

KSHITEESH KULKARNI

DESIGN PORTFOLIO

☎ +91-9869351555

✉ kulkarnikshiteesh@gmail.com

📷 [_kshiteesh](#)

About



Born in Mumbai, one of the fastest cities of the world,
I started my journey as a Mechanical Design Engineer.

While gaining knowledge of "How to make things",
I was always intrigued with the thought of "Why to do things".
And there, The Seeker in me decided to pursue further education in Product Design.

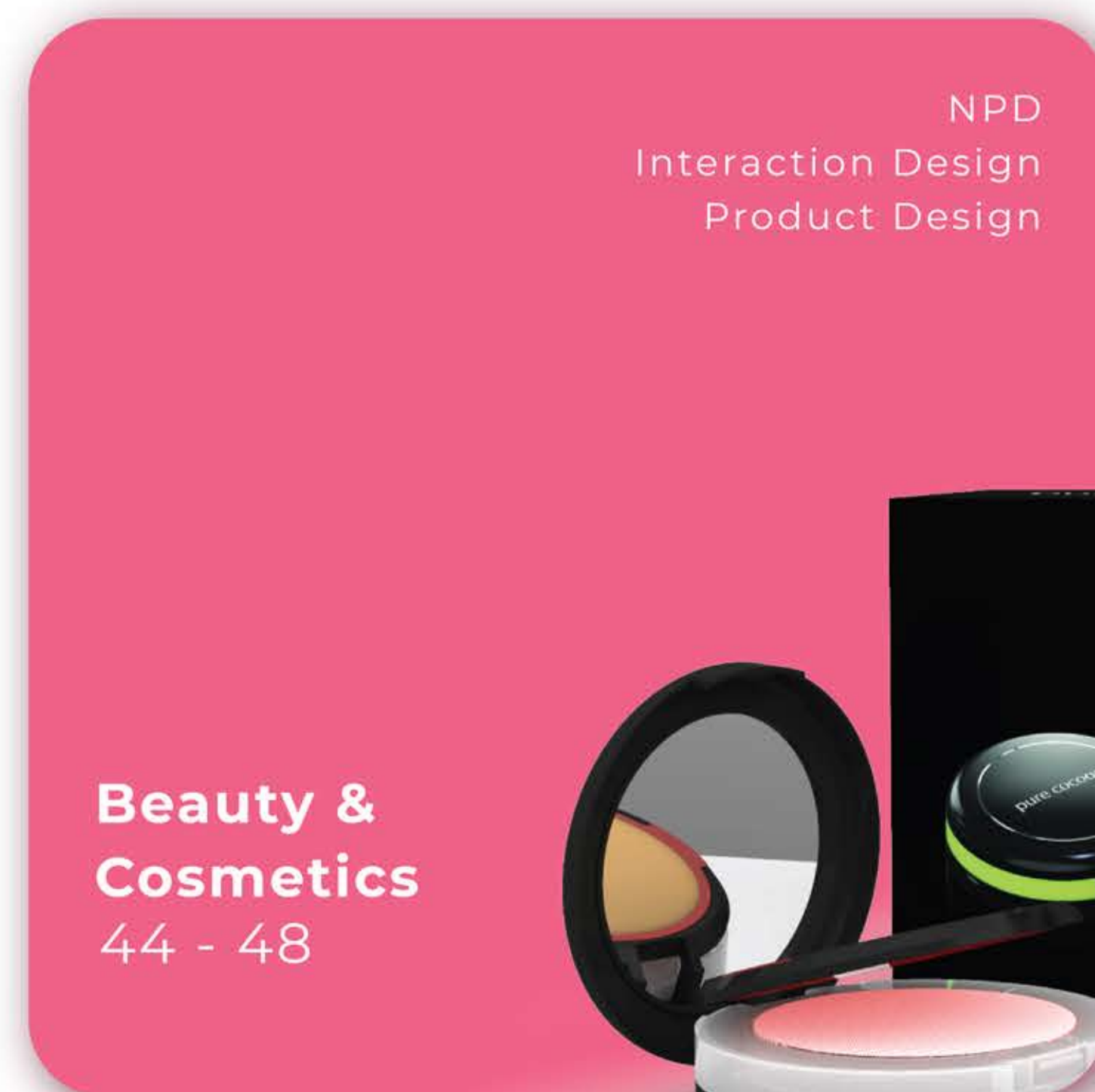
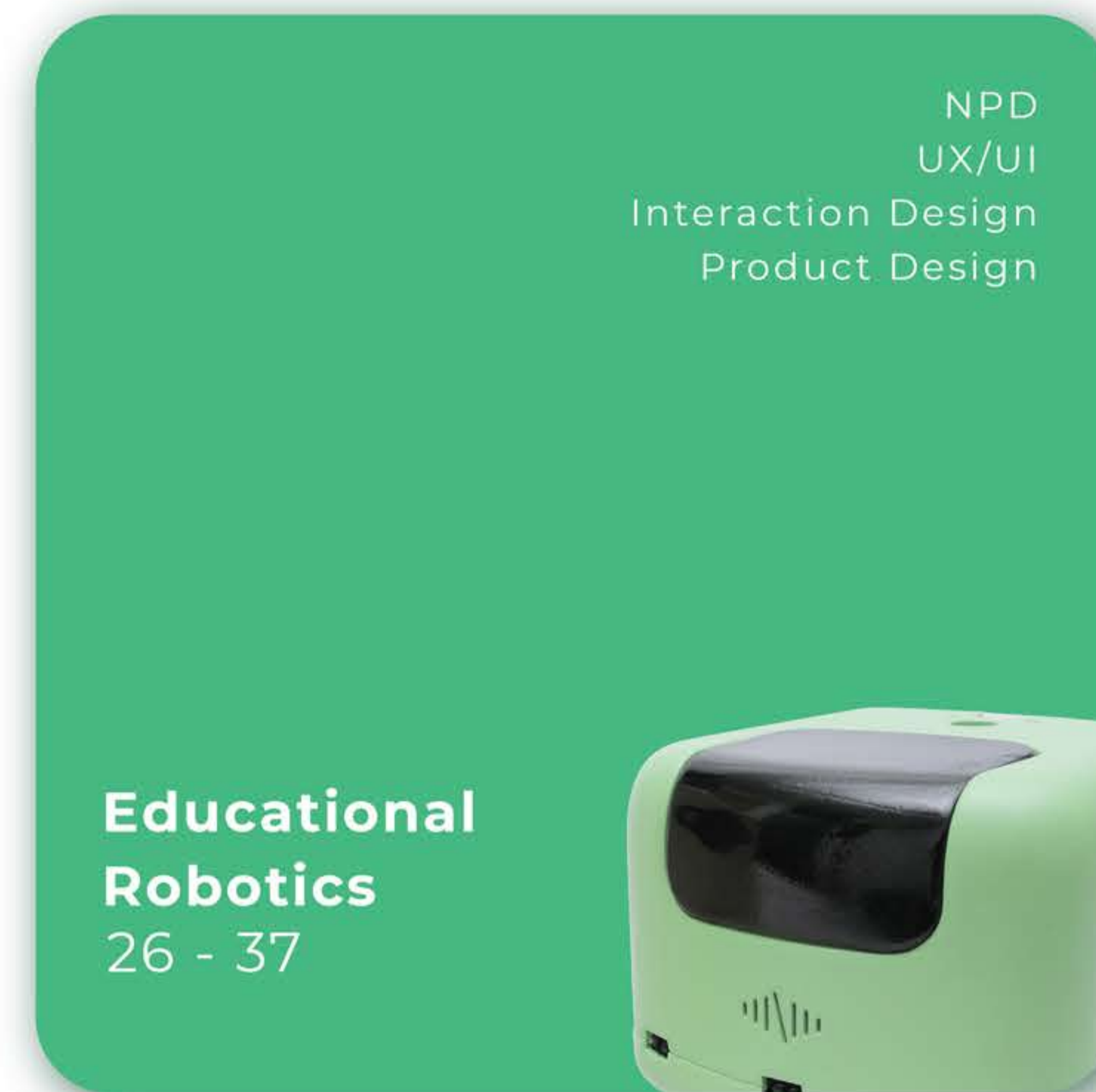
Masters in Italy not only helped me realise different aspects,
processes of Product Design but also helped me develop the capability
to create symbiosis between design and my engineering expertise.
Along the way I got opportunities to Design and Develop the products in various Industries
such as Consumer electronics, Robotics,
Surgical equipments, Beauty & Cosmetics, Luxury goods, Education.

In my professional career so far, I learned few things which I can call my strengths, such as ;

Asking the right questions,
Working for users (and listening to employers too!),
Taking ownership of complete project from conception to execution,
Managing team of Designers and Engineers (I speak both of their languages),
Envisioning Design strategy for The Big Picture.

I am a motorbike riding enthusiast and been fortunate enough
to ride across major parts of Thailand and almost all parts of India.
I believe travelling through roads gives a better perspective
of culture, people and their behaviours which,
I believe is a solid advantage for a Designer..

Index



TWINN

Interior Design eco-system

CHALLENGE : Interior Design industry is one of the most creative yet highly unorganized industry. All the processes in the system are scattered and use multiple platforms which, results in disturbance in designer's workflow.

GOALS :

- * Create an ecosystem of interconnected experiences.
- * Reduce the dependancy on non inter-compatible tools/software.
- * Enhance the productivity of Interior design professionals.

ROLE : As a Head Product Design, I was responsible for intial user research, design strategy, creating UX guidelines, coordinating with dev team, building and managing design team.

As an IC I was responsible for creating UX and UI for software module and device HMI.

ORGANIZATION : Tooliqa Innovations LLP



User Research

We interacted with all the stakeholders and tried to understand their concerns, aspirations and professional challenges.

PRIMARY



Silvia Bardelli
32, Single
Interior Designer
Milan, Italy

"We have to use multiple softwares to address client requirements such as Rendering, Walkthrough, Drawings, Moodboards etc. Sadly many of these softwares are not Inter-compatible so we end up spending a lot of time in data conversion. It hampers our productivity as we are always working on multiple projects in parallel "

Tools

Measuring tape, Pencil-Paper, AutoCAD, SketchUp, Illustrator, Photoshop, 3DS Max

Insights

- There is a definite need of a platform which can cater to end-to-end needs of Interior Designers.
- The solution must be heavily focused on saving time.
- There is a noticeable gap between creative visualization and actual implementation.

SECONDARY



Jonathan Lu
29, Single
Project Manager
Detroit, USA

"Since Design is a non linear process, It gets difficult for me to keep track of it. We have multiple projects running at one time, every project has its own milestones, timelines. The generic project management tools are not adequate for creative industry "

Tools

Microsoft Excel, Asana, Zoho

Insights

- Project management of creative industry needs a specialized solution.
- Effective coordination between management and creative professionals needs more attention.

TERTIARY



Patrick Kahn
31, Married
Software Engineer
Seattle, USA



Camilla Albanese
29, Married
Teacher
Seattle, USA

"This is our first home and we are emotionally very much attached to it, we want everything to be just perfect. However we feel a little left out in the designing process. "

Inspirations

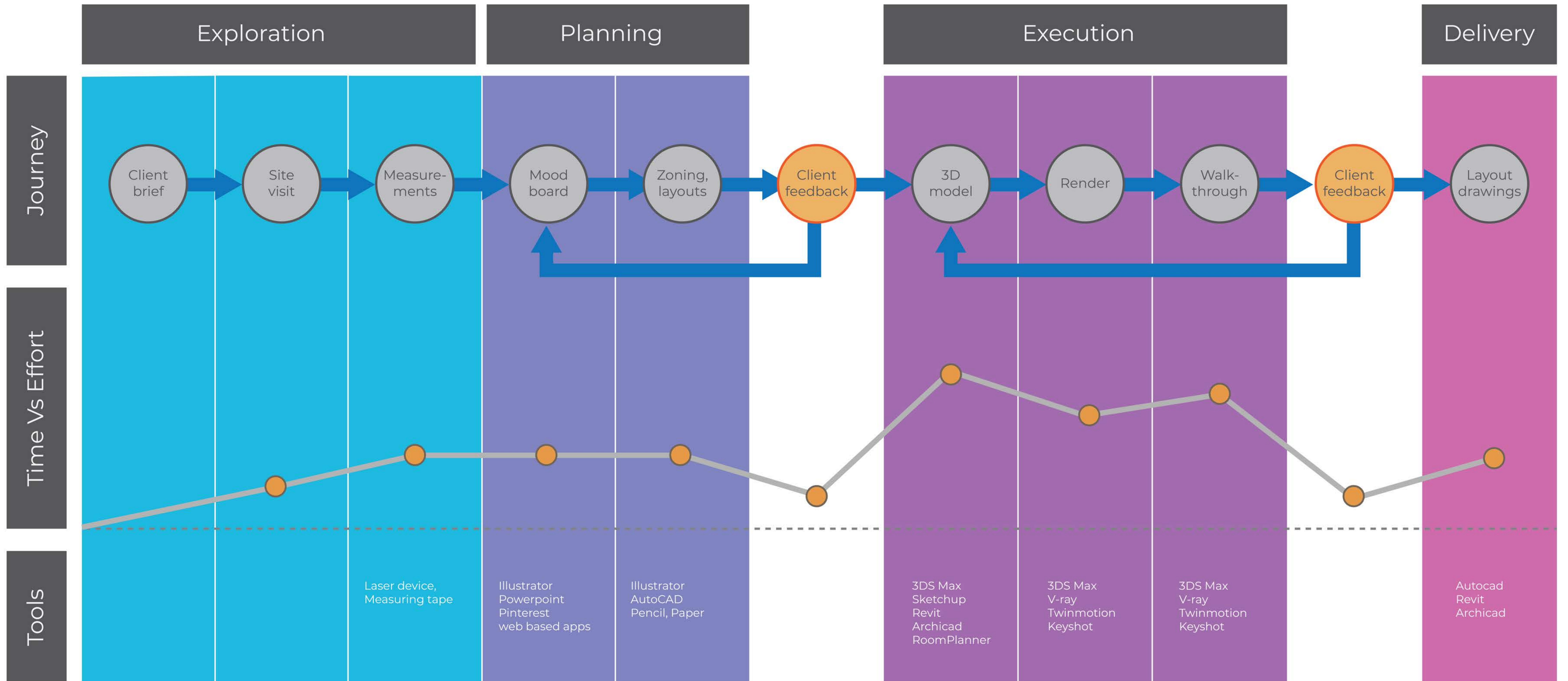
Pinterest, Youtube, Friends

Insights

- A constant interaction between the client and the designer is required due to emotional involvement of the client.
- However with minimal disturbance in the creative process.

User Journey

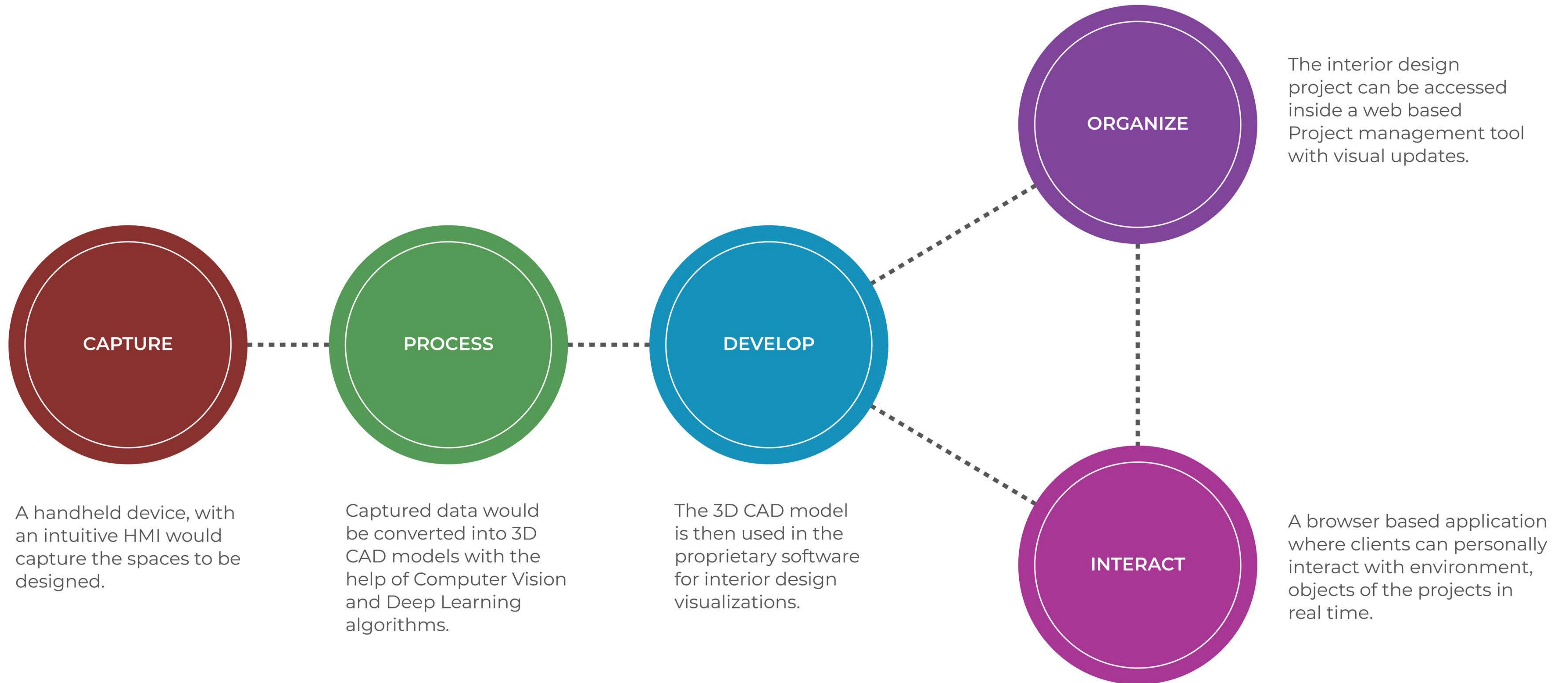
We tried to map the journey of a project from end to end. We understood how the current process is time consuming and how a designer has to continuously switch from one platform to other to create a desired output.



*steps in the journey change often depending on requirement of client and scope of project.

Product Eco-system strategy

To create an end to end solution for needs of all stakeholders, we mapped the different components of the eco-system for the better understanding of product development.



Organizational system plan

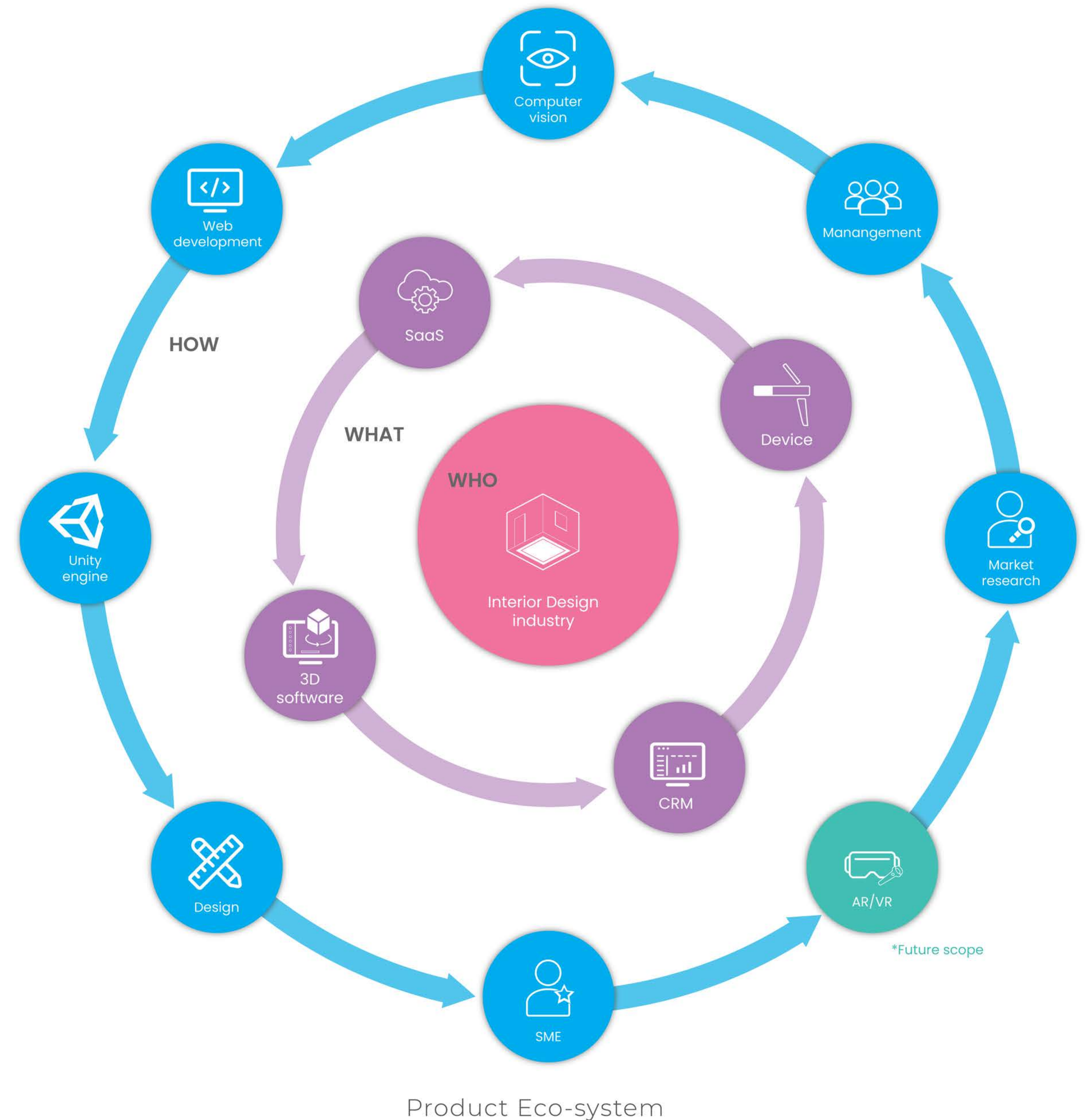
In order to fulfil the needs of such a huge industry, we created a organizational eco-system plan with keeping the user at the core of it.

To be able to provide a complete end to end solution, we tried to analyze the integral components of the complete system and divided them on the basis of three most important questions;

WHO : The user

WHAT : Product offerings

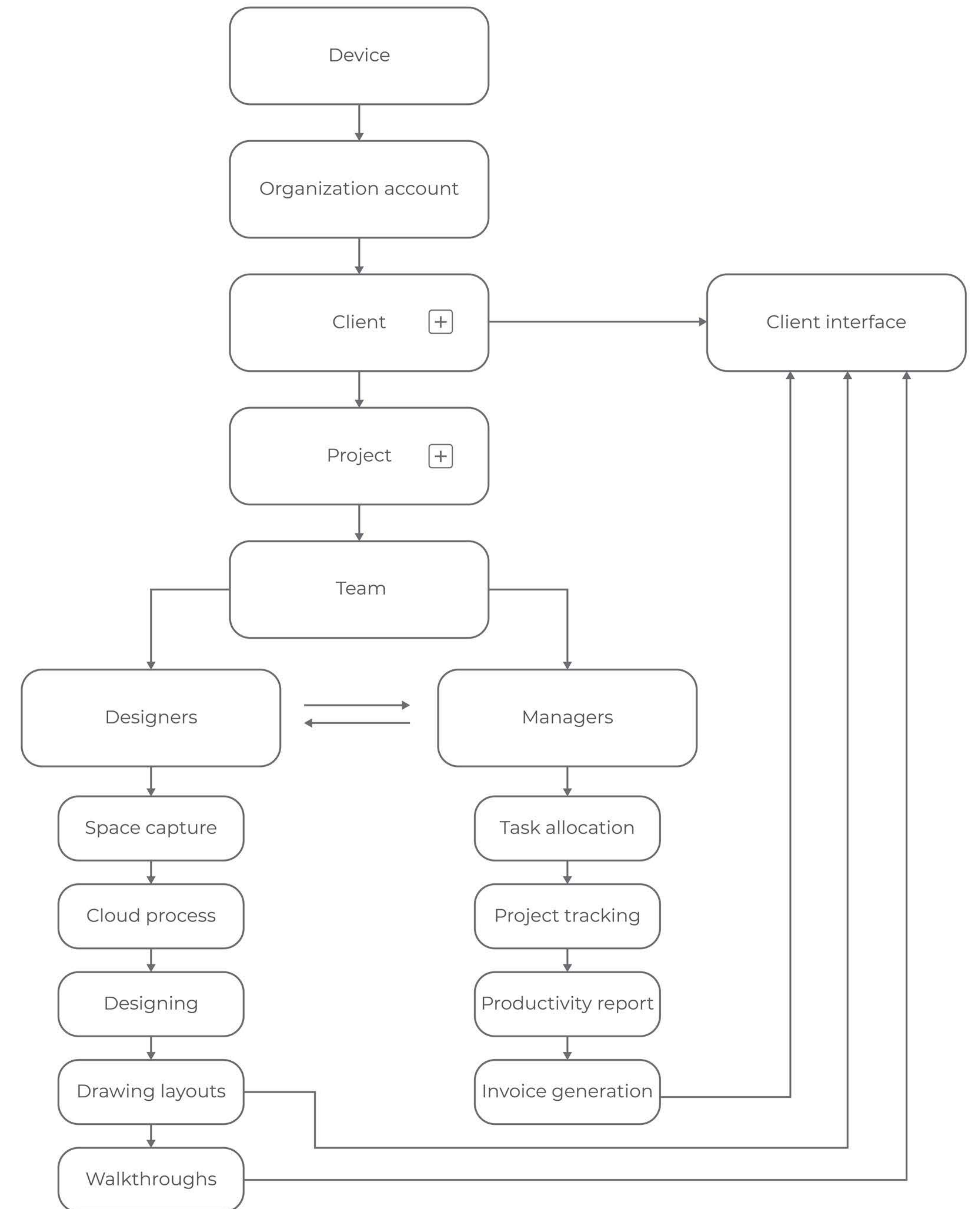
HOW : Team requirements for product development.

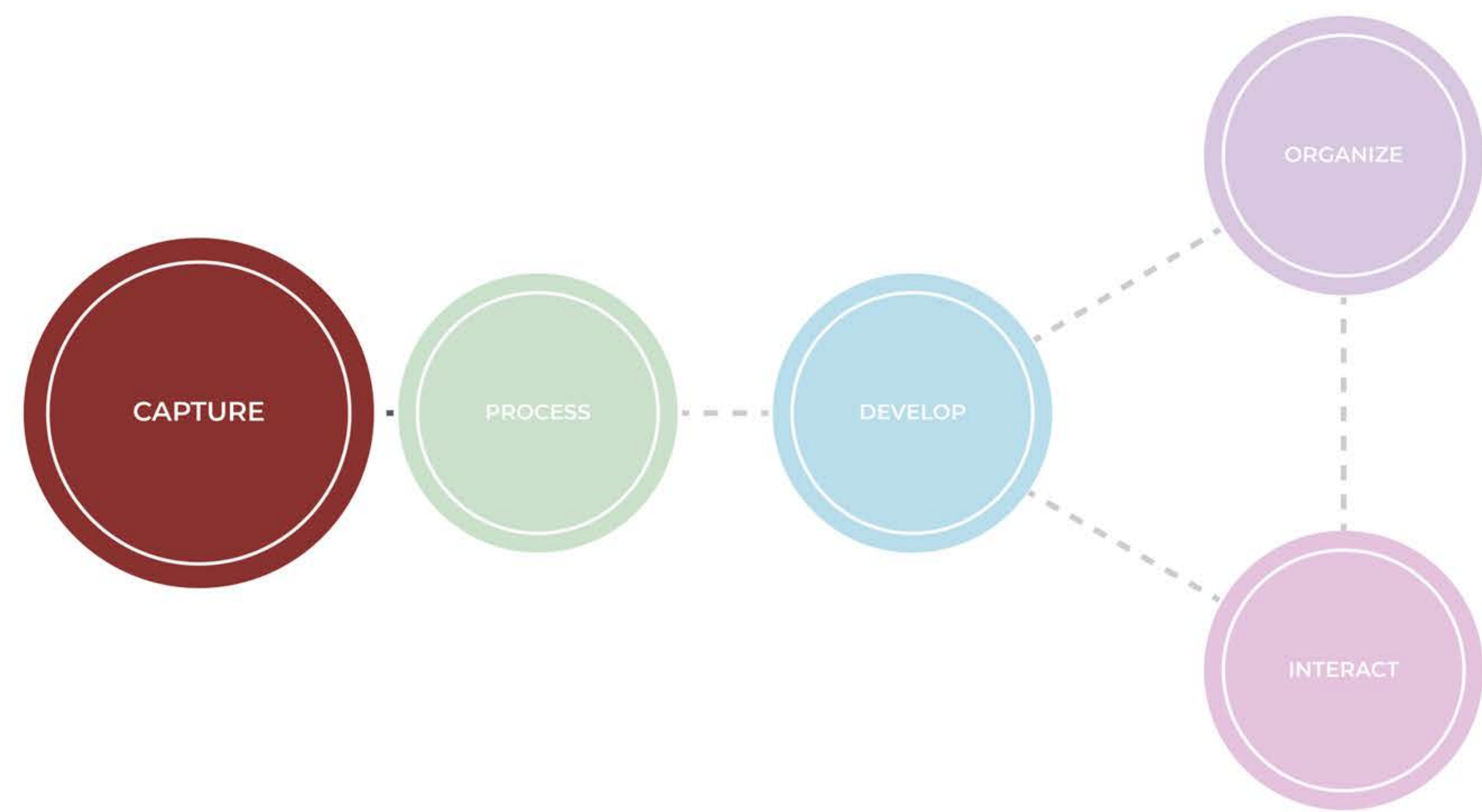


Product eco-system architecture

Fundamental structure of the product eco-system was planned with keeping in mind, the convenience of Tooliqa'a immediate clients and their clients.

