DHNAPOND TANGSITTHICHAI

product design

Portfolio

PDF version

PROFILE



DHNAPOND TANGSITTHICHAI

YONG, 25

Product Designer
(Hardware & Digital Experiences)

PERSONAL INFOMATION

Birthday : 4 June2001
Sexuality : Female
Nationality : Thai (Bangkok)

CONTACT

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E-Mail : dhnapond.yong@gmail.com
Instagram : yoyongdt

LANGUAGE

Thai : Native
English : Intermediate

EDUCATION

2020 - 2024 **Industrial Design**
GPA : 3.57
School of Architecture, Art And Design
KMITL

2021 - 2024 **IoT. System Engineering and Smart System**
GPA : 3.60
(Minor Program)
School of Engineering
KMITL

2014 - 2019 **Sci-Math**
Traim Udom Suksa Pattanakarn

WORK EXPERIENCE

Aug 2024 - Present **Robotics Designer**
General Magic (Thailand) Co., LTD
- Focused on industrial design and DFM for compact companion robots.
- Making rapid prototyping and soft-goods pattern from concept.
- Cross-engineering collaboration closely with mechanical & electronics engineers.

2023 - 2024 **UX/UI Designer (Internship & Part-Time)**
G-Able Public Co. LTD
- Designed core UX/UI for the university online learning platform.
- Maintained Figma design systems and designed website for university enrollment.

STARTUP PROJECT

2026 – Present **Lead Product Designer**
TED Youth Startup grant funding for POC
- Core designer responsible for product architecture, system visuals, and pitch assets that secured the TED Fund grant.

HARD SKILLS

Industrial Design
UX/UI Design
Service Design
3D CAD
Design for Manufacturing
Technical Drawing
Prototyping

OTHER SKILLS

Prototyping
Video Editing
Python
Microcontroller
Arduino

SOFTWARE SKILLS

Autodesk Fusion 360
SolidWorks
Keyshot
Blender
Figma
Adobe Illustration
Adobe Photoshop
Adobe Premier Pro
Adobe XD
Framer

WORKS

PRODUCT

- Mythicat
- Nekomi
- Redario
- Crealday

PRODUCT-SERVICE SYSTEM

- Klintic
- Vapordock

UX/UI

- Fanject
- NIDA for Life
- Doi Kham
- Drawing Master

Product

Mythicat Nekomi Redario Crealday

under an NDA

Mythicat

Mythicat is a **compact AI companion robot** designed to bring character-inspired design into a functional interactive product. The project involved developing its physical form and integrating mechanical and electronic systems to enable voice interaction and **expressive movements across 4 degrees of freedom**; the head, dual wings, and tail. The product was refined through an iterative prototyping process.



Background

The project focused on developing a compact AI companion robot with **expressive character features and interactive movement capabilities**. An initial R&D phase was required to **establish the product's visual direction** and proportions, while exploring how to make the product as **small as practically possible** without compromising essential mechanical and electronic requirements.

Focused on

Industrial Design & Engineering Integration

Highlight

- Developed the robot's silhouette proportions.
- Compact engineering Integration.
- Cross-functional collaboration with mechanical and electrical engineers.
- Functional prototyping with fabric.

DESIGN PROCESS



01 - Form Exploration

Created and developed the robot's original silhouette and proportions from physical models to refine its appearance, dimensions, and movement range.





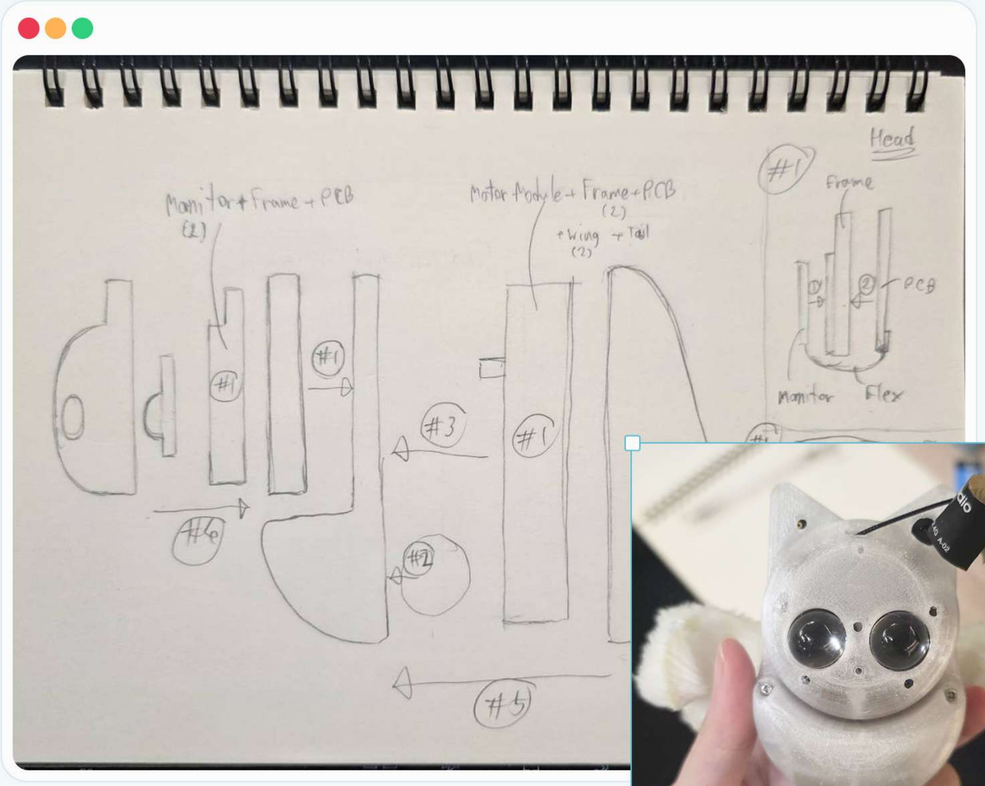


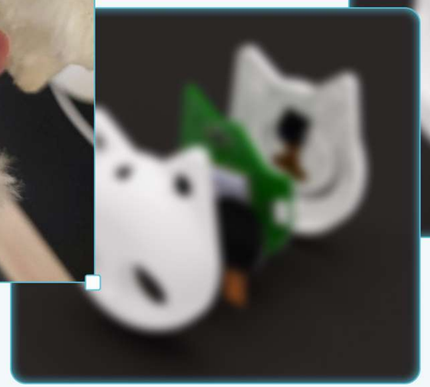


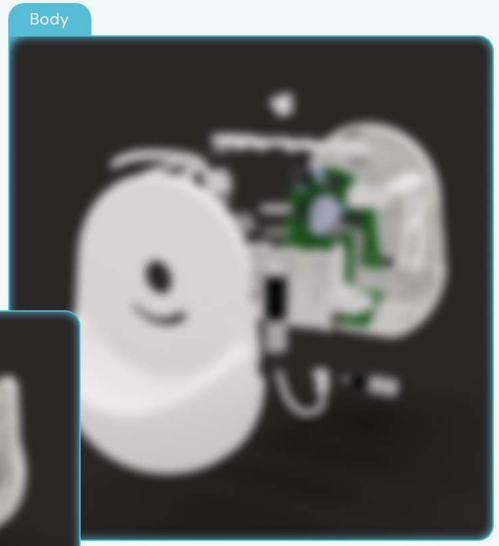


02 - Space & Assembly Optimization

Developed 3D CAD of all external housing components, **considering Design for Manufacturing** (DFM) requirements for injection molding. Worked closely with mechanical and electrical engineers to **optimize internal component placement, housing structure, and some assembly sequence** within the compact product form while minimizing changes to established mechanisms.



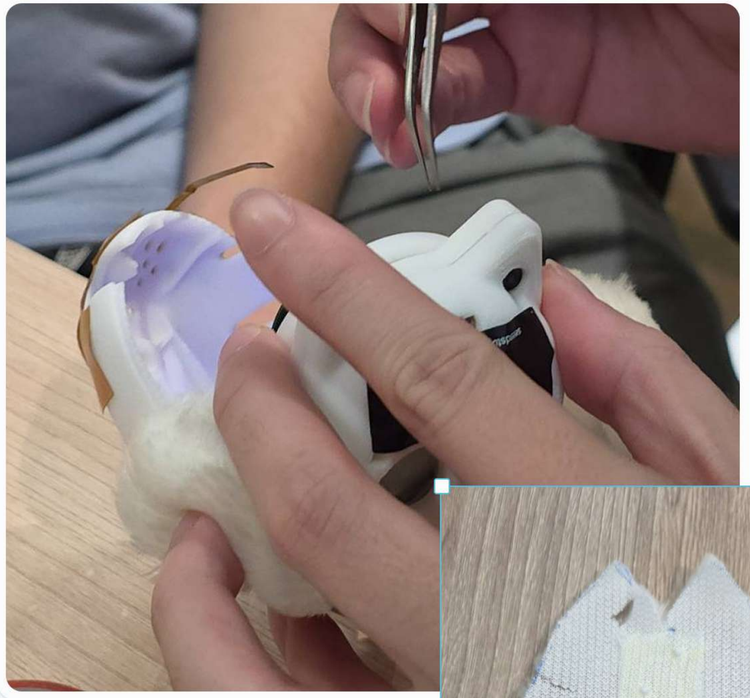


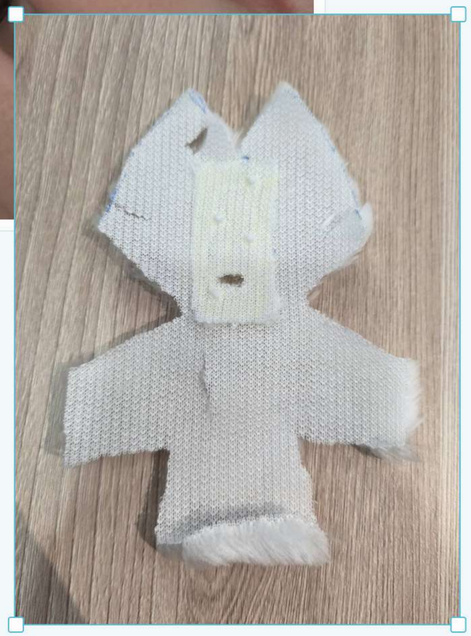


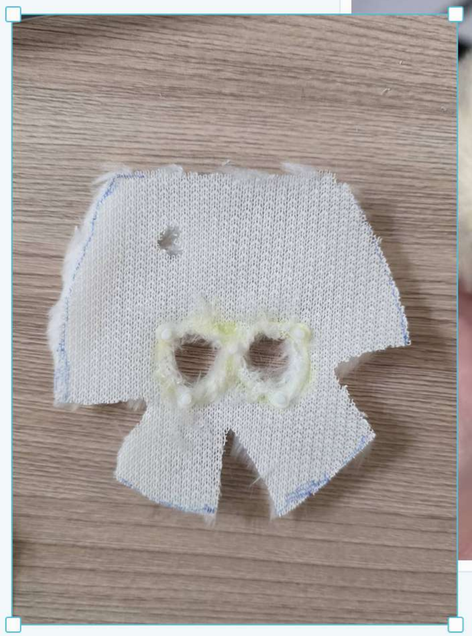


03 - Prototyping with Fabric

Developed and refined the fabric covering through physical prototyping from 3d printing, then **tested the integrated product** to evaluate mechanical movements, camera visibility, and touch sensor interaction through the fabric. Further adjustments were made until all intended mechanical and electronic functions operated as expected.



