

LEVI Stool

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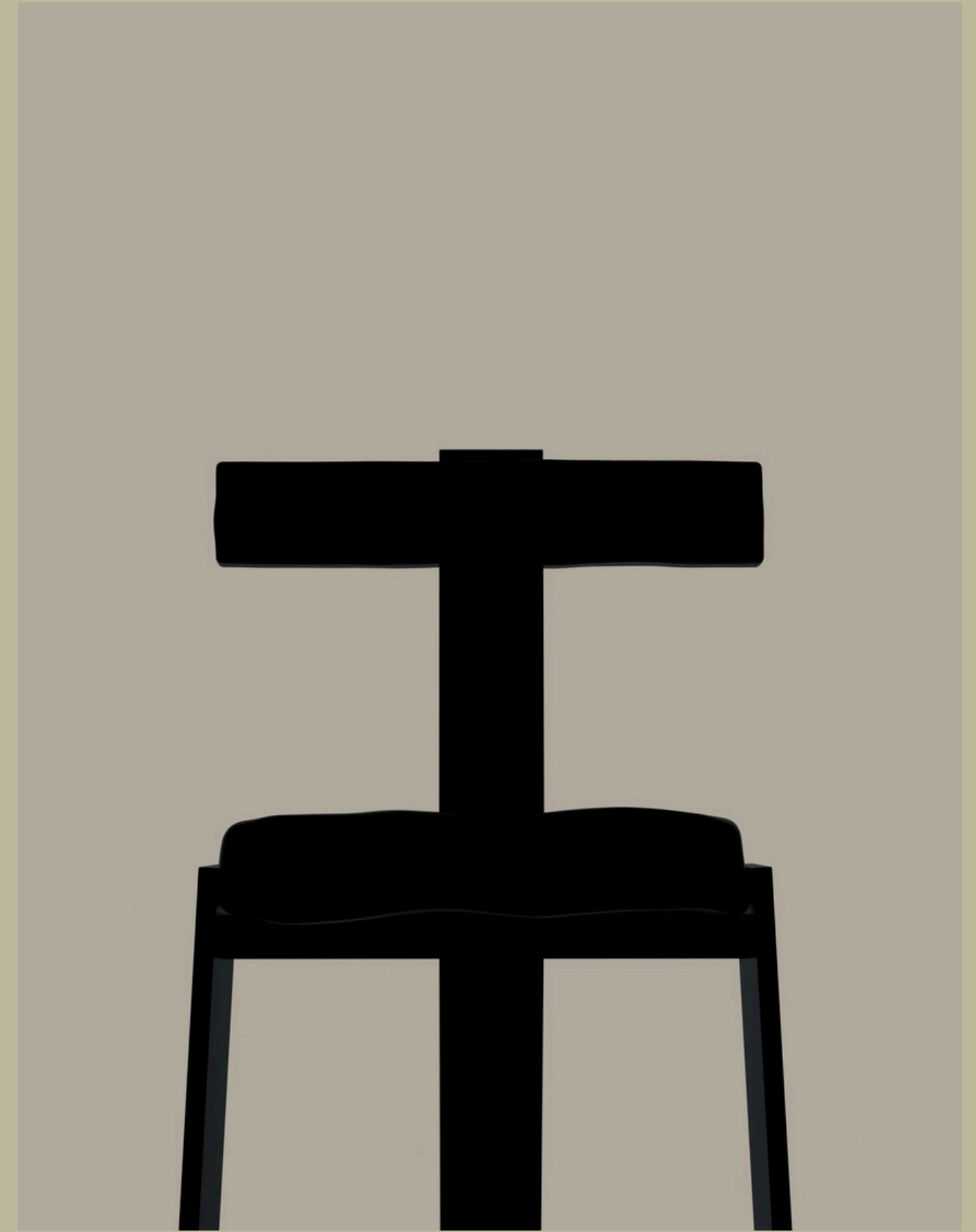


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PUGH MATRIX
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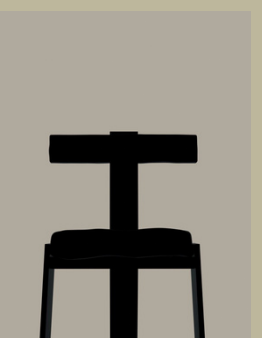
Introduction

LeviStool.co is a sustainability focused company which makes unconventional wooden stools inspired by pentahedron shape similar to pyramids for better tipping stability.

In a traditional stool the weight is distributed on only 4 points but our design is made for household and commercial use which even accommodates acrophobic people as it supports throughout the perimeter of the stool.

