FIGURE 8.a  A new way of looking at chairs, Digital collage
8.1. Introduction

This chapter explains the process that was followed to reach to the final design proposal. The programme, as the driving force of the design process, influenced all the design decisions. The design process is discussed in terms of the major decisions that lead to the final design.

8.2. Design Decision A: Placement in the building

A key decision was to determine the placement of the museum in the Standard Bank Centre. As a continuation of the context study, models of different scales were used to explore the interior space. The building was explored by placing the museum on different levels and in different positions and assessing the validity thereof.

It was decided that, in order for the museum to provide public interaction and have maximum visual impact, it should be positioned on the three public floors: lower ground floor, lower ground floor mezzanine and ground floor.
Justification of museum placement in building
The two main features of the building are the circulation routes and the atrium space. The museum is positioned in the atrium to make users of the building aware of the atrium space. The Ground floor is seen as the starting point of the museum where pedestrians enter the building on the street level.

The atrium was selected as the main intervention position because of the following reasons:

- It allows the museum to be visible from the existing circulation routes.

- It gives an additional function to the atrium that is currently under-utilized.

- By allocating the museum on different floors, it breaks away from the horizontal planes that dominate the spaces in the building.

The contemporary museum objectives influence the position of the museum
The museum should be positioned in a public place where people would walk past exhibitions or have a partial museum experience as part of their daily routine. The museum experience starts on the street level (Ground floor). This allows the people of the area to have an accidental museum encounter.
8.3. Design Decision B: Form of the Museum

Circulation informing the form of the museum

Instead of being a destination point, the satellite museum is an experience that is encountered accidentally on route to other destinations such as work, the bank on the lower ground floor of the building, or the state theatre. The three entrances of the building allow people to rush through or linger to do window shopping.

In order to provide a museum experience with a fast pace and a sufficient circulation route that simulate the existing circulation inside the building, the museum is envisioned as a path leading into more defined exhibition spaces.

The museum consists of two parts:
1. A ramp as circulation form and exhibition space in the atrium.
2. Exhibition spaces on the lower ground floor mezzanine level.

By taking on the shape of a ramp the museum contrasts with the building’s horizontal spaces and strict hierarchy of use. The flowing, sculptural quality of the ramp gives the intervention a different character than the rigid, modular building.
**Linear Organization**

The museum experience is arranged in a linear configuration. The shape of the first part of the museum is a ramp that encircles the three elevator shafts in the centre of the atrium. The ramp is an expression of the museum path that encourages forward movement of the museum visitor. Linear organizations express a direction and signify movement (Ching, 1996:198).

The curvilinear shape of the ramp makes optimal use of the atrium space and provides views to the whole building (Ching, 1996:199). The museum ramp surrounds the elevators while at the same time offering a new experience of the atrium space.

**Approach**

The first phase of the circulation system is the approach (Ching, 1996:230). The users of the building will encounter the museum as they walk along their normal path inside the building to their everyday activities. The approach to the museum is subtle; the visitor is aware of the atrium space and the people using the building. This museum is an experience that is positioned within an existing building. The museum conveys information while relating the information to everyday situations. The path is an important aspect of the museum as this is the order in which the visitor takes in information and experience the museum. The path is seen as the form generator and narrative.

**Configuration of the Path**

The museum consists of a path that leads from the ground floor to the lower ground floor. The visitor has the option to leave the ramp and buy a ticket for the museum experience on the mezzanine level.

The path on the ramp orientates the viewer inside the building. The visitor is aware of the atrium space and the people using the building. This museum is an experience that is positioned within an existing building. The museum conveys information while relating the information to everyday situations. The path is an important aspect of the museum as this is the order in which the visitor takes in information and experience the museum. The path is seen as the form generator and narrative.
Form of the Circulation Space

The form and scale of a circulation space should accommodate the movement of people as they promenade, rest or pause to take in a view along the path (Ching, 1996:268). The museum as a circulation element of the building is not merely a functional linking device; it is an experience. The form of a circulation space is influenced by the definition of its boundaries, the manner its form relates to the spaces it connects and the qualities of scale and view that are articulated (Ching, 1996:268).

