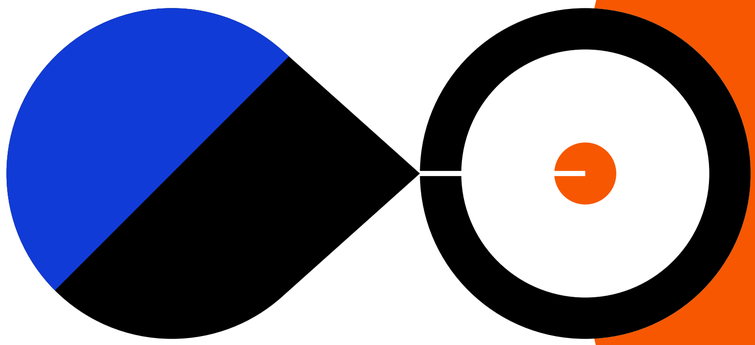
# Nitish Chopra

UX DESIGN PORTFOLIO 2024



**How you do one thing,**
**is how you do everything.**

MARTHA BECK

**Hi, I’m Nitish!**

I have 5+ years of experience as a UI/UX designer and a product manager. Having a B.Des degree in UI/UX design & a M.Sc. degree in Creative Computing.

My work philosophy revolves around creating delightful experiences for users that meet business goals with a sharp focus on results.

I spend my free time building robots, coding games & interactive experiences, and being out in the nature.

# Contents

# Designing a UX design system for blockchain digital currency / digital assets solution.

Making a UX design system for R3’s white label blockchain digital assets and digital currency solution which can be quickly scaled to adapt to the style guidelines of its B2B customer clients.

**YEAR** 2024

**TAGS** Design Systems, Fintech, Blockchain, B2B

# Problem

R3 has been in the business of making bespoke B2B blockchain applications to manage digital assets and digital currencies for their clients. They are now in a transition phase where they're building a flagship white label solution that can be quickly adapted to new clients and deployed faster & more efficiently. The challenge was to make a UX design system for this white label solution in a way so that it could also be quickly adapted to a new brand quickly.

# Solution

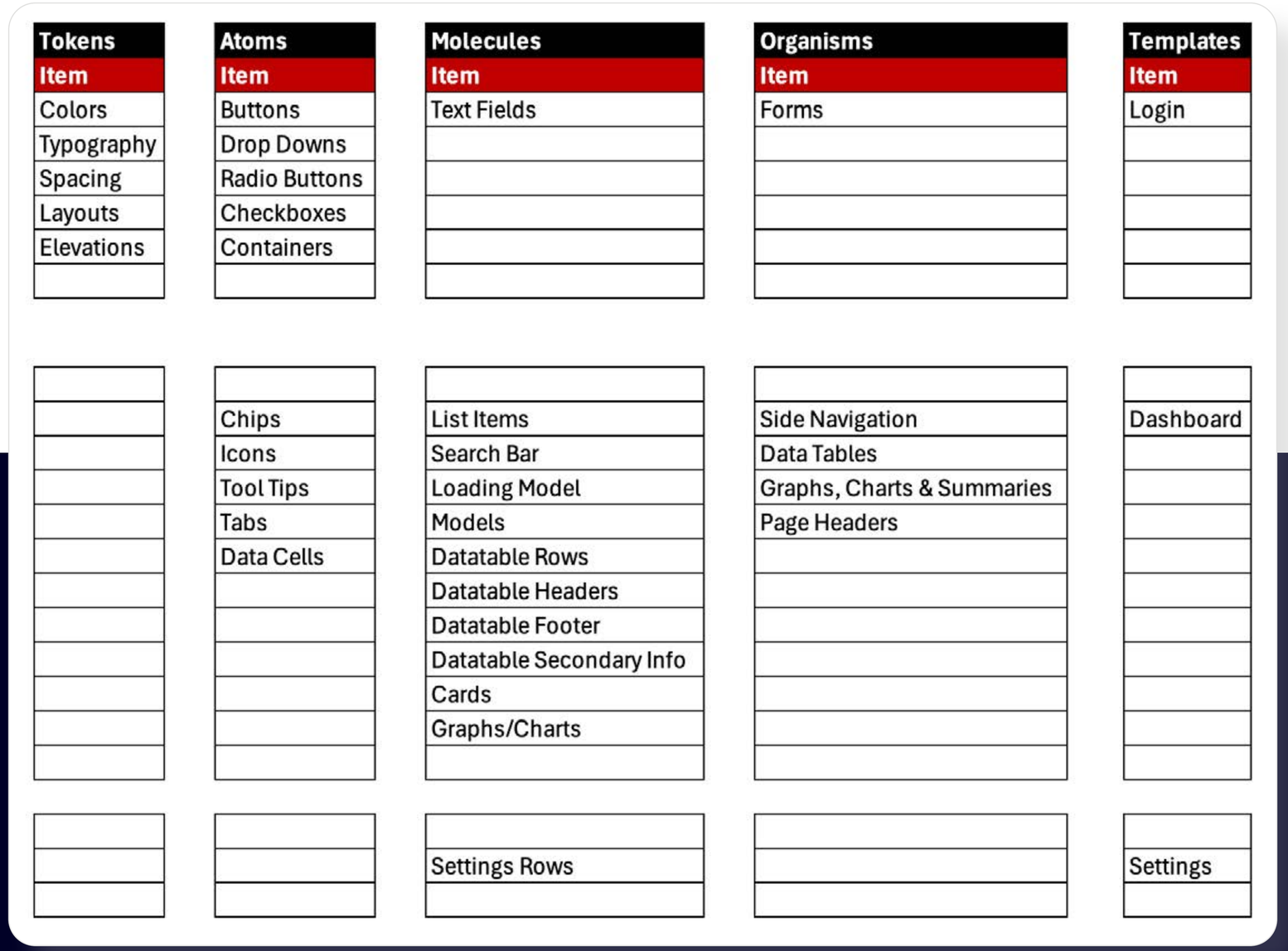
Using Figma's token variable system to build a three-level style library structure where existing flows designed in figma could be quickly replicated to a new brand by creating the new brand's token library and simply switching to it in a copy of existing UI flows.

# Requirement Gathering

We started by doing a detailed requirement gathering of the prototype white label solution and highlighting in detail the component structure from tokens to templates.

# UX Audit

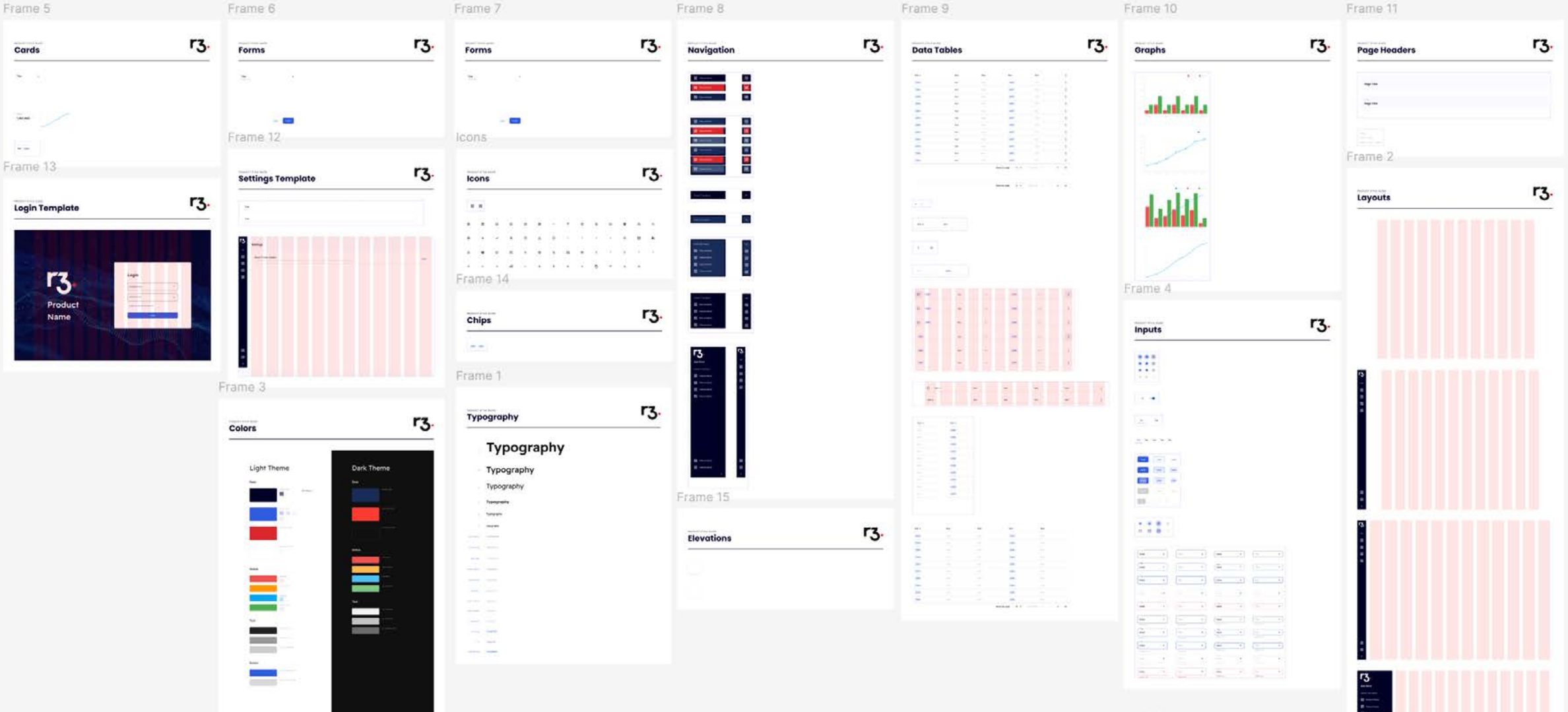
A UX audit was carried out of the white label prototype utilizing the usability heuristics framework by the nielsen group to identify improvement opportunities that can be worked on during the redesign.



| Tokens | Atoms | Molecules | Organisms | Templates |
|---|---|---|---|---|
| Item | Item | Item | Item | Item |
| Colors | Buttons | Text Fields | Forms | Login |
| Typography | Drop Downs | | | |
| Spacing | Radio Buttons | | | |
| Layouts | Checkboxes | | | |
| Elevations | Containers | | | |
| | | | | |
| | | | | |
| | Chips | List Items | Side Navigation | Dashboard |
| | Icons | Search Bar | Data Tables | |
| | Tool Tips | Loading Model | Graphs, Charts & Summaries | |
| | Tabs | Models | Page Headers | |
| | Data Cells | Datatable Rows | | |
| | | Datatable Headers | | |
| | | Datatable Footer | | |
| | | Datatable Secondary Info | | |
| | | Cards | | |
| | | Graphs/Charts | | |
| | | | | |
| | | | | |
| | | Settings Rows | | Settings |
| | | | | |