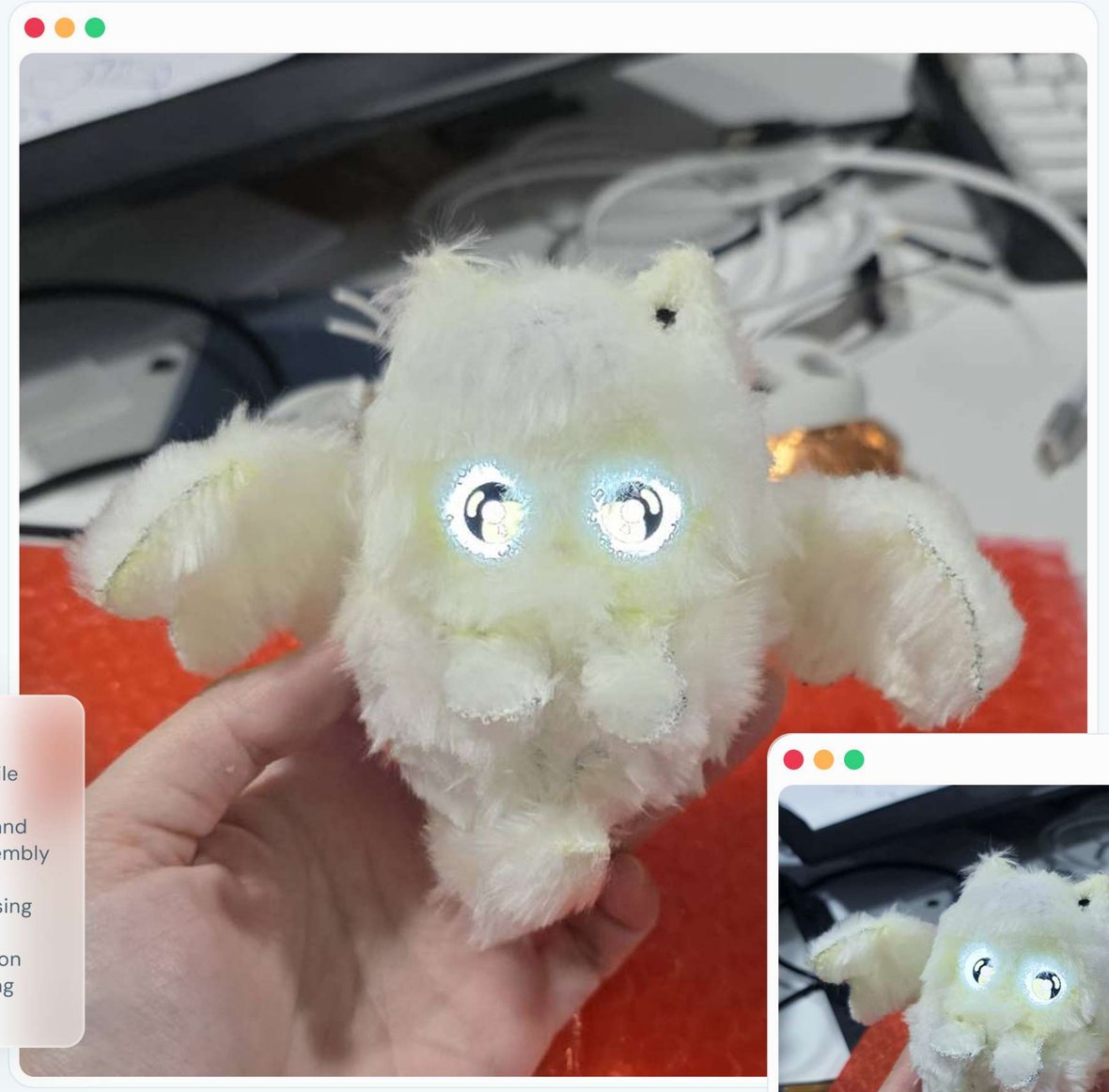


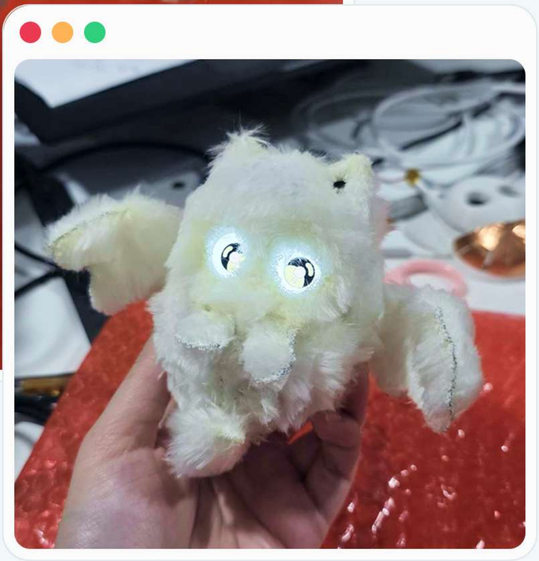




OUTCOME

The final prototype was fully functional, with all intended mechanical movements and electronic interactions operating as designed, while **achieving a more compact form without compromising** essential mechanisms or functionality.





Achievements

- **Compact Form:** Reduced product height and thickness while maintaining a similar width.
- **Engineering Collaboration:** Coordinated with mechanical and electrical engineers to resolve product integration and assembly constraints.
- **DFM Consideration:** Developed 3D models of external housing components with injection molding requirements in mind.
- **Soft Goods Integration:** Developed a fabric covering solution that accommodated mechanical movement while concealing internal components.

under an NDA



Nekomi

Nekomi is a **compact AI wearable product** that **combines character-inspired design with integrated electronic functionality**. The project covered the product's physical development, from 3D form design and internal component integration to housing development and functional prototyping.

Background

The project **began with a front-view 2D character illustration**, with no existing 3D model or defined product structure. The challenge was to **translate the character into a wearable form while preserving its visual identity**, accommodating essential electronic components within a limited internal space, and **considering manufacturing requirements**.

Focused on

Industrial Design & Engineering Integration

Highlight

- 2D-to-3D character development.
- Compact engineering integration.
- Cross-functional collaboration with electrical engineers.
- Independently handled end-to-end prototyping development, and assembly.

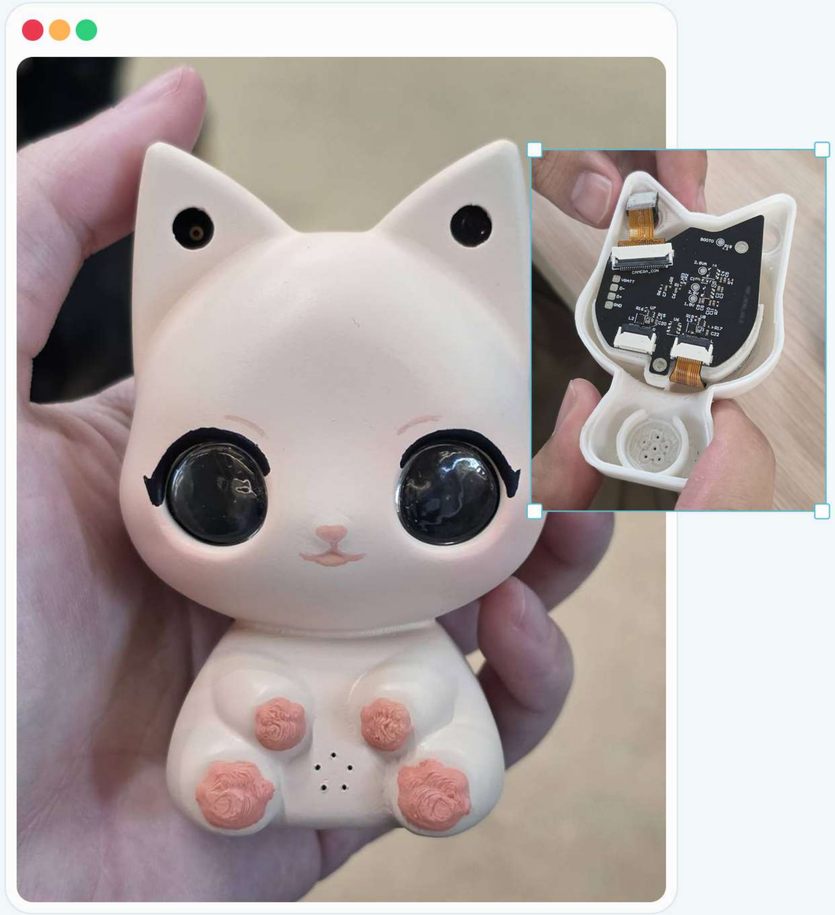
DESIGN PROCESS





01 - Character Adaptation

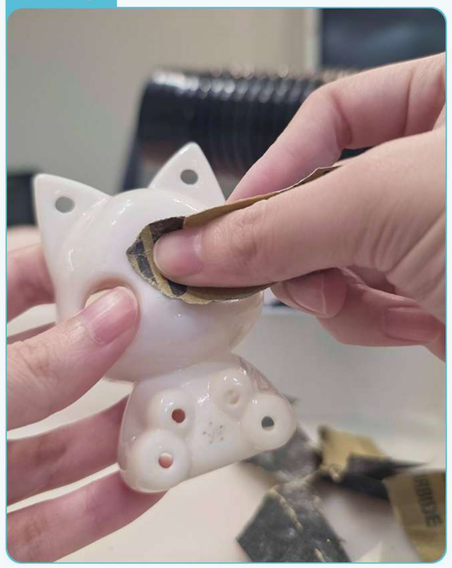
Translated the client-provided front-view character reference into a complete 3D product, independently developing its form and proportions. Refined the design through client feedback, **exploring variations in color** and minor character details while maintaining its original visual identity.



02 - Product Development & Prototyping

Developed external housing components with injection molding requirements in mind, while managing internal component packaging and assembly coordination. **Produced FDM and SLA prototypes, independently handling surface finishing, painting, fabric development**, and final assembly. Refined the prototype through physical testing to ensure fit and functionality.

Finishing



Painting



Fur Skin



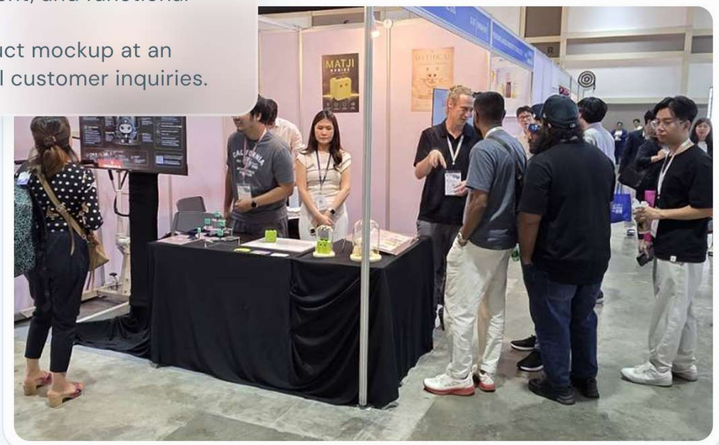
OUTCOME

The project transformed a 2D character illustration into a physical AI wearable product, **bringing the character to life through a compact product** form and hands-on material development. **The resulting prototype was showcased at an exhibition**, generating visitor interest and attracting inquiries from potential customers.

Achievements

- **2D-to-3D Character Development:** Translated a limited front-view character reference into a complete 3D product.
- **DFM-Oriented Design:** Developed external housing components with injection molding requirements in mind.
- **End-to-End Prototyping:** Independently handled 3D printing, surface finishing, painting, fabric development, and functional assembly.
- **Exhibition Showcase:** Presented the product mockup at an exhibition, generating interest and potential customer inquiries.





Redario

Redario is a **portable radio redesign** for camping enthusiasts aged 25–32, **inspired by childhood memories of secret bases** and radar detection devices. The concept combines a nostalgic, adventure-inspired appearance **with practical portability for outdoor use**.