Details of which, can be explored in the pages ahead.





The Device

The device helps in capturing the spaces with single hand maneuverability. The HMI helps in validating the data in real time and send it for further processing.

Research Method

- Site visit with designers
- Process observation
- User Interviews
- Ergonomy study

Testing Method

- Styrofoam mock-ups
- 3D printed prototypes
- Unguided HMI navigation
- Video documentation

Validation Parameters

- Hand grip comfort
- Accessibility of operations
- Interface intuitiveness
- Action time

User group : Adults (age 21-40)



The Device

The device is equipped with long range and short range HD cameras with depth sensors and ToF pointers. It can continuously record the video for 45 mins in one go.

USER EXPERIENCE



Power grip for continuous operations



Equal load distribution on handle



CapSense switches for easy interaction



7" screen touch screen for capture validation



Adequate air vents for heat dissipation



The HMI

The HMI was designed for single hand operation while capturing, both hand operation for post capture process



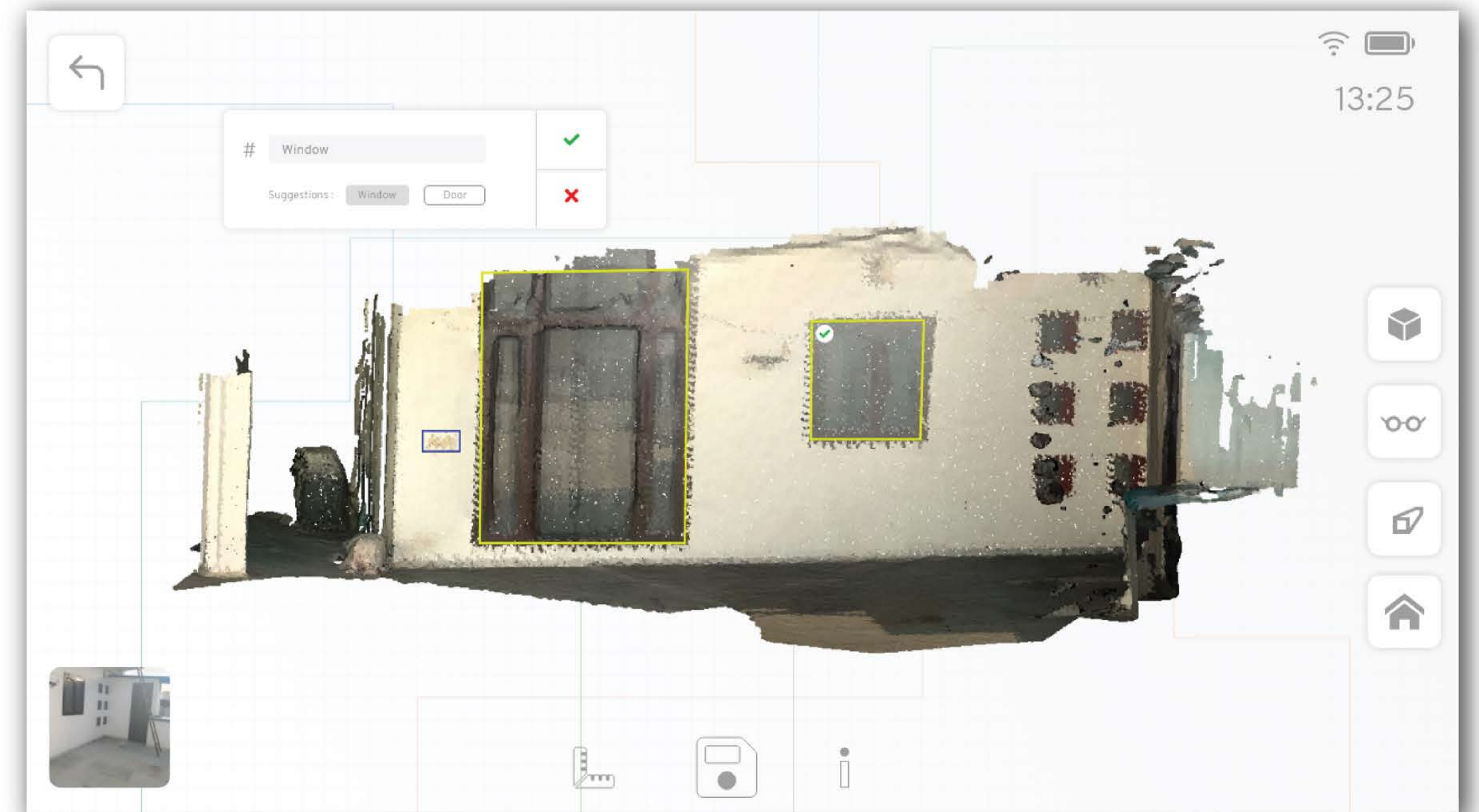
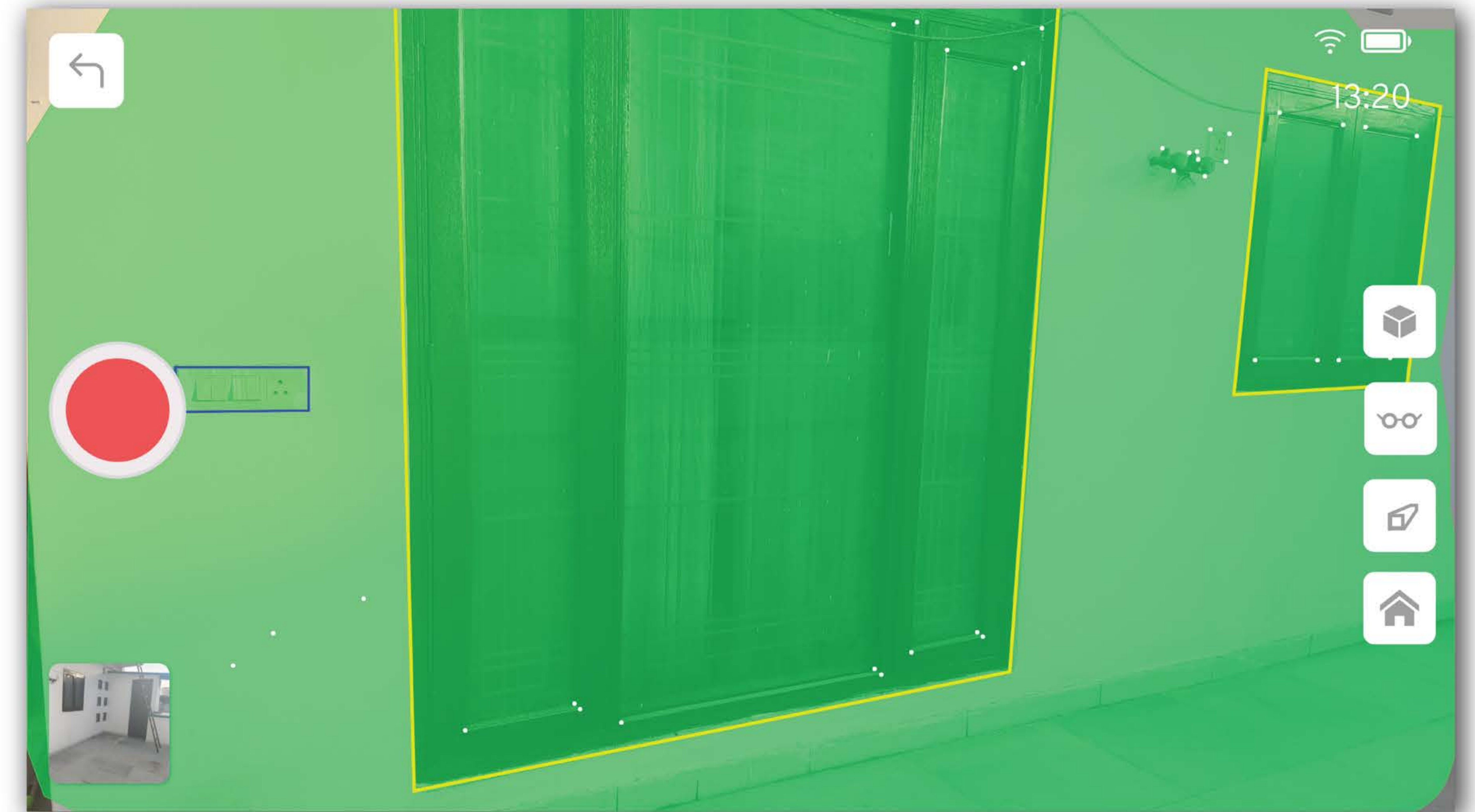
The HMI

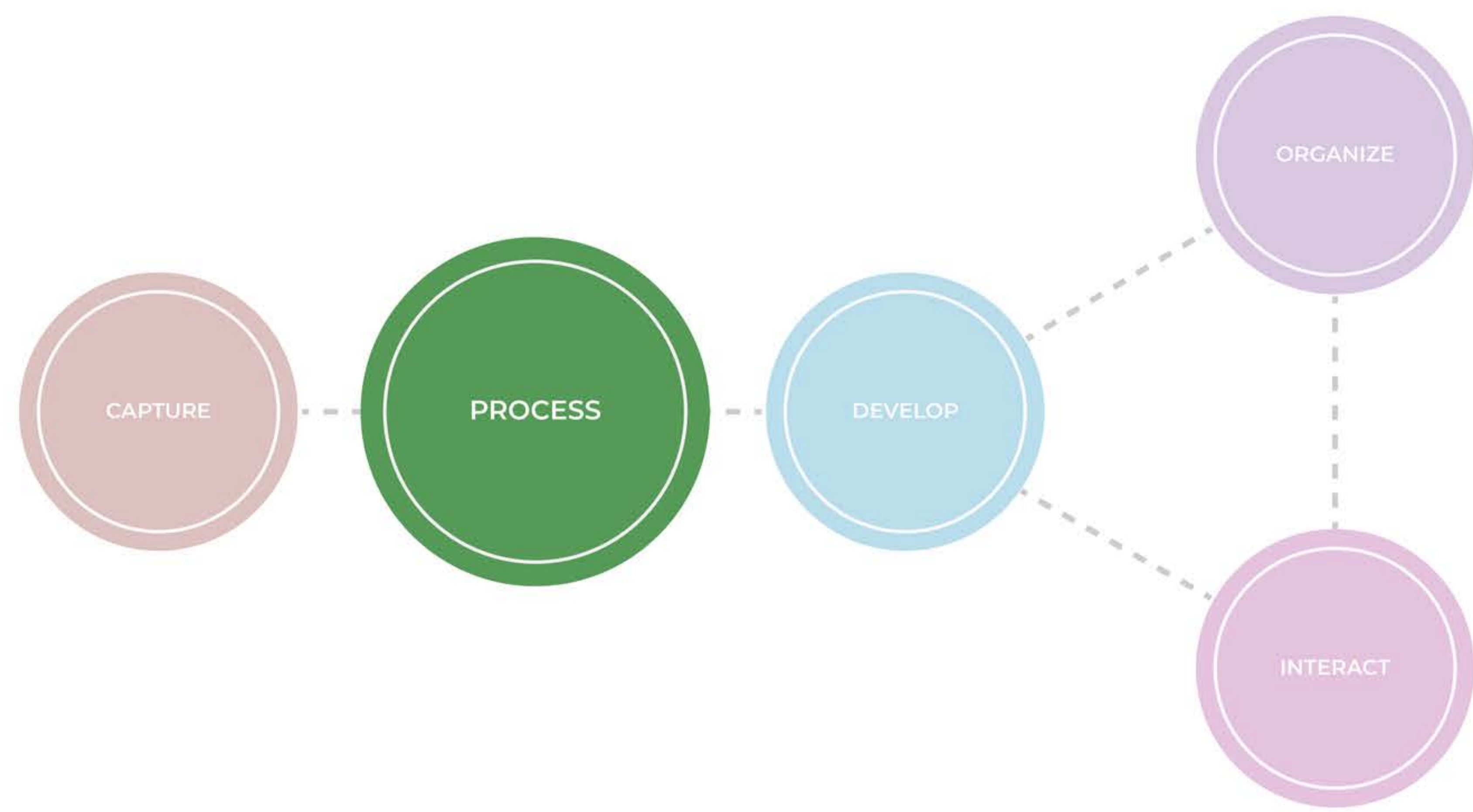
USER EXPERIENCE

- Real time validation of capture
- Menu customization as per accessibility requirements
- Guided tour on first interaction
- Object segmentation/labelling post capture
- Intelligent object recommendations
- Error prompt

USER INTERFACE

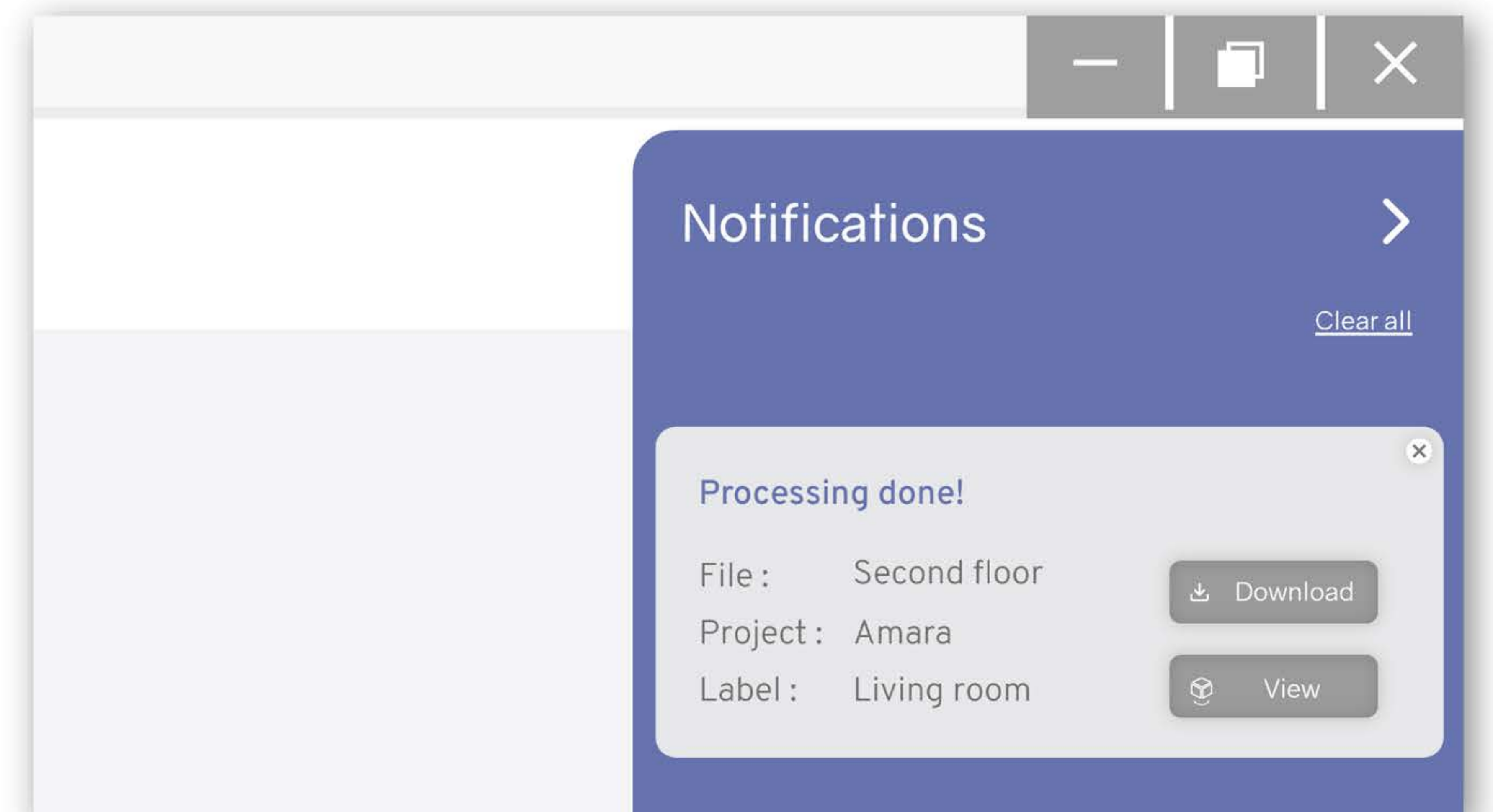
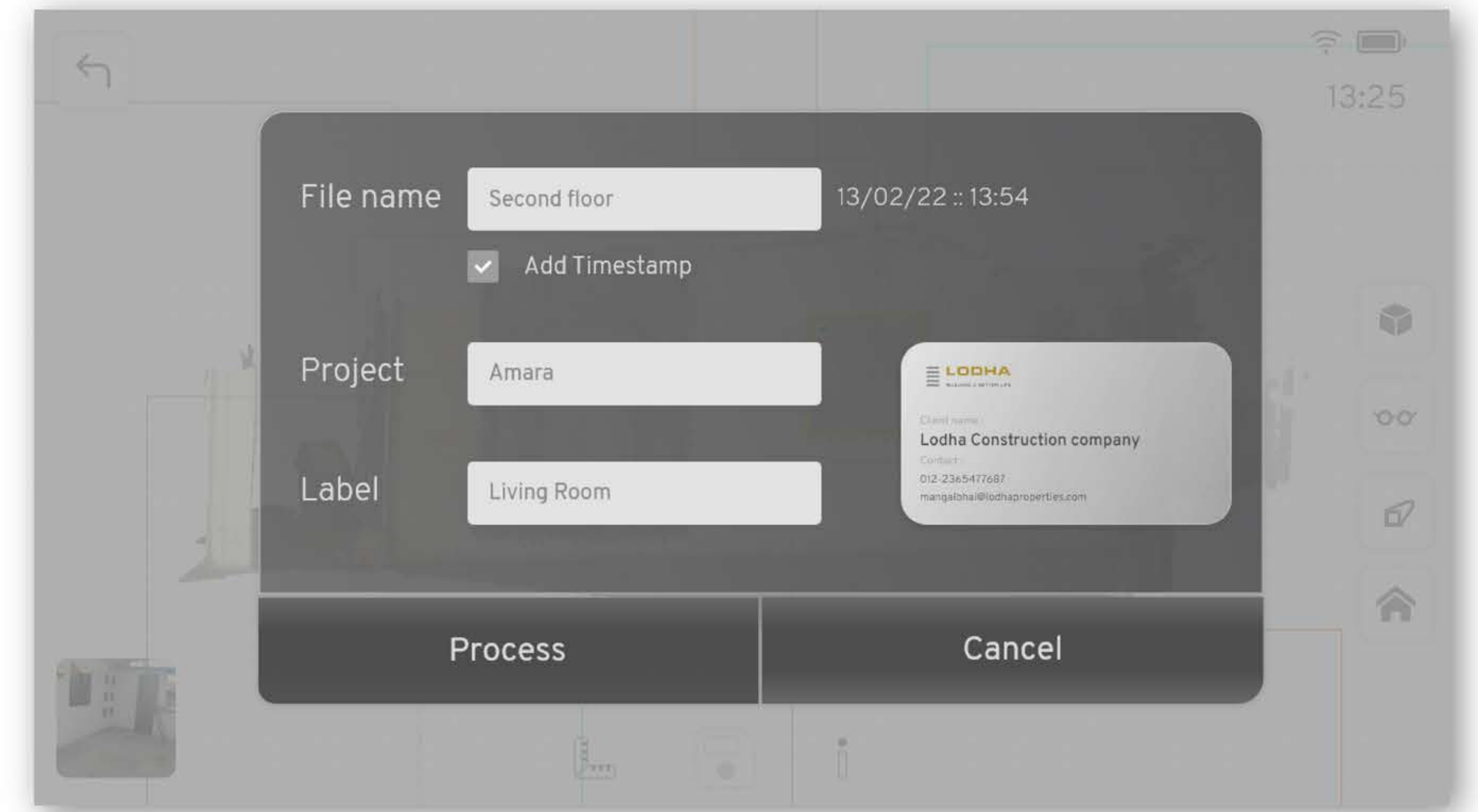
- Large and identifiable icons
- Multiple color overlay options while capturing
- Minimal screen space occupation by tools/features
- Use of neutral colors for all feature tools, menus

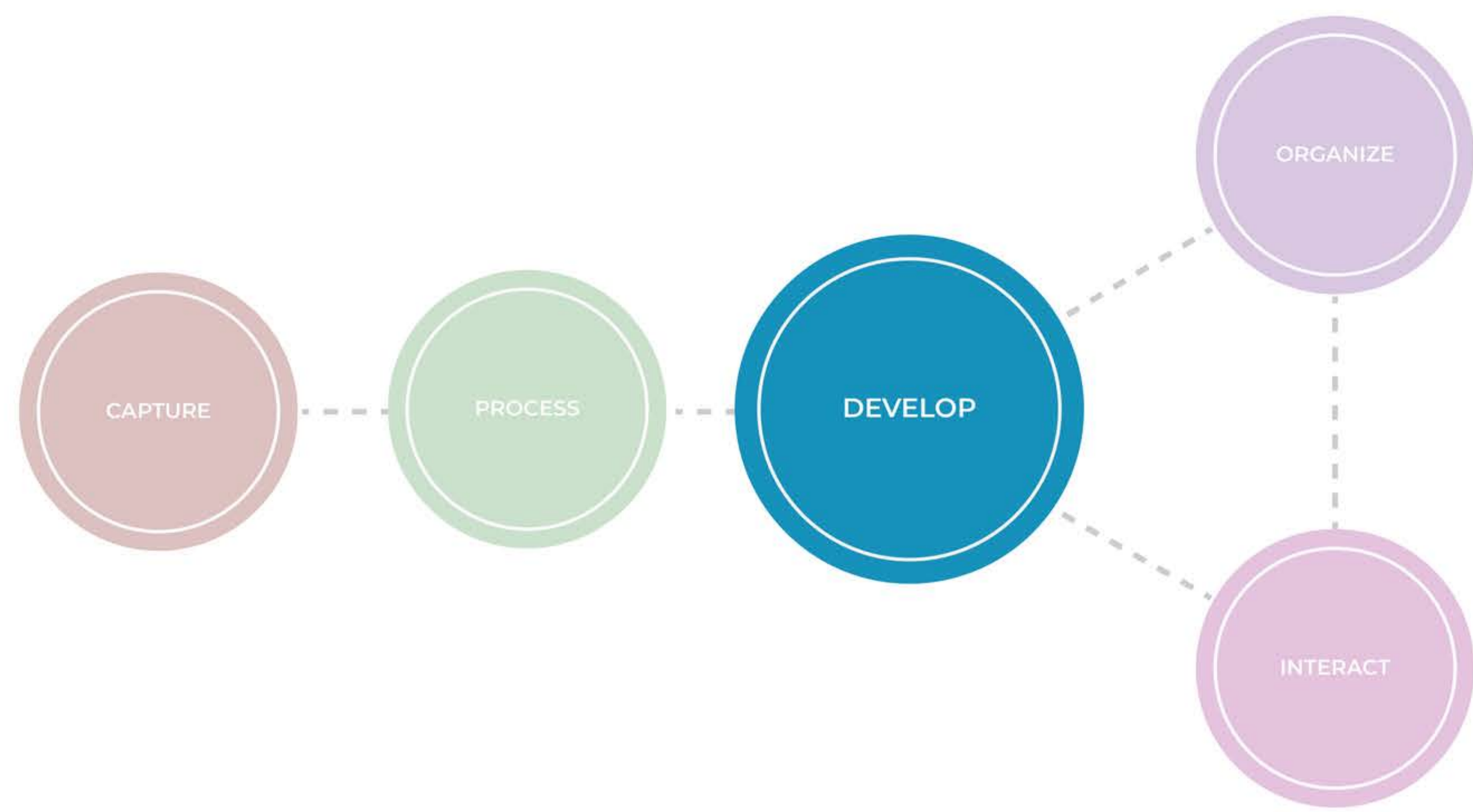




The Technology

The captured video is linked to project already created and it is sent to cloud for processing, where Computer vision and deep learning algorithms help in converting the video to a CAD 3D model. Which then can be downloaded in the Editor for further design and development.





The Editor

The Editor consists of all essential features required for end to end design of any Interior design project. This software is specifically designed for Interior designers hence it eliminates all the unnecessary features of other 3D modelling softwares thereby making it workable on low config systems as well. Unity Game engine as a core development platform, makes this Editor most versatile software.