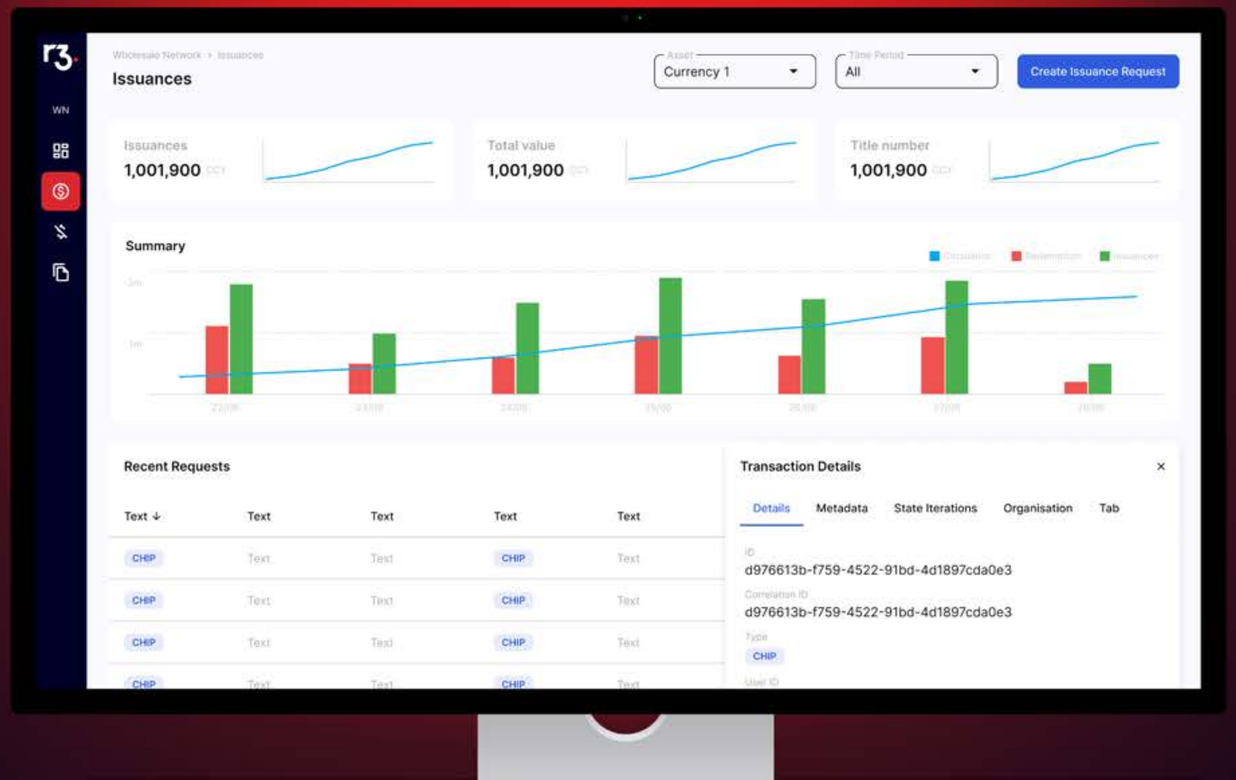
# Design System

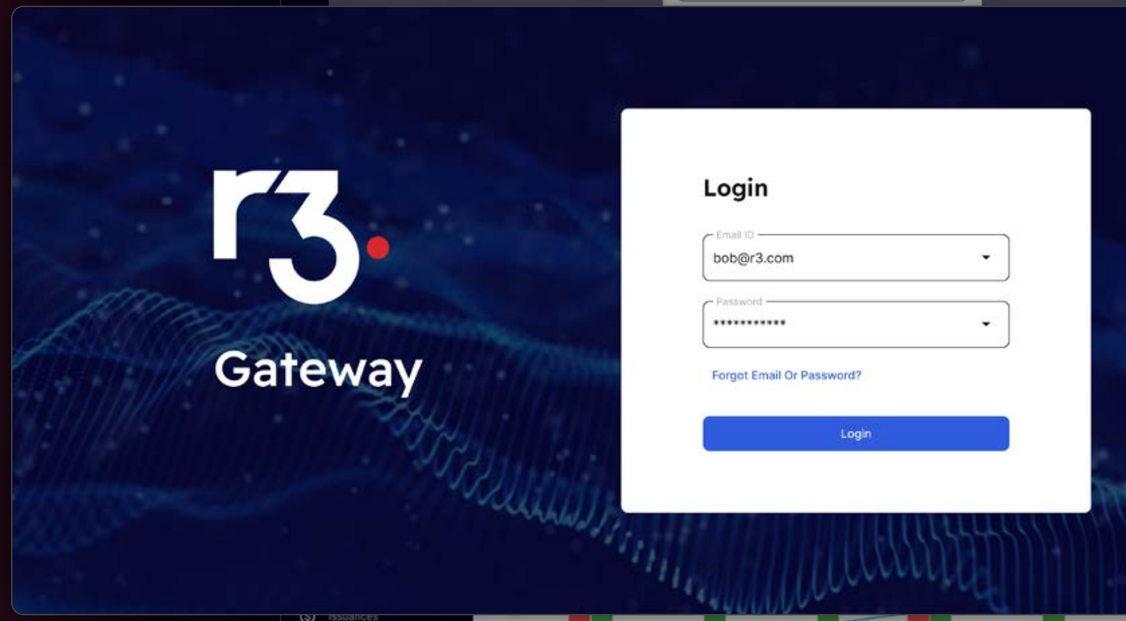
The UX system was finally designed and the figma library was engineered in a way to quickly switch and adapt to a new brands style guidelines - colors & text.

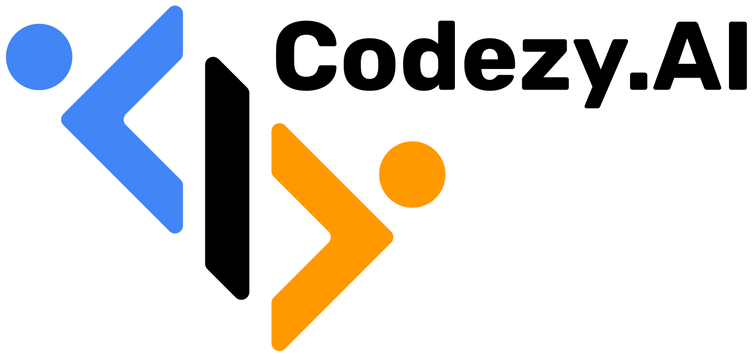


# Demo Prototype

A demo UI prototypes made using the new deisgn system can be found at this **link**






# AI recommender system mobile app to help kids learn coding

Designing a mobile app to learn coding that prioritizes engagement along with learning progress and leverages user data to personalize the learning journey and recommend coding questions/exercises.

**YEAR** 2024

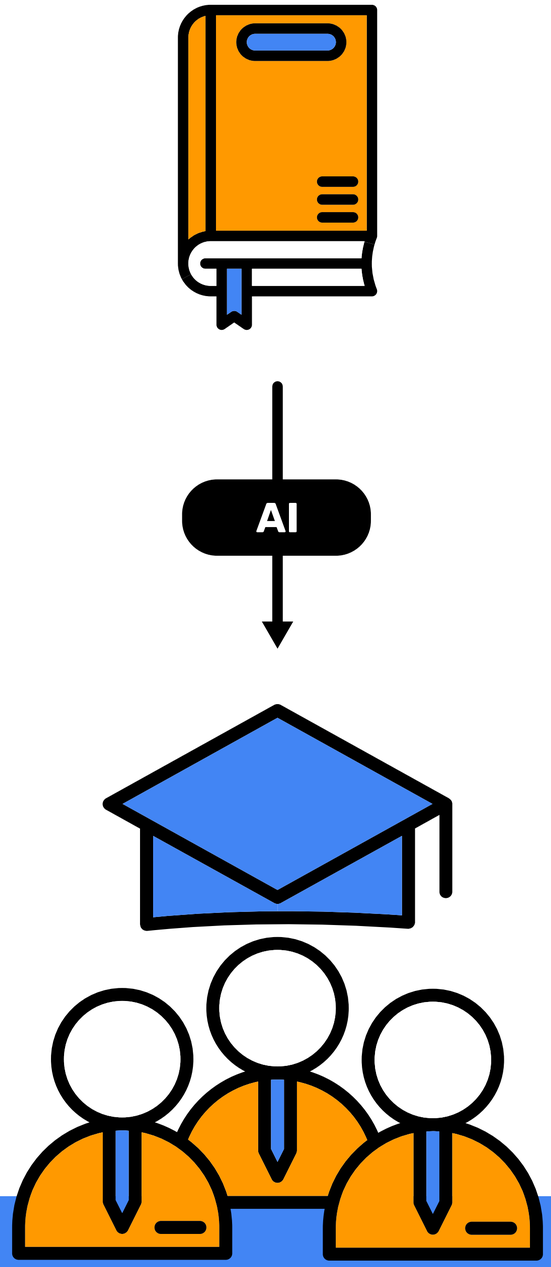
**TAGS** UI/UX Design, AI RecSys, Edtech

# Problem

Several big DIY platforms having millions of users exist - like code.org, scratch, code monkey - to teach coding to kids. Scratch recently crossed the 1 billion mark of number of games on it's platform.

But there are two primary problems common among all these platforms :

- They follow a standard lesson plan for all kids and are not sentient to individual student needs. Different students take different time to learn different concepts.
- All these platforms have content and learning management systems but do nothing at all to actually




# Solution

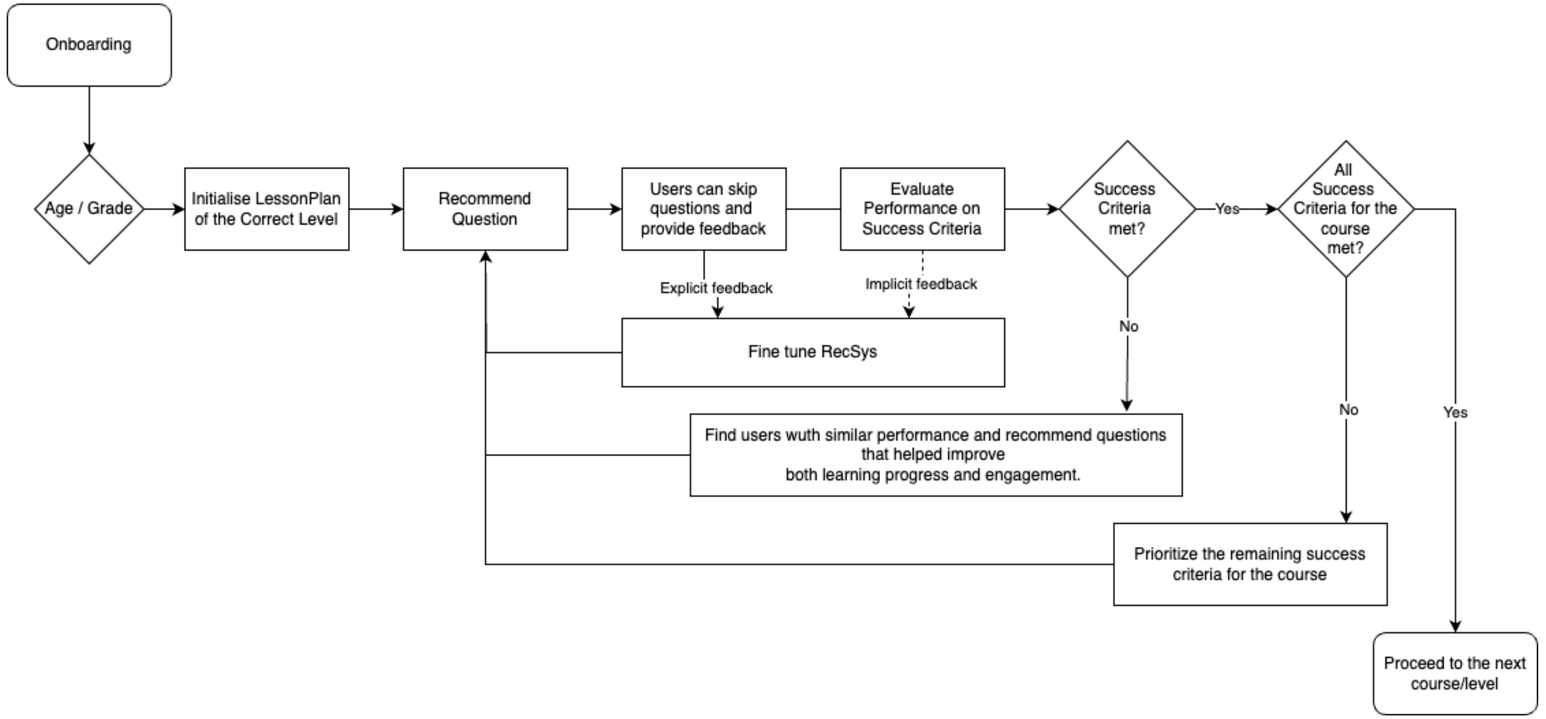
Designing a mobile app to learn coding that prioritizes engagement along with learning progress and leverages user data to personalize learning journey and recommend coding questions/exercises.

This solution will :

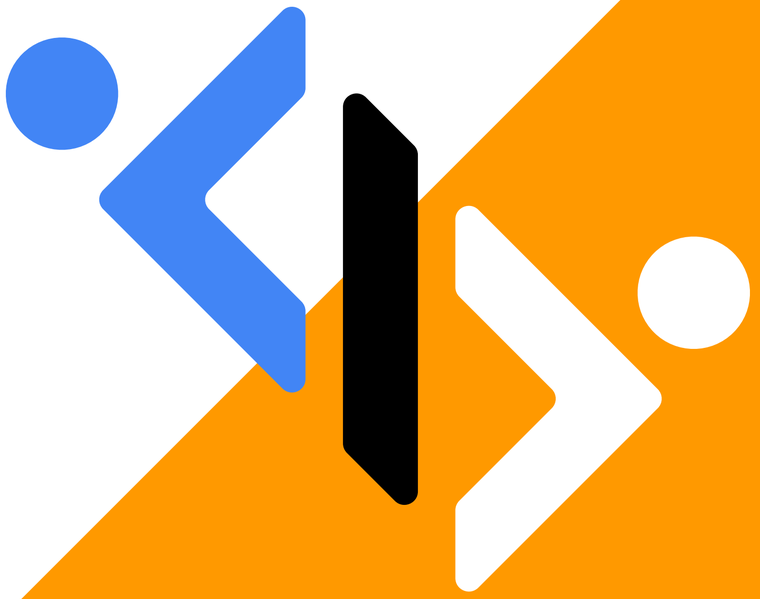
- Give a variety of coding exercises to students and constantly assess their progress against defined success criteria.
- Create personalised lesson plans for all students by comparing their performance to other users in the database and use AI to find suitable questions for them based on what helped other similar users stay engaged and improve their skills.

# AI RecSys Flowchart

A detailed database structure and AI RecSys flowchart was designed by studying the progressing of graded coding curriculum.



# User Persona



## Bio

8 year old kid

Loves to tinker and break apart electronics at home

Motivated to learn coding but prone to distraction

## Goals

Learn fundamentals of coding

Learn specific coding techniques to create projects of their interest

## Pain Points

Finds that most online coding courses for beginners are either boring and too slow. Does not want to follow the set fixed curriculum.