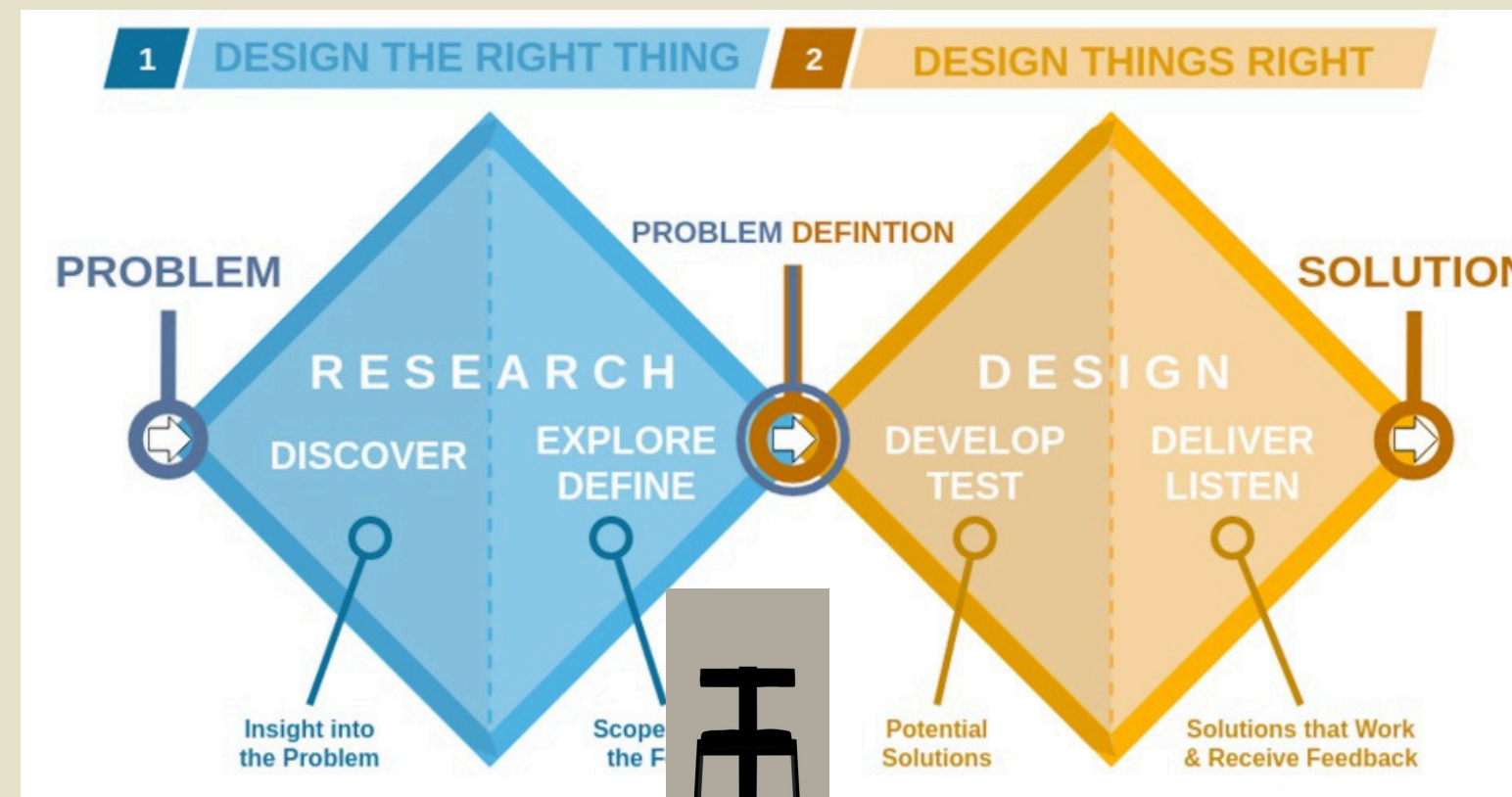
About the company

- Mission - Delivering multifunctionality with aesthetics
- Vision - Sustainable and stable stool for everyone



Design framework using Double Diamond Model

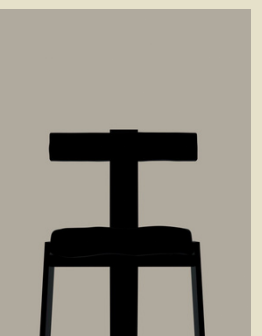
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The Double Diamond framework is a structured approach for problem solving and innovation. (Gustafsson 2019)

It consists of the following four phases:

1. Discover
2. Define
3. Develop
4. Deliver.



Discover

Discover (Identifying the problem or opportunity)



SWOT ANALYSIS

Strength

- Multifunction design for both seating and standing
- Improved safety with extended side arm
- Aesthetic and ergonomic appeal along with storage and hanging option

Weakness

- May be more expensive than standard stools
- New design may take some time to get user-friendly
- Limited market awareness as it's a new product concept

Opportunity

- Global stool market expansion: From \$15 billion in 2023 to \$22 billion by 2032 (Patel 2023)
- Eco-friendly design demand driven by sustainability-focused consumers, especially in Europe
- Rising demand for innovative, ergonomic, and aesthetic furniture

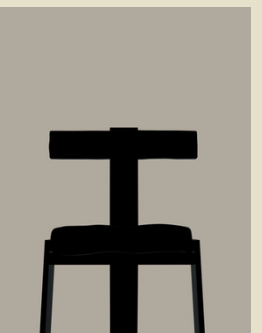
Threats

- Competition from major brands (IKEA, Herman Miller, Steelcase)
- Price sensitivity among consumers preferring cheaper alternatives
- Possible material sourcing challenges for high-quality wood
- Change in consumer preferences shifting towards other furniture styles or features



Range of Market

- 
- The global stool market was valued at \$15 billion in 2023
 - Expected to reach \$22 billion by 2032
 - **Asia Pacific:** Rapid growth due to urbanization & population
 - **North America:** Strong demand for innovative & premium furniture
 - **Europe:** Sustainability-focused consumers driving eco-friendly designs
 - **Middle East & Africa:** Hospitality sector expansion fuels market demand
 - **Key Players:** IKEA, Herman Miller, Steelcase, Haworth, La-Z-Boy



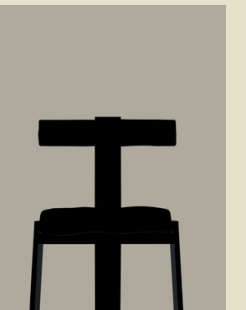
Key Takeaways

- Studied current stools to understand their safety problems.
- Identified common issues users face, especially those with a fear of heights (acrophobia) (Raypole 2019) .
- Looked at market trends showing the demand for multi-functional, aesthetic and stable stools.



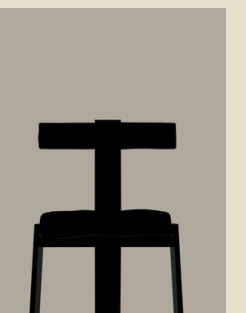
Define

Define (Refining the problem statement)



Problem Definition

- Lack of stable chairs especially for people with acrophobia
- Occupying floor space and storeability



Range of Gap

Declaration of Problem or Opportunity:

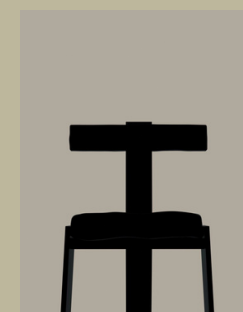
Traditional stool lack in versatility and safety features offering a fixed design which has a risk of falls and injuries (Courtney, Sorock et al. 2001). This is the major problem with people with acrophobia because lack of support can lower the confidence (Raypole 2019).

Clearly state the problem in the market :

Existing stools in the market are static and they lack in ergonomics and stability. Also, they do not really offer anything other being stools only.

