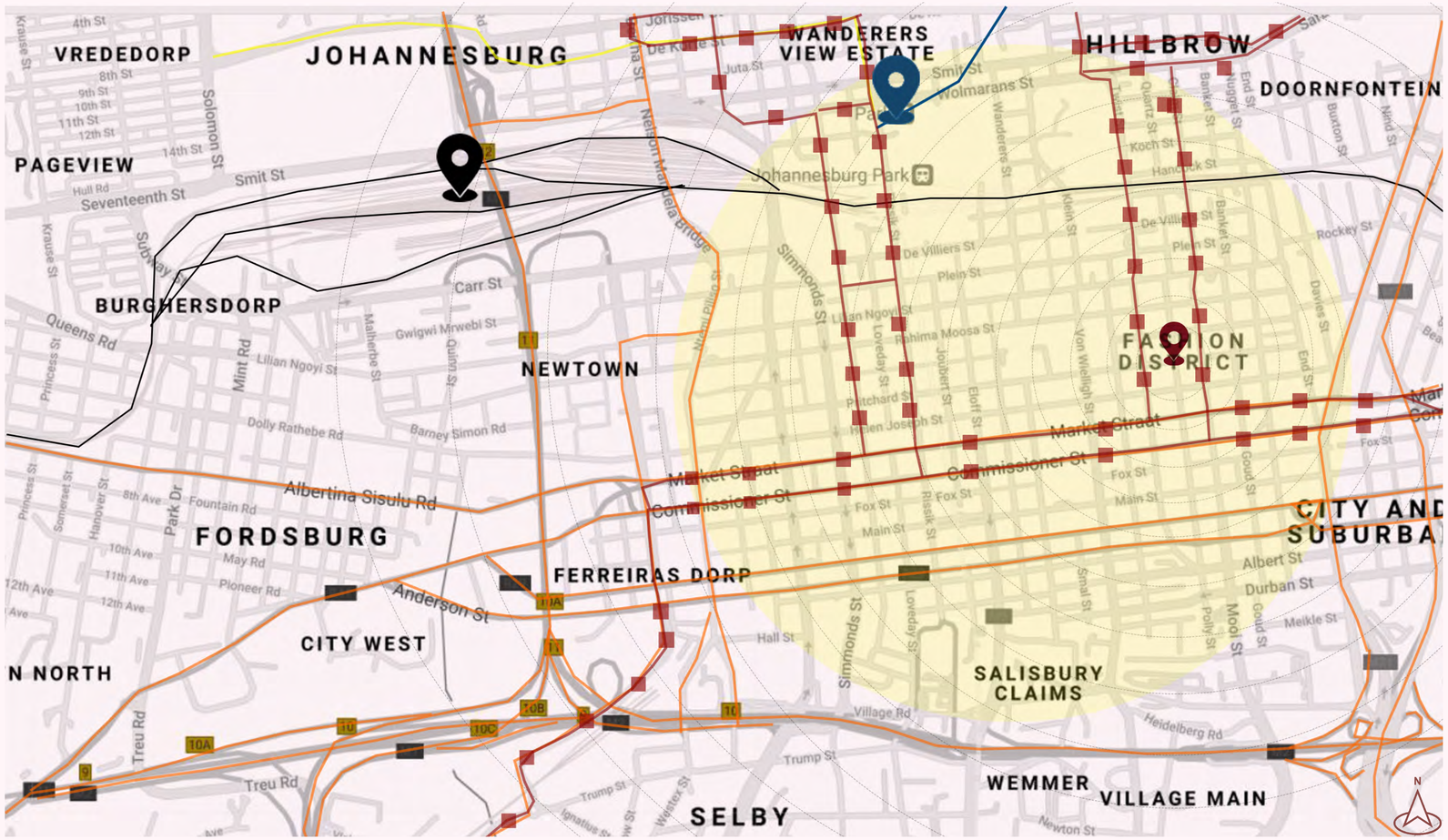
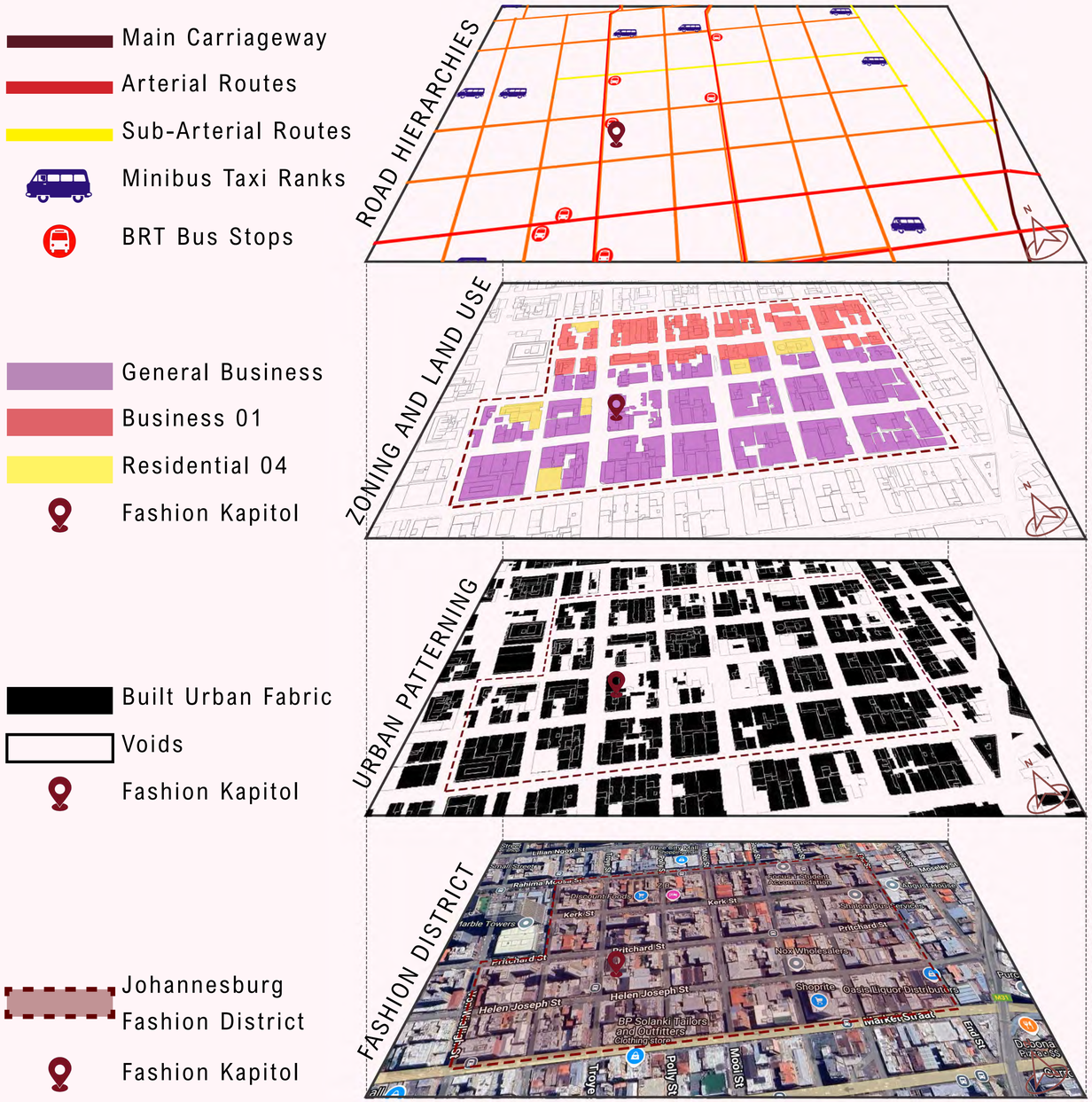


Image 63. Public transportation networks within the City of Johannesburg. (Authors own, adapted from: Google Earth 2024.)

KEY

- Railway tracks
- Bus Rapid Transit (BRT) Routes
- PUTCO Bus Routes
- Metro Bus Routes
- Minibus Taxi Routes
- Gautrain



Analysing movement and infrastructure within Johannesburg's Fashion District involves a comprehensive examination of how the district's layout, land use, and zoning interact with the flow of people and vehicles. This analysis is crucial for understanding the dynamics of urban life in the area and for identifying opportunities to enhance the district's functionality and appeal.

Johannesburg's urban layout is characterised by a grid pattern typical of many South African cities, with the Fashion District located in the historic core of the CBD. The district itself is a dense urban area with a mix of land uses, including commercial, residential, and cultural spaces. Zoning regulations in the area have traditionally supported these mixed uses, allowing for a vibrant, if sometimes chaotic, urban environment. The Fashion District's zoning reflects its role as a commercial hub with a focus on retail, fashion, and related industries. However, there are also residential zones within or adjacent to the district, contributing to a diverse urban fabric. The presence of educational institutions and cultural landmarks further adds to the district's dynamic land use.

Public transportation plays a critical role in the Fashion District, facilitating the daily movement of thousands of commuters. The district is well-served by various modes of public transport, including buses, minibus taxis, and the Rea Vaya BRT system. These services connect the district with other parts of Johannesburg, making it accessible to a wide population. The BRT system, in particular, has been a significant addition to the districts transportation infrastructure, offering a reliable and efficient mode of travel that reduces congestion and promotes the use of public transport. Minibus taxis, though less formalised, are vital for providing flexible and affordable transportation.

The interaction between these different modes of movement creates both challenges and opportunities for urban planning, urban design and architecture in the Fashion District. The main challenges include traffic congestion, inadequate parking, and the need for better integration of non-motorised transport. On the other hand, opportunities lie in enhancing the public transport network, improving pedestrian infrastructure, and promoting sustainable urban mobility. Additionally, revisiting zoning regulations to encourage more mixed-use development could aid in balancing the district's commercial activities with residential needs, promoting a more sustainable urban environment.

Image 64. Infrastructure and movement analysis in Johannesburgs' Fashion District. (Authors own, adapted from: Google Earth 2024.)

4.2.2 URBAN MORPHOLOGY ANALYSIS

The urban morphology of Johannesburg's Fashion District reveals a complex and layered physical structure that reflects its historical evolution, diverse functions, and unique character within the city's broader urban landscape. Understanding the district's morphology involves analysing its physical form, spatial configurations, and the relationship between its buildings, public spaces, and amenities. The district's morphology is shaped by a combination of its historical roots, the pressures of urbanisation, and the demands of contemporary commerce, particularly in the fashion industry.

The buildings within the Fashion District exhibit a variety of architectural styles, reflecting the district's long history and its role as a hub of commerce and culture. Many structures date back to the early 20th century, featuring characteristics of Art Deco and early modernist architecture. These buildings often have decorative façades, large windows, and detailed cornices, contributing to the district's historical charm.

More recent developments include modern commercial buildings with functionalist designs, characterised by simpler lines, larger footprints, and greater use of glass and steel. These buildings are typically multi-story, providing ample space for retail, offices, and residential units. The mix of old and new architecture creates a dynamic urban landscape where historical preservation meets contemporary urban demands.

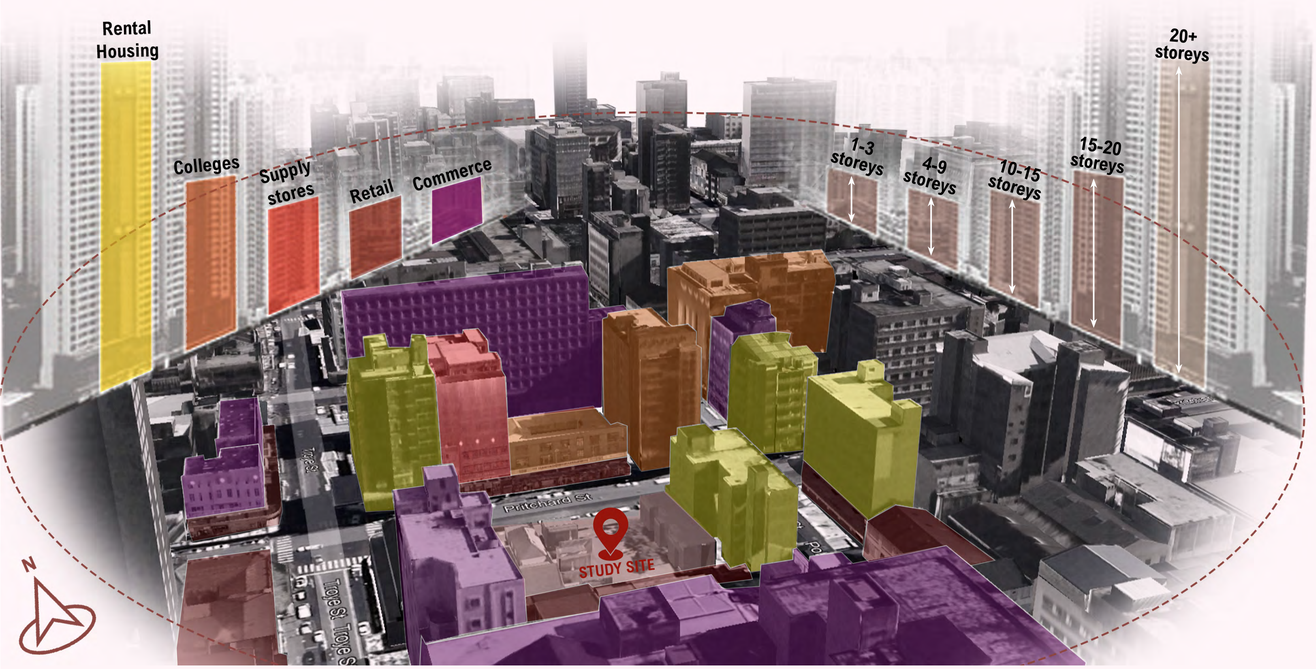


Image 65. Urban morphology analysis in the Fashion District. (Source: Authors own. Adapted from: Google Maps, 2024).



The Gallo Building - 1920s Art Deco architectural building style.

Image 66. The Gallo Building. (Source: https://www.flickr.com/photos/os-sewa/7904992680/in/photostream/)



58E Troye Street - 19th Victorian Revival architectural building style.

Image 67. 58E Troye Street (Source: Google Street View, 2024).

SPATIAL AND DEMOGRAPHIC CONFIGURATION

KEY

- Cafe
- Clothing Store
- College
- Motel
- Office Park
- Restaurant
- Shopping Centre
- Student Accommodation
- Tailor
- Public Park and Square
- Johannesburg Fashion District
- Fashion Kapitol



POPULATION DENSITY

13.3% of The City of Johannesburg's total population. 2900 people per km^2 (World Population Review, 2024).

POPULATION

- Transient population - 29,180
- Permanent population - 11,080

(World Population Review, 2024).

URBAN FORM

- Built area - 80%
- Public space - 15%
- Green infrastructure - 5%

A significant feature of the Fashion District's urban morphology is the prevalence of mixed-use buildings. These structures typically combine retail spaces on the ground floor with offices or residential units above. The integration of different uses within a single building supports the district's economic and social vitality, enabling residents, workers, and visitors to access a variety of amenities without leaving the area. Retail spaces often front the street, creating active façades that engage pedestrians and contribute to a lively streetscape. These ground-floor shops are essential for the district's identity as a fashion hub, hosting a variety of clothing stores, boutiques, and related businesses.

Public spaces within the Fashion District are limited but crucial to its urban fabric. The Fashion Kapitol, the existing public square provides essential relief from the densely built environment, offering a place for rest, social interaction, and cultural events. These spaces often serve as focal points for community life, where the district's residents and visitors can gather. The design and maintenance of these public spaces vary, with some areas being well-integrated into the urban fabric and others less so. Enhancing these spaces could significantly improve the district's overall livability and aesthetic appeal.

The Fashion District offers a range of amenities that cater to its diverse population. In addition to retail shops and fashion-related businesses, the district includes educational institutions, cultural centers, and art galleries. These amenities not only serve the local community but also attract visitors from across Johannesburg, reinforcing the district's status as a cultural and commercial hub.

Public amenities such as parking facilities, public restrooms, and transportation hubs are also crucial to the district's functionality. However, these amenities are often under pressure due to the high density and heavy foot traffic, necessitating careful planning and management to ensure they meet the needs of the district's users.

Image 68. Spatial and Demographic Configuration. (Source: Authors own. Adapted from: Google Maps, 2024).

4.3 MICRO CONTEXT ANALYSIS

4.3.1 LOCATION AND MOVEMENT ANALYSIS

Aforementioned in previous chapters, the Fashion District, situated in the Eastern quadrant of Johannesburg's CBD, houses 52 individual properties each with fashion-related activities (JDA Development Business Plan, 2004). A study conducted for the Johannesburg Property Company (JPC) and the JDA ascertains that the Fashion Kapitol, an existing shopping mall and public square, was designed to be the core and anchor of the districts' economic, social and cultural activities (Spatial Worx, 2005:2). Over the past two decades, this precinct has been the focus of numerous unsuccessful regeneration efforts by the COJ and the JDA, aimed at establishing it as an internationally recognised hub for commerce and Fashion-related activities (Cachalia et al., 2004; Rogerson, 2004a). Consequently, the Fashion Kapitol precinct, along with its neighboring buildings to the east and west, has been selected as the intervention site for this research.

Image 59 illustrates the location of the chosen study site at a macro scale.

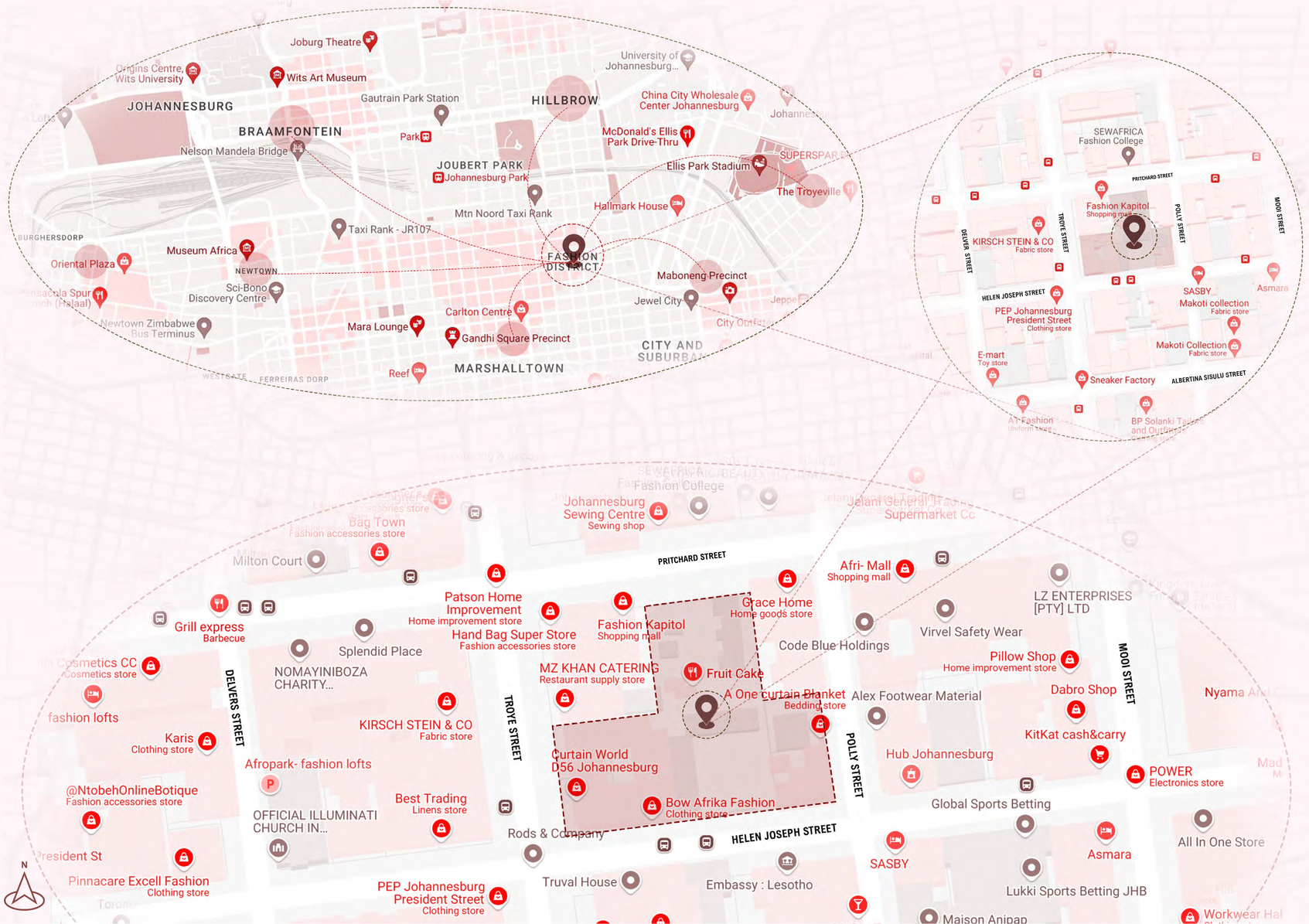


Image 69. The location of the selected study site at a macro scale.
(Source: Authors own. Adapted from: Google Maps, 2024).

4.3.2 MOVEMENT ANALYSIS

Pedestrian and non-motorised movement within the Fashion Kapitol precinct, and the Fashion District at large, is a vital aspect of the district's urban life, reflecting its dense commercial activity and vibrant street culture. The district, with its mix of retail outlets, fashion-related businesses, and cultural sites, attracts a significant number of pedestrians daily. However, the provisions for pedestrian infrastructure and non-motorised movement vary in quality and effectiveness, impacting the overall experience of those who navigate the area on foot or by bicycle.

Sidewalks around the Fashion Kapitol are present but vary significantly in width, maintenance, and overall condition. In some areas, sidewalks are wide enough to accommodate the heavy pedestrian traffic, particularly along Helen Joseph and Kerk Streets with high retail density. However, along Polly and Troye Streets, the sidewalks are narrow, uneven, or obstructed by street vendors, parked cars, or construction, making them less accessible and potentially hazardous for pedestrians.

The maintenance of sidewalks is also inconsistent. While some sections are well-maintained, others suffer from neglect, with cracked pavement, poor drainage, and inadequate lighting. These issues can deter pedestrian movement, particularly at night or during adverse weather conditions.

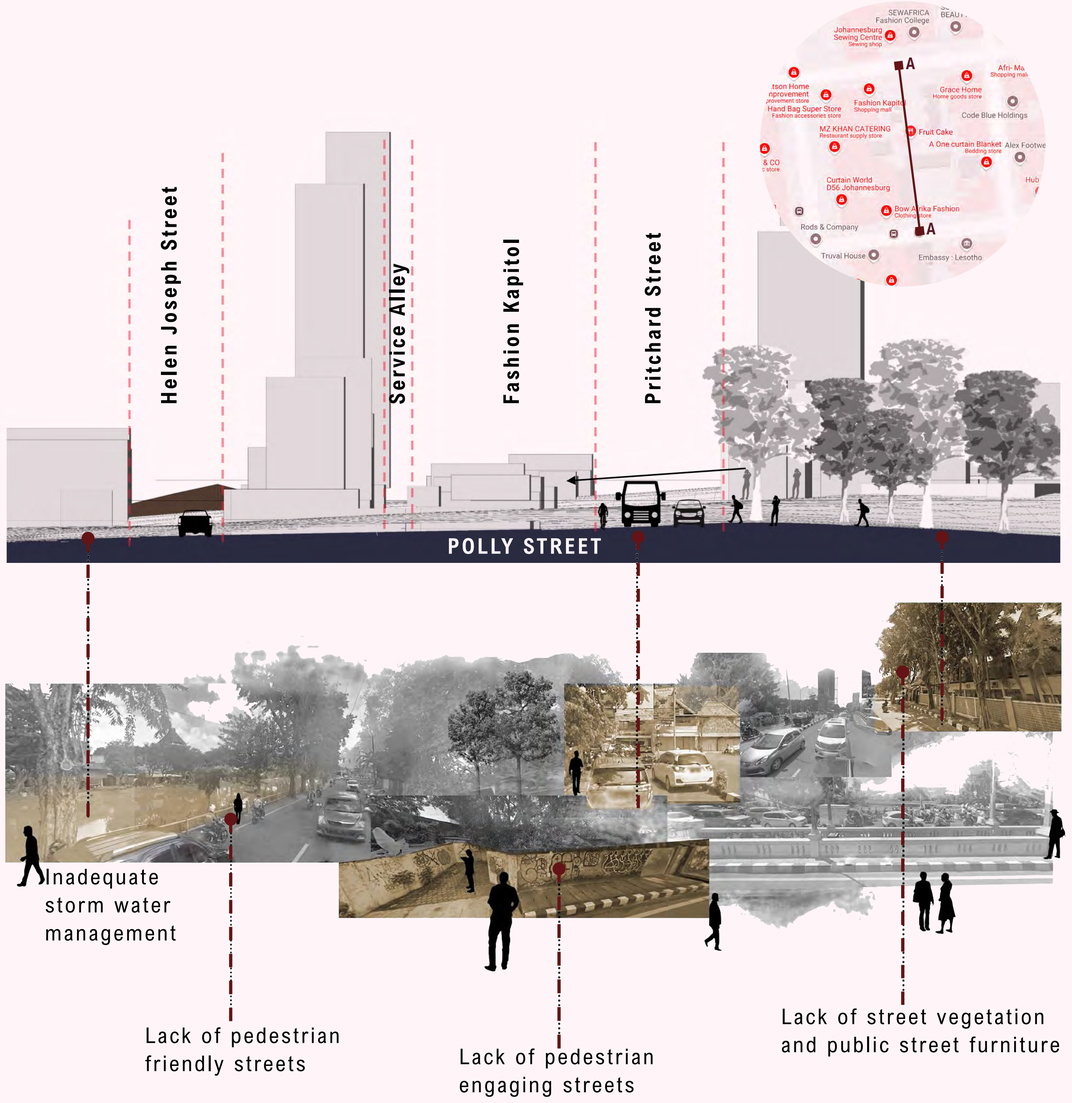


Image 70. The state of sidewalks around the Fashion Kapitol. (Source: Authors own. Adapted from: Google Maps, 2024).



Image 61. The sidewalk condition along Polly Street. (Source: Authors own. Adapted from: Google Street View, 2024).



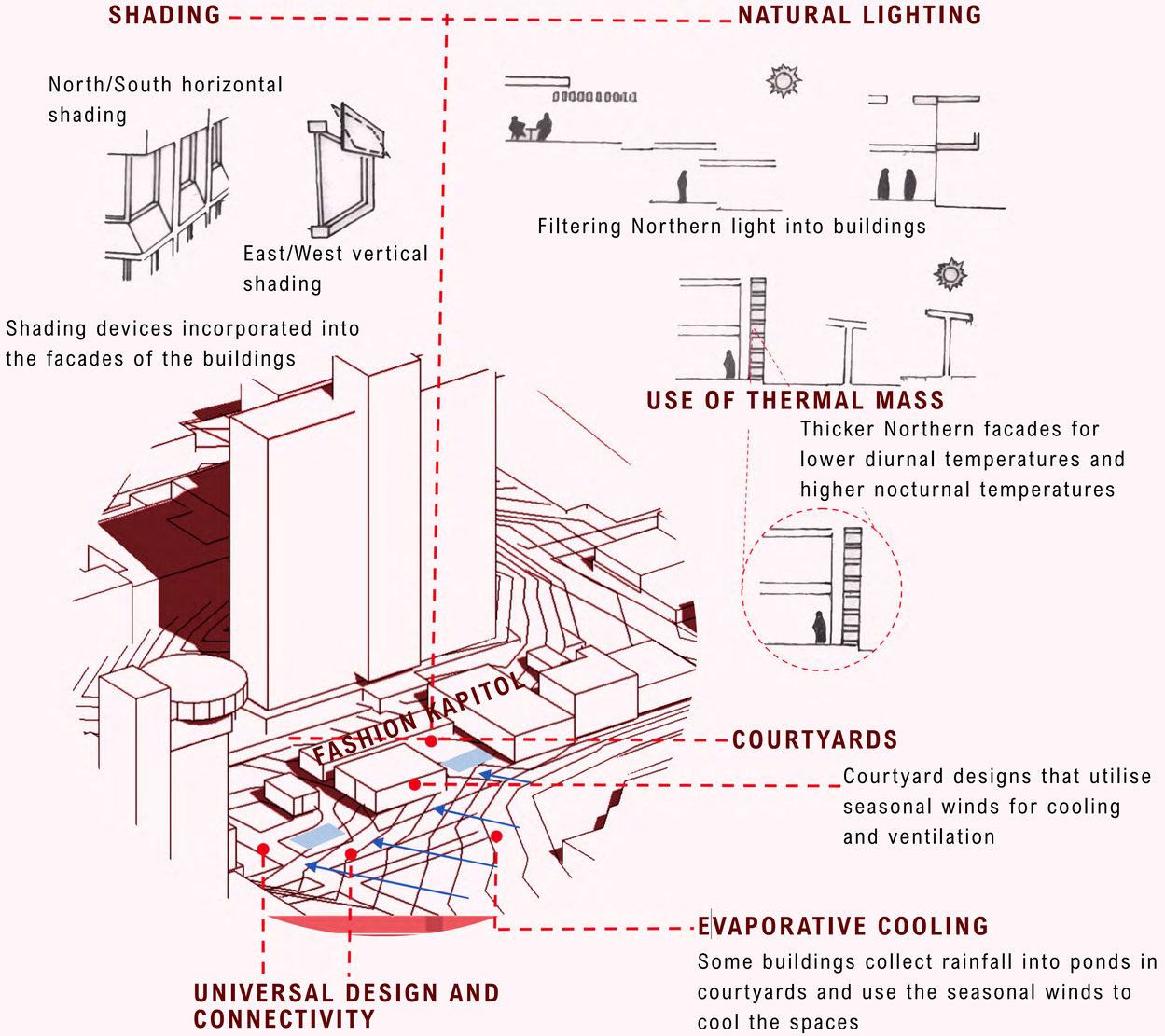
Image 62. The sidewalk condition along Helen Joseph Street. (Source: Authors own. Adapted from: Google Street View, 2024).



Image 63. The sidewalk condition along Troye Street. (Source: Authors own. Adapted from: Google Street View, 2024).



Image 64. The sidewalk condition along Pritchard Street. (Source: Authors own. Adapted from: Google Street View, 2024).



4.3.3 URBAN MORPHOLOGY ANALYSIS

The architectural characteristics of existing buildings in around the Fashion Kapitol play a significant role in shaping the interaction between shop fronts and the street, influencing not only the aesthetic appeal of the district but also its functionality and sustainability. Analysing these buildings involves looking at various aspects such as facade designs, sustainability measures, circulation, water management strategies, accessibility, universal design, and provisions made for informal trade.

1. FACADE DESIGNS

The facades of buildings around the Fashion Kapitol are a mix of historic and modern styles, reflecting the area's evolution over time. Many buildings feature large display windows and open shop fronts that create a direct visual connection between the interior and the street, encouraging pedestrian engagement. Architectural details like decorative cornices, pilasters, and signage are common in older buildings, adding character and contributing to the district's unique identity. However, some facades are less engaging, with blank walls or security grilles that detract from the street's vibrancy. Improving these facades by incorporating more transparent materials, decorative elements, and interactive displays could enhance the pedestrian experience.

2. SUSTAINABILITY MEASURES

Sustainability in building design is an area where the Fashion Kapitol and the District could see significant improvement. While some newer buildings may incorporate green technologies, such as energy-efficient lighting or insulation, many of the older structures lack modern sustainability measures. Retrofitting existing buildings with sustainable features such as green roofs, solar panels, and energy-efficient windows could reduce the district's environmental impact. Additionally, integrating sustainable building materials and practices in new developments would align the district with global trends in green architecture.

Image 71. An analysis of urban morphology around the selected site. (Source: Authors own).

4. WATER MANAGEMENT STRATEGIES

Water management is a critical issue in urban environments, and Johannesburg's CBD is no exception. Many of the district's older buildings were not designed with modern water conservation or management strategies in mind, leading to challenges in managing stormwater, preventing leaks, and ensuring adequate drainage.

Implementing water management strategies such as rainwater harvesting systems, permeable paving, and green infrastructure including bioswales could aid in reducing runoff and promote sustainable water use. These measures would also contribute to the resilience of the district in the face of climate change.

5. ACCESSIBILITY AND UNIVERSAL DESIGN

Accessibility is a key concern in the Fashion District, where the mix of old and new buildings creates varying levels of accessibility for people with disabilities. Some buildings have been updated to include ramps, elevators, and accessible restrooms, while others still have steps at entrances, narrow doorways, and inaccessible upper floors.

Universal design principles, which aim to make spaces usable by all regardless of age, disability, and/or other factors, are not yet widely implemented across the district. Adopting these principles in both new and existing buildings would improve accessibility, ensuring that all visitors and workers can navigate the district comfortably.



UNIVERSAL DESIGN

Course textured pedestrian walkways to assist the visually impaired, applying to the sense of touch



Visual permeability along pedestrian sidewalks, infused with fashion-driven designs

Brightly coloured and luminescent objects that assist audio-impaired users.

This also communicates the aesthetic and functionality of the design while also acting as a buffer from the adjacent busy streets



Aesthetically attractive pedestrian walkways

Images. 72 - 74. An analysis of universal design around the site. (Source: Google Street View, 2024).

4.3.4 CULTURE AND COMMUNITY ANALYSIS

1. INFORMAL TRADE

Street vendors are a prominent feature of the Fashion District and the Fashion Kapitol, adding to their dynamic and bustling character. However, their presence can sometimes lead to overcrowded sidewalks, obstructed pathways, and conflicts with pedestrian movement. While street vending is an important part of the district's economy and culture, better management and organization of vendor spaces could help balance the needs of pedestrians with those of vendors.

Designing flexible spaces that can accommodate informal traders, such as covered market areas, designated vending zones, or adaptable storefronts, could better integrate informal trade into the district. These spaces should be easily accessible, with appropriate amenities such as water, electricity, and waste disposal facilities to support traders.



Image 75. A photo-montage of the street vending activities around the Fashion Kapitol.
(Source: Authors own. Adapted from: Google Street View, 2024).



Image 76. A photo-montage of the street art in the Fashion District.
(Source: Authors own).

2. ART AND CULTURE

The infusion of art and culture into the Fashion District is evident in the numerous graffiti works, murals, and informal art installations scattered throughout the area. These artistic expressions add layers of meaning to the urban environment, reflecting the social, political, and cultural dynamics of the community.

Graffiti and street art are prominent features of the Fashion District, with many walls adorned with colorful murals, tags, and intricate designs. These artworks are often created by local artists, who use graffiti as a medium to comment on social issues, celebrate cultural heritage, or simply bring aesthetic beauty to the area.

The graffiti in the Fashion District is not just decorative; it also serves as a form of public dialogue. Through their art, local artists communicate messages about identity, resistance, and community pride. For instance, some murals pay homage to South Africa's struggle for freedom, while others celebrate the vibrancy and resilience of the local community.

These works of art transform ordinary walls into dynamic visual narratives, contributing to the district's identity as a place of creativity and cultural expression. They also create a sense of place, making the Fashion District more than just a commercial area but a cultural landmark in its own right.

In addition to graffiti, informal art installations by local artists and fashion designers are another significant cultural element in the Fashion District. These installations often emerge organically, without formal commissioning or planning, and can include sculptures, fashion displays, or other creative interventions in public spaces.

Local fashion designers, for example, might create temporary installations using mannequins, fabric, and other materials to showcase their work in an unconventional setting. These displays blur the line between fashion and art, turning the streets into open-air galleries where the latest trends and designs are on display for the public to enjoy.

Informal art installations add a sense of spontaneity and surprise to the district, as new pieces can appear overnight, changing the landscape and offering fresh perspectives on familiar spaces. This dynamic and ever-evolving art scene keeps the district vibrant and engaging, encouraging both locals and visitors to explore and interact with the environment.





Images 77 - 78. Art installations in the Fashion District.
(Source: http://underourownolivetree.blogspot.com/2012/08/johannesburg-fashion-district.html).

The presence of graffiti and informal art installations significantly enhances the character and identity of the Fashion District's public spaces. These artistic expressions contribute to a sense of community ownership, where local residents and artists actively shape the environment in which they live and work.

Art in public spaces also helps to humanise the urban environment, making it more inviting and accessible. By adding colour, texture, and meaning to the streets, these artworks soften the harshness of the built environment and create spaces where people feel comfortable lingering, interacting, and engaging with their surroundings.

Moreover, the art and culture embedded in the Fashion District play a crucial role in branding the area as a creative and culturally rich destination. This reputation attracts not only shoppers and investors, but also tourists, artists, and cultural enthusiasts, further boosting the district's economic and cultural vitality.