Focused on

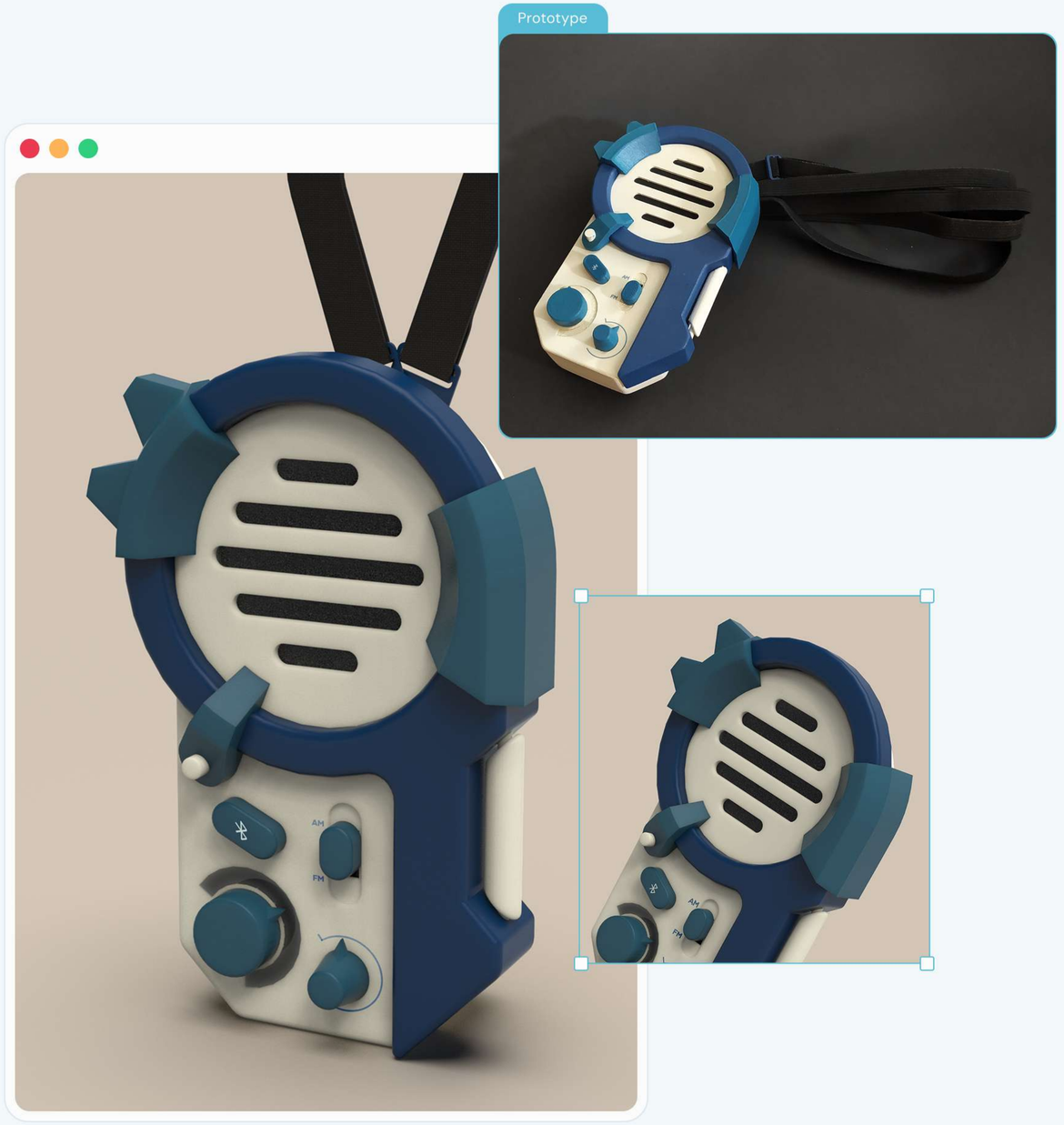
Academic Industrial Design

Highlight

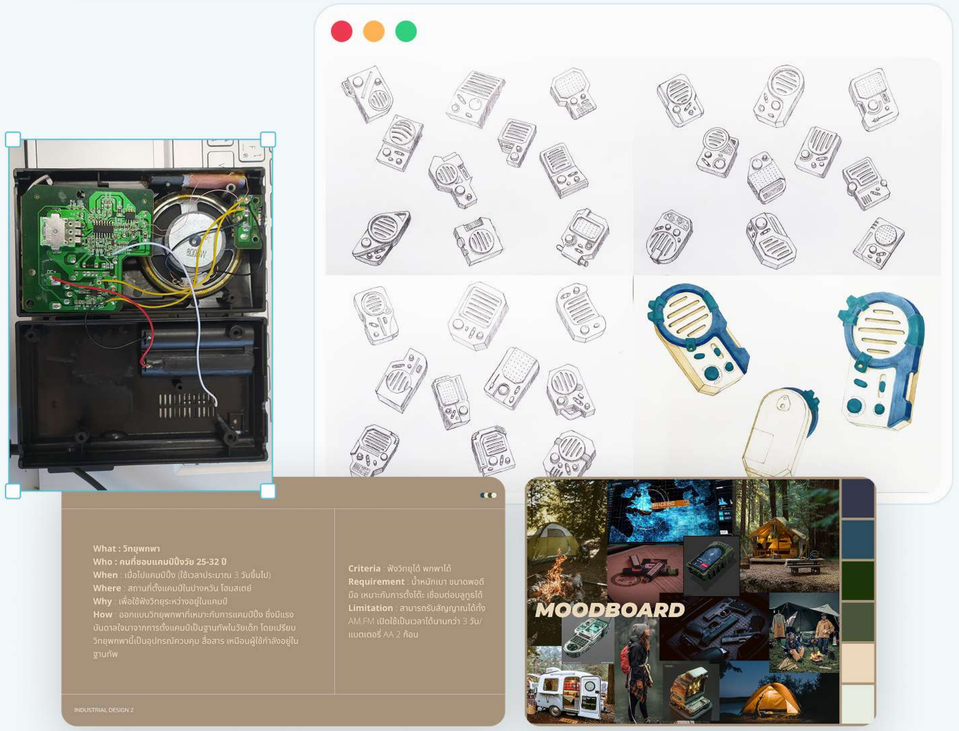
- Product teardown & research.
- Concept development.
- CAD & technical drawing.

Outcome

Completed the product redesign through a **full industrial design process**, from product teardown and concept research to 3D CAD development and technical documentation. The project demonstrated the ability to analyze an existing product, **translate design concepts into detailed product forms, and develop a physical appearance prototype** supported by working drawings.

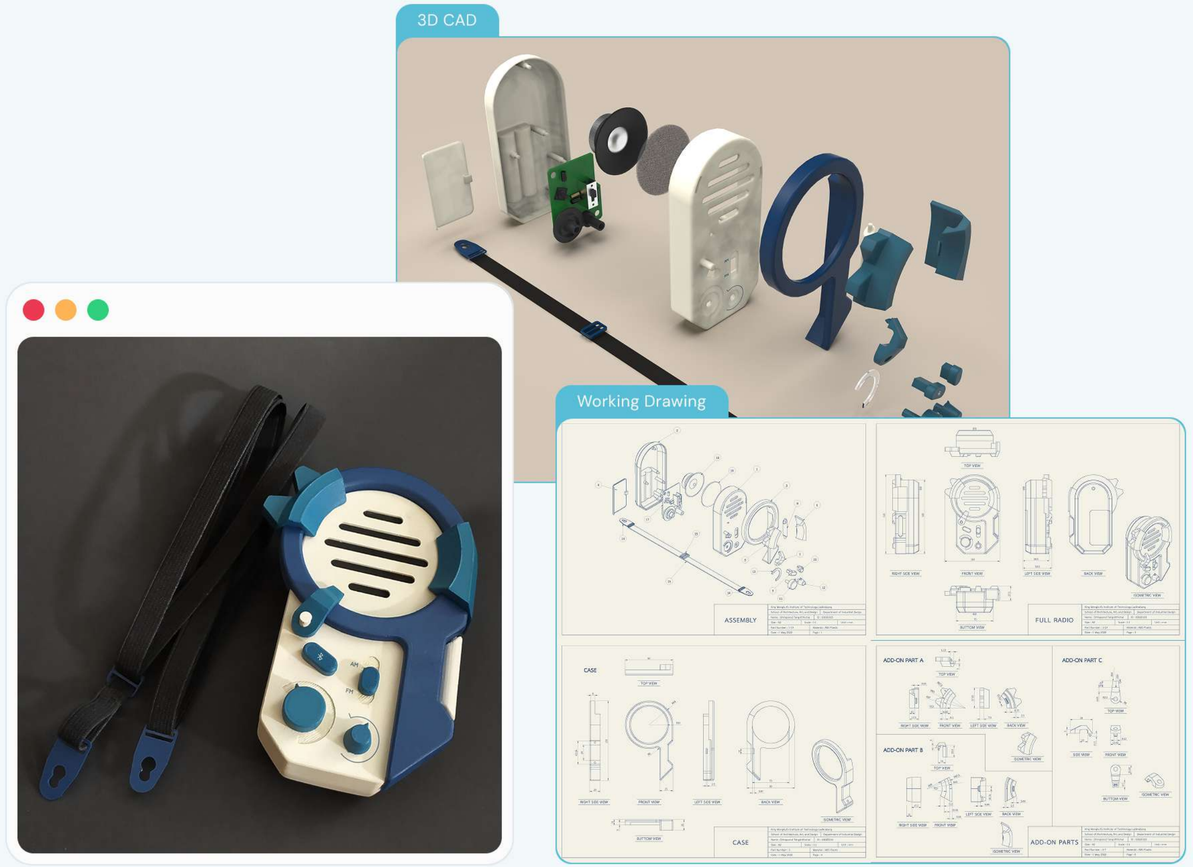


DESIGN PROCESS



01 - Concept & Sketch Design

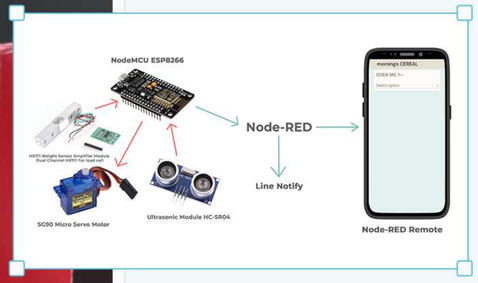
Disassembled an existing portable radio to study its internal components and spatial requirements. **Defined the target user and product direction** using the 5W1H framework, then developed mood boards and sketches inspired by childhood secret-base concepts.

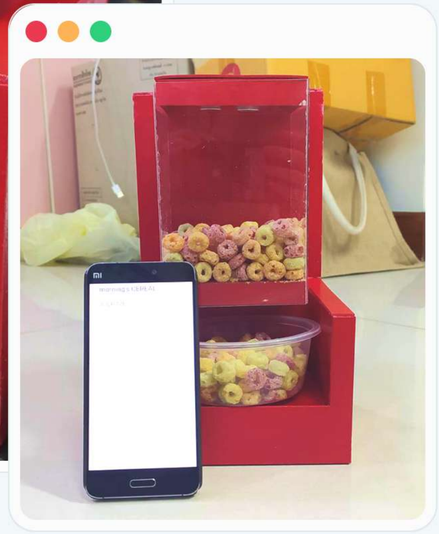


02 - CAD Development & Prototyping

Selected final **sketch design into a 3D CAD model**, integrating the original radio components into the redesigned housing. **Developed a physical appearance prototype** to evaluate the form and proportions, and **prepared working drawings** to communicate the design details.







Crealday

Crealday is an **automated cereal dispenser designed to simplify breakfast preparation for busy mornings**. Powered by an **ESP8266 microcontroller**, the device integrates sensor-based dispensing, **remote control via Node-RED, and LINE Notify alerts** to monitor cereal supply and improve everyday convenience.

Focused on

Academic IoT Development

Highlight

- Programmed remote control functionality using Python and Node-RED and implemented LINE Notify.
- Integrated ESP8266, HC-SR04 ultrasonic sensor, HX711 weight sensor, and SG90 servo motor.

Outcome

Developed the product design alongside its IoT control system, programming sensor inputs and automated dispensing functions **using Python**. Integrated remote operation through Node-RED and LINE Notify alerts to create a **working prototype, prioritizing functional system** implementation over surface refinement.

Product Service System

Klintic Vapordock

Klintic

Klintic is an integrated **product-service system designed for independent rural medical clinics**. The **physical products** support more organized medical record handling and medication management, while the **digital application and LINE OA** help streamline information management and daily clinic workflows. Together, they aim to reduce staff workload and **make clinic operations more efficient**, especially in clinics with limited personnel and high patient volumes.

Background

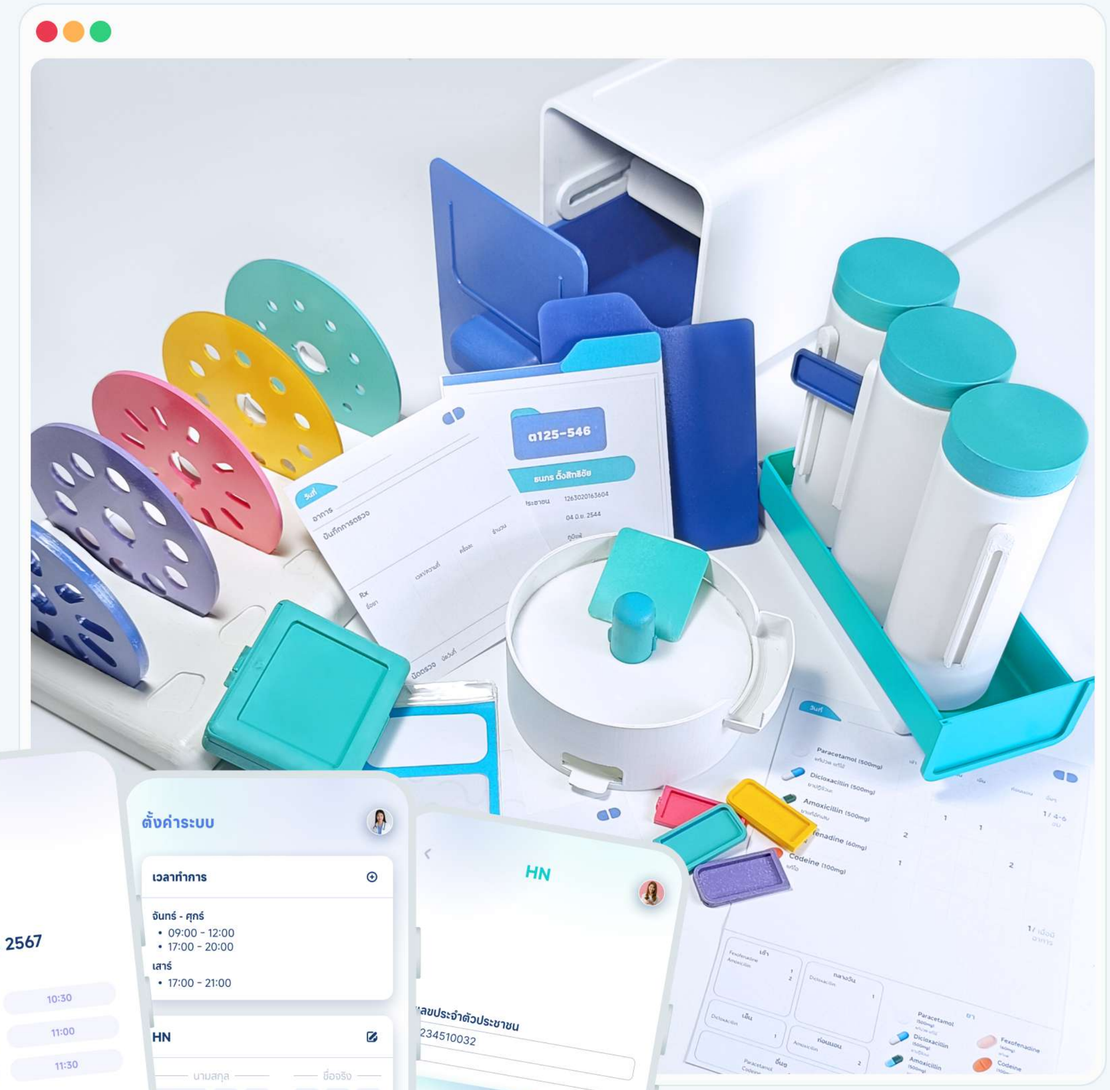
Independent clinics in provincial areas often face operational challenges due to **limited staff, high patient volumes, and clinic hours that depend on the attending doctor's availability**. Patients may arrive only to find the clinic closed, while existing **staff must manage heavy workloads**. These challenges highlight the need for a more organized approach to clinic management.