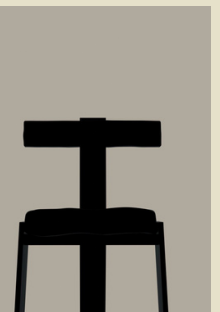
Highlight pain points for customers or businesses :

- Safety Risks
- Limited Functionality
- Aesthetics and ergonomics

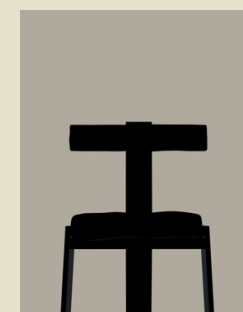
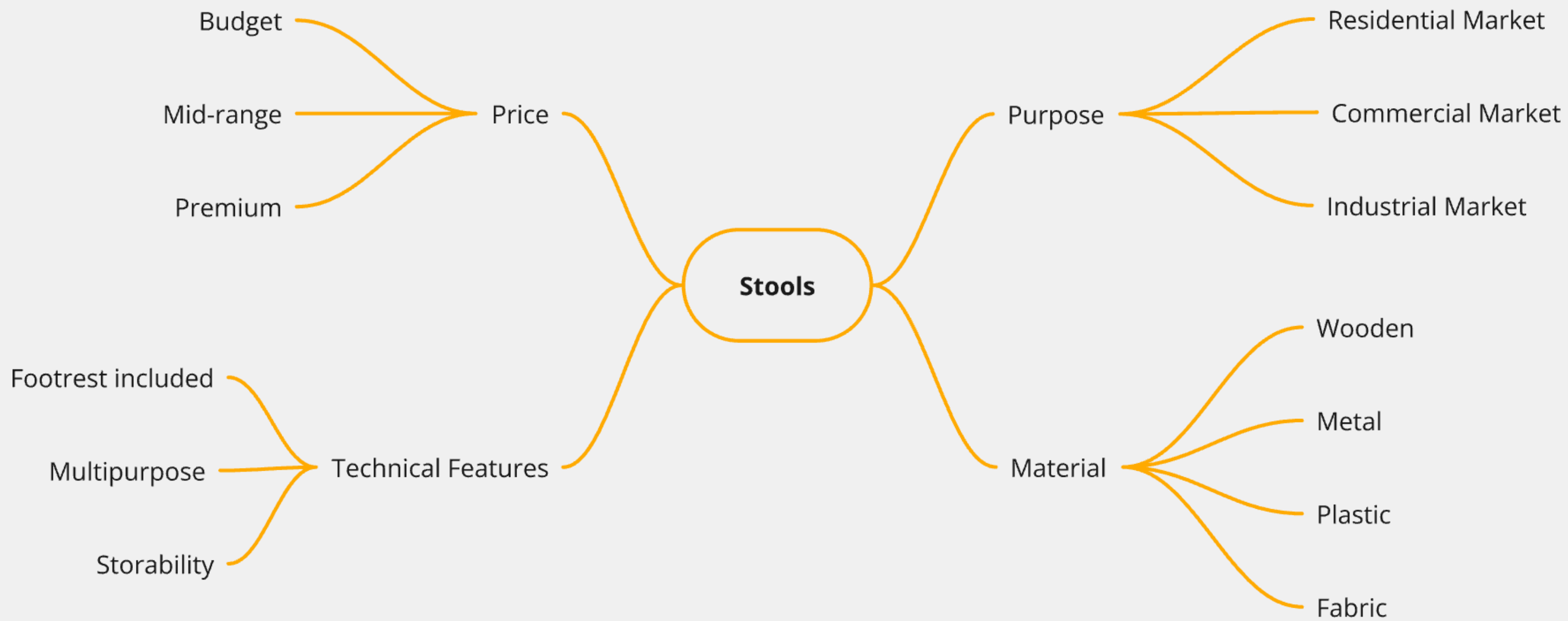


Develop

Develop (Exploring possible solutions)



Explore



Product Design Specification (PDS):

Functional requirements :

- Dual-Mode Use: Designed for both sitting and standing with an adjustable structure
- Safety Enhancement: Extendable side arm for added support and stability

Non Functional Requirements :

- Aesthetic Appeal: Modern, ergonomic design for home and commercial use
- Durability: Made from premium Red Oak wood for longevity (Uzcategui, Seale et al. 2020)
- Ease of Use: Simple extend/retract mechanism; user-friendly assembly

Key Design Parameters :

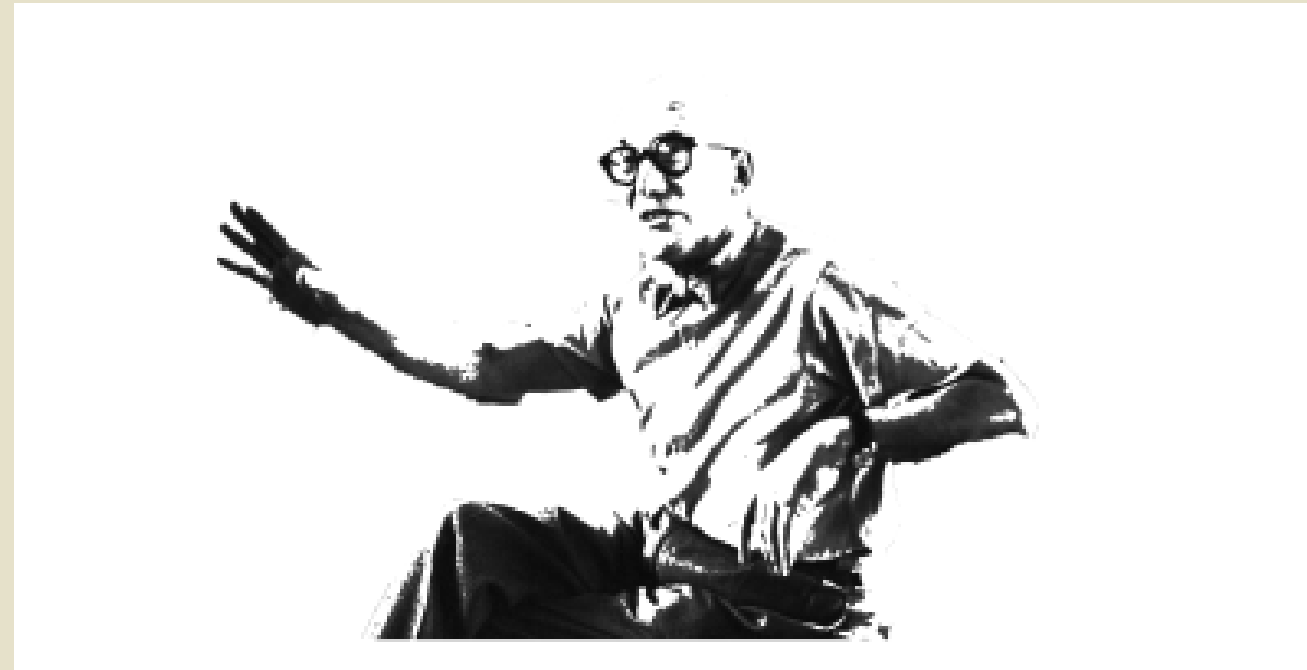
- Material: Red Oak wood with a durable finish
- Stability: Wide base and anti-slip base to prevent tipping