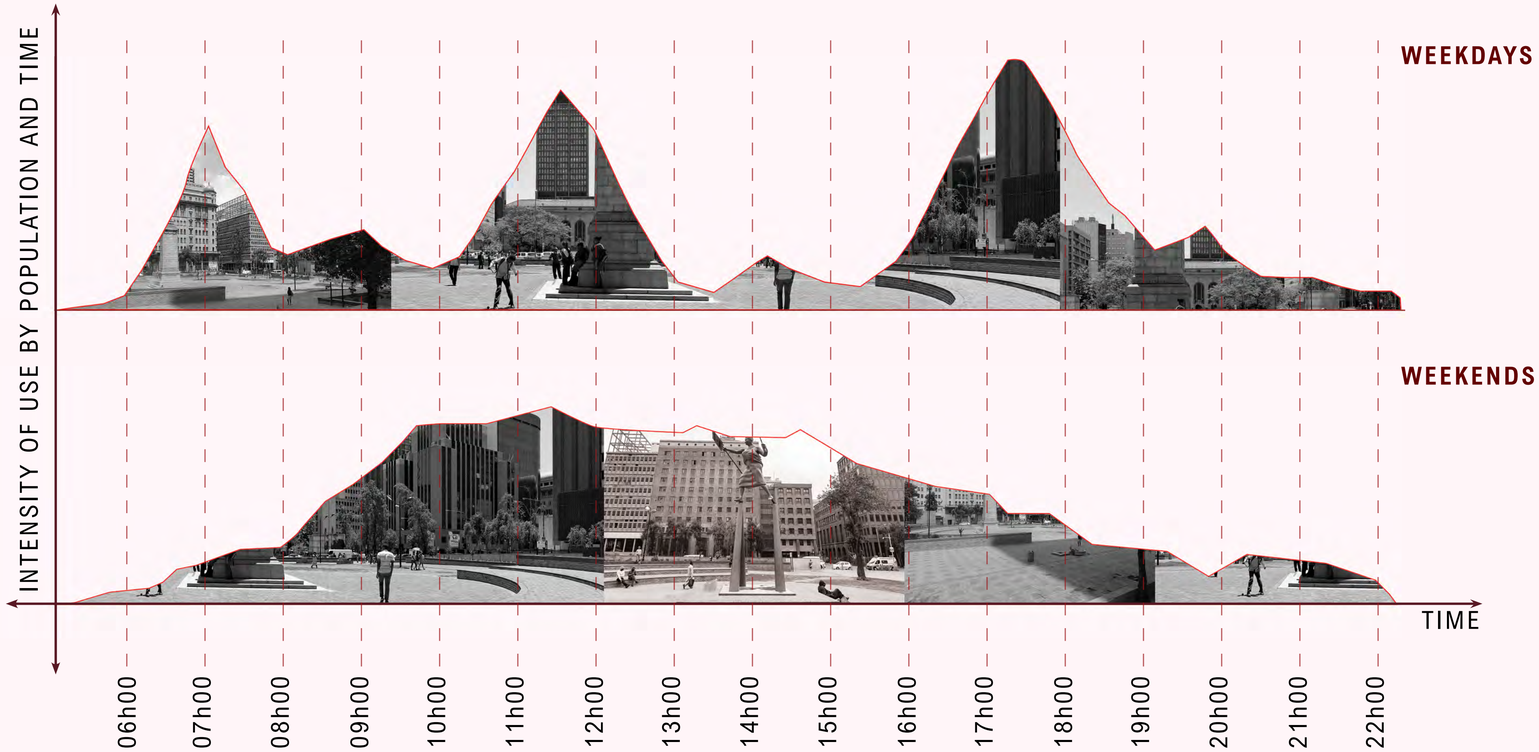
4.3.5 ACTIVITY ANALYSIS

The Johannesburg Fashion District is a dynamic area characterised by fluctuating levels of activity throughout the day, influenced by various factors such as business operations, cultural events, and social gatherings. Understanding these patterns of activity is crucial for analysing the district's vibrancy, safety, and overall atmosphere.

1. PEAK ACTIVITY TIMES

The Fashion District is busiest during regular business hours, typically from mid-morning to late afternoon. This period sees the highest level of foot traffic, driven primarily by:

- Commercial Activity: The district is home to numerous fashion-related businesses, including wholesale and retail shops, design studios, and textile suppliers. These businesses attract a steady stream of customers, suppliers, and fashion professionals, particularly during weekdays.
- Market Days: On days when markets or pop-up shops are active, the district experiences an influx of vendors, shoppers, and tourists. These events are usually held in the late morning to early afternoon and are major contributors to peak activity levels.
- Cultural and Fashion Events: The district occasionally hosts fashion shows, cultural festivals, and art exhibitions, which draw large crowds. These events are typically scheduled in the late afternoon or early evening, extending the district's busy hours beyond the typical business day.



Images 79. The intensity of uses of the Fashion Kapitol's existing shopping mall at different times of the day on Weekdays and Weekends. (Source: Authors own).

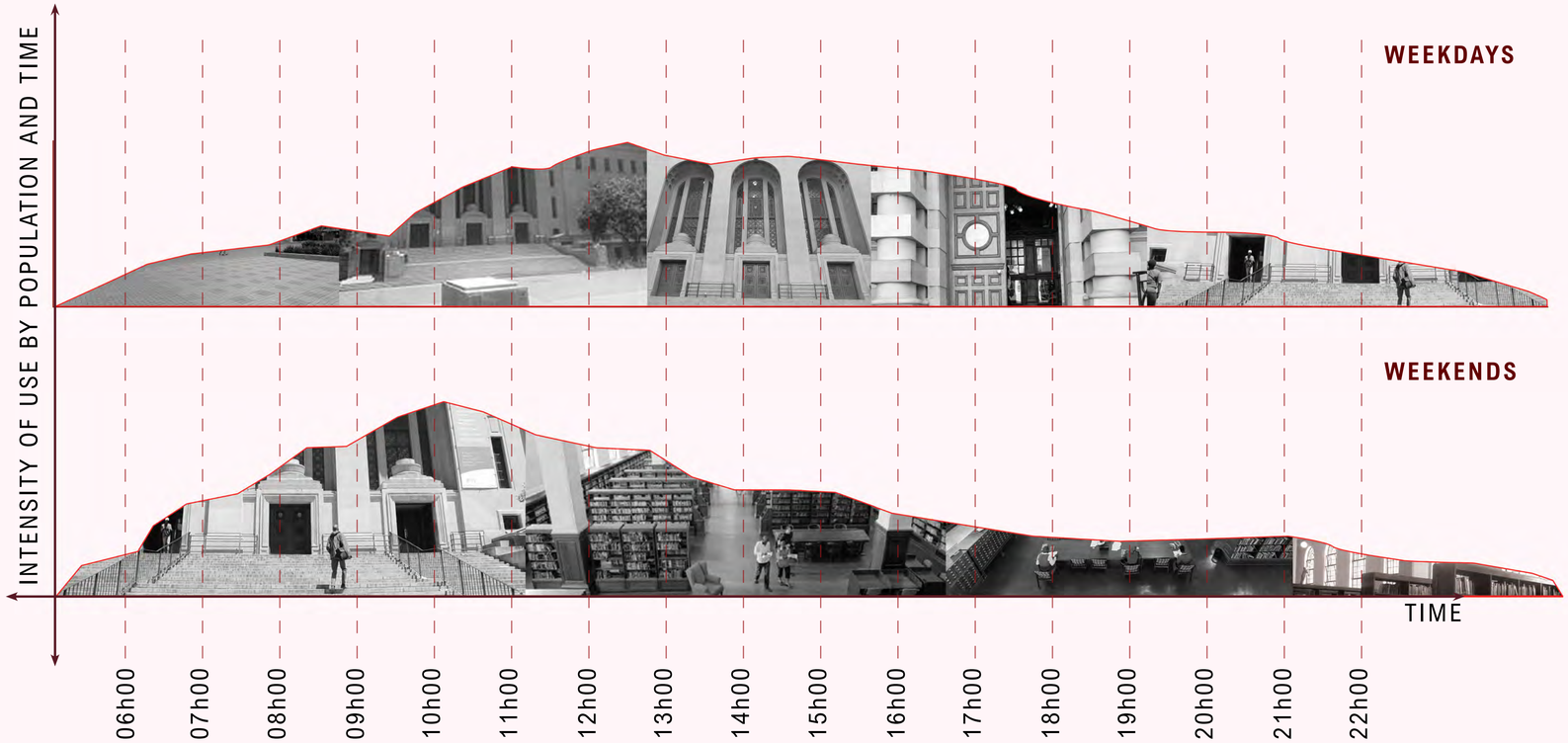
2. LOW ACTIVITY TIMES

The Fashion District is least busy during the early morning and late evening hours. Contributing factors to these quieter times include:

- Business Closures: Most shops and businesses in the district close in the early evening, leading to a significant drop in foot traffic after dark. During weekends, particularly Sundays, activity levels may also be lower as some businesses close for the day.
- Reduced Public Transportation: Public transportation services may be less frequent during early mornings and late evenings, reducing the number of visitors to the district during these times.
- Security Concerns: The perception of safety can also influence activity levels. In areas where lighting is poor or where there have been incidents of crime, people may avoid the district during off-peak hours.

3. IMPACT ON SAFETY, SECURITY AND VIBRANCE

- Safety and security: Higher levels of activity during the day contribute to a safer environment, as busy streets are typically more secure due to the presence of people. The visibility of businesses and the movement of crowds act as a deterrent to crime. Conversely, lower activity levels during early mornings and late evenings can make certain areas feel less safe, potentially deterring visitors.
- Vibrance: The bustling nature of the district during peak hours creates a vibrant atmosphere, with lively streets, open shops, and active markets contributing to the area's energy. This further reinforces the district's reputation as a fashion and cultural hub.



Images 80. The intensity of uses of the Fashion Kapitol's public square at different times of the day on Weekdays and Weekends. (Source: Authors own).

4.4 ON-SITE RESEARCH

4.4.1 APPROVAL FOR THE RESEARCH

Formal requests to carry out the research were submitted to the University of the Witwatersrand through an ethics approval application. After receiving approval, questionnaires were handed out to small business owners, local fashion designers, educators, students, and consumers within the Fashion District. These questionnaires were distributed in person during semi-structured interviews, along with a letter explaining the research's purpose, ensuring confidentiality, requesting their participation, and confirming that the study had been approved by the University of the Witwatersrand (see appendix).

4.4.2 QUESTIONNAIRE STRUCTURE AND RESPONSE RATES

The questionnaire featured five main open-ended questions designed to foster deeper discussion and provide greater insight into the topic. The key questions asked were:

1. How do you perceive the influence of fashion and architecture on each other?
2. Are there any buildings that come to mind which resemble fashion designs?
3. What fashion elements do you believe could be incorporated into building designs?
4. In what ways do you think fashion could alter the appearance and functionality of buildings?
5. What challenges do you foresee in merging fashion with architecture?

The study achieved an 80% response rate from fashion designers and small business owners, 80% from educators and students, and 70% from consumers, resulting in an average response rate of 77%. According to Gillham (2000: 48), a response rate below 30% raises concerns about the value and validity of the results, thus the target was successfully met.

4.4.3 RESEARCH FINDINGS

The insights shared during the interviews shed light on both the strengths and challenges of Johannesburg's local fashion industry and its potential intersections with architecture. While the industry is experiencing significant growth, issues such as lack of unity and collaboration among designers remain evident. These challenges are highlighted in the remarks of several Johannesburg-based designers:

"Designers in Johannesburg do not speak with one voice and are not unified, and there is also too much competition amongst them"
~ Local fashion designer and small business owner

The participants emphasised the lack of cohesion, pointing out the frequent misunderstandings within the industry, as well as the absence of meaningful dialogue among its players. This disunity mirrors a broader issue in the cultural industries of developing countries, where entrepreneurs often fail to recognise their role within a larger industry. However, despite these challenges, there is optimism about the future. One participant noted that the local fashion industry is rapidly expanding, with a growing demand for locally produced, uniquely South African products. Another added that the industry is "coming into its own," transitioning from the initial hype to a more sustainable focus on survival and growth.

The proposed fashion design institute and vertical market in the Fashion Kapitol is set to play a crucial role in addressing these challenges and fostering greater unity within the industry. Acting as an anchor, this institute will not only unite local fashion designers but also strengthen the ties between the fashion industry, the economy, and the broader cultural and community fabric of Johannesburg.

1. UNITING LOCAL FASHION DESIGNERS

It will serve as a central hub where designers can collaborate, share ideas, and learn from one another. By providing a space dedicated to education and innovation, the institute will encourage dialogue and reduce the competitive tensions that currently hinder the industry. This collaboration will also likely extend to the architectural realm, where the fusion of fashion and building design can lead to innovative projects that reflect the unique identity of Johannesburg.

2. STRENGTHENING THE INDUSTRY

The institute will also play a vital role in professionalising the local fashion industry. By offering training, resources, and networking opportunities, it will help designers refine their craft and develop new skills. This, in turn, will enhance the quality and diversity of products available, making Johannesburg a more competitive player in the global fashion market. The institute's focus on fashion design will also encourage the integration of fashion principles into architectural projects, creating spaces that are both functional and aesthetically aligned with contemporary fashion trends.

3. BOOSTING THE ECONOMY

As the institute nurtures talent and fosters innovation, it will contribute to the growth of the local economy. The development of a strong South African brand that is globally recognized will attract investment and create job opportunities, not only within the fashion industry but also in related sectors such as architecture, retail, and tourism. The institute's presence in the Fashion Kapitol will serve as a catalyst for economic revitalisation, drawing both local and international attention to Johannesburg's fashion district.

4. ENHANCING COMMUNITY AND CULTURAL TIES

The fashion design institute and vertical market will also strengthen the cultural and community ties within Johannesburg. By showcasing the continent's rich cultural heritage through fashion, the institute will foster a sense of pride and identity among local designers and the broader community. This cultural expression will likely be reflected in the architectural designs of the institute and surrounding buildings, creating a vibrant and culturally resonant environment. Moreover, the institute's programs and events will engage the community, making fashion more accessible and inclusive.

The proposed fashion design institute in the Fashion Kapitol represents a significant opportunity to unite and elevate Johannesburg's fashion industry. By serving as an anchor, it will bring together designers, the industry, the economy, and the community, fostering collaboration, innovation, and cultural expression. The integration of fashion and architecture within this context will not only enhance the district's aesthetic appeal but also contribute to its economic and cultural vitality. Through the institute, Johannesburg's Fashion District can become a globally recognised hub for fashion, culture, and design.

4.5 THE HISTORICAL REVITALISATION OF JOHANNESBURG'S FASHION DISTRICT

Since 2003, the JDA has been involved in various initiatives to upgrade the urban landscape in the Fashion District. The Fashion District project encompasses several interventions, including an urban management plan, a property plan, urban upgrading, economic support and development, as well as the overall marketing of the district and its activities (Spatial Worx, 2005). These efforts, initiated by the JDA in collaboration with the JPC, were aimed at positioning the district as both an urban and tourist attraction (Rogerson and Visser, 2004).

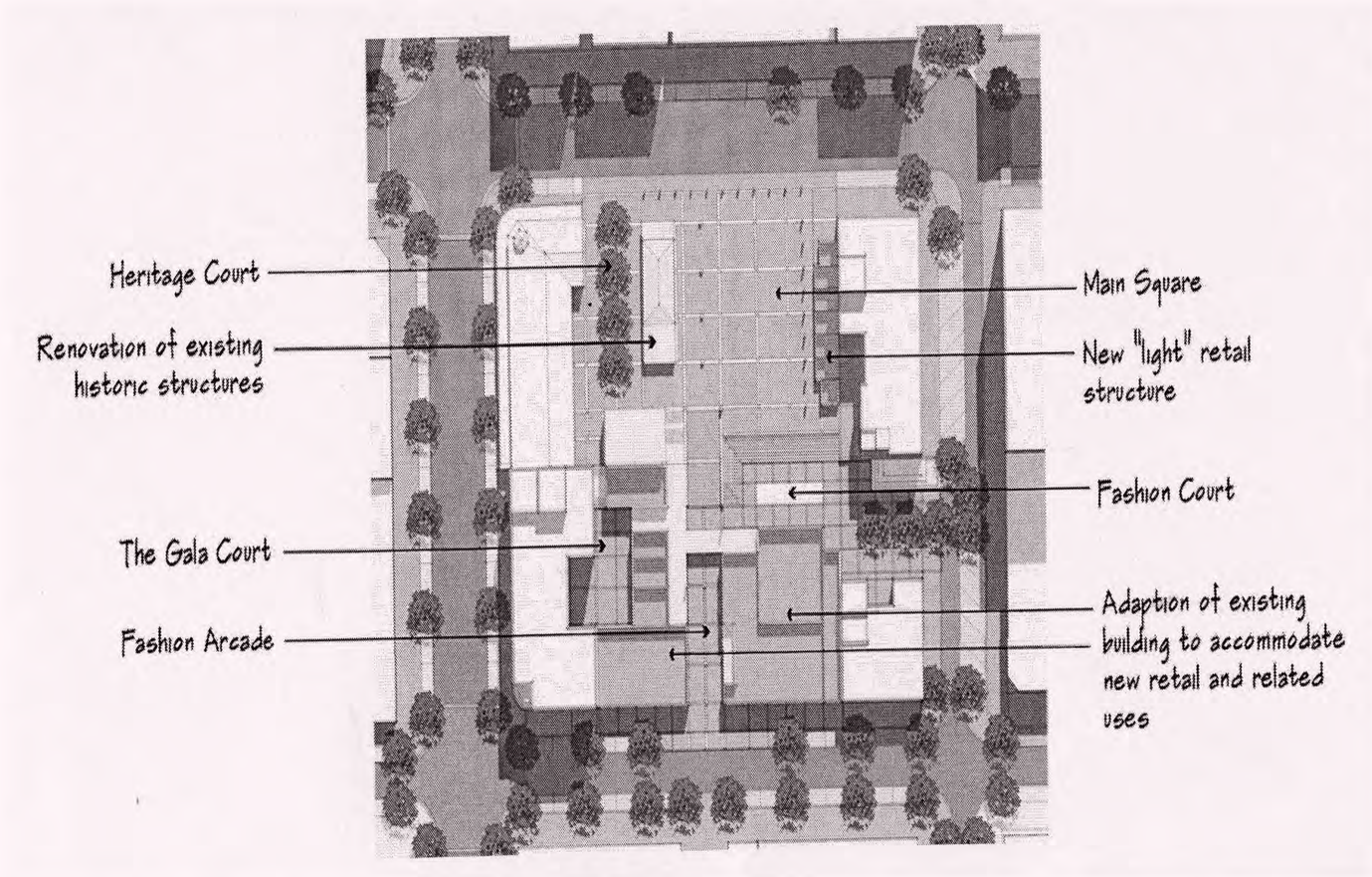
The JPC was tasked with managing the COJ's property portfolio as a profit-driven entity (Dinny, 2006). The JDA contracted the JPC to handle property-related matters for the Fashion District development. With a primary focus on the fashion square, the main goal of the Fashion District development, as outlined in its business plan, was to create a sustainable, viable, and fashionable district that served as a hub for economic growth and job creation within the emerging fashion cluster, ultimately positioning the district as the "urban edge of African fashion" (Spatial Worx, 2005).

Several initiatives in the Fashion District begun to establish a distinct identity for the area. These included:

- The creation of a City Improvement District.
- Zig-zag sewing patterns have been embedded into the pavements, and colorful banners and signage shaped like garment patterns have been installed to strengthen the area's brand identity (Nkosi, 2006).
- Gateway landmarks have been erected at key entrance points to the district.
- A networking, business support, and new property strategy has been developed.
- The Sew Africa Centre has been established, serving as the nucleus for promoting African designers (Rogerson, 2004). The Sew Africa House also includes the "Fashion Shack," a retail store for designers working in the building's upper floors.
- The Afsew Design Centre.
- A Fashion Institute with an executive director.

The Fashion Square was completed in December 2006 (Collett, 2005). A report by Spatial Worx in 2005, presented to the JDA and JPC, outlined the urban design of the Fashion District and described it as the district's focal point and with a large open-air "fashion ramp" designed for fashion events.

Additionally, the square was designed to will host restaurants, entertainment venues, and fashion-related retail and services. The Fashion District Institute and a visitor information center is located within the square. Regular fashion shows also were planned, with designers having the option to broadcast pre-recorded shows within the district (Collett, 2005).



Images 81. The FASHION SQUARE: Urban design framework. (Source: Spatial Worx Report, 2005).

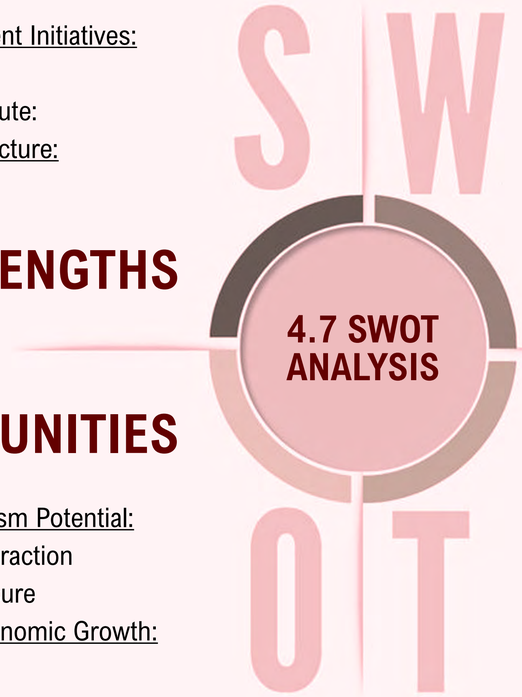
4.6 CHALLENGES FACING THE FASHION DISTRICT

According to Dinny, one of the main challenges facing the district is its lack of a distinct identity (Dinny, 2006). Its positioning on the borders of three different areas—Hillbrow residential area, the industrial zone, and the Johannesburg CBD—has resulted in a mixed and unclear identity for the district (Dinny, 2006).

There is a significant amount of vacant space, and many of the older buildings are in poor condition with minimal motivation for renovation and improvement, as illustrated in the accompanying photograph (Spatial Worx, 2005:12). Majority of these buildings have been occupied illegally and informally tranformed into shelters for the unhoused as well as immigrants in the district.

Nevertheless, Dinny recognized that creating a physical landmark, such as the Fashion Square, is an effort to establish a unique identity for the district (Dinny, 2006). The district also faces issues related to by-law enforcement and overcrowding, and (Nkosi, 2006). Additionally, concerns about safety and crime were noted (Nkosi, 2006). Prevailing negative perceptions of inner-city developments also impact the Fashion District (Spatial Worx, 2005:12).

4.7 SWOT ANALYSIS



STRENGTHS

1. Cultural and Artistic Hub:
- Rich Cultural Heritage
- Established Fashion Scene
2. Strategic Location:
- Central Position
3. Ongoing Development Initiatives:
- Fashion Square
- Fashion District Institute:
4. Supportive Infrastructure:
- Planned Facilities

WEAKNESSES

1. Lack of Clear Identity:
- Mixed Identity
2. Vacant and Deteriorating Properties:
- High Vacancy Rates
- Need for Renovation
3. Challenges with Law Enforcement:
- By-law Enforcement Issues
4. Perception Issues:
- Negative inner-city perceptions

OPPORTUNITIES

1. Economic and Tourism Potential:
- Urban and Tourist Attraction
- Global Fashion Exposure
2. Community and Economic Growth:
- Job Creation
- Local Collaboration
3. Enhancing Public Spaces:
- Green and Civic Initiatives
4. Support for Emerging Designers
- Incubator Systems

THREATS

1. Safety and Security Concerns:
- Crime and Safety Issues
2. Economic Uncertainty:
- Investment Risks
3. Competition from Other Areas:
- Competing Districts
4. Regulatory and Operational Challenges:
- Regulation and Compliance

4.8 CONCLUSION

The analysis of Johannesburg's Fashion District reveals a complex and evolving urban landscape marked by both significant potential and considerable challenges. As the district seeks to establish itself as a premier fashion hub, several strengths stand out. The area benefits from its rich cultural heritage, strategic location, and the ongoing development of key projects such as the Fashion Square and the Fashion District Institute. These initiatives, alongside supportive infrastructure like the Sew Africa Centre and Fashion Hub Studios, underscore the district's potential to become a vibrant center for fashion and economic activity.

Opportunities for revitalisation are present, particularly through the potential to enhance economic and tourism prospects, foster community growth, and support emerging designers. Initiatives such as planned green spaces and enhanced public facilities offer promising avenues for improving the district's public spaces and overall functionality.

In conclusion, the Fashion District stands at a pivotal juncture. Its future success will hinge on the effective execution of redevelopment projects, strategic management of existing challenges, and the creation of a cohesive identity that resonates both locally and globally. By leveraging its cultural assets and fostering a supportive environment for fashion and creative industries, the district has the potential to emerge as a dynamic and influential urban center in Johannesburg.



Images 82. The Fashion Kapitol. (Source: http://underourownolivetree.blogspot.com/2012/08/johannesburg-fashion-district.html).



CHAPTER 05

THE NEW FASHION KAPITOL

CHAPTER 05. THE NEW FASHION KAPITOL

5.1 AN INTRODUCTION TO THE NEW FASHION KAPITOL - THE CREATIVE NEXUS

The Creative Nexus, a Fashion Design Institute, Museum, Public Park, Vertical Fashion Market, and Atelier Spaces is an innovative mixed-use development located in the heart of Johannesburg's vibrant Fashion District on the site of the existing Fashion Kapitol. This landmark project is designed to serve as a hub for the convergence of fashion and architecture, two creative industries that have long influenced and inspired each other. The development encompasses a wide range of facilities, including educational spaces, cultural exhibitions, commercial outlets, creative ateliers, and public recreational areas, all meticulously integrated to promote collaboration, innovation, and sustainability.

The primary purpose of this building is to foster the growth and development of both the fashion and architectural industries by providing a dynamic environment where designers, students, and professionals can collaborate, learn, and showcase their work. It aims to bridge the gap between these two disciplines, encouraging the exploration of how fashion design principles can be translated into architectural forms and how architectural concepts can influence the creation of fashion. This synergy is expected to lead to groundbreaking designs and practices that push the boundaries of both fields.

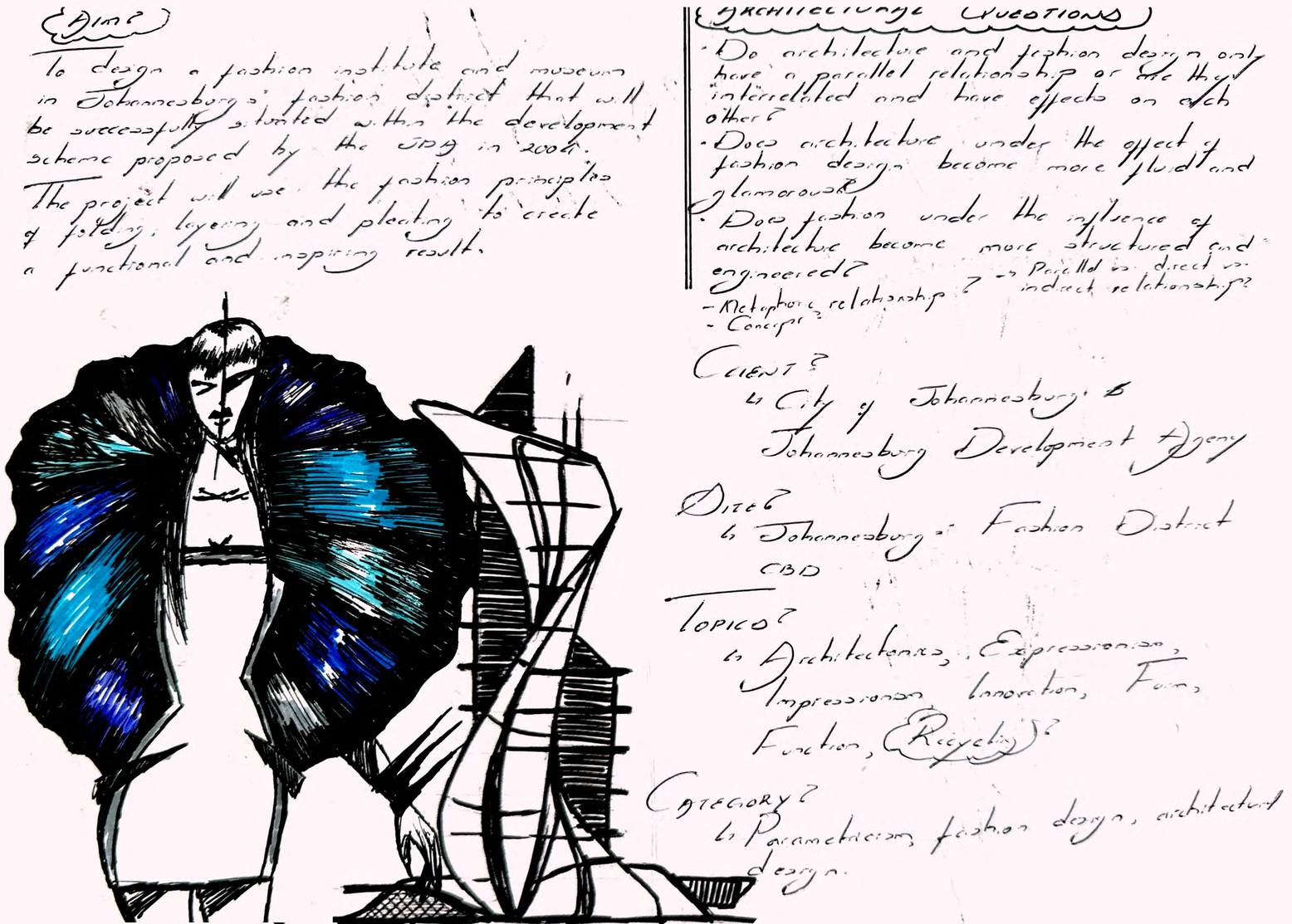
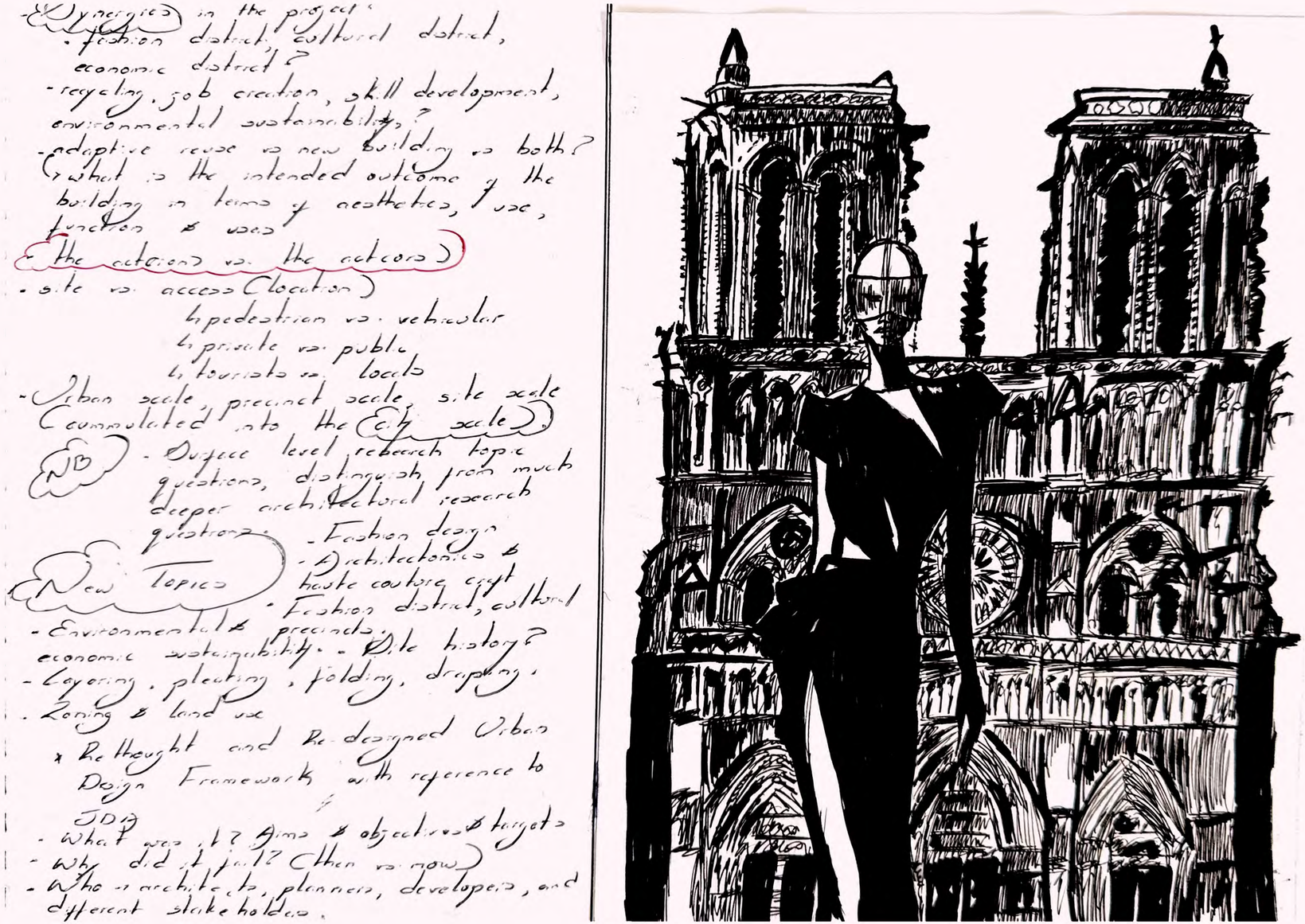


Image 83. Mind mapping. Authors own sketches



In addition to its role as a creative incubator, the building seeks to contribute to the economic and social revitalisation of Johannesburg's inner city. By attracting local and international talent, supporting small and medium-sized enterprises, and providing a platform for cultural exchange, the development aims to stimulate economic growth and enhance the city's global reputation as a center for design excellence.

Furthermore, the integration of sustainable design practices throughout the building underscores its commitment to environmental responsibility. The inclusion of green infrastructure, energy-efficient systems, and spaces dedicated to recycling and upcycling materials highlights the project's dedication to fostering a sustainable future for both the fashion and architectural industries.

Overall, this development is not just a building; it is a statement of the potential that lies at the intersection of fashion and architecture. It aims to be a beacon of innovation, creativity, and sustainability, setting new standards for how these industries can collaborate to shape the future of design.

Image 84. Note taking and mind mapping. Authors own early sketches

5.2 DESIGN BRIEF AND APPROACH

DESIGN BRIEF: Fashion Design Institute, Museum, Public Park, Vertical Fashion Market, and Atelier Spaces.

CLIENT: The client for this project is the City of Johannesburg (COJ), represented by the Johannesburg Development Agency (JDA).

PROJECT OVERVIEW: The Fashion Design Institute, Museum, Public Park, Vertical Fashion Market, Atelier Spaces, and Sustainability Facilities project aims to create a multi-functional complex that serves as a dynamic hub for fashion education, exhibition, commerce, and innovation within the heart of Johannesburg. The complex will cater to diverse users, including students, professionals, tourists, and members of the public, with a focus on accessibility, sustainability, and inclusivity.

BUILDING OUTCOME: The building is envisioned as a modern, iconic structure that seamlessly integrates into the urban fabric of Johannesburg while standing out as a symbol of creativity, sustainability, and inclusivity. The architecture should reflect the dynamic nature of the fashion industry, with clean lines, innovative use of materials, and flexible spaces that foster creativity, collaboration, and environmental responsibility. Aesthetic considerations should include a balance of transparency and solidity, with ample natural light, greenery, and sustainable features incorporated throughout the design.