The circulation space of the museum is not enclosed; the spaces are visually and spatially connected to the atrium and the rest of the building. The museum becomes an extension of the existing movement routes inside the building. The scale and proportions of the museum is determined by the fact that the museum should be able to accommodate a large number of people moving through the spaces.
Circulation Precedents

1. Painting Gallery (Kunstbunker)

Philip Johnson
New Canaan, Connecticut, USA
1965
Private Art Museum (Private Collection)

Description: The museum is an underground design for the architect’s personal contemporary art collection, with only the entrance exposed in a grassy mound. Paintings are displayed in four interlinked circular spaces of varying diameters. The rooms contain swiveling newel posts to which panels are attached onto which paintings can be displayed (Newhouse, 1998:18).

Issues addressed: The design addresses the issues of viewer fatigue and storage space in the event of museum growth.

Strengths: The museum offers an interesting approach to movement and interaction where the viewer sits while the paintings move past on panels.

Concerns: A large amount of space is ‘wasted’ with the radii of the circles, and this limits the size of paintings that can be shown. The mechanical conveyance of objects tends to destroy the sense of immediacy which is at the core of museum communication.

2. Horno 3 (Museum of Steel)

Nicholas Grimshaw
Monterrey, Mexico
2007
Travelling Art Museum (45000 square ft)

Description: The indoor and outdoor spaces of the museum are built around one of three decommissioned blast furnaces (Jodidio, 2010:162). The museum was completed for the International forum of Cultures, and was meant to display the qualities of local craftsmanship. It houses an exhibition space, offices, workshops, educational spaces as well as an archive.

Issues addressed: Through adaptive re-use an aged blast furnace is turned into a museum sharing an educational environment that is part science center, part museum and part thrill ride.

Strengths: The elements of vertical movement (the spiral staircase and glass-enclosed elevator shaft) are main design features, symbolising the clarity and modernity of the design that contrasts with the industrial facility (Jodidio, 2010:165).

Concerns: The museum is aimed at children and families. If the program is changed slightly, it could be an attraction for other age-groups as well.

“All museum arrangement depend on a relation between a stationary exhibit and a moving observer.”

(Bednar, 1965:13)

APPLICATION OF RESEARCH

- Ch.2: Museums - Circulation is an important aspect of museum design.
- Ch.5: Response to context - The circulation of the museum should respond to the existing circulation.
8.3. Design Decision C: Shape of the Ramp

The shape of the ramp was influenced by SABS deemed-to-satisfy-rules (SABS 0400-1990: 152), as it is required that a landing should be provided for every 1.5m of vertical rise (in other words for every 18m length of ramp). According to the SABS deemed-to-satisfy-rules the gradient of the ramp should be no more than 1:12 and the ramp width (trafficable surface) should not be less than 1.1m.

The design that was proposed in June, 2010, entailed a ramp with an angular shape and different museum activities happening every 15 meters.

The shape of the ramp changed from this proposal to the final design, as the slope and landings were not sufficient. The idea of having multiple museum activities on the ramp was simplified to viewing the ramp as a form of circulation that leads to museum spaces that contain the museum activities.
FIGURE 8.16.b Plans of the design intervention submitted for June examination, not to scale (June, 2010).
FIGURES 8.16.c Lower ground floor plan of the design intervention submitted for June examination, not to scale (June, 2010).
Design Proposal
June, 2010

FIGURES 8.17.a-c Sketches of the museum spaces as a visitor on the ramp would experience it (June, 2010).
FIGURES 8.18.a, b Sections exploring the position of the ramp in the atrium space (June, 2010).

Design Proposal
June, 2010

FIGURE 8.18.a

FIGURE 8.18.b
FIGURES 8.19, 20 Working plans showing the shapes that were explored.