Usability Considerations :

- Portability: Lightweight yet stable for easy repositioning
- Maintenance: Simple cleaning and minimal upkeep for moving parts
- Assembly: Easy-to-follow instructions; minimal tools required



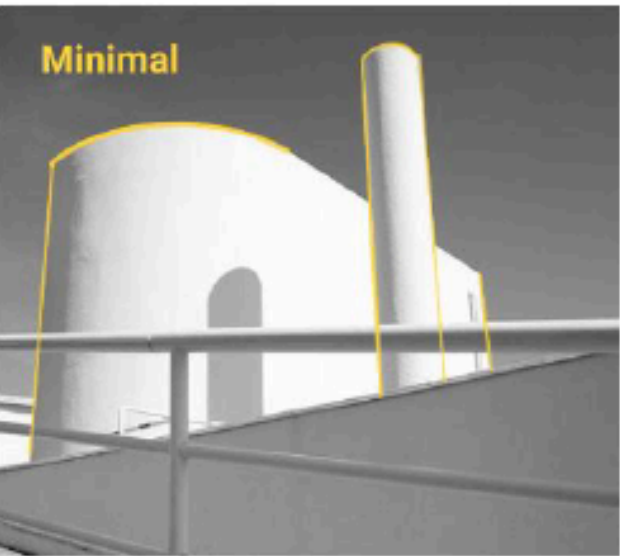
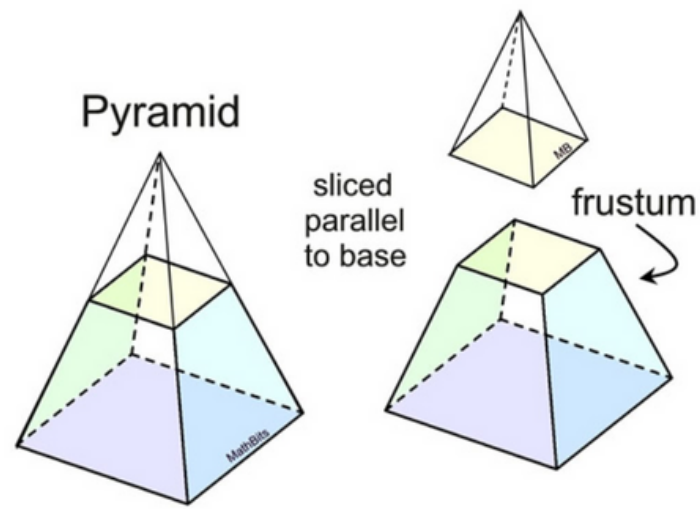
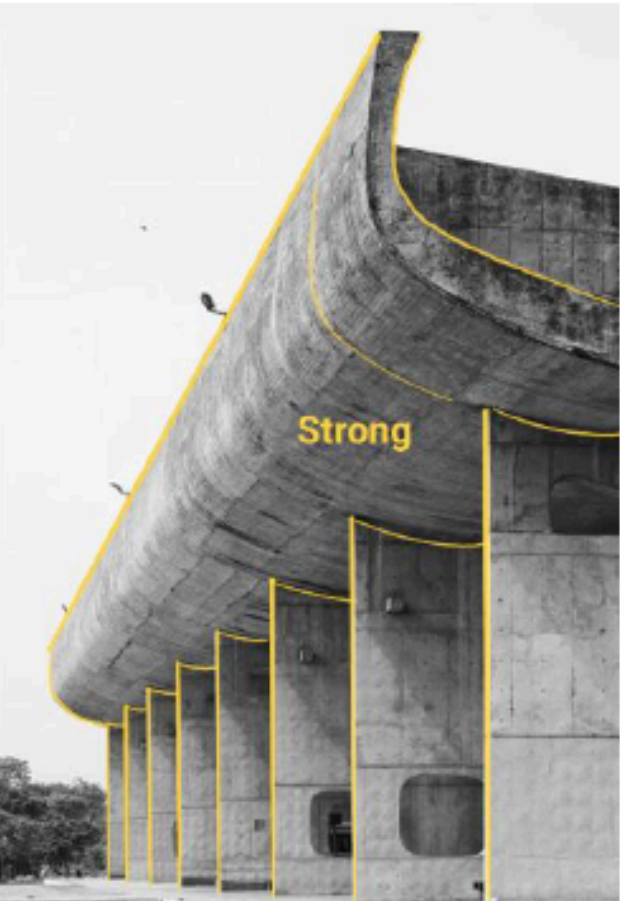
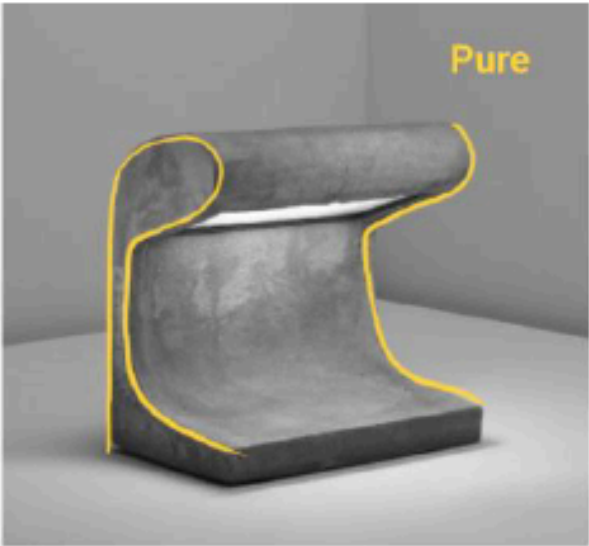
ABOUT **LE CORBUSIERS ARCHITECTURE**