Research Method

- User interviews
- Architecture comparison with other 3D softwares
- YouTube tutorials
- Screen recordings of competitor software usage by designers

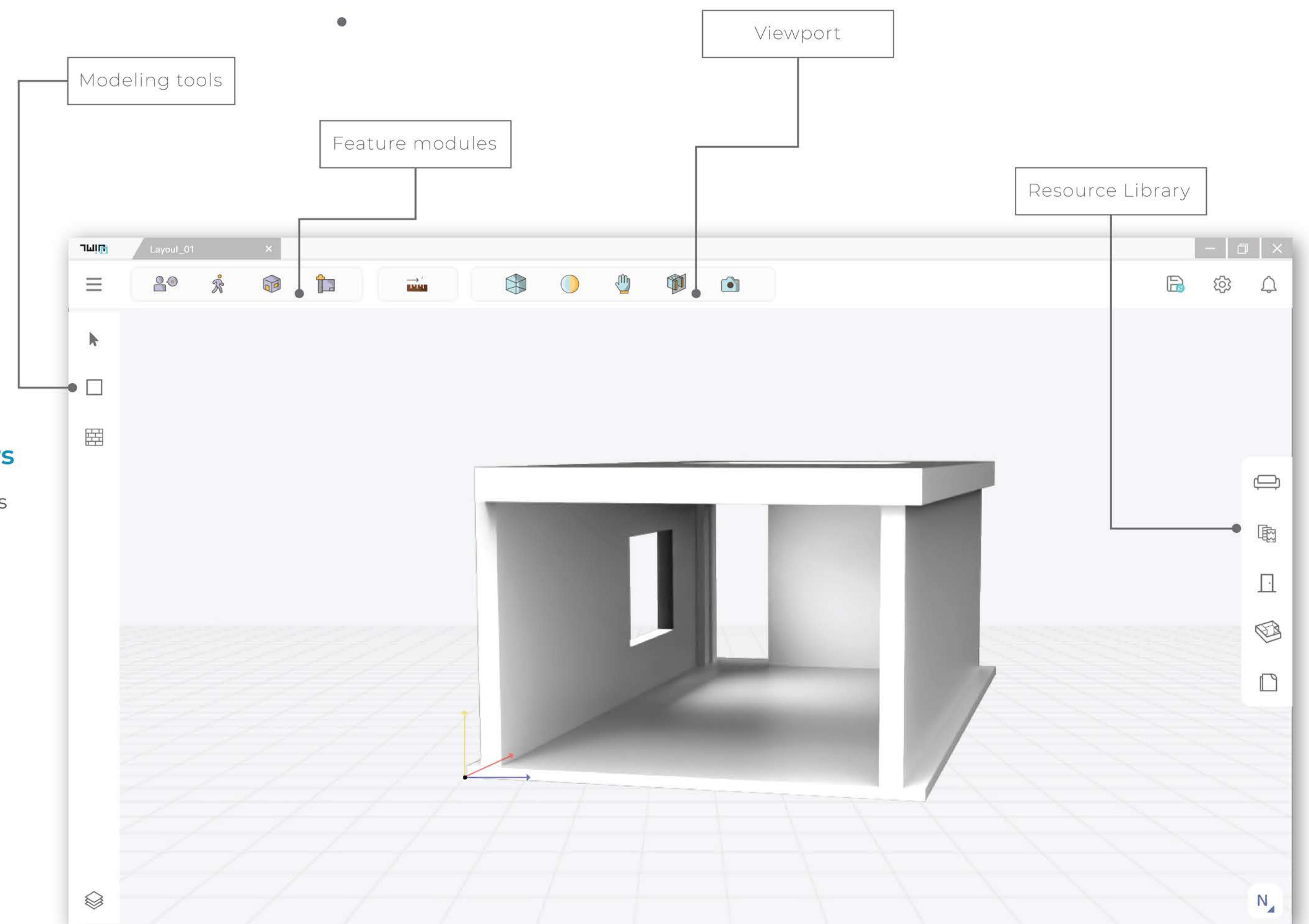
Testing Method

- Heatmap analysis of prototypes
- Unguided prototype testing
- Video documentation analysis

Validation Parameters

- Discovery time of operations
- Ease of use
- Interface intuitiveness
- Performance time

User group : Interior Designers



The Editor : Features

3D Modelling

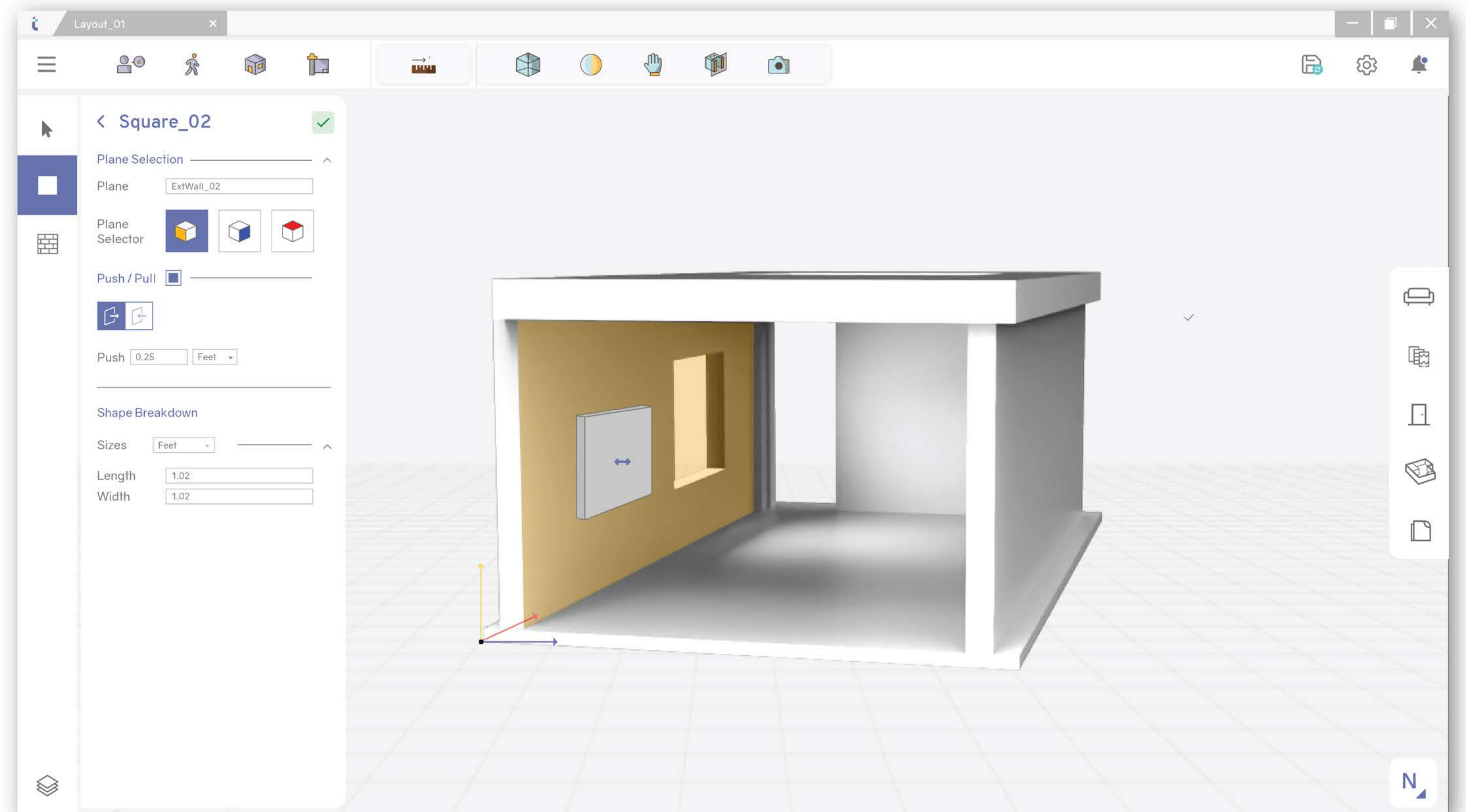
Soul of every 3D software is 3D modeling. This module in Editor is designed specifically with considering the specific requirements of Interior design process.

USER EXPERIENCE

- Mouse based push & pull operations
- Familiarity with operations inspired by competition softwares
- Option to change measurement units

USER INTERFACE

- Clear communication interface
- Visual cues for selection



The Editor : Features

Drafting and Layouts

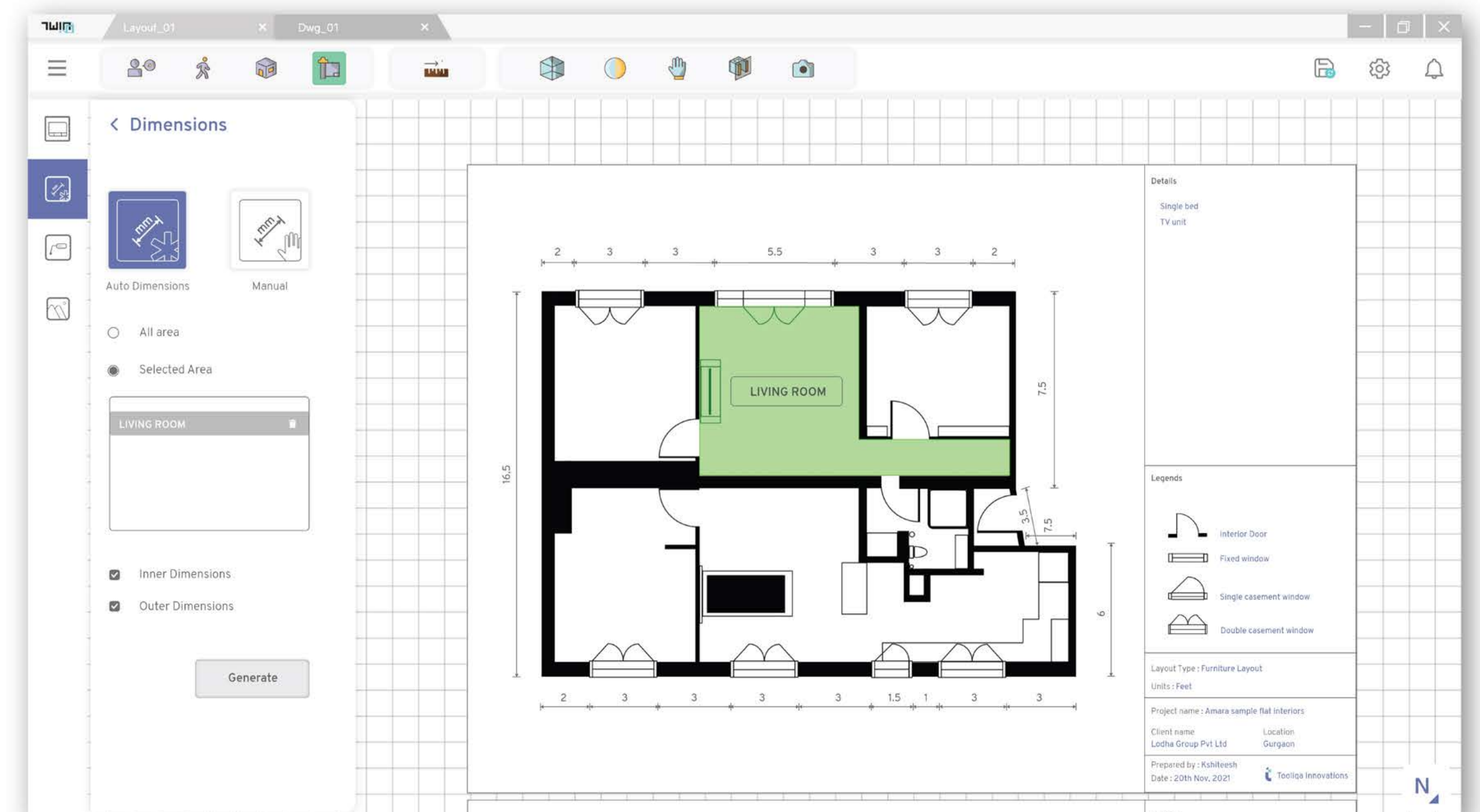
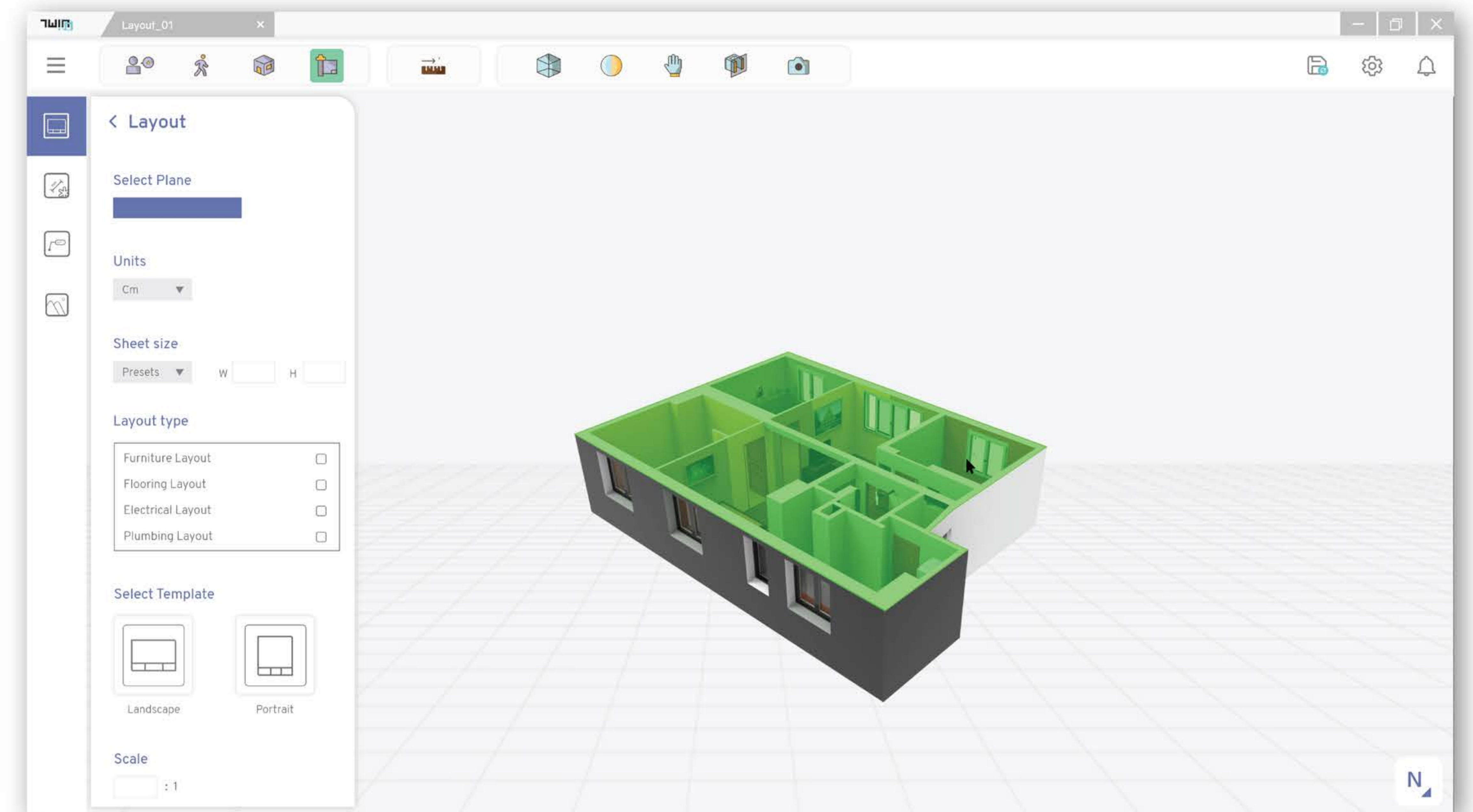
This is the most important stage in the project where designers have to plan the zones and object placements. Conventionally done in 2D first and then made into 3D models. However in this software, 3D models are already created as per dimensions, the task becomes easier.

USER EXPERIENCE

- Single click auto-dimensioning
- Automatic scale factor based on sheet template
- Auto generated symbols based on labels from capture

USER INTERFACE

- Familiar and identifiable icons
- Consistent design language
- Minimal screen space occupation by tools/features



The Editor : Features

Walkthrough

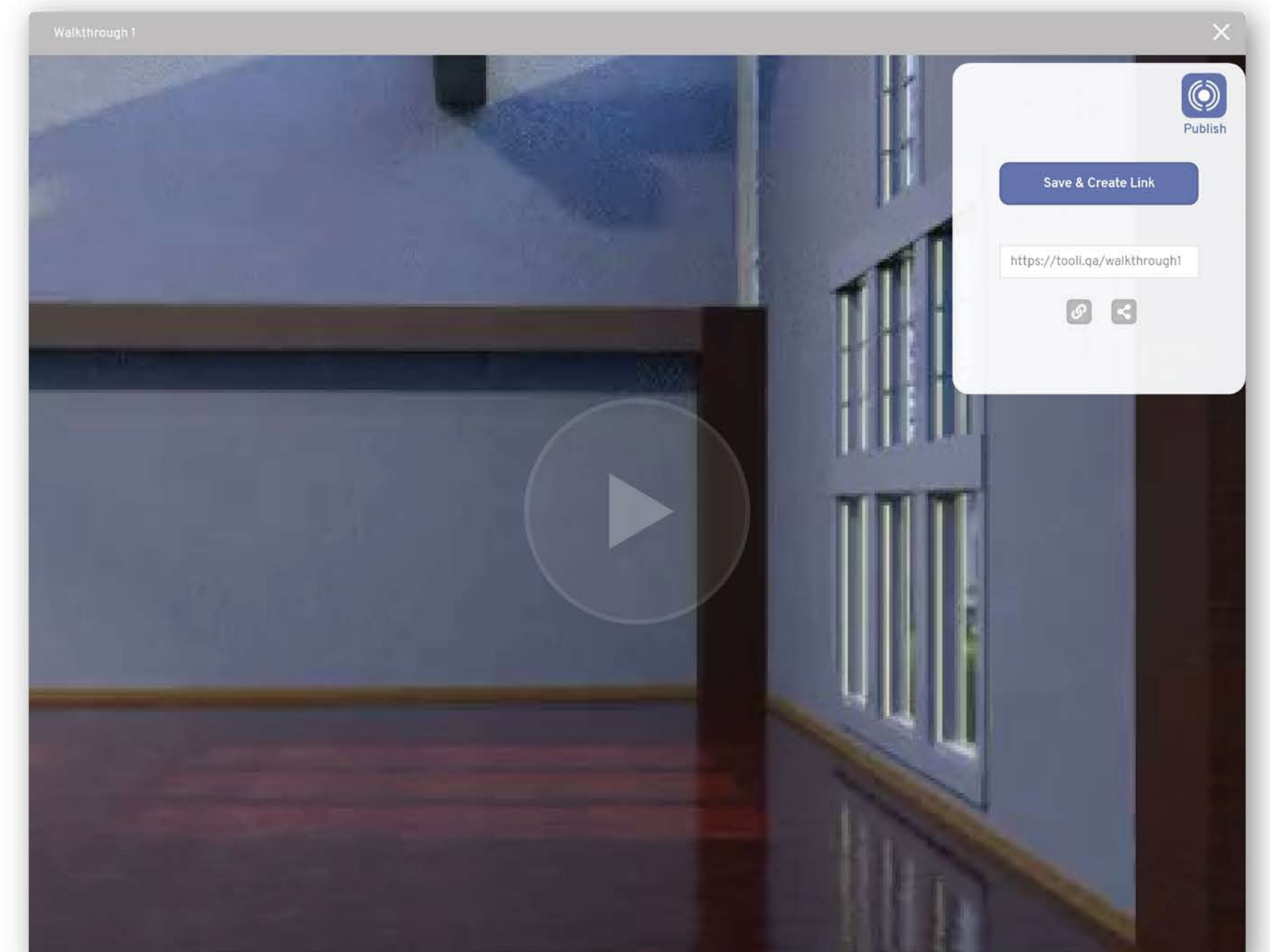
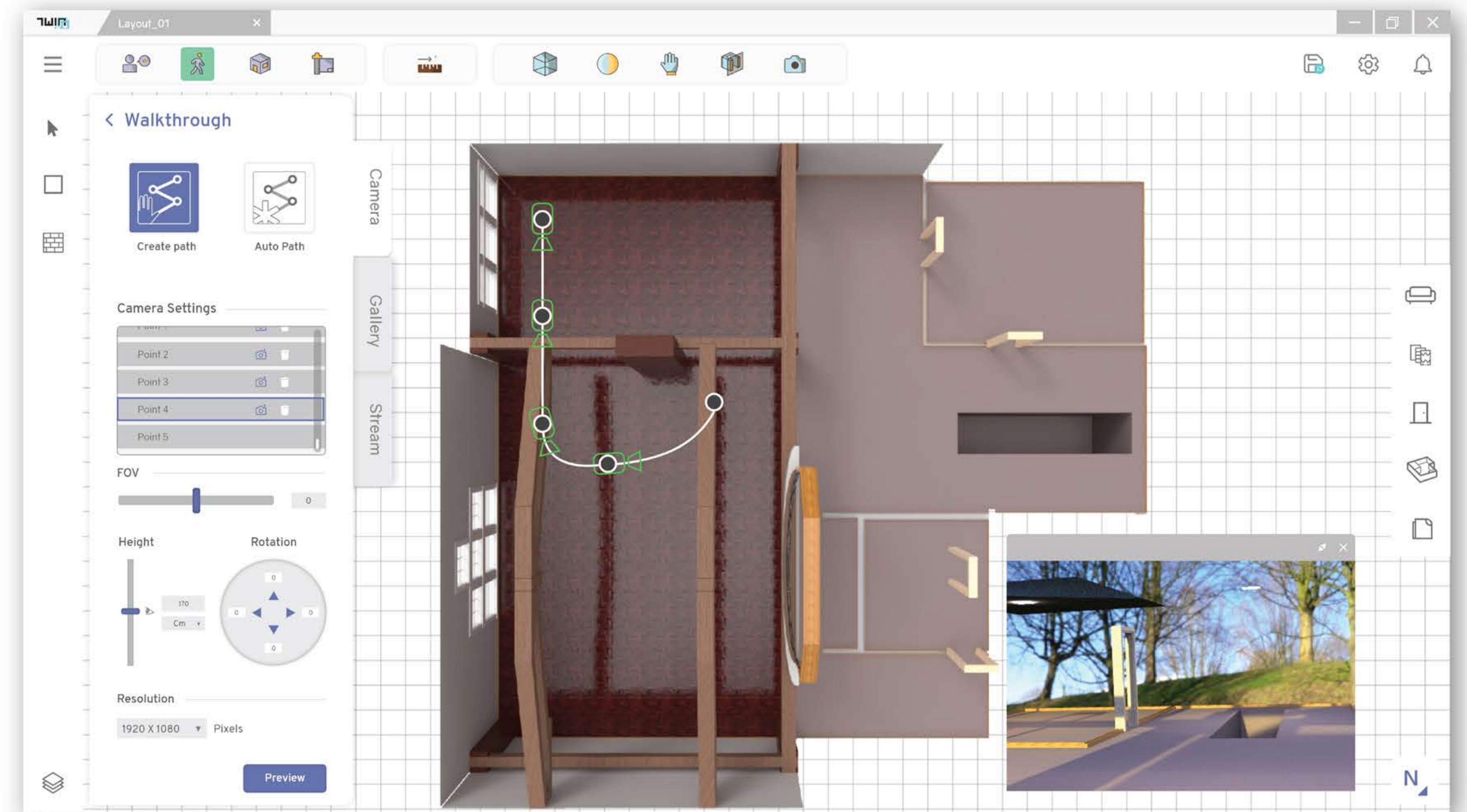
Walkthroughs are easier way to give the feeling of being in the space. However not frequently used due to complexities of operations and time consumption to create them.

USER EXPERIENCE

- Auto path creation based on capture movement
- Default 2D view to create path manually
- Parallel 3D visualization
- Online sharing of walkthrough as web link

USER INTERFACE

- All operations clubbed in single panel
- Intuitive interface
- Camera positioning and placements through wheel interface
- Bezier curve for 2D path creation



The Editor : Features

Render

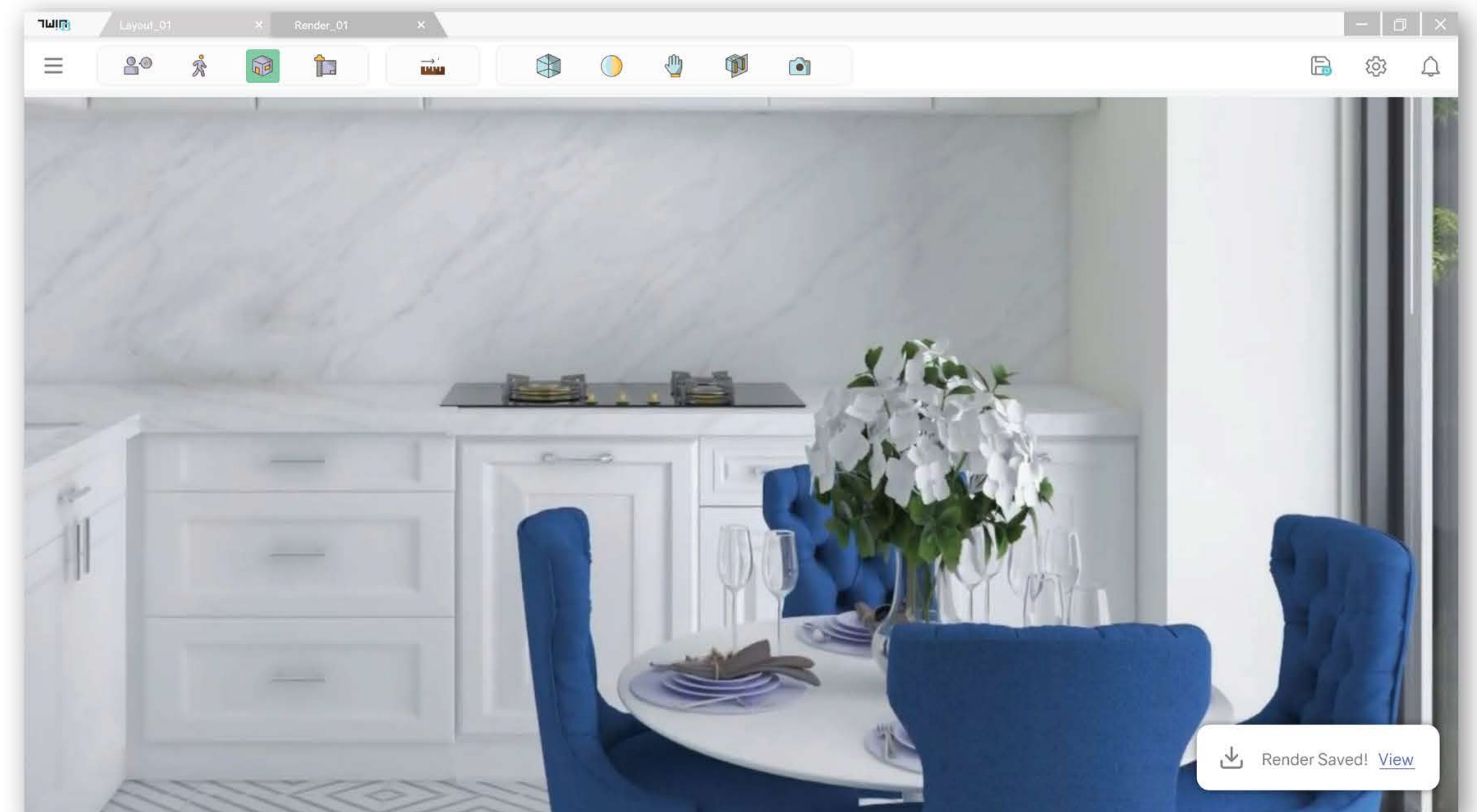
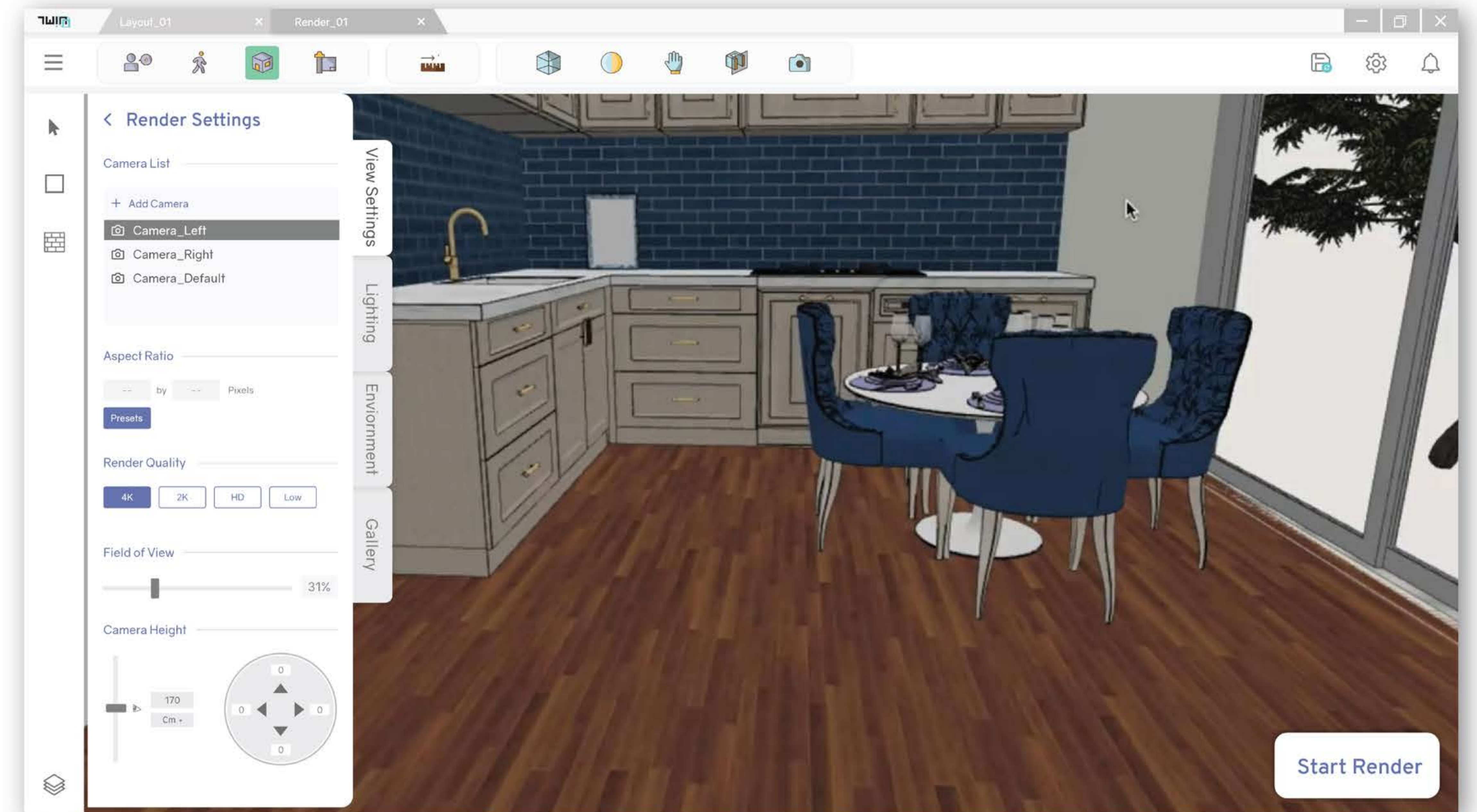
Renderings are generally created in specialized softwares due to its complexities of photorealistic settings. Having a render engine within the same software as that of 3D modelling saves the time of the designer. Unity engine helps in overcoming those issues.