Focused on

Thesis Product-Service System Design

Highlight

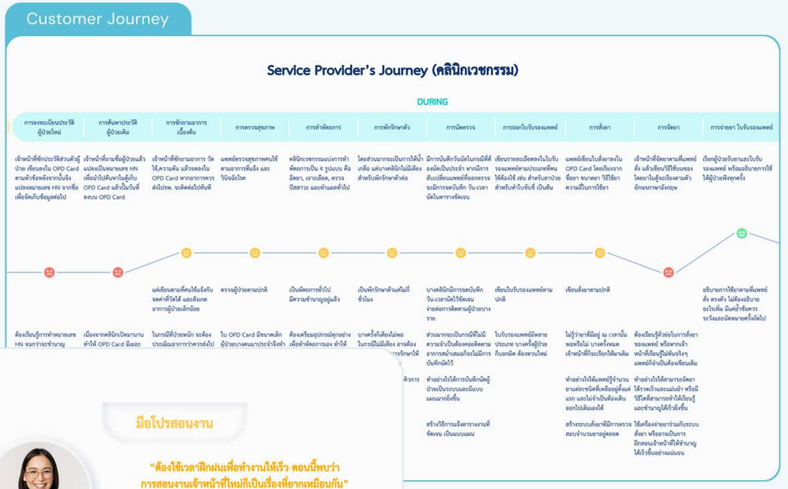
- Conducted on-site interviews and observations.
- Developed service experience with digital platforms.
- Designed medical record and medication management products.



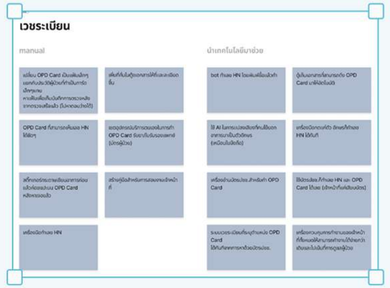
DESIGN PROCESS

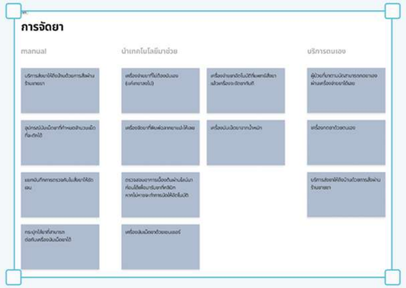
01 - User Research & Analysis

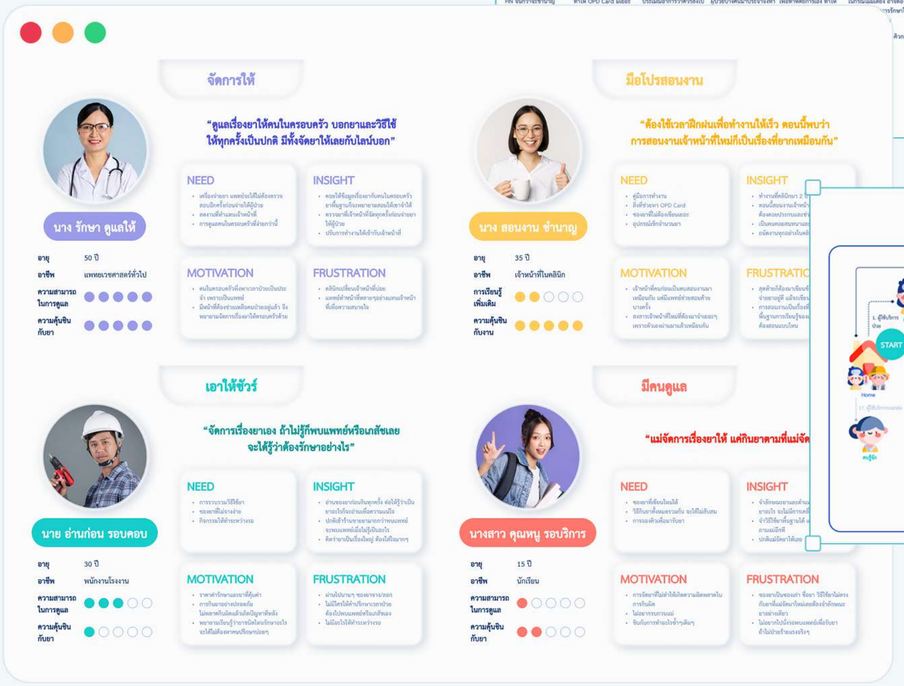
Conducted on-site **observations and interviews** with doctors, staff, and patients to understand clinic services, patient behaviors, and daily workflows. Identified pain points and opportunities for **improvement through affinity mapping and SWOT analysis**, then synthesized the findings into **personas, customer journeys, and a system map** to guide the design direction.

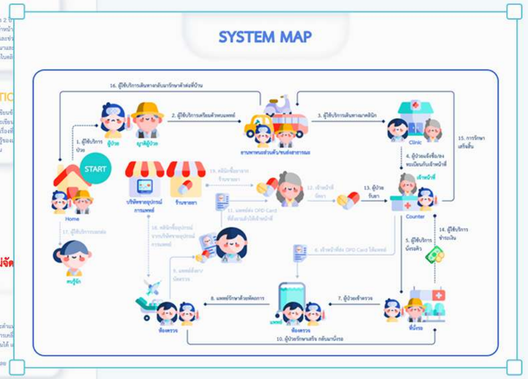








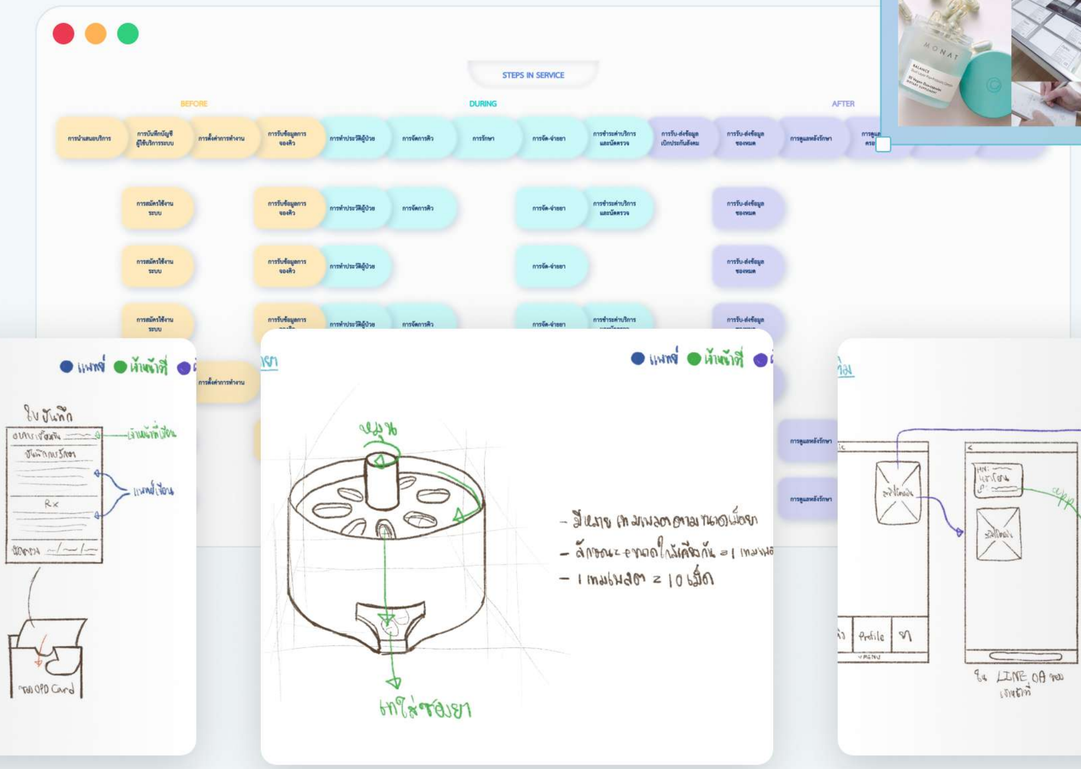


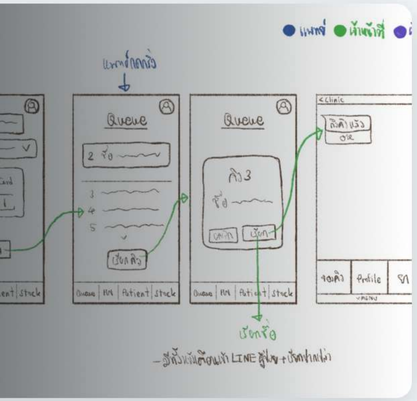


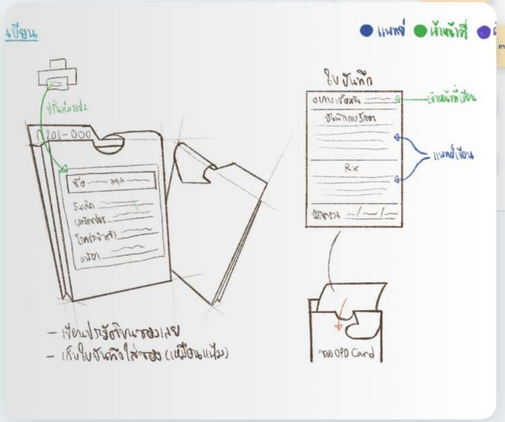
02 - Product & Service Development

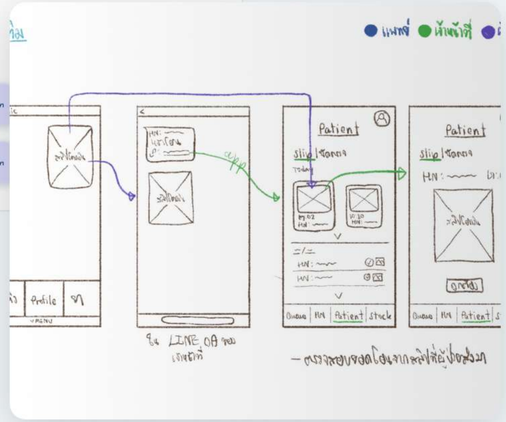
Designed initial design concepts through **sketches of physical products and application features**, exploring solutions based on the identified user needs and operational challenges. Integrated the proposed hardware and software solutions into a **step-by-step service flow** to establish a cohesive clinic management experience.