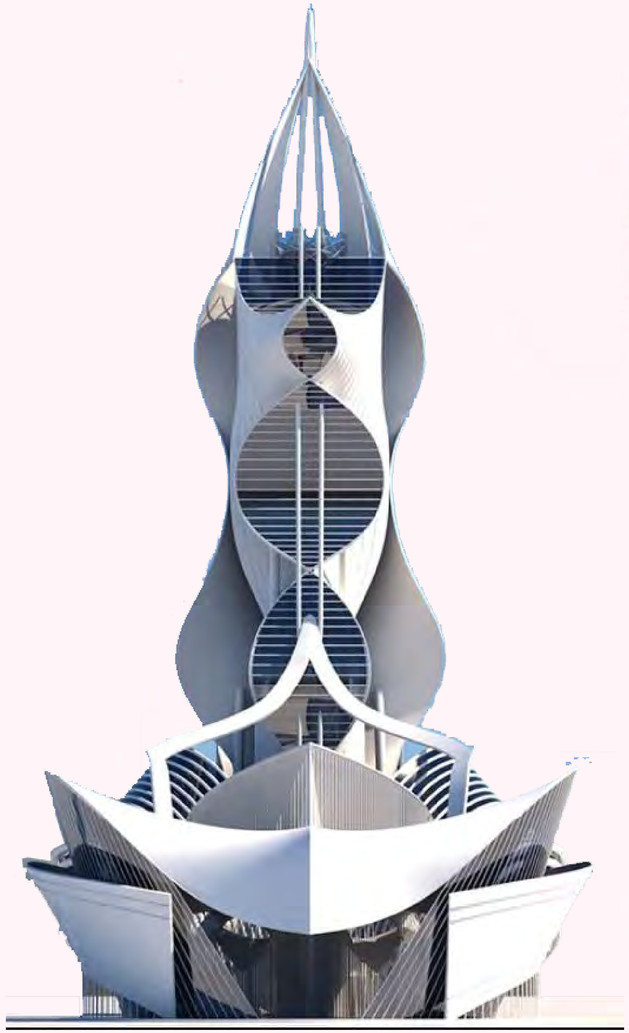


Image 85. Early building iteration from the ARPL 7003A review 1 exercise. (Authors own AI generation from: https://gencraft.com/)

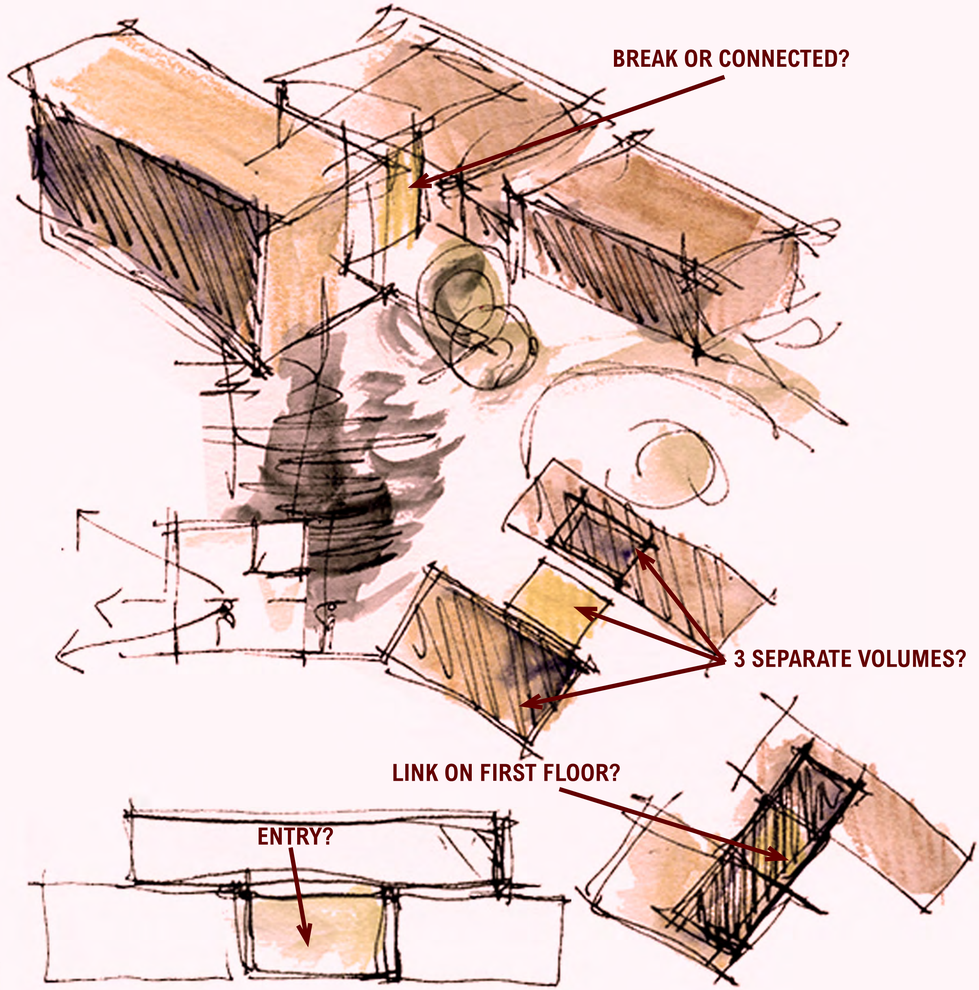


Image 86. Early building sketch iterations. (Authors own)

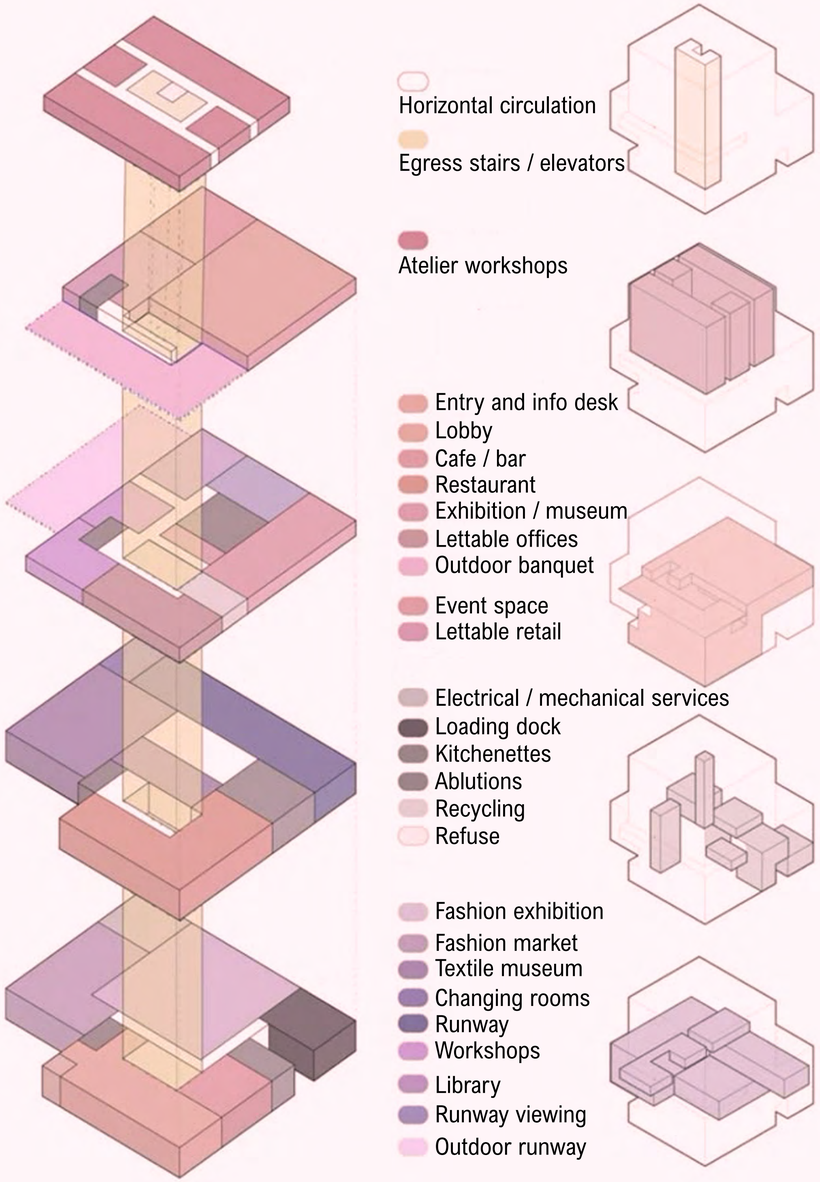


Image 87. Early programming exploration. (Authors own, Adapted from: https://id.pinterest.com/pin/668509944093661 9/)

Functionality:

1. Fashion Design Institute:
   - The institute will comprise classrooms, studios, workshops, lecture halls, and administrative offices.
   - Each classroom/studio should range from 50 to 100 square meters to accommodate various group sizes and activities.
   - Specialised facilities such as sewing rooms, pattern-making labs, and computer-aided design (CAD) studios should be included.
   - Flexible spaces for exhibitions, fashion shows, and industry events should also be incorporated.

2. Fashion Museum:
   - The museum will feature permanent and rotating exhibitions showcasing the history, culture, and evolution of fashion.
   - Galleries should be designed to accommodate both clothing displays and multi-media presentations.
   - Interactive exhibits and educational spaces for workshops and lectures should be integrated.
   - Climate-controlled storage areas for archival collections should be included.

3. Public Park:
   - The park will serve as a green oasis within the urban environment, providing space for relaxation, recreation, and community events.
   - Features may include walking paths, seating areas, playgrounds, water features, and outdoor art installations.
   - Sustainable landscaping techniques should be employed to maximise biodiversity and promote environmental stewardship.

4. Vertical Fashion Market:
   - To be spread across multiple levels
   - The vertical fashion market will provide retail space for fashion boutiques, pop-up shops, and artisanal vendors.
   - Each level should feature a mix of retail spaces, communal areas, and amenities such as restrooms and food kiosks.
   - The market should have a vibrant and welcoming atmosphere, with flexible spaces for events, fashion shows, and product launches.

5. Atelier Spaces:
   - Dedicated spaces for established fashion houses and ateliers to design, produce, and showcase their collections.
   - Each atelier should include studio space, fitting rooms, and display areas for finished garments.
   - Collaboration spaces and shared amenities should be provided to foster interaction and creativity among designers.

6. Lettable Office Spaces:
    - Office spaces for rent to fashion-related businesses, startups, and creative professionals.
    - Flexible layouts to accommodate different tenant needs, with access to shared amenities and facilities.

7. Fabric Recycling Facilities:
    - Dedicated facilities for sorting, processing, and recycling fabric waste generated by fashion-related activities.
    - Equipment and machinery for shredding, spinning, and weaving recycled fibers into new textiles.
    - Educational programs and workshops to promote sustainable fashion practices among designers and the community.

8. Storage:
    - Climate-controlled storage facilities for archival collections, fabric inventory, and exhibition materials.
    - Secure areas for storing valuable textiles, artifacts, and fashion archives.

Sustainability Measures:

- Passive design strategies such as natural ventilation, daylighting, and thermal mass to minimize energy consumption and enhance indoor comfort.
- Integration of renewable energy sources such as solar panels and wind turbines to offset electricity demand.
- Water-efficient fixtures and landscaping practices to reduce water consumption and promote water conservation.
- Use of sustainable materials with low environmental impact, such as recycled concrete, reclaimed wood, and eco-friendly finishes.
- Implementation of green building certifications and standards to ensure the highest level of environmental performance and occupant well-being.

Parking Requirements:
The project will include an underground parking garage with capacity for 200 vehicles to accommodate visitors and staff. Additionally, bicycle parking facilities should be provided to promote alternative modes of transportation.

Number of Storeys:
The complex will be designed as a multi-storey structure, with a maximum height of eight storeys. The height and scale of the building should be sensitive to the surrounding context and comply with local zoning regulations.

Accessibility and Disability Movement:

- All areas of the complex should be fully accessible to individuals with disabilities, with ramps, elevators, and tactile indicators provided where necessary.
- Accessible parking spaces should be available near the entrances, with clear signage and way-finding systems to guide users.
- Restrooms, seating areas, and amenities should be designed to accommodate users of all abilities, with consideration given to spatial requirements and ergonomic design.
- Public transportation access points should be integrated into the site design, with designated drop-off areas and convenient connections to bus stops and taxi ranks.

The Creative Nexus project represents a holistic approach to urban design, creating a vibrant and sustainable destination that celebrates fashion, creativity, and environmental responsibility. Through thoughtful planning and design, the complex will serve as a catalyst for economic growth, cultural exchange, and community engagement, enriching the fabric of Johannesburg's urban landscape for generations to come.

Primary theme of the building: the fusion of fashion and architecture

Secondary theme of the building: Sustainability and urban regeneration

Building typology: Mixed-use urban development

5.3 BUILDING PROGRAMMING

ROOM / SPACE	QUANTITY	APPROX. UNIT AREA	TOTAL AREA
1. PUBLIC RECEPTION AND FOYER			
Foyer and entrance lobby	2	70	140
Generous private courtyard	1	125	125
Information and support desk	1	40	40
2. FASHION DESIGN INSTITUTE			
Classrooms	10	50	500
Lecture halls	3	150	450
Computer labs	3	75	225
Design studios	10	100	1000
Faculty offices	10	20	200
Student lounge	2	100	200
Library	1	200	200
Workshop rooms	10	75	750
Meeting rooms	5	50	250
Administrative offices	5	25	125
Auditorium	1	500	500
3. FASHION MUSEUM			
Exhibition halls	3	200	600
Curatorial offices	2	30	60
Storage rooms	2	50	100
Interactive display rooms	2	100	200
Gift shop	2	75	150
Café	2	100	200
4. PUBLIC PARK			
Open green space	-	-	5000
Walking paths	1	300	300
Playground	-	-	1000
Walking paths	1	200	200
5. VERTICAL FASHION MARKET			
Retail shops	20	50	1000
Market stalls	30	20	600
Food court	1	300	300
Storage rooms	5	50	250
6. ATELIER SPACES			
Design studios	10	75	750
Lettable office spaces	10	50	500
Fabric recycling facility	2	100	200
Shared workshops	2	75	150
7. GENERAL SERVICE			
Patch room and server	1	20	20
Storage per floor	1	20	20
Delivery area	-	-	-
Refuse area 1: wet, putrefiable waste	1	50	50
Refuse area 2: recyclable waste	1	50	50
Cleaning equipment store	1	10	10
Kitchenettes	-	8	-
Visitors' ablutions (male and female)	-	30	-
Visitors' ablutions (mobility impaired)	-	3	-
Staff ablutions (male and female)	-	20	-
TOTAL AREA			**15,315M²**

Table 03. The Creative Nexus Programming exercise. Authors own.

8. **SERVICES**

- Two passenger lifts (One must be a stretcher lift)
- Minimum of two fire escape staircases
- Air conditioning plant – minimum of 50sq m (10x5m) - HVAC duct to be a minimum of 1m x 1m
- Wet services ducts, electrical duct, data duct
- Server room to fulfil all IT requirements – minimum of 15sq m
- IT maintenance room 40sq m
- Security control room - minimum of 25sq m
- Area for the recycling of all waste minimum of 40sq m

9. **GENERAL**

- Ablutions for the public and staff to be provided to National Building Regulatory requirements, for both public events and everyday users of the building.
- All areas to be accessible for impaired visitors and staff.
- Floor to ceiling heights in the main public areas to be a minimum of 4 meters.
- Light and acoustics are to be carefully considered.

5.4 DEVELOPMENT AND DESIGN RATIONALE

The design and development rationale for this mixed-use building in Johannesburg's Fashion District is rooted in a holistic approach that intertwines functionality, aesthetics, sustainability, and community engagement. Each decision in the design process was carefully considered to ensure that the final outcome not only meets the needs of its users but also contributes positively to the broader urban environment.

1. SITE SELECTION AND CONTEXTUAL INTEGRATION

- DECISION: The building is situated in the Fashion District of Johannesburg, a historically significant area associated with the garment industry.

- RATIONALE: This location was chosen to reinforce the district's identity and to capitalise on the area's existing infrastructure and cultural heritage. The proximity to key transportation routes ensures accessibility, while the integration with the surrounding urban fabric allows the building to serve as a catalyst for further regeneration efforts in the inner city.

2. MIXED USE FUNCTIONALITY

- DECISION: The building combines educational facilities, cultural spaces, commercial outlets, creative studios, and public recreational areas.

- RATIONALE: The mixed-use approach is adopted to create a vibrant, multi-functional space that serves a variety of purposes, fostering cross-disciplinary collaboration between fashion and architecture. This diversity of functions also maximises the building's utility, attracting a wide range of users and ensuring continuous activity throughout the day.

3. ARCHITECTURAL FORM AND AESTHETICS

- DECISION: The architectural form is characterised by fluid, dynamic lines that echo the movement of fabric and the flow of garments.

- RATIONALE: The aesthetic choices reflect the building's dual focus on fashion and architecture, embodying the fluidity of fashion design while maintaining the structural integrity associated with architecture. The use of curvilinear forms and innovative materials creates a visually striking landmark that symbolises the synergy between the two disciplines.

4. SUSTAINABILITY AND GREEN INFRASTRUCTURE

- DECISION: The building incorporates green roofs, solar panels, rainwater harvesting systems, and energy-efficient technologies.

- RATIONALE: Sustainability is a key priority in the design process, aligned with global and local environmental goals. The integration of green infrastructure not only reduces the building's carbon footprint but also enhances its resilience and long-term viability. These features support the project's commitment to environmental stewardship and set a precedent for future developments in the area.

5. EDUCATIONAL AND CULTURAL SPACES

- DECISION: The Fashion Design Institute and Museum are core components, with dedicated spaces for learning, exhibitions, and cultural exchange.

- RATIONALE: These elements are included to fulfill the building's role as a hub for education and cultural enrichment. The institute provides state-of-the-art facilities for fashion design education, while the museum offers a platform for showcasing the history and evolution of fashion and architecture. Together, they foster knowledge sharing and inspire the next generation of designers and architects.

6. PUBLIC ENGAGEMENT AND ACCESSIBILITY

- DECISION: The design includes a public park, open plazas, and accessible pathways, along with dedicated facilities for impaired users.

- RATIONALE: Public engagement is central to the building's mission. By creating welcoming, inclusive spaces, the design encourages community interaction and ensures that the building is accessible to all. The park and plazas serve as gathering points for both local residents and visitors, enhancing the social fabric of the area.

7. VERTICAL FASHION MARKET AND ATELIER SPACES

- DECISION: The building features a vertical fashion market and ateliers for both established fashion houses and emerging designers.

- RATIONALE: The inclusion of commercial and creative spaces within the building was driven by the need to support the local fashion industry. The vertical market offers a unique retail experience, while the ateliers provide affordable, flexible spaces for designers to work and showcase their creations. This fosters a vibrant creative ecosystem and strengthens the building's role as a fashion industry hub.

8. STRUCTURAL AND MATERIAL CHOICES

- DECISION: The building employs advanced construction techniques and high-quality, sustainable materials

- RATIONALE: The selection of materials and construction methods is influenced by the need for durability, sustainability, and aesthetic appeal. The use of recycled materials, in particular, aligns with the building's environmental goals and reflects the fashion industry's growing focus on sustainability. The structural design will ensure that the building is not only stable but also flexible enough to accommodate future changes and expansions.

9. PARKING AND TRANSPORTATION STRATEGY

- DECISION: The design includes underground parking, bicycle storage, and direct connections to public transportation networks.

- RATIONALE: To minimise the building's impact on the surrounding urban area and promote sustainable transportation, ample parking and transportation facilities are integrated into the design. The underground parking preserves the site's surface for pedestrian use, while the bicycle storage and public transport links encourage eco-friendly commuting options.

10. PHASED DEVELOPMENT STRATEGY

- DECISION: The project is designed to be developed in phases, allowing for gradual expansion and adaptation over time.

- RATIONALE: A phased development approach provides flexibility, enabling the project to respond to changing needs and market conditions. This strategy also allows for continuous operation of the building during construction, minimising disruption and ensuring that the various functions can come online as they are completed.

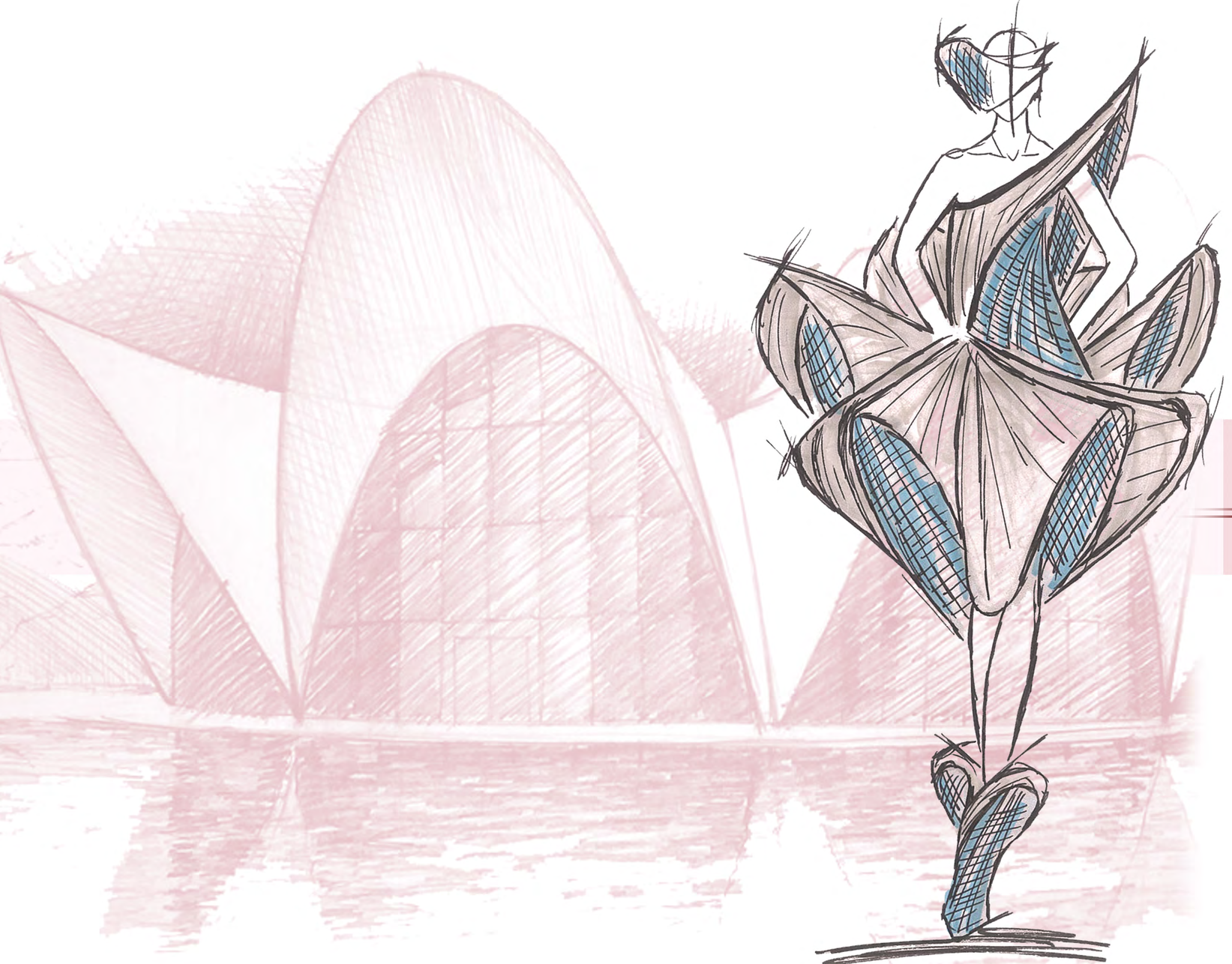
5.5 CONCLUSION

The new Fashion Kapitol represents a forward-thinking, multifaceted development that bridges the worlds of fashion and architecture. This project is more than just a building; it is a dynamic environment where creativity, education, commerce, and sustainability converge.

The design brief outlines a comprehensive program that meticulously addresses the functional needs of diverse users, from students and designers to the general public. By carefully planning the spatial distribution and square meterage of each room, the programming ensures that every aspect of the building serves its intended purpose, whether it be fostering innovation, displaying cultural artifacts, or providing spaces for leisure and community interaction.

The design and development rationale further articulates the strategic decisions made throughout the process, ensuring that the building is not only visually compelling but also structurally sound, environmentally responsible, and socially engaging. The integration of advanced materials, sustainable technologies, and innovative design principles demonstrates a commitment to creating a landmark that reflects the synergy between fashion and architecture.

In conclusion, this development is poised to become a beacon of creativity and sustainability in Johannesburg's inner city. By blending educational, commercial, cultural, and recreational functions within a single cohesive structure, it stands as a testament to the potential of interdisciplinary collaboration.



CHAPTER 06

DESIGN DEVELOPMENT

CHAPTER 06. DESIGN DEVELOPMENT

6.1 INTRODUCTION

The design development phase of the new Fashion Kapitol: Creative Nexus, represents the critical juncture where conceptual ideas are transformed into tangible, detailed plans. This chapter delves into the intricate process of refining the architectural vision, addressing both the aesthetic aspirations and the functional requirements of the project.

As the design transitions from broad concepts to detailed solutions, this phase focuses on ensuring that every aspect of the building aligns with the overarching goals of innovation, sustainability, and community engagement. Here, the integration of cutting-edge technology, sustainable practices, and user-centric design principles becomes paramount. The chapter will explore the key design decisions made during this phase, the challenges encountered, and the strategies employed to resolve them, ensuring that the final design is not only a work of architectural significance but also a practical, functional space that meets the diverse needs of its users.

In this context, the Design Development Chapter serves as a bridge between the initial design concepts and the construction phase, providing a comprehensive road map that outlines how the project will come to life, from the selection of materials to the detailing of spaces and the integration of complex systems. This chapter is an essential part of the project's narrative, capturing the evolution of the design and setting the stage for the realisation of a landmark that will redefine the intersection of fashion and architecture.

6.2 DESIGN CHARETTE AND CONCEPT GENERATION

The Design charette and concept generation section marks the initial creative exploration for the Creative Nexus. This phase brought together the different initial ideas with a goal to explore innovative bold concepts that would blend the disciplines of fashion and architecture into a cohesive, forward-thinking design.

During this stage, key design principles were developed, addressing the project's spatial flow, functionality, and aesthetic direction. The charette allowed for rapid iteration and critique, laying the foundation for a building that harmonises sustainability, creativity, and practicality, while setting the stage for the development of a landmark in Johannesburg's evolving urban fabric.

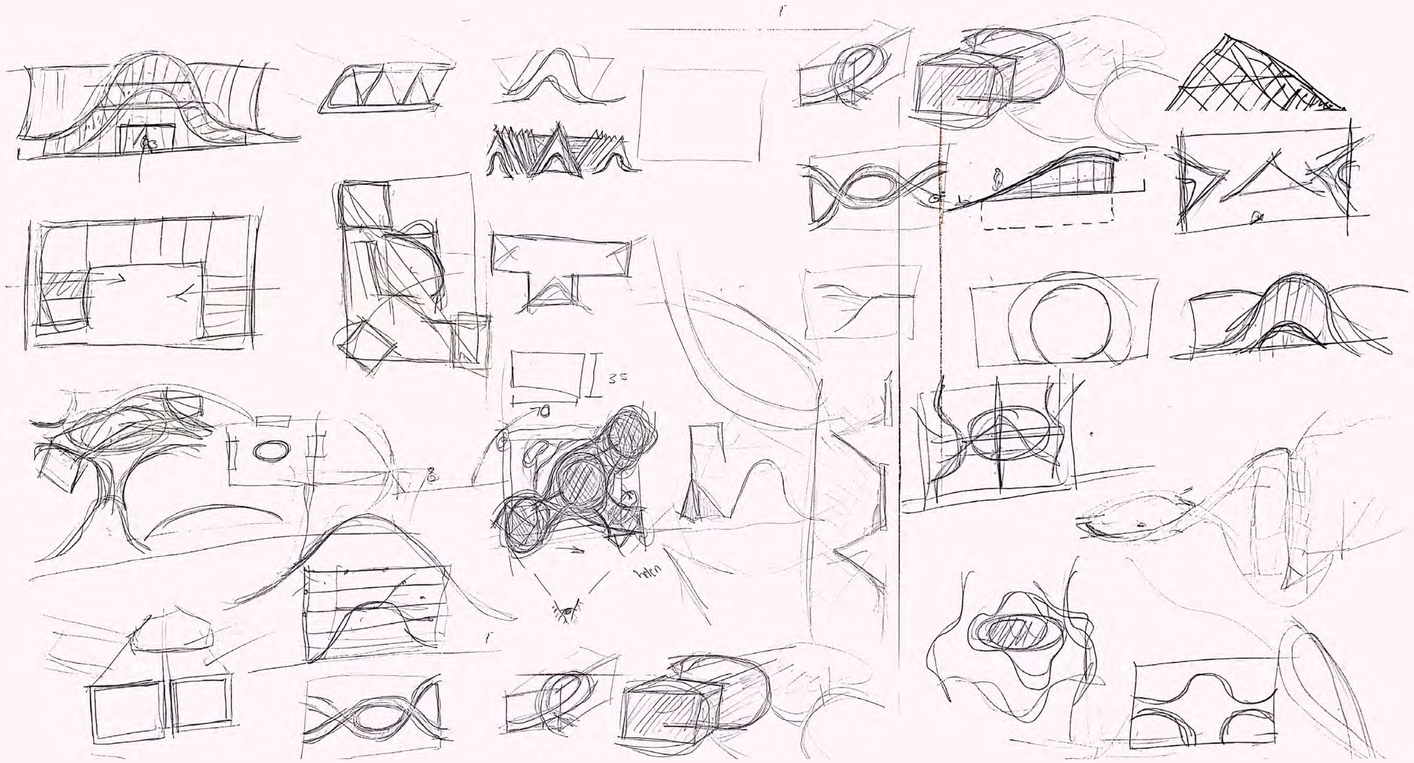


Image 88. Preliminary design sketching. (Source: Authors own)

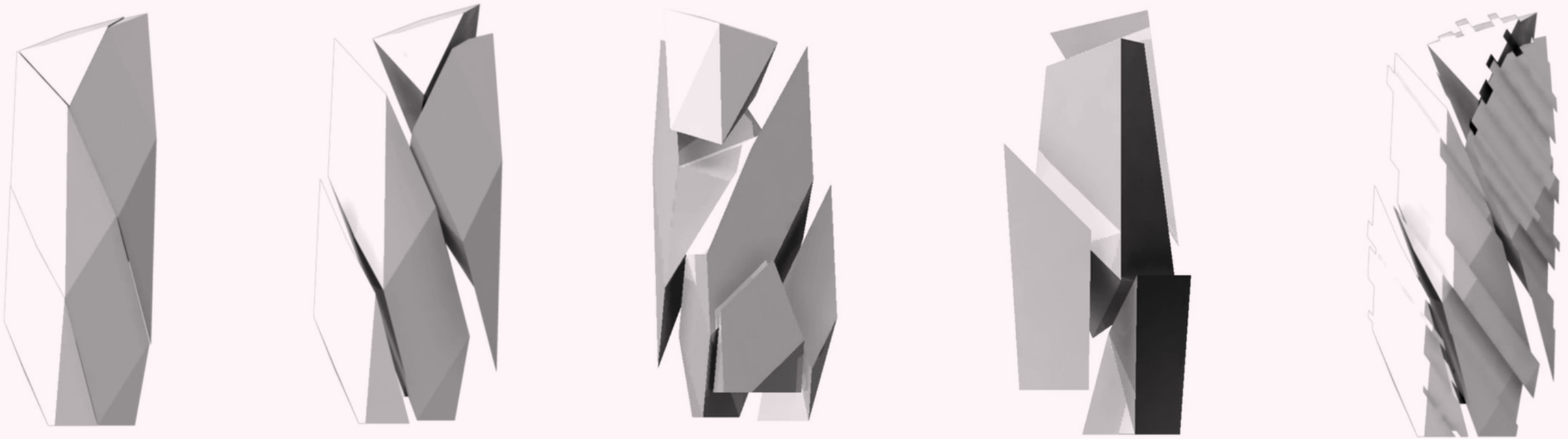


Image 89. Preliminary building digital sketching. (Source: Authors own).

6.2.1 CONCEPTUAL DESIGN EXPLORATION 01

In the initial conceptual massing exploration, as shown in *Image 77*, the site chosen encompassed the existing Fashion Kapitol, including the mall and public square.

The first design concept featured an L-shaped building that opened northward toward Pritchard Street. The primary goal of this design was to shift the building mass as far south as possible, creating an expansive open space on the northern side for a public square. This space would be maximised for its orientation benefits, ease of access for pedestrians, public transport users, and drivers, and its potential for dynamic street edge interactions. The central arm, extending from the intersection of the L-shape, would serve as a prominent landmark, providing the site with a distinct aesthetic identity.

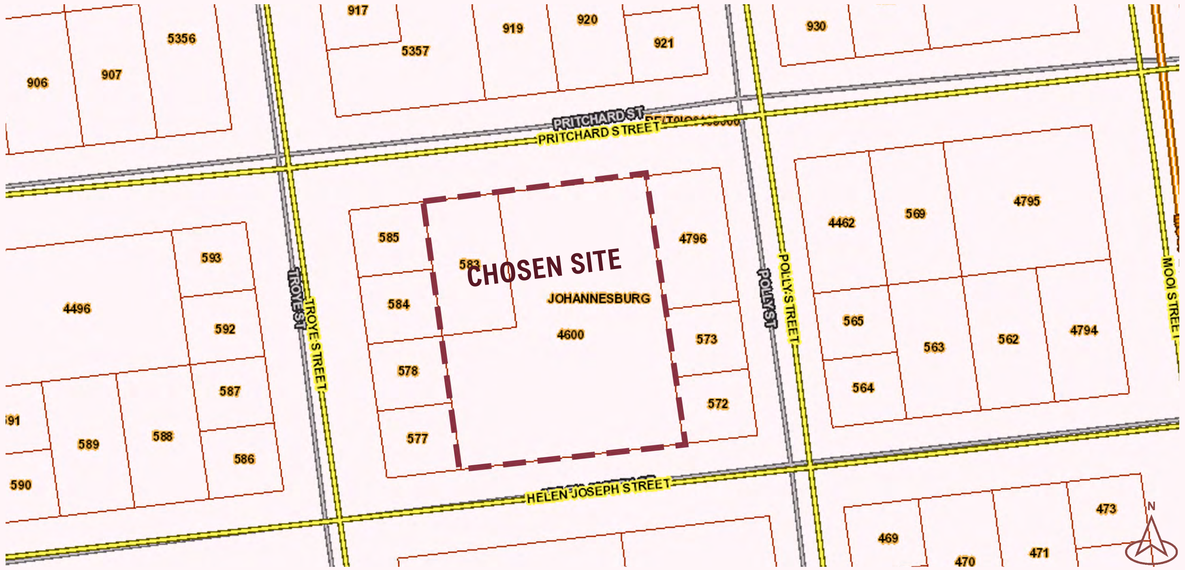


Image 90. The chosen site of study within Johannesburg's Fashion District. Authors own.

(Base map adapted from: https://www.google.com/maps/place/Fashion+District,+Johannesburg)

1. SKETCHING

The sketching process began with a series of exploratory drawings, aimed at capturing the conceptual essence and spatial dynamics of the building and surrounding public spaces. Initial sketches focused on massing, scale, and how the building would engage with the surrounding urban fabric, particularly the existing Fashion Kapitol. Through quick, iterative sketches, the design explored different forms, façade treatments, and circulation patterns.

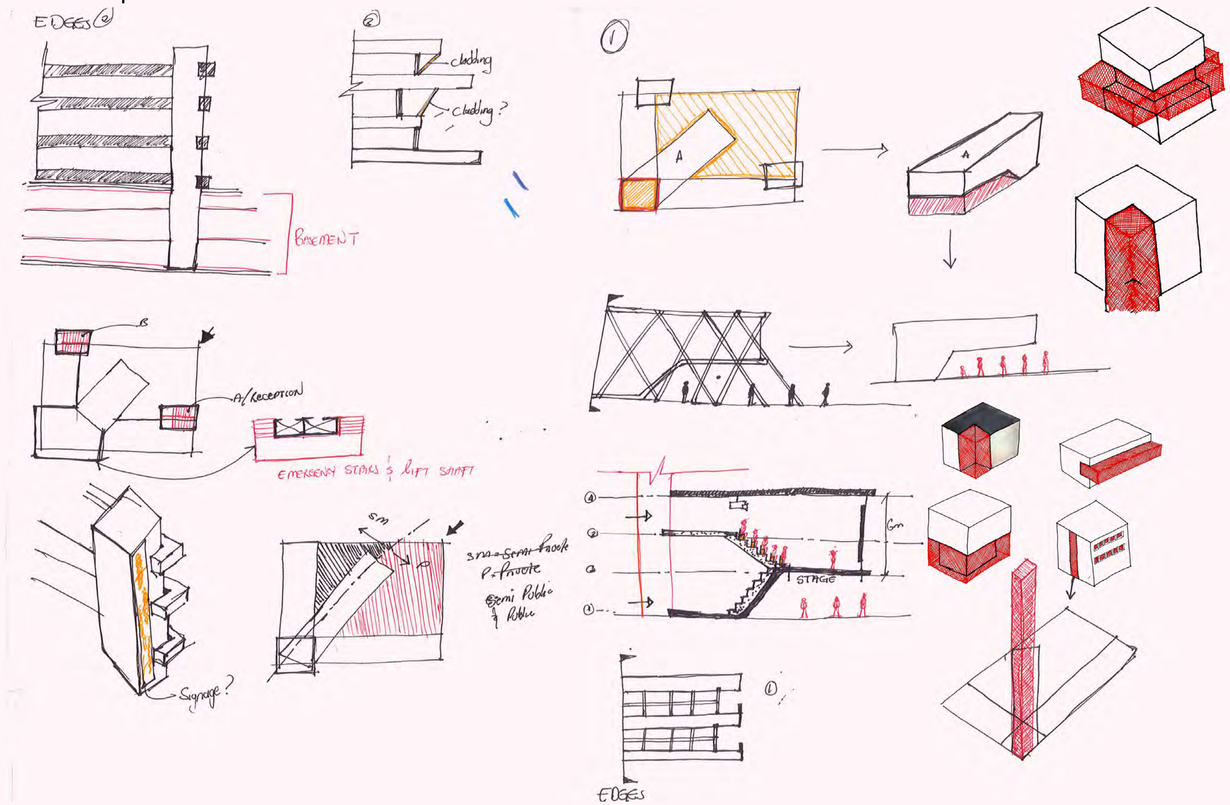
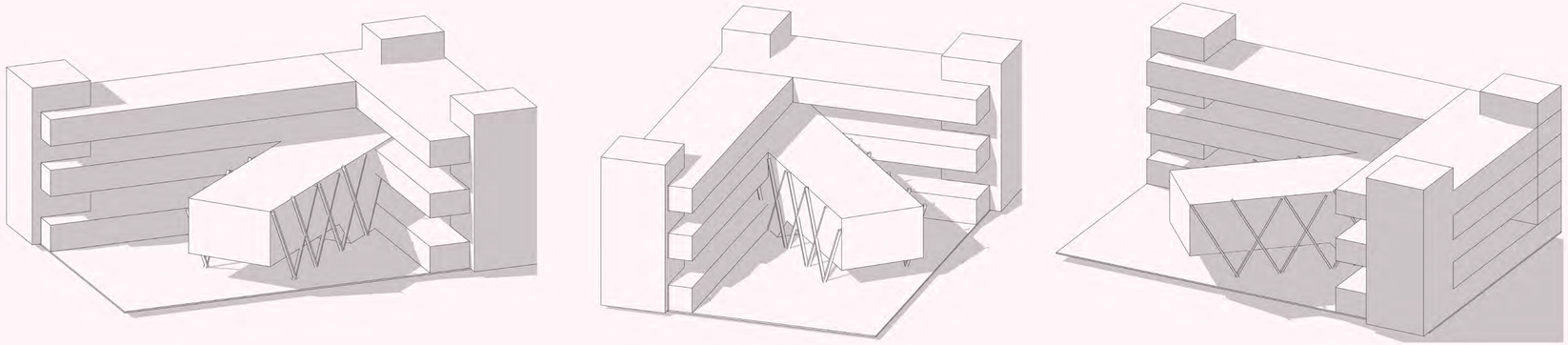


Image 91. Conceptual design exploration 01 sketching process. (Source: Authors own.)

2. MASSING AND MASSING ATTRIBUTES

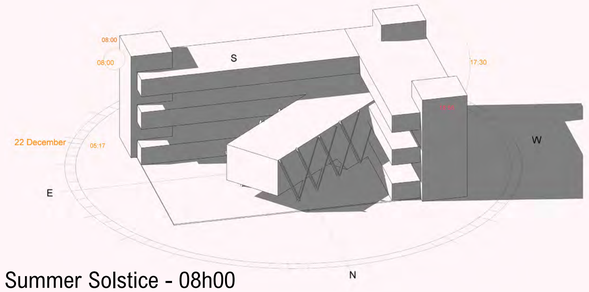
The massing process for this building involved shaping the overall form and volume in response to the site's context and functional needs. Starting with broad geometric explorations, the design tested various configurations to optimise the relationship between the building and the existing Fashion Kapitol, ensuring it fit seamlessly into the urban fabric. The L-shaped massing was selected to maximise public square space, enhance street frontage, and improve pedestrian flow. Special attention was given to how the mass would interact with sunlight, access points, and the surrounding environment, resulting in a balanced, harmonious structure that both defines and activates its location.



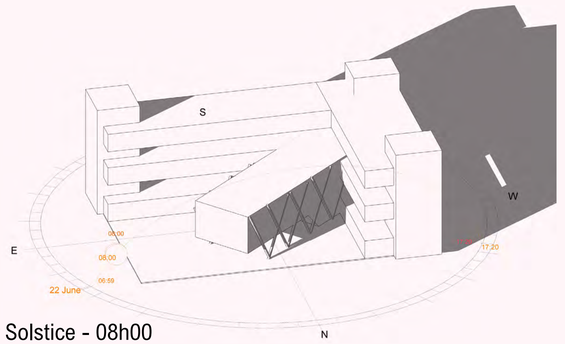
Images 92 - 94. Massing exploration 01. (Source: Authors own.)