USER EXPERIENCE

- Minimal customization operations considering standard industry requirements
- Less render process time due to game engine
- Queing option for parallel processing

USER INTERFACE

- All operations clubbed in single panel
- Lean UI
- Visual updates on every ray bounce cycle



The Editor : Features

Library

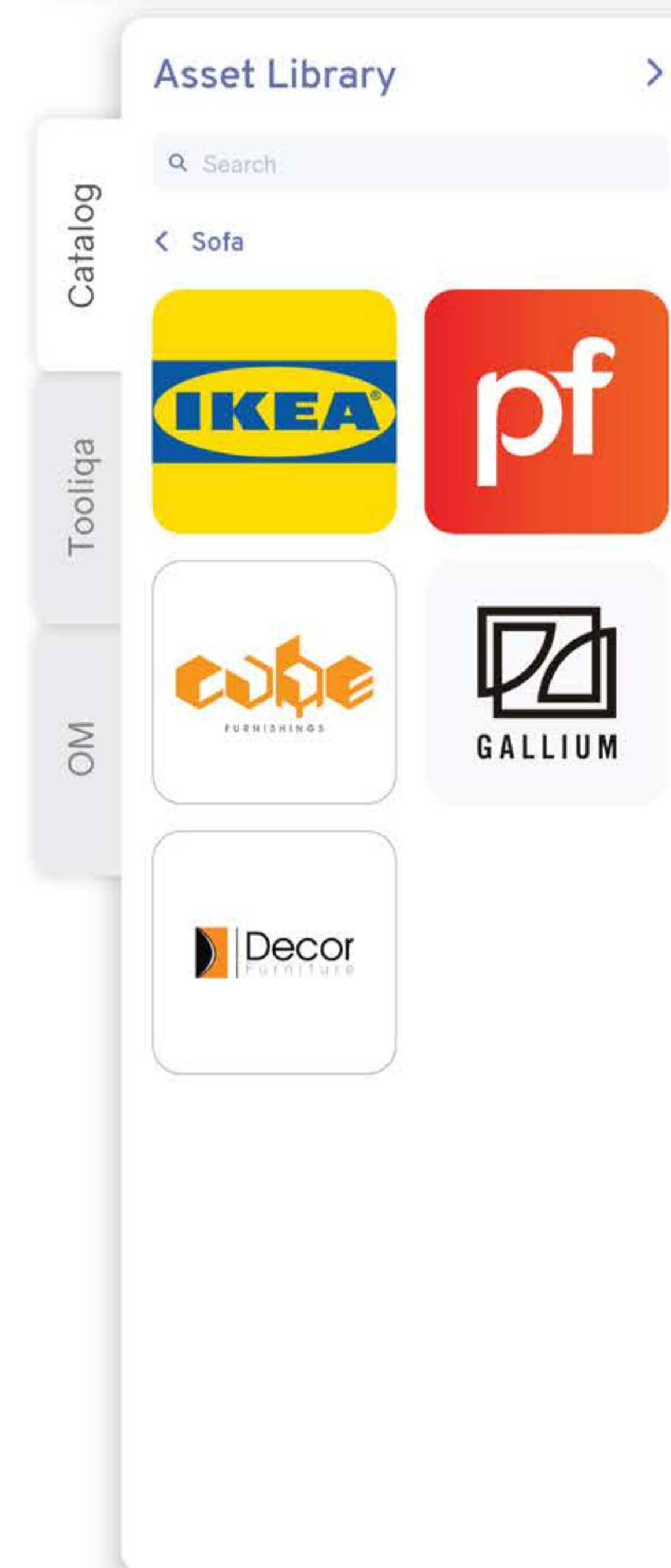
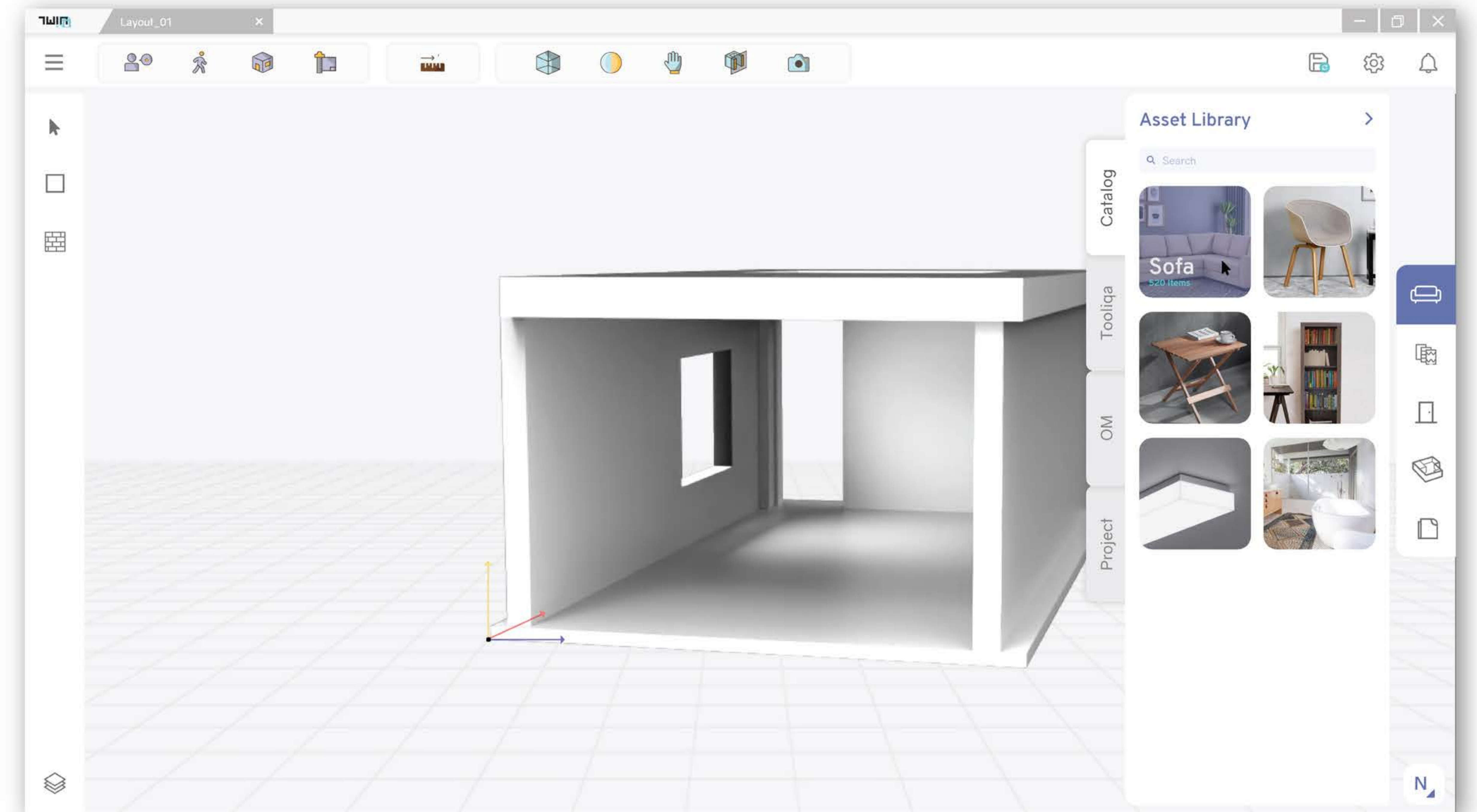
It is important to have a library of 3D assets at immediate disposal for any designer. However most of the times available 3D assets are just for creative visualizations and don't exist in real world.

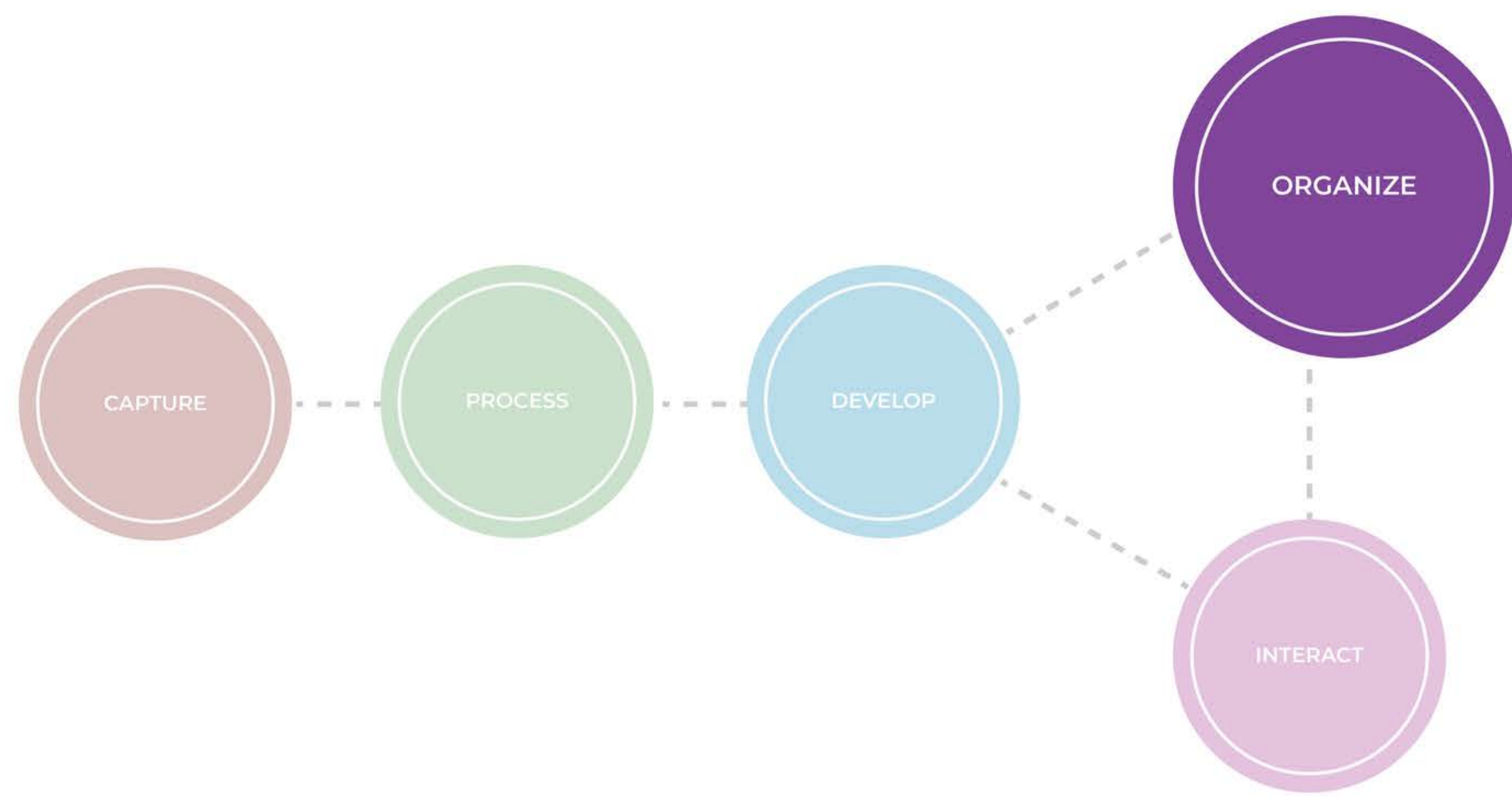
USER EXPERIENCE

- Actual manufacturing catalogues from vendors
- Real time updates of assets
- Asset preview
- Cost displayed in preview for easier decision making

USER INTERFACE

- Breadcrumb design for easier category navigation
- Large preview icons





The CR & PM

It is important to track and document the process along with the designing. This CRM and Project Management tool is connected with The Editor and Device which, makes it easier for designers to track the effectivity in the same ecosystem.

Research Method

- User interviews
- Structural system comparison with competition
- Screen recordings of competitor software usage

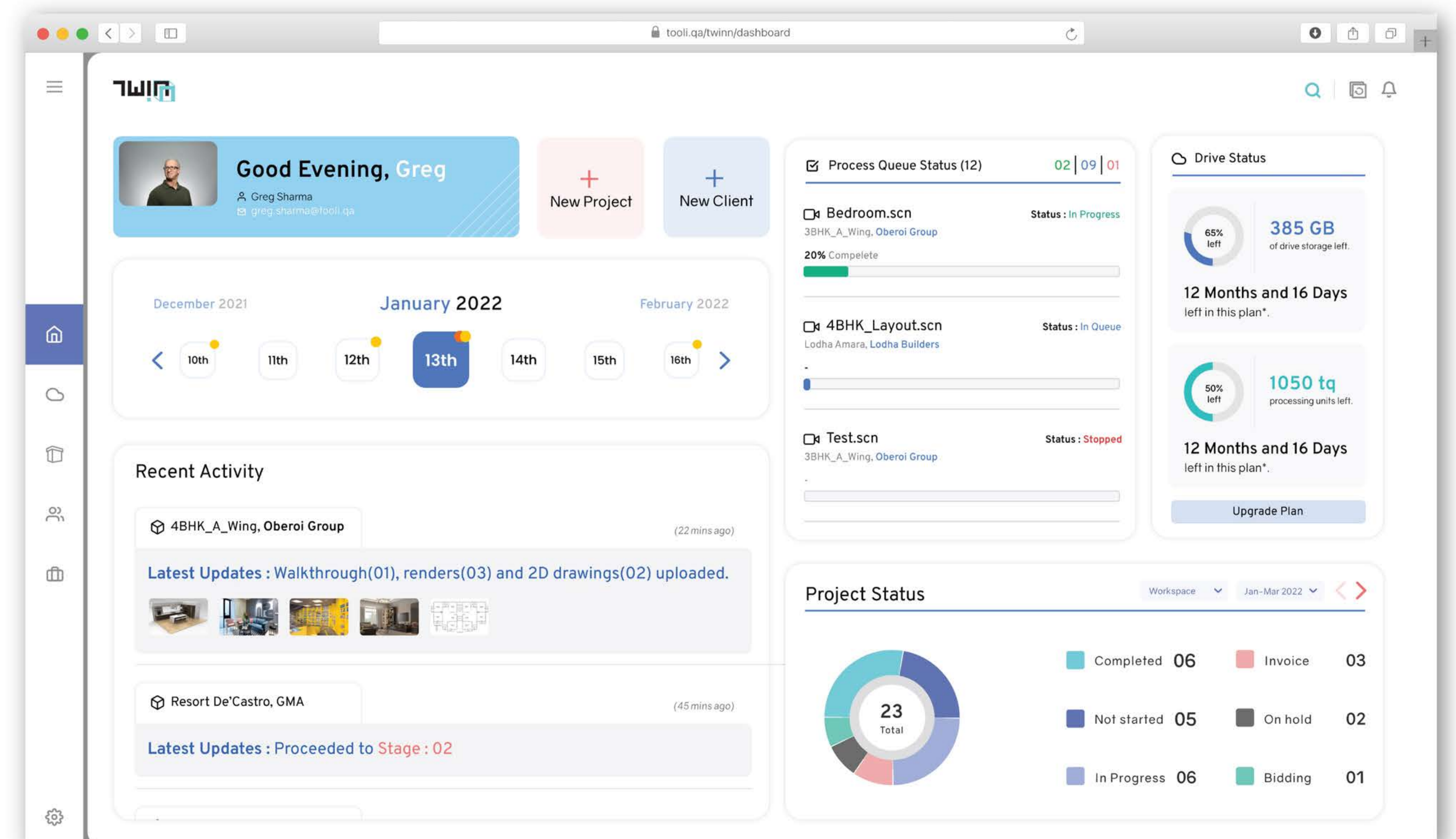
Testing Method

- Heatmap analysis of prototypes
- Unguided prototype testing
- Video documentation analysis

Validation Parameters

- Discovery time of operations
- Ease of use
- Interface intuitiveness
- Performance time

User group : Project managers, Interior designers



The Project Management

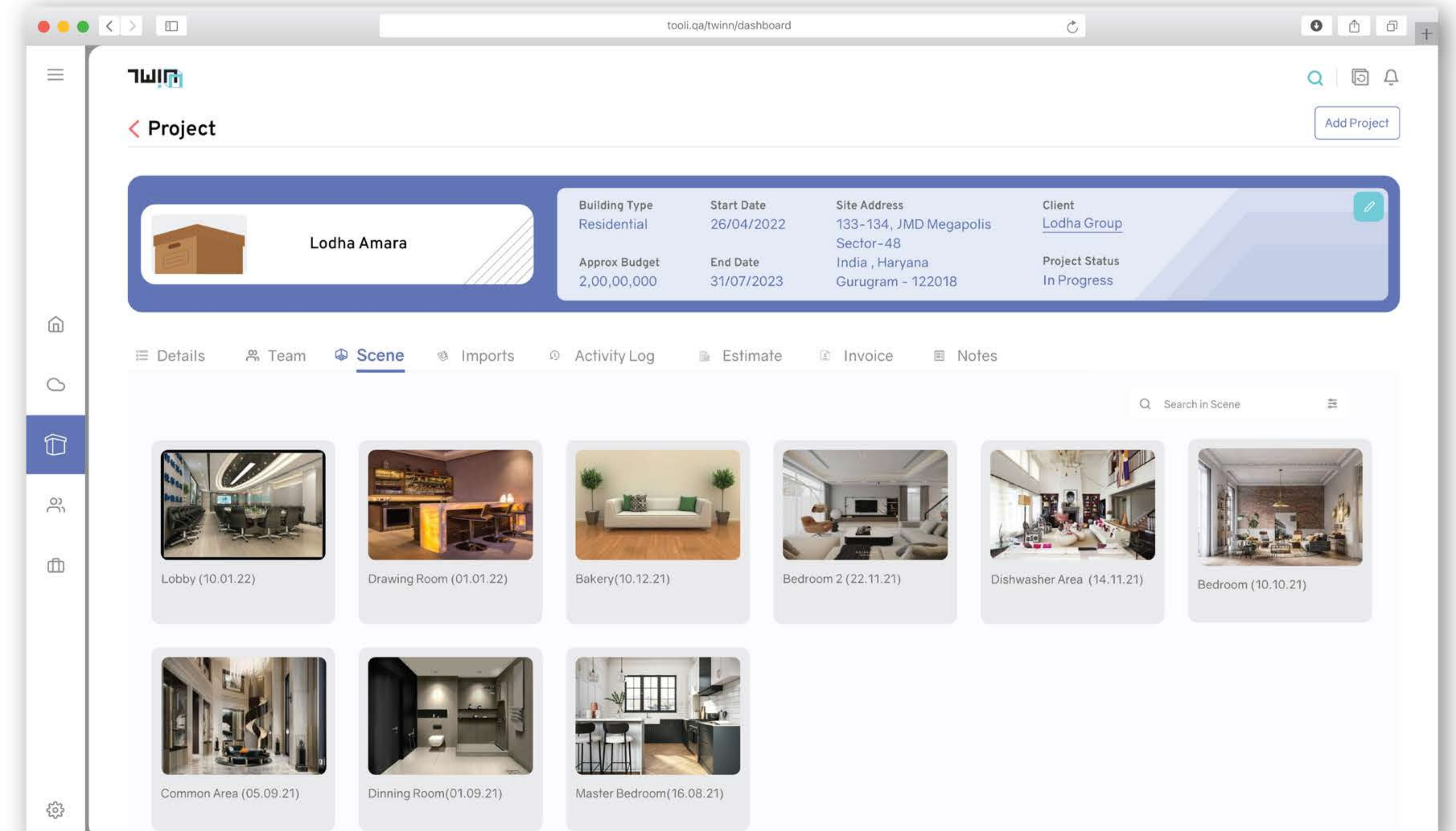
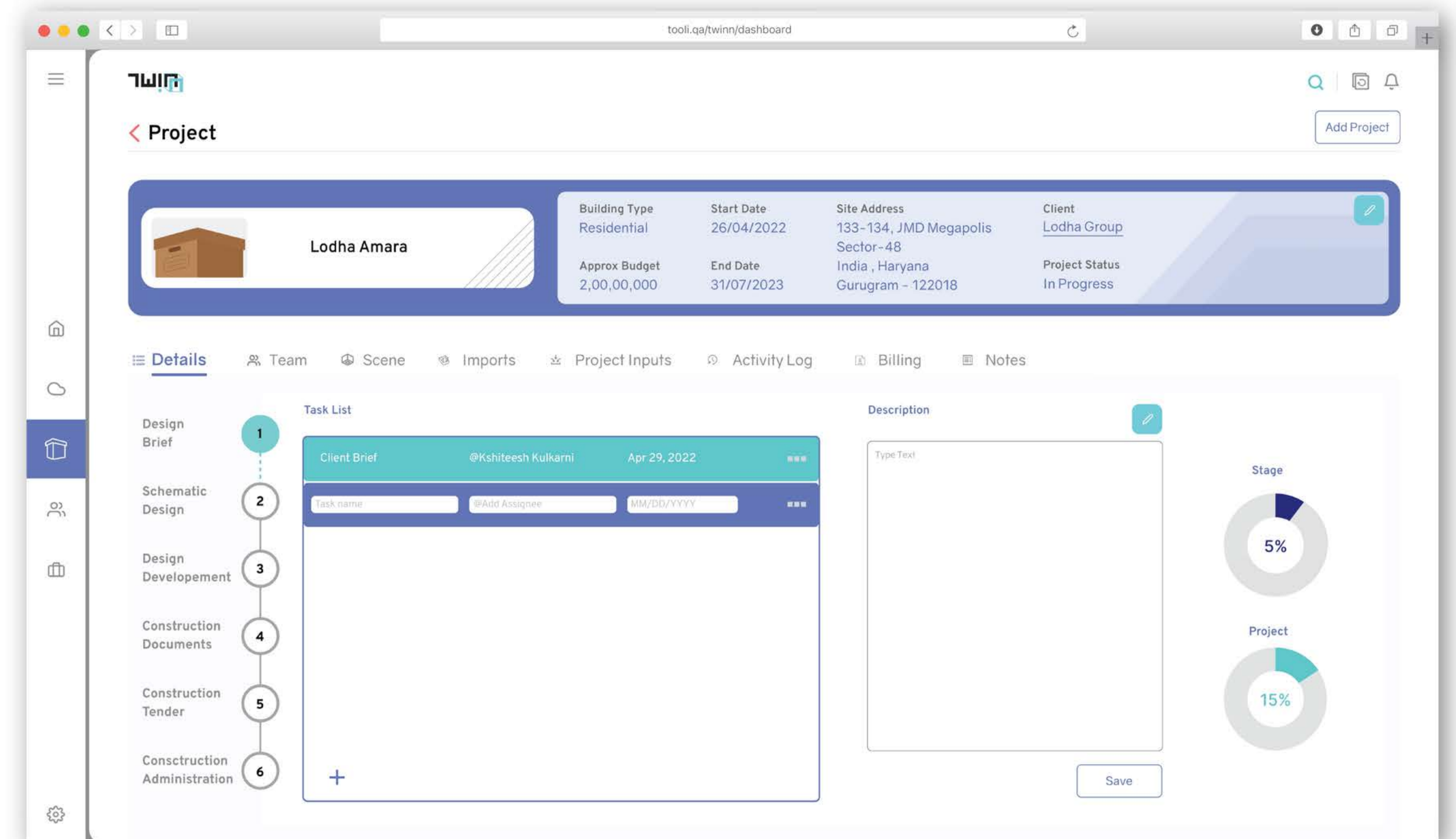
The cloud synchronisation with the device and the editor makes this tool most efficient part of the whole eco system. It helps managers keep track of projects without frequent intervention of designers.

USER EXPERIENCE

- Customized project milestones
- Possibility to view projects in 3D through WebGL interface
- Communication to designers through portal

USER INTERFACE

- Single page design for whole project
- Easy discoverability of categories



The Invoice

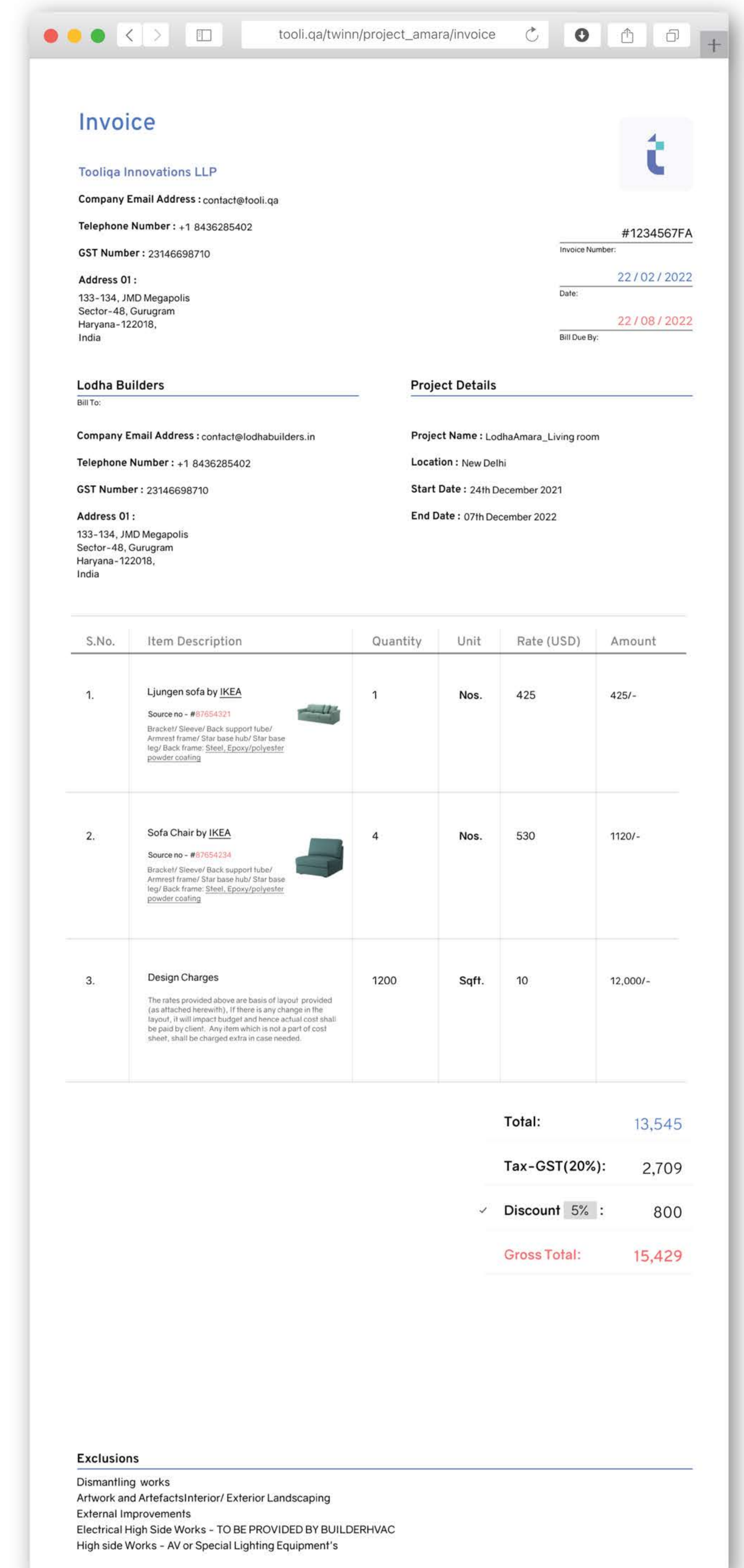
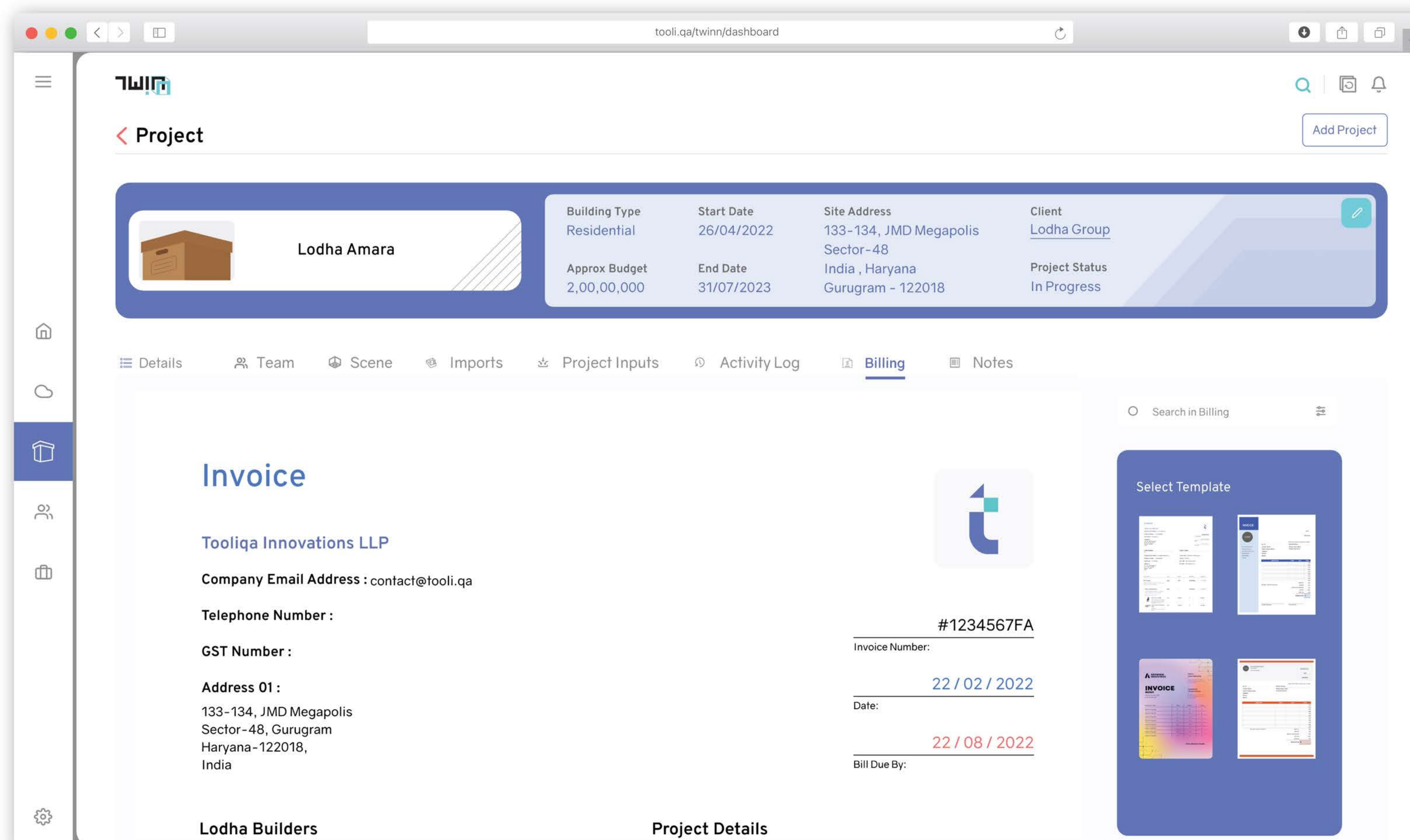
This invoice generation module is linked directly with Editor to get the informations of assets used in design.