Plan of ramp
July, 2010

Plan of ramp
August, 2010
8.4. Design Decision D: 
The Display of Objects

The satellite museum exhibits objects that are in the storerooms of the Ditsong: National Museum of Cultural History. To create a hypothetical design scenario that enables the author to design a contemporary museum experience, it is stated that the satellite museum will display chairs as cultural objects.

The objects of the Ditsong: National Museum of Cultural History are divided into categories according to the materials they are made of and the preservation processes the objects are taken through (Cultural Heritage Organisational Structure, 2010). Chairs fall into the Section: metal, wood, textile and ceramic collection.

A chair is a cultural object that is of such a shape and size that it influences the space of the room it is placed in. The act of sitting relates to activities that can take place in an atrium. There is a lack of seating in the Standard Bank Centre, and the museum can contribute to the space in this matter.

The exhibition spaces are designed to accommodate chairs and to provide seating along the ramp and inside the museum.

"To 'exhibit' is to hold out, to offer, to display objects or works: to expose”
(David Dernie, 2006:6)

"The meaning of everyday objects gradually and spontaneously migrates, (...) sometimes becoming manifestos, i.e. bearers of a cultural meaning...”
Frederica Zanco (DOMUS, 2010:105)
FIGURES 8.21.a-g Design sketches exploring seating possibilities on the ramp and exhibition opportunities (July, 2010).
FIGURE 8.22 The Vodashop window display in the Standard Bank Centre.
FIGURE 8.23 The Edgars window display in the Standard Bank Centre.
FIGURE 8.24 Informal stands in Sammy Mark Square exhibiting objects.
FIGURE 8.25, 8.26 Chairs on display in the Vitra design museum (Boissière, 1990).

“Groups of objects brought together in the form of a collection generate social and cultural statements.”
(Eileen Hooper-Greenhill, 2000:49)

APPLICATION OF RESEARCH

Ch.5: Response to context
- Chairs are three-dimensional objects that would not disappear in the voluminous atrium space.

Ch.4: Context
- Chairs as museum objects stand in contrast with the objects for sale in the building.

Ch.3: Culture
- Any man-made object can be seen as a cultural artefact.

Vitra Design Museum
Architect: Frank Gehry & Associates
Location: Weil am Rhein
Date: 1989
Project Manager: Robert G. Hale, AIA
Project Architect: Berthold H. Penkhuys
Description: The Vitra Design Museum focuses on the historical and future development of furniture design. Its collection falls within the sphere of everyday culture (Boissière, 1990:7).

Design Application: The furniture is exhibited in such a way to motivate visitors to directly interact with the furniture, and in doing so grasp design through a new experience.

“...the making of displays happens at so many levels in contemporary life, from market stalls and shop windows to our home interiors...

...contemporary exhibition design draws increasingly on display techniques that have emerged outside the confines of the gallery.”
(David Demie, 2006:102)
8.5. Design Decision E: Transitions and Thresholds

The design intervention deals with many transitions. Examples of spatial transitions are: the transition from outside the building to inside, the transition from one floor level to another, the transition from the passages of the building to the ramp in the atrium volume and the transition between the commercial spaces and the new museum spaces.

The thresholds of these transitions are sometimes emphasized with changes in design elements such as lighting, materials, spatial quality and visual barriers. In other cases the thresholds are minimal and a person is unwittingly lured into the museum experience.

The thresholds were explored by enclosing the ramp in a membrane structure that would connect the ramp with the existing commercial spaces and emphasize the organic quality of the ramp inside the rigid building. The author decided against the use of a membrane in the final design, as the ramp is seen as an element that ‘sits’ in the space and opens up to expose the user to the atrium volume and the skylight, rather than a wrapped element.