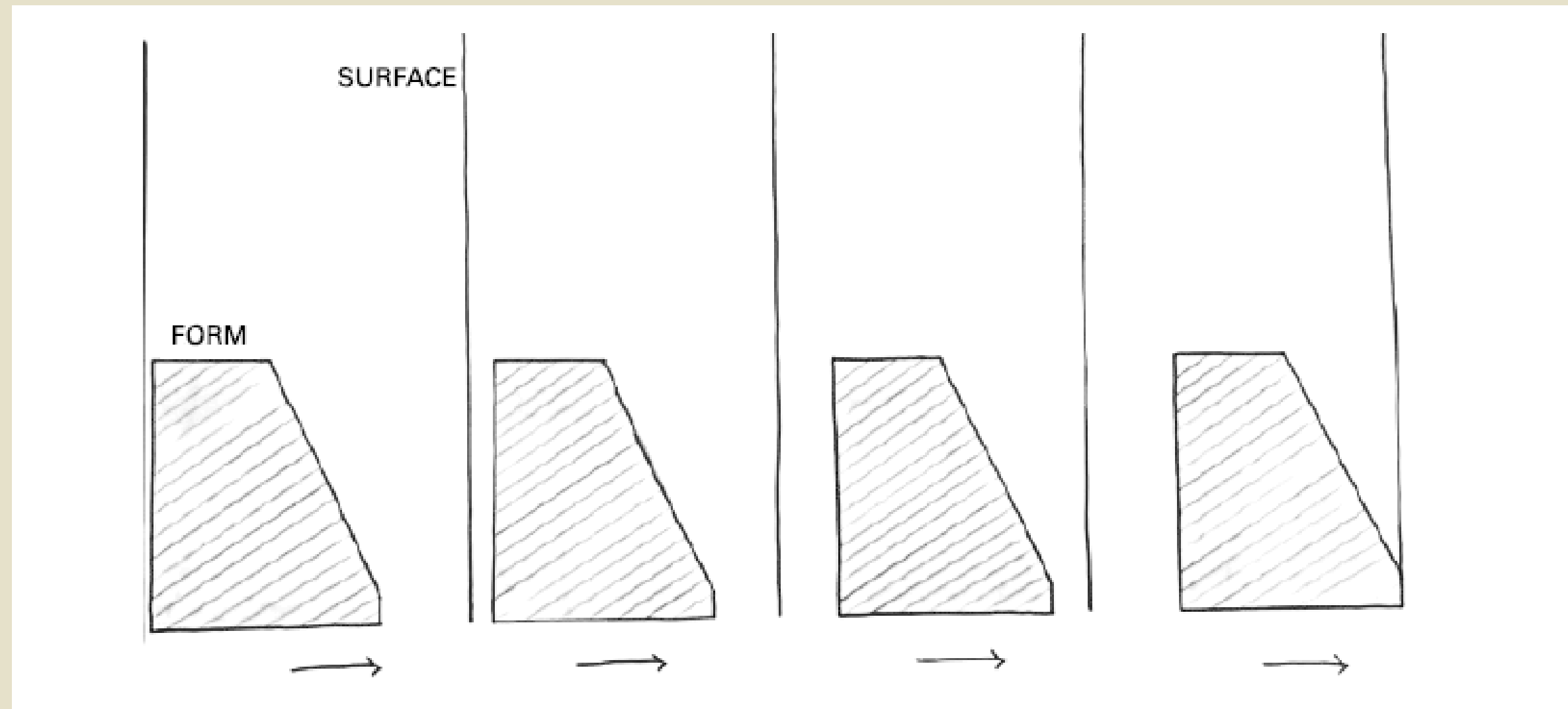
In our observations, We find Le Corbusier's architecture to be exceptionally robust and impactful. While his overall architectural style is characterized by simplicity, he skillfully brings attention to fundamental or concealed areas by employing primar colors. His architectural designs exhibit a distinct emphasis on geometry, creating a palpable sense of geometric harmony within the structures. Additionally, he adeptly combines various shapes and forms, seamlessly integrating circles with sharp-edged shapes while considering ergonomic principles and the natural inclinations of the human body (Corbusier 2013).The spaciousness of his architecture, along with open facades, contributes to an inviting atmosphere.



Moodboard



Design Ideation

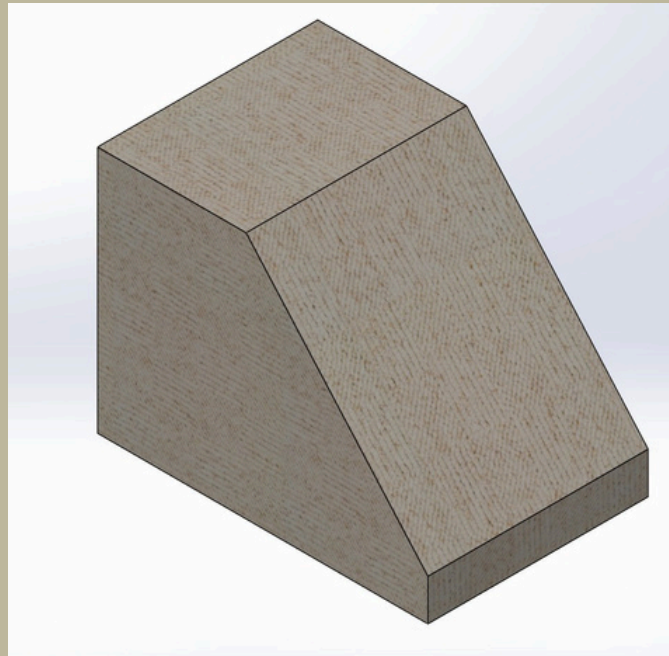


The idea was finalized by considering how the form will work and be used. The main goal of the design is to make sure the form is supported on any surface and looks strong and stable. The purpose of the form is to be used as a stool for sitting and standing. Users should feel confident while using it to stand on and comfortable when sitting on it. This design follows the idea that the form should match its function.