ORIENTATION AND SOLAR GAIN

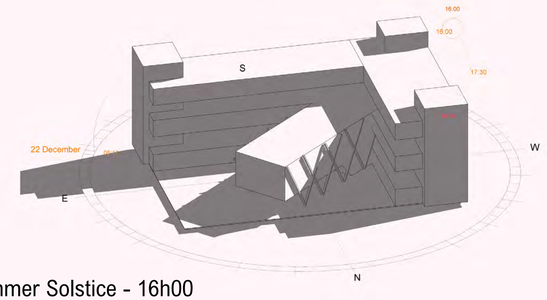
The building's shape was intentionally oriented with large public spaces and facades facing north to maximise solar exposure in both interior and exterior areas during winter and summer. The L-shaped configuration also aligns the programming to ensure optimal daylight access and enhances natural and passive ventilation throughout the building.



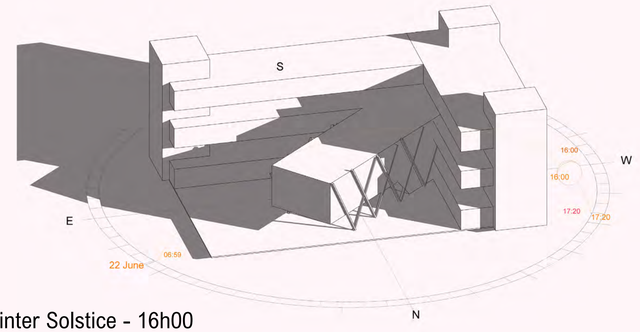
Summer Solstice - 08h00



Winter Solstice - 08h00



Summer Solstice - 16h00



Winter Solstice - 16h00

Images 95 - 98. Solar daylighting analysis. (Source: Authors own.)

ACCESS POINTS

The main pedestrian access points to the site are at the Northern corner of the site. The main entrance to the building in at the central arm of the mass.

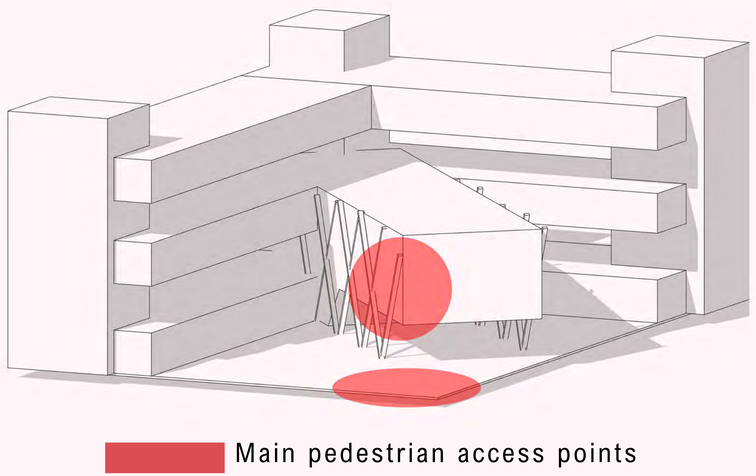


Image 99. Massing attribute exploration - access points (Source: Authors own.)

CIRCULATION AND MOVEMENT

The main vertical circulation core of the building is central to where the arms of the L shape converge. The fire escape routes are located on the ends of the wings, so as to comply with the minimum distance requirements of fire safety. Horizontal circulation mirrors the floor layout of the building.

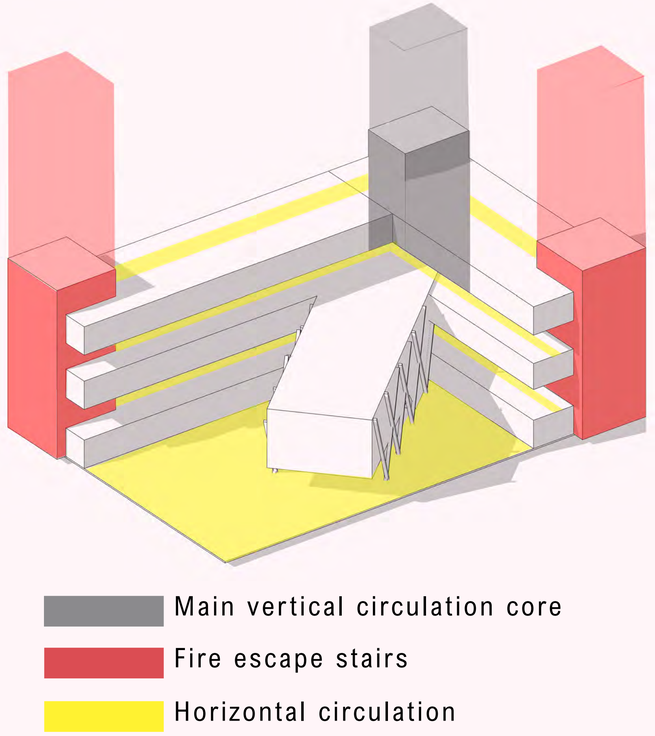


Image 100. Massing attribute exploration - circulation and movement. (Source: Authors own.)

HIERARCHY OF SPACES

The spaces become more privatised as one travels further vertically into the building. The public spaces are on the ground and first floor for easy accessibility of the various uses, allowing for non-members of the institution to access and utilise them.

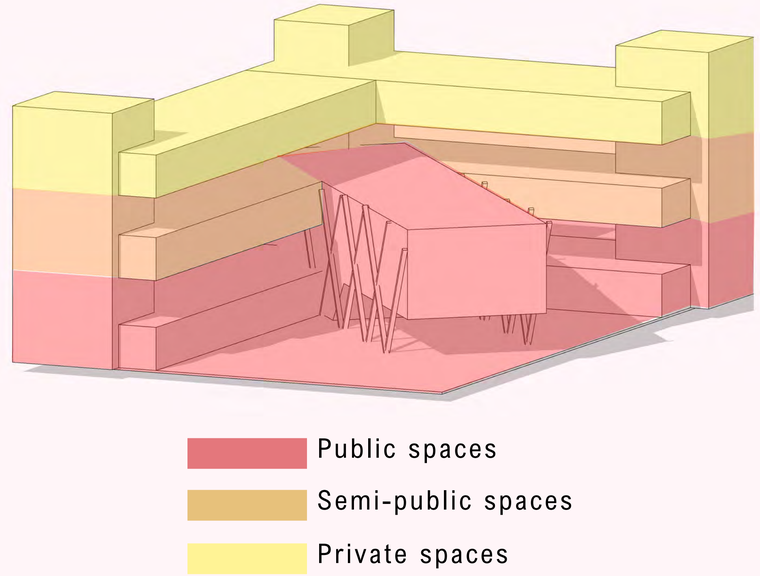
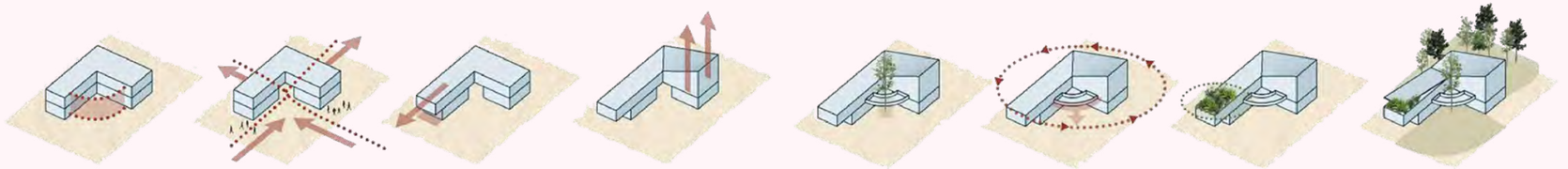


Image 101. Massing attribute exploration - hierarchy of spaces. (Source: Authors own.)

6.2.2 CONCEPTUAL DESIGN EXPLORATION 01 _ REVIEW 02

In the initial conceptual massing exploration was explored and refined further for the second review exercise. The design was refined to enhance both its architectural and fashion-related principles, ensuring the building harmonized with its environment while responding to the needs of its users. Programmatically, the L-shaped form was adjusted to maximise solar gain and improve natural ventilation, creating more energy-efficient interior spaces. The refinement also involved reworking the building's proportions and spatial relationships to better interact with the surrounding urban context, ensuring seamless transitions between public and private areas and enhancing accessibility for pedestrians and vehicles.

1. MASSING AND FORM DEVELOPMENT



ENCLOSURE
L-shaped enclosure of the building form.

SUBTRACTION
Create a void at the central plane of the form as the focal point.

EXTRUSION
Elongate and shorten the edges and vertices of the form.

ADDITION
Include volume by extruding upwards.

FORECOURT
Frame the public forecourt by providing an elevated platform.

VISTAS
Prioritise city views throughout internal spaces.

GREENERY
Maximise usable roof areas by providing accessible terraces.

LANDSCAPING AND CONTEXT
Seamlessly blend building into its context.

Images 102. Conceptual design exploration 01, massing and form refinement. (Source: Authors own.)

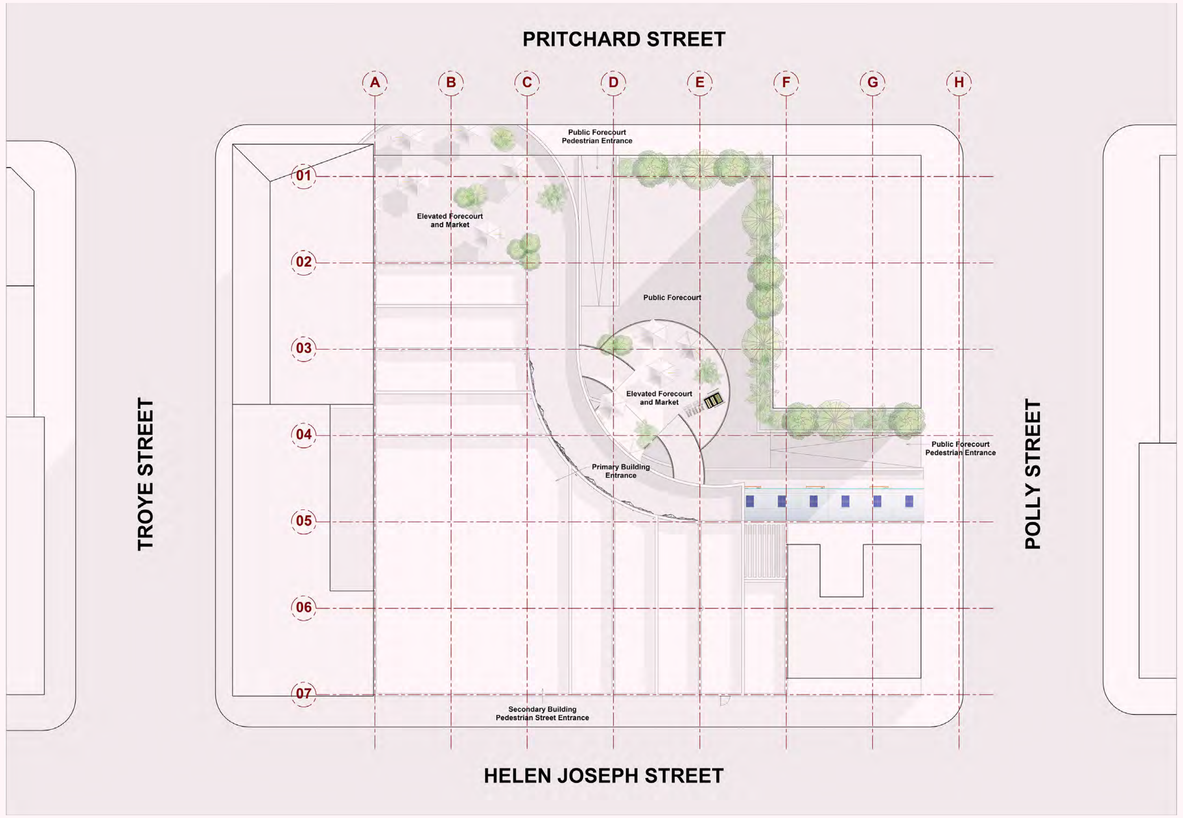

THE NEW KAPITOL


PUBLIC FORECOURT


PEDESTRIAN STREET ENTRANCE

Image 103 - 105. Conceptual design exploration 01, presented for the second review. (Source: Authors own.)

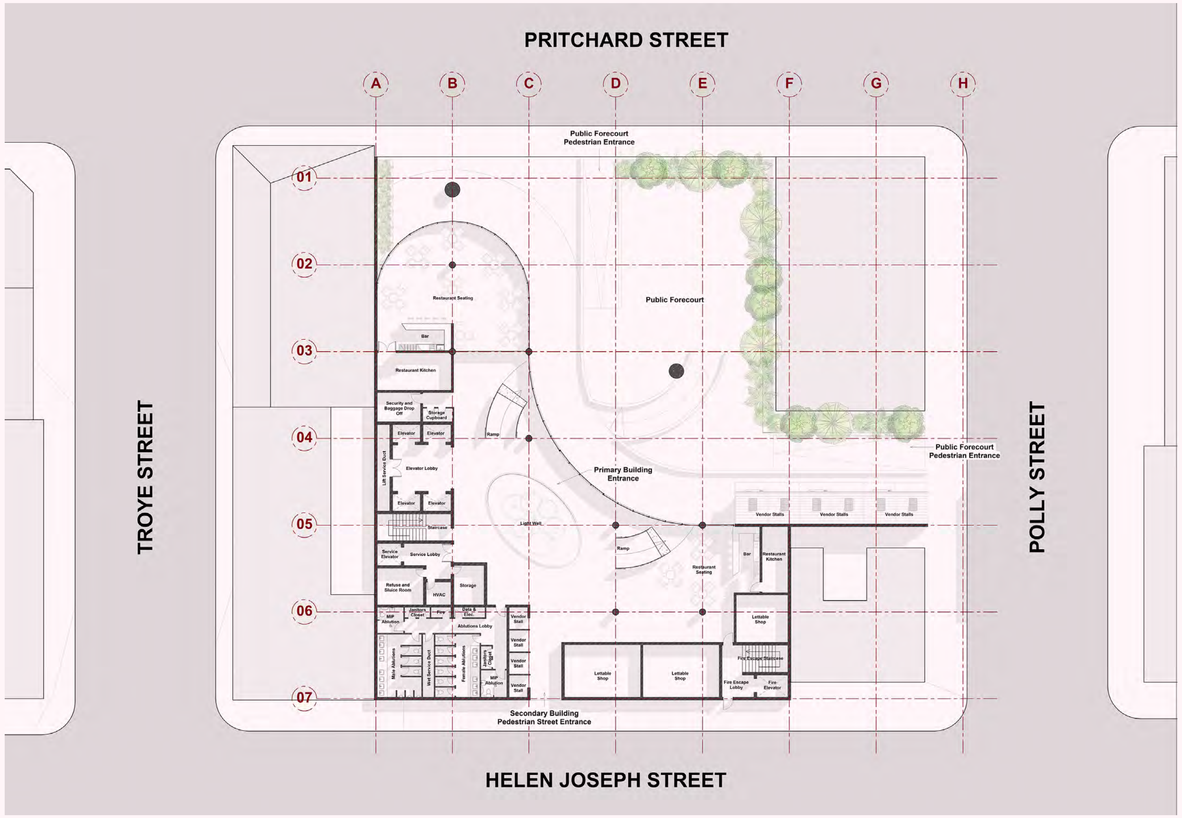
2. FLOOR PLANS AND SPATIAL PROGRAMMING



N

SITE PLAN / ROOF PLAN

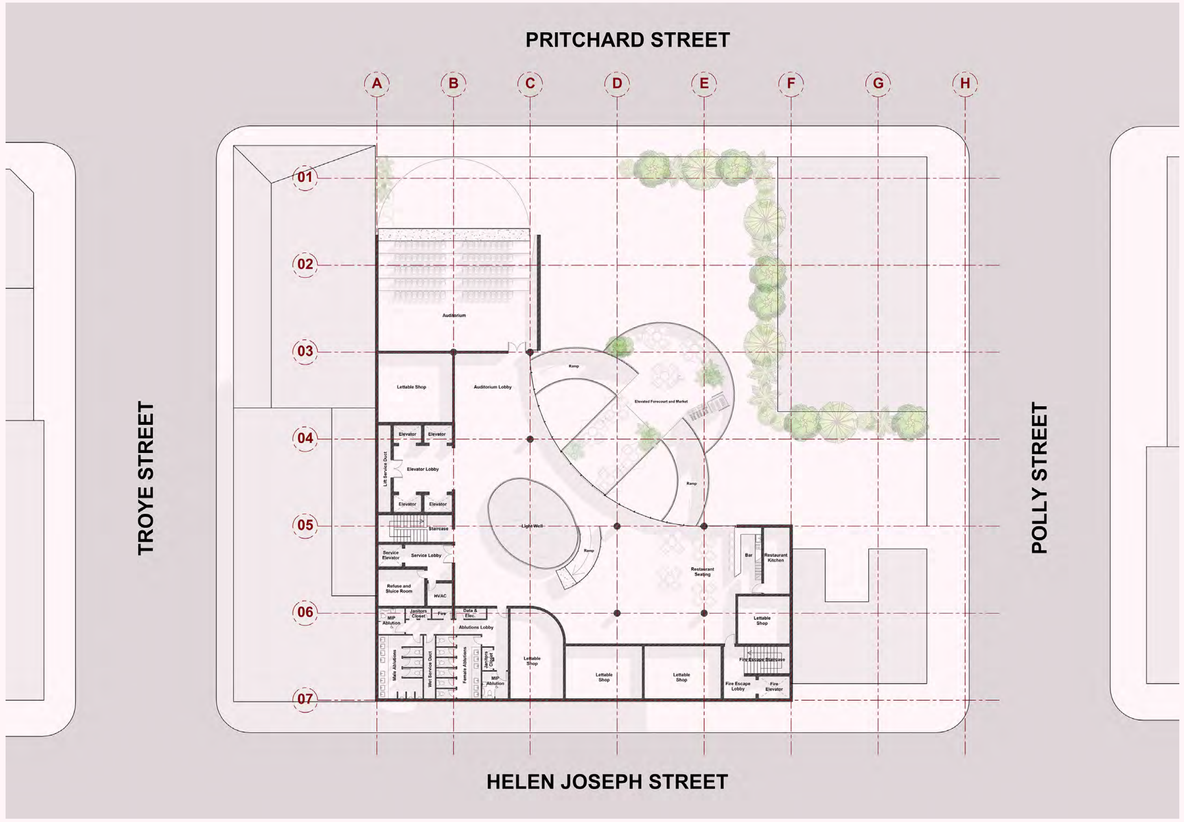
0M 10M 20M 30M 40M 50M SCALE 1:100



N

GROUND FLOOR PLAN

0M 10M 20M 30M 40M 50M SCALE 1:100



N

FIRST FLOOR PLAN

0M 10M 20M 30M 40M 50M

SCALE 1:100



N

SECOND FLOOR PLAN

0M 10M 20M 30M 40M 50M

SCALE 1:100

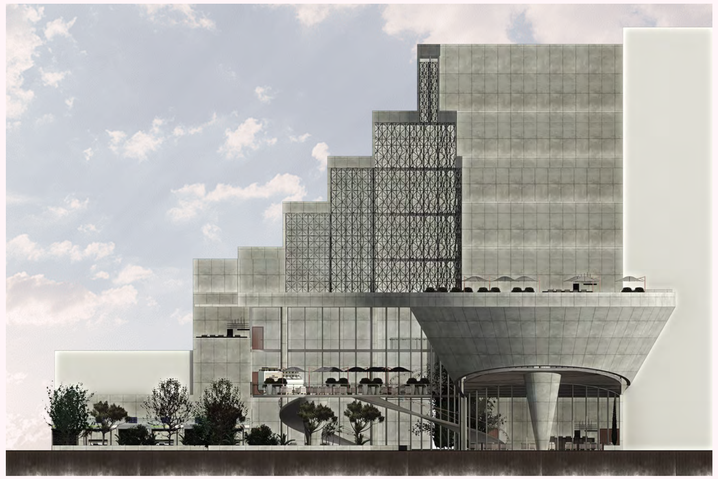
3. ELEVATIONS



NORTH ELEVATION



EAST ELEVATION



WEST ELEVATION

6.2.3 CONCEPTUAL DESIGN EXPLORATION 01 _ CRITIQUES

The initial design concept for The Creative Nexus, centered around an L-shaped building with a northward orientation, introduces a promising foundational idea. However, several architectural, functional, and contextual aspects require critical examination to ensure the project achieves its intended goals.

1. MASSING AND SPATIAL ORGANISATION

The L-shaped massing, though intended to create an expansive public square to the north, raises questions about the balance between built space and open space. While the open northern plaza benefits from excellent solar orientation and accessibility, the southern portion of the building may become underutilized or overshadowed.

The extensive southern shift of the building mass, though aimed at creating openness, could lead to a lack of cohesion with surrounding structures, possibly disconnecting the building from the active urban fabric of the Fashion Kapitol.

Moreover, the L-shaped configuration may limit flexibility in the programming of interior spaces, constraining circulation paths and functional zones. A more flexible massing approach, such as a centralised or modular layout, could improve adaptability to evolving uses, especially for an institute that caters to dynamic industries such as fashion and architecture.

Lastly, the extensive southern shift could lead to a disjointed relationship with neighboring structures, particularly the two adjacent buildings to the south, which are currently vacant, illegally inhabited, and in a state of dereliction. Incorporating these derelict buildings into the design as part of an adaptive reuse strategy could enhance the integration of the new development with its context and address urban regeneration goals. These buildings could be revitalised to support complementary functions, such as additional retail spaces or community facilities, thereby strengthening the overall urban fabric and creating a more cohesive and sustainable redevelopment.

2. CONTEXTUAL INTEGRATION

While the L-shaped design aims to create a distinct landmark with its central arm, this approach risks overpowering the existing Fashion Kapitol and adjacent derelict structures. A more nuanced design that integrates the neighboring buildings into the scheme would respect the scale and historical significance of the area while contributing to urban regeneration. This integration could provide opportunities for dynamic interactions and a more cohesive urban identity. The design should consider how the new structure will interact with and enhance these existing elements, ensuring that the redevelopment fosters a harmonious and revitalised urban environment.

Furthermore, the proposed interaction with the street edge is promising, but the design does not clearly articulate how the edges will engage the public realm in terms of permeability and transparency. The building could risk becoming monolithic if the façade treatments are not thoughtfully designed to ensure interaction with passersby. Introducing varied, human-scale elements along the street frontage, such as outdoor seating, retail spaces, or interactive displays, could activate the edges more effectively.

3. FUNCTIONALITY AND PROGRAMMING

While the L-shaped form prioritises public space, the programming inside the building may suffer from inefficiencies due to the long, linear layout. Fashion design studios, exhibition spaces, and ateliers require flexible, interconnected spaces that allow for collaboration and creativity. The current design's segmented form could inhibit this flow, especially if the central arm is intended as a landmark feature rather than a functional space. Further integration of these spaces in a more compact or clustered arrangement could enhance the creative synergy within the building.

Additionally, the initial concept does not sufficiently address the hierarchy of private, semi-private, and public spaces. In a building dedicated to fashion design, ateliers and production areas need to be shielded from direct public view, while exhibition spaces and retail components should be highly visible. A more nuanced approach to zoning these spaces would improve functionality and create a more intuitive user experience.

4. AESTHETIC CONSIDERATIONS

While the central arm of the L-shape is intended as an iconic beacon, there is a risk that the landmark element could become overly symbolic and disconnected from the rest of the building. A purely formal landmark without a deeper functional or conceptual rationale might reduce the building's overall coherence. The aesthetic design should evolve to reflect the fluidity and elegance of fashion design principles, that is, wrapping, transformation and folding, in a way that creates a seamless dialogue between form and function.

Additionally, the façade treatments need to be carefully reconsidered. While north-facing facades offer excellent opportunities for natural light, the materiality and articulation of these facades will need to reflect the dual nature of fashion and architecture. Textured, layered façades that respond to changing light conditions throughout the day could enrich the design and strengthen the connection between the building's appearance and its conceptual underpinnings.

5. SUSTAINABILITY AND ENVIRONMENTAL IMPACT

Though the initial concept rightly considers solar orientation and natural ventilation, more attention needs to be given to sustainability strategies that extend beyond passive measures. The building's environmental impact can be reduced through the integration of green infrastructure, such as green roofs, rainwater harvesting systems, and renewable energy sources like solar panels. Given the prominence of sustainability in both fashion and architecture today, the design should push the envelope in terms of resource efficiency and environmental responsiveness.

The design also lacks clarity on how the building will adapt to the changing needs of its users. Flexibility and resilience are key to ensuring the long-term sustainability of a structure, and the current design could benefit from further refinement to allow for future modifications in response to evolving trends in fashion and architecture.

CONCLUSION

The initial design concept for the Fashion Design Institute offers a strong starting point, particularly in its focus on creating a public square and establishing a landmark presence. However, it requires significant refinement to address concerns related to massing, functionality, contextual integration, and sustainability. By rethinking the spatial organisation, refining the landmark concept, and incorporating deeper connections to both fashion and architectural principles, the design can evolve into a more cohesive, adaptable, and environmentally responsible solution.

6.2.4 CONCEPTUAL DESIGN EXPLORATION 02

In response to the need for a more cohesive and contextually responsive approach, the new design concept exploration for the New Fashion Kapitol aims to address the challenges identified in the initial proposal.

This phase of the design process will delve into innovative solutions that better integrate the principles of haute couture with architectural form, while also enhancing the building's functionality and urban integration. The exploration focuses on refining the massing and spatial organisation to create a harmonious relationship with the surrounding urban environment, including the vacant and derelict buildings adjacent to the site. By incorporating fashion design principles, wrapping, transformation and folding, into the architectural language, the new concept seeks to foster a dynamic interaction between fashion and architecture. Additionally, the revised design will address sustainability and adaptive reuse strategies to promote environmental resilience and contribute to the broader goals of urban regeneration. This comprehensive exploration aims to establish a design that is both aesthetically compelling and functionally effective, ultimately creating a landmark that resonates with its cultural and urban context.

Image 93 illustrates the new site, including the adjacent buildings to be incorporated into the scheme.

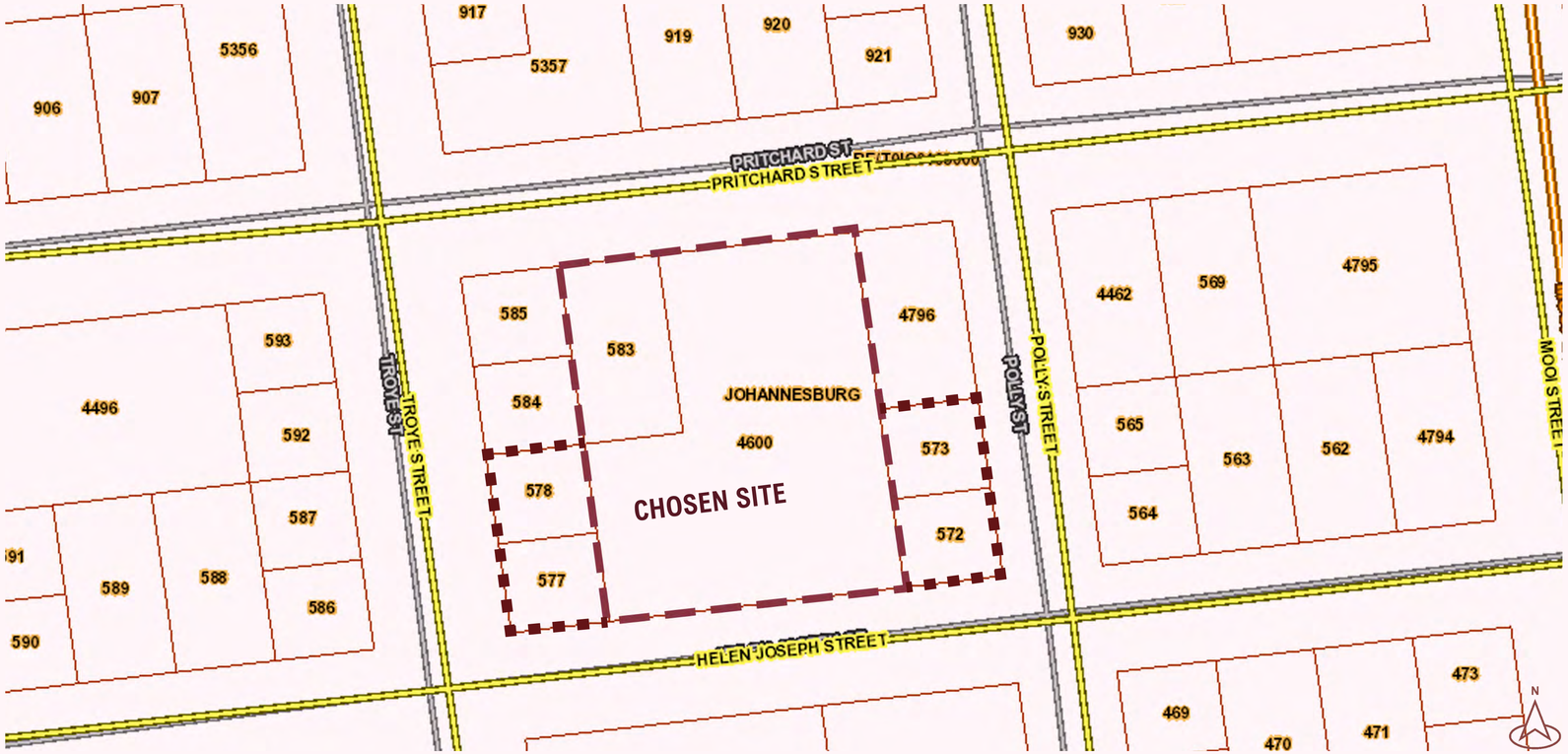
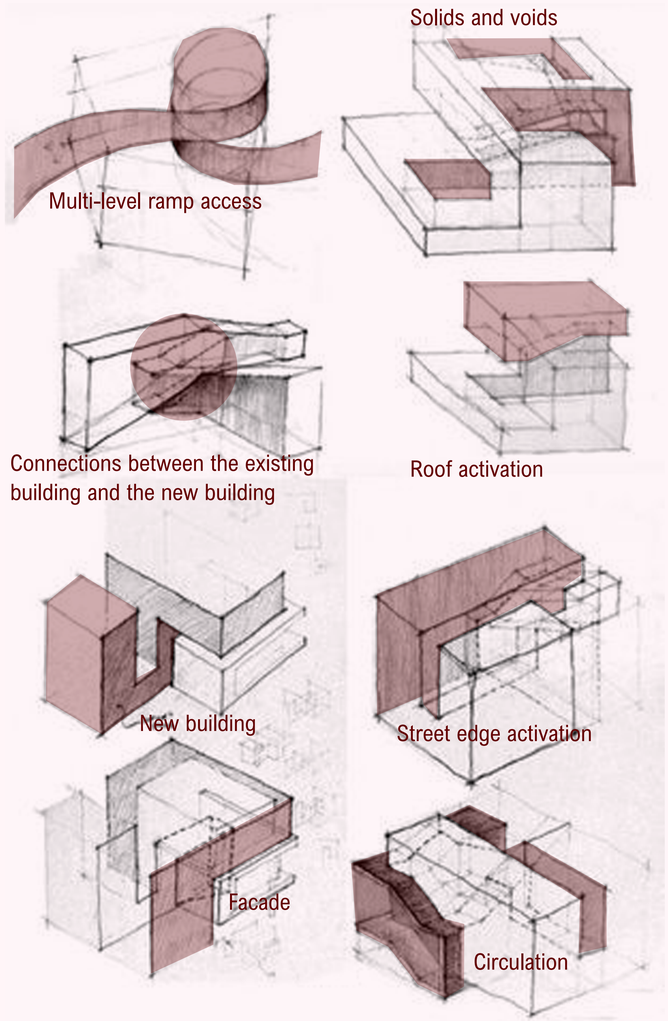


Image 106. The chosen site of study including the adjacent building. Authors own.

(Base map adapted from: https://www.google.com/maps/place/Fashion+District,+Johannesburg)



1. SKETCHING

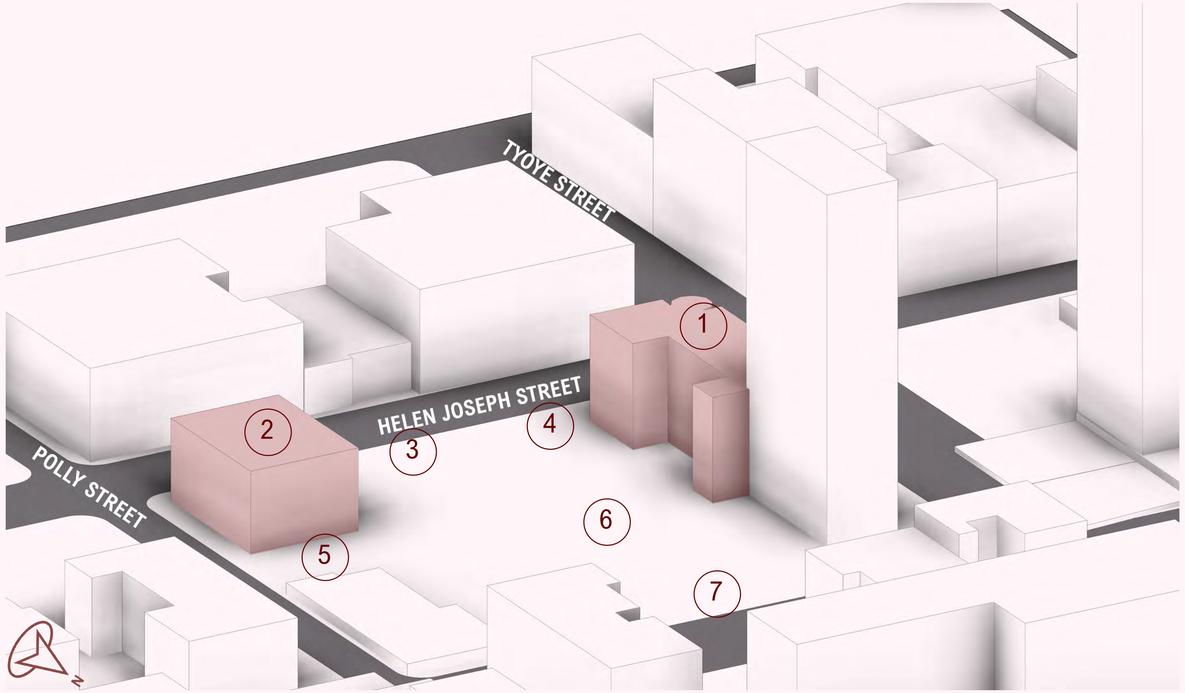
The sketching process for the new design concept involved an iterative and exploratory approach to refine the architectural vision. Initial sketches focused on re-imagining the massing and spatial organisation to enhance integration with the surrounding urban context and address the integration of haute couture principles. These preliminary drawings experimented with different shapes and configurations, incorporating elements of fashion designs to influence the building's form and facade. The sketches aimed to balance functional requirements with aesthetic aspirations, exploring how the building could interact with the adjacent derelict structures and public spaces. This iterative process allowed for rapid visualisation of concepts, enabling the design team to evaluate and refine ideas effectively before advancing to more detailed development.

Image 107. Conceptual design exploration 02, preliminary sketching. Authors own.

(Adapted from: https://architectureskетch.tumblr.com/image/47946102714)



2. MASSING ATTRIBUTES



1. The existing Gallo Building. Reuse through facadism and renovation strategies
2. Existing Building. Reuse through renovation and integration strategies.
3. New lightweight building to integrate with existing buildings
4. Basement entrance for parking and building services
5. Secondary pedestrian entrance
6. Integrated public square
7. Primary pedestrian entrance



Image 108. Building 01 to be reused and adapted. (Source: Google Street View, 2024).



Image 109. Building 02, The Gallo Building to be reused and adapted. (Source: Google Street View, 2024).

3. APPROACH TO ADAPTIVE REUSE

The adaptive reuse concept of the New Fashion Kapitol prioritises conservation, restoration, and thoughtful repair of the existing Art Deco buildings to maintain their historic character while enhancing their functionality for contemporary use.

Conservation efforts focus on preserving original architectural details, such as decorative facades, window frames, and cornices, to respect the structures' cultural significance within Johannesburg's Fashion District.

Restoration practices are employed to rejuvenate worn or damaged elements,such as brickwork, plaster, and metalwork, ensuring they retain their original aesthetic while achieving modern structural standards.

Repair techniques are carefully chosen to stabilise and reinforce core systems, such as load-bearing walls and support beams, allowing the buildings to safely accommodate new programs without compromising their historical integrity. These approaches create a seamless blend between old and new, promoting a sustainable and respectful transformation that honors the area's heritage while meeting the evolving needs of the fashion and architecture industries.

Image 110. A photo-montage illustrating the approach to adaptive reuse for The New Fashion Kapitol. Includes the original Gallo Building and 169 Helen Joseph Street Ground Floor Plans. (Floor plans adapted from: Bruwer, 2002).

4. TRANSLATING HAUTE COUTURE CRAFT INTO THE NEW FASHION KAPITOL

A. WRAPPING

In the design of this building's Art Deco brick facade, the concept of wrapping will be a key architectural element, directly influenced by haute couture's fabric draping techniques. Just as fashion designers manipulate fabric to create fluidity, structure, and movement, the facade will be designed to appear as though it is elegantly wrapped around the building, creating a sense of dynamism and depth.

This wrapping effect will be achieved through the strategic use of curved and layered brickwork, where the material bends and folds in a way that mimics the organic drape of fabric. The interplay of recessed and protruding brick patterns will create shadows and highlights, reinforcing the illusion of softness despite the use of rigid masonry. Additionally, perforations and ornamental detailing will be integrated to enhance the sense of lightness, much like delicate lacework or pleating in haute couture garments.

By incorporating this technique, the facade will not only serve as an aesthetic expression of movement and elegance but also contribute to the building's functionality. The layered brick surfaces can provide passive shading, improving energy efficiency, while the perforated sections allow for controlled natural ventilation. This fusion of fashion-inspired wrapping techniques with Art Deco architectural detailing will result in a distinctive, sculptural facade that embodies both craftsmanship and innovation.



