

Report

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Acknowledgement

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Introduction

The report is part of the summer internship project carried out as a part of the M-des in Industrial Design program at IDC, IIT Bombay. The project helps to understand the various parameters that essentially makes a tourism project successful. It aims to visualize the key issues faced by the institute in disturbing these parameters and might hinder the development of the place at a later stage. The report also suggests solutions which are capable of giving a facelift to the institute by tiny tweaks to relevant parameters.

Project Brief

The unique feature of Sargaalaya is that it had artisans skilled in different materials.

Identify issues in Sargaalaya with respect to experience of tourism.

Proposal of solutions for the identified issues to be accommodated in action plan for next year

Explore possibilities of product development in crafts stalls.

Vision of the team

Aim

To identify issues related to tourism experience in the present scenario at Sargaalaya and propose solutions for the same.

Primary Objectives

Situation analysis of Tourism in Sargaalaya and identify opportunities for industrial design

Explore various materials and crafts and initiate innovative product development

Secondary Objective

Understand the general development parameters associated to tourism.

Analysis of the visitor pattern and development parameters

Generate conceptual design solutions related to tourism experience

Create prototypes of selected designs

Understanding tourism

Key ingredients of a tourist destination

Access

This includes moving visitors from their origin to and within the destination. Access also includes having suitable transport services and infrastructure to meet market needs, including airstrips and airports, wharfs and ports and appropriate forms of ground transport.

Attractions

These are things of value that motivate people to travel to another location. Attractions can be natural, cultural, scenic or events related. They also include activities that can be undertaken including walking, snorkelling or relaxing. On the reverse side, if a destination has negative features these need to be minimised or removed. For example, unsightly rubbish, polluted beaches or poor environmental management are likely to deter visitors.

Accommodation

Most destinations require a range of accommodation needs (styles, quality and prices) to meet different market needs, experiences and preferences. Building the right facility to match the dominant markets is important. Accommodation types include hotels, backpacker hotels, bed and breakfast, camping grounds, resorts, lodges and safari camps.

Amenities

This includes any other service that is required to meet the needs of the visitor including signs, retail shopping, restaurants and cafes, tourist information centres, government services (e.g. customs and immigration), telecommunications (e.g. internet, mobile phone) public toilets and emergency services (e.g. medical centres and hospitals).

Awareness

Strong and effective marketing campaigns are essential for building destination awareness and branding. The local destination community must also have an awareness of the value of tourism, be positive about what it has to offer and train its frontline tourism staff and industry employers to have a positive attitude to tourists. A perceived I

Elements of successful tourism

High quality customer service

Having well-trained not just hospitable staff at all points of contact from the visitor information centre to the local gas station and coffee shop to the hotel or tour company.

Quality Experiences:

Quality experiences that are authentic but relevant to the visitor, easy to plan, buy and participate in. It's one thing to have great experiences or iconic attractions but travelers must be able to:

- Know what's available – this means marketing what you have to offer
- Find out information about it – what's offered, operating season and hours, prices, etc.
- Be able to easily make a booking or purchase a ticket, if necessary
- Be able to find it – this means good local information, maps and signage

Good Value

Good value doesn't necessarily mean cheap since there are markets at all price ranges but it does mean value for the money charged.

Meet Customer Expectations and Standards

Today's consumers have high expectations and standards. Local accommodations, restaurants, attractions and other experiences need to be up-to-par so as to compete.

Infrastructure and Services

Transportation connections, good signage, easy to find parking, basic services such as gas stations, banks/ATMs, accommodations and restaurants, convenience stores and visitor information.

Key Elements of development

- Public Infrastructure
- Private Infrastructure
- Destination Access
- Natural Environment
- Products
- Experiences
- Quality and Standards
- Health, Safety and Security
- Brand Identity

Present trend in tourism sector

Present trends in travel and tourism are characterized by:

Growth in the use of internet for travel research and booking

Growth in the use of social media for travel research

Growth in the use of Smart devices for locating and connecting

Role of Sargaalaya

Responsible Tourism:

Responsible Tourism is mainly conceived with three kinds of responsibilities which are termed as the 'triple bottom – line' economic responsibility, social responsibility and environmental responsibility. It seeks to minimize negative economic, environment and social impacts.

Sargaalaya as a responsible tourism model generates greater economic benefits to people in and around Iringal and enhances the wellbeing of local communities, dependent on weaving and sculpting in different materials and many other indigenous arts. It also helped in the development of the town helping people to generate income through small business. It also makes positive contributions to the conservation of cultural heritage as the birth place of Kunjali Marakkar, the naval commander of Zamorin of Kozhikode.

Sargaalaya acts as an educational hub in crafts making as well as a cultural hub by incorporating festivals and events for the communities. It provides facilities to manage events like wedding and receptions and conferences.

Craft based Tourism:

Sargaalaya has around 27 stalls which has its own workspaces and display areas to facilitate promotion of local crafts. These include Hand sculpting in terracotta and brass. Various products are made in timber, Arecanut stem, Coconut Stem. Jewelry is made out of materials like Coconut shell, Terracotta, Pearl, Crystal, Coir, Wood and Bamboo. Weaving and Crafts making using Natural fibres include Kora grass, Screw pine, Water hyacinth, Banana fibre, Palm fibre, Coir, Straw and vetiver.