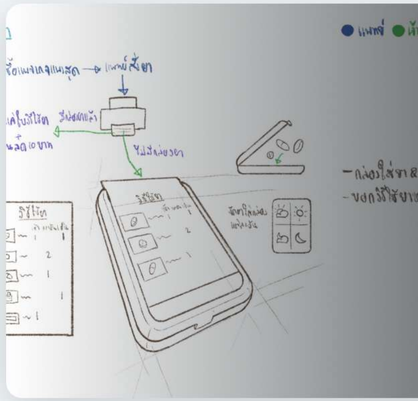








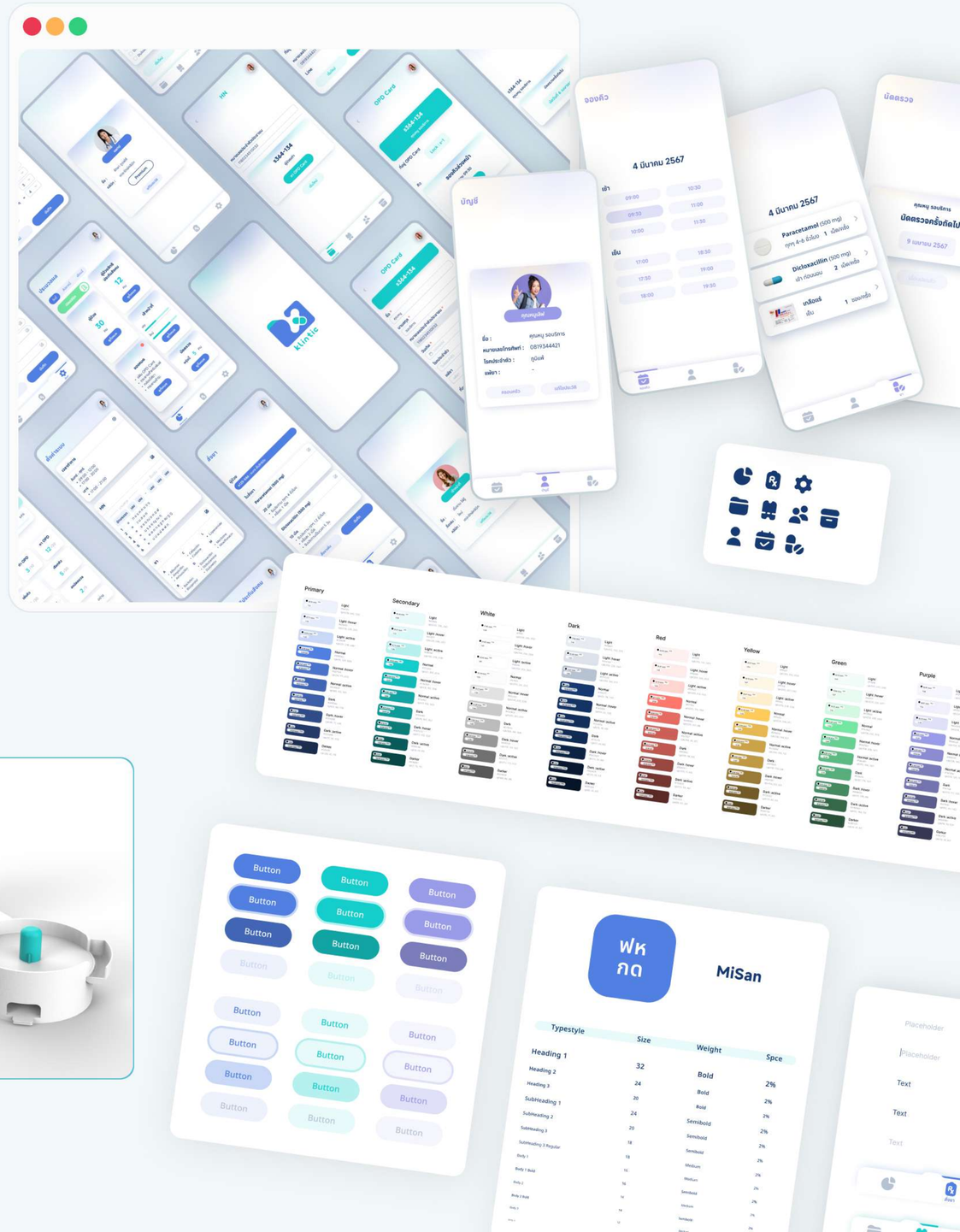




03 - Prototyping & System Integration

Developed the **digital system from flowcharts and wireframes include design system until final UI**. On the hardware side, **created 3D CAD models and independently produced physical prototypes** through 3D printing, including surface finishing and painting.





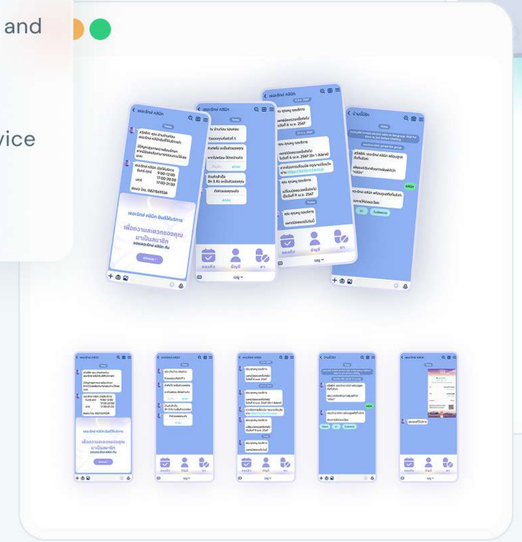
OUTCOME

The thesis established an **integrated clinic management framework connecting physical products, digital interfaces, and service workflows**. Through functional prototyping, it demonstrated how these elements could work together to address operational challenges in independent clinics, **providing a foundation for future implementation** and further development of clinic management systems.

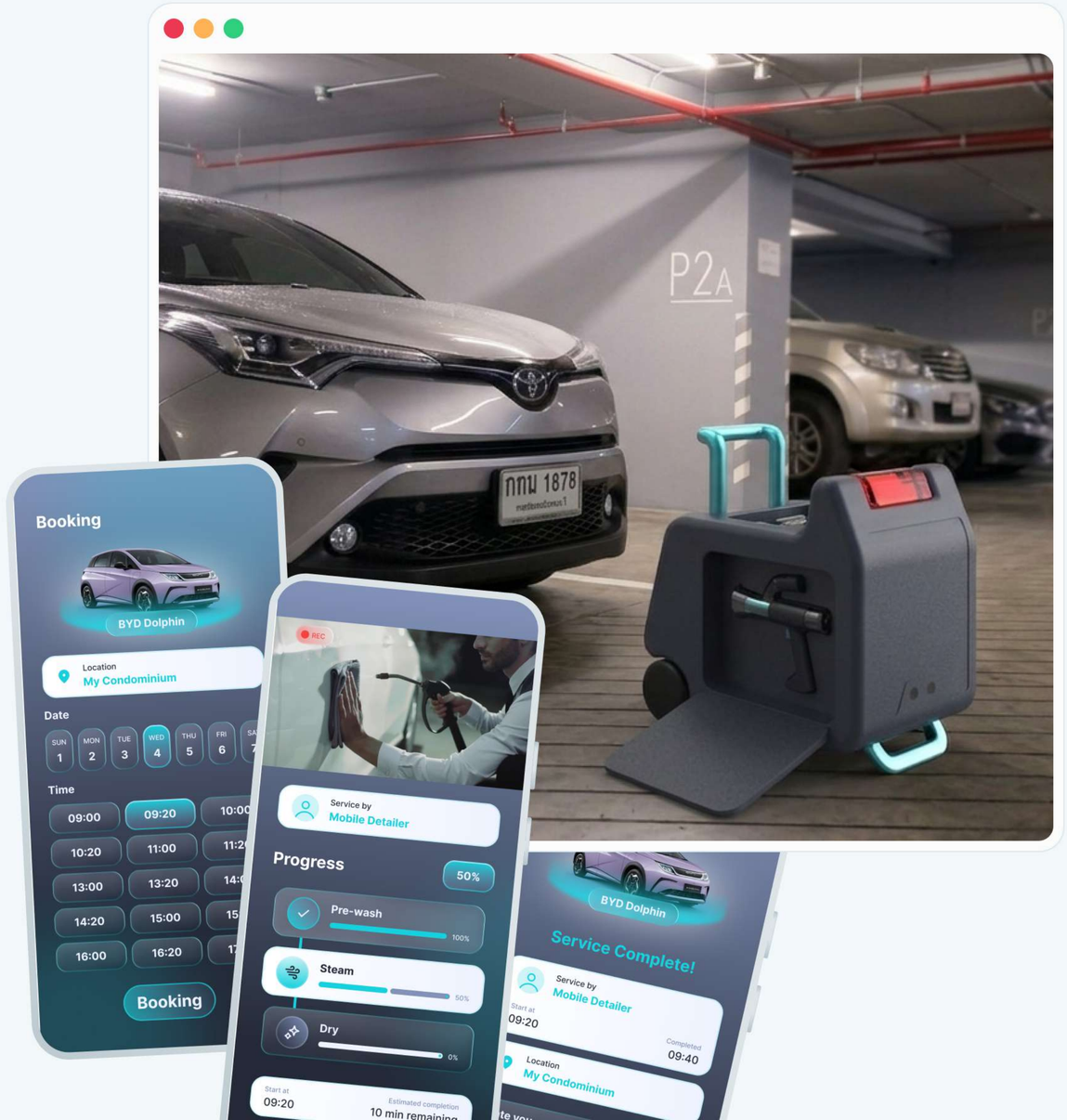
Achievements

- **User Research:** Conducted field research with doctors, staff, and patients.
- **Service Design:** Mapped clinic workflows and designed an integrated service experience.
- **System Integration:** Connected hardware, software, and service workflows into a unified framework.
- **Project Management:** Independently managed the entire multidisciplinary thesis project within one semester.





under an NDA



Vapordock

Vapordock is a **condo-focused mobile car care service** concept developed as **part of a TED Fund funding**. Combining a **digital booking platform**, a **compact smart dock**, and **cordless steam cleaner**, the project aims to make professional car care more accessible and convenient for condo residents.

Background

Recognizing a business opportunity in the underserved condo car care market, we explored a mobile detailing service tailored to residential environments. However, **limited parking space and condominium restrictions can make on-site car washing challenging**. This led to the development of a product-service concept, which was **proposed to TED Fund for Proof of Concept (POC) funding**.

Focused on

Product Development & Funding Proposal with Pitching

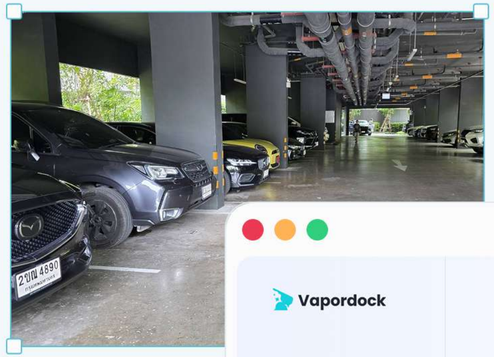
Highlight

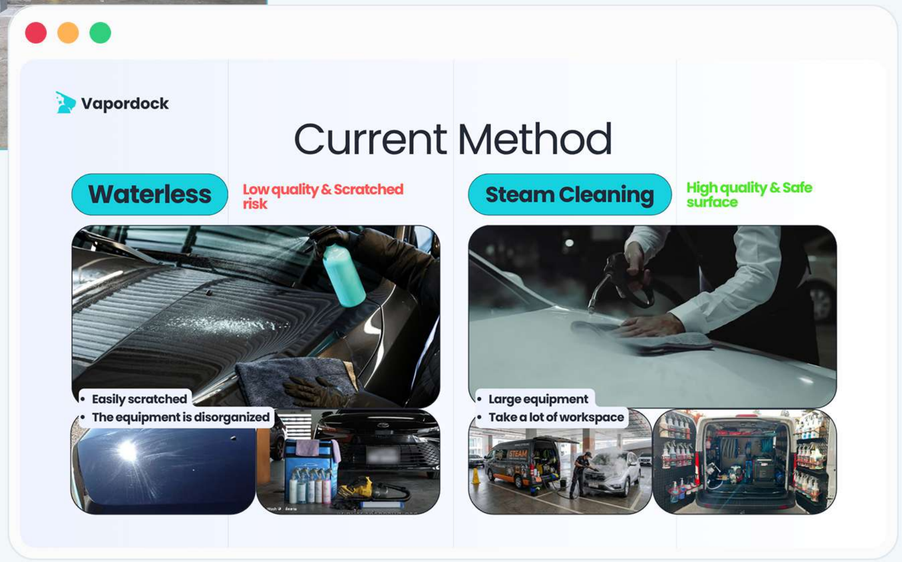
- Prepared the TED Fund proposal, pitch deck, and pitching.
- Designed the cordless steam cleaner and smart dock concepts.
- Designed the digital booking platform concept.
- Contributed to service workflow and service model discussions.

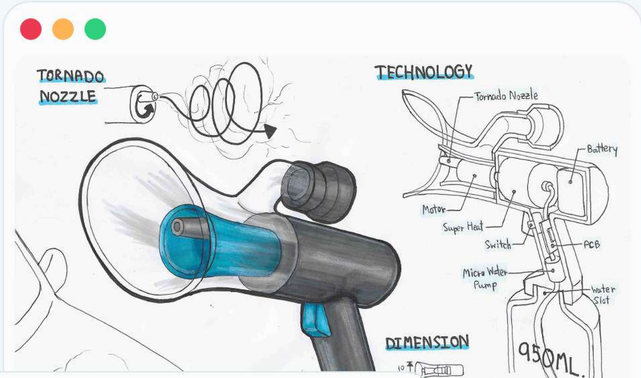
DESIGN PROCESS

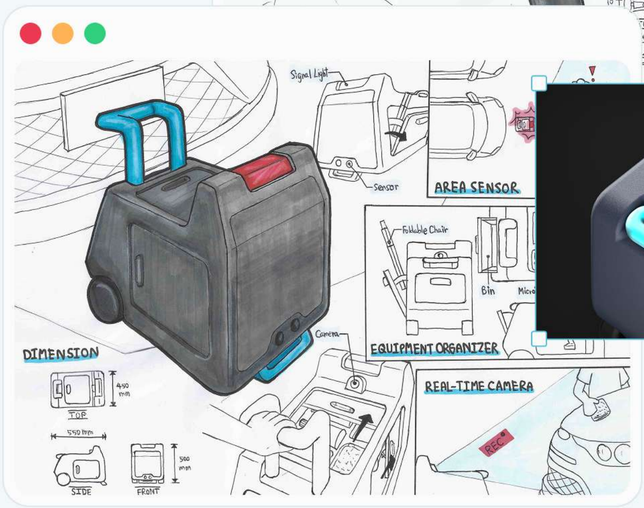
01 - Research & Problem Identification

Conducted **on-site research in condominium parking areas** to investigate the challenges and constraints of providing car-washing services in residential environments. Observed parking conditions and **identified operational limitations to inform the product and service design direction**.