Image 111. Wrapping - Haute Couture technique employed in the design of facade systems. (Sketch: Authors own, adapted from: https://archello.com/project/karinox-coffee Image source: https://medium.com/@dotsod/draping-unraveling-the-elegance-of-fabric-manipulation-88312f69f67b)

The incorporation of the wrapping technique into the building's Art Deco brick facade will introduce a striking visual contrast to the rigid, geometric nature of the surrounding urban fabric. In an environment dominated by hard, linear structures, the soft, fluid appearance of the facade will stand out while still respecting the architectural language of the surrounding context, and the Fashion District at large.

By employing curved brickwork, sculptural layering, and perforated patterns, the facade will evoke the organic drape of fabric, softening the building's presence within the cityscape. This design approach does not merely serve an aesthetic purpose; it also enhances the relationship between the building and its surroundings. The undulating surfaces and intricate brick detailing will create an engaging dialogue with neighboring structures, offering a contemporary reinterpretation of Art Deco's ornamental richness.

Moreover, the contrast between softness and rigidity will emphasise the uniqueness of the building, making it a visual landmark while maintaining harmony with its urban setting. The interplay of shadow and light on the curved surfaces will further enhance this effect, ensuring that the facade remains dynamic and responsive to its environment. Through this approach, the building will not only embrace the elegance of haute couture wrapping but also redefine the way architectural materials can convey movement, lightness, and sophistication within a structured cityscape.

B. FOLDING

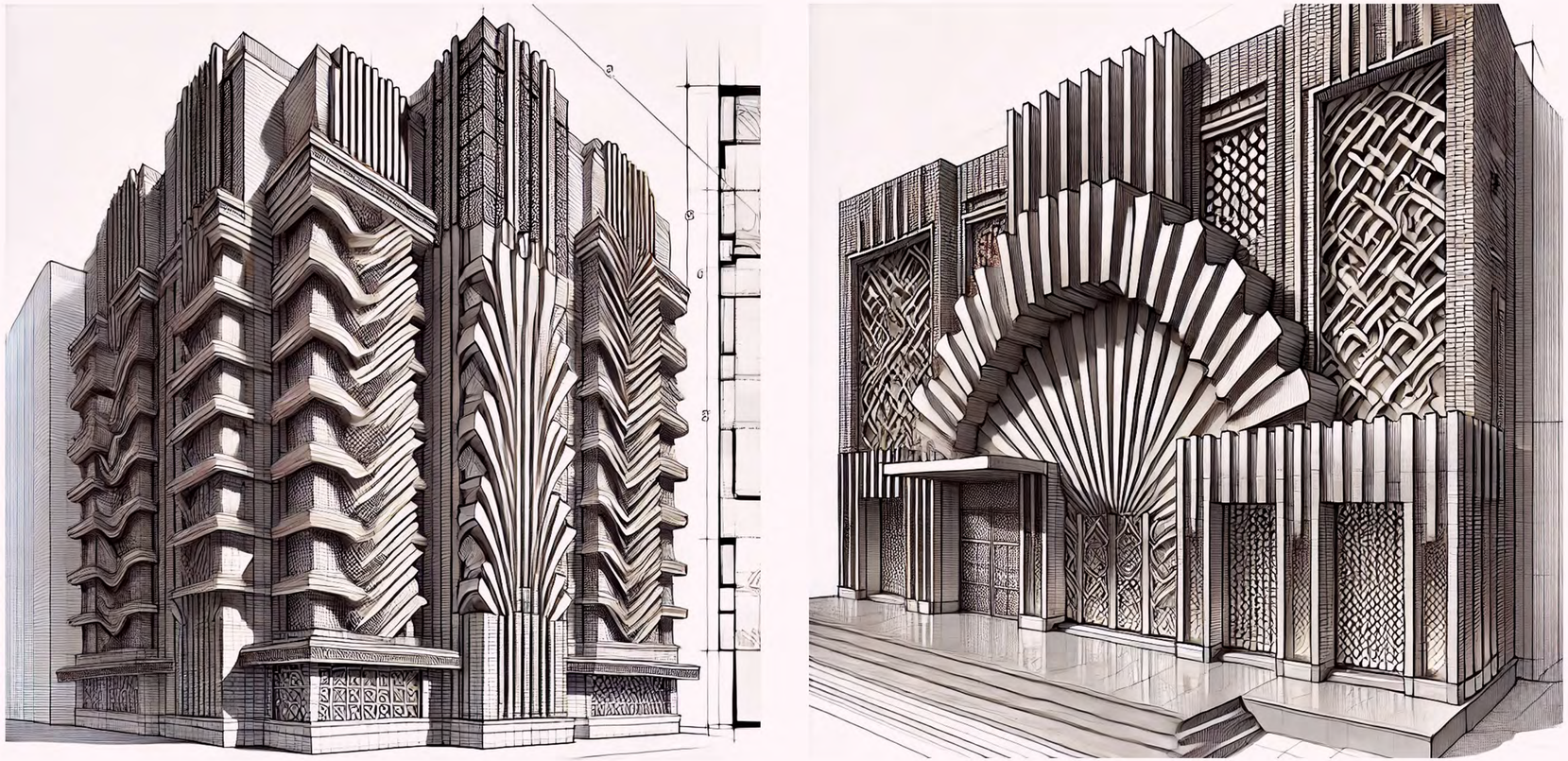


Image 112. Folding - Haute Couture technique employed in the design of facade systems. (Authors own).



By incorporating vertical or horizontal folds into the building's facade, The New Fashion Kapitol introduces a rhythmic pattern reminiscent of pleated or folded fabric, adding dimension and visual complexity. This will be realised through stepped or recessed brickwork, fluted columns, and sculpted reliefs that break the monotony of flat surfaces while maintaining the geometric sophistication characteristic of the existing Art Deco design.

The play of light across these folded surfaces can further enhance the illusion of movement, much like the way light dances across pleated fabric in haute couture fashion. Additionally, the technique of folding in the building will be used to improve functionality—providing shading elements, defining entryways, and even integrating ventilation through strategically placed gaps in the folds. By drawing inspiration from fashion's mastery of fabric manipulation, the Art Deco facade is re-imagined as a sculptural, layered composition that harmonises ornamentation with performance, creating a truly dynamic and expressive architectural statement.

Image 113. Folding - Haute Couture technique employed in the design of facade systems. (Authors own).

C. TRANSFORMATION

Drawing from the transformative techniques used in haute couture, the building mirrors the fashion industry's ability to reinvent garments for different settings, offering adaptable spaces that shift and evolve in purpose. Exhibition areas can seamlessly transition into event spaces, retail zones can morph to accommodate seasonal markets, and the public square is designed to be reconfigured for performances, pop-up shops, or community gatherings, much like how a designer adjusts a piece for various contexts.

This philosophy of transformation is deeply embedded in the architectural design, with facades incorporating adjustable panels and shading devices. These elements create a dynamic, ever-changing exterior that responds to environmental shifts like sunlight and weather, much as a garment may alter in appearance with different styling or accessories. Internally, the use of partition walls and movable screens allows tenants to modify the space, enabling a flexible layout that reflects the fluidity of haute couture design—where each element can be personalised, tailored, and transformed.

This adaptive framework not only provides functional versatility but also emphasises transformation as a key experience. It engages both users and visitors, reinforcing the idea of change and fluidity as central to the building's identity. Much like fashion's ability to adapt and reimagine itself, the architecture creates a dynamic and ever-evolving environment where the boundaries between space, function, and experience are constantly redefined.

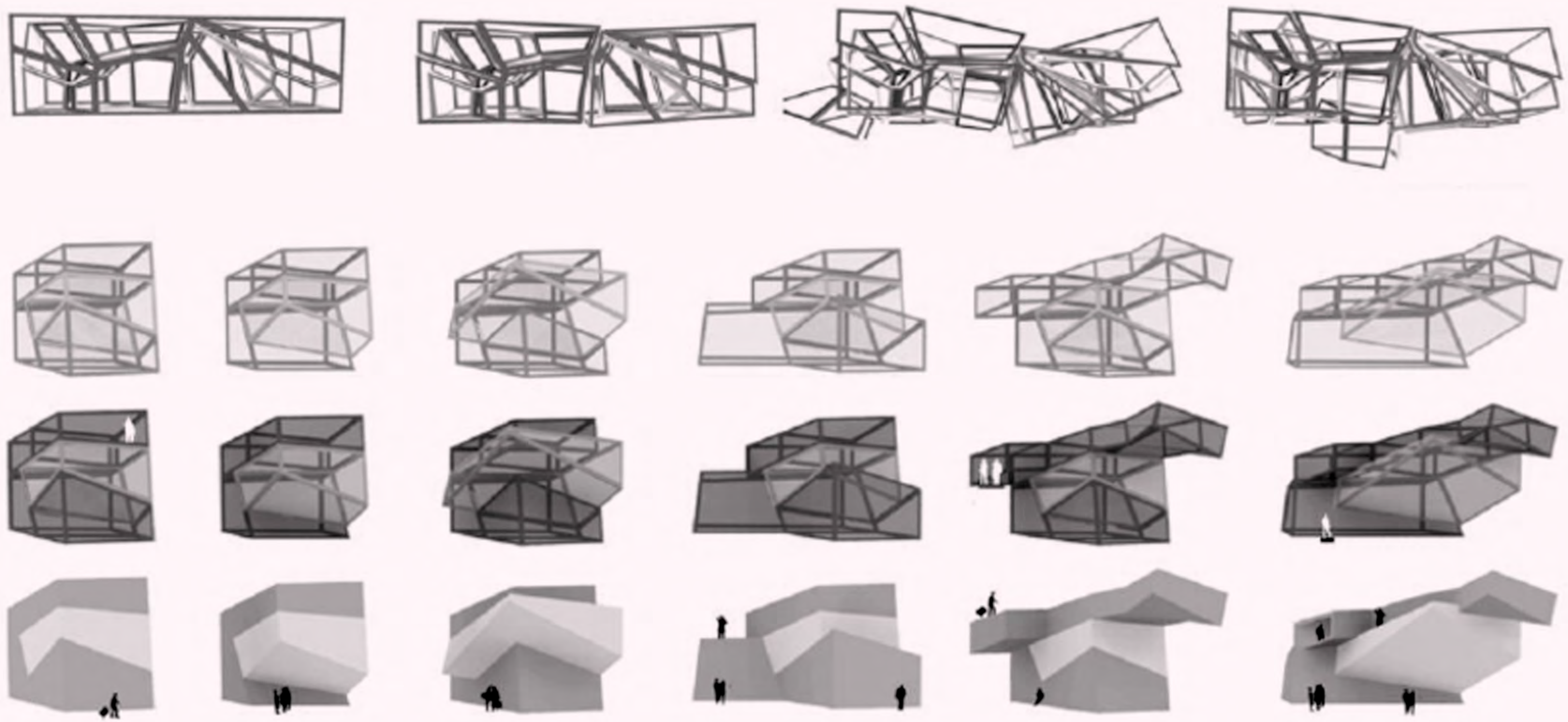


Image 114. Transformation - Progressive transformation of structure. (Source: Jones, Solman and Zavoleas. 2014).

6.3 NEW BUILDING DESIGN ELEMENTS AND PRINCIPLES

1. INTEGRATION OF FASHION DESIGN AND ARCHITECTURE

Principle:
The new design merges haute couture techniques such as into the architecture. These fashion principles are applied to the building's facades and spatial configuration to create a visually dynamic and fluid form.

Application:
The building's exterior incorporates layered and perforated brick walls emulating fabric drapery, while pleating is expressed through vertical elements on the facade, creating rhythm and texture. This not only reinforces the relationship between fashion and architecture but also ensures the building is visually captivating from every angle.

2. ADAPTIVE REUSE OF ADJACENT BUILDINGS

Principle:
In line with urban regeneration goals, the derelict buildings adjacent to the site are incorporated into the design through adaptive reuse, preserving their historical significance while revitalising them for modern use.

Application:
These existing structures are re-purposed into fashion ateliers, design studios, and lettable office spaces, blending the old with the new. The preservation of key architectural features ensures that the district retains its historical character while contributing to the overall urban revitalisation. This approach aligns with sustainable development principles, minimising new construction while maximising the use of existing resources.

3. SUSTAINABILITY AND GREEN INFRASTRUCTURE

Principle:
Sustainability is a core element of the design, with green infrastructure integrated into both the building and the surrounding public spaces to promote environmental resilience.

Application:
The roof of the building is designed as a green roof, contributing to stormwater management and improving thermal insulation. In addition, passive solar strategies are employed, with large north-facing windows providing natural daylighting and passive ventilation. The underground museum benefits from geothermal temperature regulation due to its subterranean positioning.

4. PUBLIC TRANSPORTATION, INTEGRATION AND ACCESSIBILITY

Principle:
Ensuring ease of access and movement for all users is essential for creating an inclusive and functional space.

Application:
The design integrates seamlessly with the surrounding public transportation network, with pedestrian-friendly entrances and connections to nearby transit nodes. Ramps, elevators, and wide pathways ensure full accessibility, making the building and public square welcoming for all visitors.

5. URBAN CONNECTIVITY AND STREET EDGE ACTIVATION

Principle:
The building engages with its urban context by activating the street edge and encouraging interaction between the interior and exterior spaces.

Application:
The north-facing public square opens up toward Pritchard Street, creating a welcoming urban plaza that draws people into the space. The building wraps around the square, with retail and exhibition spaces facing the street, enhancing the site's street presence and encouraging foot traffic.

6. VERTICAL FASHION MARKET

Principle:
A vertical fashion market that connects multiple floors of the building serves as both a functional and symbolic representation of the fashion industry.

Application:
This multi-level market provides space for designers, fabric sellers, and artisans to display their work. Each level of the market offers different services, from fabric recycling facilities to ateliers and design workshops, ensuring that the market caters to the full spectrum of the fashion design process.

7. CENTRAL LANDMARK FEATURE

Principle:
The new building acts as a visual and spatial anchor for the entire site.

Application:
Designed as a vertical tower and rising from the building's core, this new building creates a striking silhouette. It serves as a beacon for the site and a symbol of the fashion industry's forward-thinking nature. The tower's facade incorporates both transparent and opaque materials, creating a dynamic play of light and shadow throughout the day.

8. AESTHETIC HARMONY AND MATERIALITY

Principle:
The selection of materials and overall aesthetic aims to balance modern elegance with the historical context of the Fashion District.

Application:
The building's exterior reflects both the high-end nature of fashion design and the durable, grounded presence of architecture. The interior spaces create a sophisticated environment that speaks to both industries.

In summary, this new concept leverages fashion and architectural principles to create a landmark that both reflects and enhances the Fashion District's cultural and urban fabric. By merging functionality, aesthetics, and sustainability, the design offers a dynamic, multifaceted experience for its users.



6.4 THE PROPOSED DEVELOPMENT

"Every building, like every garment has its personal state of being.
And that is something powerful to play with"
~ Iris Van Herpen

The New Fashion Kapitol proposed development re-imagines Johannesburg's Fashion District as a dynamic hub where fashion, culture, and architecture converge. Positioned within the district's historic heart, this project integrates a fashion institute, archive, commerce center, and public spaces into a cohesive landmark that celebrates both local and international fashion innovation.

Honoring the precinct's existing Art Deco buildings and architectural heritage, the design incorporates these structures into the new scheme, preserving their original form and structural core while breathing new life into their spaces. Through the haute couture principles of wrapping, folding, and transformation, the development emphasises the intricate relationship between fashion and architecture. This approach fosters a unique environment that supports creativity, cultural exchange, and urban renewal, reinforcing Johannesburg's reputation as a leader in African fashion and design.


Fashion Kapitol



SITE INFORMATION AND PERMISSIBLE DEVELOPMENT

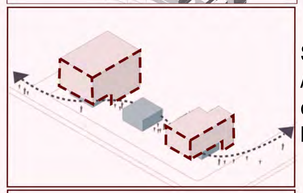
PROPOSED DEVELOPMENT - THE NEW FASHION KAPITOL, The Craetive Nexus

Mixed use: social and institutional infrastructure, commerce, retail and education.

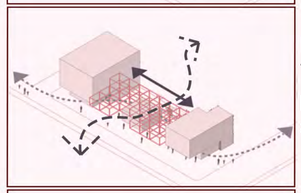
1. PROPERTY DESCRIPTION		
TOWNSHIP	Johannesburg Fashion District	
ERVEN	572, 573, 577, 578, 583 and 4600	
SITE AREA	5105m²	
2. ZONING INFORMATION		
JHB TOWN PLANNING SCHEME (2018)	Business 01 | Zoning CZ1	
AMMENDMENT SCHEME Nº.	N/A	
3. DEVELOPMENT CONTROL MEASURES		
CONTROL	PERMISSIBLE	PROPOSED
Height Zone	C	Complies
Height of Building	8 storeys	Complies
Floor Area Ratio	4.0	Complies
Building Lines	0m	Complies
Nº. of Dwelling Units on the ERVEN	1 dwelling unit per 200m²	n/a
Coverage Development Requirements	100%	60%
4. AREA SCHEDULE FOR BUILDING CONTROL (Total int. area)		
Basement -1	2,600m²	
Ground Floor Area	2,607m²	
First Floor Area	2,607m²	
Second Floor Area	2,607m²	
Third Floor Area	825m²	
Fourth Floor Area	825m²	
Fifth Floor Area	825m²	
Sixth Floor Area	825m²	
Seventh Floor Area	825m²	
TOTAL AREA	14,546m²	



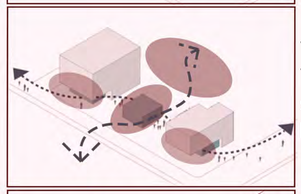
SITE CONSTRAINTS
The urban form, qualities and land use of the New Fashion Kapitol should extend outwards to reinforce itself as the Fashion Districts cultural and monumental boulevard. The form and character of the facades North and South on the site are thoughtfully considered.



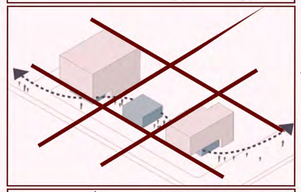
SEAMLESS AND CONTINUOUS PERIPHERY
A continuous perimeter without corners softens the building and articulates it as a seamless extension of its context on either side, while being part of a continuous whole. It differentiates and elevates the building from the urban context.



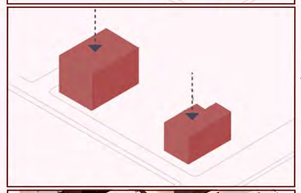
PRESENCE ON THE NORTH AND SOUTH TERRACES
The proposal suggests a pavilion-like structure at the centre of the intervention, establishing a modest presence on the cultural square with the public plaza forecourt. This creates visual and spatial interest along the North and South Facades.



THE CITY AND ITS PUBLIC SPACES
The proposal extends the city's public square within itself, creating a vertical market that spans two stories. This vertical market aims to seamlessly integrate formal and informal street trade that has become a defining character of the Fashion District.



PROGRAMMING AND PHASING
The project suggests a straightforward division of the program. Phase 01 involves the reuse, recycling and transformation of the existing buildings on the site. Phase 02 involves the inclusion of the Fashion Kapitol vertical market and the redevelopment of the existing square.



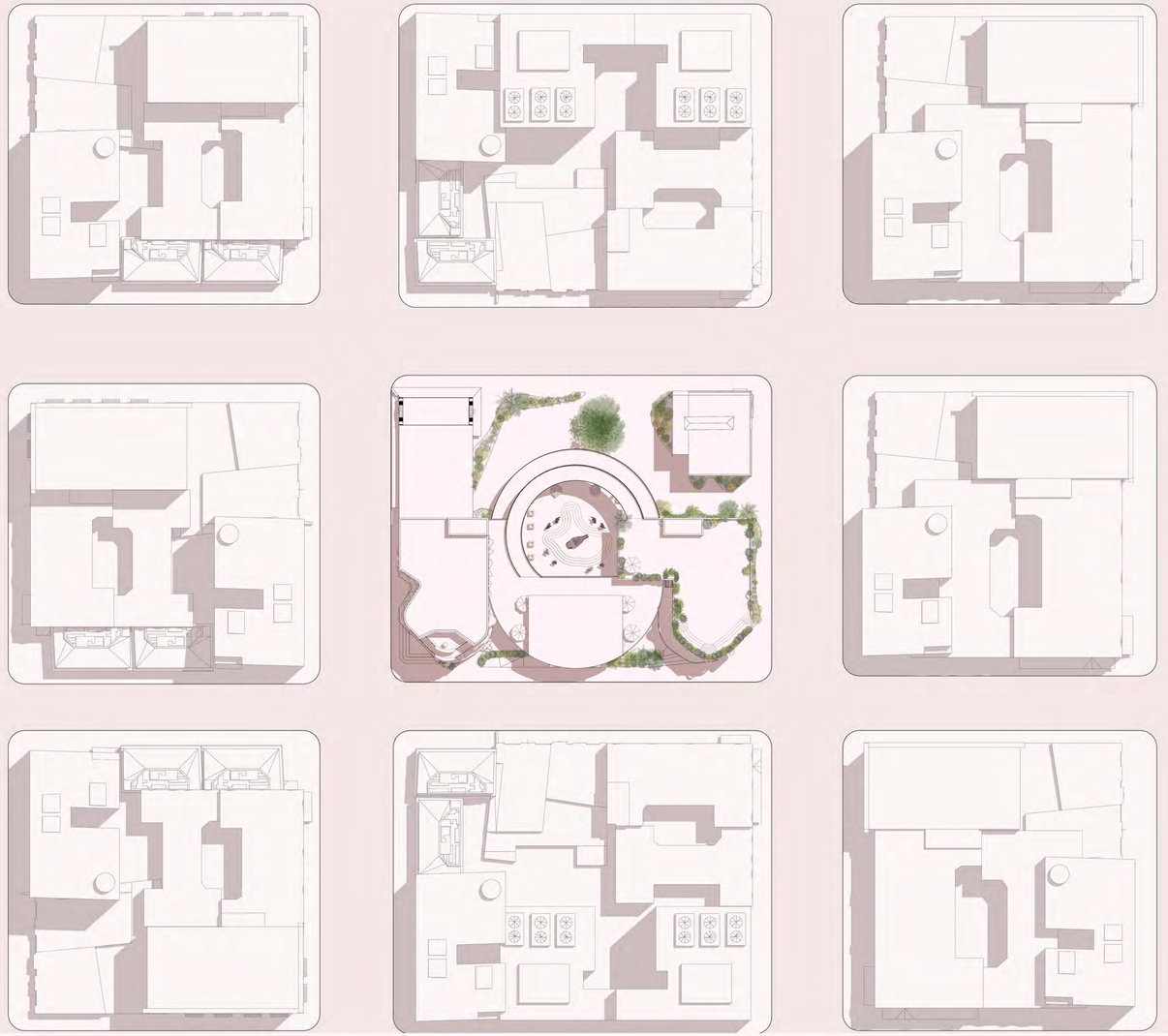
URBAN GRAIN
The New Fashion Kapitol master-plan defines a strategy for a more fine-grained street-scape and articulation of buildings in a East-South-West direction. This strategy is proposed to avoid visual impermeability into the Fashion Kapitol square.



THE NEW FASHION KAPITOL
The Creative Haven will be inclusive, a seamless merging between the city and its history in Fashion, with a diversity of pragmatic yet exciting spaces. It will be urban yet idyllic, geometric yet organic, differential yet transformative. Architecture as social infrastructure.

SITE PLAN



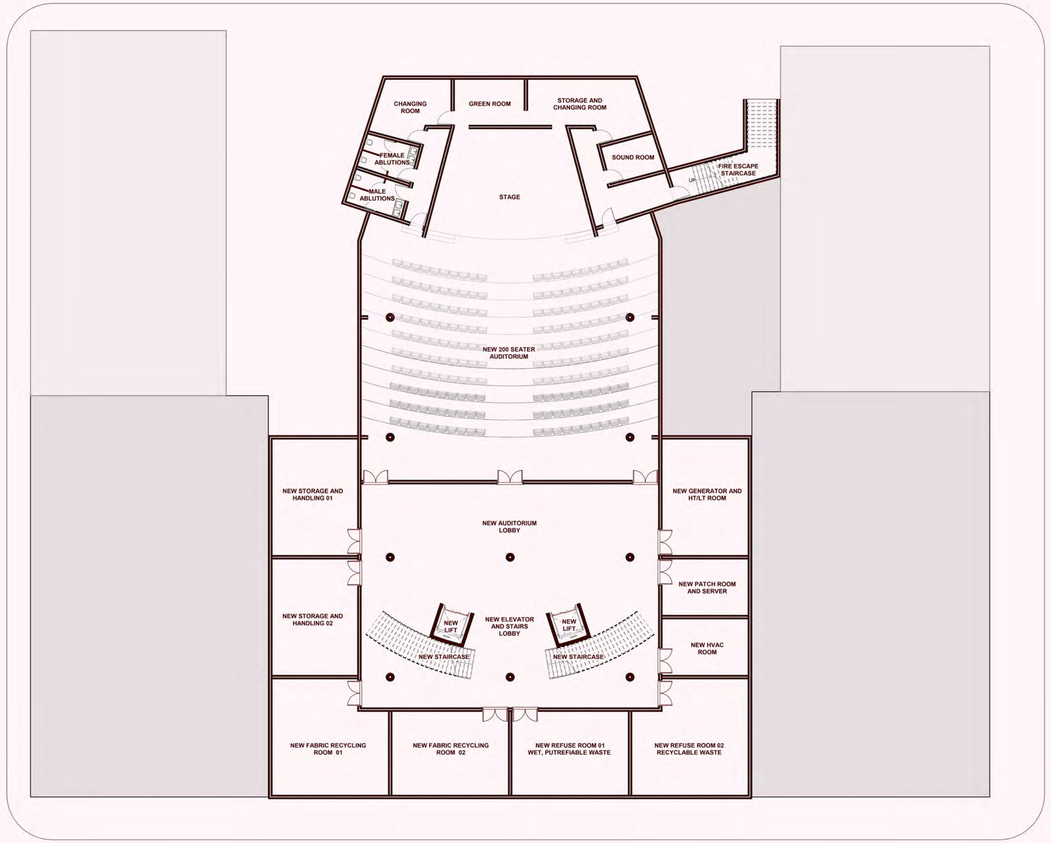


LEVEL -1 | BASEMENT FLOOR PLAN

N

Scale bar 1:100

0 5 10 15 20

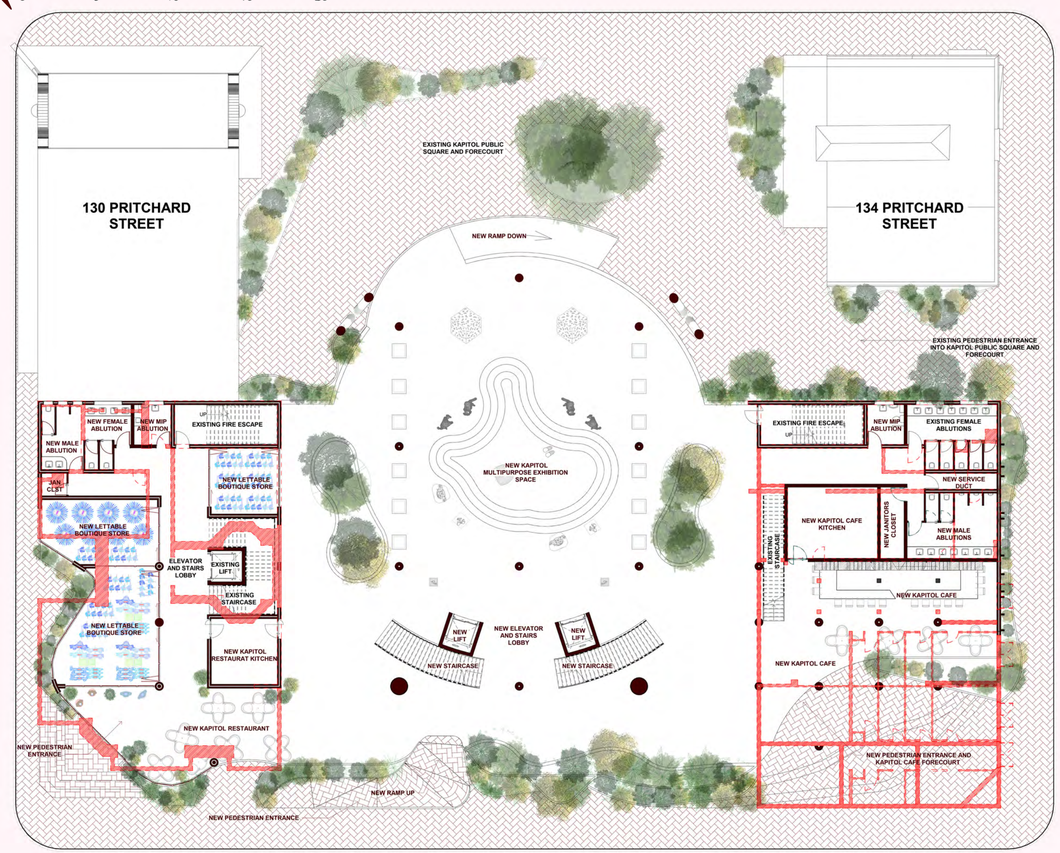


LEVEL 00 | GROUND FLOOR PLAN

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0 5 10 15 20



SOUTH ELEVATION



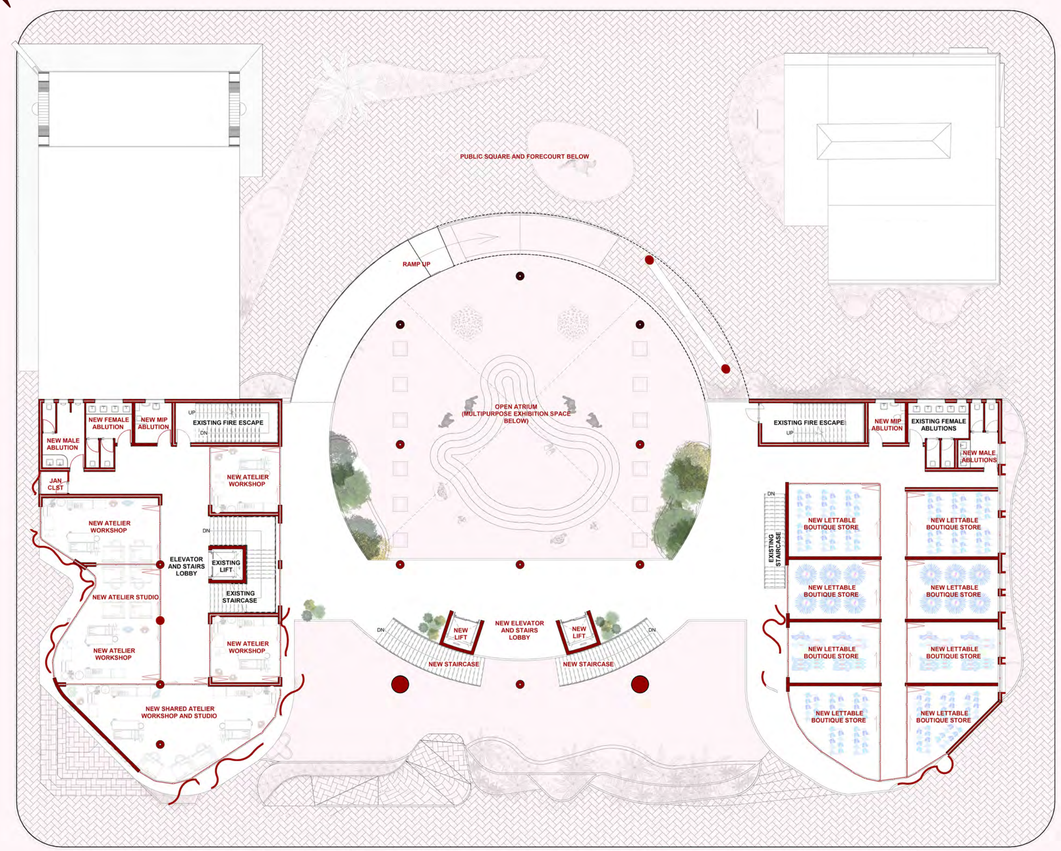
EAST ELEVATION



LEVEL 01 | FIRST FLOOR PLAN

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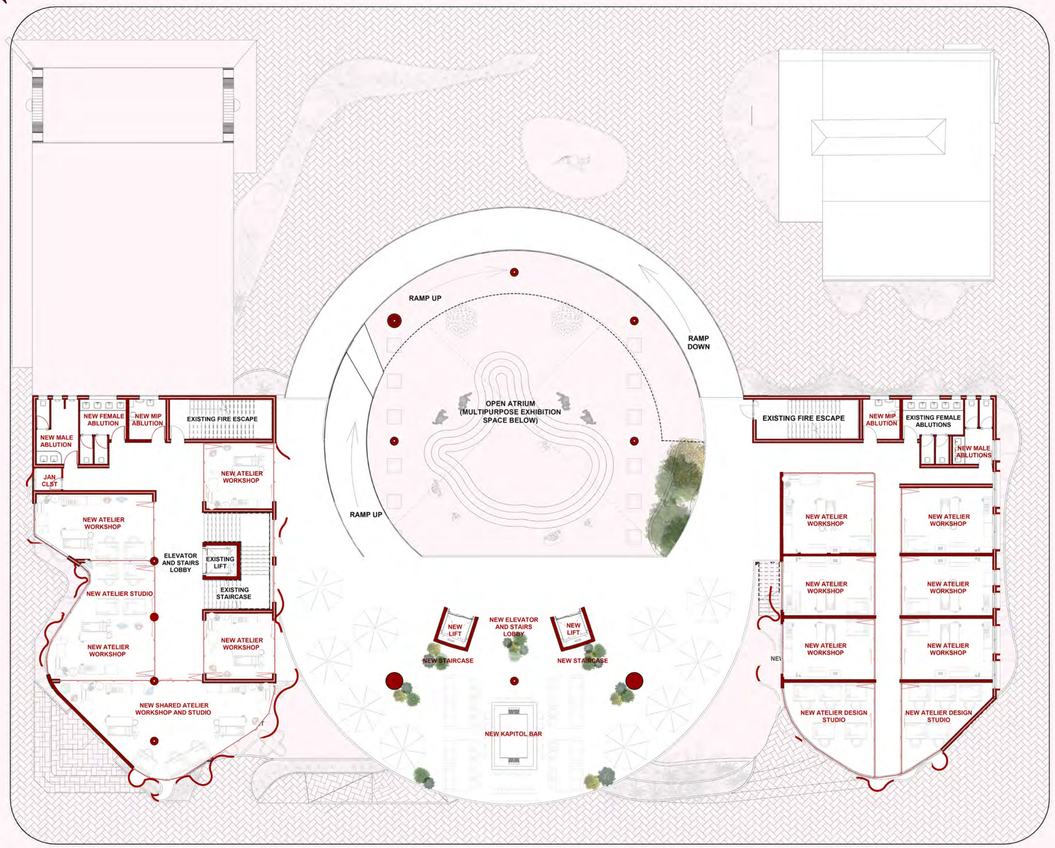
0 5 10 15 20 Scale bar 1:100



LEVEL 02 | SECOND FLOOR PLAN

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SOUTH ELEVATION









LEVEL 03 | THIRD FLOOR PLAN

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0 5 10 15 20 Scale bar 1:100



NORTH ELEVATION



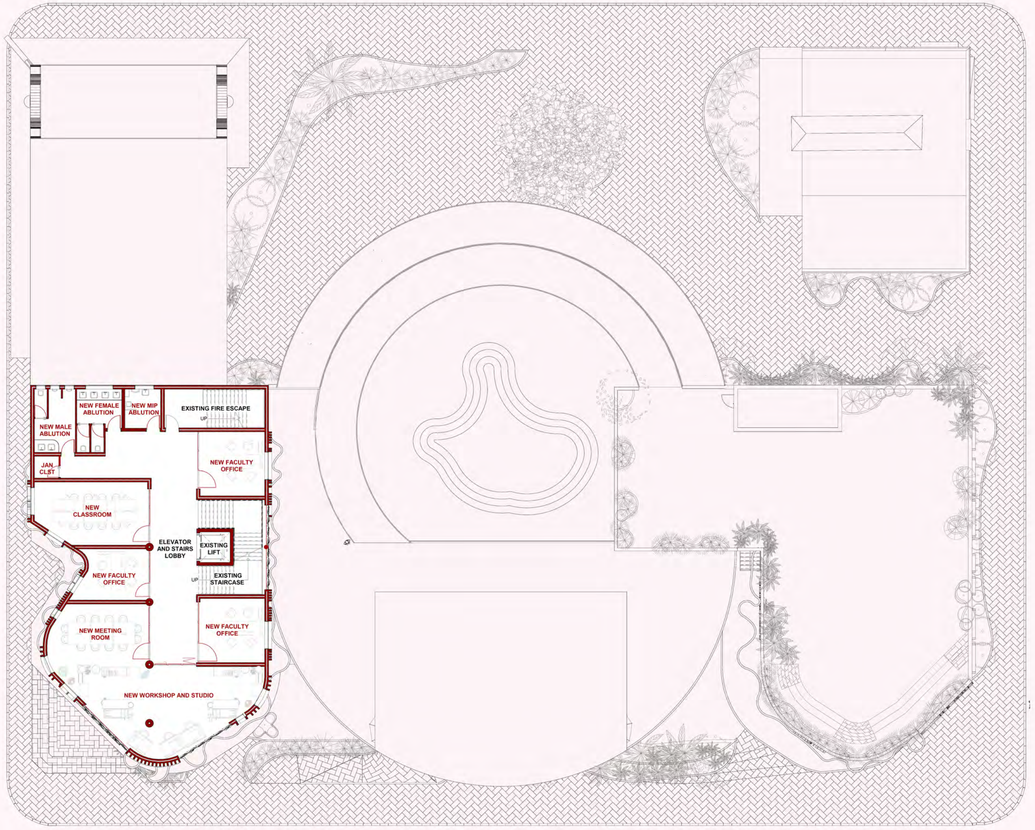




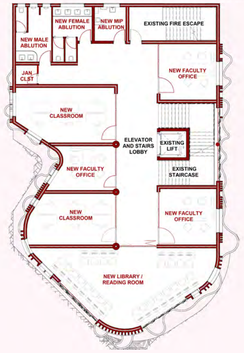
LEVEL 04 | FOURTH FLOOR PLAN

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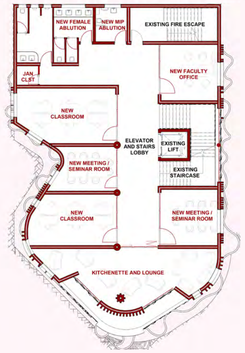
0 5 10 15 20 Scale bar 1:100



LEVEL 05 | FIFTH FLOOR PLAN



LEVEL 06 | SIXTH FLOOR PLAN



LEVEL 07 | SEVENTH FLOOR PLAN



LEVEL 08 | ROOF PLAN

N

0 5 10 15 20 Scale bar 1:100










NZISA NDANU
M.n.M
Fashion
Kapitol

6.5 CONCLUSION

The design development of the Creative Nexus has evolved through a careful consideration of both architectural and fashion principles, resulting in a refined concept that embraces functionality, aesthetic innovation, and sustainability. The integration of adaptive reuse, haute couture techniques, public engagement, and environmentally conscious design aligns the building with its intended role as a cultural and creative hub within Johannesburg's Fashion District and urban core.