Besides being able to buy these products, it also helps any one to get hands on experience in the making of these products. By this experience Sargaalaya can attract a lot of people. Cane and bamboo crafts and furniture are an important part of Sargaalaya where artists from Nagaland and West Bengal are putting valuable efforts to develop various products. Handlooms and Paintings and temple arts are also given priority in the village since they have great relation to our culture.

Nature Based Tourism:

A visitor is invited into a beautiful ecosystem which was once an abandoned Quarry site. The master planning of the entire village is designed in such a way that the remains of the site are integrated into the park premises which is rich in a wide variety of flora. The natural pond also provides shelter and comfort for fishes and birds. The experience of realization of the two faces of man's development is an important part of this destination.

Boating service is provided for people to in Sargaalaya in the pond developed in the site. Experiences related to river side boating and further visiting the adjacent island as a part of a tour packages is also an integral part of tourism in the place.

Services in Sargaalaya:

The list below provides the major areas where the institute plays a crucial role

Type of Crafts

Stall	Craft or activity
1	Sculptures and terracotta ornaments
2	Mini hall, Craft Training
3	Nagaland Dry Flower
4	Cane furniture
5	Palm Fibre
6	Coir jewelry and Ornaments
7	Sea shells products and ornaments

- 8 Screw pine and water hyacinth
- 9 Malabar terry and handloom products
- 10 Leather unit
- 11 Vetiver
- 12 Dance dress ornaments
- 13 Pooram Crafts
- 14 Terracotta Sculpture
- 15 Metal Sculpture
- 16 Coconut Stem
- 17 Cora Grass and Handloom
- 18 Bamboo
- 19 Paper Bag
- 20 Jewelry and Crystals
- 21 Special Metal Engraving and Decorative painting
- 22 Coconut Jewelry
- 23 Herbarium painting
- 24 Mural Painting

25	Chennapatanam toys
26	Metal Embossing
27	Temple Art and Sculpture
28	Textile Shop

Experience

- International Crafts Expo
- Hands on Crafts making
- Shopping handicrafts products
- Pedal Boating
- River boating
- Children's play area
- Open air theatre space
- Local Cuisine

Event Management

- Conference area
- Accommodation
- Dining Space

Education and Training

- Short term training in Crafts
- Training programs in fine arts, dance and music for children
- Training programs in selected art forms

Situation Analysis

Visitor Analysis

- An international traveler interested to explore indigenous crafts
- A person from a different state on a long tour covering different places
- A local traveler who is staying away from home for a vacation.
- A person spending time as a part of a business travel in Vadakara
- A person who is visiting friends and relatives in the town or Vadakara
- A person who wants to shop furniture for her new house
- A person who wants to order bulk quantities of crafts for a resort
- A person coming for a wedding reception in the village
- A teacher coming to attend a farewell party
- A police officer coming to attend an important meeting
- An officer on the way to an important meeting
- A couple coming to shoot their video album
- School students on a school trip to visit the crafts
- A group of students from design college to study materials and crafts making

- Students coming on weekend to learn music
- Women coming to get training on making paper bags
- Women coming to learn 'Chendamelam'
- Students coming to interpret the architecture and planning of the institute

What visitors do in Sargaalaya

Understanding Visitors' activity pattern

Type of Visitor Range of time spent based on observation

**Outdoor
Enthusiasts:** 2 to 4 hours

Cultural Enthusiasts: 3 to 6 hours

Event Attendee 1 to 3 hours

Pleasure Traveler: 2 to 4 hours

Understanding Visitor's activity pattern

Type of Visitor Important Activities and Spaces Used based on observation

**Outdoor
Enthusiasts:** Park, Corridors, Pond Boating, River side
Boating, Craft Stalls, Amphitheatre

Cultural Enthusiasts: Emporium, Craft Stalls, Cafeteria,

Event Attendee Conference Areas, Cafeteria, Dining Area,
Corridors.

Pleasure Traveler: Emporium, Craft Stalls, Corridors, River side
Boating

Development Parameters

1. Infrastructure

a) Waste Management

Inside the stalls, Trash cans are provided along the corridor across the stalls. They are also kept near Cafeteria, Guest Houses and Toilets. They are also kept outside near Amphitheatre and parking lot. Waste collection is done using pull carts or manually and then segregated into four types and then either moved to the plant or disposed of.

2. Public Amenities

a) Information Design

b) Signage Design

Signage provided inside the village include Directional Signage and Spatial Information. The core area is home to most of these signage board in different materials and making.

c) Food and refreshment

The cafeteria located in the core area has dining spaces and kitchen. It also has spaces for small storages, Cold storages and storage of utensils. There is a popcorn unit separate from the main cafeteria.