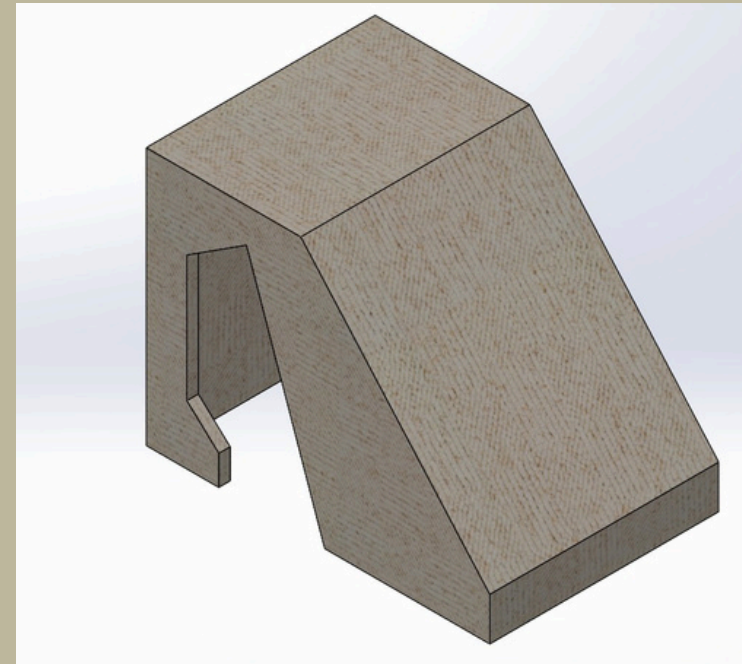
Alternative Designs

1



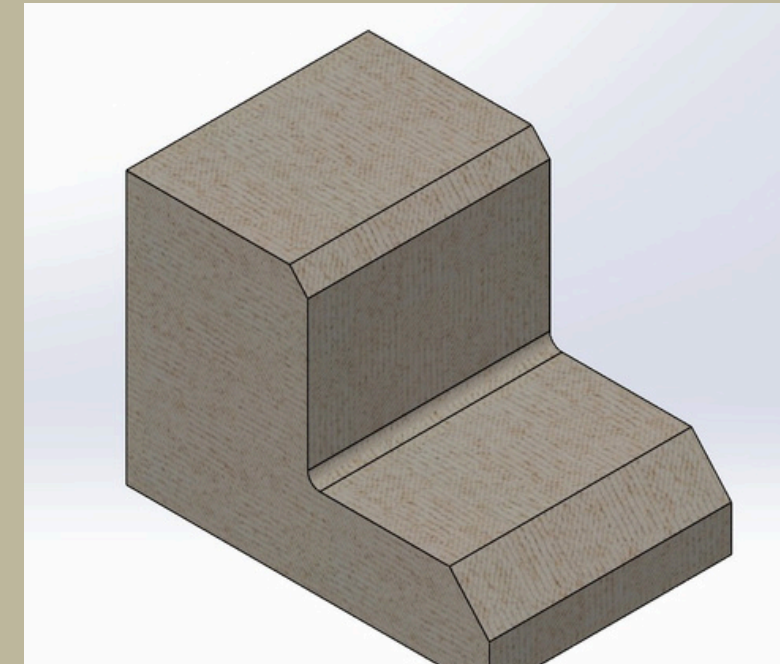
Basic Funtionality

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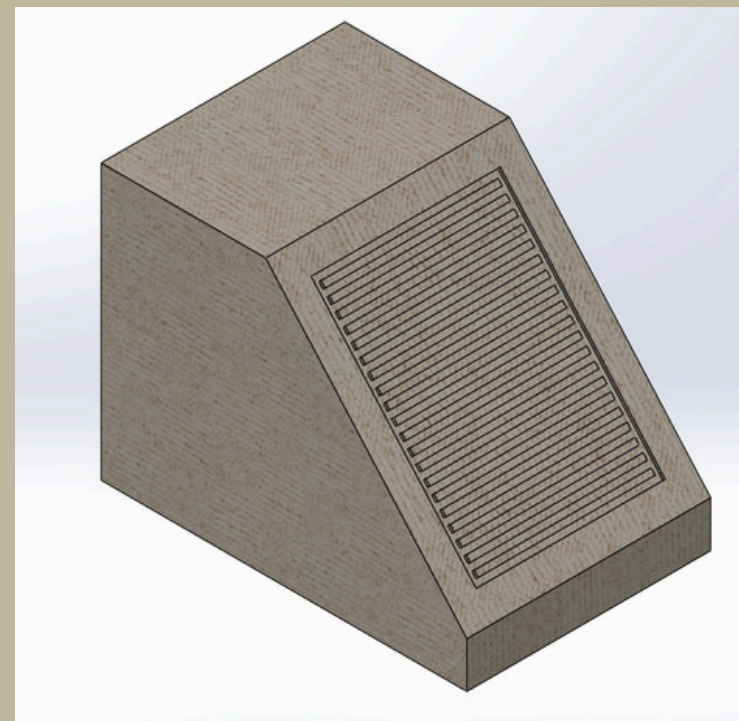
Aesthetics