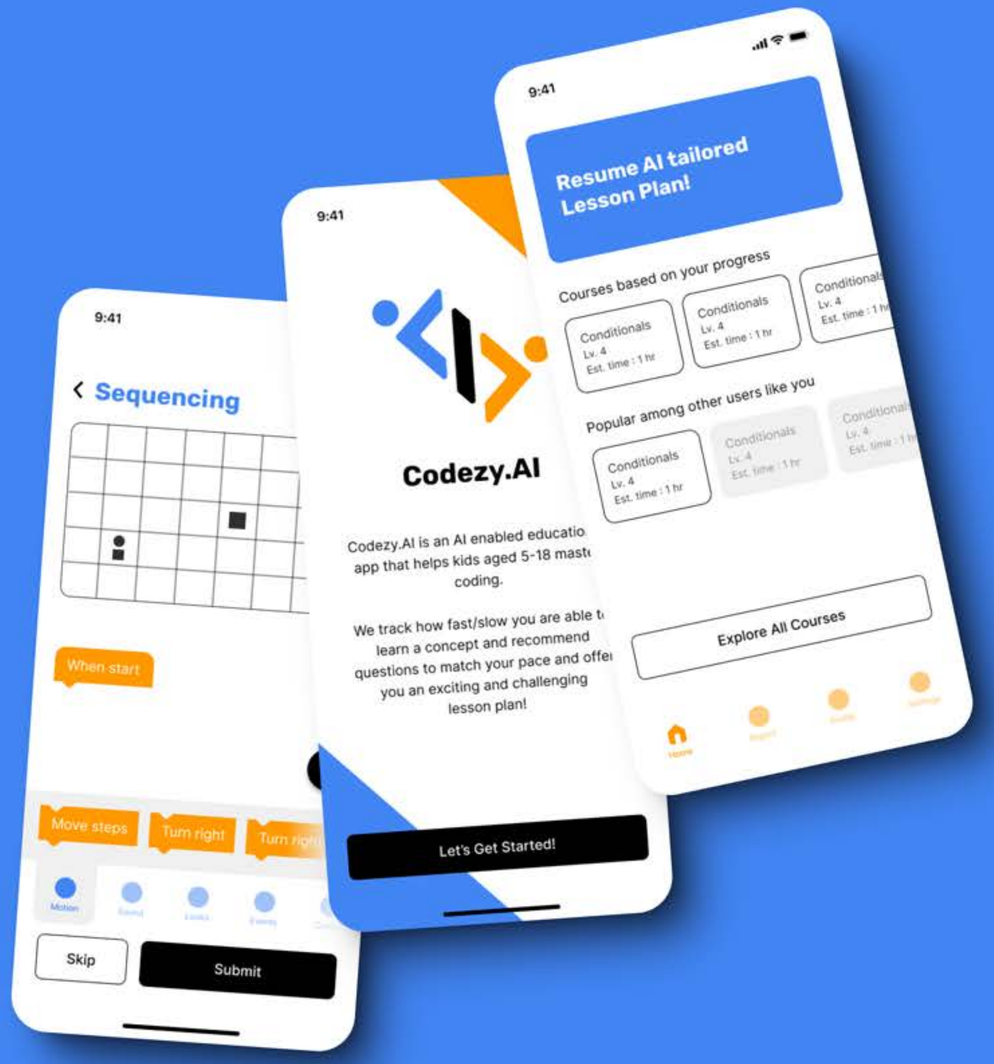
Wants to learn specific coding courses based on their interest but only to find that certain concepts in those lessons are something they are not trained for

# Customer Journey

| Phase | Onboarding | Coding Exercises | Level Completion | Explore |
|---|---|---|---|---|
| **Steps** | 1. Login / Sign Up<br><br>2. Understand the age/grade and the coding background of a child | 1. Start course<br><br>2. Read goal<br><br>3. Attempt exercise | 1. Course finished | 1. Explore all available courses<br><br>2. Select a course to start |
| **Feelings** | 🤨 Skeptical - "Why do they need my personal info?" | 😪 Bored - "These are too easy for me..." | 😪 Bored - "This level was too easy for me..." | 🤩 Excited - "That looks like an interesting course!" |
| | | 🤯 Struggling - "These are too hard for me!" | 🤯 Struggling - "This level was too hard for me!" | 😞 Dejected - "Oh no! It looks like I don't know the basics needed for this course..." |
| **Pain Points** | Lack of information from the platform on the importance of this. | Exercises are too boring or hard | Overall feeling that the course was too boring or hard | Finds interesting courses but lacks the basic prerequisites to proceed with the course |
| **Opportunity** | Use good UX writing to communicate the necessity of collecting the data to the user | Use AI to model performance against other users and find questions that keeps students engaged & also progress on skills. | Provide the option to switch to manual control mode and scroll through complete course repository | Use AI to create a quick crash course to learn the basics |

# Final Prototype

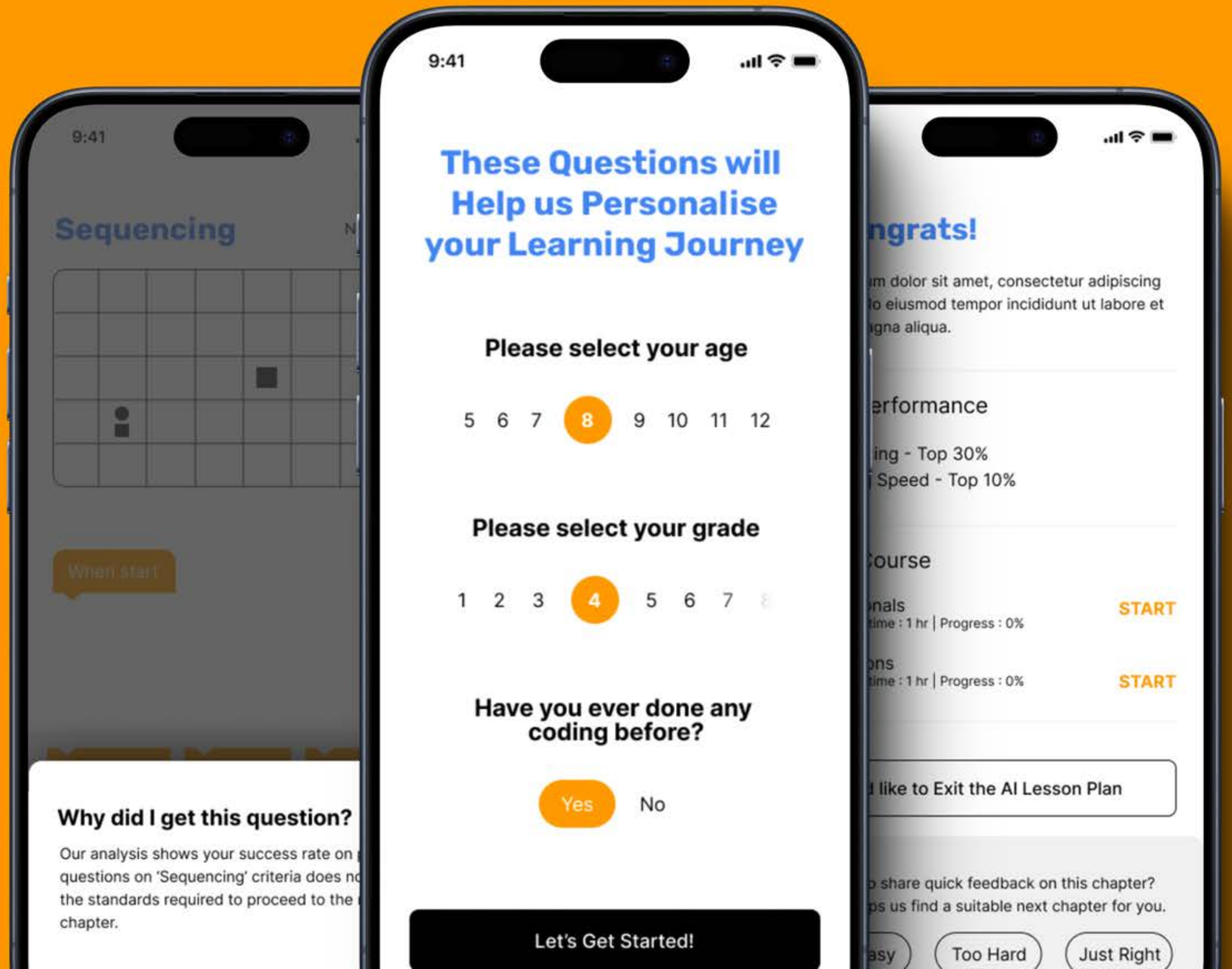
The final mobile UI prototype can be found at this **link**



# Google’s People + AI Guidebook

Google’s people + AI guidebook was referenced to design suitably for AI ensuring key concepts like setting the right expectation, managing errors & giving appropriate freedom to users.

The detailed annotations and callouts to these principles incorporated in the designs can be found **here**




# Designing an LMS that led to $100,000 in annual revenue

Designing a gamified online platform for Avishkaar to be used by young kids aged 8 - 14 to consume instructional content for Avishkaar's STEM kits, code their projects, and participate in their online community.

The platform is now used by over 100,000+ kids with over 45,000 app downloads and has 27,800 MAU. And also helped create LTV revenue of $100,000 annually.

**YEAR** 2020 - 2023

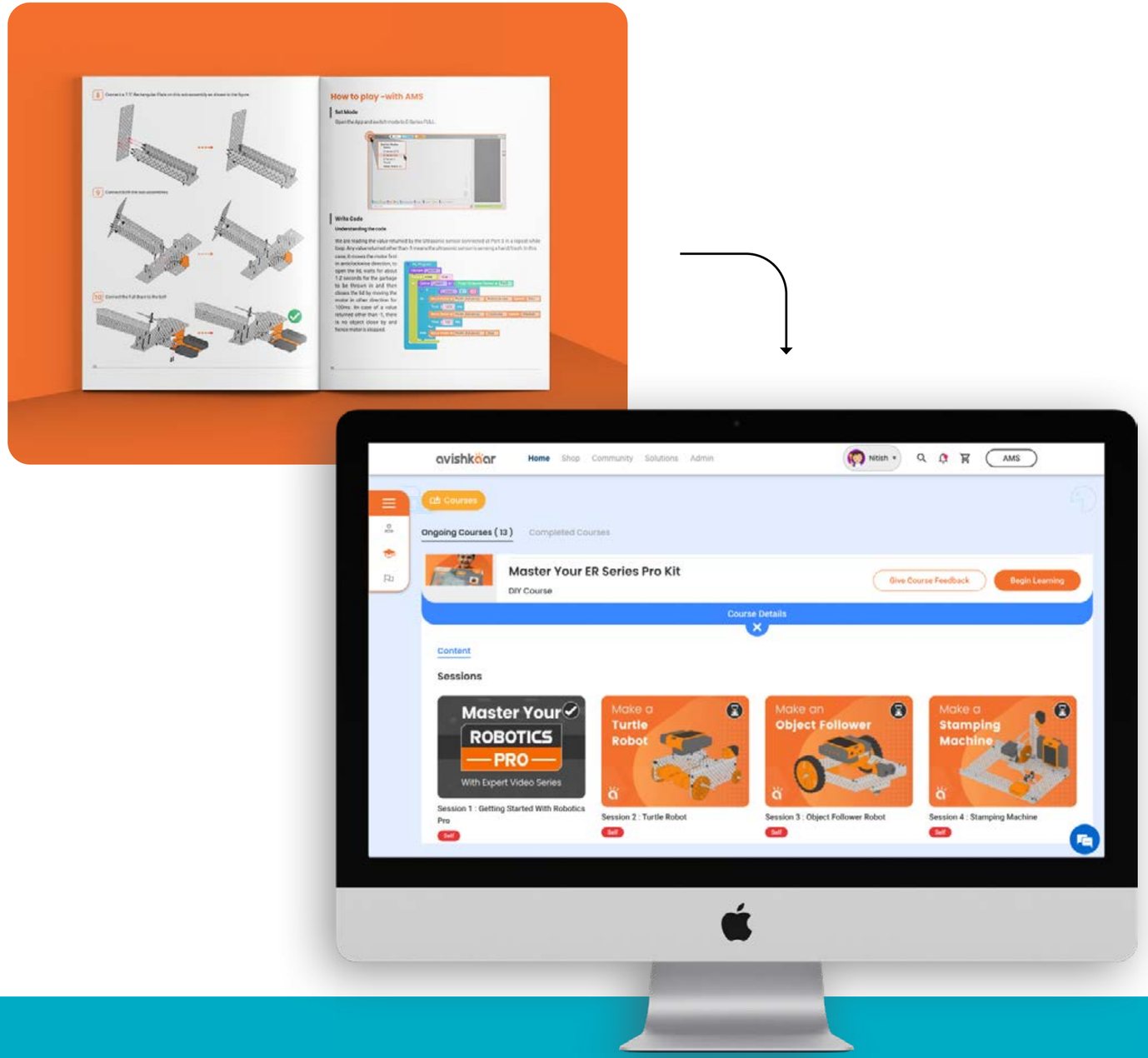
**TAGS** Design Systems, Marketing Content, Edtech

# Problem

Avishkaar sold robotics and electronics kits for kids to learn coding & STEM skills. But faced a challenge with high user adoption (and as a result low return business) since their instructional content was shared only in the form of a printed manual booklet.

# Solution

Design a gamified LMS (learning management system) to ensure kids complete the curriculum that came with a specific kit and reward them for their achievements. The platform would also engage them in an online community to keep them motivated and engaged on their learning journey. And finally, propose them a path forward and encourage them to advance their skills by enrolling in advanced courses or procuring advanced hardware - leading to increased returning revenue for the organisation.