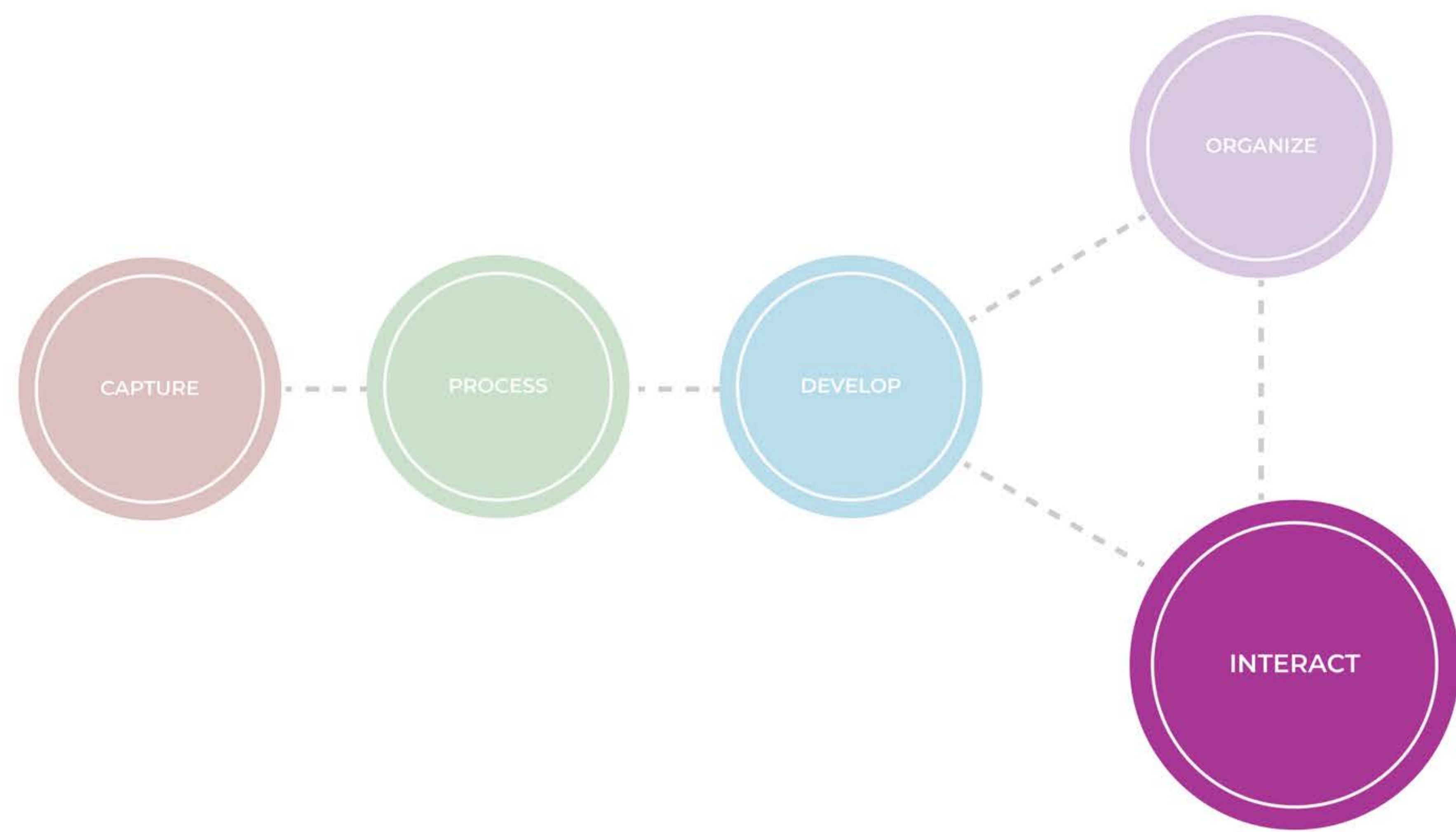
USER EXPERIENCE

- Auto generation of invoice
- Real time cost validation through vendor catalogue
- Manual update option

USER INTERFACE

- Template selection possibility
- Opens in separate window for visual clarity and attention





Client Interaction

With this module, client is able to interact with the designs and get the sense being in the environment. This feature is quite important as most of the times while the design process happens, client feels left out.

Research Method

- User interviews
- Comparison study of interactive web applications
- Study of game environments

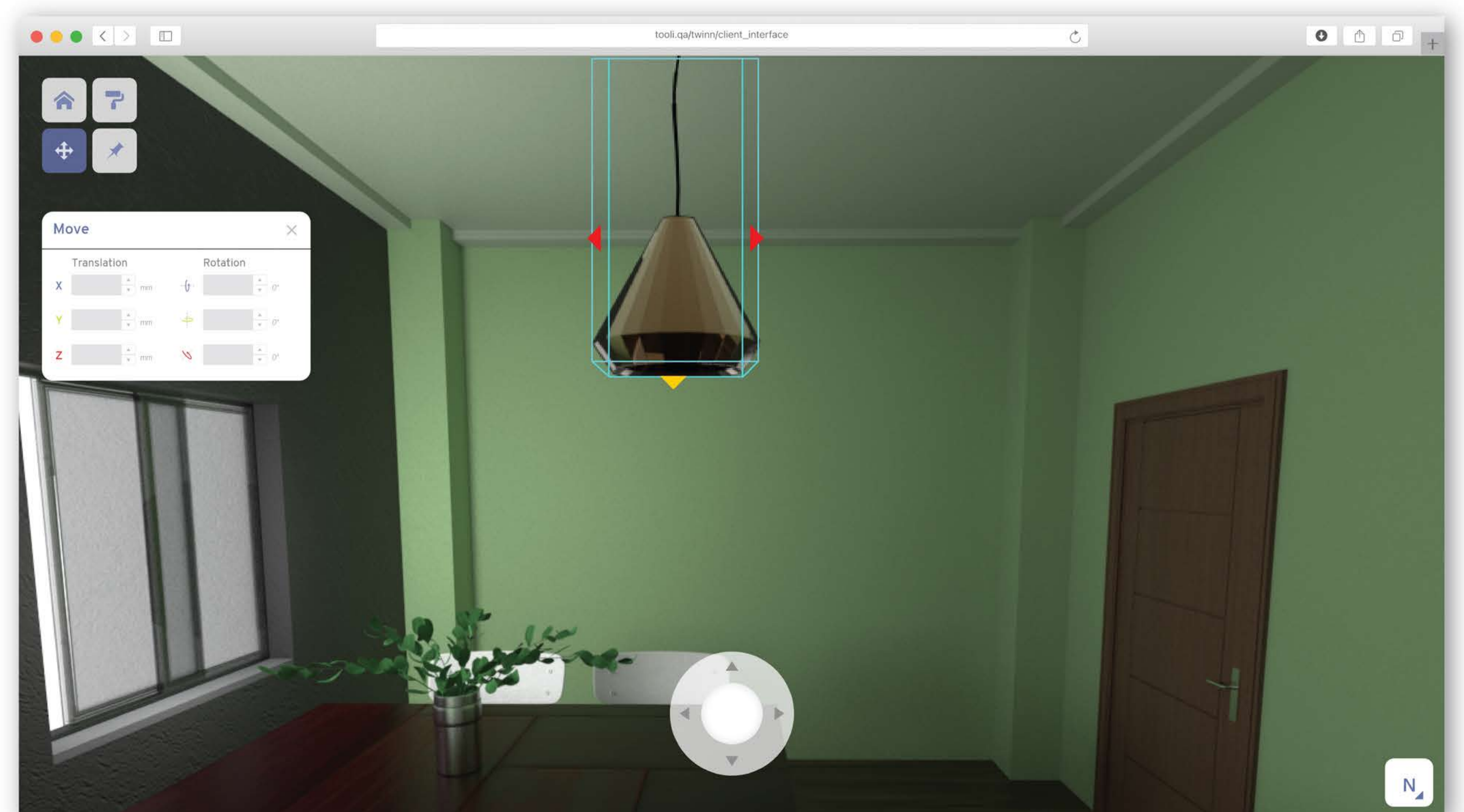
Testing Method

- Unguided prototype testing
- Video documentation analysis

Validation Parameters

- Discovery time of operations
- Ease of use
- Interface intuitiveness

User group : Couples who have sought interior design service, Couple who are seeking interior design services



The Client Interface

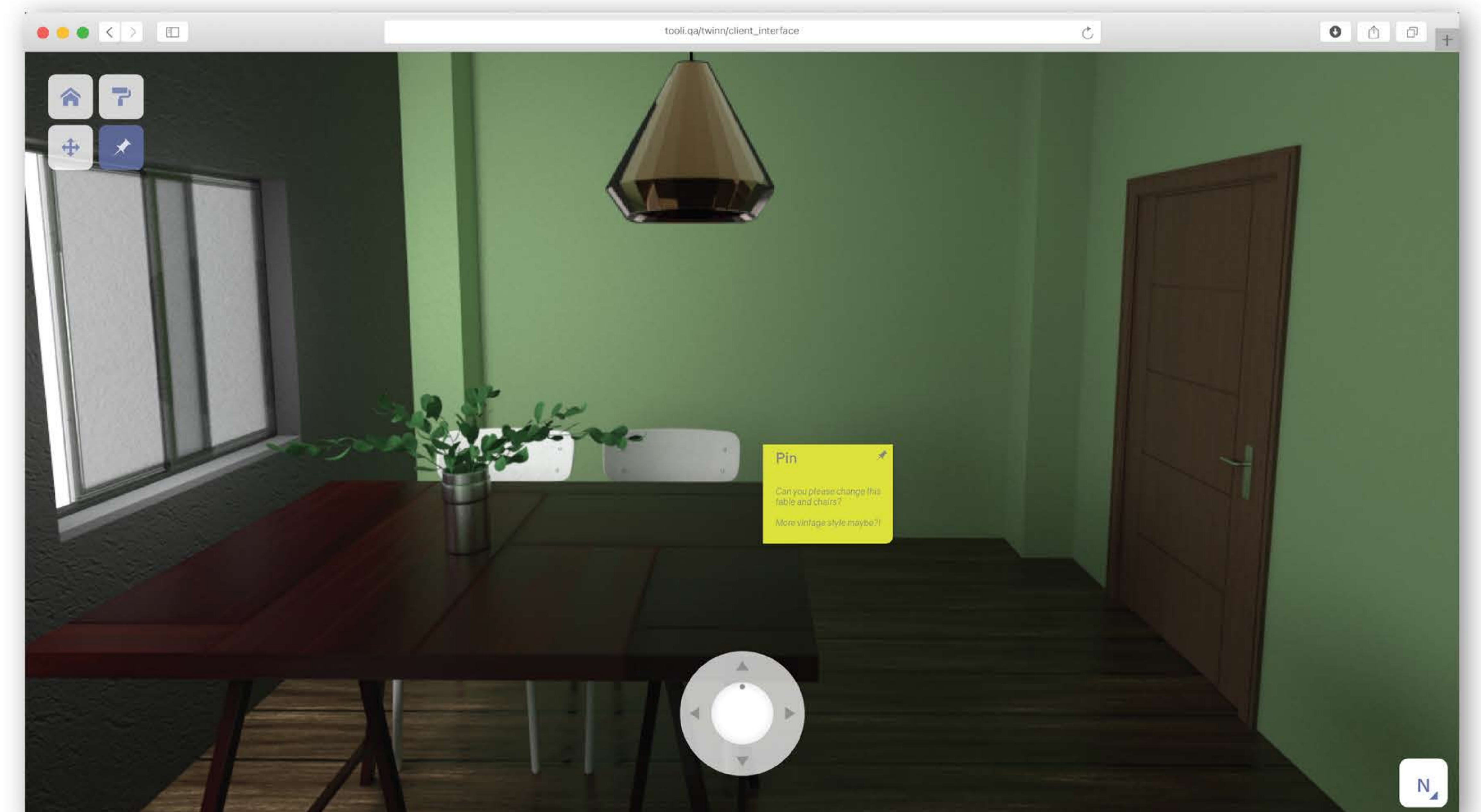
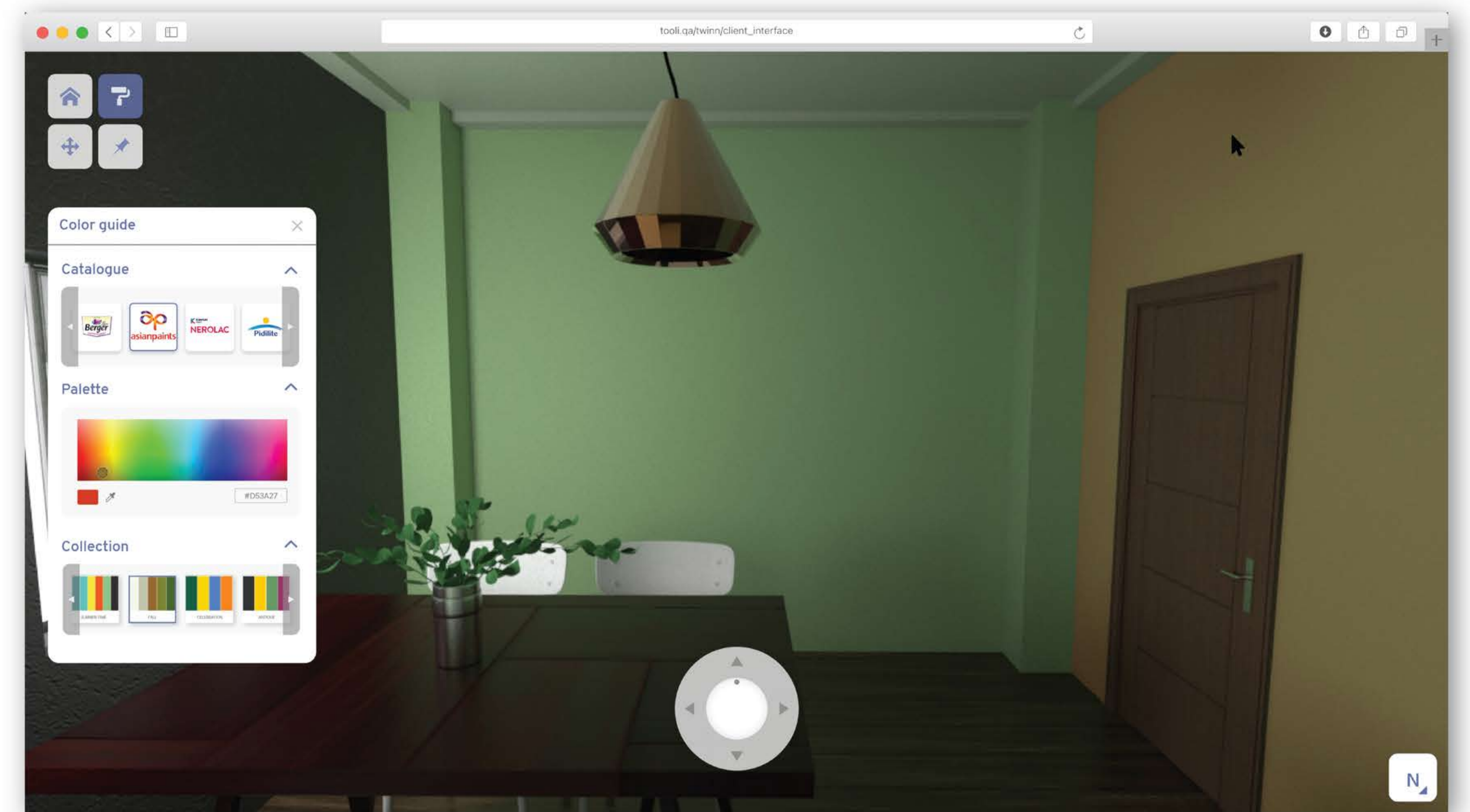
This interface allows customers to interact with the designs created by interior designers. It also provides the sense of control to the customer hence reducing a lot of 'to and fro' communications with the designers.

USER EXPERIENCE

- Object movement and placement control
- Color catalogues by vendors
- Complete environment control
- Possibility of suggestions to designers with notes

USER INTERFACE

- Minimal screen space occupation by tools/menus
- Intuitive navigation controls (wheel/steering)



PYBO | MEEBO

Educational Robotics

CHALLENGE : Robotics is considered as an extra curricular activity in the academics which, ultimately becomes interest dependant subject for the students. Whereas Computer science is a mandatory subject in the curriculum but students eventually loose interest in it for not being able to relate with practical applications.

GOALS :

- * Create educational robotic solutions as a physical manifestation of Computer science curriculum.
- * Design robots which are age appropriate to ensure consistent engagement with all age groups.
- * Design curriculum mapped activities.

ROLE : As a Product Design lead, I was responsible for user research, insight generation and analysis, mentoring team of designers and engineers, in charge of end to end product development.

As an IC, I was responsible for engineering, vendor identification and alignment, manufacturing support.

ORGANIZATION : Next Education India Pvt. Ltd.

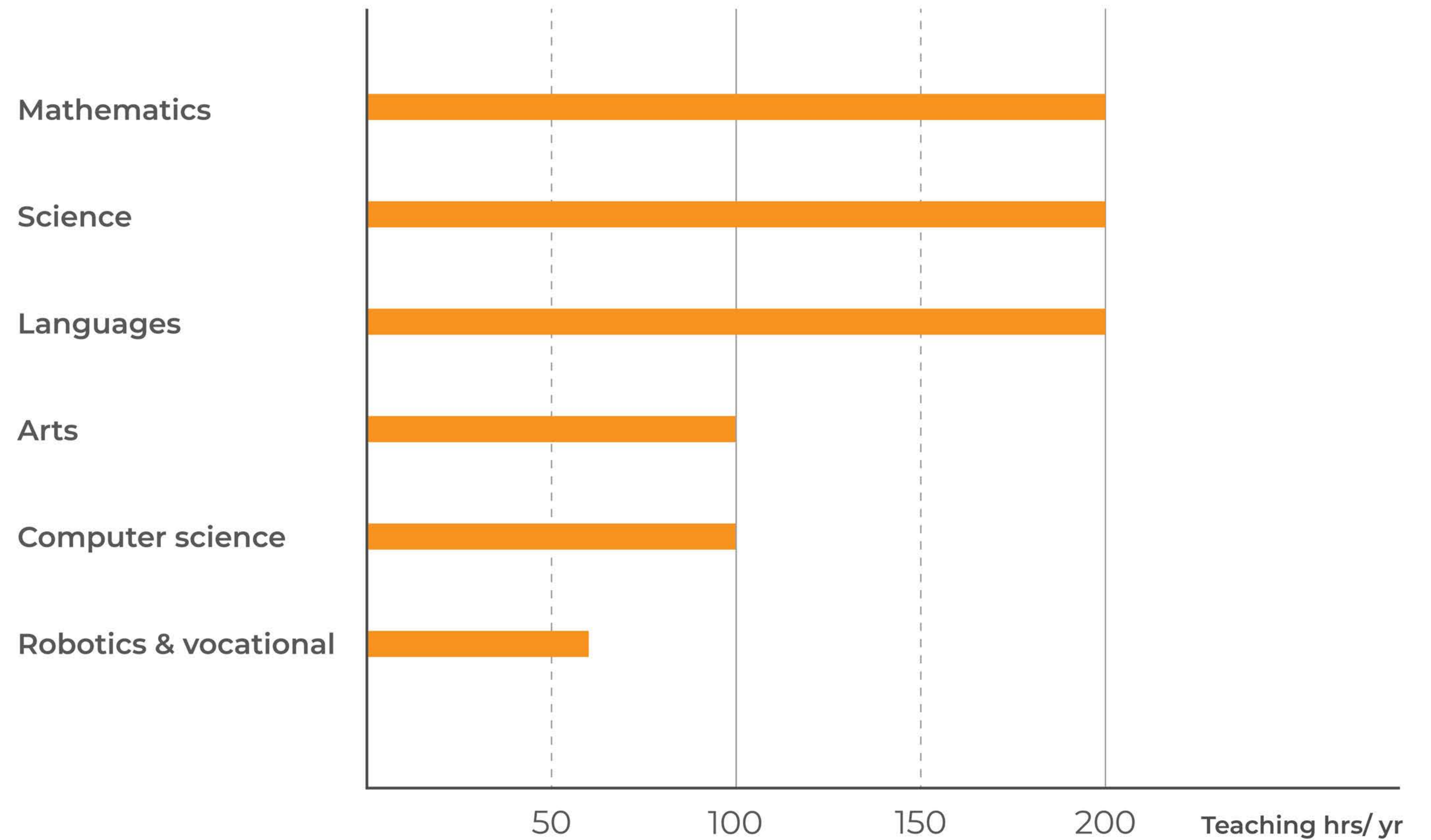


The Trigger Point

We went to many schools across the country to understand the academic and usability challenges of Robotics and Computer Science as a curriculum.


We analyzed the academic weightage of all the subjects in comparison with robotics.

This was a crucial moment of realization where we started analyzing reasons and a possible intervention from company's point of view.



The Research


We spoke with all the stakeholders to understand the challenges in robotics as an academic subject, practical implemetations.



RAKSHITA AGARWAL
Student, Grade IX
ICSE School, Mumbai


*"I love to make different Robots.
I saw this video of Robot,
playing Guitar on YouTube,
I am going to try making it
with my LEGO Mindtorms"*

PRIMARY



NISHTA PAL
Student, Grade V
State Board School,
Hyderabad


*"I like programming the Robot,
It's fun.
But I don't like to construct
the Robot.
It is difficult with screw driver.
I hurt my self last week".*



DINESH GUPTA
CS and Robotics teacher
CBSE School, Ahmedabad

*"Students love Robotics.
They enjoy it when their Robots
move or perform the functions,
but they fail to relate it with
the computer science curriculum.
Because mostly the softwares
in computer class and softwares
for Robotics are different".*


SECONDARY



AAKASH CHAUDHARY
Head Admin
CBSE School, Panipat

*"Students forget to bring their kits to
school, so they end up sharing with
their friends. We, nowadays have started
to keep kits in school but it takes up
a lot of space.
It is difficult for us to allocate that much
of space in school".*

TERTIARY



SADHANA SHARMA
Principal
CBSE School, New Delhi

*"Most of the times,
we have to utilize the lectures
of Robotics or Extra Curricular Activities
to cover the syllabus
of Mathematics and Sciences,
as the learning curve
for these subjects is quite high".*

Insights

After an extensive consumer research, we summarized few actionable insights which would work as a base for our product development.



Robotics is not given much importance as compared to other subjects



Students often fail to understand that Robotics is also a physical manifestation of computer programming.



Same Robotic kits are used across all grades, barring few exceptions of manual and autonomous robots.



The lack of consideration about age appropriateness is one of the reason children lose interest quickly.



Schools have space constraint for storage of kits and inventory.

The Strategy



Development of 2 separate Robotic products for two different age groups wiz. Age 7-10 & Age 11 onwards



The Robotics product to be a part of Computer Science with emphasis on programming.



The Robotics to be mapped with academic curriculum, so that students will be able to relate with CS.



To optimize the costs in mass production, common technology to be used for all products - Micro : Bit by BBC



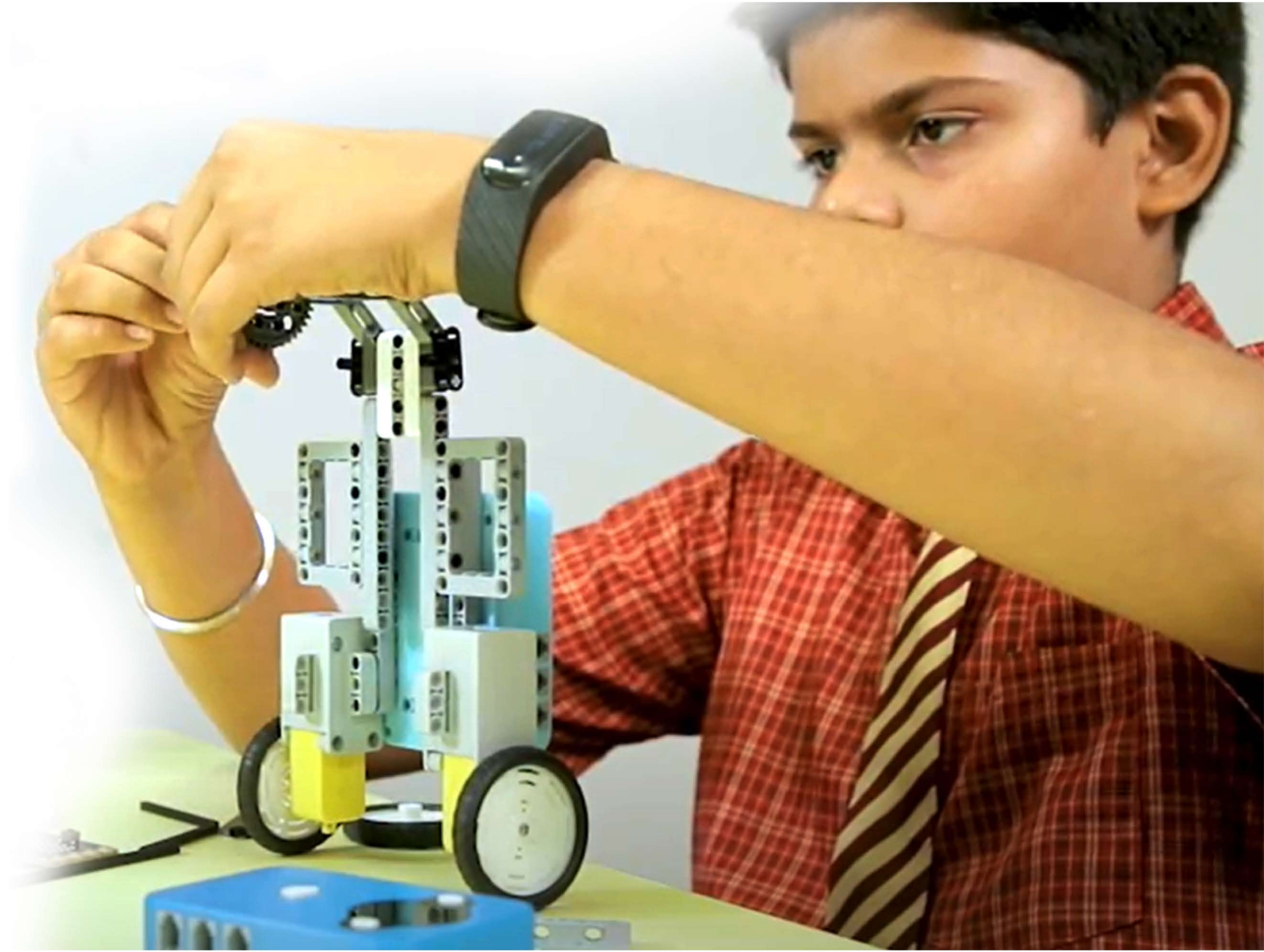
We would use modular construction blocks to encourage students to be creative and optimize space issue.