3. Experiences

a) Installation

Most of the installations inside the village premises are large clay sculptures placed on the front lawn and adjacent to the entrances of the buildings in the core area. Soft Landscape design consists of patches of green lawn adjacent to the buildings with varying species of outdoor plants. The hard landscape consists of rock features of the existing quarry site integrated into various public spaces.

b) Landscape Furniture

No landscape furniture

4. Products and services

a) Innovative product development

b) Graphics design

Design Solutions

Waste bin design

Signage Design

Installation design

Landscape Furniture

Shopping Cart design

Shelf design

Bamboo

Exploring Bamboo material

Bamboo – details

Product Categories at Sargaalaya

Lamp Design

Concept:

Design Inspiration



Selecting and Preparing Bamboo



Selecting the type and length of bamboo is based on the work to be done.

Marking and Cutting Length



Drilling

Marking and Cutting









Finishing



Bending





Coconut shell top







Bulb Holder in Bamboo





Bamboo Night Lamp-2

Lamp 2 is another version of lamp 1 where special bulb holders are designed for dual light source that are placed on both sides of the bamboo node. Brass rod is bent to make handles and coconut shells are drilled in patterns so as to obtain unique shadows. The connecting wires are made detachable for easy packaging and transport



Bamboo Selection

-A piece of bamboo with node as center is selected diameter was just sufficient for an ordinary bulb to slide inside

Marking and drilling holes

-Drilling holes helps in effective splitting of bamboo as the split and crack wont propagate beyond the hole.it also minimize further cracks while bamboo is heated and expanded





Heating and expansion

-The strips are heated and are expanded by inserting bamboo rings that are cur from lager diameter bamboo



Bamboo holder

-In order to fix two bulbs the central node had to be drilled and bulb holder kept in middle



Bamboo holder

-Bulb holders are fixed on both sides of bamboo piece and wires are taken out at the center

Another hole drilled at the center passing through the other side to fix the holder to node area of lamp





Fixing bulb holder to node and electrical connections

- Similar diameter hole is drilled at the node area as well and wires are taken out through a bigger hole made to occupy female socket





Sanding and drilling of coconut shell

-Coconut shell is sanded and the husk is removed

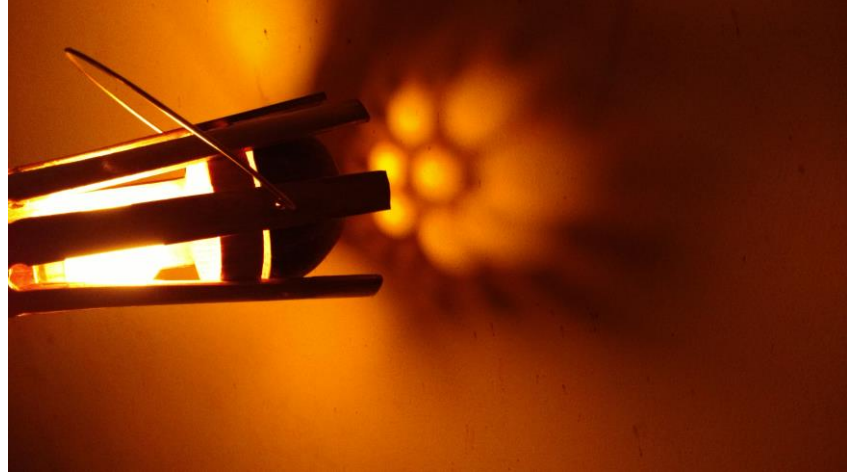
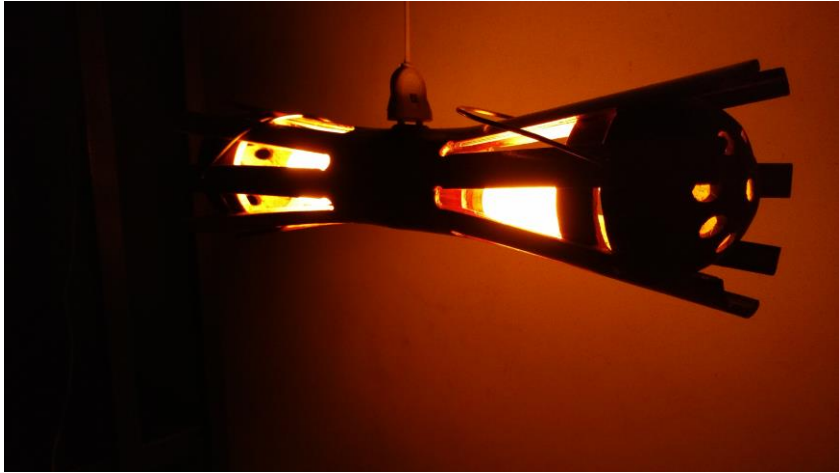
A small drill hole is made on the bamboo strip as well as the coconut shell to fix the handle. This in fact stops the top shell cover from falling while tilted