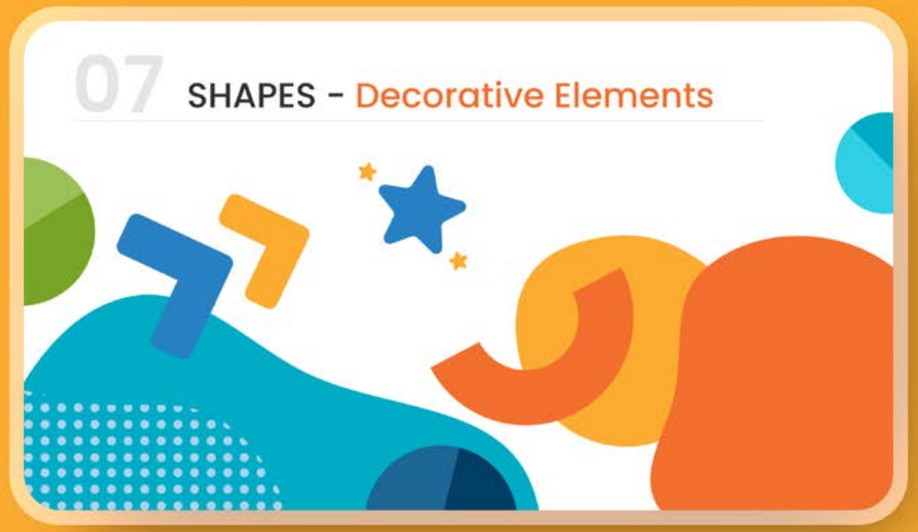


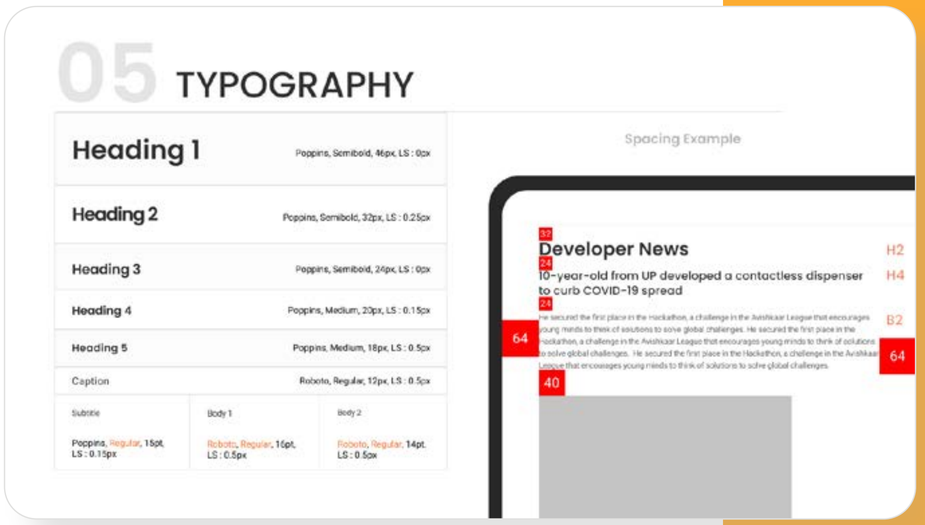
# Design System

A UX design system was designed to set a vision for the platform design and consistency across different features.

But since the design team was fairly small at the organisation and we only had a single product suite - we did not create an extensive design system for expansive applications and scalability.

The style guide for the design system can be found at this link



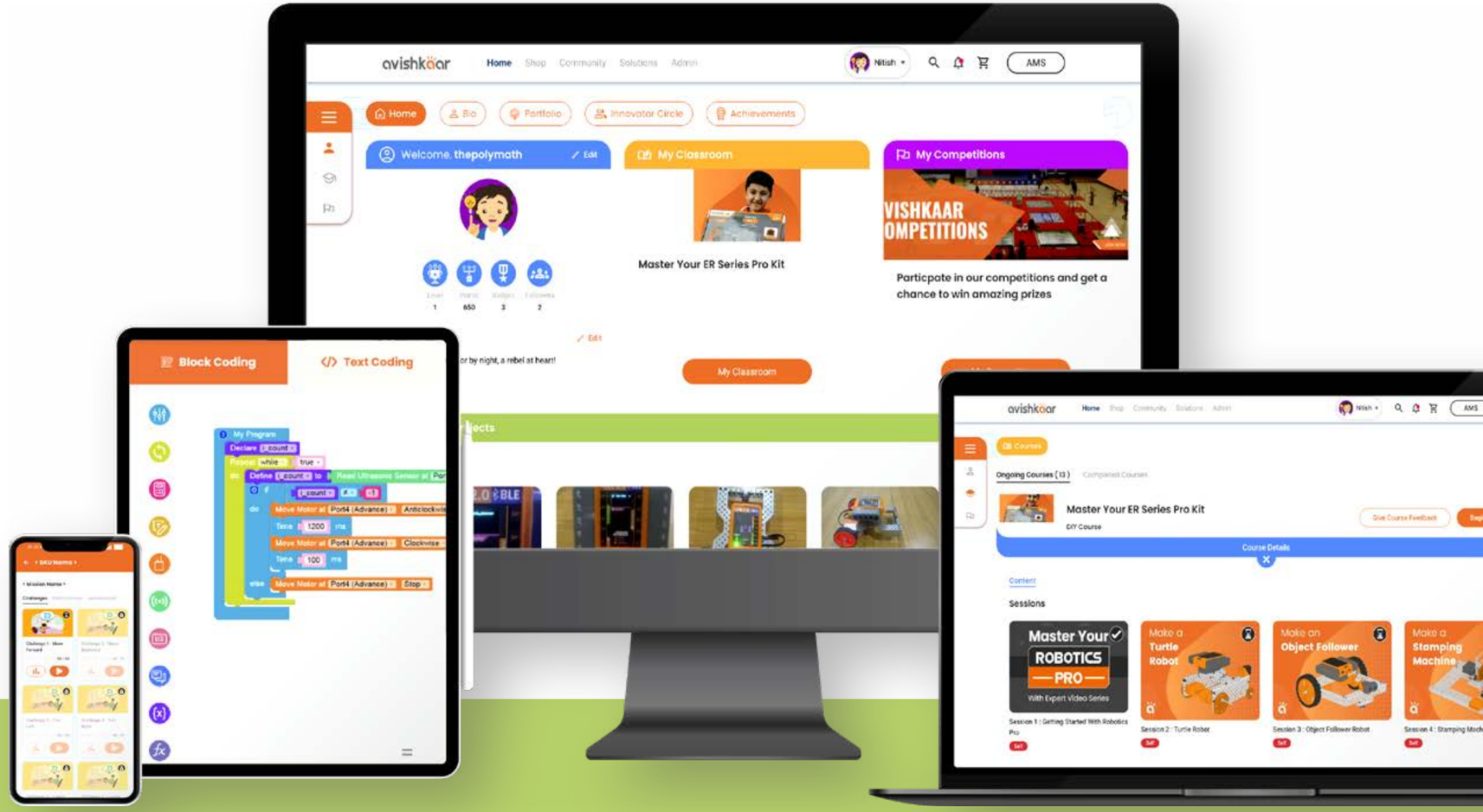




# Final Prototypes

Desktop UI was designed for a web app and mobile UI for a hybrid mobile app.

The demo desktop UI prototype can be found at this **link**

The demo mobile UI prototype can be found at this **link**



Honeywell

# Remote management of HVAC equipment across hundreds of sites.

Designing B2B building management software application suite to allow central and remote monitoring of HVAC equipment across hundreds of small-sites for large-scale franchise businesses.

**YEAR** 2019

**TAGS** UI/UX Design, B2B Software

# Alarms

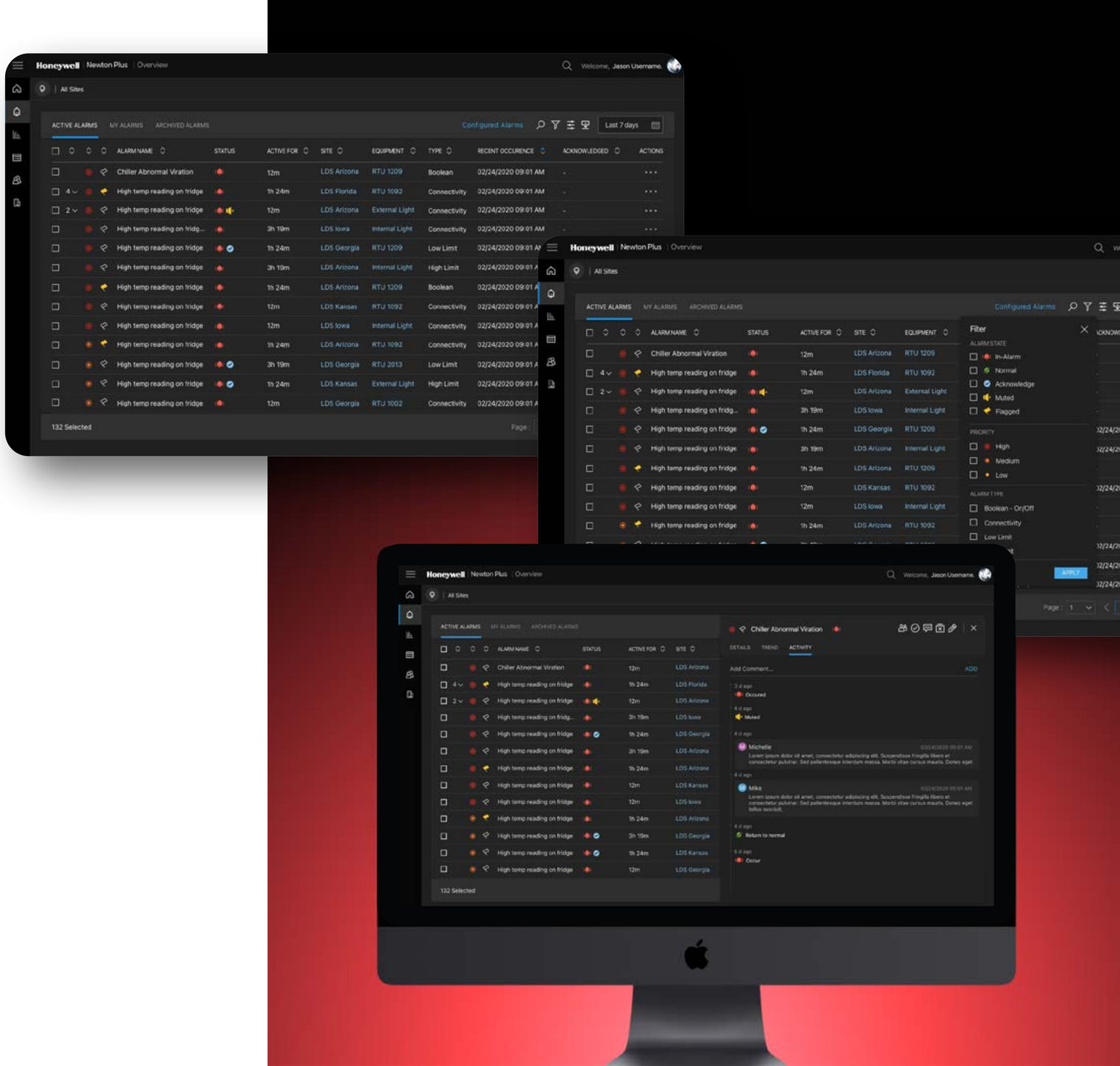
## Problem

The alarms feature of the application provided alerts to the building supervisors whenever any equipment malfunctioned. Repairing of the equipment was often a complicated task requiring collaboration by multiple technicians over days and weeks. The challenge was the alarms feature only provided them a one-time update on the malfunction and no tools to ensure follow-up and track repairs.

## Solution

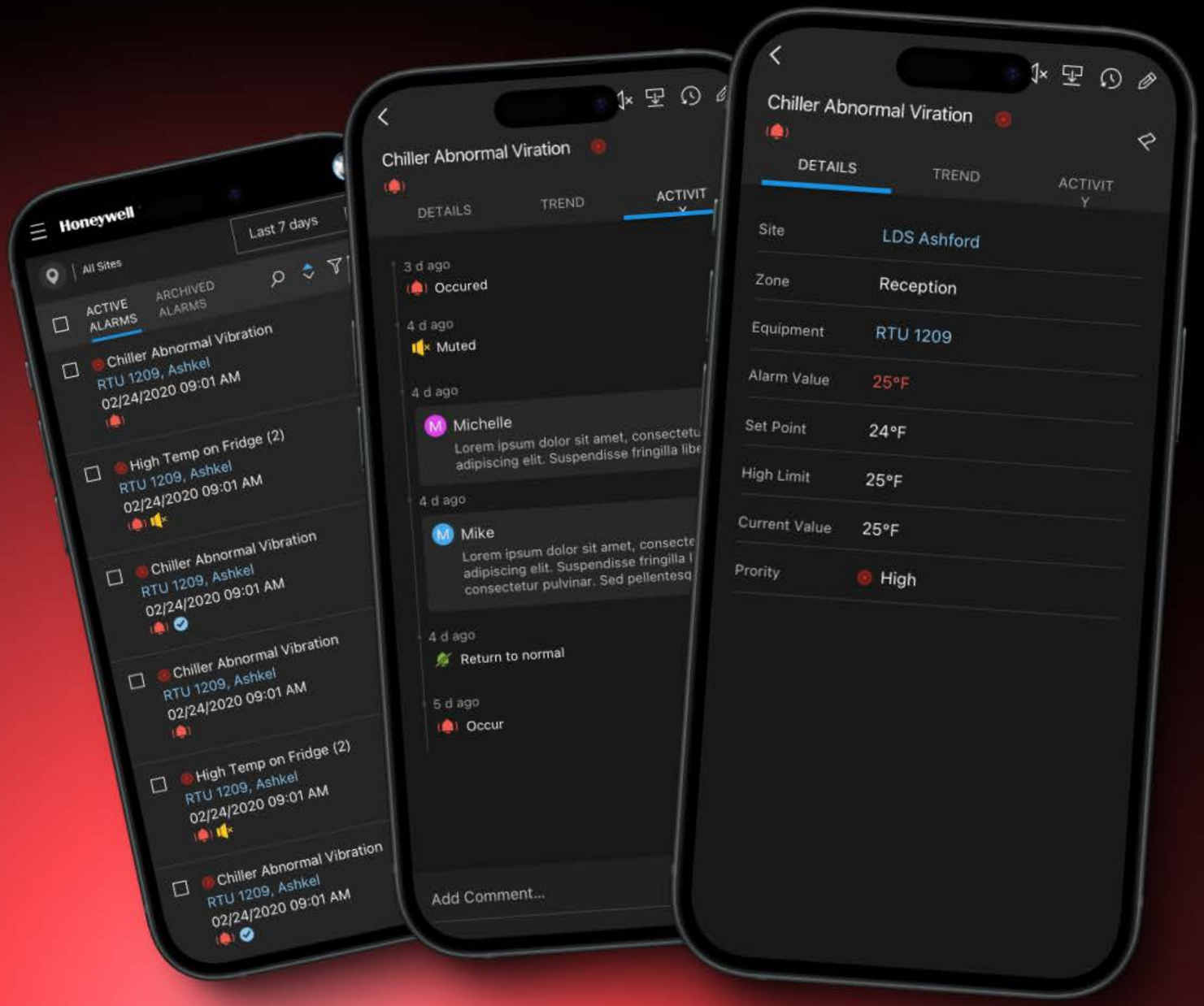
Redesign the alarm feature to have a “ticketing” approach with three new sub-features for alarms to ensure efficient repairs & tracking of the same. These features were -

- Ability to assign the alarms to other users to assign them work on it.
- ‘Trends’ tab to show them sensor data from the equipment to aid with troubleshooting & repair.
- ‘Activity’ tab to track updates from different users on the repairwork so that future users could follow it and understand the chronology better when the alarm was assigned ot them.