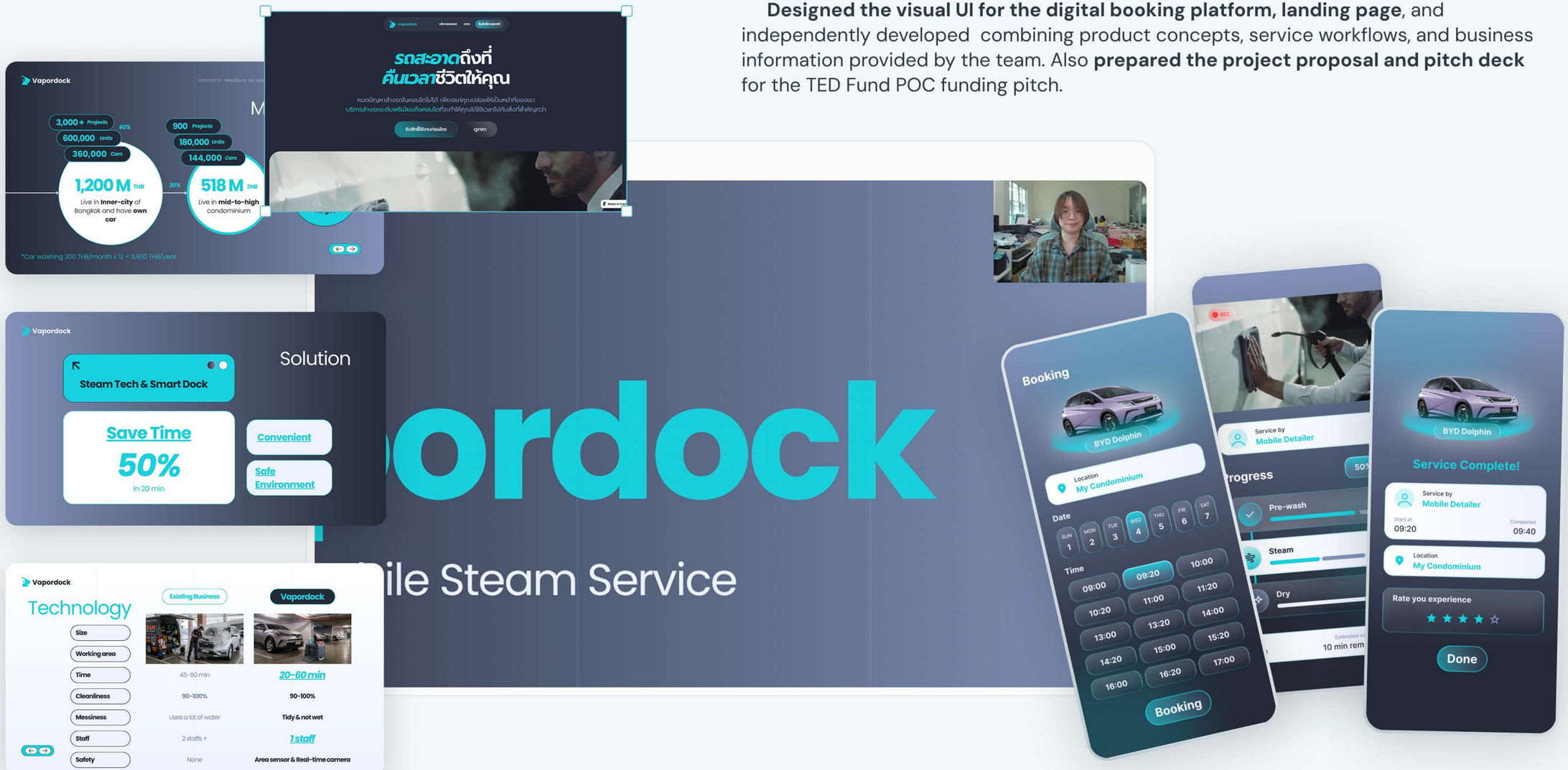


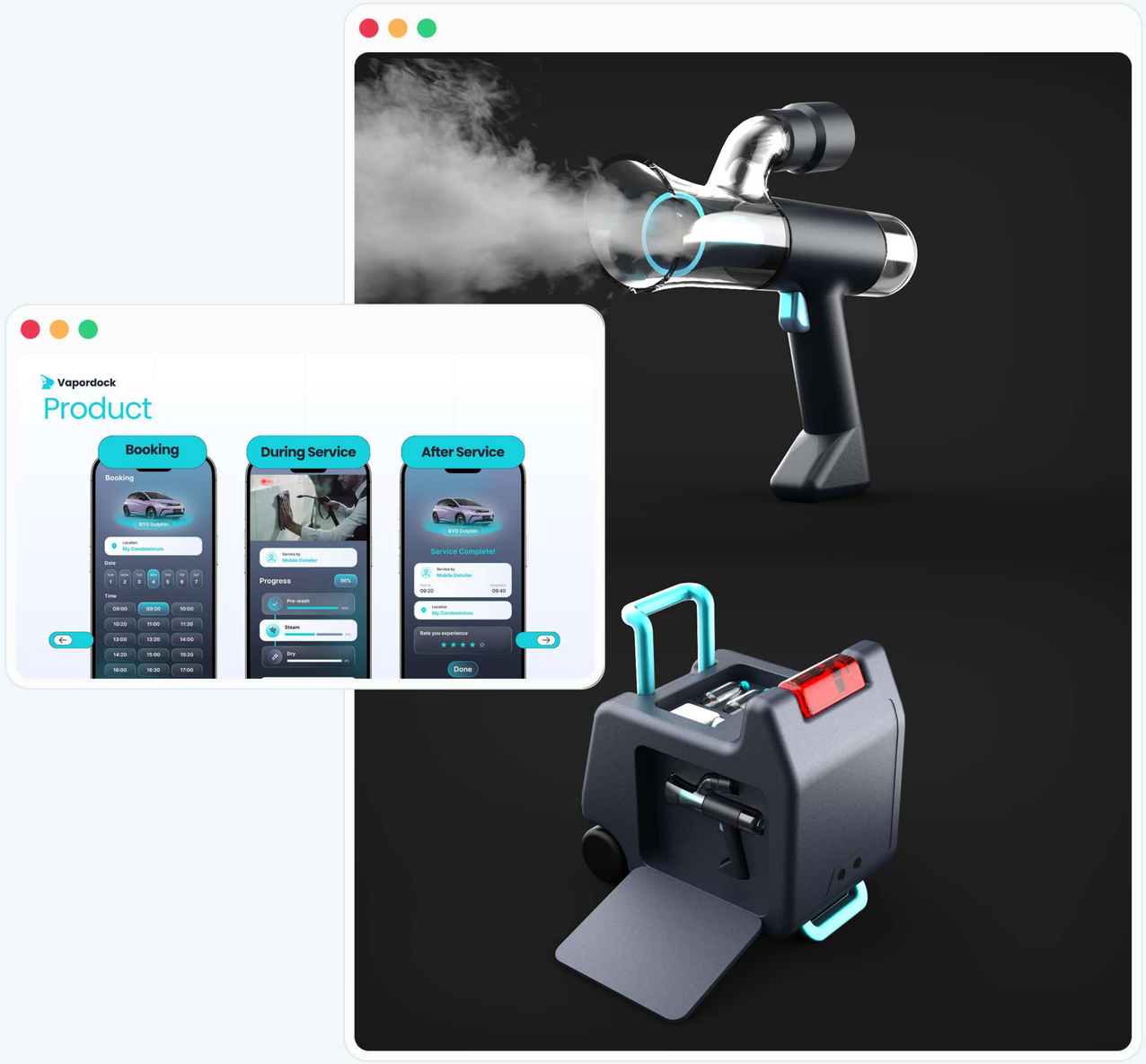
02 - Sketch Design & 3D Visual

Translated the team's functional requirements and equipment specifications into product concepts, **designing the cordless steam cleaner and a smart dock** to organize and store the required equipment. Explored the designs through **sketch designs and 3D renders to visualize the proposed products for project pitching**.

03 - UI Visual & Project Pitching

Designed the visual UI for the digital booking platform, landing page, and independently developed combining product concepts, service workflows, and business information provided by the team. Also **prepared the project proposal and pitch deck** for the TED Fund POC funding pitch.





OUTCOME

Successfully secured TED Fund Proof of Concept (POC) funding through the project proposal and pitch presentation. The project brought together product concepts, a digital booking experience, and a proposed mobile car care service, establishing a foundation for further concept validation and development.

Achievements

- **System Integration:** Connected hardware and software to service workflows.
- **Funding Proposal Development:** Successfully developed a comprehensive proposal and pitch deck
- **Business & Market Understanding:** Gained practical insights into business models and market validation through cross-functional collaboration.

UX/UI

Fanject NIDA for Life Doi Kham Drawing Master

Fanject

Fanject is a **web application designed to make giveaway activities within fan communities** more organized and accessible. It brings giveaway distribution, receiving, and trading into one place, helping fans manage their participation and connect with others in the community.

Background

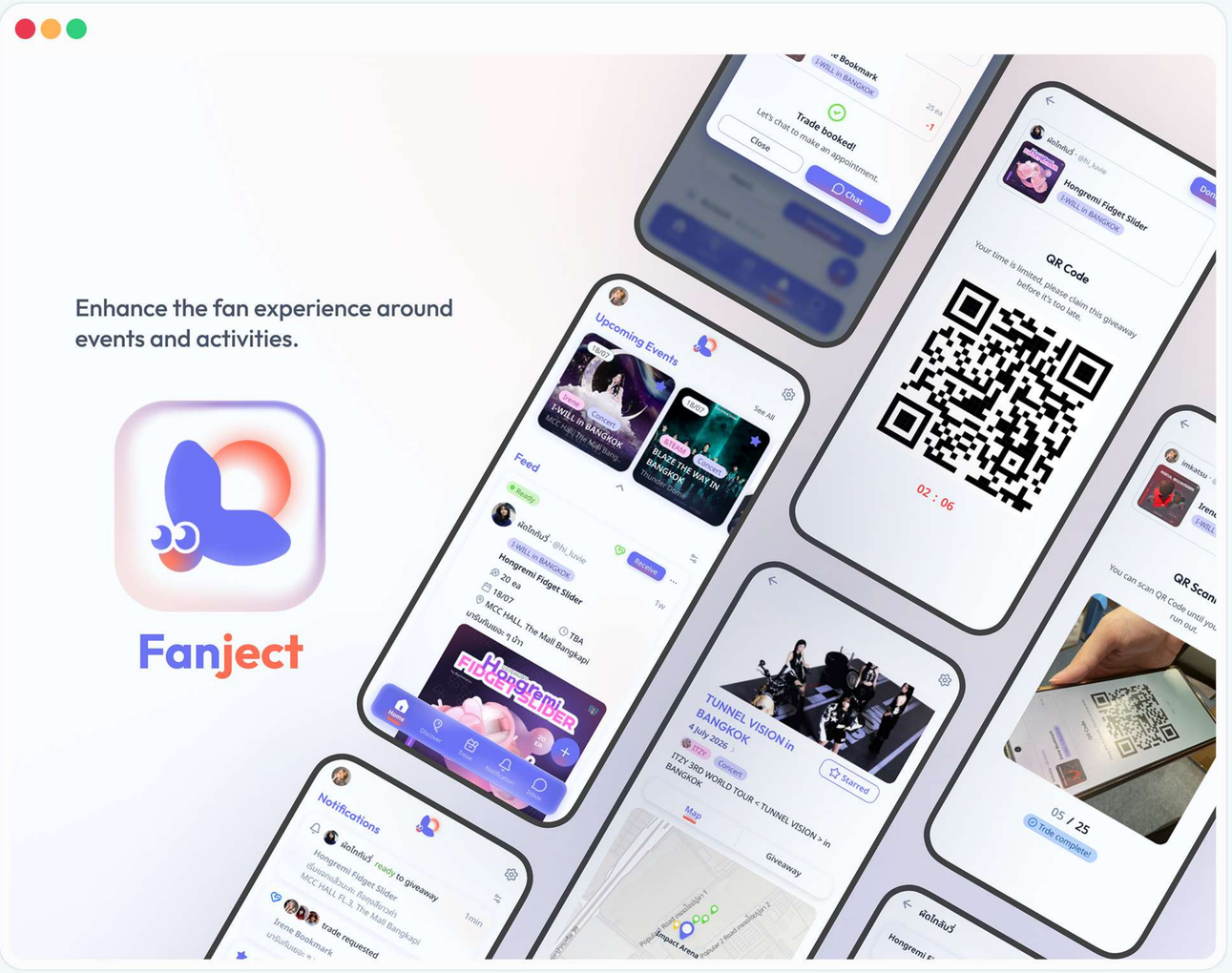
Giveaway activities are a common part of fan communities. However, organizing and participating in these activities can be challenging, as **fans may miss giveaways due to unclear schedules or planned meetups may fall through because of timing conflicts**. Although existing social platforms are commonly used to organize these activities, their features are not specifically designed to support the needs of fan community giveaways.