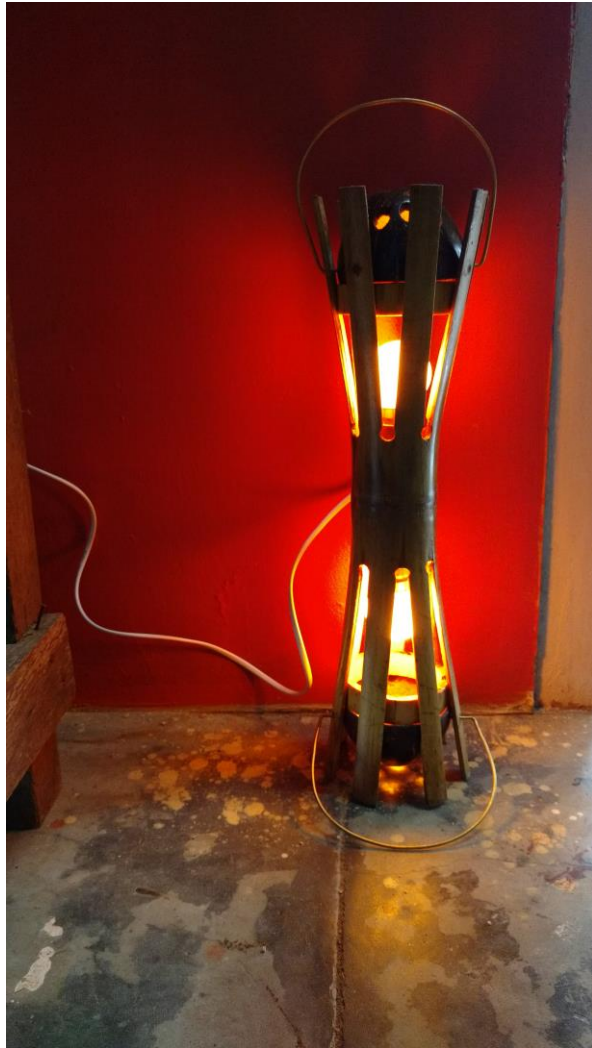
Early trials



Lighting and shadows



Light may be kept on ground or hung horizontally. The patterns are observed near to walls and ground



**Diffused light using
handmade paper**

-A more diffused and gradient light is observed while handmade paper is kept surrounding the lamp