# Alarms Prototype

The demo mobile & desktop UI prototypes can be found at this **link**



# Schedules

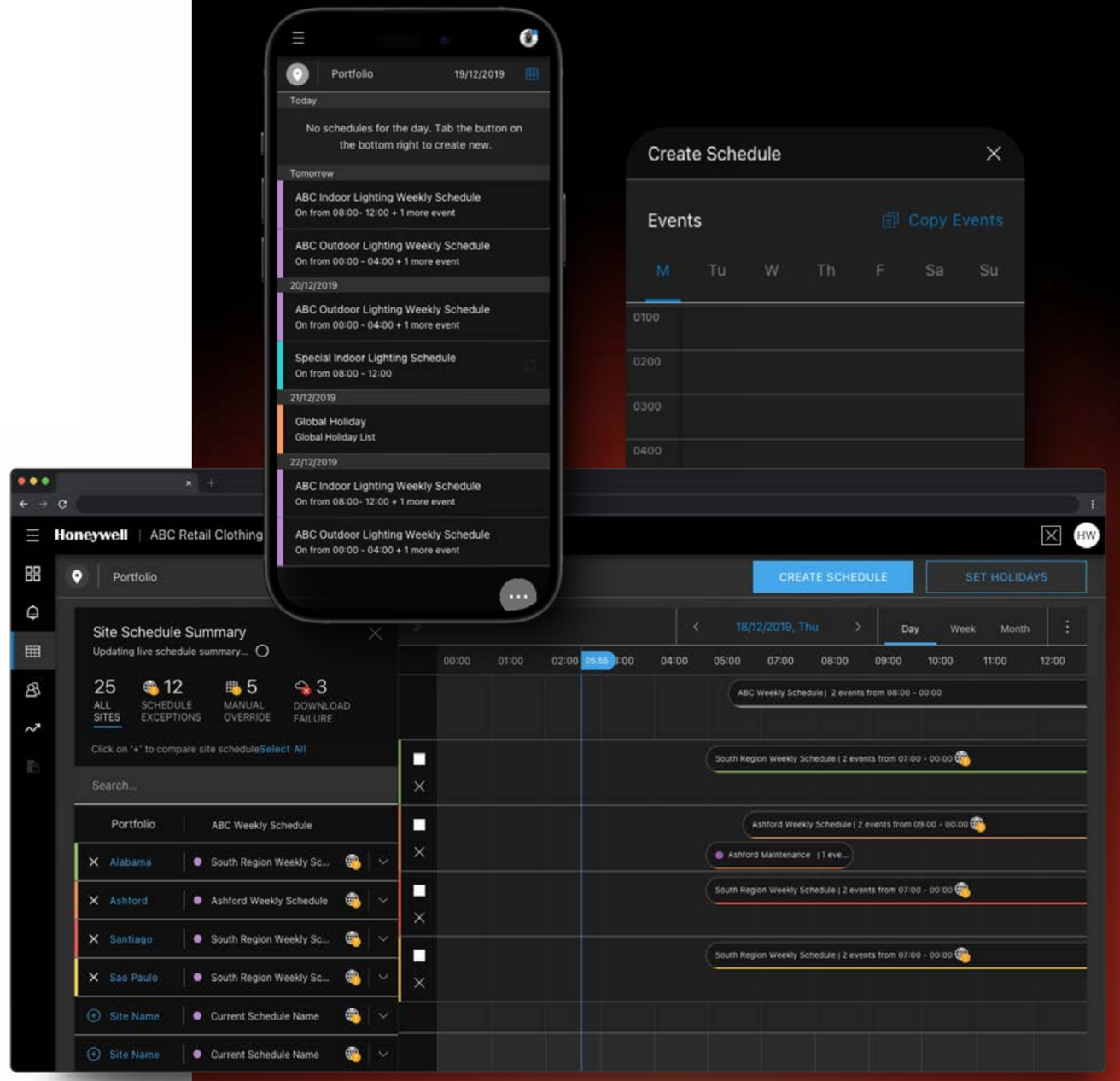
## Problem

The schedules feature of the application allowed building supervisors to create on/off/standby schedules on equipment to save energy & costs. This had been straightforward in the traditional scenario where the usecase was a single supervisor managing a big commercial building. But the challenge for our usecase of centralised supervision of hundreds of building meant there were multiple & hierarchical building supervisors trying to run schedules. This meant that we needed a way to design the feature in a way so that all these supervisors could see the schedules deployed by managers across the hierarchy and take more informed decisions about them.

## Solution

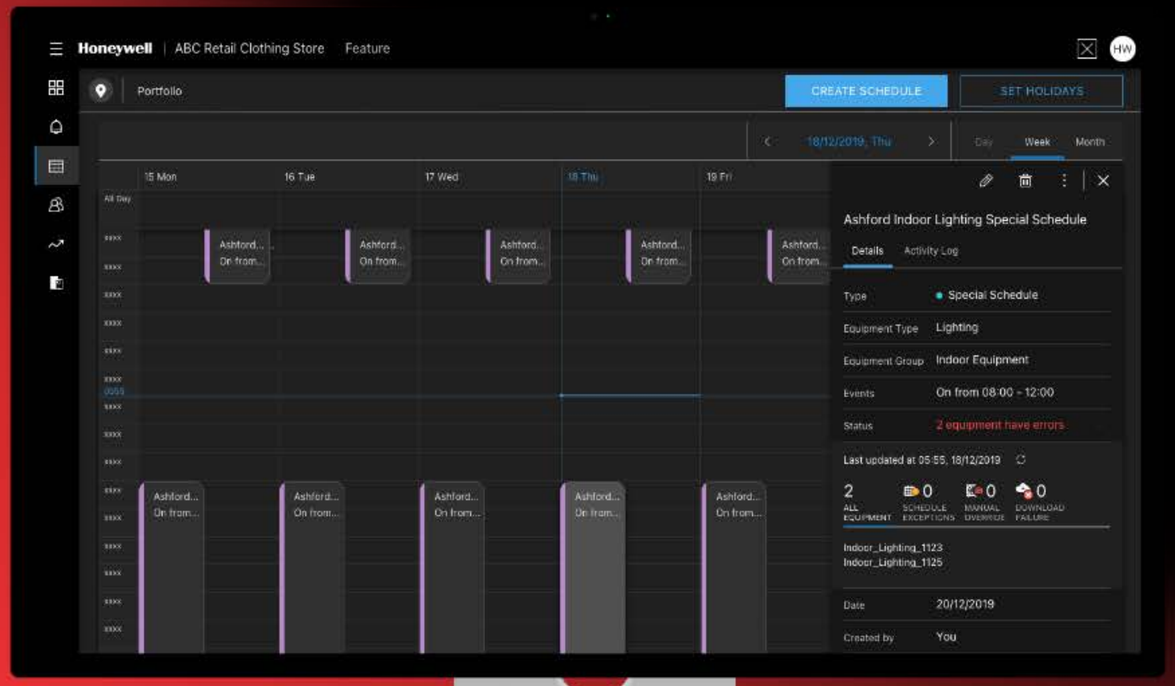
The proposed design solution created a way for these managers to see multiple clashing hierarchical schedules in equipment and allowed them to take more informed decisions.

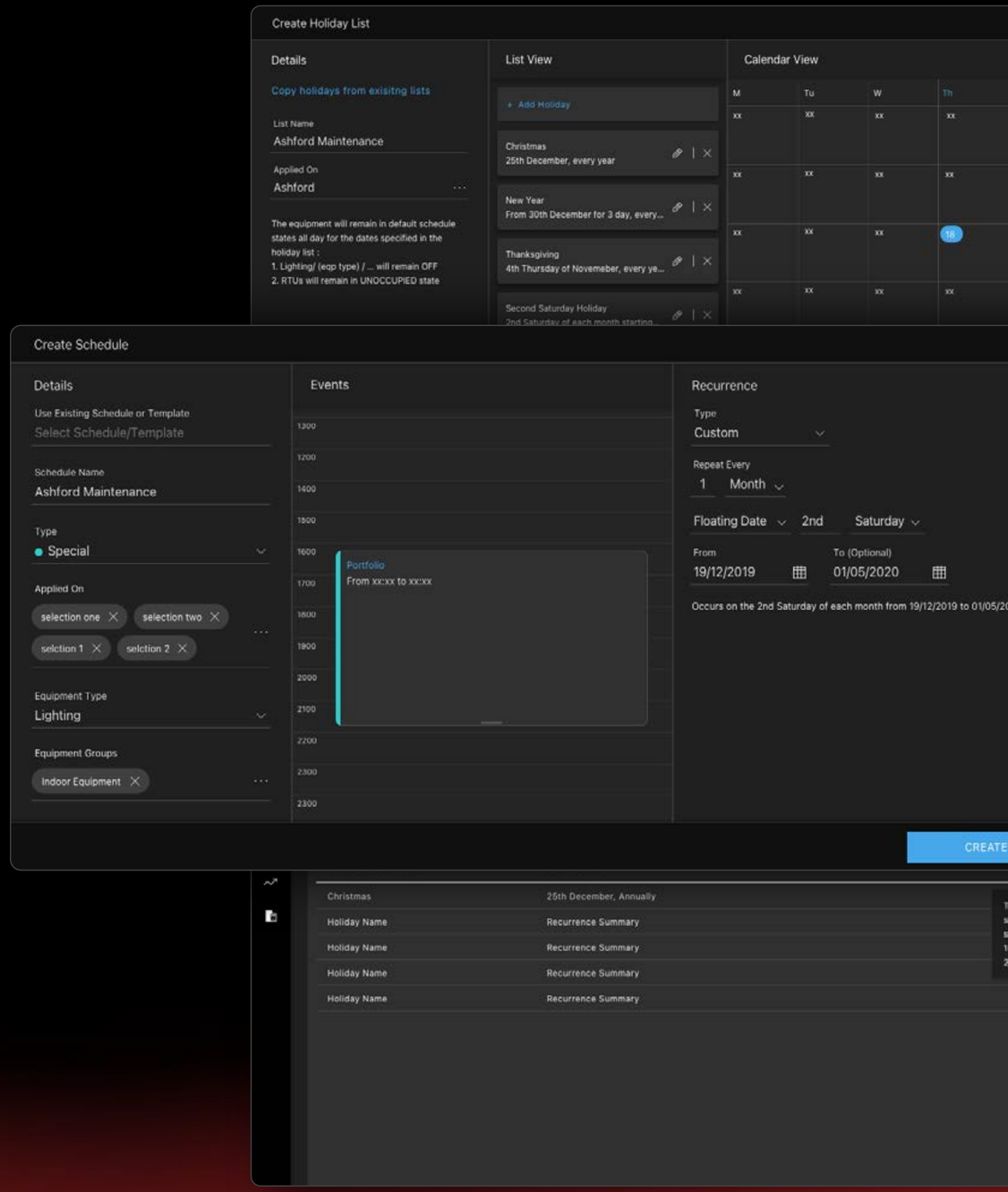
The proposal was widely appreciated internally. And a design patent was successfully secured for them. The same can be viewed through this link.



# Schedules Prototype

The demo mobile & desktop UI prototypes can be found at this **link**

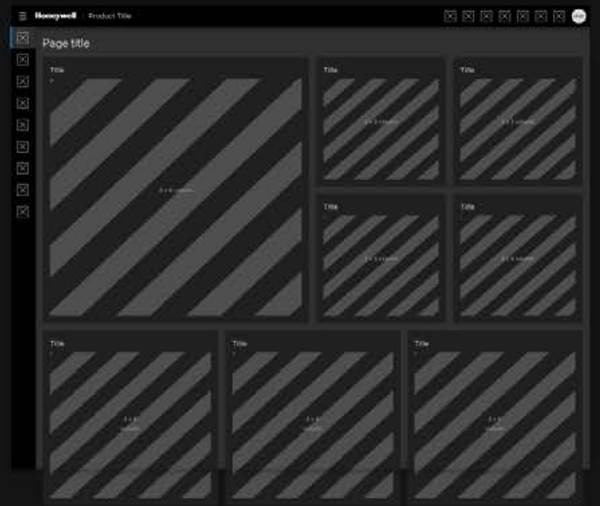


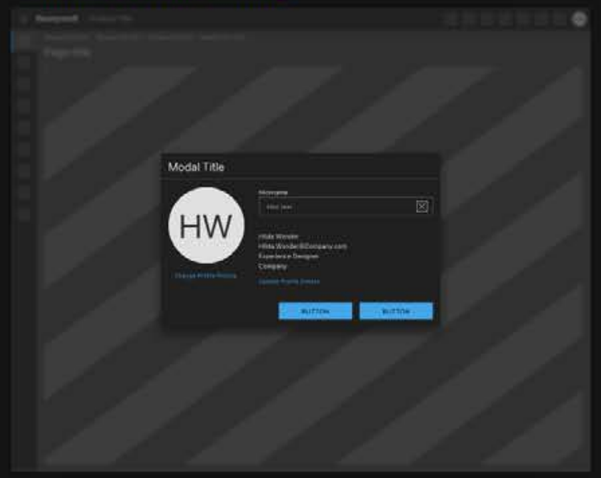
# Design System

Honeywell's inhouse design system was leveraged to make all the designs and was a great exposure on managing massive scalable B2B application design systems.