Focused on

UX/UI Design & Vibe Coding

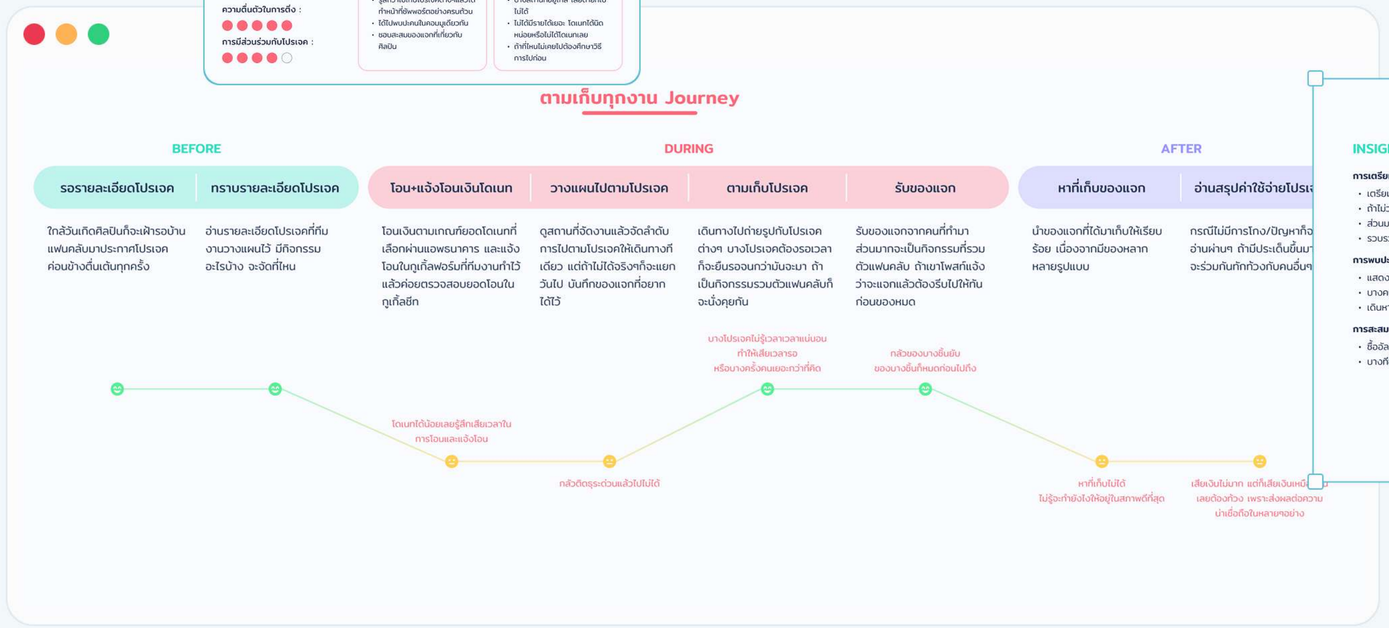
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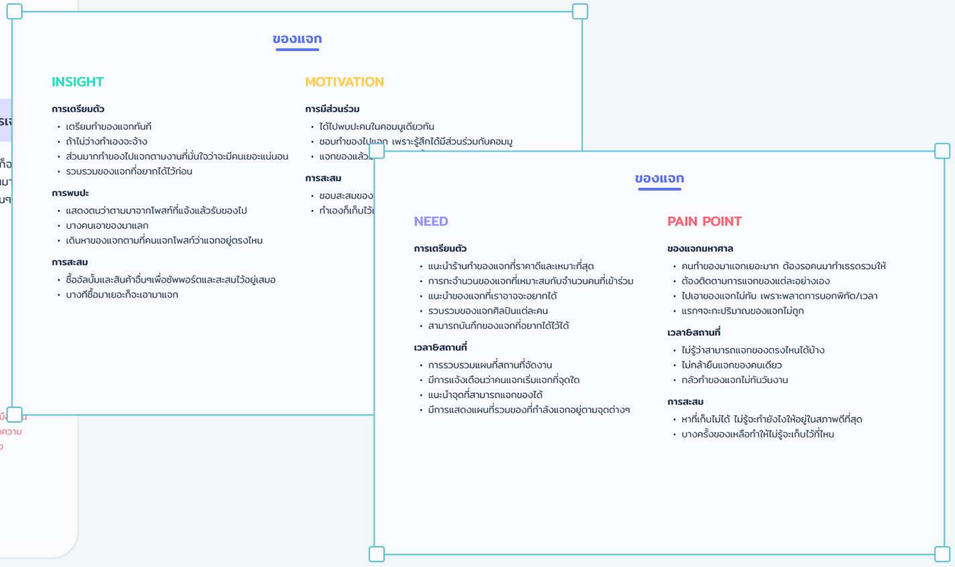
- Conducted Google Forms surveys and drew on firsthand experiences.
- Designed user flows and interfaces for giveaway distribution, receiving, and trading.
- Used vibe coding to implement the product design and develop a live website.



DESIGN PROCESS





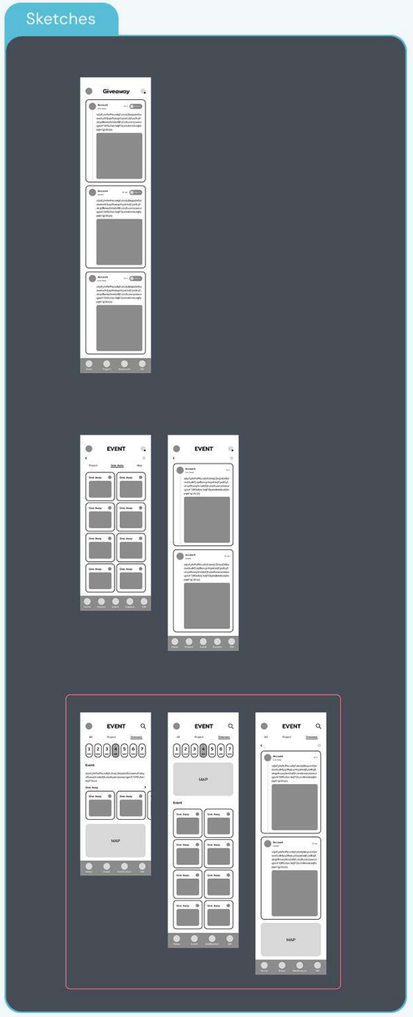


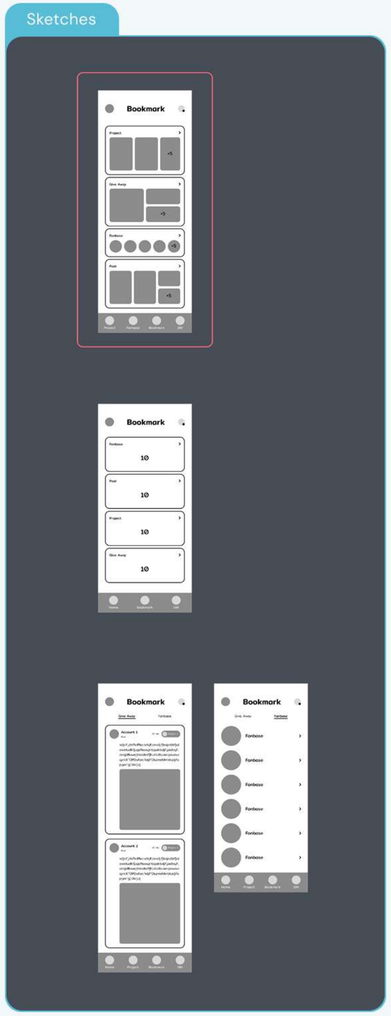
01 - User Research & Analysis

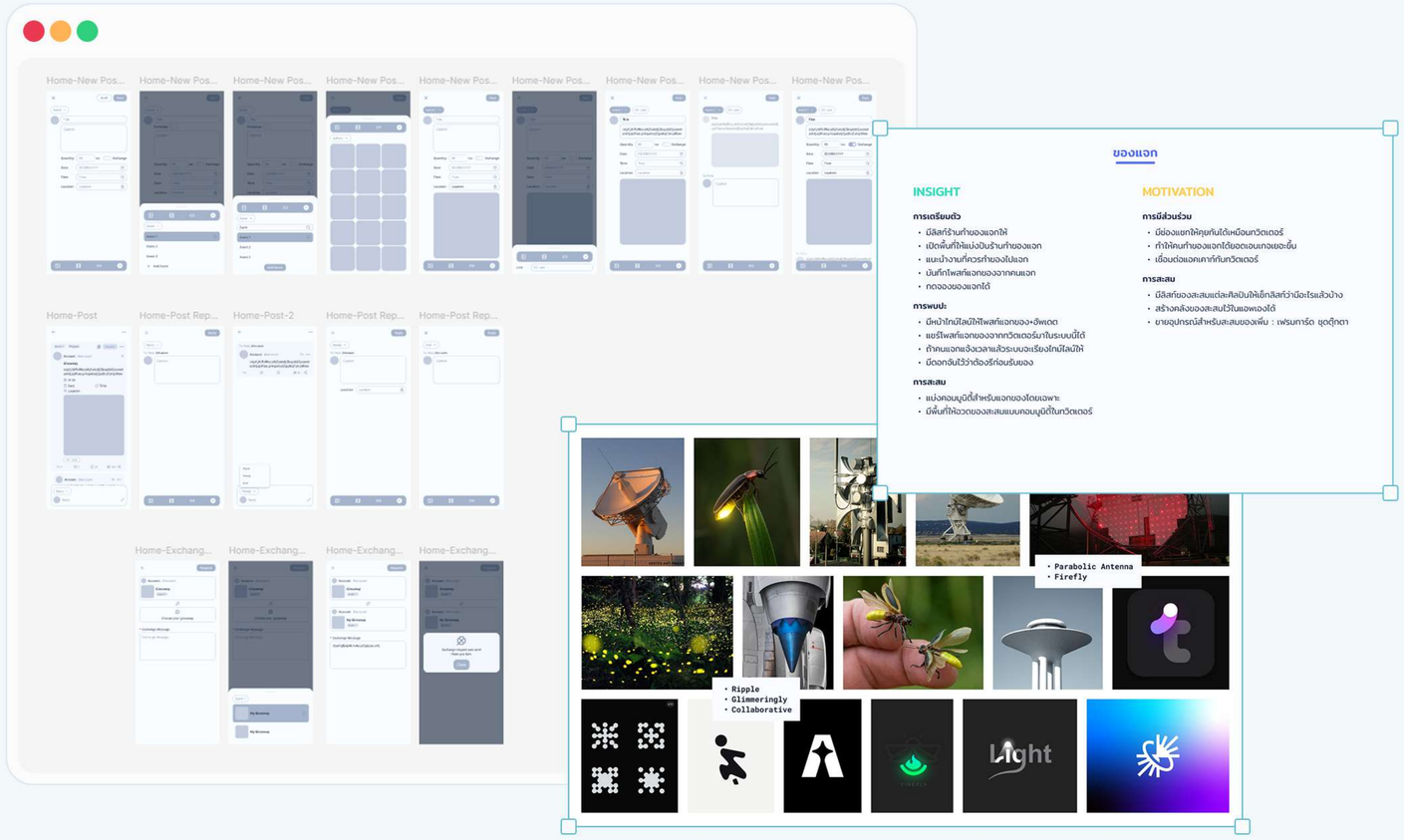
Explored fan community giveaway activities through Google Forms surveys and firsthand experiences. Analyzed the findings through **personas, and customer journey mapping** to identify and grouping user needs, recurring challenges, and opportunities for product development

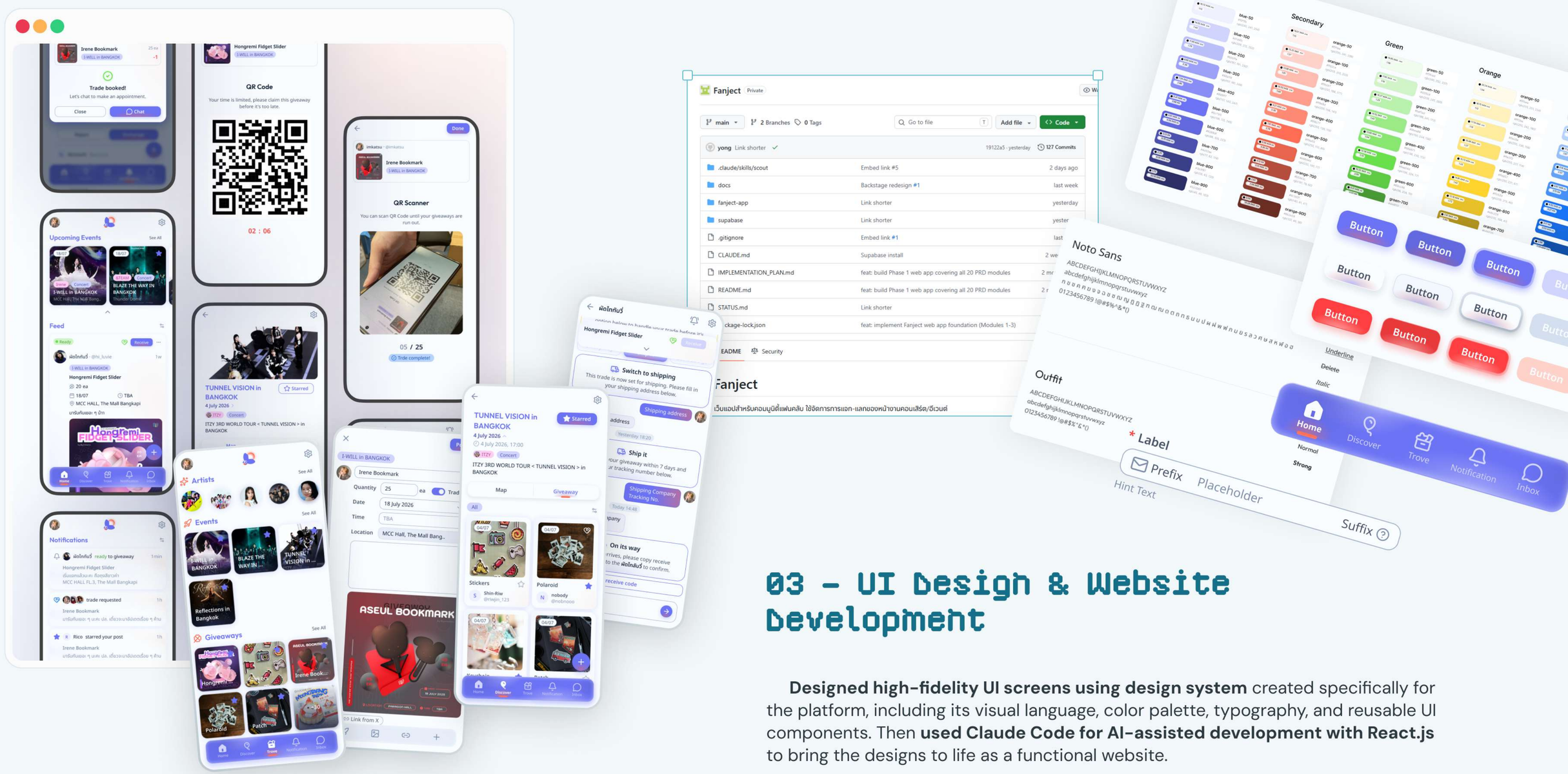
02 - Concept & Sketch Design

Explored ideas and potential features to address the identified user needs, then developed the Fanject concept around a **firefly and satellite dish, symbolizing connection and the sharing of support** within fan communities. Translated the concept into initial **sketches and wireframes** for overall structure.