Pybo

This Educational robot is designed for age group 10+

The aim for this robot is to inculcate the idea of tinkering and experimentation in the young minds.



The Robot

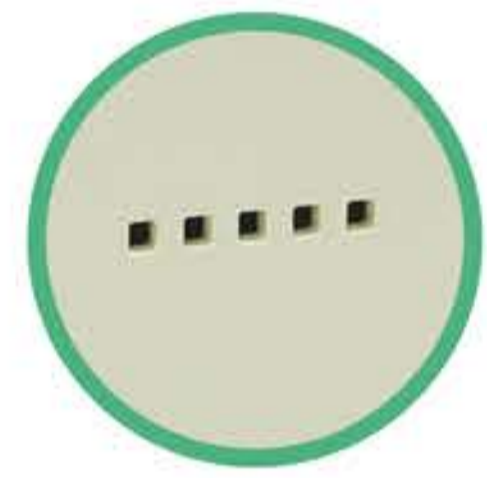
USER EXPERIENCE



Modular components for flexibility to create variety of structures.



Known interaction for attaching sensors and motors

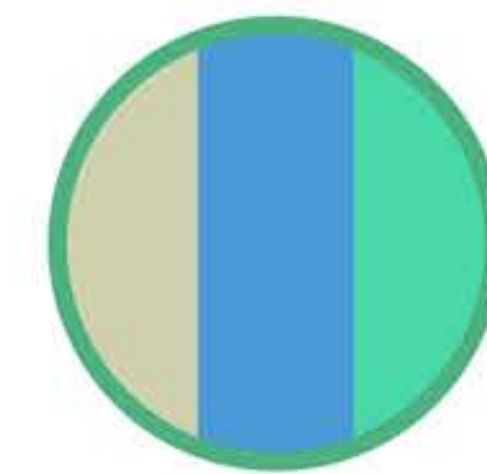


Exposed GP I/O pins for tinkerers to experiment

AESTHETICS



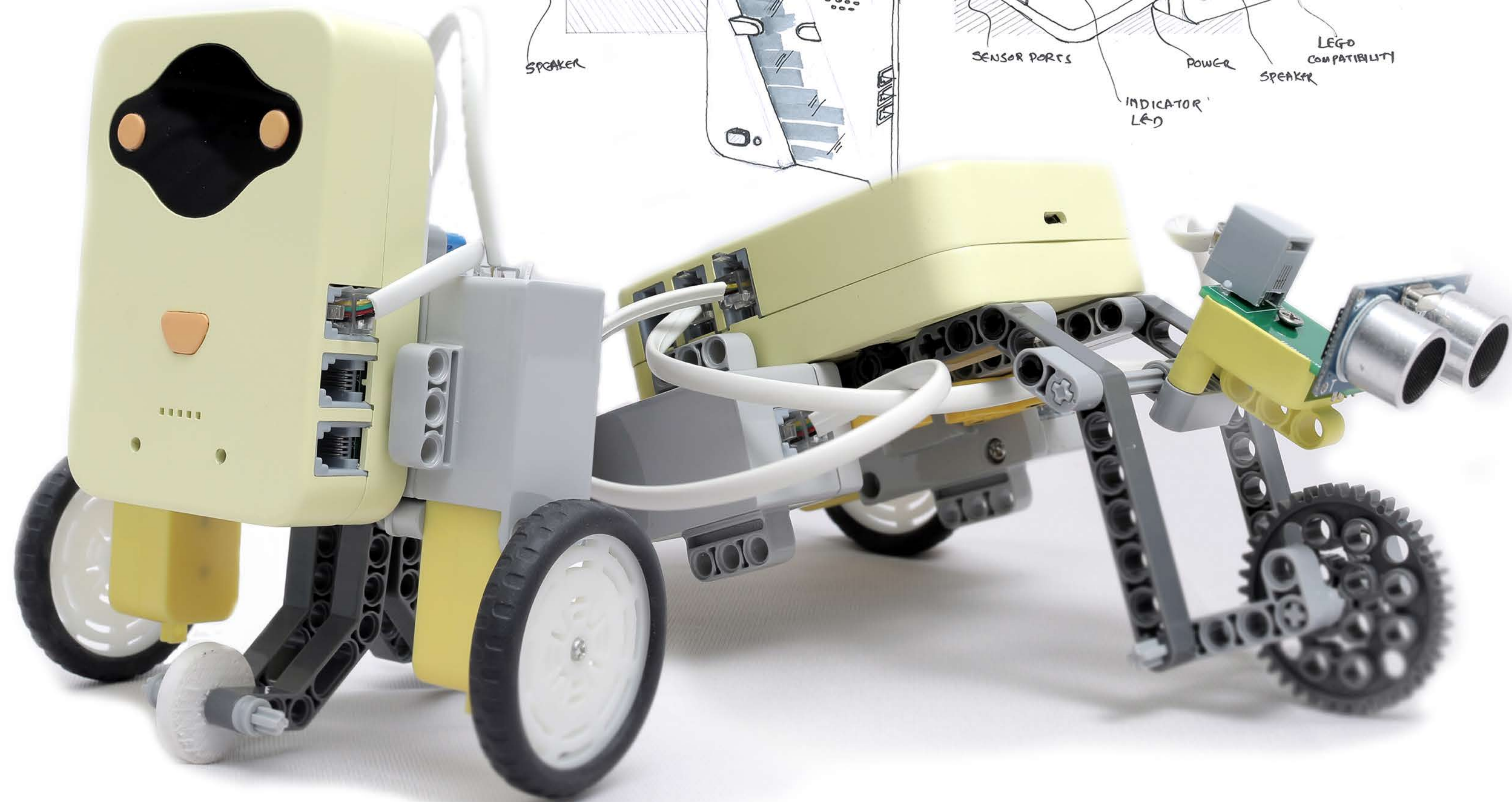
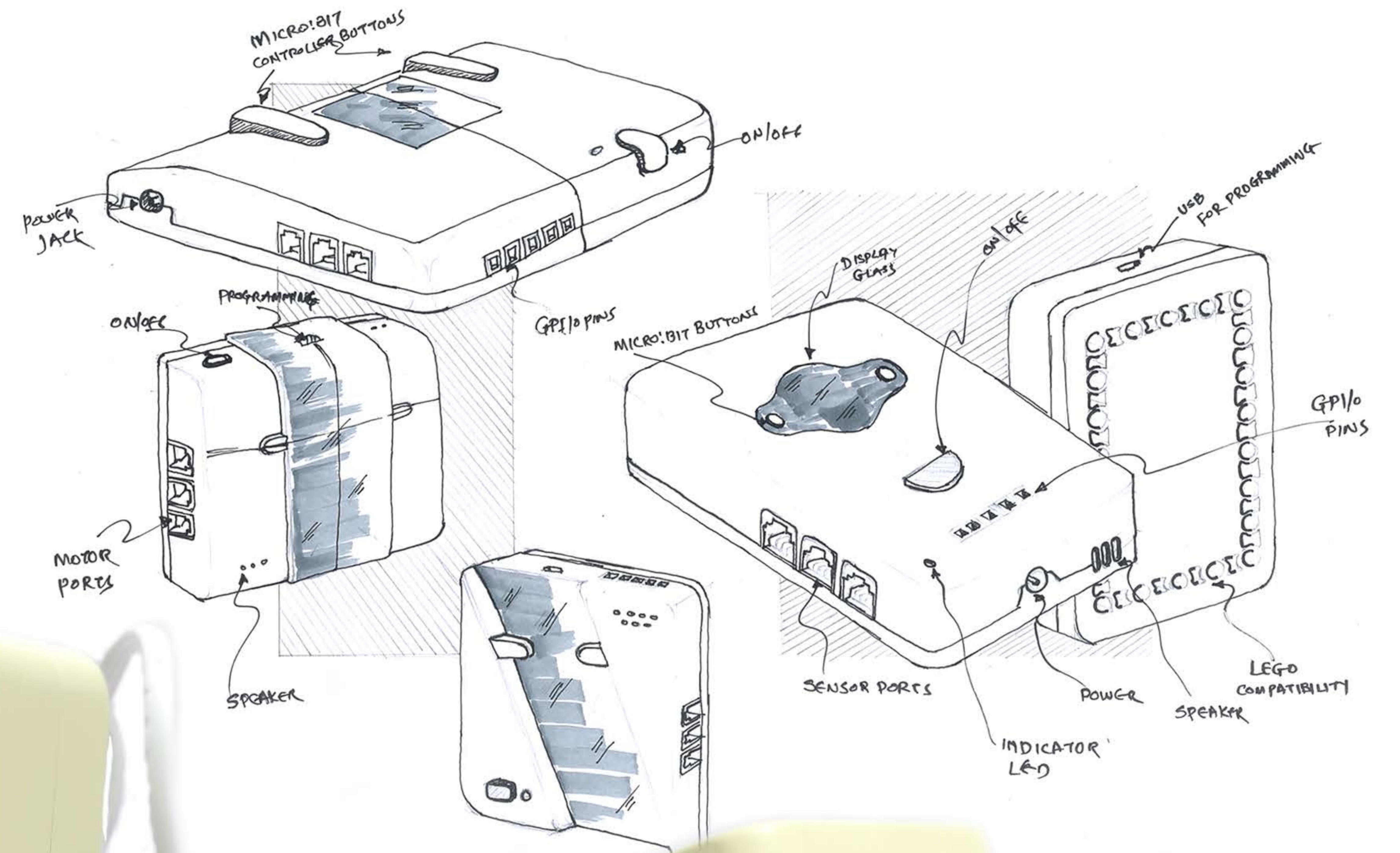
A character for the robot, inspired from comic books



Variety of colors for identification within student groups



Rounded edges to bring friendliness to the technological object



The Interface

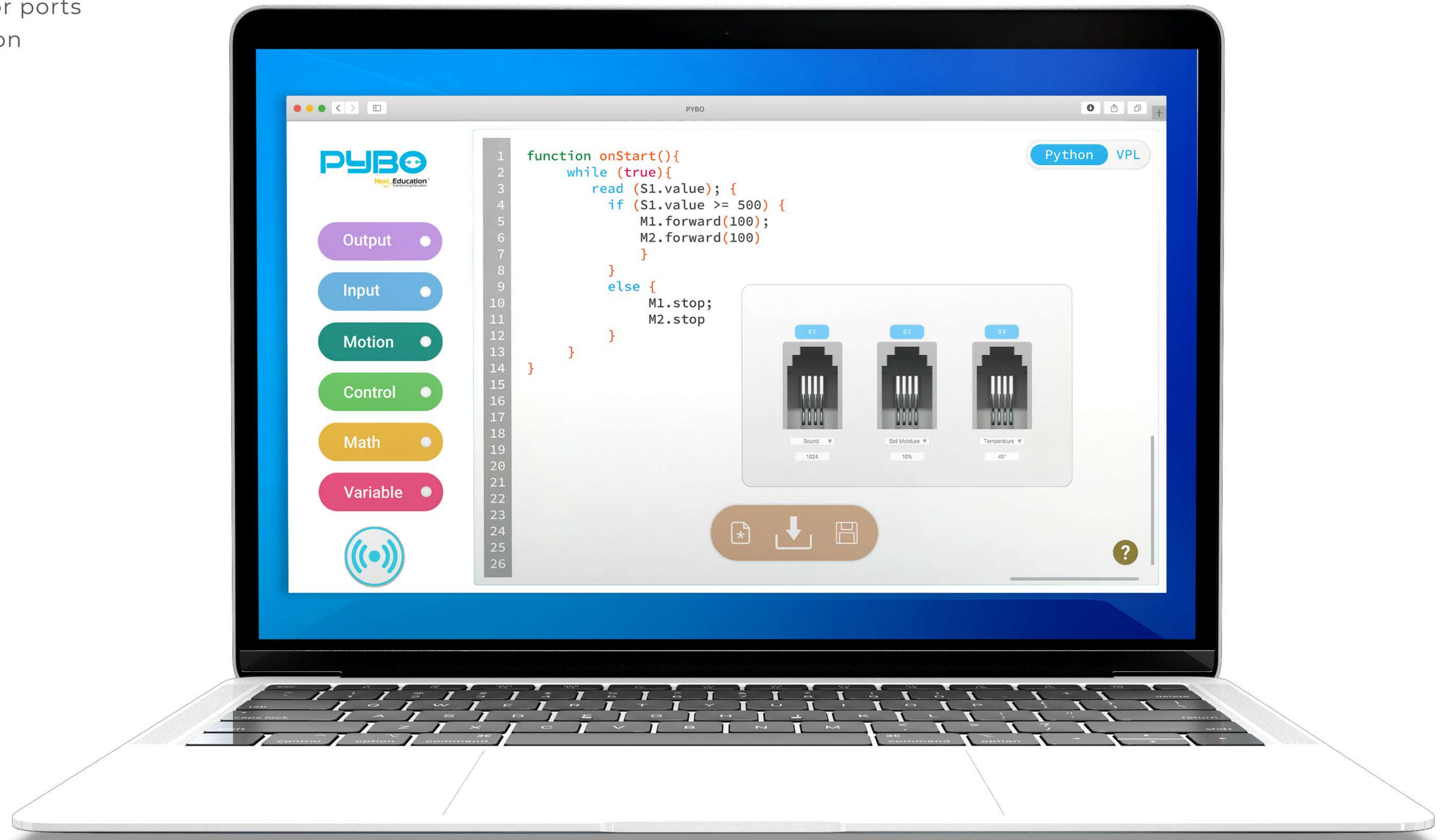
A **Block Based Coding** Platform is developed for Robot programming. The provision is given to code with text based language such as Python.

USER EXPERIENCE

- Toggle for different programming modes
- Visual representation of motor, sensor ports
- Recognizable positioning of 'Help' icon

USER INTERFACE

- Color codes for different functions
- Large and identifiable icons



Meebo

This Robot uses Micro:Bit development board as a medium for learning coding.

The aim of this robot is to build curiosity towards computer science amongst children below 10 yrs of age group

By programming a mobile robotic platform, students are able to understand the physical manifestation of the coding.



The Robot

USER EXPERIENCE



Ease of access to data port

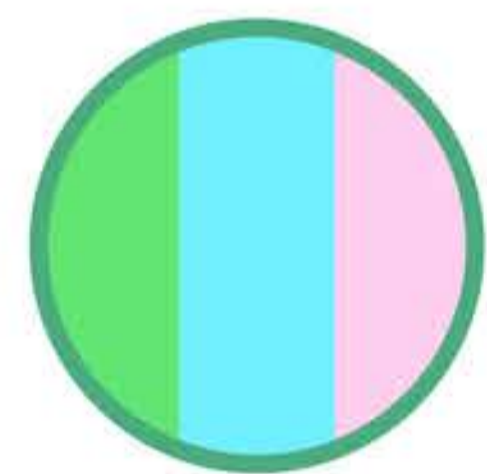


Palm size fit for kids aged 8-10



Pencil hole for programmable drawing

AESTHETICS



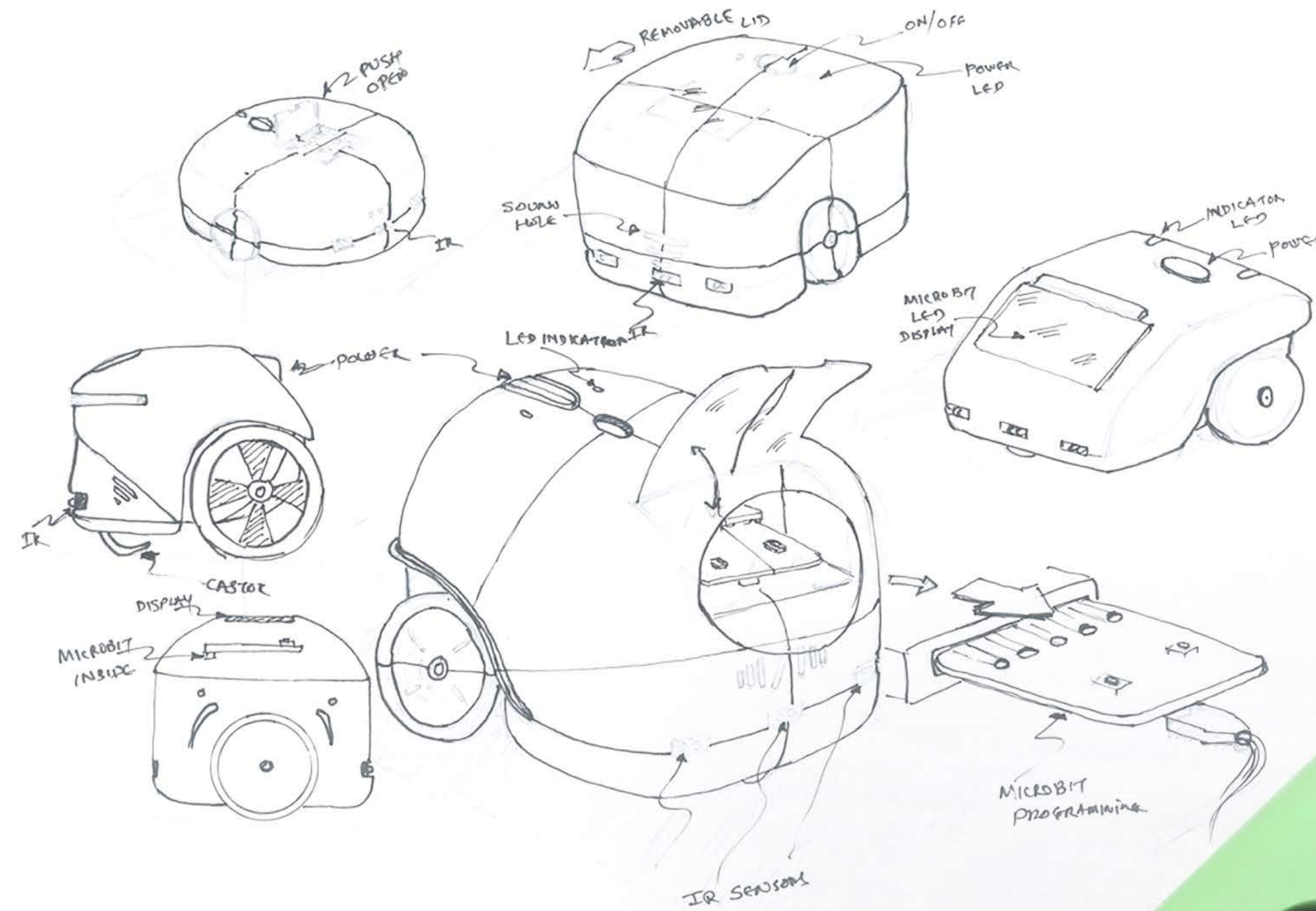
Color variations to associate with team activities



Visual nudge to emphasize association with coding (</>)



Squircle form to emphasize friendliness



The Interface

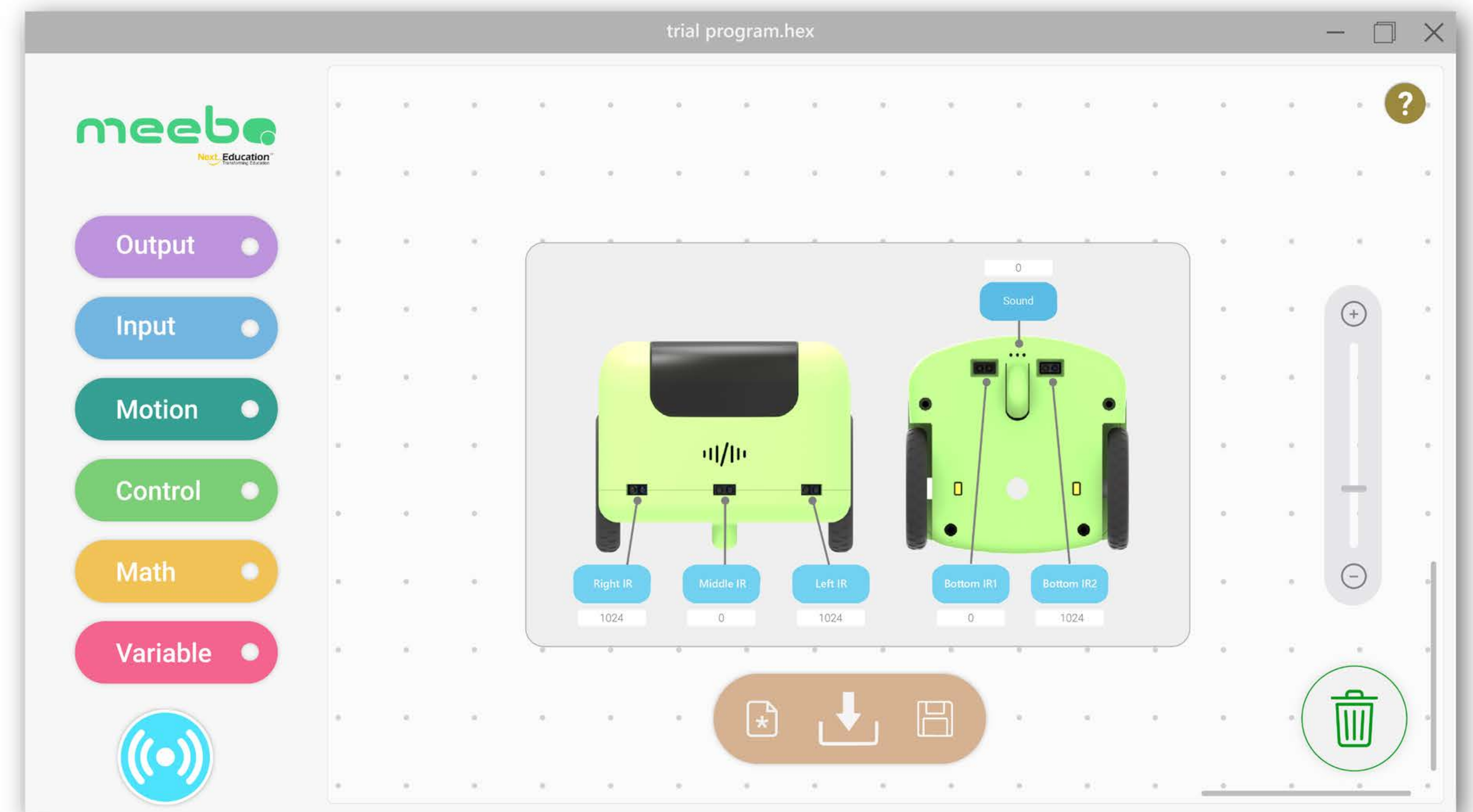
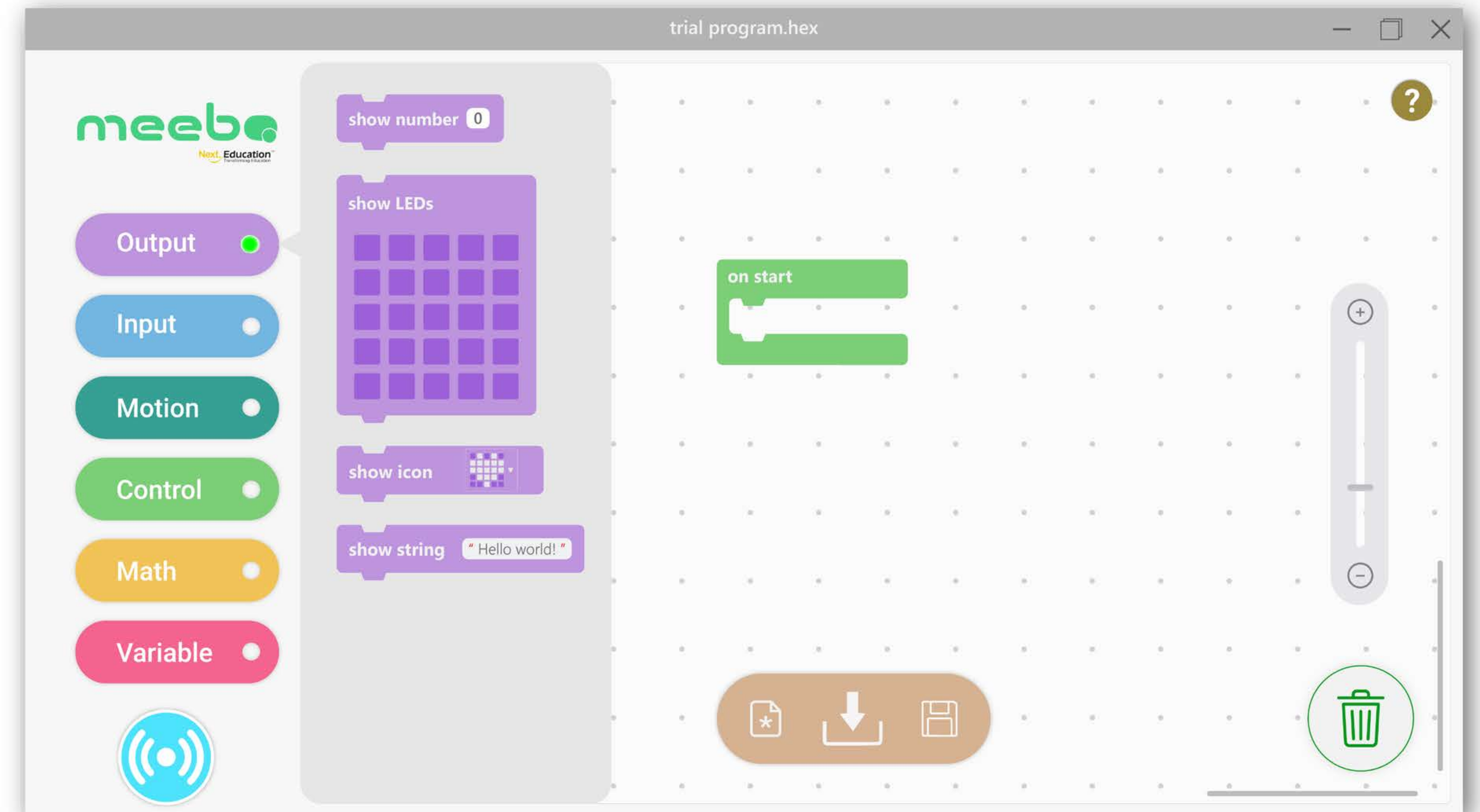
Visual Programming Language is used for children to understand the programming concepts easily. A block based software called Blockly is used as back end.