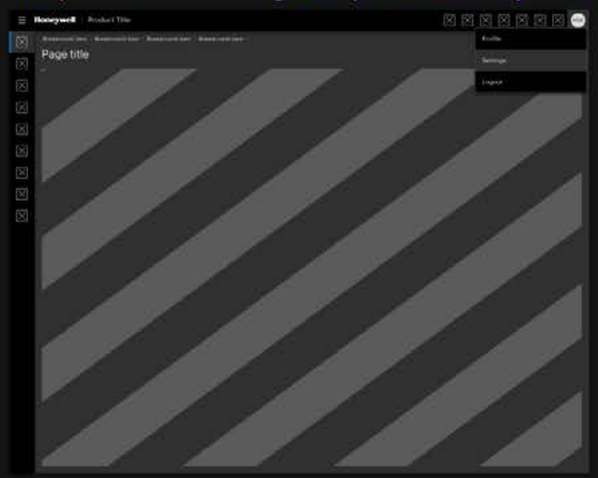

Templates / Dashboard-Compact / Example 2



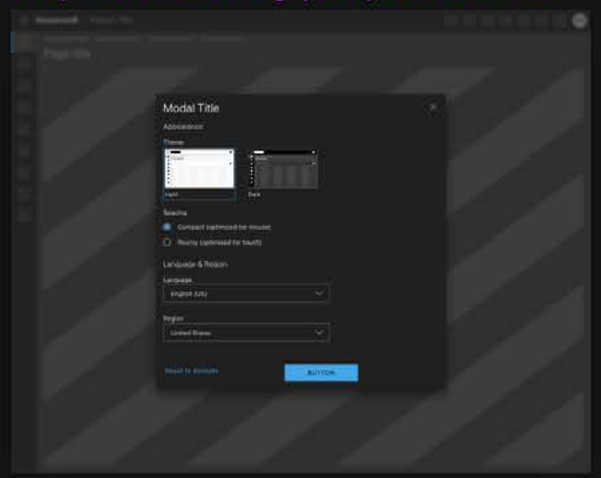

Templates: Profile Settings



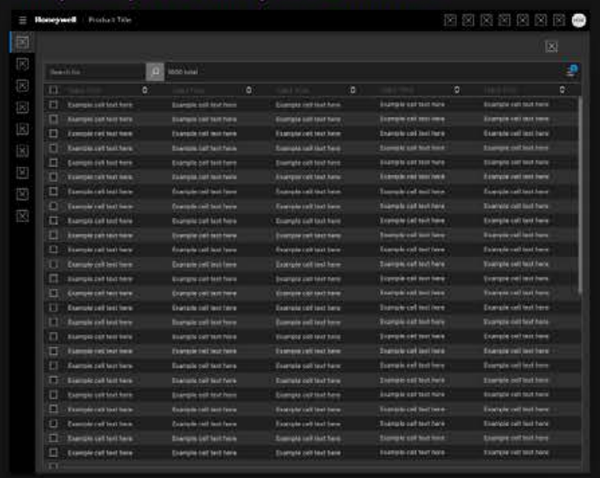

Templates: Global Setting...Compact web - entry menu




Templates: Global Settings / Compact web - modal




Templates / Data Table / Selectable Data




# Driving The Next Billion Sales in India Through a Hyperlocal Ecommerce Model

Designing a hyper-local e-commerce service model to tap the emergent internet users in India's developing cities and villages. The model's key features are that it allows the buyers to get micro-edits from local sellers, and for the local sellers, it provides tools to create trust profiles for the buyers and give them credit.

**YEAR** 2018

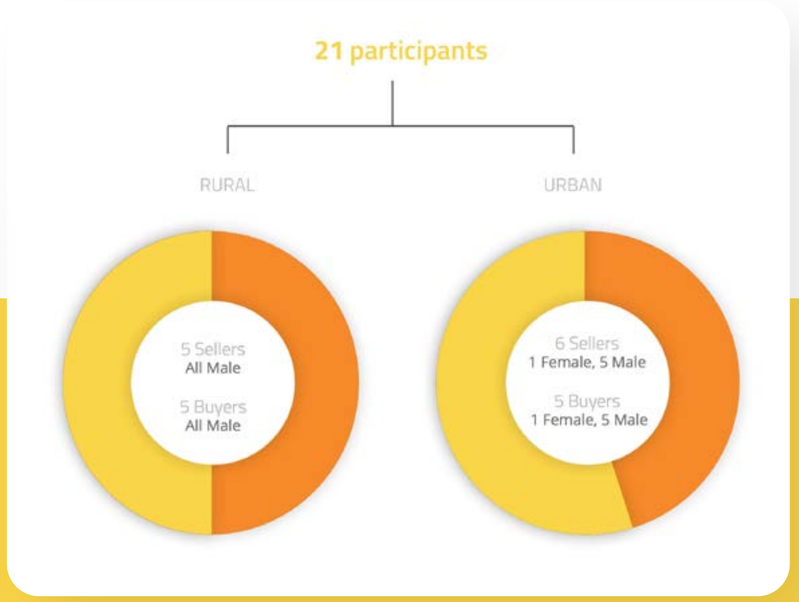
**TAGS** Ecommerce, Design Research, Service Design

# Research

Secondary and primary research was conducted to understand the problem areas ranging in different subjects from rural e-commerce, rural ICT initiatives, hierarchy needs, behavioral economics, consumer patterns & retail psychology.

Secondary research was conducted by reading research articles, case studies, government reports & internet blogs.

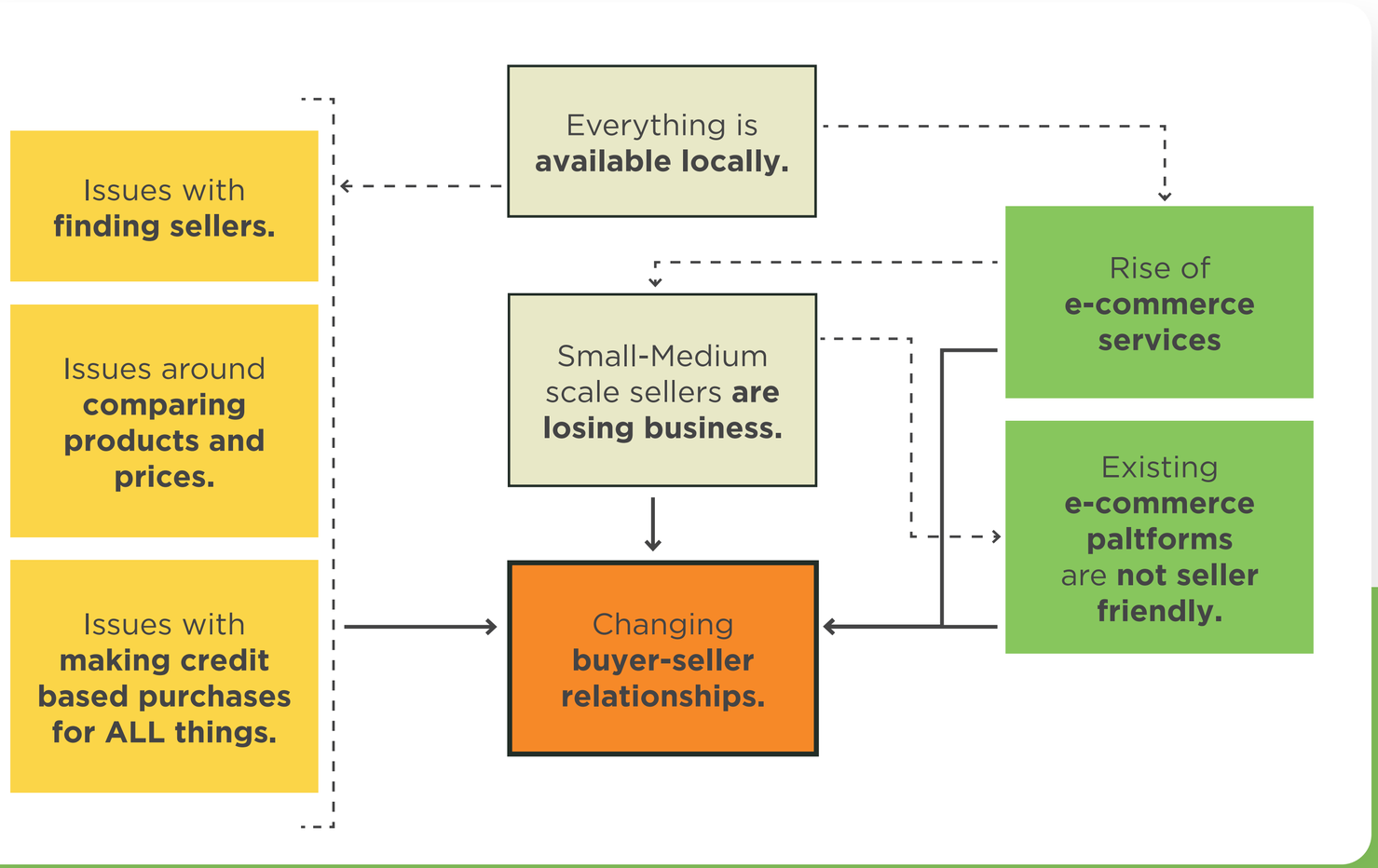
Primary research was conducted by interviewing low-income buyers and sellers both in urban and by traveling to nearby villages.




# Core Insight

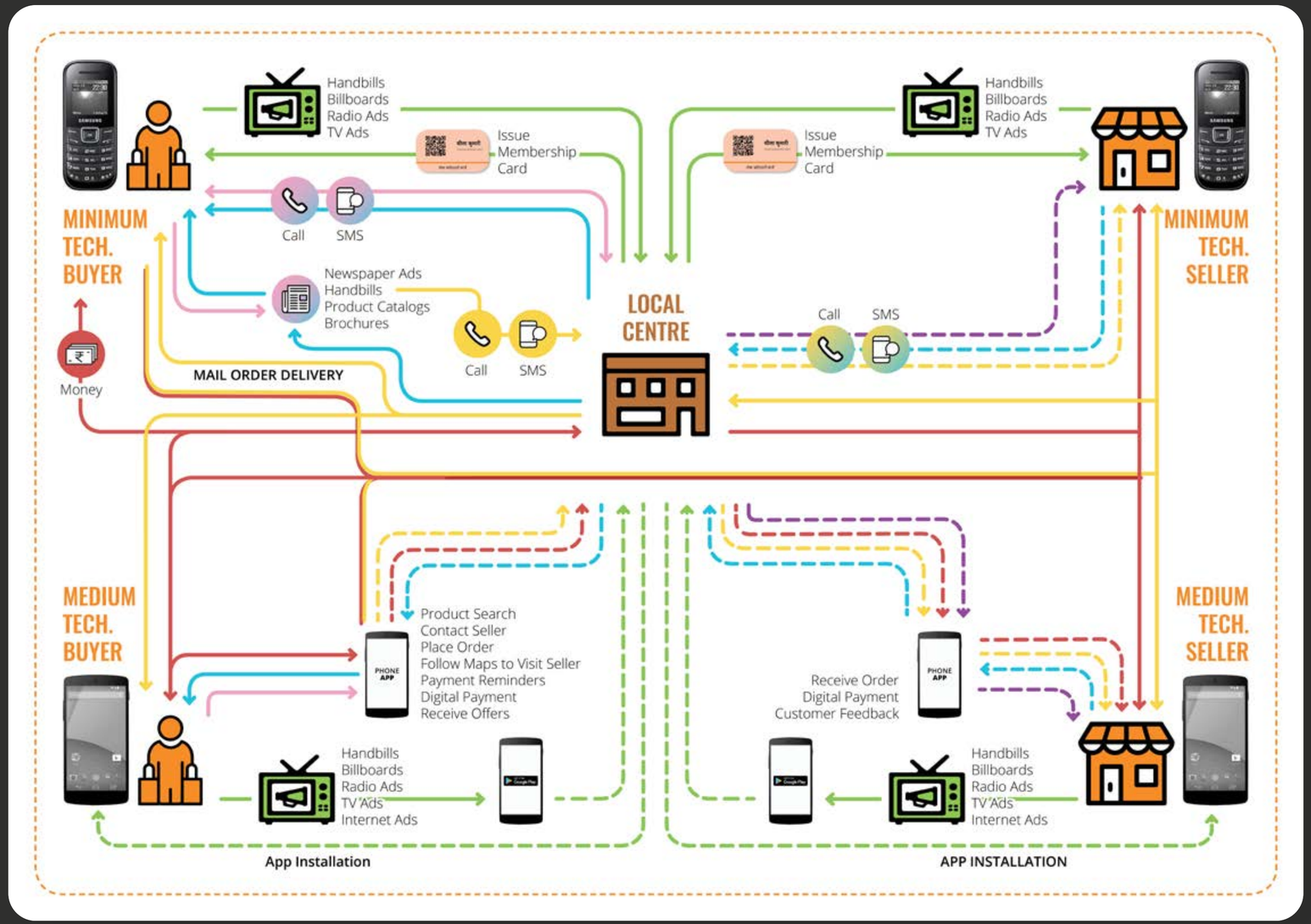
The project started with the assumption that the core proposition that will motivate rural buyers to try e-commerce would be better prices and an availability of a bigger catalogue.