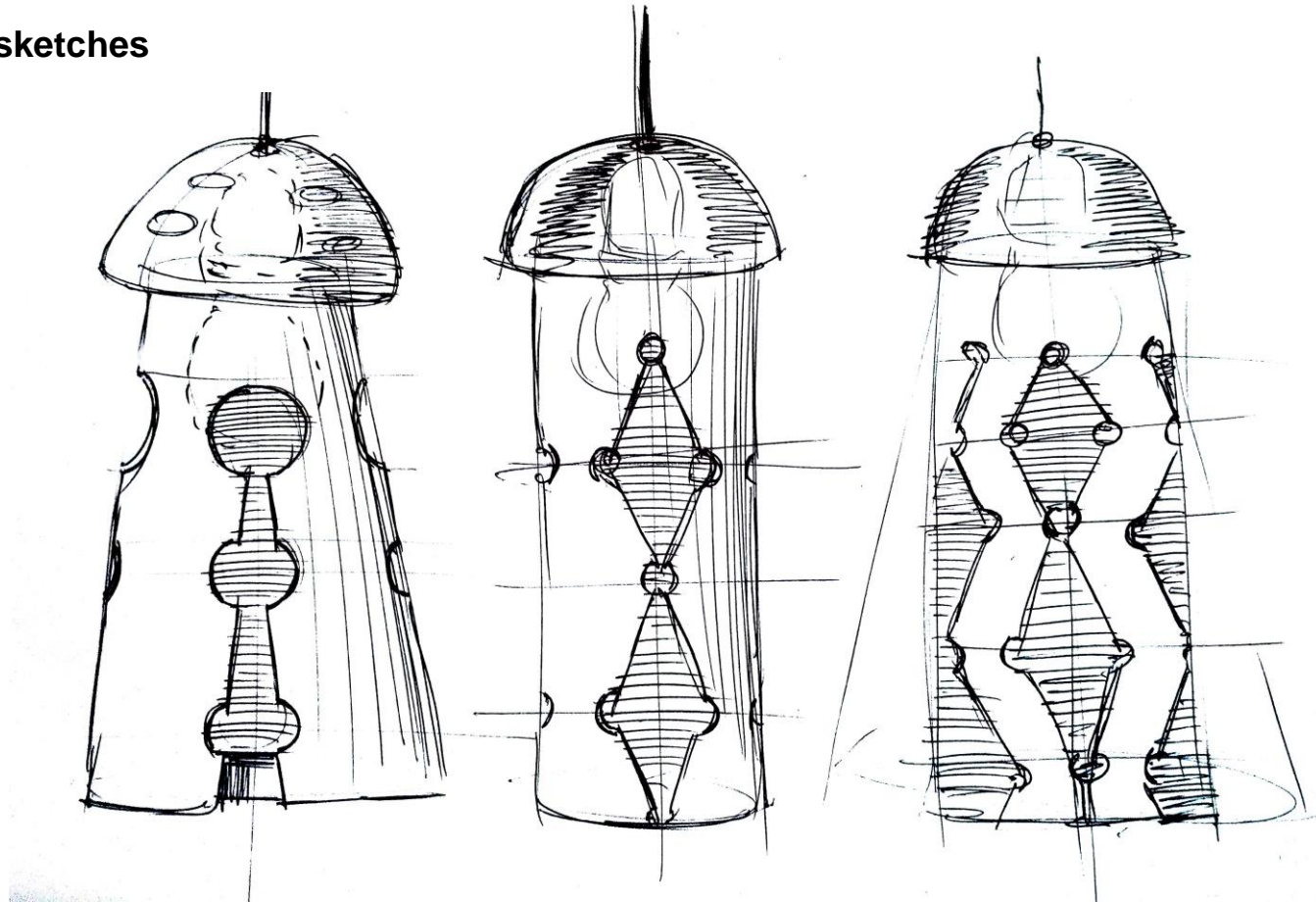


The lamp may be hung horizontally by the handles and power cable at the center



Bamboo Lamp Shade-lamp3

Ideation sketches



Initial exploration



Marking and drilling

-Bamboo piece is selected with one node area and is marked. Drill holes were made





Once the holes were drilled, drill holes were connected with parallel cuts cut using a jigsaw. Since process required a firm grip, bamboo was fixed on a bench vice with supports at both sides. All parallel cuts along one direction was completed successfully

But as cross lines were attempted to cut, cracks started occurring along bamboo grain direction. This lead to vibrations and initiated more cracks which finally led to breaking



Bamboo Lamp Shade-lamp4

Bamboo with one node end is selected and drill holes of various diameters are drilled. The node is drilled just sufficient to stop bulb holder from coming out while hung –one directional. A coconut shell top acts as top cover that hides the holder and electrical connections





Lamp 4

Concept Sketches

Fixed Wall Lighting

The task was to design a wall lighting for a given space in a wall for a Spa in Thrissur.