The thoughtful programming of spaces, attention to accessibility, and incorporation of a vertical fashion market emphasise the building's multifaceted purpose, serving as both an educational institution and a beacon for fashion innovation. This chapter has outlined the rationale behind key design decisions, ensuring that the project is responsive to its context, future-proof in its flexibility, and ambitious in its architectural vision. The proposed development offers a unique opportunity to elevate the relationship between fashion and architecture while contributing positively to the regeneration of the city.



CHAPTER 07

TECHNICAL SYSTEMS

CHAPTER 07. TECHNICAL SYSTEMS

7.1 INTRODUCTION

The technical and construction systems of the New Fashion Kapitol play a critical role in translating the architectural vision into a tangible, functional structure. This chapter delves into the various engineering, structural, and material solutions that will ensure the building's performance, durability, and sustainability. From foundational elements to advanced construction technologies, the design prioritises energy efficiency, environmental responsibility, and ease of maintenance.

Additionally, the integration of contemporary construction methods, such as prefabrication, adaptive reuse, and innovative facade systems, aims to achieve a harmonious balance between aesthetic ambition and practical functionality. By addressing essential systems such as structural support, mechanical, electrical, and plumbing (MEP) solutions, as well as sustainable features, this chapter outlines the technical backbone that will bring the building to life.

7.2.1 TECHNICAL SYSTEMS EXPLORATION 01

The first technical system explored was that of the underground museum positioned beneath the public square. This construction system requires a carefully considered approach that balances structural integrity, accessibility, and aesthetic integration with the surrounding urban environment. This unique space, designed to showcase fashion history and innovation, sitting below the public square, provides a seamless connection between the ground-level activities and the subterranean exhibition spaces.

To achieve this, advanced excavation techniques, waterproofing systems, and reinforced concrete structures will be employed, ensuring the museum's durability and safety. Additionally, the design will incorporate raised windows that offer views from the square above, enhancing the visual and experiential connection between the museum and its urban context.

Excavation will be the first critical step, utilising modern techniques such as sheet piling and diaphragm walls to stabilise the surrounding soil and existing buildings while preventing groundwater intrusion. A reinforced concrete shell will provide the structural foundation, designed to withstand both vertical and lateral loads, ensuring long-term stability.

The museum will feature raised windows that slightly protrude above the ground-level public square, allowing natural light to filter into the subterranean space and offering visitors a glimpse into the museum from above. These windows will be constructed with high-strength glass and steel framing, designed to handle both foot traffic and environmental conditions. The design will emphasise the seamless integration of the museum into the public realm, using materials and finishes that create a dialogue between the surface plaza and the spaces below.

Waterproofing and drainage will play a vital role in maintaining the integrity of the underground structure. Advanced waterproofing membranes, drainage systems, and vapor barriers will be implemented to prevent moisture ingress, safeguarding the exhibits and ensuring visitor comfort. Careful attention will also be given to ventilation, with passive and mechanical systems ensuring the museum remains comfortable year-round.

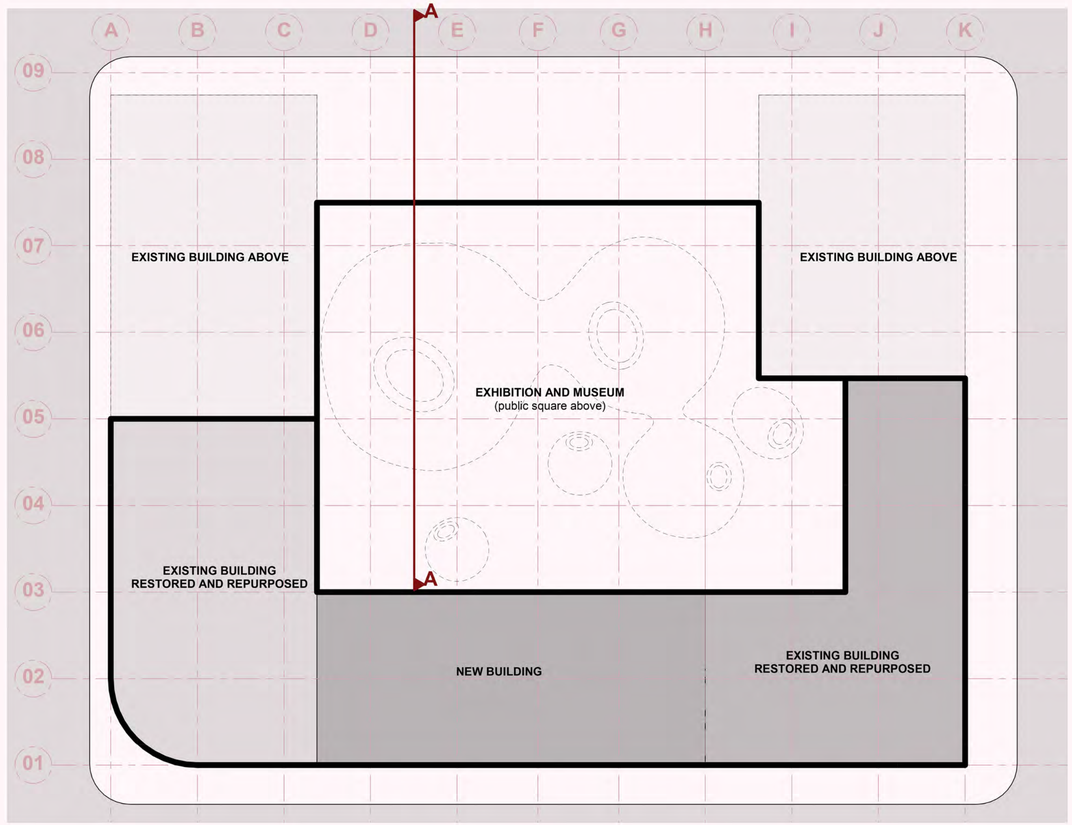


N

SITE PLAN

0M 10M 20M 30M 40M 50M

SCALE 1:500



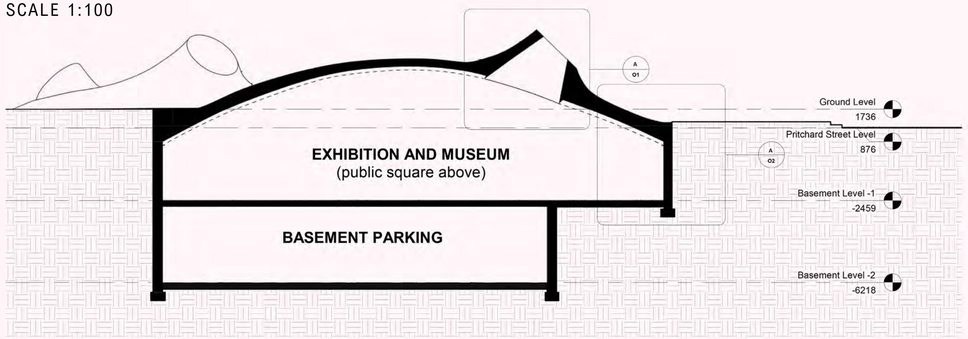
N

BASEMENT PLAN

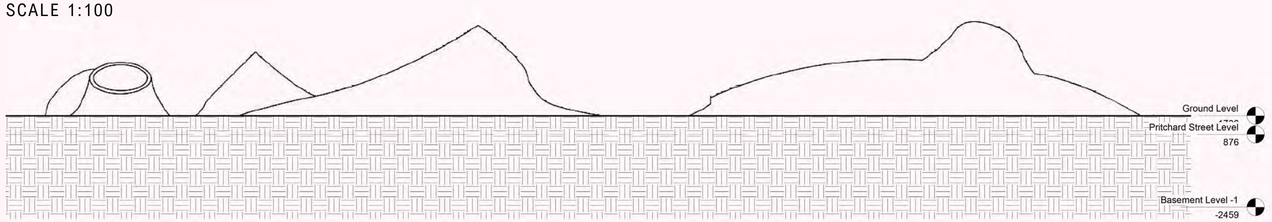
0M 10M 20M 30M 40M 50M

SCALE 1:100

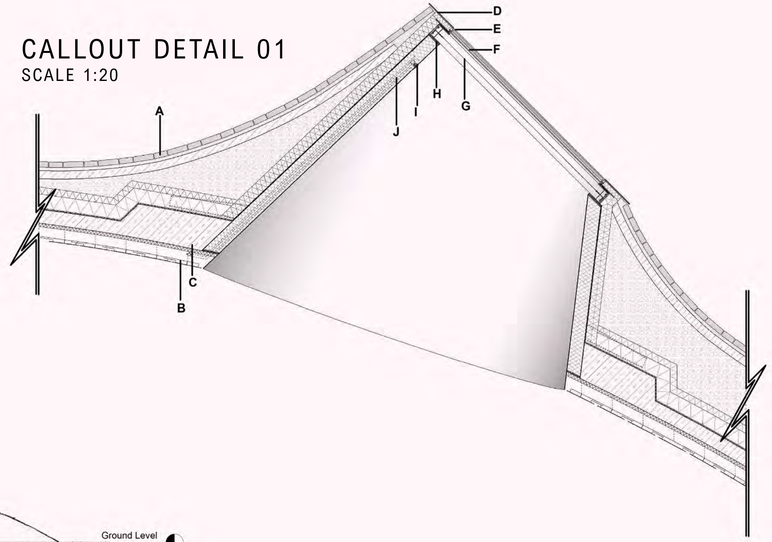
SECTION A-A
SCALE 1:100



NORTH ELEVATION
SCALE 1:100



CALLOUT DETAIL 01
SCALE 1:20



A - Landscape Paving
Concrete tile, impermeable cement based joining mortar
Screed.
Reinforced concrete slab
Glass foam filling and insulation
Polystyrene thermal insulation
Drainage sheet
3-ply bitumen sheeting

B - Suspended ceiling
Fireproof textile hoods
Technical installation space for fire sprinklers, power sensors, data and power systems
Acoustic boards

C - Reinforced concrete dome structure
Skylight support ring

D - Sand blasted stainless steel plate

E - Silicone joint

F - Burglar resistant, laminated thermal glazing

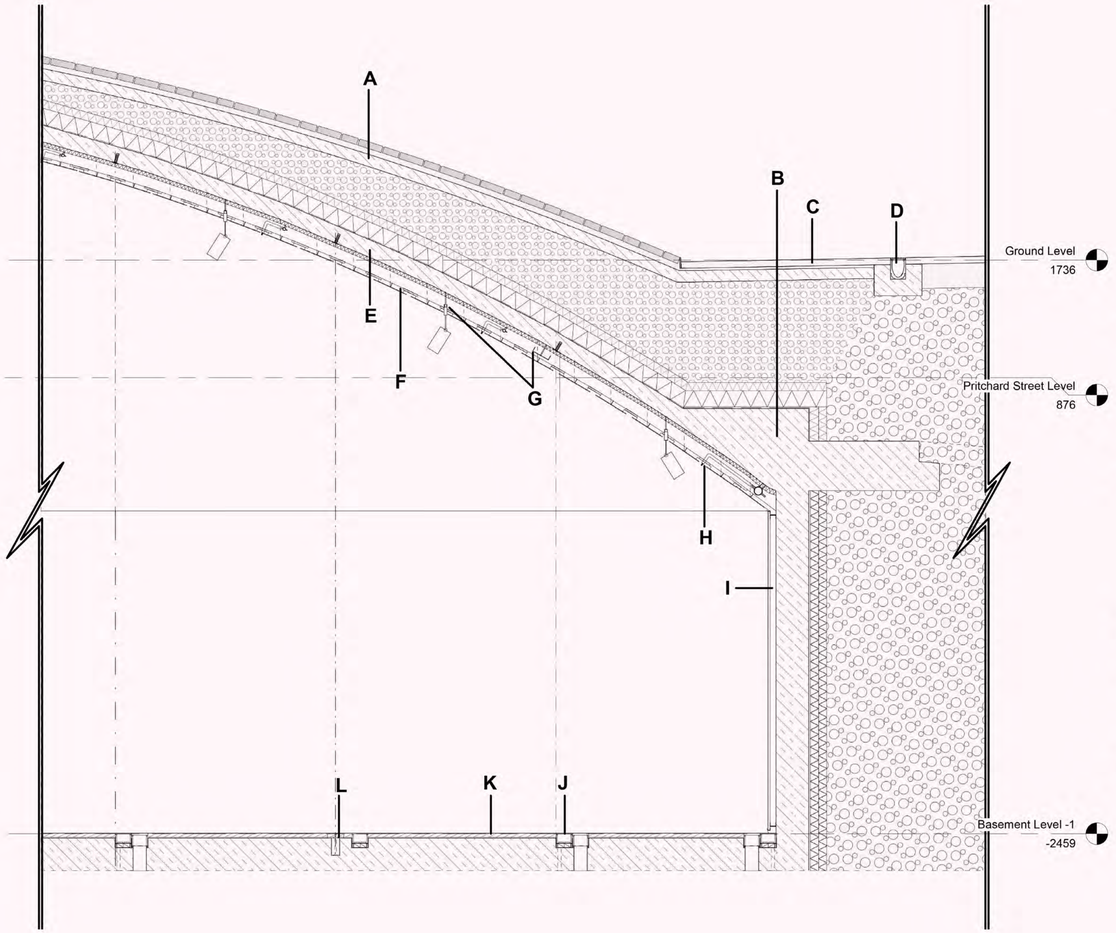
G - Blackout sun protector blinds attached to the U-steel beam

H - U-steel beam
Attachment brackets for blinds

I - Sprinkler head and fire detector sensors integrated into steel cone structures

J - Steel cone structure
Structural steel plate, u-steel beam
Fireproof insulation

CALLOUT DETAIL 02
SCALE 1:20



A - Landscape Paving
Concrete tile, impermeable cement based joining mortar
Screed.
Reinforced concrete slab
Glass foam filling and insulation
Polystyrene thermal insulation
Drainage sheet and 3-ply bitumen sheeting

B - Pre-stressed reinforced concrete beam structure enveloping each dome

C - Asphalt paving
Asphalt coating
Reinforced concrete slab
Polystyrene thermal insulation
Drainage sheet and 3-ply bitumen sheeting

D - Drainage

E - Reinforced concrete dome structure

F - Suspended ceiling
Fireproof textile hoods
Technical installation space for fire sprinklers, power sensors, data and power systems
Acoustic boards

G - Lighting tracks, power and data channels

H - Sprinkler system by grid

I - Non-load bearing wall structure
Gypsum plasterboard
Plywood
Steel frame, space for technical installations

J - Technical floor unit, including power, data, supply air

K - Wooden block flooring
Reinforced concrete slab

L - Floor attachment points for partition walls

7.2.2 TECHNICAL SYSTEMS EXPLORATION 01 _ CRITIQUES

The proposed construction system for the underground museum, while technically sound, seems to lack integration with the overall architectural language of the project. One key critique is that the museum feels somewhat detached from the rest of the scheme, both spatially and conceptually. While the use of modern construction techniques and reinforced concrete ensures the structural integrity of the underground space, these systems alone do not align with the design principles of fluidity that are central to the project's architectural vision. This disconnection creates a technical solution that feels isolated from the overarching narrative of fashion meeting architecture, diminishing the cohesive experience the design seeks to deliver.

Additionally, the windows on the public square—while functional in allowing light into the museum—miss an opportunity to contribute meaningfully to the space above. These windows could serve a dual purpose, integrating into the public realm in ways that engage users more actively. Instead of merely acting as windows, they could be transformed into planters, seating elements, or even platforms for performances, adding layers of interaction and creating a more dynamic relationship between the surface and the underground space. This would not only strengthen the connection between the museum and the public square but also align more closely with the design's intention of folding and transforming spaces in innovative ways.

Moreover, the current floor plans fail to communicate a clear vision of how the underground museum connects to the larger architectural program. The lack of clarity in showing how the museum relates to the

rest of the building and the overall scheme makes it difficult to grasp the holistic design approach. A stronger integration between the museum and the rest of the institute could elevate the project, allowing it to better reflect the fashion principles — wrapping, folding, and transformation — that are key to the concept. Without this coherence, the museum risks becoming an isolated element that undermines the broader narrative of the design.

Another significant critique lies in the callout details presented in the technical drawings, which depict unnecessarily complicated construction systems. While the intent may have been to showcase technical proficiency or ensure durability, the complexity of these systems introduces inefficiencies that could be avoided. Overly intricate connections and layering of materials not only add to construction costs and timelines but also pose potential issues in execution, where small misalignments could lead to larger problems in the future.

A more refined and simplified approach to the construction details could benefit the overall project. By developing a deeper understanding of the structural and material systems, the construction methods can be streamlined, reducing unnecessary complications while maintaining both form and function. This simplification doesn't mean compromising on quality or aesthetics; rather, it allows for more thoughtful and efficient solutions that better align with the project's concept of folding, layering, and fluidity.

Simplifying these systems would not only enhance the ease of construction but also allow the design to more closely reflect the core architectural and fashion principles guiding the project. A leaner, more coherent construction methodology would create a better synthesis between design intent and execution, ensuring that the building's construction aligns with its conceptual vision.

In summation, while the construction system is technically robust, it needs further refinement to align with the intended architectural language and integrate more fully into the overall scheme. The window design, in particular, requires reconsideration to activate the public square in ways that are more thoughtful and engaging, serving both the needs of the museum and the urban context.

7.2.3 TECHNICAL SYSTEMS EXPLORATION 02

In this second exploration of the construction and technical systems for the building, a more integrated and cohesive approach is taken. The focus is on aligning the construction methods with the conceptual design, ensuring that the technical systems support and enhance the architectural language rather than detract from it. The goal is to achieve an efficient, aesthetically aligned, and structurally sound building that incorporates sustainable practices while preserving the identity of the site and the adjacent structures.

1. STRUCTURAL FRAMEWORK

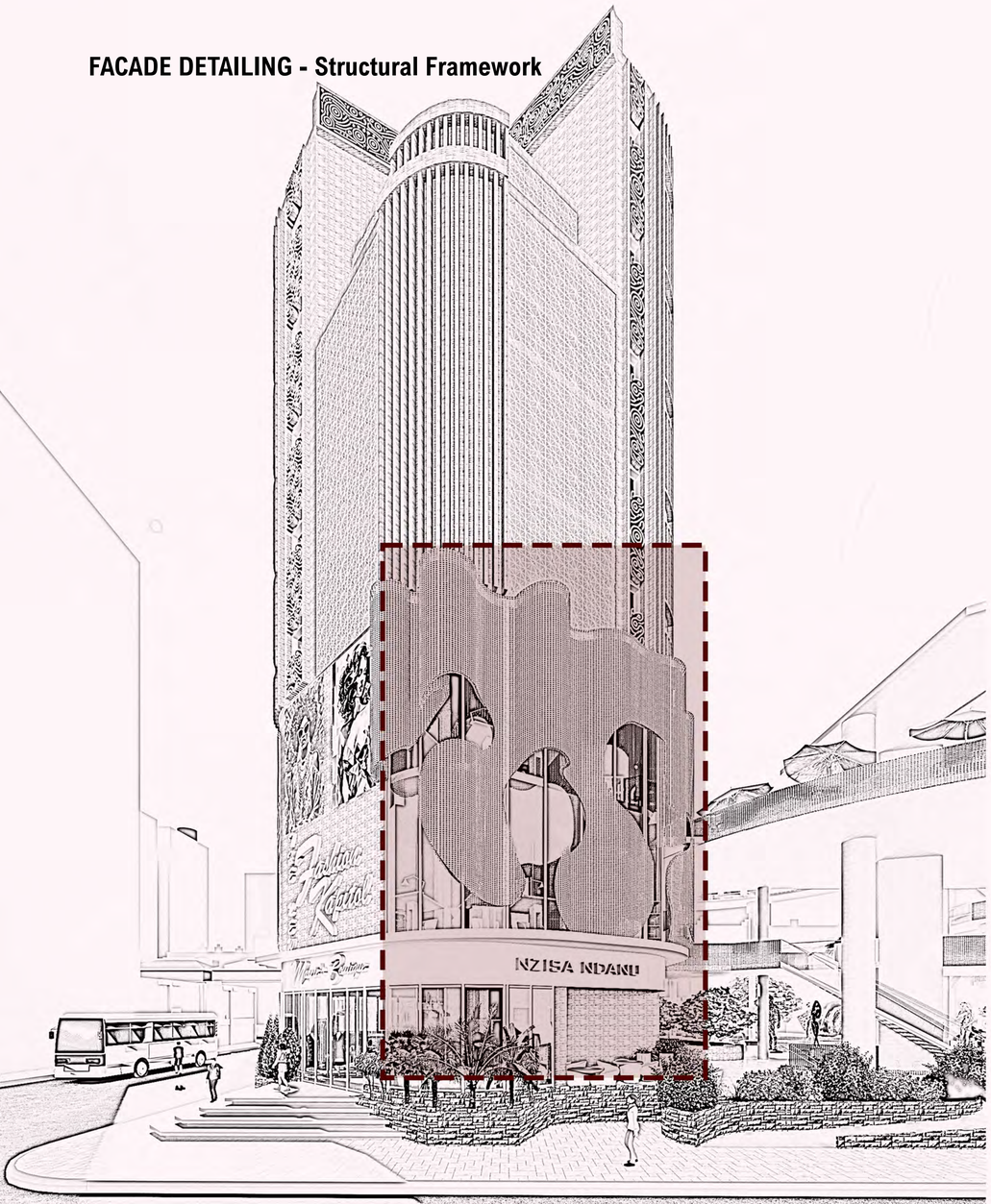
The primary structure for the new building will utilise a steel frame system. Steel's flexibility and strength make it an ideal material for the fashion-inspired architectural forms envisioned in this project. The building's dynamic geometry, combined with the concept of wrapping, folding and transformation, will benefit from the versatility of steel framing. Steel allows for expansive spans, creating large open spaces required for the fashion ateliers, public square, and vertical fashion market without relying on heavy internal supports. This is crucial for maintaining visual and spatial continuity throughout the building.

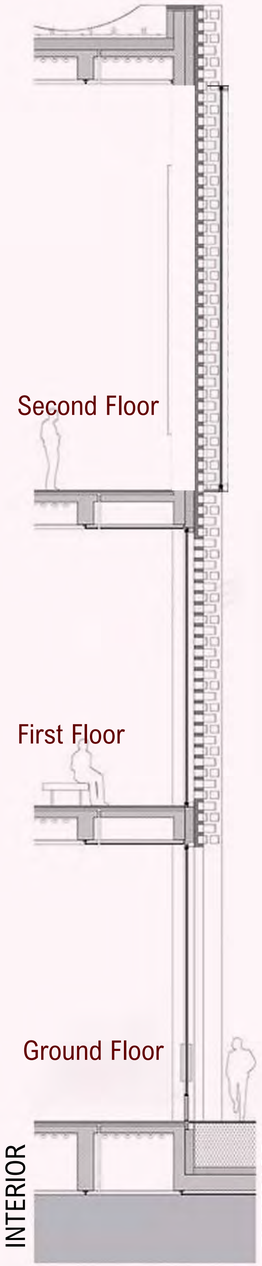
Why Steel Frame?
Steel is chosen because of its ability to handle irregular shapes, its adaptability to prefabrication (speeding up construction timelines), and its high strength-to-weight ratio, which minimises the building's foundation loads.

Integration with Architectural Form.
The framing system will be used to create the "skin" of the building, reflecting the fashion principles, reinforcing the project's conceptual intent through structure.

Preservation of Adjacent Buildings.
The two adjacent buildings that will be reused as part of the adaptive reuse strategy will maintain their original structural framework and core services. This ensures that the historical integrity of the buildings is preserved while retrofitting them with modern enhancements. The existing cores, including staircases and elevator shafts, will be kept in place, ensuring a seamless integration with the new development.

FACADE DETAILING - Structural Framework





PERIMETER SECTION THROUGH FACADE

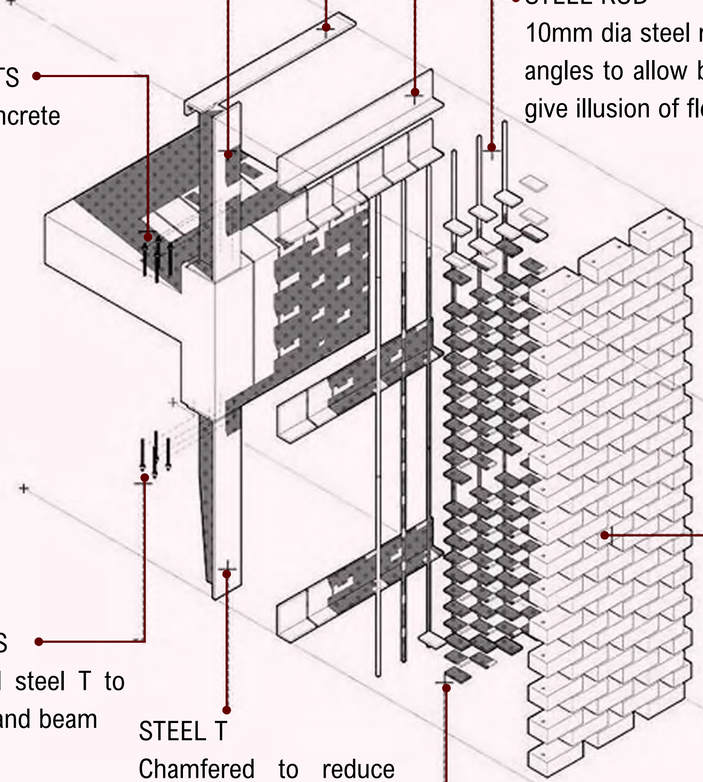
STEEL T
Acts as curtain wall mullion

STEEL T
Welded to 8mm steel base plate and bolted to concrete downstand beam.
Welded to curtain wall mullion.
Supports steel angle to hold the brick skin

UNEQUAL STEEL ANGLE
Steel angle welded to steel T to support the load from the brick skin while providing horizontal bracing for the structural system

STEEL ROD
10mm dia steel rods welded to unequal steel angles to allow bricks to slot into. Hidden to give illusion of floating facade.

EXPANSION BOLTS
Bolt steel T to concrete downstand beam



TERRACOTTA SATIN FACE BRICK

CHEMICAL BOLTS
To fix chamfered steel T to concrete downstand beam

STEEL T
Chamfered to reduce the weight of the main structural component in bearing the load of the suspended brick skin

MORTAR JOINT
Joins perforated bricks. Slightly recessed to allow moisture protection

EXPLODED AXONOMETRIC DETAIL OF FACADE

2. BUILDING ENVELOPES AND FACADES

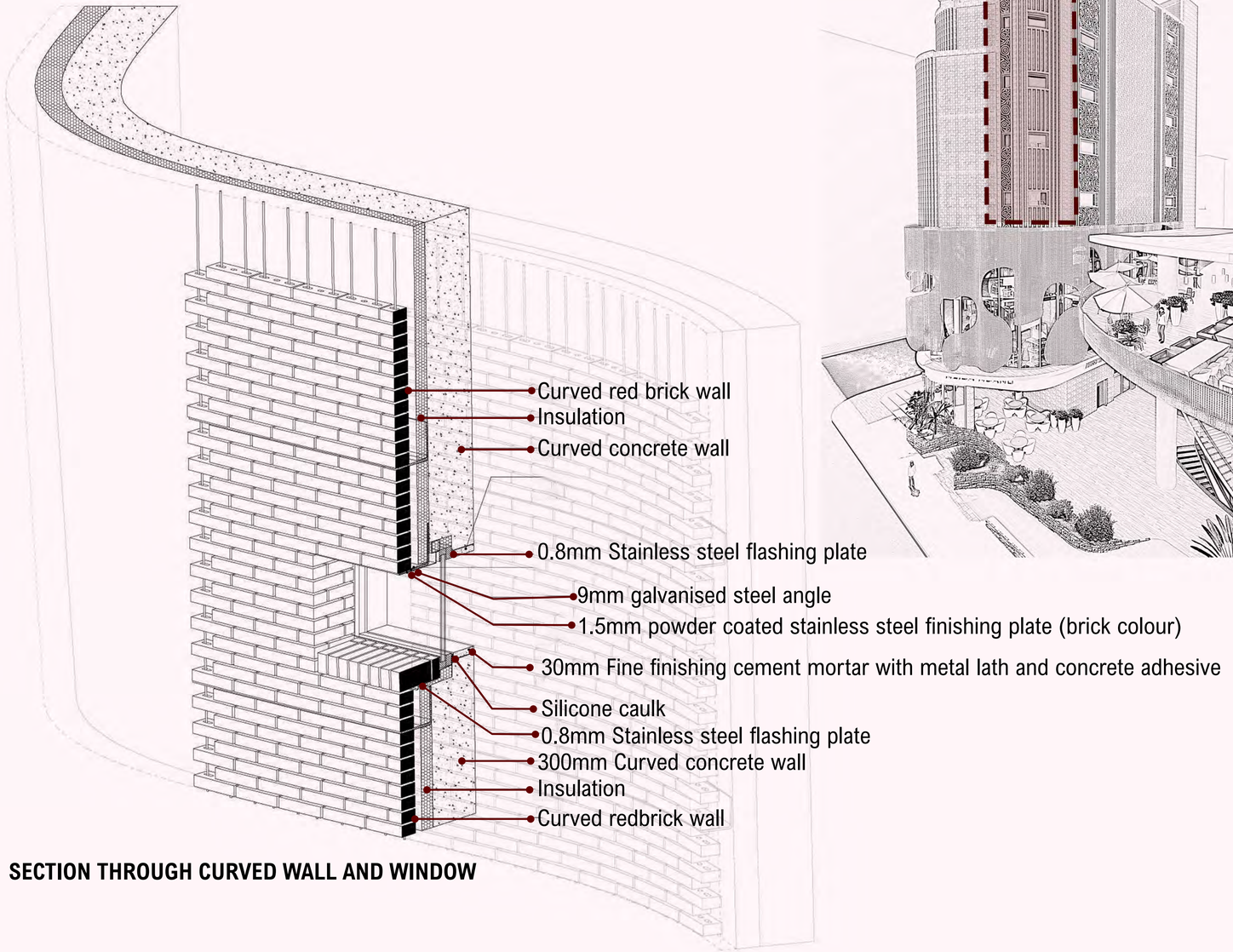
The building envelope will consist of a double-skin facade system. This facade will have an outer layer of perforated brick walls, inspired by haute couture wrapping and folding principles, and an inner layer of high-performance glazing for thermal and acoustic insulation.

Perforated Metal Panels.
These perforations will be strategically placed to provide shading and create a play of light and shadow across the building's exterior. The perforations will reference patterns found in fabrics, allowing the facade to "breathe" and contribute to natural ventilation.

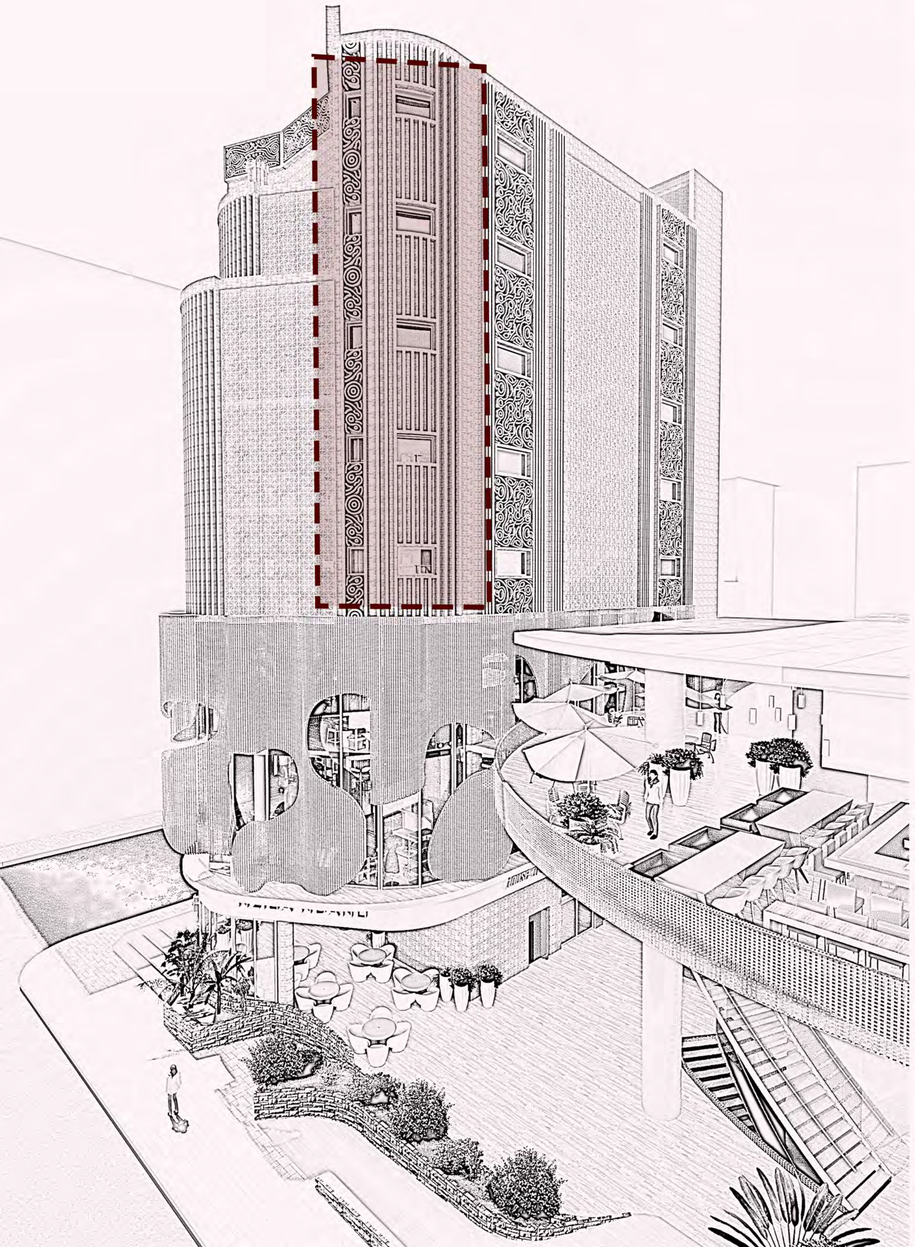
Inner Glass Skin.
The inner glazing will be energy-efficient, utilising low-emissivity (Low-E) coatings to control heat transfer while maximising daylighting.

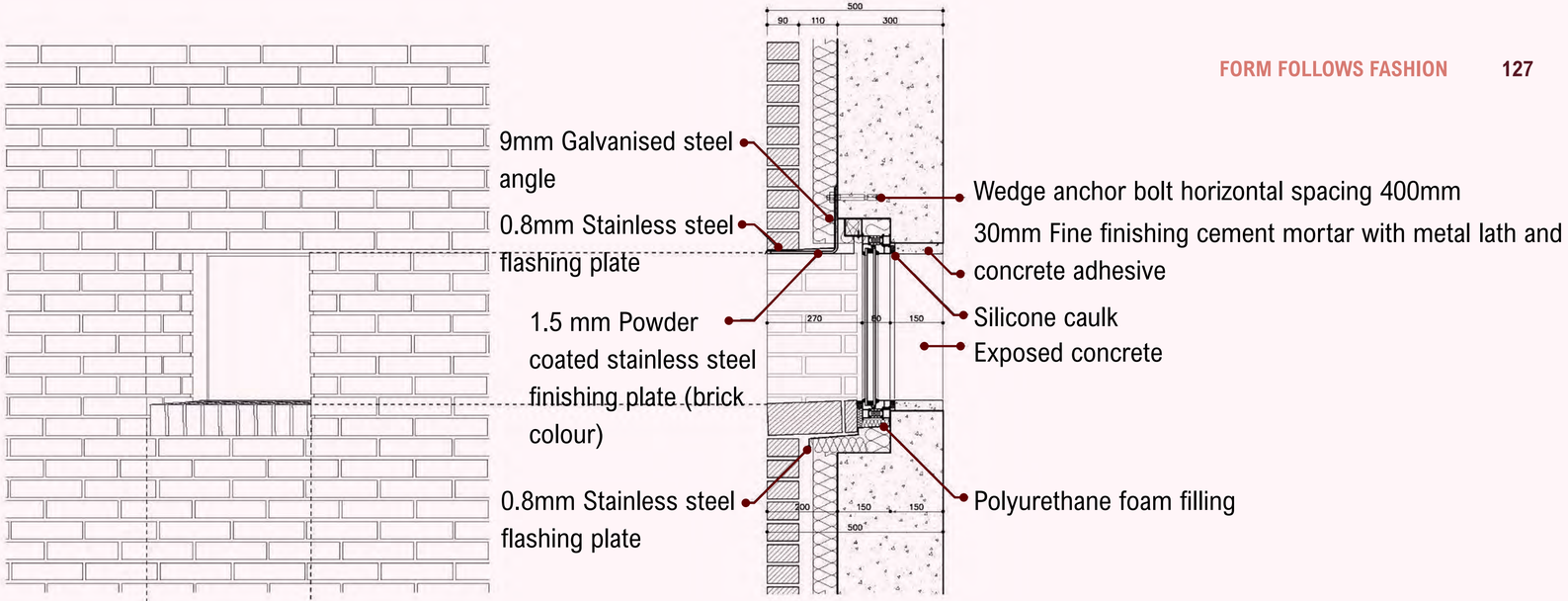
The combination of these two layers allows for passive solar control, helping the building remain energy-efficient and reducing reliance on artificial climate control.