But through research, I realised the primary problem to solve was enabling buyers to get micro-credit from local sellers, and for sellers, tools to allow them to trust buyers.



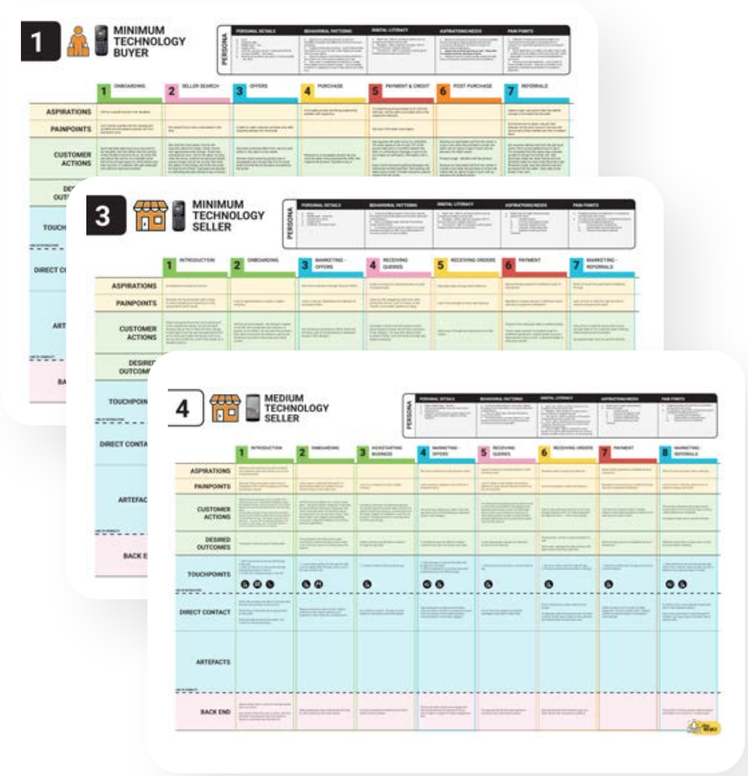
# Final Concept

A rural e-commerce service model that allowed buyers to get micro-credit from local buyers. And local buyers, the tools to trust buyers and give credit.



# Personas + Customer Journeys

Detailed personas and customer journeys were first made before making the detailed service blueprints.



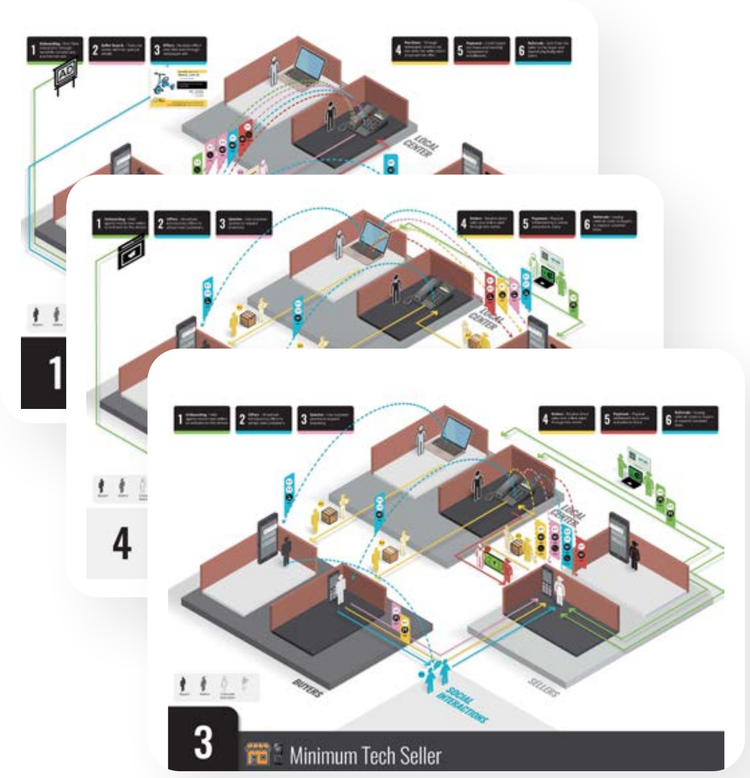

## 2 MEDIUM TECHNOLOGY BUYER

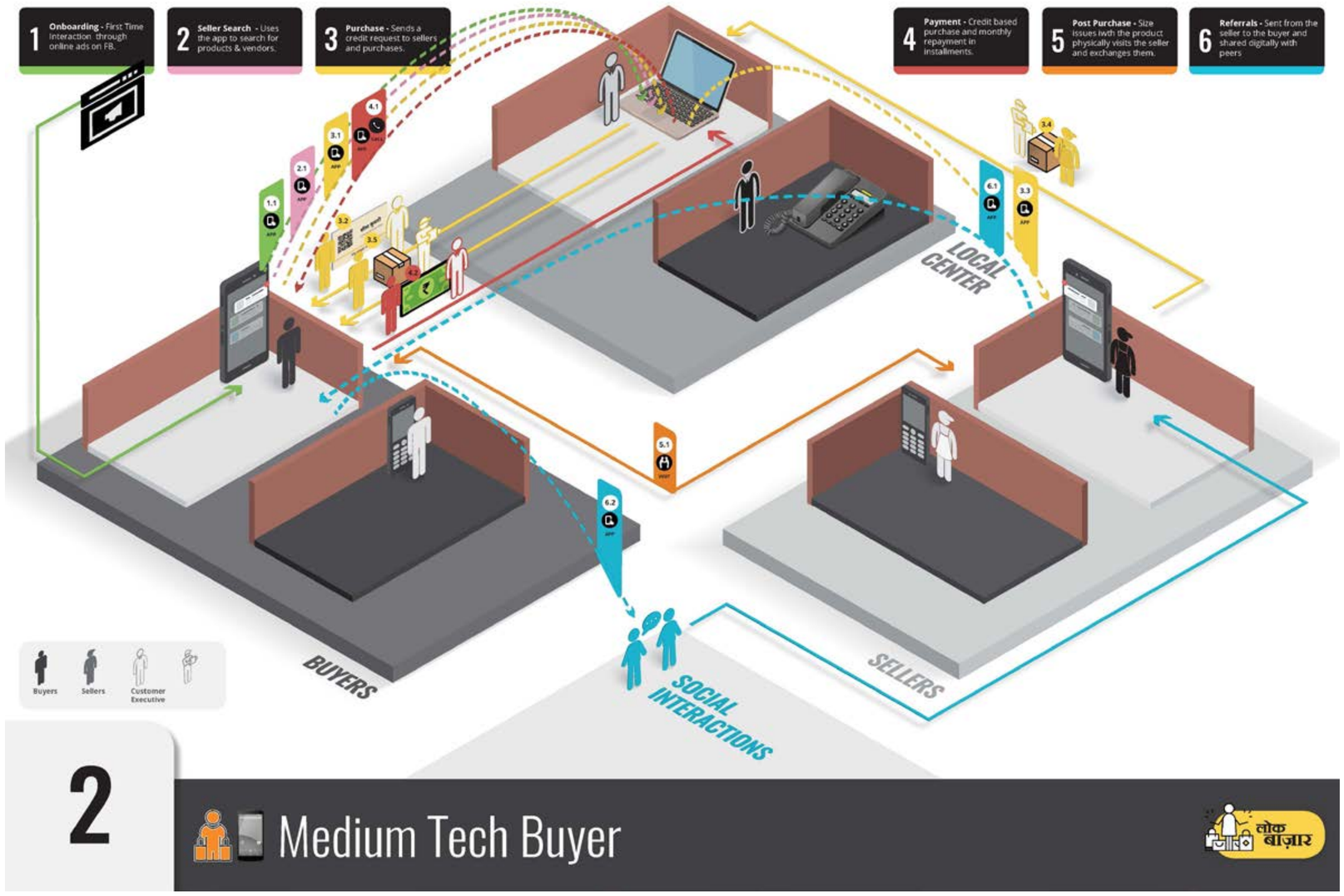
| PERSONA | PERSONAL DETAILS | BEHAVIORAL PATTERNS | DIGITAL LITERACY | ASPIRATIONS/NEEDS | PAIN POINTS |
|---|---|---|---|---|---|
| | a. Alok, Middle Aged – 30s, Family of five.<br>b. Works as a driver.<br>c. 10,000 Rs. monthly income<br>d. Income instability – late salary.<br>e. Monthly Consumption per person in the household – Rs. 2400 | a. Exposure to products/services through the handbills/newspaper ads/billboards and word of mouth marketing.<br>b. Frequent/essential purchases – social relationships with sellers who trust her with credit. Repeat purchases with the same sellers.<br>c. Does not research much before buying something – lack of time one of the reasons leading up to this.<br>d. Often cater to credit based transactions to tackle with instable income and low savings – but susceptible to default on repayment in case of high amount of credit/loan. | a. Basic User - Able to use direct actions such as accepting and disconnecting calls<br>b. Navigator - Able to abstract concepts, think in terms of hierarchy, navigate hierarchy<br>c. Text Inputter - Able to recognise e writing space, comprehend and make coherent text<br>d. Saver - Able to understand a virtual space where things (e.g. files, pictures, music etc.) can be stored, organized, and exchanged.<br>e. Account Holder - Able to understand a virtual identity of the self as different/based from that of others, develop and follow social norms in a virtual community. | a. Needs to overcome the barrier of income instability and low savings by making aspirational/essential purchases at all points in the month through non-interest credit and EMI plans.<br>b. Aspires for at home services as well – being able to compare products and shop at home.<br>c. Aspires to source and buy quality products locally without moving far away from the area of residence. | a. Difficulty in finding more sellers and creating more buying options when it comes to non-essential/aspirational and non-frequent purchases.<br>b. Dependency on sellers who allow them credit – unable to find new sellers who'd trust them with credit – especially in the case of non-essential/aspirational purchases.<br>c. Post-purchase dissatisfaction – poor quality of products/seller service – absence of consistent and systematic redressal methods like in e-commerce platforms. |

| | 1 ONBOARDING | 2 SELLER SEARCH | 3 PURCHASE | 4 PAYMENT & CREDIT | 5 POST PURCHASE | 6 REFERRALS |
|---|---|---|---|---|---|---|
| ASPIRATIONS | Wishes to buy his son's uniform online in a timely fashion and through credit. | To find the right product - uniform. | Make a credit based purchase | | Hopes to get a smooth exchange for the uniform | Hopes to gain card points after the referral concept is introduced by the seller. |
| PAINPOINTS | Job hours don't allow him time for shopping<br>Plus low income coupled with low savings and unstable income patterns are other hinderers. | Other online platforms don't provide products that have a local scope - like school uniforms. | Doesn't know any sellers who'd trust him with credit. | | Unsure if the seller will agree or not. | Don't know how to share. Unsure if the referrals will be used. Unsure if and how the card points will be credited and how to redeem them. |
| CUSTOMER ACTIONS | Alok has to buy school uniform for his son whose school is starting in a week. At the same time his driving job is not allowing him time to go out and shop. He shops at Amazon/ Flipkart often so he searched for the uniform there but is unable to find it for his son's school. While scrolling through FB he sees the ad for the uniform and is urged to download the service's app | He searches the app and finds the exact product he was looking for and three sellers who are selling it. | He is a little short on savings too and uses the app to send credit request to all the sellers<br><br>The app requests him to schedule an executive delivery to his home to finish onboarding and proceed with his credit request. | The seller offering the second best price agrees to his credit request. He finalises the purchase and products are delivered to him within 36 hours.<br><br>Next month he starts getting messages and calls about repayment. He receives his salary next month and pays back using paytm. | The uniform turns out a little small. He initiates an exchange request through the app. Physically visits the store. Changes the uniform for a bigger size. Tries it on his son there itself. Comes back home. | He receives referral code from the store owner. Store owner explains how to use it. The message from the center also contains number to contact for further info. He physically meets other student parents and shares with them the code. Whenever a peer uses the referral code and purchase from the seller - Alok gets some points in his card. |
| DESIRED OUTCOMES | To be able to find a local school uniform seller who can trust him with an informal credit plan. | To be fully informed about product and seller information so he can make a decision. | Find seller who'll trust him with credit. | To get the credit. And be assisted with repayment in terms of reminders and collection. | Try the new uniform and get the old changed. | Correctly forward the referral code to peers<br>Successful usage of the code. Increased card points -> increased shopping. |
| TOUCHPOINTS | 1. Gets to know about the service through an FB ad.<br>2. Brief introduction to the service through onboarding screens of the UI. | 1. Phone app shows the products and sellers. | 1. Phone App allows to send multiple credit requests.<br>2. Onboarding through an executive visit to his home. | 1. Notification on the phone app about credit request acceptance.<br>2. Address and delivery through the app.<br>3. Products are delivered to his place.<br>4. Payment reminders - app notifications.<br>5. Instalment collection through digital transactions or exec. visit. | 1. Exchange request through the app.<br>2. Actual exchange through the store visit. | 1. Receives referral codes on app.<br>2. Looks at instructions to understand how it works.<br>3. Shares the code with peers through app.<br>4. Peers buy from the seller.<br>5. Alok receives message about added points to her card. |
| LINE OF INTERACTION | | | | | | |
| DIRECT CONTACT | The FB ad shows images of the uniform he was searching for. And the app introduces him briefly to the service. | App has search box that can be used to seach for products.<br>Product images and details shown.<br>Available seller information also shown - number, address, chat option. | App prompts to enter credit details - duration, amount, EMIs.<br><br>Visiting exec. confirms the number and address and hands over the physical card. | A notification is sent to his phone about acceptance. He provides his address and other order details. Order is confirmed.<br><br>He is followed up every month with payment reminders and phonecalls to schedule exec visit who collects money from her.<br><br>Products are delivered to his place by an executive, who gets the buyers signatures at the time of delivery. | Seller receives a notification about the request. He approves. The buyer gets a noti about the approval.<br>He visits the store, tries on the new uniform and exchanges it for the old one. | A referral code is automatically created and sent to his phone.<br><br>Every time a purchase is made through the referral code, Alok gets a notification about added points. |
| ARTEFACTS | | | | | | |
| LINE OF VISIBILITY | | | | | | |
| BACK END | E-commere site data is used to drive customers to the app for products/categories which are only available locally - for eg. school uniforms. | The app records buyer data around buyer search queries. | Buyer added in the DB.<br><br>**His credit request is added in the DB as well, if it's not converted he can be offered alternatives.** | DB is updated with the buyer and seller record.<br><br>Center follows up Alok every month with payment reminders and phonecalls to schedule exec visit who collects money from her, which is then forwarded to the seller. | | The number of times a buyer's referral code is used adds to his score as a "wanted buyer". |