Concept

Concept Sketches

Mock up Models



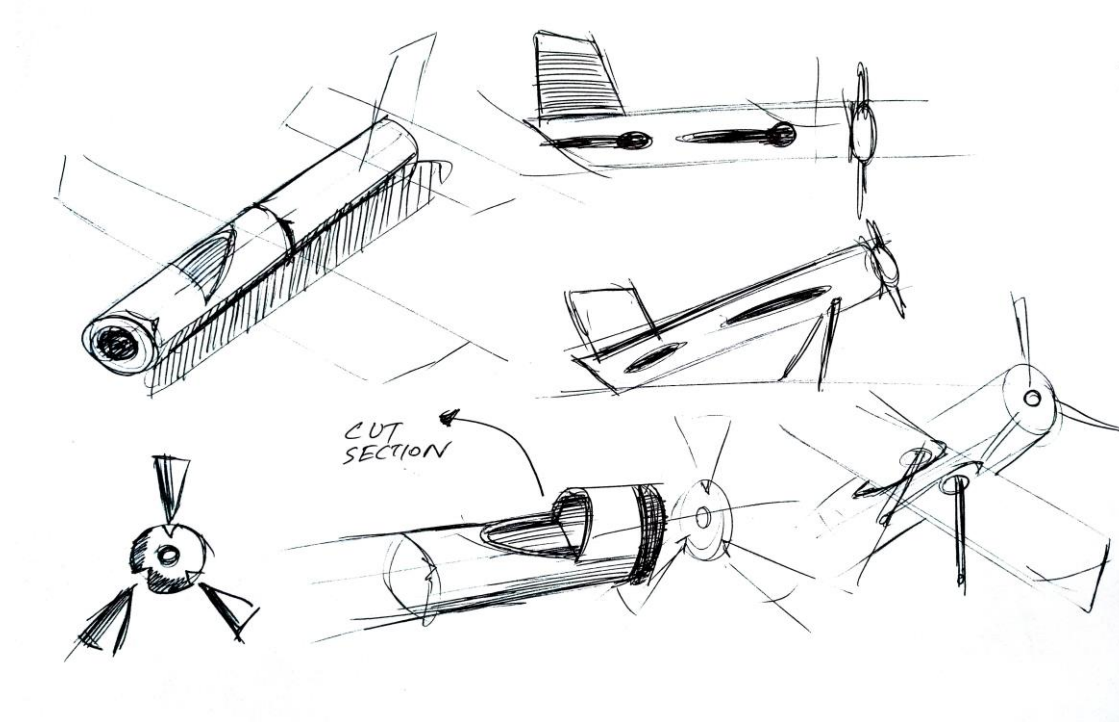


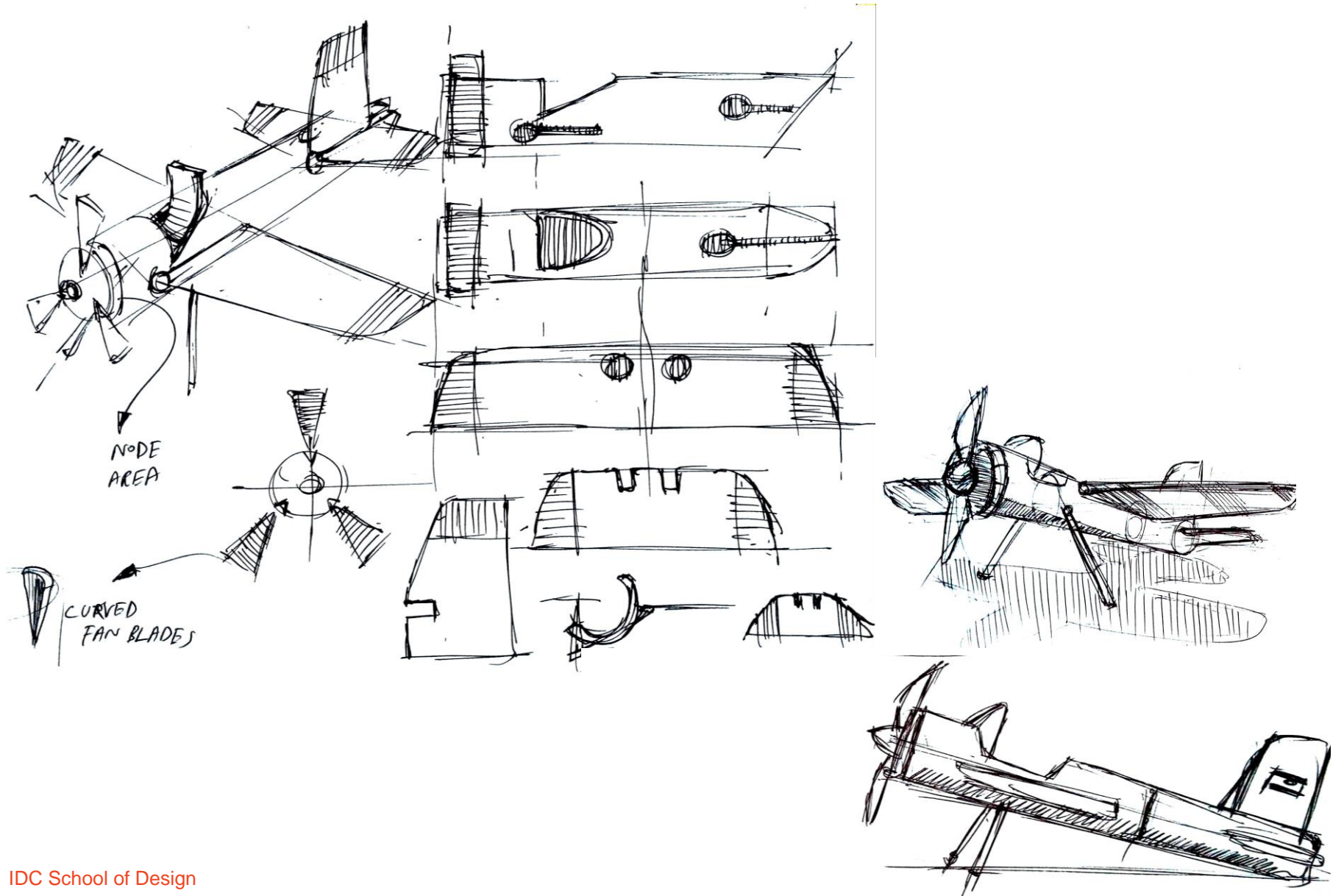
Vintage Wheel – Plane

DIY Bamboo toy

Vintage wheel is a DIY toy made completely in bamboo. The toy can be assembled or disassembled anytime making it easy for packaging. Rather than readymade toys, vintage wheel focus on a learning platform for kids below five years of age. Assembling the toy part by part makes them curious of what is left out. Joy of making will indirectly lead to learning.

Ideation sketches





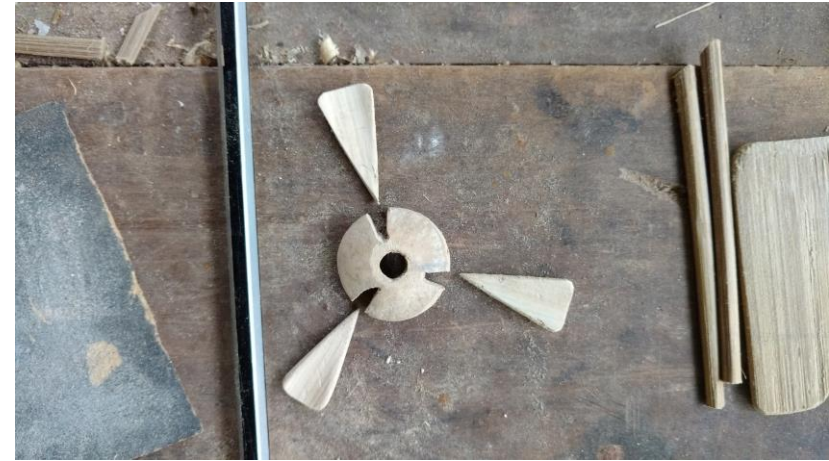


Wing is cut from a bamboo with larger diameter

Selected bamboo is a thin section with a node at one end. A notch is cut which makes the cockpit



Holes are drilled and strips are cut and removed. The drill holes also acts as joinery detail and ensures a perfect fit for wings



Leg supports are inserted from the base through the drill holes in the front wing.

Propeller fan is made from a node and fan blades made out of small bamboo. They are stuck in curved angles so as to rotate while blown air.