DESIGN PRECEDENT STUDY

Title: Marsyas (Installation Art)
Artist: Anish Kapoor
Location: Turbine Hall of the Tate Modern Museum in London
Date: 2002
Engineer: Arup, London
Membrane Fabricator: Hightex, Lucerne
Description: Three steel rings are joined together by a red PVC membrane to create a sculpture that floats in the space. The geometry generated by the steel structures determine a shift between vertical and horizontal shapes.
Design Application: A lightweight, sculptural organic structure in an open area defines space, creates focal points and thresholds and adds another layer to the space. The relationship of the viewer to object in space plays an important role in the installation.
FIGURES 8.27.a-d Design sketches exploring the ramp wrapped in a textile membrane (August, 2010).
FIGURE 8.28 Digital collage exploring the connection between the ramp and the building (August, 2010).
8.5. Design Decision F: Structure of the Ramp

The ramp structure is a person’s first encounter with the museum that leads to more enclosed museum spaces. It is a circulation element that provides a spatial experience of the atrium. As part of the satellite museum, the ramp is also an exhibition space that facilitates the display of museum objects.

Chairs are suspended at certain points by a cable system above the ramp. A person walks underneath the suspended chairs and views the chairs from unusual angles.

Seating is provided at intervals on the edges of the ramp. This encourages people to pause and look at the building as a ‘living museum’.

DESIGN PRECEDENT STUDY

Centenary Building
Architect: Earthworld Architects and Interiors
Location: University of Pretoria Campus
Date: 2009
Project Architect: André Eksteen, Braam de Villiers, Leon van der Westhuizen
Description: The prominent concrete ramp on the South side of the building contains concrete and steel seating elements on the one side, to allow students to wait for classes.
Design Application: The museum ramp will provide seating for people to experience the atrium space as a living museum from different angles. The seating will not impose on the walkway and distract people from the museum experience.
The design that is portrayed in this section of the chapter is based on the design concept as discussed in chapter 7. The final design is a result of the design development that makes up the first part of this chapter.

A contemporary museum experience opposes the idea of a museum portraying the same message for a hundred years to come. The concept of a museum in flux ensures a museum experience that is constantly changing. This would motivate people to visit the museum on a regular basis. This concept applies to the management of a museum with changing exhibitions.

The museum consists of two parts: firstly a ramp circulation structure that spirals around the existing elevator shafts in the atrium space. The second part of the museum is a series of exhibition spaces for which a person has to pay to gain entrance.

The museum spaces are designed to accommodate changing exhibitions. A stipulated path through the museum generates movement, but a visitor can deviate from the path and determine the amount of time spent in the museum.

The design aims to inspire a new perspective on museums in general and hopes to establish the museum as a part of a city user’s daily routine.
Entances and Thresholds

FIGURES 8.36 Ground floor plan of design intervention in existing building.
FIGURE 8.37 Ground floor plan of design intervention indicating entrances and thresholds, not to scale.

The Eastern entrance of the Standard Bank Centre on Van der Walt Street is seen as the main entrance to the building. A person crosses an existing threshold between the interior and exterior when entering the building.

Once inside the building a person walks between a museum exhibition and a shop, in a space where it is unclear where the shop ends and the museum begins. This blurring of thresholds is enhanced with the shadows of chairs that are projected by gobos onto the walls. The concrete floor slab is cut out and replaced with translucent glass panels onto which images of chairs are projected from the Silhouette Room underneath.

The starting point of the ramp is considered to be the entrance to the museum experience. A person is confronted with the choice of accessing the ramp or continuing past the ramp into the retail space of the building. This defined threshold is pronounced with the changing levels between ramp and existing floor, different lighting and the manner in which the ramp structure contrasts with the rest of the building’s character.

Chairs are suspended by cables above the ramp. The ramp structure expresses the changes in thresholds by sometimes creating a space separate from the atrium with lasercut plywood panels. The threshold between the ramp and existing building is blurred where seating is positioned on the edge of the ramp as well as on the edges of the existing floorslabs.
Entrances and Thresholds

On the mezzanine level the ramp leads to the museum entrance. The entrance is a pronounced threshold that can be locked when the museum is closed while the rest of the building is open.