# Spatial Maps

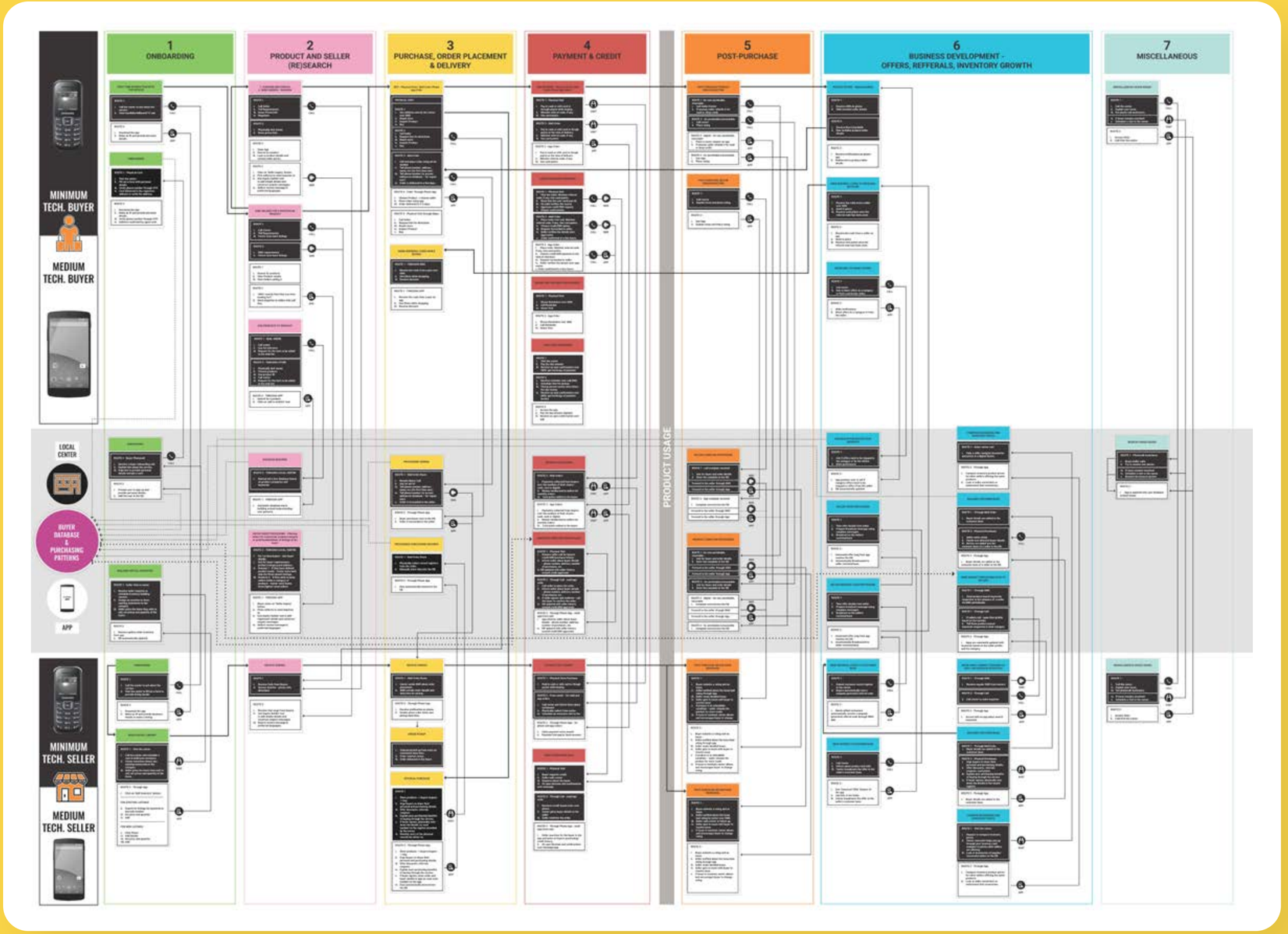
Spatial Maps were made to understand the physical spread of the system.



# Service Blueprint

Building the customer journey, personas and service blueprints indipendently help my build the final detailed service blueprint.



# Design Artefacts

Demo artefacts were made for all four key customer personas to illicit how the designs in respective touchpoints would materialise - from mobile apps, to text messages, newspaper flyers and physical membership cards.

The demo flows can be found at this link


# Physical Navigation in a Virtual World

Solving the problem of navigating an LMS by designing a “physical” navigation interaction to explore the portal.

**YEAR** 2017

**TAGS** Design Systems, Edtech

# Problem

The project was inspired by identifying improvement opportunities through a UX analysis of ‘BlackBoard’ - a popular institutional LMS.

The key challenges identified were:

- Existence of multiple navigation menus
- Lack of visual hierarchy
- Multiple features with similar functionalities

# Solution

A “physical” navigation in a virtual space made by modeling the features of an LMS to a structural space as if it is one’s university or a school.

Do away with navigation problems through a conceptual map of the website by rendering an experience of navigation through an architectural structure.

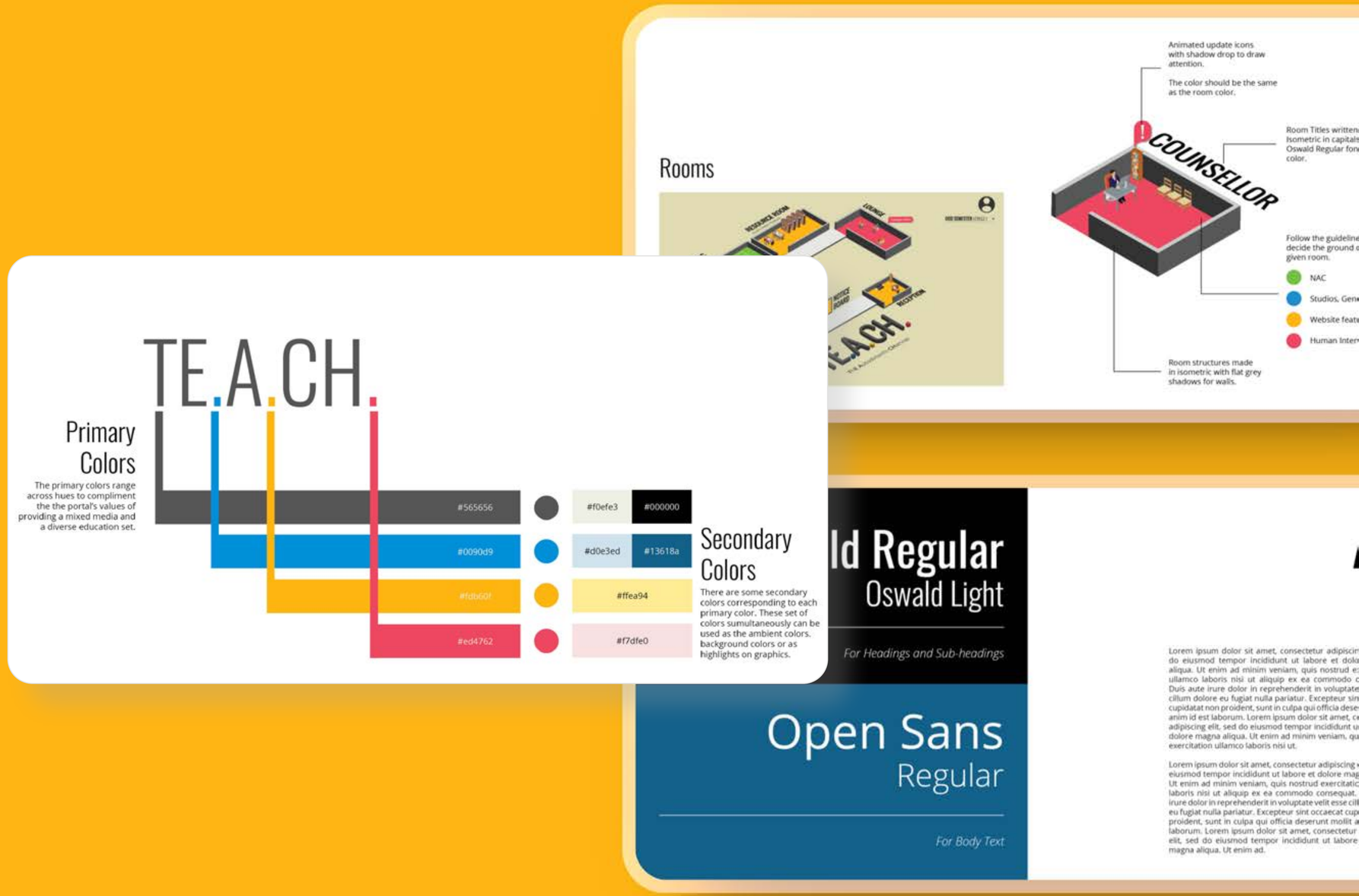
The movement of the users, then, is not so much through a 2D tree/map of the website but through a 3D space; and at all times they’ll be aware of their exact location in this ‘web’.

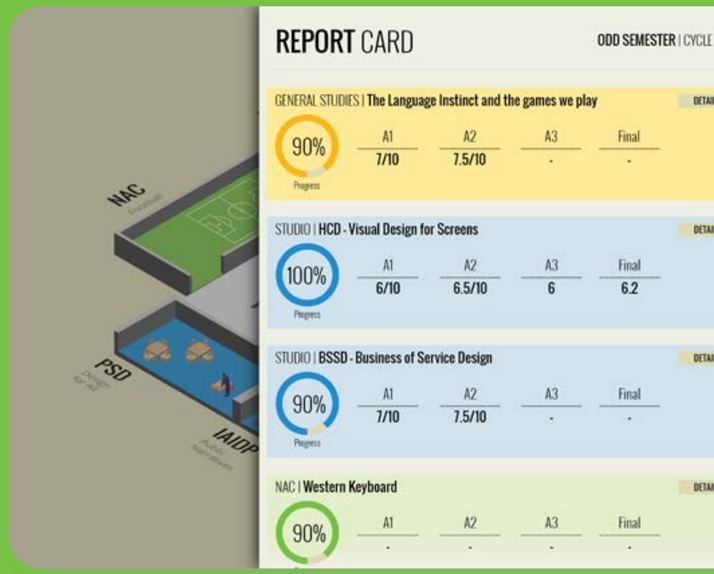
The hope is that such an interaction would be engaging, empowering, and cognitively simpler for a user.

# Style Guide

A style guide was prepared to inform the final UI design and create a scalable structure to encompass the needs of different institutes.

The detailed style guide can be found at this [link]



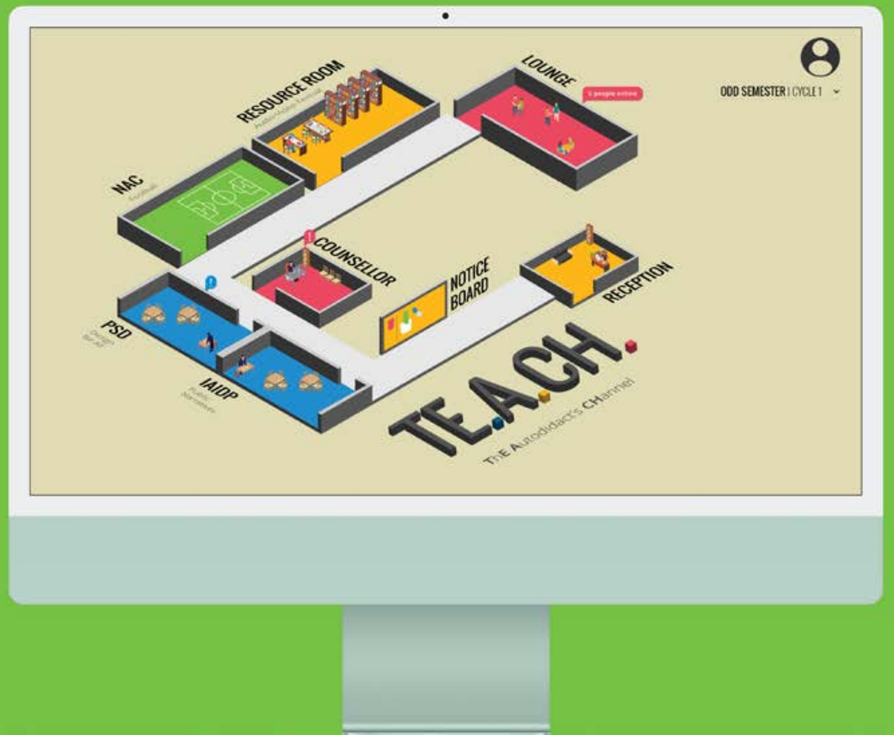




# Final Prototype

High-fidelity UIs for two essential user journeys were crafted to demo the core experience.

Links to both these user journey can be found below:

- New User Onboarding
- Returning User



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