3

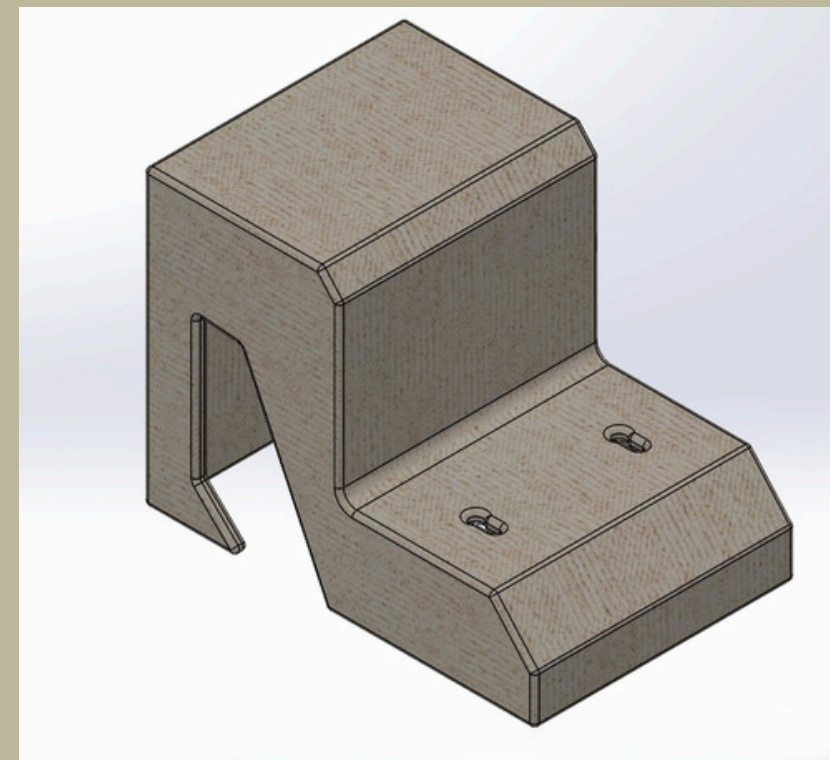


Ergonomics

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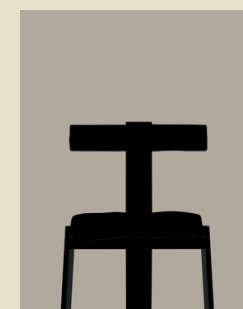







Multifunctionality



Design Concept Selection

PUGH MATRIX



Criteria	Weightage	Design 5 Levi Stool 	Design 4 	Design 3 	Design 2 	Design 1 
Stability	5	1	1	1	1	1
Ergonomics	4	1	-1	1	0	0
Aesthetics	3	1	1	-1	1	0
Portability	4	1	-1	1	1	0
Multifunctionality	4	1	1	-1	-1	-1
Storeability	3	1	1	-1	0	-1
		23	7	3	8	-2

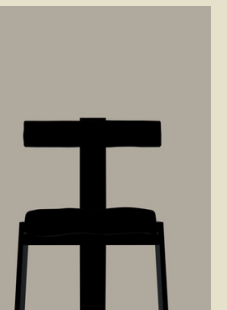
Ranking System

- 0 : The Reference Concept
- +1 : Design is better than the reference design
- -1: Design is worse than the reference design