Thermal Insulation and Ventilation
Between the two facade layers, the air cavity will act as a thermal buffer, helping to maintain the building's internal temperature. This cavity will also facilitate natural ventilation by allowing air to circulate through the perforations in the outer skin.

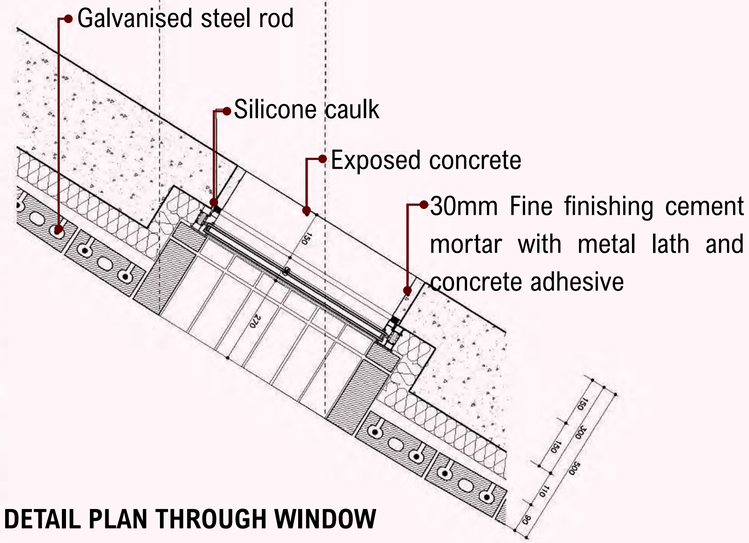


SECTION THROUGH CURVED WALL AND WINDOW

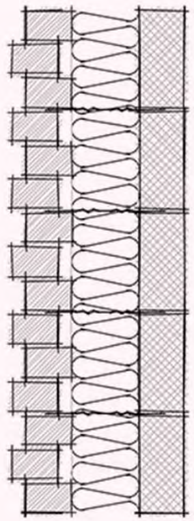




DETAIL SECTION THROUGH WINDOW



DETAIL PLAN THROUGH WINDOW



The Art Deco brick building patterns are created using a combination of protruding soldier courses and stretcher bonds

SKETCH OF PROTRUDING BRICKWORK ALONG FACADE

3. SUSTAINABLE SYSTEMS AND GREEN INFRASTRUCTURE

The building's construction will prioritise sustainable materials and systems to align with the broader goal of creating a fashion district focused on sustainability and urban regeneration.

Recycled Materials.
Where possible, recycled steel, concrete, and glass will be incorporated into the construction. Additionally, fabric recycling facilities within the building will repurpose waste textiles into insulation or acoustic panels, reducing the building's environmental footprint.

Energy Generation.
Photovoltaic panels will be integrated into the building's roof and facade to generate renewable energy. This will reduce the building's reliance on the grid and align with sustainability goals.

Green Roof.
The building will feature green roofing on several levels, including the roof of the public square. These areas will serve as recreational spaces, stormwater management systems, and natural insulators, reducing the building's energy load.

4. INTERIOR SYSTEMS AND FINISHES

The interior of the building will continue the theme of folding and transformation, using a combination of high-end materials to create luxurious and visually cohesive spaces.

High-End Finishes.
Luxurious materials such as polished stone, natural wood, and fabric-inspired wall coverings will be used in public areas, creating a tactile and sophisticated environment. For the fashion ateliers and vertical fashion market, more durable yet elegant materials such as exposed concrete and steel will be employed to reflect the industrial aspects of garment production.

Interior Circulation.
The circulation system will be designed to encourage movement through the various spaces, with large, open corridors that visually connect the fashion ateliers, museum, and vertical market. Ramps and elevators will provide accessibility, ensuring compliance with disability access regulations.

5. ADAPTIVE REUSE OF ADJACENT BUILDINGS

As part of the urban regeneration strategy, the two adjacent dilapidated buildings will be integrated into the scheme through adaptive reuse. The intention is to preserve the structural framework of these buildings while transforming their interiors and facades to align with the new project.

Facade Restoration.
The existing facades will be restored where possible, with new materials added to enhance insulation and aesthetic appeal. The integration of the adaptive reuse buildings will provide additional leasable office and studio spaces, contributing to the fashion district's economic revitalisation.

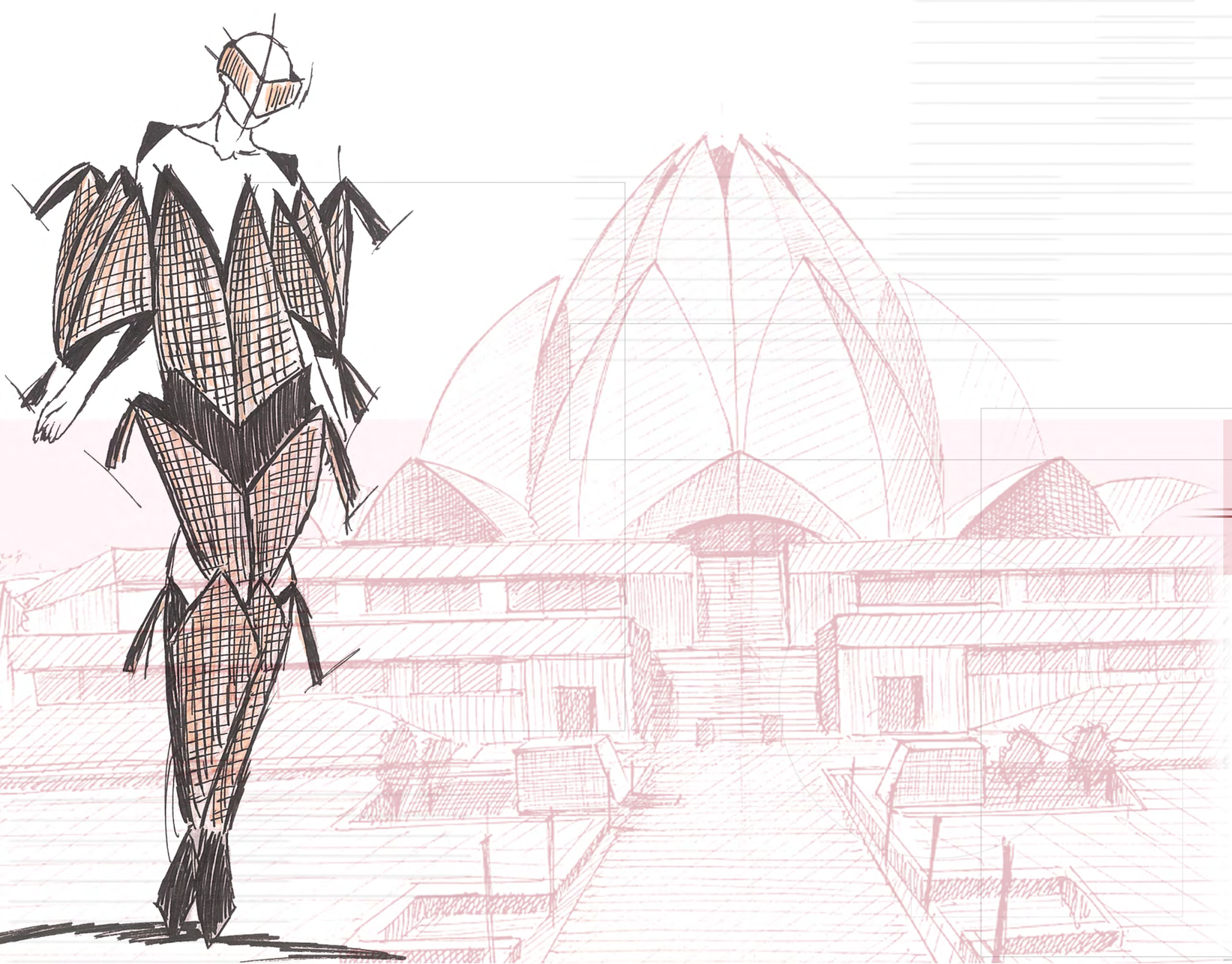
Structural Reinforcement.
These buildings will be structurally reinforced to meet modern building codes while maintaining their historical character. Their core services, such as stairwells and elevator shafts, will remain intact, allowing for a seamless blend between the old and new structures.

This second exploration of construction and technical systems emphasises the integration of sustainability, functionality, and architectural expression. The use of steel framing for flexibility, a double-skin facade for passive environmental control, and the adaptive reuse of adjacent buildings all contribute to creating a building that not only meets the needs of the fashion district but also enhances the urban landscape. By maintaining the original structure and core services of the adjacent buildings, the project ensures a respectful nod to the area's history while pushing forward with innovative, fashion-inspired architecture.

7.3 CONCLUSION

The exploration of technical and construction systems in this chapter underscores the importance of aligning structural and material choices with the conceptual design and functional requirements of the building. The integration of a steel frame system, double-skin facades, and sustainable construction methods enhances the architectural vision of merging fashion design principles with architectural expression. The adaptive reuse of adjacent buildings plays a pivotal role in urban regeneration, contributing to the overall sustainability and cultural sensitivity of the project.

Additionally, the careful design of the underground museum, with its interaction with the public square above, brings a layered approach to space utilisation and urban engagement. The critiques of earlier technical systems have led to refinements that simplify construction while retaining design integrity. This holistic approach ensures the building is not only structurally sound and energy-efficient but also a vibrant, functional part of Johannesburg's Fashion District, reflecting both fashion's fluidity and architecture's strength.



CHAPTER 08

CONCLUSION

CHAPTER 08. CONCLUSION

8.1 INTRODUCTION

The broad aim of this research report was to generate a better understanding and reflection of the possible integration of fashion design and architecture in the generation of a building intervention within a chosen site. A case study of the Johannesburg Fashion District has been employed as a research strategy in identifying and exploring the links and gaps in the spatial provision of fashion and architecture in the inner city of Johannesburg. From this, the study has discussed as a key purpose, the possible role of the incorporation of haute couture craft, and the use of urban design in this. The aim of this study was developed through the following objectives:

Objective 01
To analyse the similarities between fashion design and architecture, and chart their evolutionary trajectory.

Objective 02
To identify and discuss the potential limitations arising from this relationship.

Objective 03
Translate three haute couture principles into architectural design strategies, using them both tectonically and aesthetically.

Objective 04
Propose and design a fashion design institute, archive and commerce centre with a building program that benefits the occupants on different levels according to their needs, and offers upliftment, revitalisation and renewal to the Fashion District.

Inner city Urban regeneration, as discussed in previous chapters refers to the implementation of holistic frameworks that integrate the physical, social and natural environments of urban areas, contributing largely to city resillience and the envisioned future of inner cities (Zheng *et al.,* 2004). Debates on the integration of fashion design and architecture in urban regeneration practices have been associated with the compatibility of the two professions, improved quality of life and the overall satisfaction of inhabitants (Lee, 2011: Aibidin, 2016).

8.2 SUMMARY OF FINDINGS

The primary theoretical direction of this project underwent significant changes over the past nine months. Initially, the focus was on a broad analysis of the relationship between fashion and architecture. Early research provided clear evidence of a connection between the two fields. However, a deeper exploration of specific fashion principles, such as wrapping, folding and transformation, led to a more focused and intriguing interpretation. This presented a new design challenge, unlike those encountered in previous studio projects.

Through the development of different prototypes, the final conceptual idea emerged, which became the core of the project. Applying the afore-mentioned concepts to the structure highlighted the parallel approach to fashion. It became clear that translating fashion principles into an architectural language was not only possible but effective. Once this direction was settled, further research was required to identify the appropriate transformation techniques, reinforcing the design approach.

This project presents a distinct opportunity to revitalise the connection between fashion and architecture. The significance of the site and location is as crucial as the innovative approach to both the function and form of the project. The design of the fashion institute will highlight the relationship between architecture and the urban landscape in the Fashion District, emphasising their interconnectedness.

8.3 ACHIEVING THE RESEARCH OBJECTIVES

Referring to the research objectives and sub-questions outlined at the beginning of this study, this section serves as a foundation for deriving key insights from the research findings. It offers a concise summary of the study's overall research design, including the methods of data collection, data analysis, and the outcomes of the investigation. This framework sets the stage for a discussion on recommendations for the future of the integration of fashion design and architecture in Johannesburg's Fashion District.

8.3.1 RESEARCH OBJECTIVE 01

To analyse the similarities between fashion design and architecture, and chart their evolutionary trajectory.

This research successfully analysed the shared principles between fashion design and architecture, illustrating their longstanding and evolving relationship. Both disciplines are concerned with the manipulation of form, space, and volume, and both respond to human needs for functionality, aesthetics, and cultural expression. Over time, technological advances in materials and construction methods have further intertwined these industries, with fashion becoming more structurally expressive, and architecture adopting techniques from garment design. By tracing the historical development of these fields, the research highlighted how fashion and architecture have influenced each other, marking key moments where their evolutionary paths converged. This understanding set a foundation for deeper exploration of specific design principles common to both.

8.3.2 RESEARCH OBJECTIVE 02

To identify and discuss the potential limitations from this relationship.

While the relationship between fashion design and architecture offers vast creative potential, this research identified several limitations. One challenge lies in the difference in scale and permanence between the two fields. Fashion, being more ephemeral, is designed for frequent change, whereas architecture is rooted in durability and longevity. These conflicting time frames can create limitations when applying fashion principles like to architecture. Additionally, material constraints pose challenges. Fashion materials are generally lighter and more flexible than architectural materials, and translating the fluidity of fabric into rigid structural elements requires innovative material choices and engineering solutions. These limitations, while significant, were acknowledged as opportunities for further exploration and innovation.

8.3.3 RESEARCH OBJECTIVE 03

Translate three haute couture principles into architectural design strategies, using them both tectonically and aesthetically.

The research achieves this objective by successfully applying the haute couture principles of wrapping, folding, and transformation into architectural design strategies. Wrapping was used tectonically to create layered facades, echoing the way garments wrap around the human body, providing both protection and aesthetic appeal. Folding was applied to both form and structure, introducing dynamic lines and shapes that mimic pleated fabric, creating visual interest and depth. Transformation was integrated aesthetically, where the building's design adapts and shifts, just as fashion transforms to reflect changing trends or seasons. These principles were incorporated into the design of the fashion institute to create a building that not only serves its functional purpose but also stands as an architectural embodiment of haute couture ideals.

8.3.4 RESEARCH OBJECTIVE 04

Propose and design a fashion design institute, archive and commerce centre with a building program that benefits the occupants on different levels according to their needs, and offers upliftment, revitalisation and renewal to the Fashion District.

The proposed fashion design institute, archive, and commerce center are designed with a comprehensive building program that caters to various stakeholders within the Fashion District. The design focuses on creating spaces that promote collaboration, creativity, and learning for students, professionals, and visitors alike. The building integrates a variety of spaces—studios, ateliers, retail spaces, exhibition areas, and archives—to accommodate the diverse needs of its occupants.

Additionally, the design considers accessibility, sustainability, and urban regeneration. By incorporating green infrastructure and public spaces, the project seeks to revitalise the Fashion District, offering a space that not only serves as an educational and commercial hub but also uplifts the surrounding urban environment. The center's focus on inclusivity and adaptability ensures that it contributes positively to the district's cultural and economic renewal.

8.4 CHALLENGES AND LIMITATIONS OF THE RESEARCH

The design and research process for the New Fashion Kapitol presented several challenges, largely stemming from the complex interplay between fashion design and architecture, as well as the urban and heritage constraints of the Johannesburg Fashion District. This research sought to explore the potential of translating haute couture principles—often associated with luxury, precision, and modernity—into an architectural expression that is relevant within the historical and socio-economic realities of downtown Johannesburg. However, bridging this gap between conceptual ambition and contextual feasibility proved to be a significant challenge.

8.4.1 THE CHALLENGE OF INTEGRATING FASHION DESIGN AND ARCHITECTURAL DESIGN

At the core of this research was the ambition to merge fashion design with architecture, particularly by incorporating the haute couture principles of wrapping, folding, and transformation into the design of the New Fashion Kapitol. While these principles are highly expressive in fashion, translating them into architectural elements—particularly within a rigid and structured built environment—posed several difficulties.

SCALE AND MATERIALITY DIFFERENCES

Haute couture is characterised by fluidity, lightweight materials, and intricate detailing, whereas architecture demands durability, structural integrity, and adaptability to environmental conditions. Finding ways to express pleating and layering in robust building materials, while maintaining the essence of haute couture, required significant adaptation.

BALANCING FUNCTION AND AESTHETIC

Unlike fashion, which is often fleeting and trend-driven, architecture must endure over time. This meant that the design had to find a balance between being visually innovative and being structurally and functionally sound.

8.4.2 ADAPTING HAUTE COUTURE INTO THE CONTEXT OF JOHANNESBURG'S FASHION DISTRICT

One of the most significant challenges was placing a concept rooted in high-end, pristine fashion aesthetics into a dense, historic, and evolving urban environment. Haute couture typically represents exclusivity and refinement, while the Johannesburg Fashion District is a dynamic, informal, and highly active space where formal and informal economies intersect.

SOCIO-ECONOMIC CONTEXT

The area's identity is deeply connected to trade, small businesses, and an informal economy, which contrasts sharply with the controlled, pristine nature of haute couture. The challenge was to design a building that could accommodate these realities without feeling disconnected from those who use it.

BRIDGING OLD AND NEW

Instead of creating a futuristic, isolated design, the approach needed to find a way to subtly integrate fashion-inspired elements while still being relevant to the local cultural and economic context.

8.4.3 HERITAGE CONSTRAINTS AND THE SHIFT TO ADAPTIVE REUSE

The research initially explored a completely new architectural intervention. However, due to heritage restrictions and the importance of preserving Johannesburg's historical fabric, the approach pivoted toward adaptive reuse rather than new construction. While this shift allowed for a more contextually sensitive response, it introduced new challenges.

LIMITATIONS IN STRUCTURAL MODIFICATIONS

Heritage protection regulations dictated that major structural interventions were not possible. The existing load-bearing walls, core services, and layouts needed to be retained, which restricted spatial reconfiguration and adaptability.

NAVIGATING INTERIOR LAYOUT CONSTRAINTS

The internal organisation of the existing buildings was not originally designed for flexible, modern fashion spaces. Unlike a purpose-built structure, where spaces could be optimised for workshops, exhibition areas, and retail, the challenge was working within the given framework.

URBAN UPGRADING AND PUBLIC REALM CONSIDERATIONS

The Fashion District is undergoing urban renewal, however, upgrading infrastructure, improving pedestrian flow, and ensuring the development is well-integrated with its surroundings were challenges that extended beyond the building itself.

8.4.4 THE FACADE AS THE PRIMARY SPACE FOR ARCHITECTURAL EXPRESSION

With many of the major design opportunities restricted by heritage regulations, the façade became the key space for experimentation and innovation. However, even this was challenging due to the Art Deco style of the existing buildings.

RESPECTING THE ART DECO LANGUAGE

The existing structures feature distinct decorative elements, geometric patterns, and proportions that define the Art Deco aesthetic. Any new intervention had to respect these stylistic elements rather than over power them.

FINDING A BALANCE BETWEEN FASHION AND HERITAGE

The challenge was to incorporate haute couture-inspired layering, pleating, and folding in a way that felt natural within the Art Deco framework. Instead of forcing a new style onto the old structure, the design aimed to enhance and reinterpret the existing language.

MATERIAL LIMITATIONS

The use of glass, steel, and fabric-like textures needed to complement the existing masonry and stonework rather than compete with it. Creating a visually compelling façade without overwhelming the historical character required careful material selection.

8.4.5 MATERIALITY AND ITS ROLE IN INTEGRATION

The material selection for the New Fashion Kapitol played a key role in ensuring harmony between the new and existing elements. The approach to materiality aimed to complement the existing Art Deco architecture while subtly introducing elements of haute couture expression.

PRESERVING THE ORIGINAL BRICKWORK AND STONE DETAILING

The heritage components were restored using traditional techniques, ensuring the texture, color, and proportion of the buildings remained intact.

USING LIGHTWEIGHT AND PERFORATED BRICKWORK

To introduce pleating and layering, lightweight brickwork was used on the façade. These screens reference haute couture's delicate detailing while remaining durable in an urban environment.

TEXTURED CONCRETE ELEMENTS

Inspired by the folds and pleats of fashion, certain new additions were constructed using textured concrete panels, which maintain the robustness required for architecture while introducing an element of sculptural fluidity.

GLASS AND TRANSPARENCY

Strategic use of glass panels allowed for openness, reflecting the idea of transformation seen in fashion, where layering can reveal or conceal. However, excessive use of glass was avoided to maintain cohesion with the historic solid façades.

8.4.6 THE CHALLENGE OF URBAN ACTIVATION

Beyond the building itself, activating the public realm was a crucial consideration. The challenge was ensuring that the new Fashion Kapitol not only functions as an architectural landmark but also fosters engagement, interaction, and inclusivity.

PROGRAMMING FOR DIVERSE USERS

The building needed to cater to fashion students, designers, traders, and the public, ensuring it remained accessible to all, not just high-end designers or businesses.

INTEGRATING INFORMAL TRADE

Many local fashion businesses operate informally, which denoted designing flexible retail spaces that could adapt to different forms of trade and commerce.

SECURITY AND SAFETY CONSIDERATIONS

Given the urban context, designing safe yet open public spaces was a challenge. Balancing accessibility with controlled entry points was crucial.

8.4.7 LESSONS LEARNED AND FUTURE DIRECTIONS

While this research and design process faced numerous challenges, it demonstrates the potential of integrating fashion and architecture in a meaningful and contextually sensitive way. The New Fashion Kapitol represents a balance between heritage preservation, urban renewal, and contemporary innovation, creating a space that respects the past while looking toward the future.

Key takeaways from this research include:

1. The importance of adaptive reuse as a sustainable and historically conscious design approach.
2. The challenge of translating haute couture aesthetics into a heritage protected, urban environment.
3. The role of materiality in bridging old and new, ensuring that interventions feel integrated rather than imposed.
4. The need for flexible and user friendly spaces that serve a diverse community while maintaining a strong architectural identity.

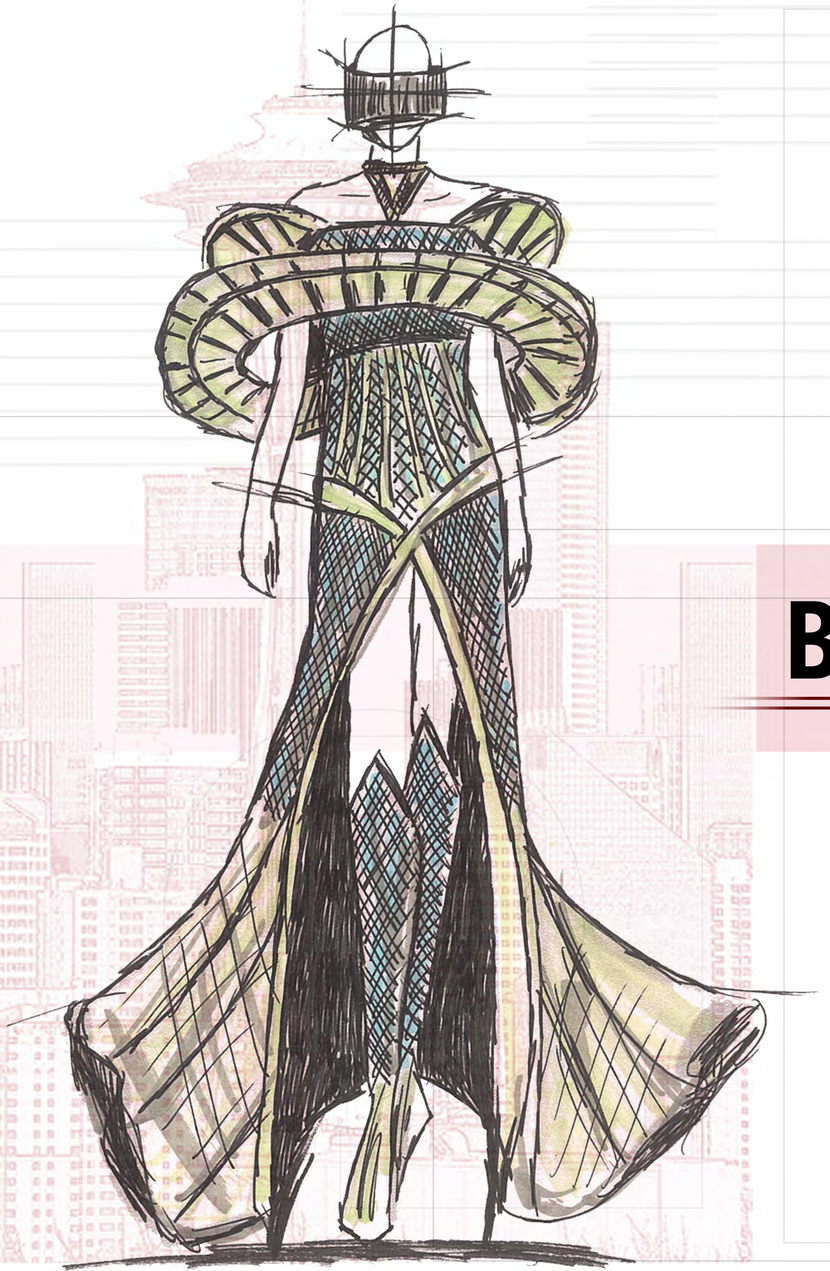
8.5 CONCLUSION

This research has explored the intricate relationship between fashion design and architecture, highlighting their shared history, parallels, and the potential for mutual influence. The analysis has shown that these two fields, while distinct in scale, materials, and purpose, share a fundamental concern with form, structure, and the interaction between the body and space. From their origins as practical responses to human needs, both disciplines have evolved into complex expressions of identity, culture, and innovation. Through this study, it has become clear that the integration of fashion principles—such as wrapping, folding, and transformation—into architectural design offers a unique opportunity to create spaces that are dynamic, responsive, and aesthetically engaging.

By charting the evolutionary trajectory of fashion and architecture, this research has provided a framework for understanding their intertwined developments. It has also critically examined the limitations of this relationship, particularly in terms of material, scale, and temporality, emphasising the need for a nuanced approach when translating fashion principles into architectural practice. The limitations outlined provide a realistic assessment of the challenges inherent in merging these two fields while pointing to innovative ways of addressing them.

The successful application of haute couture principles into the architectural design strategies of the proposed fashion institute demonstrates the potential for creating a new architectural language, one that borrows from the fluidity, elegance, and adaptability of fashion. This design not only serves as a functional and aesthetic response to the needs of the Fashion District but also acts as a catalyst for urban renewal and cultural revitalisation. By blending educational, commercial, and public functions, the proposed Creative Nexus contributes to the socio-economic and environmental upliftment of Johannesburg's Fashion District.

Ultimately, this research has contributed to the ongoing dialogue between fashion and architecture, providing insights into how these two creative disciplines can inform and enrich each other. It has pushed the boundaries of both fields, proposing new methods for integrating design strategies that prioritize innovation, sustainability, and human experience. The study's conclusions highlight the promise of continued exploration at the intersection of fashion and architecture, encouraging further research and experimentation in this evolving relationship.



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LIST OF FIGURES



Image 01. Architecture and Fashion, an effortless integration.
Adapted from: 7 Designs + Development, 2024 (https://www.7ddev.com/architecture-fashion-a-seamless-connection/)





Images 02 and 03. Fashion follows form
Source: 7 Designs + Development, 2024 (https://www.7ddev.com/architecture-fashion-a-seamless-connection/)



Image 04. Mind mapping. Authors own sketches



Image 05. Introduction to Johannesburgs Fashion District. Authors own.
(Base map adapted from: https://www.google.com/maps/place/Fashion+District,+Johannesburg)



Image 06. Johannesburg's Fashion District. Authors own.
(Base map adapted from: https://www.google.com/maps/place/Fashion+District,+Johannesburg)



Image 07. The chosen site of study within Johannesburg's Fashion District. Authors own.
(Base map adapted from: https://www.google.com/maps/place/Fashion+District,+Johannesburg)



Image 08. Authors own sketches and collage



Image 09. A simple timeline of the parallel relationship between fashion design and architecture throughout history. Authors own, adapted from (Elassi, H. 2019).

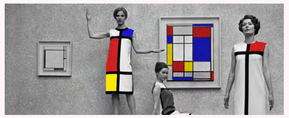
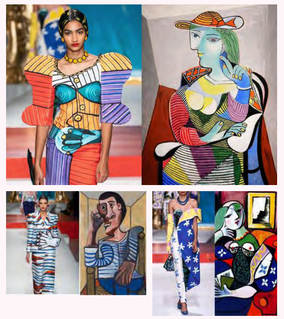


Image 10. Art inspired fashion design. Source: (Collier & Dobson, 2024. Available from: https://www.collierdobson.com/blogs/news/how-art-has-influenced-the-fashion-world)



Images 11-13. Pop art in the world of fashion design.
(Source: Vogue Runway, 2024. Available from: https://www.vogue.com/fashion-shows/spring-2020-ready-to-wear/moschino/slideshow/collection#2).

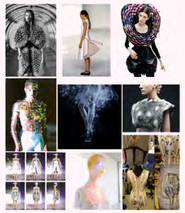


Image 14. The intersection of science, biology and fashion design. (Source: Anderson, 2020. Available from: https://lstarkweather.medium.com/fashion-scientists-3dfcb7a1553a).



Image 15. Claire Daine's 2016 Met Gala Cinderella light up dress by Zac Posen. (Source: Chi, 2016. Available from: https://www.vanityfair.com/style/2016/05/met-gala-2016-red-carpet).



Image 16. The role of science and lighting in architecture. (Available from: https://www.arch2o.com/how-lighting-can-give-your-building-a-new-soul-4-led-lighting-applications/).



Images 17 and 18. Science in fashion design and architecture. (Source: CUUB Studio, 2024. Available from: https://www.cuubstudio.com/blog/the-fusion-of-architecture-and-high-fashion/)



Image 19. Virtual fashion show. (Source: Lifestyle and Design Cluster, 2024. Available from: https://ldcluster.com/portfolio-item/digital-fashion-summit/)



Image 20. The fusion of fashion design and technology. (Source: Secret, 2023. Available from: https://ellasecretcloth.medium.com/the-influence-of-technology-on-fashion-trends-in-2024-65620784b70a)



Image 19. Virtual Fashion show and Styling. (Source: Barr, 2020. Available from: https://www.independent.co.uk/life-style/fashion/fashion-3d-show-runway-online-hanifa-instagram-live-congo-a9530551.html)



Image 20. The use of computer aided software to generate a building form that inspires and is inspired by fashion. Source: Authors own assignment from the course ARPL 7001A_ Advanced Digital Applications.

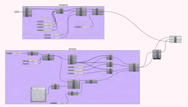
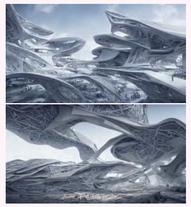


Image 21. Building and panel generation in Rhino and Grasshopper. Source: Authors own assignment from the course ARPL 7001A_Advanced Digital Applications.



Images 21 and 22. A fractal parametric city by Zaha Hadid. (Source: OpenArt, 2024. Available from: https://openart.ai/discovery/sd-1005963784155824218).



Image 23. Culturally-inspired fashion at Virgil Abloh's Louis Vutton Mens FW'21 collection. (Source: Nhalungo, 2021. Available from: https://industrieafrica.com/blogs/imprint/op-ed-louis-vuitton-mens-fw-21-designer-virgil-abloh-cultural-appropriation-ghana-kente).



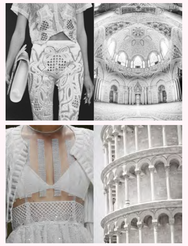
Image 24. The Louvre Abu Dhabi, a cultural icon. (Source: Turner, 2023. Available from:https://www.absoluteproduct.com/article/spotlight-louvre-abu-dhabi?siteregion=GB).



Image 25. Vivienne Westwood organises demonstrations to highlight her concerns on climate change. (Source: Vecchi, 2023. Available from: https://www.istitutomarangoni.com/en/maze35/industry/will-fashion-carry-on-vivienne-westwoods-activism).



Image 26. National Museum of the American Indian, Washington DC.. (Source: Lawrence, 2022. Available from: https://www.opb.org/article/2022/11/11/new-dc-memorial-honors-native-veterans/).



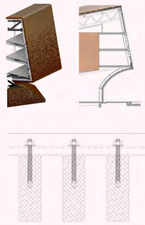
Images 27 and 28. What happens to architecture when form follows fashion? (Available from: https://www.arch2o.com/what-happens-to-architecture-when-form-follows-fashion/#google_vignette.)



Images 29 - 32. Pieces from Yeohlee Teng's collections over time. (Source: Borrelli-Persson, 2021. Available from: https://www.vogue.com/article/in-advance-of-her-2021-cfda-award-an-intreview-with-yeohlee-teng)



Images 33 and 34. The Jinling Art Museum, Nanjing China. (Source: Barandy, 2024. Available from: https://www.designboom.com/architecture/jinling-art-museum-azl-architects-nanjing-china-08-13-2024/)



Images 35 and 36. The construction of the Jinling Art Museum, Nanjing China. (Source: Barandy, 2024. Available from: https://www.designboom.com/architecture/jinling-art-museum-azl-architects-nanjing-china-08-13-2024/)



Images 37 and 38. Interior views of the Jinling Art Museum, Nanjing China. (Source: Barandy, 2024. Available from: https://www.designboom.com/architecture/jinling-art-museum-azl-architects-nanjing-china-08-13-2024/)



Image 39. Japanese fashion designer Issey Miyake. (https://arquitecturaviva.com/articles/issey-miyake



Image 40. Issey Miyake's garment construction through origami techniques. (Source: Fitzgerald, 2012.)



Image 41. The Air Force Academy Cadet Chapel. (Source: Perez, 2010. Available from: https://www.archdaily.com/63449/ad-classics-usafa-cadet-chapel-skidmore-owings-merrill-2.)



Images 42-44. The Air Force Academy Cadet Chapel. (Source: Perez, 2010. Available from: https://www.archdaily.com/63449/ad-classics-usafa-cadet-chapel-skidmore-owings-merrill-2.)

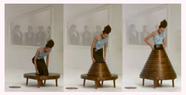


Image 45. Hussein Chalayan's coffee table dress. (Source: Hess, 2019. Available from: https://www.anothermag.com/fashion-beauty/11507/hussein-chalayan-best-shows-coffee-table-dress-airplane-dress-led-dress.)



Images 46-47. The Zeitz Museum of Contemporary African Art. (Source: Ghisleni, 2024. Available from: https://www.archdaily.com/879763/zeitz-museum-of-contemporary-art-africa-heatherwick-studio).



Images 48. The Zeitz Museum of Contemporary African Art Cape Twon, South Africa. (Source: Ghisleni, 2024. Available from: https://www.archdaily.com/879763/zeitz-museum-of-contemporary-art-africa-heatherwick-studio).

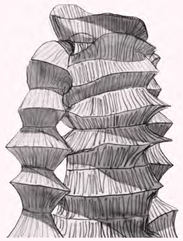


Image 49. Exploring folding in fashion design. Authors own, sketch adapted from Issey Miyake's 1994 Flying Saucer Dress. (Available from: https://www.kerrytaylorauctions.com/auction/lot/217-an-issey-miyake-flying-saucer-dress-1994/?lot=6800&sd=1).



Image 50. Is Origami the Future of the Tech Industry or is it Merely an Art Form? (Available from: https://www.linkedin.com/pulse/origami-future-tech-industry-merely-form-art-madiha-turshin/).



Image 51. Fashionable Architecture - experimenting with textures and materials in fashion design and architecture. (Available from: https://fashionablearchitecture.tumblr.com/).

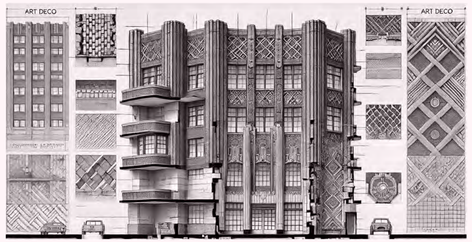


Image 52. Patterning and architectural ornamentation in art deco facade exploration. Authors own.



Image 53. Parametricism in fashion design and in architecture. (Available from: https://parametric-architecture.com/ai-immersed-artistry-studio-hera-kim/).

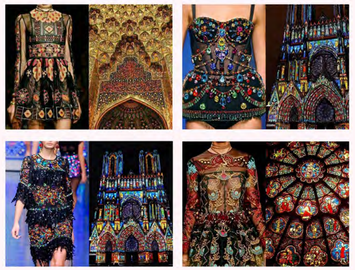


Image 54-57. Fashion and Architetcure: exploring the influence of colour. (Source: Stewart, J. (2017). Side by side images reveal how high fashion is influenced by architecture. Available from: https://mymodernmet.com/archi-tecture-fashion-design/)



Image 58. Africa Fashion: An 'Afrotopia' of Fashion, Photography and History from the Continent's Brightest Creatives. (Source: Cooper, H. (2022). Meet the buzzy African fash-ion designers in the V&A's new Africa Fashion exhibition. Available from: https://theglossa-rymagazine.com/fashion/african-fashion-designers-va/)C



Image 59. The selected site of study.
(Authors own, adapted from: Google Maps, 2024).



Image 60. 3D view of Johannesburg inner city. (Authors own, adapted from: https://ww-w.3dcadbrowser.com/3d-model/johannesburg-city-south-africa-2020.)



Image 61. Johannesburg's Fashion District within the greater context of the COJ. (Authors own, adapted from:https://issuu.com/andrew_proudman/docs/andrew_proudman_the_de-sign_of_an_active_landscape.)



Image 62. Johannesburg's Fashion District within the greater context of the COJ. (Authors own, adapted from: Google Earth 2024.)



Image 63. Public transportation networks within the City of Johannesburg. (Authors own, adapted from: Google Earth 2024.)