Final Assembly



Part list-main body, front wing, tail wing (vertical and horizontal stabilizers)

Coating with sealer and melamine







Cane

Exploring cane material

Properties of cane

Working with cane

High quality cane Obtained locally from Thamarassery OR Coimbatore

There are two artisans specialized in cane and bamboo products at Sargaalaya. We were mostly interacting with Mr. Sanjay who has been there for the past 7 years, a native of West Bengal. He had learned all the skills from his native and has experience in making furniture of all kinds. Mr. Naresh who is also a Bengali works on larger pieces of furniture. They also do weaving in cane and threads.

Product categories at Sargaalaya

A few products in cane are already displayed for potential customers. These includes a sofa set and a dining set which are displayed in the emporium priced at 45000 at 30000 respectively.

Few other products in the making were a sofa set priced at 50000. Closely Watching the making of this piece of furniture helped to understand the basic idea of making structure for furniture. This product was entirely different and had a striking sense of aesthetics associated with it. The sketch below shows the technique used for the making this product.

Making Process

Preparing the cane

Treated cane was kept in bundles in the store room. Out of this cane was chosen based on its flexibility. The flexibility of a cane length can be understood by checking its cross section. The cane is more flexible if the pores are more closely packed. So if the frame to be made has an extreme bend they chose the one which is more flexible.

Types of cane: Cane is available in varying thickness till a maximum of 1"

Tools Used

There were mainly two tools for working with cane. The knife for peeling is made out by shaping an axe saw blade to a desired sharp curve. The same knife is used for making small cuts and wedges. Cane lengths are cut using a cutter (plier like). A wooden piece was used as support while peeling the skin.

Bending of cane is done with the help of a gas assisted flame torch. The frames of cane were made by bending cane. A wooden tool as shown in the picture was used for bending the cane as well as refining the natural bends of the cane.

The bending process

The length of frame to be made are marked on the cane length before cutting the desired length. An extra length is given at the edge to assist in bending the ends.

The idea behind bending is that if one half of the cross section is heated up and the other is left as the same, it can be bent to the heated direction. Bending is done by exposing the required area to extreme heat or flame which unlike bamboo results in burning that portion. The intensity of heat depends upon the type of curve to be made.

The typical bends include an angular bend and curves. The technique in both was slightly different when examined carefully. As shown in the picture angular bend involves application of intense flame to a point and gradual heat to adjacent areas to ease the bend or to avoid cracking. The curve is made by accurately marking the length of curve first. Then the start and the end of the curve are flamed and given a gradual angular bend as per the shape of the curve. Then the middle part of the curve is bent gradually in continuous flame to get a neat curve.

After this, the wooden tool is used to correct the direction of the curve or to correct any minor mistakes. This is done with the help of light flame if required. The flames area is then scraped off with the knife to give the normal colour or left with the burnt appearance. The burnt area shows black spots on the cane.

Making frame profiles:

This particular chair consists of rounded rectangular profiles which act as the thickness of the chair. Initially a circular frame is made to fix the profiles. The profiles are created by joining two ends of a desired length. The joint is made by creating lap joints on both ends.

Lap joint in cane:

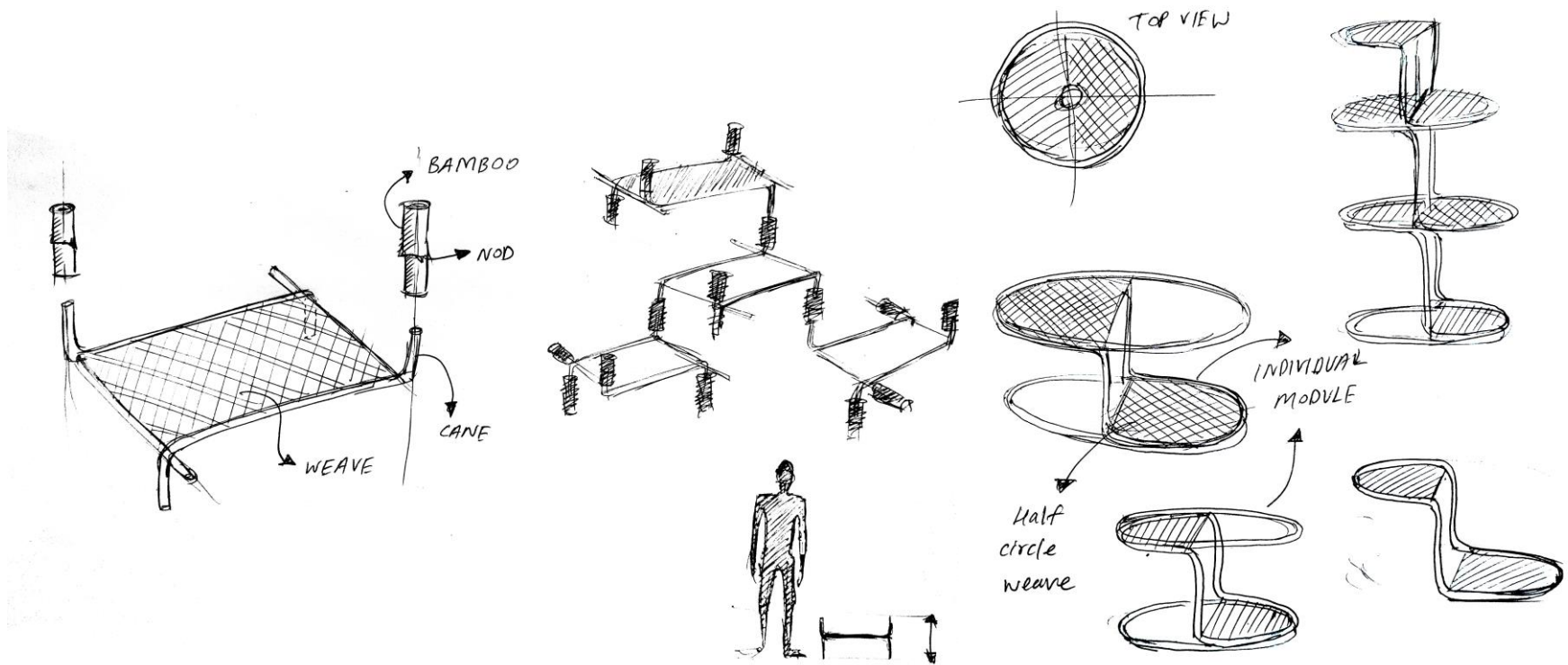
This is done by giving a wedge on both ends of the cane length approximately 1 to 4 inches depending on the size of the frame. Half of these are cut and then joined using iron nails to get a perfect lap joint.