USER EXPERIENCE

- Block based 'drag n drop' programming
- Visual representation of sensor values on robot
- Recognizable positioning of 'Help' icon

USER INTERFACE

- Color codes for different functions
- Large and identifiable icons

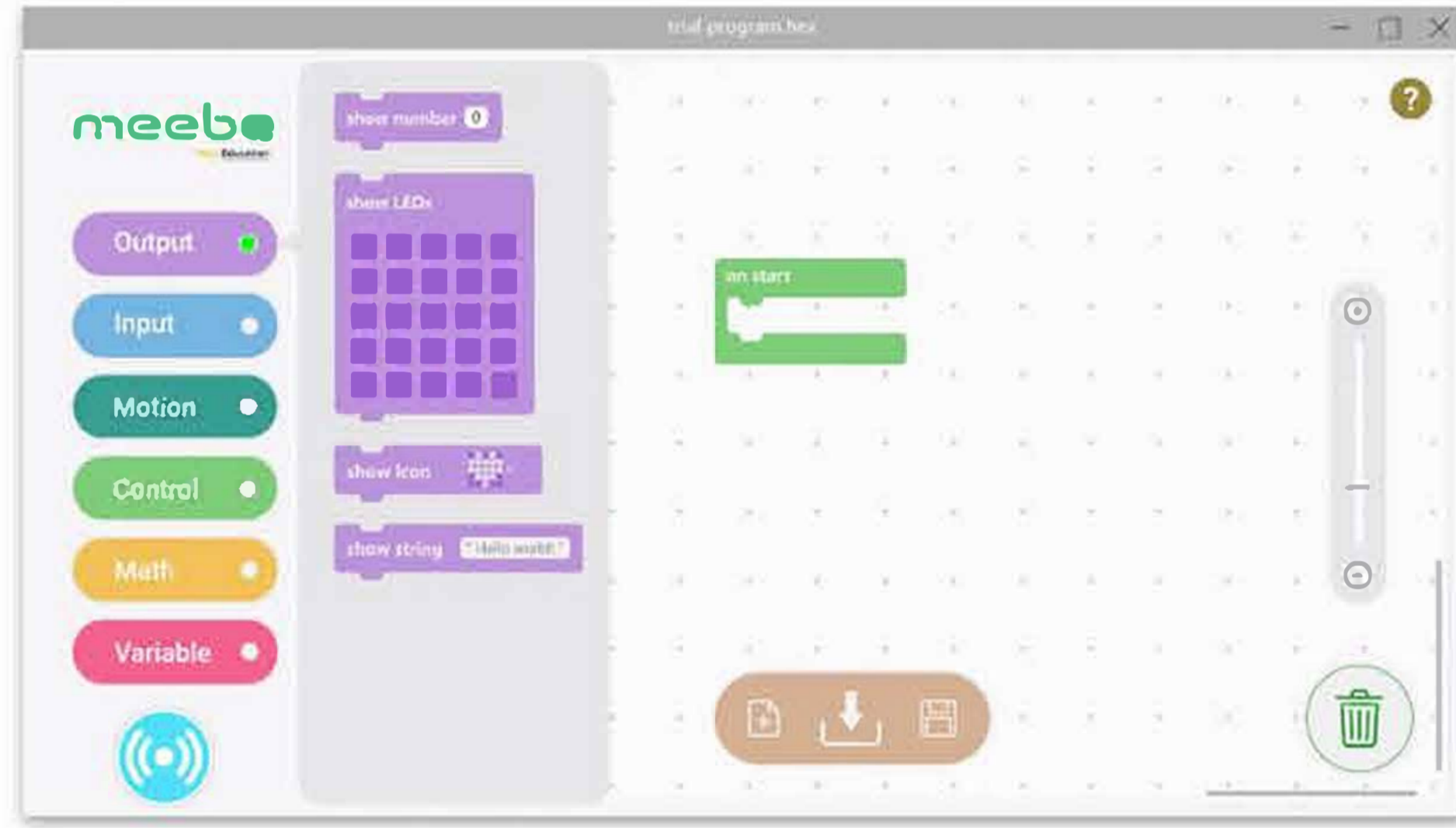


The Accolades

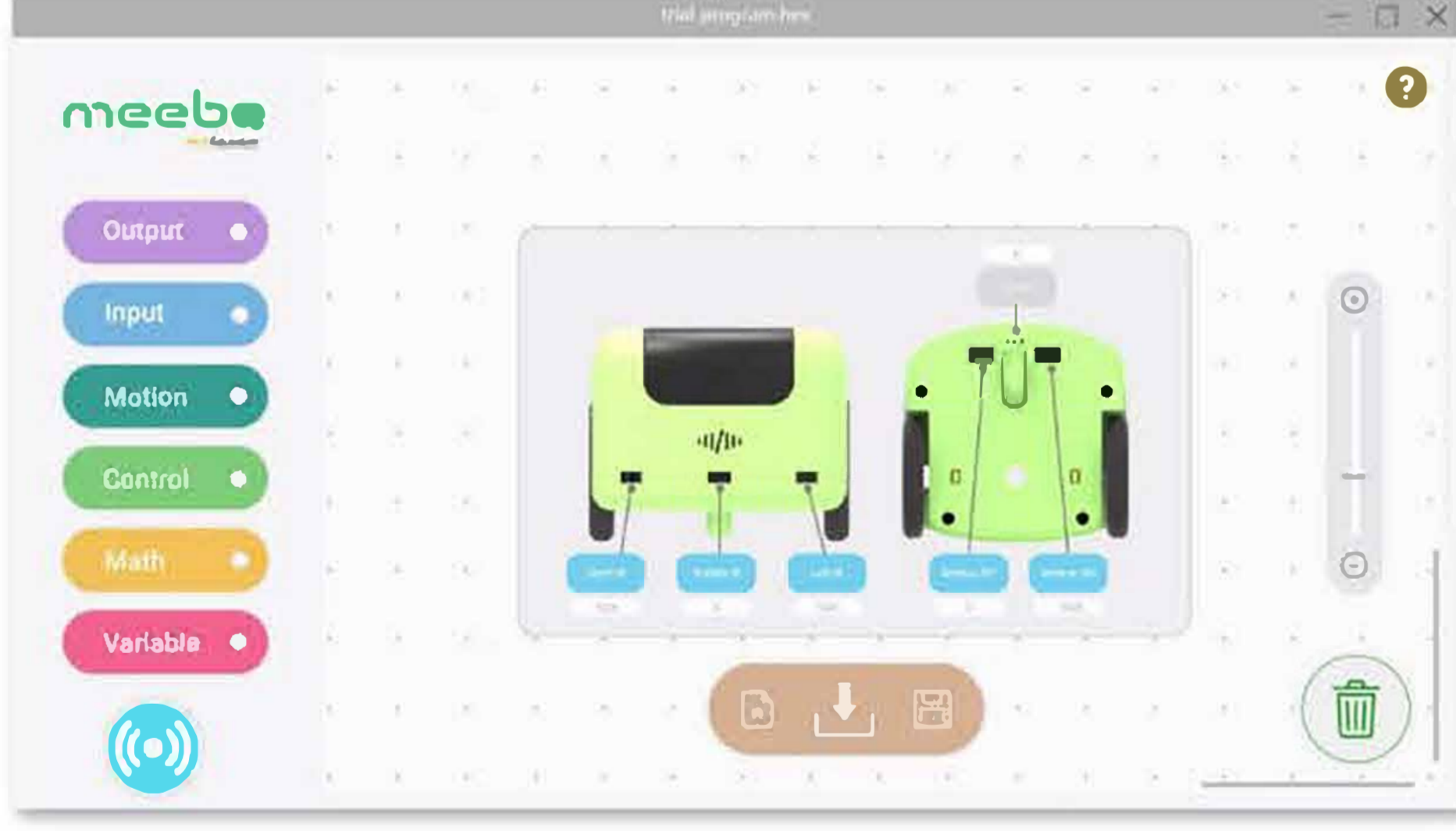
We presented a research paper with a case study of MEEBO in a prestigious institute IIT Bombay under the category *Design for children*.

Our research was titled '*Computational thinking through programmable toys*'

available to read [here](#)



User Interface of Coding blocks



User Interface of Sensor inputs

PRODUCT FAMILIARIZATION SOFTWARE UI

A video call window shows Kshiteesh Kulkarni (Speaker) in the top right corner.



LED Screen and Microbit
Power and charging LED
On and Off button
Pen Hole
Wheel
I.R. Sensor For obstacle detection
I.R. Sensor For line following
Sound sensor and Speaker

Step 1: Open the flap
Step 2: Connect Cable to microbit
Step 3: Connect Cable to PC

PRODUCT FAMILIARIZATION ROBOT : MEEBO

A video call window shows Kshiteesh Kulkarni (Speaker) in the top right corner.

FLASH-ON-GO

Epilation Device

CHALLENGE : The traditional epilation devices have a tedious process of usage. The laser flash when triggered, creates a localized pain in the particular area, due to which the next spot to be epilated, is always missed. The traditional gun like form of these devices creates a negative and fearful emotional connect with the device.

GOAL :

- * Re-design the complete experience of epilation at home.
- * Modify device's appearance and usability best suited to users.
- * Help in establishing intimate emotional connect between device & user.

ROLE : This was a graduation project of my Masters in Product Design. I was responsible for end to end product design and development.

ORGANIZATION : Imetec Bellissima, Tenacta group.



Primary Research

To gain better understanding of the products and market, it is important to understand the user and their behaviour.

RESEARCH METHOD

User Interview

Interacted with users from different demographics to understand their needs, behaviours, aspirations and product interactions

Shadowing





Tried to understand user behaviour while purchasing or casually browsing or taking knowledge of the product.

Interactions

Interacted with sales assistants, shop managers to understand buying patterns of users.

Observations

Observed the the users using the skin care , hair removal products with their consent.

| PEOPLE Who | OBJECTS What | ENVIRONMENTS Where | MESSAGES Why | SERVICES What else |
|--|---|---|---|--|
|  <p>Santi Alaysius 29, Principal Design firm Indonesia</p> | <p>Electric shaver Philips Hair Dryer Braun Hair Straightener Remington</p> | <p>Gym Spa Bathroom Bedroom</p> | <p>Awareness of beauty, keen on cleanliness, self research</p> | <p>Razor, Wax, Lotion</p> |
|  <p>Peter Dreier 37, Director Architect firm Chicago, USA</p> | <p>HPL Professional services</p> | <p>Beauty consultant</p> | <p>Desire of removing hair painlessly & without hassle, permanent solution</p> | <p>Wax, Electrolysis</p> |
|  <p>Mogilevskaya 26, Architect Freelance Ukraine</p> | <p>Pedicure set Vega Hair Dryer Philips Hair Straightener Braun</p> | <p>Bathroom Beauty center</p> | <p>Desire of removing hair permanently, beauty blogs</p> | <p>Wax, Solenium, Photoepilation</p> |
|  <p>Taylor Stewart 24, Nutritionist Self practice United Kingdom</p> | <p>Hair remover Silk'n</p> | <p>Bathroom Living room while watching TV</p> | <p>Expensive professional treatments, no flexibility of time due to work schedule</p> | <p>Wax, Razor, Lotion</p> |



Product popularity



Product Browsing patterns



Product assistant's
product knowledge



Sales pattern

Secondary Research

A new product development requires an analysis of technology, market and business.

RESEARCH METHOD

Technology understanding

I made myself educated about the basic principle of working of these epilation devices.

Competition analysis

Tried to understand and analyze the similar products in the market and their price points to gain the buying power of the users.

Product Positioning

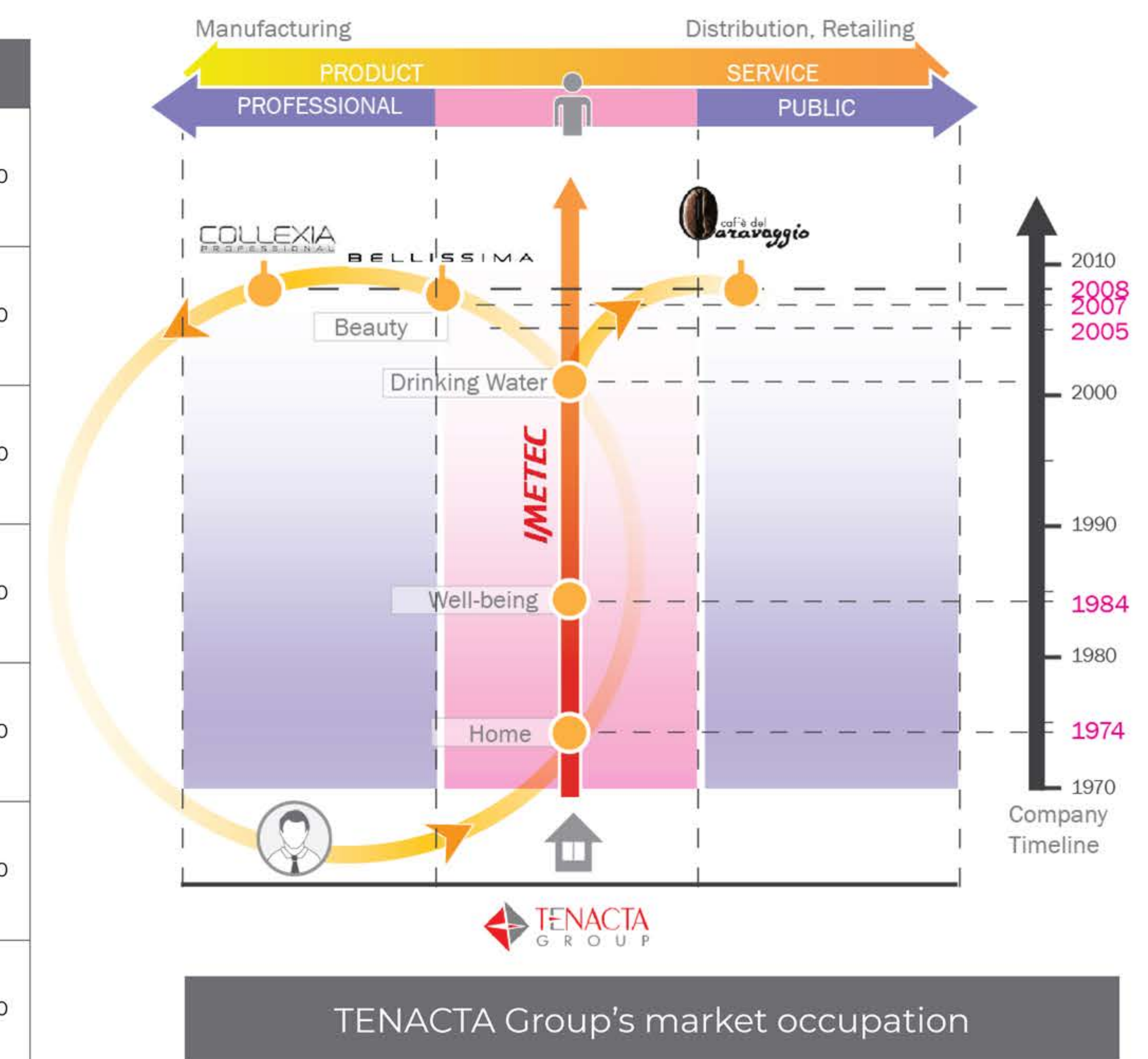
Analyzed the organization's history, their customer base and their loyalty to the product segment.

How do Intense Pulsed Light (IPL) devices work?

IPL technology works by **targeting the melanin** (pigment in your hair follicle), and helping to **break the cycle of hair growth**. The light's stimulation 'damages' the root and after a few treatment sessions, will inhibit it to produce new hair. With continued use, the light energy helps prevent unwanted hair from reaching the skin surface

| DEPILATION | | EPILATION | | | | | | |
|------------|------------------|-----------|-----------|--------|----------|---------------------|---------|-------|
| 2-3 days | 1-2 weeks | 2-4 weeks | | | | | forever | |
| razor | depilation cream | tweezing | threading | waxing | sugaring | mechanical epilator | IPL | laser |

| Competition | Product | Price (Europe) |
|-------------|--------------------|----------------|
| PHILIPS | Lumea | €550 - €600 |
| ROWENTA | Derma perfect 9800 | €550 - €600 |
| REMINGTON | i-Light | €600 - €650 |
| BRAUN | Venus naked skin | €700 - €750 |
| HOMEDICS | Me my elos | €650 - €700 |
| beurer | SensEpil | €650 - €700 |
| evoDerma | Lumi | €650 - €700 |



Aesthetics

A product's value depends a lot on emotions it evokes, study of the aesthetic considerations are most important for a product which deals with intimate experience.

Moodboard

Tried to form a visual imagery which would capture essence of the product, desired for users.

Trends

Analysis of user preferences based on their buying patterns in the beauty care category.

Brand's design DNA

Studied the patterns in brand's existing products to which users relate and formed guidelines for product development.



The Process

After the research, analysis and strategy, the most important was to visualize, prototype, test, revise.

Sketching

Made several sketch based on my understanding of desired product.

Mock up

Created multiple styrofoam mock ups to the scale for testing.

Testing

Got the mock ups tested by female users to understand ergonomony, visual appeal, ease of action.

Prototype

Created semi functional prototypes with different for factors and got it tested with several female colleagues.



The Device

Traditional epilation devices are not automated. For every shot, user has to move the device hence there are chances of missing out a region. This device senses the skin tone first, When power button pressed, laser strikes body, immediately roller helps in moving the device, as soon as roller moves, a fan throws air to cool off the skin. The cycle repeats till user decides to stop.

USER EXPERIENCE



Ergonomic form for comfortable grip



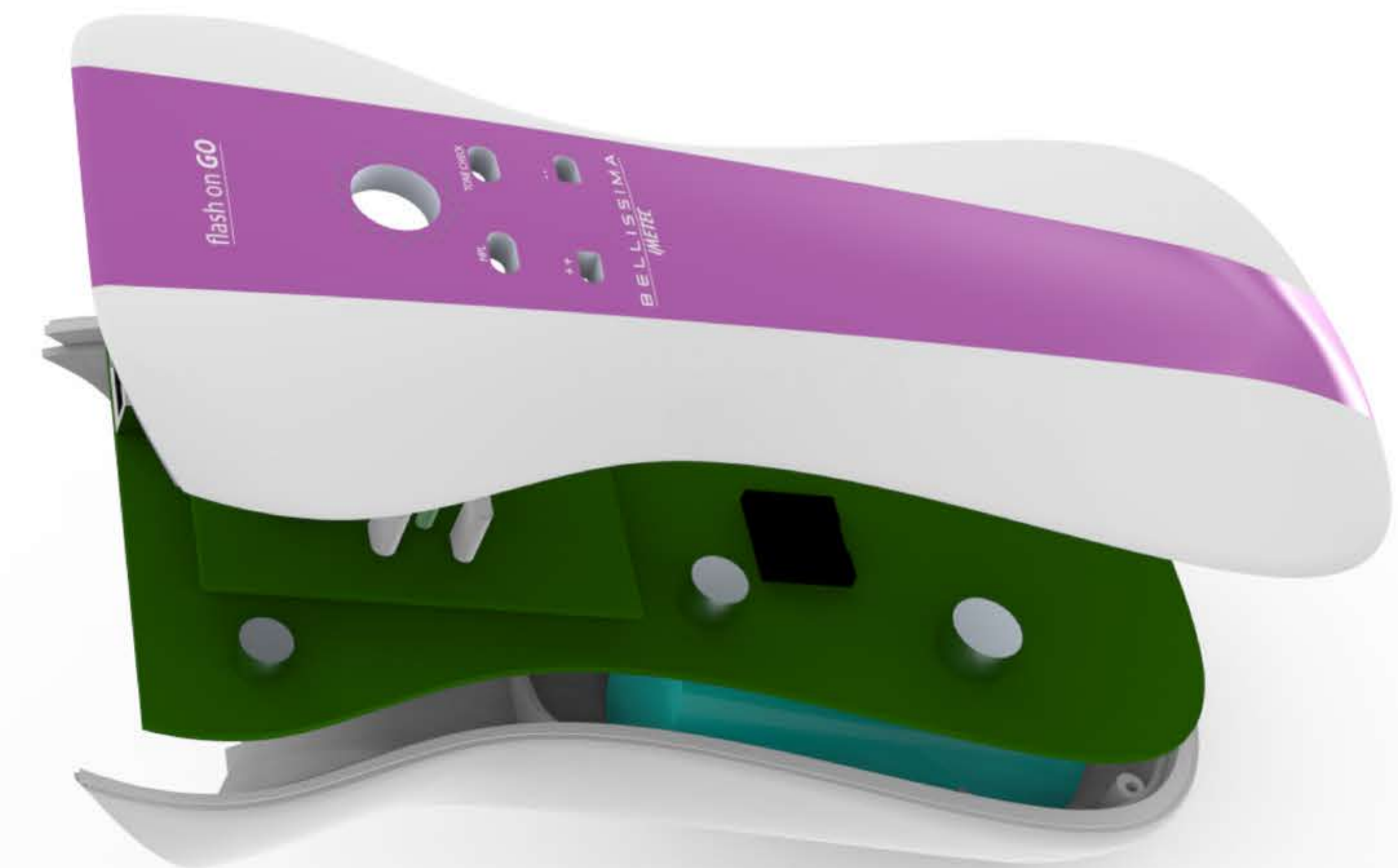
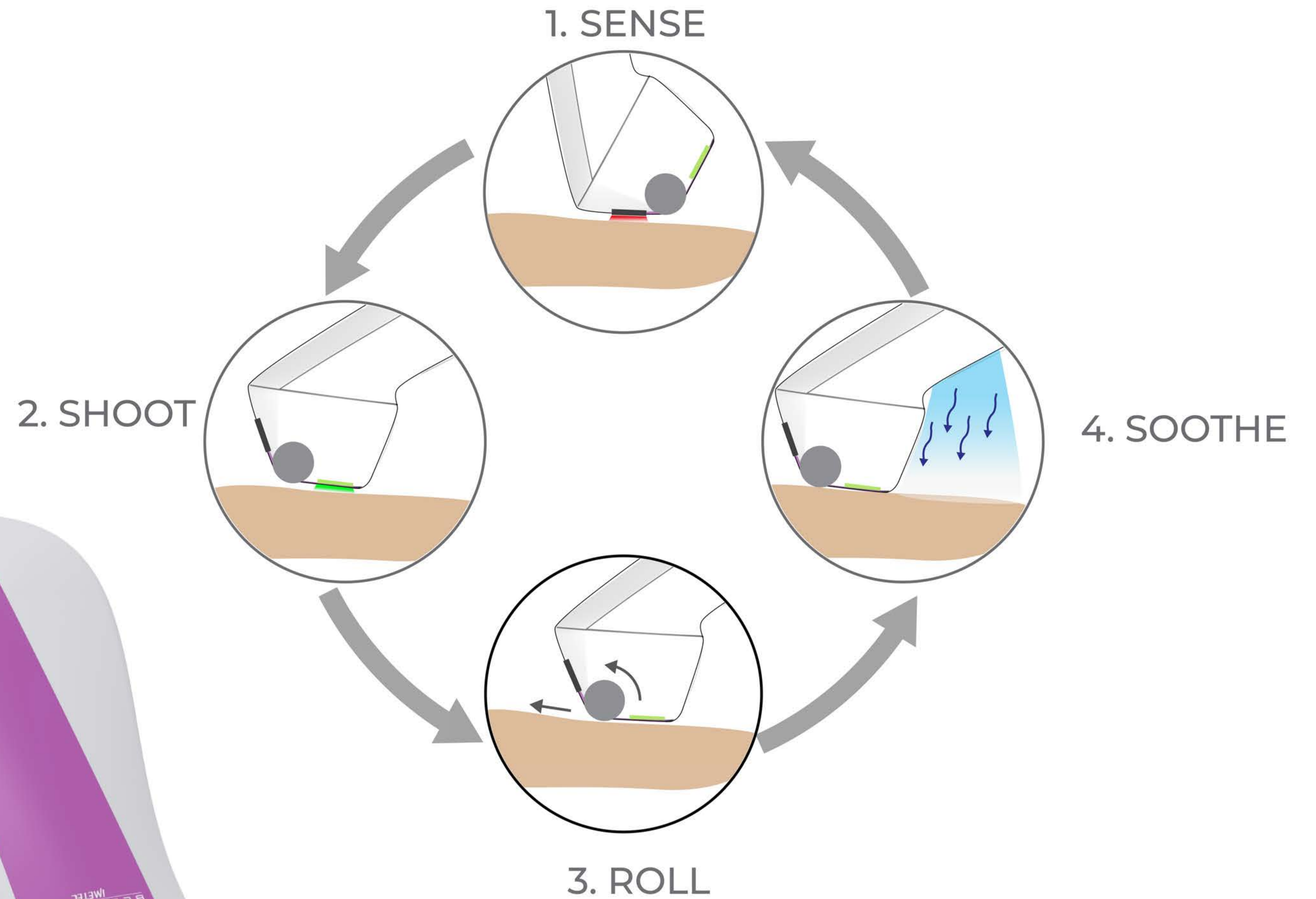
Roller for ease of movement on skinxx



Tactile buttons for blind interactions



Air throw vent for soothing post laser shot



PURE COCOON

Beauty & Cosmetics

CHALLENGE : Compacts are one of the most essential parts of cosmetics used in daily life.

An average person uses the compact about 10-12 times in a day.

In these times the applicator collects the bacteria on face and neck every time it is being used. If exposed to contamination through air, it might result in itchy skin and rashes.

GOAL :

- * Designing a solution for hygiene needs in cosmetic industry.
- * Create awareness about the unhygienic usage practice by opening up a new cosmetic tech product segment in the industry.

ROLE : I worked as an Individual contributor on this project, responsible for end to end product development i.e. research, design, engineering.

ORGANIZATION : Zen Design solutions pvt. ltd.



User profile

We interacted with the users who are frequent users of compacts and in need to be presentable due to their profession or self confidence.

Their challenges led us to work on a sustainable solution which is not only effective but is also non invasive.



Niharika Tyagi

26, Single
News reporter
Media house

“ My job is mostly outdoors and I sweat a lot, I have to use my foundation at least 10-15 times a day! If I don't change the sponge in 2 days, I start having skin infection”

Behaviour

- Carries extra applicators all the time
- Takes care of looking presentable in front of camera
- Changes compact frequently
- Hydrates regularly
- Follows skincare regime only on weekends

Challenges

- Outdoor job
- Sensitivity towards dust, pollution
- Job requires constant movement
- Needs to replace applicator every alternate day due to frequent use.

Essentials

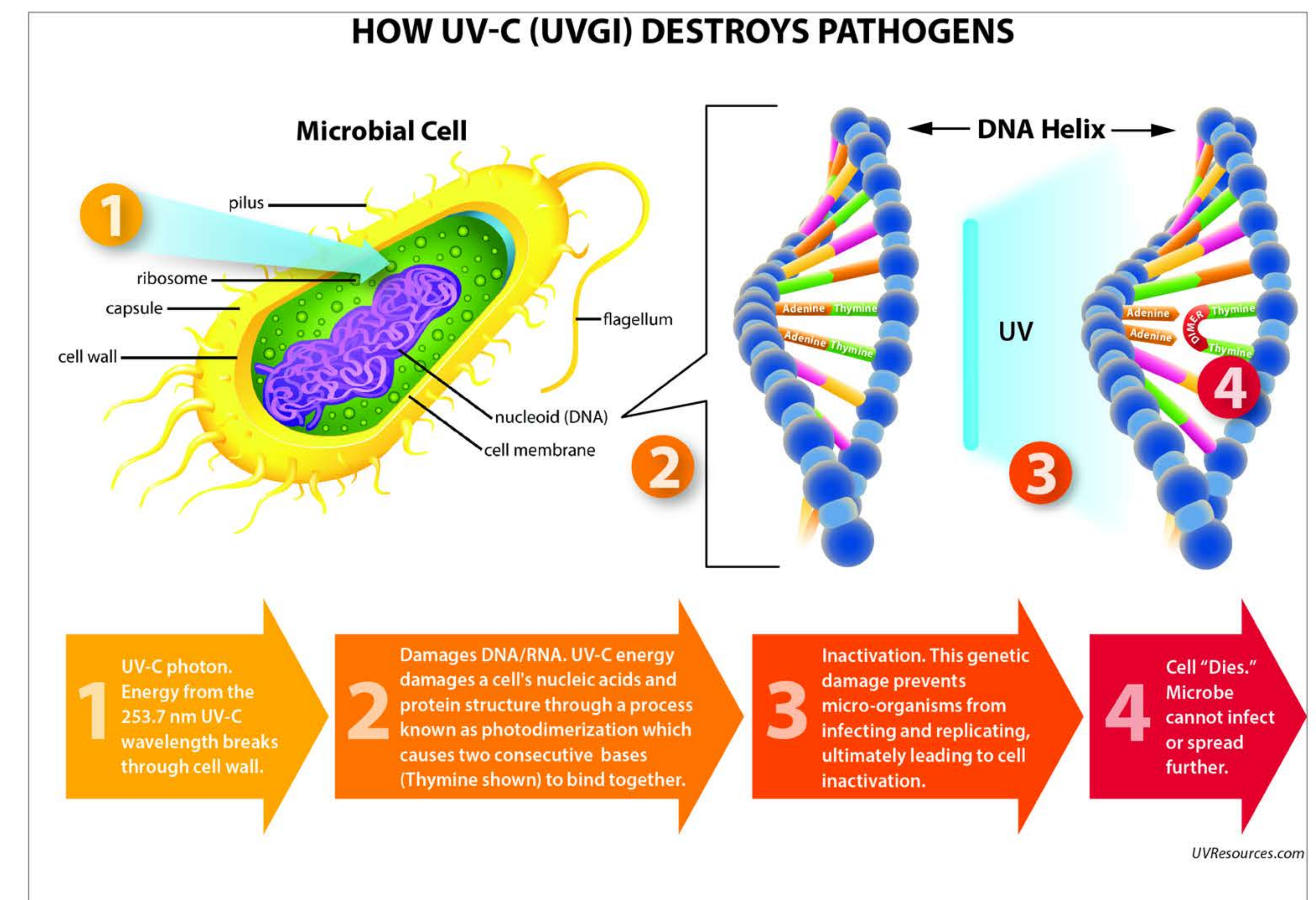
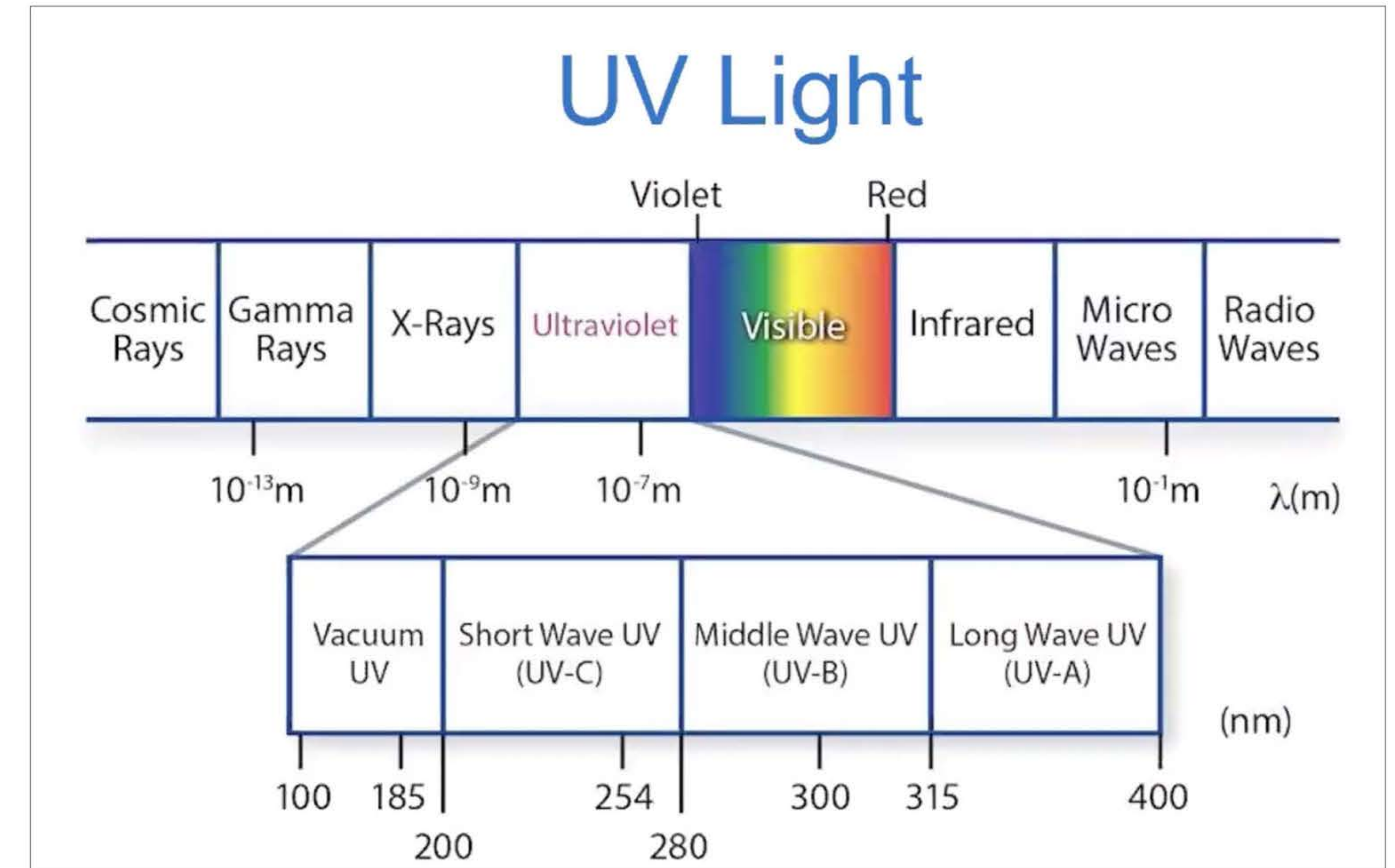
- Water bottle
- Wet wipes
- Handkerchief
- Hand sanitizer
- Spare applicators
- Phone charger
- Power bank

The Technology

While searching for the technological solutions, we came across technology of UV radiation.