Image 64. Infrastructure and movement analysis in Johannesburg's' Fashion District. (Au-thors own, adapted from: Google Earth 2024.)



Image 65. Urban morphology analysis in the Fashion District. (Source: Authors own. Adapted from: Google Maps, 2024).



Image 66. The Gallo Building.
(Source: https://www.flickr.com/photos/ossewa/7904992680/in/photostream/)



Image 67. 58E Troye Street
(Source: Google Street View, 2024).

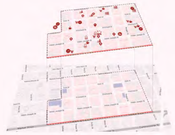


Image 68. Spatial and Demographic Configuration. (Source: Authors own. Adapted from: Google Maps, 2024).



Image 69. The location of the selected study site at a macro scale.
(Source: Authors own. Adapted from: Google Maps, 2024).

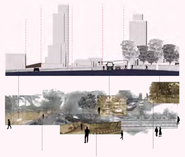


Image 70. The state of sidewalks around the Fashion Kapitol.
(Source: Authors own. Adapted from: Google Maps, 2024).



Image 71. An analysis of urban morphology around the selected site.
(Source: Authors own).





Images. 72-74. An analysis of universal design around the site.
(Source: Google Street View, 2024).



Image 75. A photo-montage of the street vending activities around the Fashion Kapitol.
(Source: Authors own. Adapted from: Google Street View, 2024).

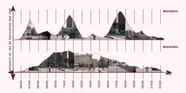


Image 76. A photo-montage of the street art in the Fashion District.
(Source: Authors own).

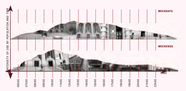




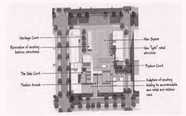
Images 77 - 78. Art installations in the Fashion District.
(Source: http://underourownolivetree.blogspot.com/2012/08/johannesburg-fashion-district.html).



Images 79. The intensity of uses of the Fashion Kapitol's existing shopping mall at different times of the day on Weekdays and Weekends.
(Source: Authors own).



Images 80. The intensity of uses of the Fashion Kapitol's public square at different times of the day on Weekdays and Weekends.
(Source: Authors own).



Images 81. The FASHION SQUARE: Urban design framework
(Source: Spatial Worx Report, 2005).



Images 82. The Fashion Kapitol.
(Source: http://underourownolivetree.blogspot.com/2012/08/johannesburg-fashion-district.html).



Image 83. Mind mapping. Authors own sketches



Image 84. Note taking and mind mapping. Authors own early sketches

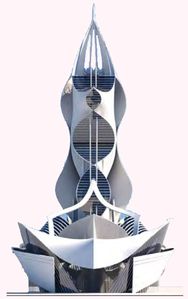


Image 85. Early building iteration from the ARPL 7003A review 1 exercise. (Authors own AI generation from: https://gencraft.com/)

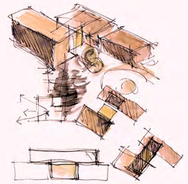


Image 86. Early building sketches. (Authors own).

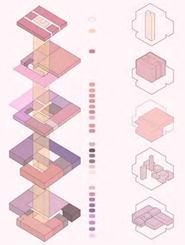


Image 87. Early programming exploration. (Authors own, Adapted from: https://id.pinterest.com/pin/668509944093661971/).



Image 88. Preliminary design sketching. (Source: Authors own)



Image 89. Preliminary building digital sketching. (Source: Authors own).



Image 90. The chosen site of study within Johannesburg's Fashion District. Authors own. (Base map adapted from: https://www.google.com/maps/place/Fashion+District,+Johannesburg)

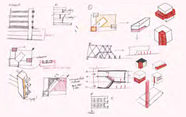
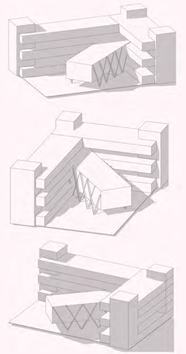
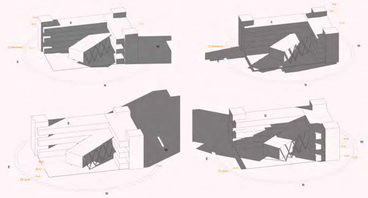


Image 91. Conceptual design exploration 01 sketching process. (Source: Authors own.)



Images 92-94. Massing exploration 01. (Source: Authors own.)



Images 95-98. Solar daylighting analysis. (Source: Authors own.)



Image 99. Massing attribute exploration - access points (Source: Authors own.)

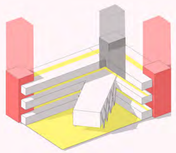


Image 100. Massing attribute exploration - circulation and movement. (Source: Authors own.)

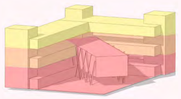
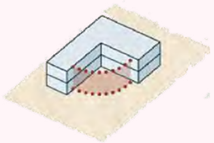


Image 101. Massing attribute exploration - hierarchy of spaces. (Source: Authors own.)



Images 102. Conceptual design exploration 01, massing and form refinement. (Source: Authors own.)



Image 103-105. Conceptual design exploration 01, presented for the second review. (Source: Authors own.)



Image 106. The chosen site of study including the adjacent building. Authors own. (Base map adapted from: https://www.google.com/maps/place/Fashion+District,+Johannesburg)

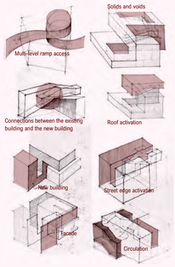


Image 107. Conceptual design exploration 02, preliminary sketching. Authors own. (Adapted from: https://architecturesketch.tumblr.com/image/47946102714)



Image 108. Building 01 to be reused and adapted. (Source: Google Street View 2014).



Image 109. Building 02, The Gallo Building to be reused and adapted. (Source: Google Street View 2014).



Image 110. A photo-montage illustrating the approach to adaptive reuse for The New Fashion Kapitol. Includes the original Gallo Building and 169 Helen Joseph Street Ground Floor Plans. (Floor plans adapted from: Bruwer, 2002).



Image 111. Wrapping - Haute Couture technique employed in the design of facade systems. (Sketch: Authors own, adapted from: https://archello.com/project/karinox-coffee Image source: https://medium.com/@dotsod/draping-unraveling-the-elegance-of-fabric-manipulation-88312f69f67b).



Image 112. Folding - Haute Couture technique employed in the design of facade systems. (Source: Authors own.)



Image 113. Folding - Haute Couture technique employed in the design of facade systems. (Source: Authors own.)

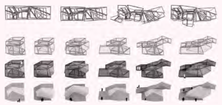
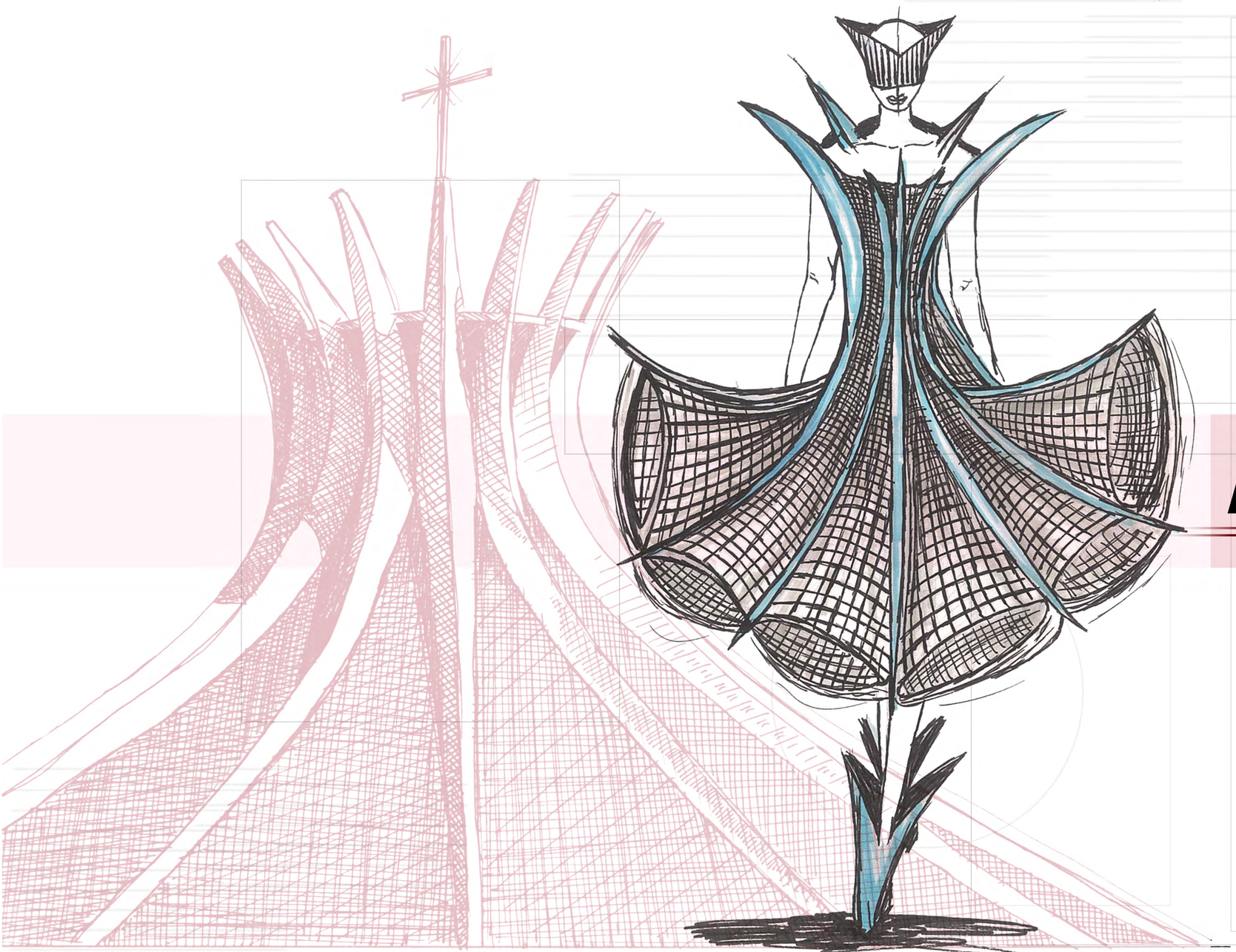


Image 114. Transformation - Progressive transformation of structure. (Source: Jones, Solman and Zavoleas, 2014).



APPENDIX

Faculty of Engineering and the Built Environment
Private Bag 3, Wits 2050, South Africa * Telephone (011) 717 – 7007 * Fax: (011) 717 7009 * Email: febe.pg@wits.ac.za

PLAGIARISM DECLARATION TO BE SIGNED BY ALL HIGHER DEGREE STUDENTS

SENATE PLAGIARISM POLICY: APPENDIX ONE

I Mercy Ndanu Mutinga (Student number: 1105169) am a student registered for the degree of Master of Architecture (Professional) in the academic year 2024.

I hereby declare the following:

- I am aware that plagiarism (the use of someone else's work without their permission and/or without acknowledging the original source) is wrong.
- I confirm that the work submitted for assessment for the above degree is my own unaided work except where I have explicitly indicated otherwise.
- I have followed the required conventions in referencing the thoughts and ideas of others.
- I understand that the University of the Witwatersrand may take disciplinary action against me if there is a belief that this in not my own unaided work or that I have failed to acknowledge the source of the ideas or words in my writing.

Signature: _____ Date: 23.03.2024

UNIVERSITY OF THE WITWATERSRAND, JOHANNESBURG | SCHOOL of ARCHITECTURE PLANNING

01 August 2024

Mutinga Mercy

1105169

TO WHOM IT MAY CONCERN

RESEARCH ETHICS APPROVAL

Form Follows Fashion: Translating Haute Couture Craft into Architectonics

This letter serves to confirm that the Ethics application for the above titled study has been approved. The researcher has been granted clearance to proceed with the research study or project.

Protocol/clearance number is: **SOAP026/03/2024**

Yours sincerely

Motsei Choabi

Senior Administrative Manager | School of Architecture and Planning

E: motsei.choabi@wits.ac.za
T: +27 11 717 7727
W: www.wits.ac.za/soap/

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CONSENT FORM

Title of research: FORM FOLLOWS FASHION: TRANSLATING HAUTE COUTURE CRAFT INTO ARCHITECTONICS

Name of researcher: Mercy Ndanu Mutinga

I agree to participate in the research project titled Form Follows Fashion, conducted by Mercy Ndanu Mutinga who has (have) discussed the research project with me.

I have received, read and kept a copy of the information letter/plain language statement. I have had the opportunity to ask questions about this research and I have received satisfactory answers. I understand the general purposes, risks and methods of this research.

(Please circle the relevant options below)

The research study was explained to me.	YES	NO
My participation is completely voluntary.	YES	NO
I have the right to withdraw from the study at any time without any implications.	YES	NO
I agree that direct quotations from my interview may be used by the researcher in their research project.	YES	NO
I agree that my participation will remain anonymous. My name and/or other identifying data will not be used by the researcher in the research report.	YES	NO
I agree that other researchers may use the information I provide In my interview but my name and personal information will not be used or passed on.	YES	NO
I can request a copy of the research findings and report.	YES	NO
I agree that the interview may be audio recorded.	YES	NO

Name: _____ (please print)

Signature:

_____

Date: _____

Name: _____

Signature:

_____

Date: _____

UNIVERSITY OF THE WITWATERSRAND, JOHANNESBURG | SCHOOL OF ARCHITECTURE PLANNING

Participant Information Sheet – Fashion designers

Topic of research:

FORM FOLLOWS FASHION: TRANSLATING HAUTE COUTURE CRAFTS INTO ARCHITECTONICS

Dear Sir/Madam,

My name is Mercy Ndanu Mutinga. I am a Master of Architecture (Professional), student number 1105169 at the University of the Witwatersrand, Johannesburg. My supervisor is Adjunct Professor Hilton Judin. I am conducting a research study about the relationship between fashion design and architecture, the study title is Form Follows Fashion: translating Haute Couture Craft into Architectonics. The purpose of this study is to explore how the principles and techniques of haute couture can be translated into architectural design. This research aims to bridge the gap between fashion and architecture by examining the aesthetic and structural elements that can be adapted from couture crafts to architectonics.

I am inviting you to take part in an interview. You have been selected to participate in this study because you are a fashion designer working in the industry. Your expertise and experience are invaluable for understanding how the principles of haute couture can be integrated into architectural design. I am looking for professionals who can provide valuable insights into the intersection of fashion and architecture.

If you agree to take part in this study, you will be asked to participate in a semi-structured interview where you will share your thoughts and experiences related to the topic. Additionally, the research will involve photography and use of data from social media to capture and analyse the intricate details of haute couture and its potential applications in architecture. This will last 30 min – 1hr and will take place at your place of work after working hours.

The main questions I intend to ask include:

1. How do you see fashion and architecture influencing each other?
2. Can you think of any buildings that remind you of fashion designs?
3. What fashion elements do you think could be used in building designs?
4. How do you think fashion can change the look and function of buildings?
5. What do you think might be hard about combining fashion and architecture?

With your permission, I would like to record the interview by noting down your responses. This data will be stored in secure and password protected files for one year. Only the researcher will have access to this data.

During the interview, I will need to ask for some personal information about you, including your educational and career backgrounds.

This interview will be confidential and anonymous. When I share the results of the research study, I will not include your name or anything else that could identify you. With your permission, other researchers may use the data collected from this research study, but your name and any personal information will not be used or passed on.

If you decide to take part, it should be because you want to volunteer. You can stop being in the study at any time. You do not have to answer any questions if you do not want to. You will not get any direct benefits if you choose to join the research study. You will not lose any services, benefits or rights you would normally have if you decide not to join. Taking part in the research study will not cost you anything. You will not be paid for being in this research study.

The risks for this research study are no more that what happens in everyday life.

The research study will be written up as a research report. Upon completion, the report will be made available online at the Wits university library website. If you would like to receive a summary of this report, I will be happy to send it to you.

If you have any questions during or afterwards about this research study, feel free to contact me or any supervisor on the details listed below. If you have any concerns or complaints about the ethical procedures of this research study, you are welcome to contact the University Human Ethics Committee (Non-Medical), telephone (+27) 011 717 1408, email hrecnin-medical@wits.ac.za.

Yours sincerely,

Researcher: Mercy Ndanu Mutinga

1105169@students.wits.ac.za

+27 762 350 907

Supervisor: Adjunct Professor Hilton Judin

Hilton.Judin@wits.ac.za

+27 11 717 7623

UNIVERSITY OF THE WITWATERSRAND, JOHANNESBURG | SCHOOL OF ARCHITECTURE PLANNING

Participant Information Sheet – Small business owners

Topic of research:

FORM FOLLOWS FASHION: TRANSLATING HAUTE COUTURE CRAFTS INTO ARCHITECTONICS

Dear Sir/Madam,

My name is Mercy Ndanu Mutinga. I am a Master of Architecture (Professional), student number 1105169 at the University of the Witwatersrand, Johannesburg. My supervisor is Adjunct Professor Hilton Judin. I am conducting a research study about the relationship between fashion design and architecture, the study title is Form Follows Fashion: translating Haute Couture Craft into Architectonics. The purpose of this study is to explore how the principles and techniques of haute couture can be translated into architectural design. This research aims to bridge the gap between fashion and architecture by examining the aesthetic and structural elements that can be adapted from couture crafts to architectonics.

I am inviting you to take part in an interview. You have been selected to participate in this study because you are a small business owner in the fashion district. Your experiences and insights are crucial for understanding the practical aspects of how fashion influences architectural design in a business context. I am looking for professionals who can provide valuable insights into the intersection of fashion and architecture from a business standpoint.

If you agree to take part in this study, you will be asked to participate in a semi-structured interview where you will share your thoughts and experiences related to the topic. Additionally, the research will involve photography and observation to capture and analyse the intricate details of haute couture and its potential applications in architecture. This will last 30 min – 1hr and will take place at your place of work after working hours.

The main questions I intend to ask include:

1. How do you see fashion and architecture influencing each other in the business context?
2. Can you think of any buildings in the fashion district that remind you of fashion designs?
3. What fashion elements do you think could be used in building designs to attract customers?
4. How do you think fashion-inspired architecture can impact your business and customer experience?
5. What challenges do you foresee in combining fashion and architectural design in your business environment?

With your permission, I would like to record the interview by noting down your responses. This data will be stored in secure and password protected files for one year. Only the researcher will have access to this data. During the interview, I will need to ask for some personal information about you, including your educational and career backgrounds.

This interview will be confidential and anonymous. When I share the results of the research study, I will not include your name or anything else that could identify you. With your permission, other researchers may use the data collected from this research study, but your name and any personal information will not be used or passed on.

If you decide to take part, it should be because you want to volunteer. You can stop being in the study at any time. You do not have to answer any questions if you do not want to. You will not get any direct benefits if you choose to join the research study. You will not lose any services, benefits or rights you would normally have if you decide not to join. Taking part in the research study will not cost you anything. You will not be paid for being in this research study.

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Yours sincerely,

Researcher: Mercy Ndanu Mutinga

1105169@students.wits.ac.za

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Supervisor: Adjunct Professor Hilton Judin

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Researcher: Mercy Ndanu Mutinga
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+27 762 350 907

Supervisor: Adjunct Professor Hilton Judin
Hilton.Judin@wits.ac.za
+27 11 717 7623

Participant Information Sheet – Educators

Topic of research:

FORM FOLLOWS FASHION: TRANSLATING HAUTE COUTURE CRAFTS INTO ARCHITECTONICS

Dear Sir/Madam,

My name is Mercy Ndanu Mutinga. I am a Master of Architecture (Professional), student number 1105169 at the University of the Witwatersrand, Johannesburg. My supervisor is Adjunct Professor Hilton Judin. I am conducting a research study about the relationship between fashion design and architecture, the study title is Form Follows Fashion: translating Haute Couture Craft into Architectonics. The purpose of this study is to explore how the principles and techniques of haute couture can be translated into architectural design. This research aims to bridge the gap between fashion and architecture by examining the aesthetic and structural elements that can be adapted from couture crafts to architectonics.

I am inviting you to take part in an interview. You have been selected to participate in this study because you are an educator in the fashion district. Your knowledge and experience are crucial for understanding the theoretical and practical aspects of how fashion principles can influence architectural design. I am looking for professionals who can provide valuable insights into the intersection of fashion and architecture from an educational perspective.

If you agree to take part in this study, you will be asked to participate in a semi-structured interview where you will share your thoughts and experiences related to the topic. Additionally, the research will involve observation to capture and analyse the intricate details in teaching haute couture craft and its potential applications in architecture. This will last 30 min – 1hr and will take place at your place of work after working hours.

The main questions I intend to ask include:

1. How do you see fashion and architecture influencing each other in educational contexts?
2. Can you think of any examples where fashion design principles are applied in architectural designs?
3. What fashion elements do you think could be integrated into building designs for educational purposes?
4. How do you think fashion-inspired architecture can enhance the learning environment for students?
5. What challenges do you foresee in combining fashion and architectural design in educational settings?

With your permission, I would like to record the interview by noting down your responses. This data will be stored in secure and password protected files for one year. Only the researcher will have access to this data. During the interview, I will need to ask for some personal information about you, including your educational and career backgrounds.

This interview will be confidential and anonymous. When I share the results of the research study, I will not include your name or anything else that could identify you. With your permission, other researchers may use the data collected from this research study, but your name and any personal information will not be used or passed on.

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If you have any questions during or afterwards about this research study, feel free to contact me or any supervisor on the details listed below. If you have any concerns or complaints about the ethical procedures of this research study, you are welcome to contact the University Human Ethics Committee (Non-Medical), telephone (+27) 011 717 1408, email hrecnin-medical@wits.ac.za.

Yours sincerely,

Participant Information Sheet – Students

Topic of research:

FORM FOLLOWS FASHION: TRANSLATING HAUTE COUTURE CRAFTS INTO ARCHITECTONICS

Dear Sir/Madam,

My name is Mercy Ndanu Mutinga. I am a Master of Architecture (Professional), student number 1105169 at the University of the Witwatersrand, Johannesburg. My supervisor is Adjunct Professor Hilton Judin. I am conducting a research study about the relationship between fashion design and architecture, the study title is Form Follows Fashion: translating Haute Couture Craft into Architectonics. The purpose of this study is to explore how the principles and techniques of haute couture can be translated into architectural design. This research aims to bridge the gap between fashion and architecture by examining the aesthetic and structural elements that can be adapted from couture crafts to architectonics.

I am inviting you to take part in an interview. You have been selected to participate in this study because you are a student with an interest in fashion and/or architecture. Your perspectives are invaluable for understanding how fashion principles can influence architectural design from a learning and emerging professional standpoint. I am looking for students who can provide fresh insights into the intersection of fashion and architecture.

If you agree to take part in this study, you will be asked to participate in a semi-structured interview where you will share your thoughts and experiences related to the topic. Additionally, the research will involve observation to capture and analyse the intricate details in learning about haute couture craft and its potential applications in architecture. This will last 30 min – 1hr and will take place at your place of work after working hours.

The main questions I intend to ask include:

1. How do you see fashion and architecture influencing each other in contemporary design?
2. Can you think of any buildings or designs that remind you of fashion trends?
3. What fashion elements do you think could be used in building designs to make them more appealing?
4. How do you think fashion-inspired architecture can impact the way people experience spaces?
5. What challenges do you think might arise when combining fashion and architectural design?

With your permission, I would like to record the interview by noting down your responses. This data will be stored in secure and password protected files for one year. Only the researcher will have access to this data. During the interview, I will need to ask for some personal information about you, including your educational and career backgrounds.

This interview will be confidential and anonymous. When I share the results of the research study, I will not include your name or anything else that could identify you. With your permission, other researchers may use the data collected from this research study, but your name and any personal information will not be used or passed on.

If you decide to take part, it should be because you want to volunteer. You can stop being in the study at any time. You do not have to answer any questions if you do not want to. You will not get any direct benefits if you choose to join the research study. You will not lose any services, benefits or rights you would normally have if you decide not to join. Taking part in the research study will not cost you anything. You will not be paid for being in this research study.

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Yours sincerely,

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1105169@students.wits.ac.za

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Supervisor: Adjunct Professor Hilton Judin

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+27 11 717 7623

UNIVERSITY OF THE WITWATERSRAND, JOHANNESBURG | SCHOOL OF ARCHITECTURE PLANNING

Participant Information Sheet – Consumers

Topic of research:

FORM FOLLOWS FASHION: TRANSLATING HAUTE COUTURE CRAFTS INTO ARCHITECTONICS

Dear Sir/Madam,

My name is Mercy Ndanu Mutinga. I am a Master of Architecture (Professional), student number 1105169 at the University of the Witwatersrand, Johannesburg. My supervisor is Adjunct Professor Hilton Judin. I am conducting a research study about the relationship between fashion design and architecture, the study title is Form Follows Fashion: translating Haute Couture Craft into Architectonics. The purpose of this study is to explore how the principles and techniques of haute couture can be translated into architectural design. This research aims to bridge the gap between fashion and architecture by examining the aesthetic and structural elements that can be adapted from couture crafts to architectonics.

I am inviting you to take part in an interview. You have been selected to participate in this study because you are a consumer in the fashion district. Your experiences and behaviours as a consumer are crucial for understanding the practical aspects of how fashion influences architectural design in commercial settings. I am looking for individuals who can provide valuable perspectives on the intersection of fashion and architecture from a consumer's standpoint.

If you agree to take part in this study, you will be observed as you interact with various elements in the fashion district. This may include observing your shopping behaviour, how you navigate fashion spaces, and your engagement with fashion displays and store designs. The purpose of these observations is to gain insights into how fashion-inspired architectural designs impact consumer experiences and behaviours.

If you decide to take part, it should be because you want to volunteer. You can stop being in the study at any time. You will not get any direct benefits if you choose to join the research study. You will not lose any services, benefits or rights you would normally have if you decide not to join. Taking part in the research study will not cost you anything. You will not be paid for being in this research study.

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Yours sincerely,

Researcher: Mercy Ndanu Mutinga

1105169@students.wits.ac.za

+27 762 350 907

Supervisor: Adjunct Professor Hilton Judin

Hilton.Judin@wits.ac.za

+27 11 717 7623

UNIVERSITY OF THE WITWATERSRAND, JOHANNESBURG | SCHOOL OF ARCHITECTURE PLANNING

QUESTIONNAIRE 01 – LOCAL FASHION DESIGNER A

Title of research: FORM FOLLOWS FASHION: TRANSLATING HAUTE COUTURE CRAFT INTO ARCHITECTONICS

QUESTION: How do you see fashion and architecture influencing each other?
ANSWER: Fashion and architecture both deal with form, structure, and aesthetics. I see them influencing each other in terms of how they play with materials, lines, and textures. Just like in fashion, where fabrics drape, layer, and flow, architecture can use similar principles to create dynamic, fluid spaces. Both fields also aim to reflect culture and trends, and I think they influence each other by pushing the boundaries of design.

QUESTION: Can you think of any buildings that remind you of fashion designs?
ANSWER: Yes, the work of Zaha Hadid reminds me a lot of avant-garde fashion. Her buildings, with their sweeping curves and futuristic shapes, remind me of high-fashion garments that experiment with form and structure. Another example is the Guggenheim Museum, which has a spiral form that mirrors the movement and flow you'd see in a couture gown.

QUESTION: What fashion elements do you think could be used in building designs?
ANSWER: Elements like layering, pleating, and draping could translate well into architectural design. For example, pleats can be mimicked in the facade of a building to create texture, and layering different materials or structures could give a building a unique depth and dimension. Embellishments like intricate detailing could also be replicated through the use of unique materials or patterns in architectural finishes.

QUESTION: How do you think fashion can change the look and function of buildings?
ANSWER: Fashion can bring a more fluid and organic look to buildings, making them feel less rigid. Fashion-inspired designs can also change how spaces function by introducing more flexible, adaptable environments. For example, buildings could be designed to "wear" different facades depending on the season or event, much like how fashion changes with trends. It can also create a more human-centric approach, focusing on how people feel within a space, similar to how clothing is meant to make someone feel.

QUESTION: What do you think might be hard about combining fashion and architecture?
ANSWER: One of the biggest challenges would be ensuring that the designs are practical and sustainable. Fashion can be ephemeral and trend-based, but buildings are meant to last. Translating fashion's often delicate materials and concepts into durable, functional structures would be difficult. Additionally, balancing aesthetics with the need for practicality in construction might create limitations in the design process.

UNIVERSITY OF THE WITWATERSRAND, JOHANNESBURG | SCHOOL OF ARCHITECTURE PLANNING

QUESTIONNAIRE 01 – LOCAL FASHION DESIGNER B

Title of research: FORM FOLLOWS FASHION: TRANSLATING HAUTE COUTURE CRAFT INTO ARCHITECTONICS

QUESTION: How do you see fashion and architecture influencing each other?
ANSWER: I think fashion and architecture both focus on style and appearance. Fashion creates a look for people, and architecture creates a look for buildings, so they both influence how we see things. They can both be very creative and use different materials to make something unique, but I'm not too sure about the technical side of architecture.

QUESTION: Can you think of any buildings that remind you of fashion designs?
ANSWER: I can't think of specific buildings, but I imagine some of the modern buildings in cities have a stylish, sleek look like high-end fashion. Maybe some shopping malls or stores with interesting designs remind me of fashion, where the building's exterior feels trendy or artistic.

QUESTION: What fashion elements do you think could be used in building designs?
ANSWER: Things like colours and patterns could definitely be used in building designs. Just like how we mix fabrics and textures in clothing, buildings could also use different materials to make them more eye-catching. Simple details like shapes or patterns found in fabric could inspire how a building looks.

QUESTION: How do you think fashion can change the look and function of buildings?
ANSWER: Fashion could make buildings more attractive and fun, I think. If designers use bold colours or playful styles from fashion, the buildings could stand out more. I'm not sure how it would change the function, but it could make buildings feel more stylish and trendy, like how clothing makes a person look more fashionable.

QUESTION: What do you think might be hard about combining fashion and architecture?
ANSWER: I think it could be hard because fashion trends change quickly, but buildings last a long time. What's fashionable now might not be in style in a few years, so making sure the building looks good for a long time might be tricky. Also, I'm not sure how fashion materials would work in construction since buildings need to be strong and last.

UNIVERSITY OF THE WITWATERSRAND, JOHANNESBURG | SCHOOL OF ARCHITECTURE PLANNING

QUESTIONNAIRE 01 – EDUCATOR AT FASHION DESIGN COLLEGE

Title of research: FORM FOLLOWS FASHION: TRANSLATING HAUTE COUTURE CRAFT INTO ARCHITECTONICS

QUESTION: How do you see fashion and architecture influencing each other in educational contexts?

ANSWER: Fashion and architecture both influence how we experience space and form, which is critical in an educational setting. In fashion education, we teach students to think about form, structure, and creativity, and I see architecture as doing the same with physical spaces. In educational contexts, I think these disciplines intersect by fostering environments that encourage creativity and innovation, using spatial design to reflect the dynamism of fashion.

QUESTION: Can you think of any examples where fashion design principles are applied in architectural designs?

ANSWER: Some contemporary buildings in Johannesburg, like high-end fashion stores or fashion showrooms, seem to reflect fashion principles such as fluidity, texture, and layering. For example, stores designed with flowing interiors or layered facades can mirror the drapery and layering seen in fashion design. Additionally, spaces like art and fashion schools sometimes integrate bold, modern designs that resemble the creativity found in fashion.

QUESTION: What fashion elements do you think could be integrated into building designs for educational purposes?

ANSWER: Elements like colour, texture, and layering could be very effective in educational spaces. For instance, using different materials or colours within a building can define various learning zones, much like how different fabrics create different looks in fashion. Similarly, the modular and adaptable nature of fashion could be applied to the flexibility of classrooms and learning spaces to accommodate different teaching styles and activities.

QUESTION: How do you think fashion-inspired architecture can enhance the learning environment for students?

ANSWER: Fashion-inspired architecture can create more engaging, dynamic spaces that stimulate creativity and learning. If students are in an environment that reflects innovation and style, it could inspire them to think outside the box in their own work. Architecture that reflects fashion's adaptability and creativity could help students feel more connected to their field and create a more immersive learning experience.

QUESTION: What challenges do you foresee in combining fashion and architectural design in educational settings?

ANSWER: One of the main challenges would be balancing the aesthetics of fashion-inspired designs with the practical needs of an educational environment. Educational buildings need to be functional, durable, and cost-effective, while fashion can sometimes be more experimental and short-term. Ensuring that fashion-inspired architecture remains sustainable, practical, and conducive to learning would be a major consideration.

UNIVERSITY OF THE WITWATERSRAND, JOHANNESBURG | SCHOOL OF ARCHITECTURE PLANNING

QUESTIONNAIRE 01 – STUDENT

Title of research: FORM FOLLOWS FASHION: TRANSLATING HAUTE COUTURE CRAFT INTO ARCHITECTONICS

QUESTION: How do you see fashion and architecture influencing each other in contemporary design?

ANSWER: I think both fashion and architecture are about expressing creativity and pushing boundaries. In contemporary design, they seem to share ideas of form, structure, and aesthetics. Fashion influences architecture by introducing new shapes, patterns, and materials, while architecture gives fashion ideas about space and how to use it. They both reflect cultural trends and innovation, so I see a lot of overlap in how they influence each other.

QUESTION: Can you think of any buildings or designs that remind you of fashion trends?

ANSWER: Yes, some modern buildings, like shopping malls and trendy boutiques in Johannesburg, remind me of fashion trends. For example, some buildings have a sleek, minimalist look that reminds me of the current trend for clean, sharp lines in clothing design. Also, buildings with bold, geometric shapes make me think of avant-garde fashion where designers experiment with form and volume.

QUESTION: What fashion elements do you think could be used in building designs to make them more appealing?

ANSWER: I think elements like texture, layering, and colour would make buildings more appealing. Just like how fashion designers mix materials or use bold patterns, buildings could have textured facades or interesting materials to catch the eye. Even subtle details like pleats, folds, or unique colour schemes could make a building stand out, much like a well-designed outfit.

QUESTION: How do you think fashion-inspired architecture can impact the way people experience spaces?

ANSWER: Fashion-inspired architecture can make spaces feel more vibrant and exciting. If a building has a unique design that reminds people of fashion, it could make the space feel more modern and creative. People might feel more inspired or connected to the environment, especially in places like design schools or cultural hubs where creativity is encouraged. It could also change the way people interact with the space, making it feel more dynamic or playful.

QUESTION: What challenges do you think might arise when combining fashion and architectural design?

ANSWER: One challenge might be that fashion trends change quickly, but buildings are permanent. It could be hard to design a building that stays relevant and stylish over time. Another challenge is that fashion can be experimental and not always practical, while buildings need to be functional and safe. Balancing creativity with practicality might be difficult when combining the two.

UNIVERSITY OF THE WITWATERSRAND, JOHANNESBURG | SCHOOL OF ARCHITECTURE PLANNING

QUESTIONNAIRE 01 – SHOPPER

Title of research: FORM FOLLOWS FASHION: TRANSLATING HAUTE COUTURE CRAFT INTO ARCHITECTONICS

QUESTION: How do you see fashion and architecture influencing each other in contemporary design?
ANSWER: I don't know much about architecture, but I think both fashion and buildings can influence how things look. Fashion changes fast, but buildings usually stay the same for a long time. Maybe they influence each other by making places look more stylish or trendy, but I've never really thought about it.

QUESTION: Can you think of any buildings or designs that remind you of fashion trends?
ANSWER: Not really. I'm more familiar with fashion stores and markets, and most of them don't look fancy. The buildings I see are just simple and practical, like the stalls where they sell clothes. I don't really notice any fashion trends in how the buildings look.

QUESTION: What fashion elements do you think could be used in building designs to make them more appealing?
ANSWER: I think bright colours or patterns could make buildings look more interesting, kind of like how bright clothing stands out. Maybe the outside of buildings could have patterns like on clothes, or they could have signs that stand out, just like clothes with bold designs.

QUESTION: How do you think fashion-inspired architecture can impact the way people experience spaces?
ANSWER: If buildings looked more stylish, it might make people want to shop there more. A place that looks nice might feel more fun or welcoming. But I'm not sure how much it would change how I shop. I usually just look for places that sell what I need, and I don't think too much about how the building looks.

QUESTION: What challenges do you think might arise when combining fashion and architectural design?
ANSWER: I guess it could be hard because fashion changes quickly, and buildings don't. You might design a building based on what's in style now, but it could look old in a few years. Also, clothes can be light and easy to change, but buildings need to be strong and last a long time, so I think that could make it harder to mix fashion with building design.

QUESTIONNAIRE 01 – SMALL BUSINESS OWNER

Title of research: FORM FOLLOWS FASHION: TRANSLATING HAUTE COUTURE CRAFT INTO ARCHITECTONICS

QUESTION: How do you see fashion and architecture influencing each other in the business context?

ANSWER: I'm not sure how they influence each other, but I think both can help attract customers. If a building looks nice, more people might come in to see what's inside, just like how good-looking clothes attract buyers. In business, it's all about making things look good so people feel like coming in.

QUESTION: Can you think of any buildings in the fashion district that remind you of fashion designs?

ANSWER: Bright colours, big windows to show off the clothes, and signs that stand out. Just like in fashion, you need to catch people's attention from far away. If the outside looks stylish, people might come inside to check out the store.

QUESTION: How do you think fashion-inspired architecture can impact your business and customer experience?

ANSWER: I think bright colours or patterns could make buildings look more interesting, kind of like how bright clothing stands out. Maybe the outside of buildings could have patterns like on clothes, or they could have signs that stand out, just like clothes with bold designs.

QUESTION: How do you think fashion-inspired architecture can impact the way people experience spaces?

ANSWER: If the building looks more stylish, I think more people would want to shop there. It might make the whole place feel more lively and interesting, which could be good for business. People like to shop in places that feel trendy and modern, so it could help attract more customers.

QUESTION: What challenges do you foresee in combining fashion and architectural design in your business environment?

ANSWER: It could be expensive to make the building look fashionable, and for a small business, that might be hard. Also, fashion changes all the time, but buildings stay the same for a long time. It might be tough to keep the place looking trendy without spending too much money, and we also need to focus on selling clothes, not just on how the building looks.



FORM FOLLOWS FASHION

TRANSLATING HAUTE COUTURE CRAFT INTO ARCHITECTONICS