Modular Shelf

The stalls had lot of scope for better showcase of crafts. They were mostly over clutter together or displayed simply on wall mounted shelf. The inspiration behind designing a cane shelf was to make use of the less used roof space as well as the empty central space of stall. Hence the idea was to create a shelf that can be both hung or kept on the ground.



Ideation Sketches



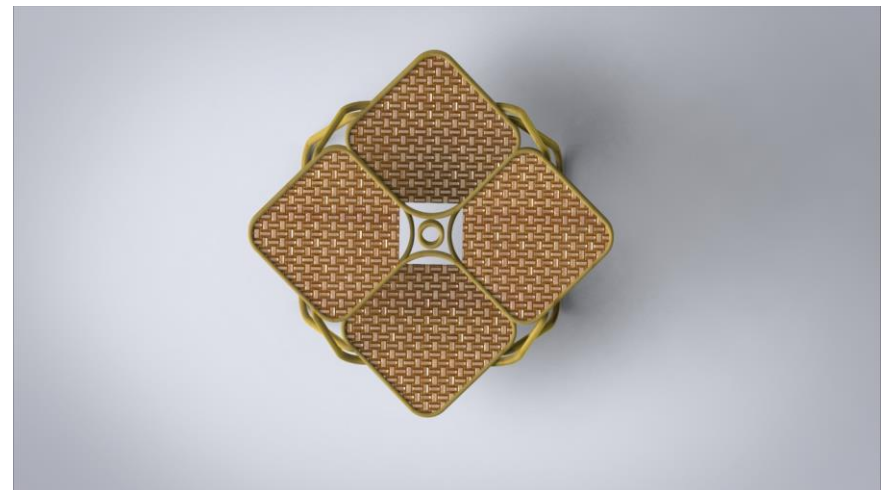
3d Renders

3d rendering helped in greater visualization of modular growth and possible limitations. The initial design was not selected as it the growth pattern Too random



3d Renders

Final design



MAKING OF PROTOTYPE



Peeling of cane skin and Cutting



Measuring and marking

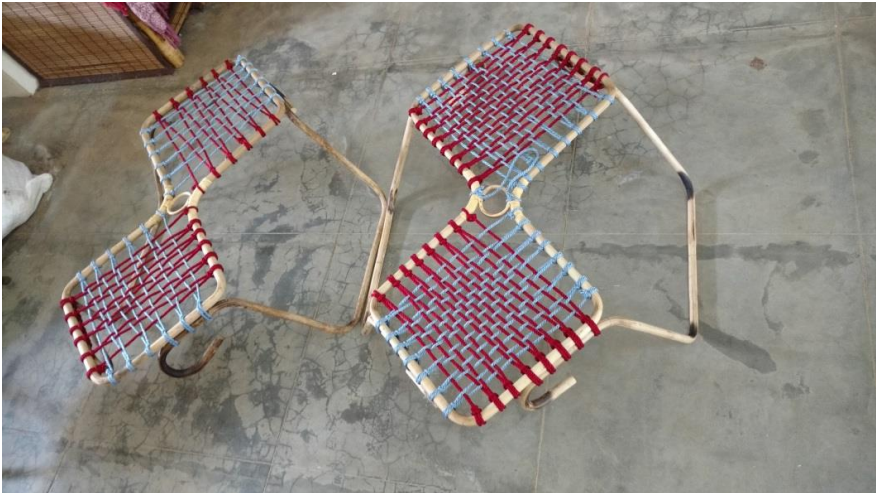


Coiling by cane reed

Heating and bending is done in direct flame.

Adding leg support and testing the interlocking while hung on a central pole support





Thread weaving

Prototype displayed on ground and while hung