Working in beauty and cosmetics industries, there was awareness about UV light being used for nail paint curing.

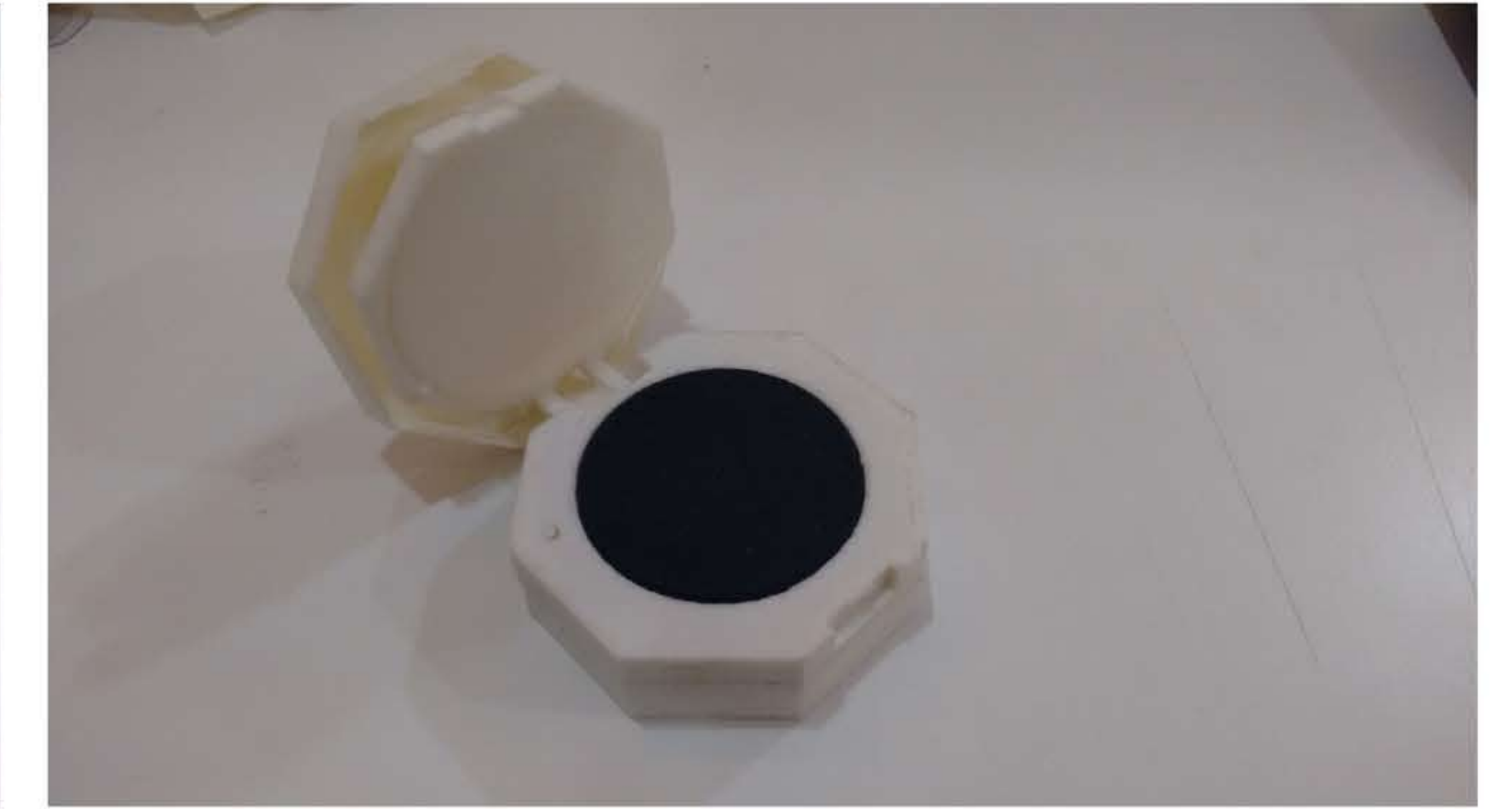
However we understood that UV light of wavelength between 200 - 280 nanometers is effective in killing bacteria with the efficacy of almost 95%.



Prototype

Several prototypes and proof of principle were made with FDM 3D printing to test the hypothesis.

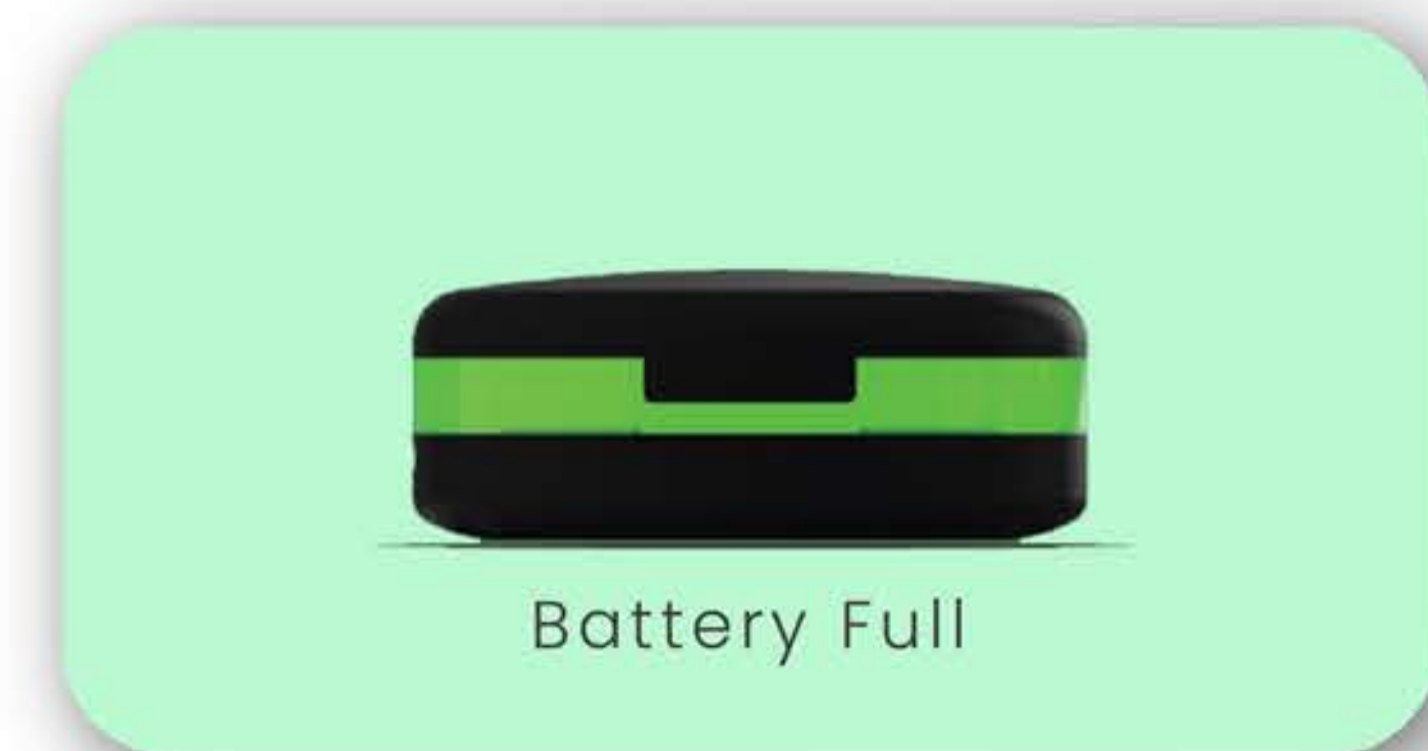
A final prototype made with vacuum casting to imitate the real materials was made and presented in L'oreal R&D center, Canada.



The Compact

The compact was designed in such a way that consumer can still relate with traditional form factor and should not feel uncomfortable carrying it around.

The compact comes with a charger and an RGB LED embedded in the body provides charging indications.



REFILL

Open the compact,
Lift the Pan-holder,
Push the pan from bottom



SOIRÉE

Luxury Tableware & Barware

CHALLENGE : The Hosting culture is quite prevalent in the economically affluent class of people. This strata of society takes pride in showcasing curated luxury artifacts. Shazé was able to have certain amount of visibility in these socio economic circles but only as a white label retail brand.

GOAL :

- * Design a Luxury goods collection which would portray Shazé as an Indigenous design and OEM brand.
- * Introduce material experimentation and usability as a USP.

ROLE : As Head product design, I was responsible for creating a dedicated design team out of independent designers working within the org, setting up a design process, guiding the junior designers. As an IC, I was responsible for User research, insight generation, manufacturing and engineering support.

ORGANIZATION : Shazé Luxury retail pvt. ltd.

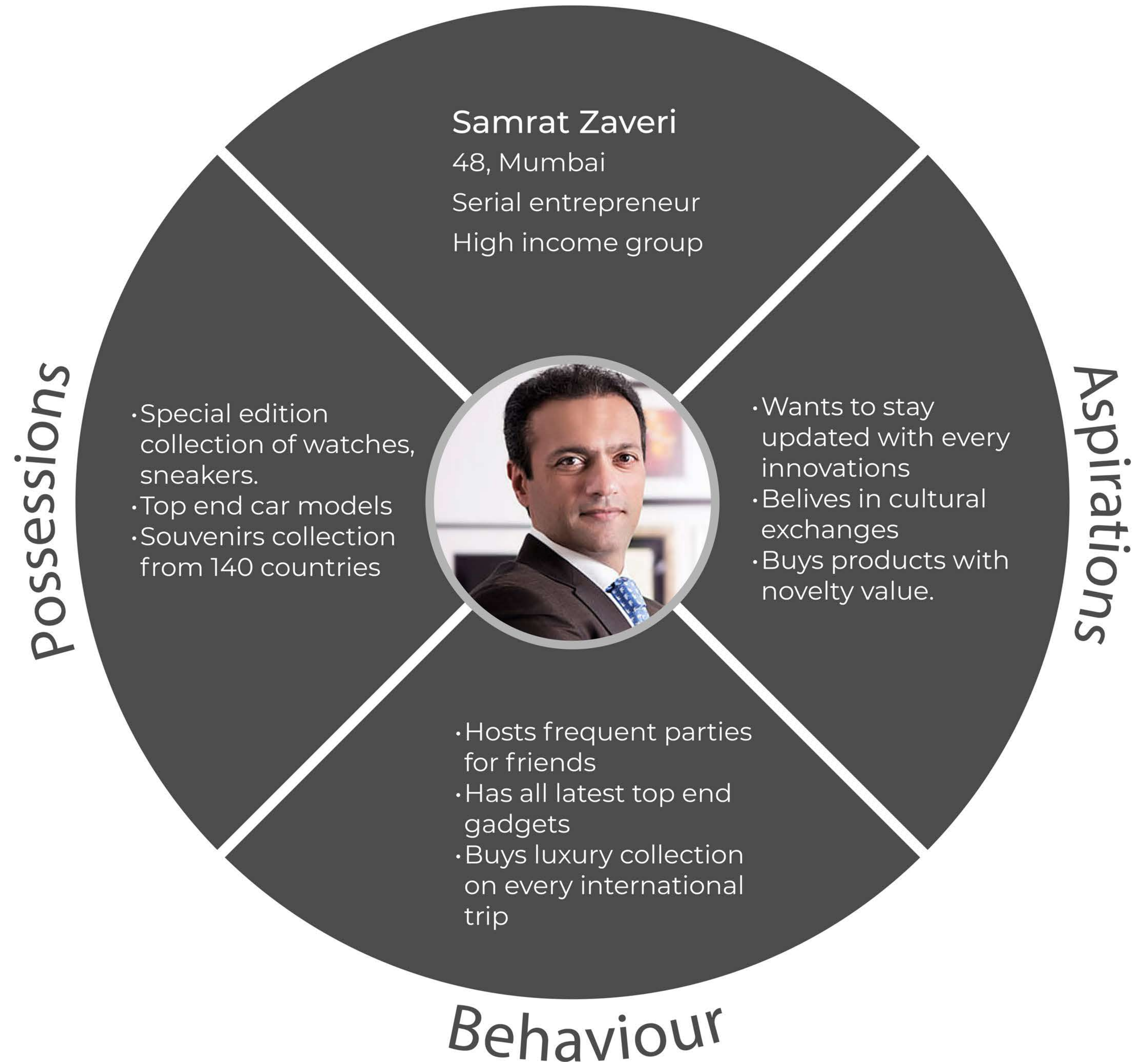


The User

The target user group was the affluent class of the society.

It was important to understand their behaviours and aspirations.

The insights gave us an understanding of approach to take for further product development.



The Technology

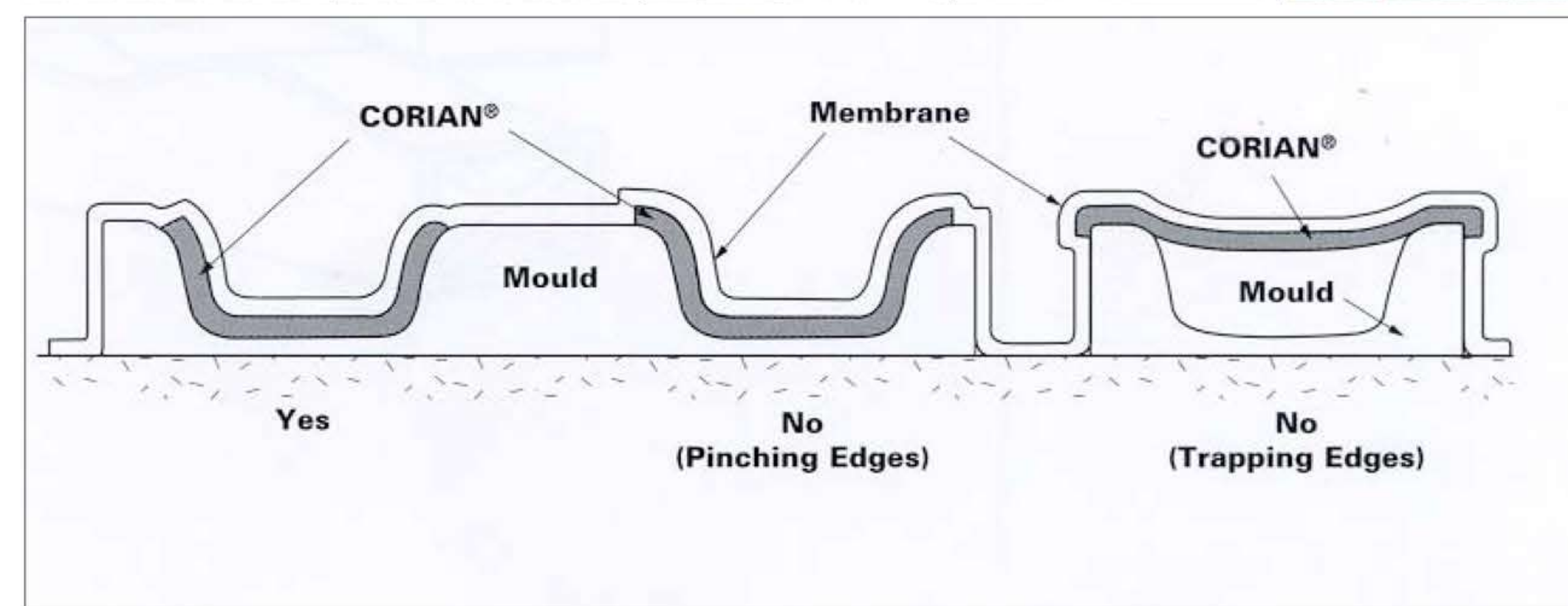
Once we understood the users, we decided to try out experimental materials.

Corian® is a material by DuPont™
It is mainly used in furniture, kitchen countertops.

However the material itself is food safe, anti bacterial and can be machined, molded, polished.

It has a rich look and beautiful texture hence we decided to use that material for our tableware and barware collection.

Along with Corian® we decided to use food grade stainless steel (grade 430) to better complement in terms of rigidity and post processing possibilities.



The Tableware

First collection included Corian® with food grade stainless steel which gives a royal look the family of tableware.

The nut bowl

The base of nut bowl can be detached and the shells kept in it can be thrown away.

The platter

The ergonomically designed platter consists of a in-built and detachable tray for finger food.



The caviar bowl

It is designed in such a way that it helps maintain the correct temperature of caviar in the cup.

The olive tray

It was made to arrange an array of olives in an organic form.

The Barware

The bar essentials were made to have a unique experience of drink making in step of the process.

The idea behind making this collection was to pay importance to the small accessories which enhance the process of making a drink

Tongs

The corian part on tongs provides extra grip for easier ice picking.



Jigger

The symmetrical looking jigger has different capacity of liquid holding on each side (30ml & 60ml)



Stirrer

The uniquely designed stirrer rotates on straight leg. The crooked leg of stirrer does the swirling part.

A stand is made to hold stirrer & contains the dripping of liquid after use.



Prototypes WIP

Ice bucket

The buckets is designed to hold 1L of ice and cap can be used to bring ice refills.



DUENA

Concept Furniture

CHALLENGE : It is most common practice to hang the coats, jackets or purses at the back rest of chair. The uncomfortable posture results in spine and neck problems over a period of time.

GOAL :

- * Designing a seating solution for hanging objects with any hindrance to seating posture of the user.
- * It should encourage the approachability, friendliness

ROLE : This project was designed for furniture design competition. I was responsible for design and engineering in this project.

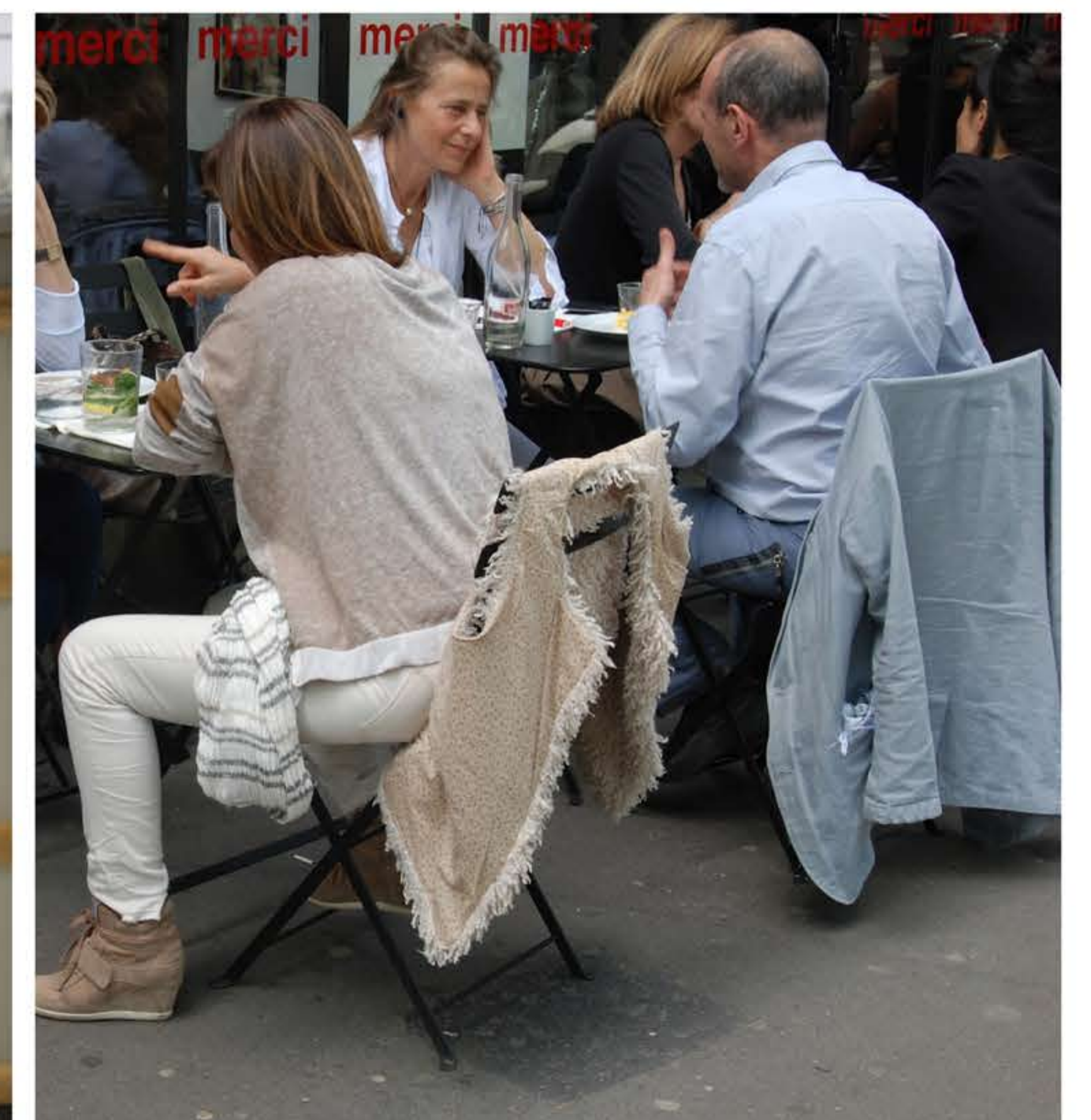
ORGANIZATION : Taiwan design competition.



The Problem

Using backrest for hanging the overcoats, jackets, suits, backpacks is the most common practice in the western countries.

However this habit creates a hinderence to use the backrest appropriately. This practice leads to improper sitting posture which leads to severe back and spine health issues.



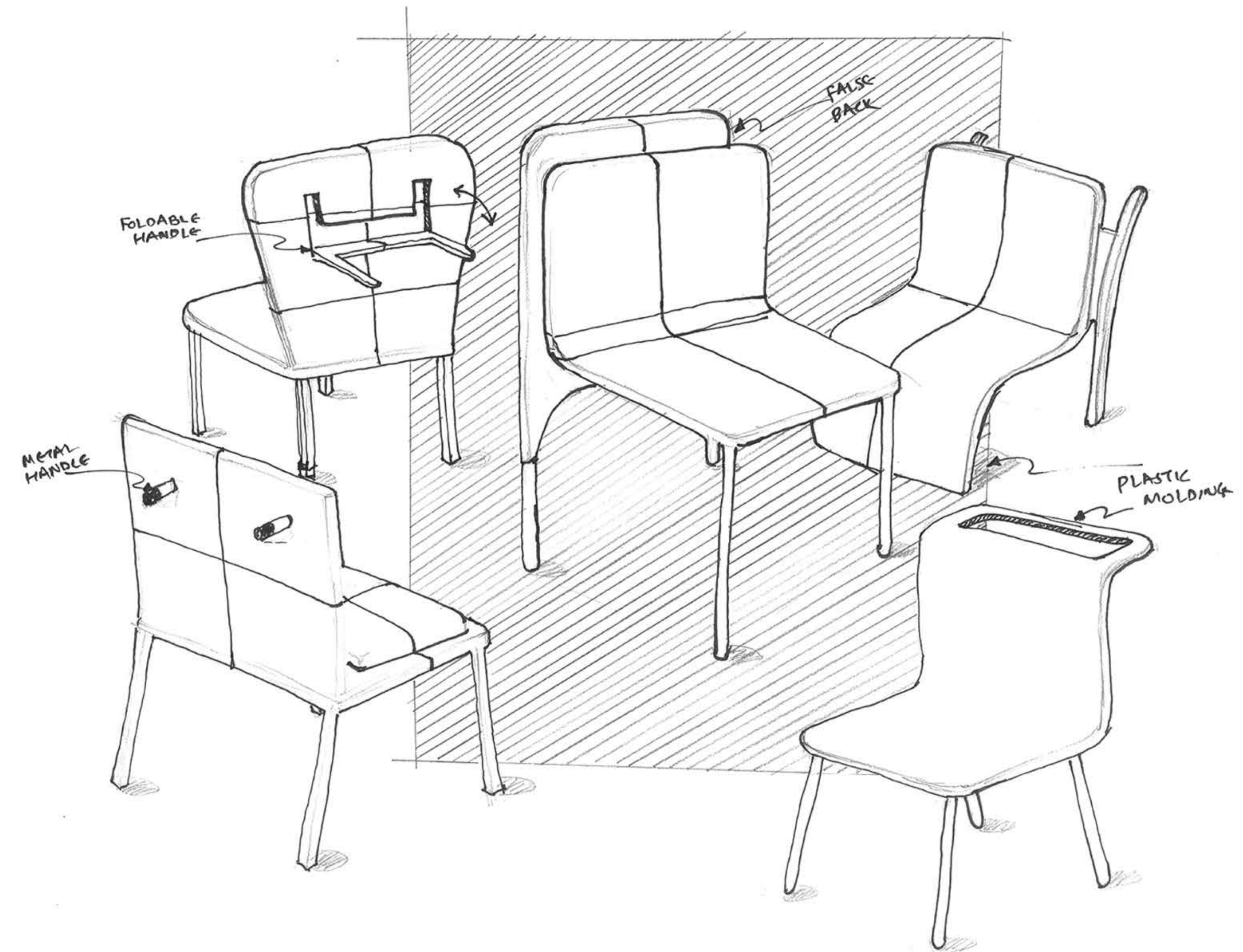
The Chair

This *Duena chair* creates a false backrest with a distance between actual backrest.

Two distinct backrests of chair for non interference of hangar and back rest.

Ash wood as a main material of chair.

Minimal design with concentration on aesthetics & functionality.



A table is perfectly designed to create a furniture family, using same design language as that of the chair. The down plate can be used to keep belongings or stationary. It leaves the top table free to work or eat.

Thank you.

for more Design projects,



www.iamadesigner.com

☎ +91-9869351555

✉ kulkarnikshiteesh@gmail.com

📷 [@_kshiteesh](https://www.instagram.com/_kshiteesh)