Inside the museum the entrances to each room is marked with a defined threshold. Each exhibition space has unique qualities and portrays the objects in a different way.

The path that a visitor follows through the museum is suggested with an orange bulkhead. There is no threshold that prevents the visitor to deviate from the path and follow his or her own route.

From the exhibition rooms the visitor has a view of the ramp and the atrium. The visual links emphasize the position of the museum inside a commercial building.

The entrance onto the ramp to the lower ground floor is the threshold where the visitor leaves the museum and moves into the atrium space.
Transfer of Information

In museums there are various layers of information for visitors to take in. The designer has to take into account that some people choose to walk through museums at a fast pace and only scan labels of objects, while other people spend time considering each object.

In the satellite museum, the information is categorized under three captions:

1. Straightforward information: This includes the labeling of the objects or posters and other written information provided in a manner that attracts attention. The information should be sufficient for the person to understand the exhibition and each object.

Signage of the museum falls under this category, as the information should assist the person in navigating a route through the museum.

2. Interpretive information: This type of information is gathered through the reading of pamphlets or booklets provided by the museum, that gives a deeper insight into the objects. This information is dependant on the person’s deductions or assumptions that are made about an object. Interpretive information is subjective.

3. Interactive information: The satellite museum offers people the opportunity to sit on chairs and interact with the objects in a physical manner.

Computer stations are provided where museum visitors can search for more information regarding the objects on display.

Dialogue between object and visitor

The satellite museum provides a variety of opportunities where dialogue can take place between the object and visitor.

In the Story Room, the audio stories are seen as the object visitors interact with, therefore the ‘dialogue’ that takes place actually involves the visitor listening to what the ‘object’ is saying.

In the Silhouette Room a visitor has an interpretive experience as the chairs are exhibited in silhouette and a visitor can make assumptions based on the shape of the chair or the shadows that are created.

The Object Room enables a visitor to explore objects that are concealed in shelves. The visitor can take select objects to hold and touch.

The Context Room displays chairs in terms of how a person would encounter the chairs in real life. A chair would be positioned as if next to a desk or directed towards at a television screen.

Opportunities for interactivity enables visitors to have a ‘personal dialogue’ with the objects.

FIGURE 8.41 An example of a display in the Context Room.
FIGURE 8.42 Section A-A: section through the museum spaces parallel to Van der Walt Street, not to scale (November Exam Presentation).
FIGURE 8.43
FIGURE 8.43 Section B-B: section through the museum spaces parallel to Church Street, not to scale (November Exam presentation).
FIGURE 8.44 Section through the atrium showing spatial intention of ramp experience, not to scale (November Exam Presentation).
FIGURE 8.45 3D rendering of entrance into building from Van der Walt Street (November exam presentation).
FIGURE 8.46 3D rendering of museum ticket counter (November exam presentation).
FIGURE 8.47 3D rendering of Story Room (November exam presentation).
FIGURE 8.48 3D rendering of computer stations (November exam presentation).
**Transfer of Information**

The silhouette room provides an interpretive experience:

Museum visitors observe chairs exhibited in glass display cases of differing heights. The chairs are lit from inside the display cases, creating shadows on the walls and ceiling of the dimly lit room. The shadows portray distorted images of chairs. A person can deduce information or make assumptions regarding the chairs based on their silhouettes.
Transfer of Information

Information is transferred in two ways in the context room:

The chairs are placed in relation to the floating glass element in the centre of the room. The abstract contextualization of the chairs can be interpreted by individuals based on their knowledge or understanding of a chair.

Museum visitors can sit on the chairs in the context room and receive interactive information in this manner.
FIGURE 8.51 Ground Floor Plan, not to scale (November exam presentation).
FIGURE 8.52 Lower Ground Floor Mezzanine Plan, not to scale (November exam presentation).
FIGURE 8.53 Lower Ground Floor Plan, not to scale (November exam presentation).
FIGURES 8.54 - 8.64 Photographs of model used to express the three-dimensional spaces (November exam presentation).