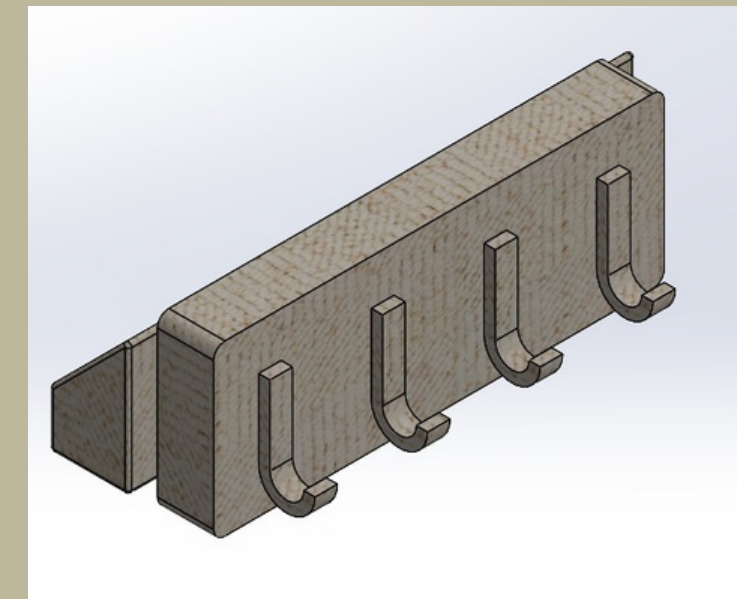
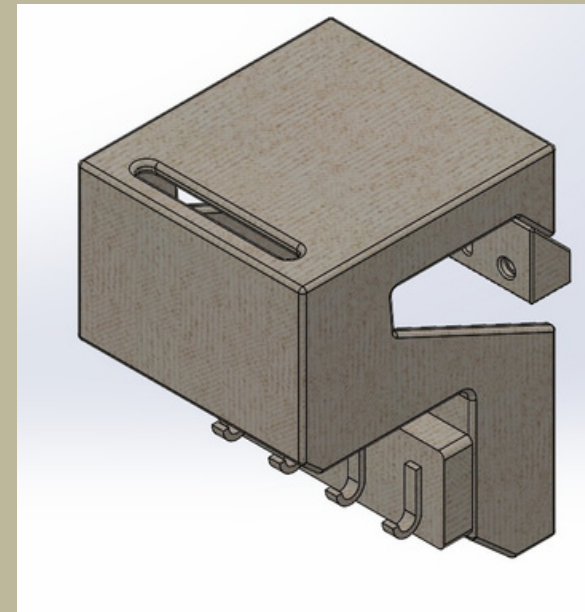
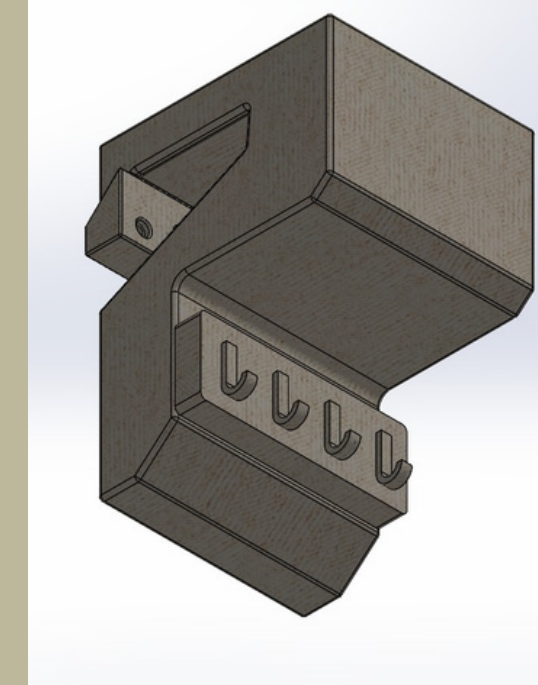
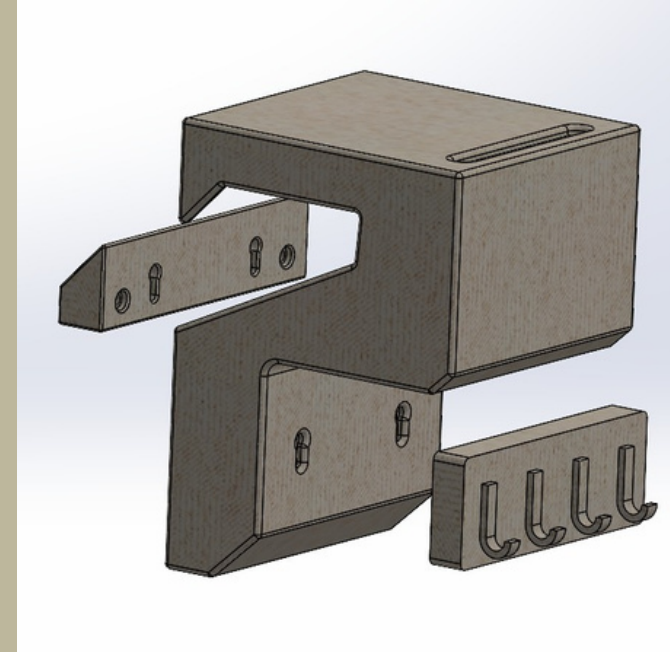
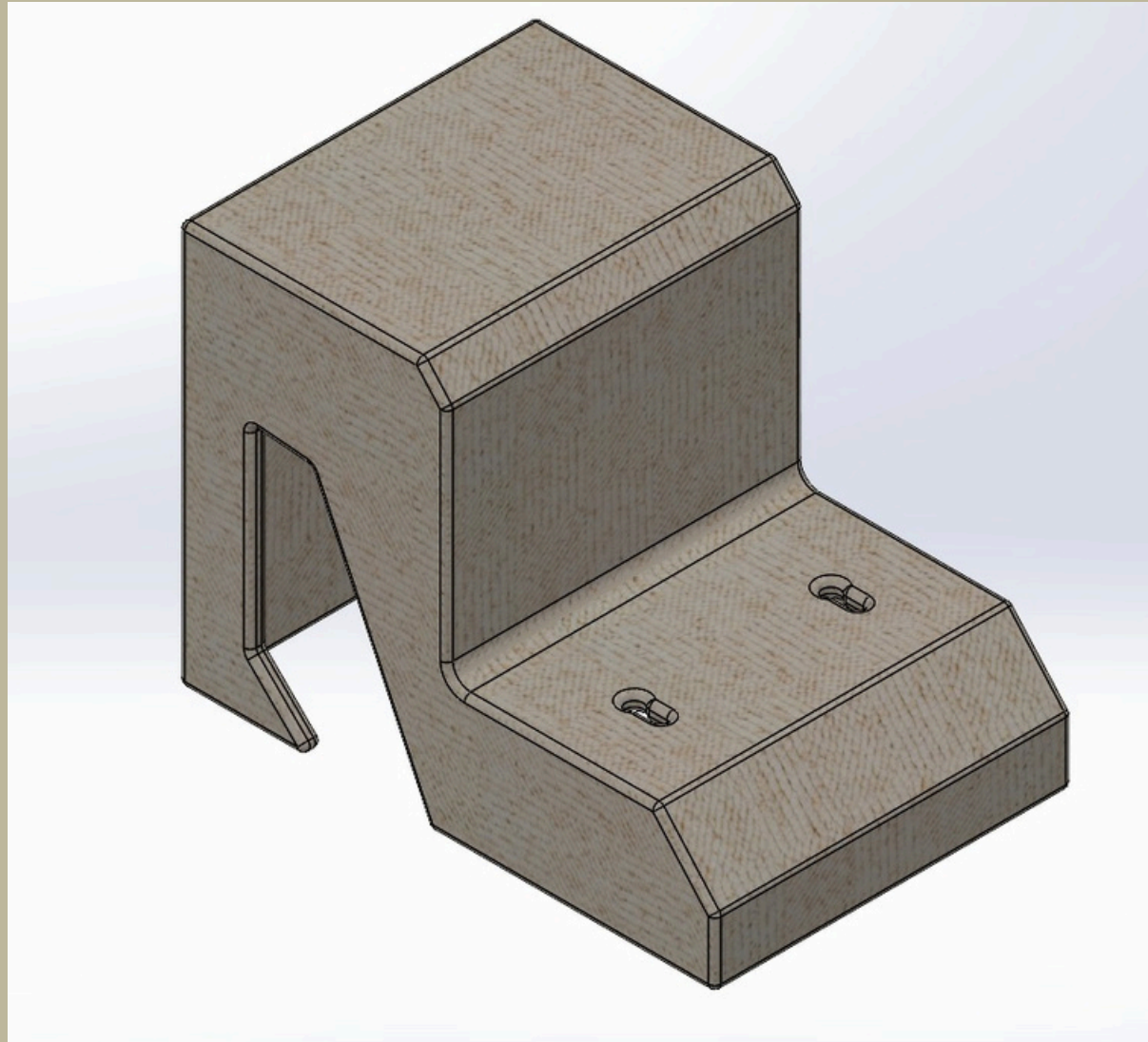


Deliver

Deliver (Finalizing and implementing the best solution)



Design Concept Selection

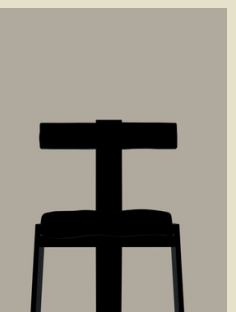


The selected stool serves the purpose of stool along with being aesthetic and ergonomic as it has handles and can be picked up from any face of the stool along with being portable and can be hung on the wall to save floor space all while having multifunctionality capabilities of serving as a shelf and a coat hanger



Summary

- The LEVI Stool features a well-thought-out design that addresses:
 - Stability
 - Ergonomics
 - Sustainability
- The project reflects a strong understanding of:
 - Market trends
 - Consumer needs (especially for multifunctional and eco-friendly furniture)
- Key challenges to manage:
 - Cost considerations
 - User adaptation
 - Market competition
- Areas for improvement in the document:
 - More details on the design process
 - Insights from user testing
 - Financial planning strategies
- The product has strong potential, but its success depends on:
 - Effective marketing
 - Cost management
 - Continuous innovation



References

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A stylized black silhouette of a chair, featuring a horizontal backrest, a central vertical post, a seat, and four legs. It is positioned on the left side of the slide.

Thankyou