03 - UI Design & Website Development

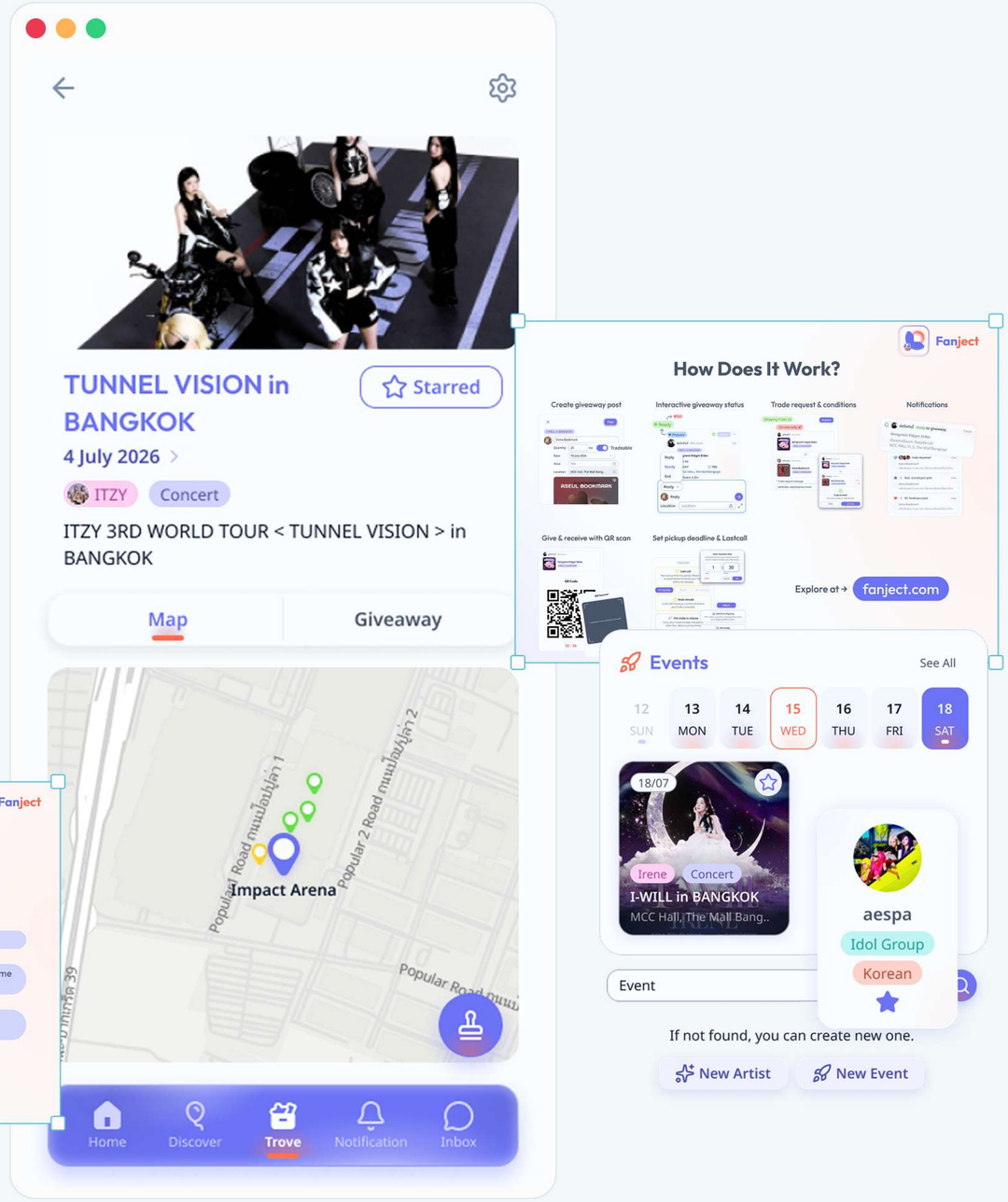
Designed high-fidelity UI screens using design system created specifically for the platform, including its visual language, color palette, typography, and reusable UI components. Then **used Claude Code for AI-assisted development with React.js** to bring the designs to life as a functional website.

OUTCOME

Successfully transformed Fanject from an initial product concept into a live, **usable website, with giveaway distribution**, receiving, and trading as its core features. The first development phase established a functional foundation for addressing everyday giveaway activities within fan communities, with opportunities for broader community support features in future development.

Achievements

- **Product Development:** Expanded end-to-end experience across product strategy, UX/UI design, and website implementation.
- **Design System Development:** Created a custom design system and reusable UI components.
- **AI-Assisted Development:** Gained practical experience in using vibe coding to bring a designed product into implementation.
- **Web-app Launch:** Successfully launched as a live platform.



under an NDA



NIDA for Life

NIDA for Life is a **university-based online learning platform**. The platform **originated from an initial UX/UI design framework** created for university learning platforms, which was later adapted and further developed into a dedicated website for NIDA, tailored to its institutional identity and learning structure.

Background

Initially developed as a reusable UX/UI design framework for university online learning platforms, the concept was intended to be adapted to the needs of different institutions. Later, NIDA sought to adopt this framework for its own Lifelong Learning platform, leading our company to **adapt the existing design to fit NIDA's design system**, institutional identity, and platform requirements.

Focused on

Internship UX/UI Design

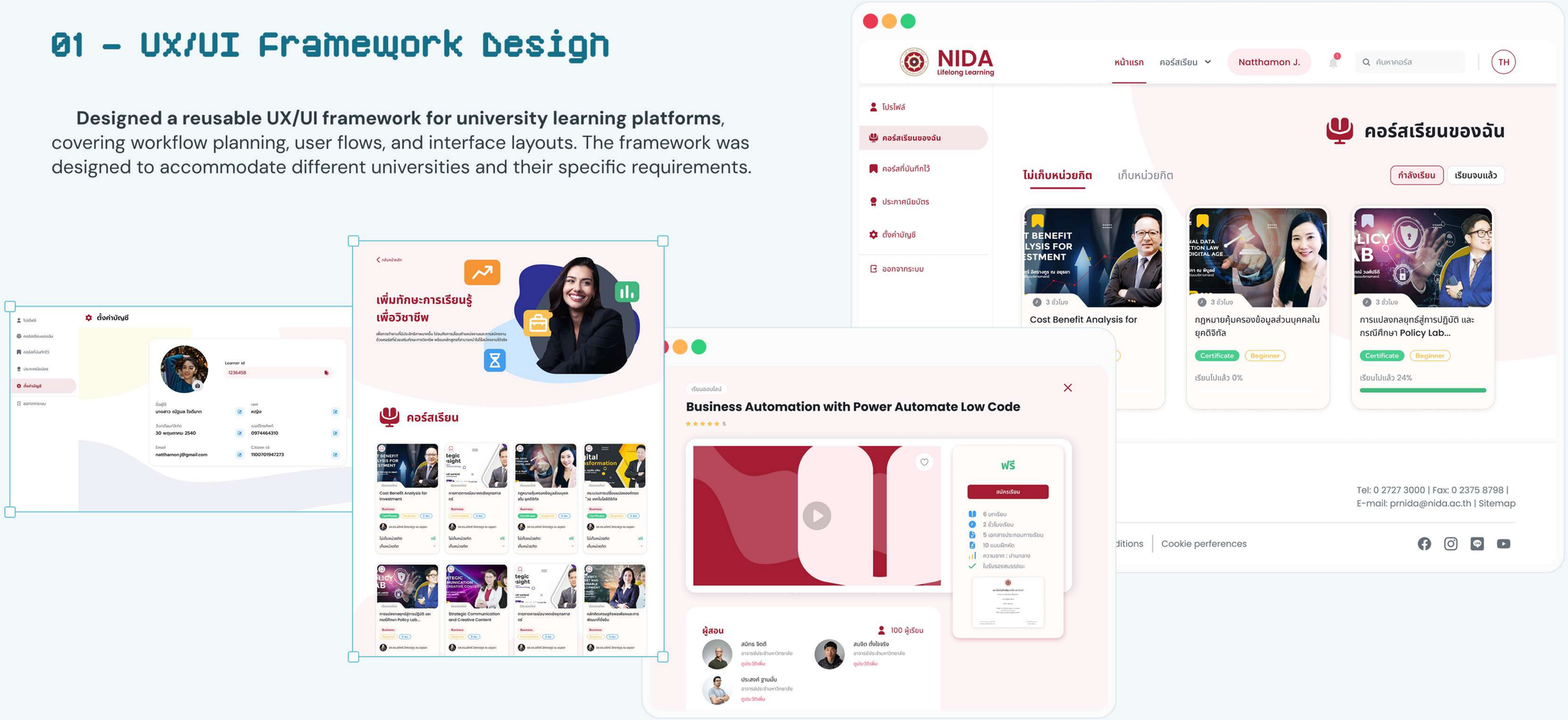
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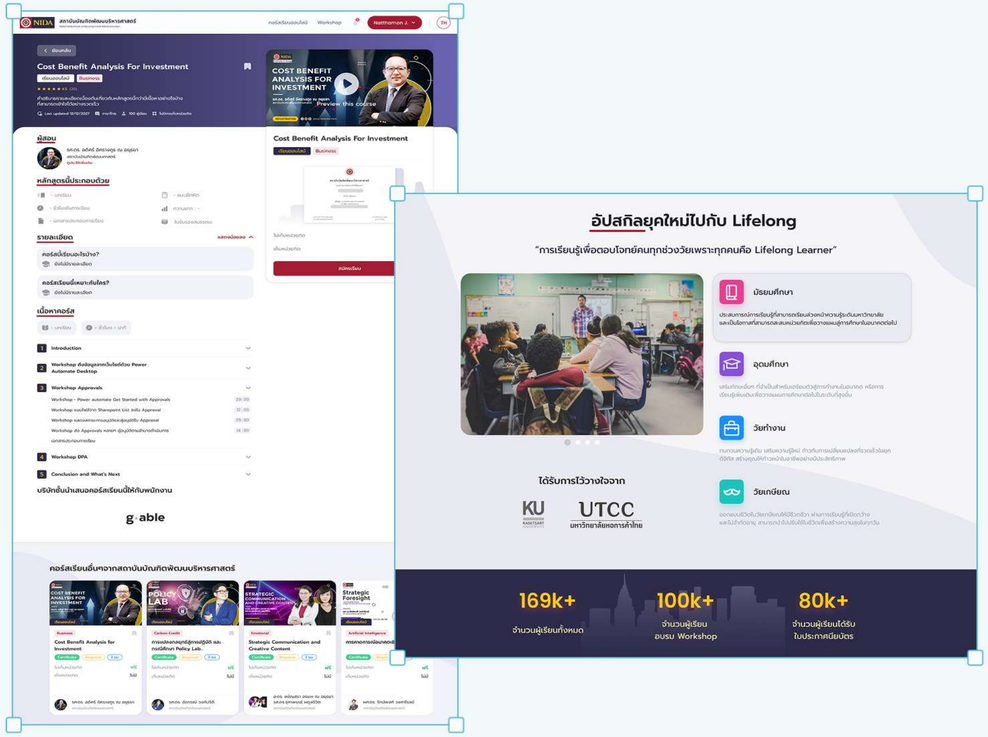
- Created a reusable learning platform design framework.
- Design system & UX/UI adaptation.
- Cross-functional collaboration with project manager, UX/UI designers, and front-end developer.

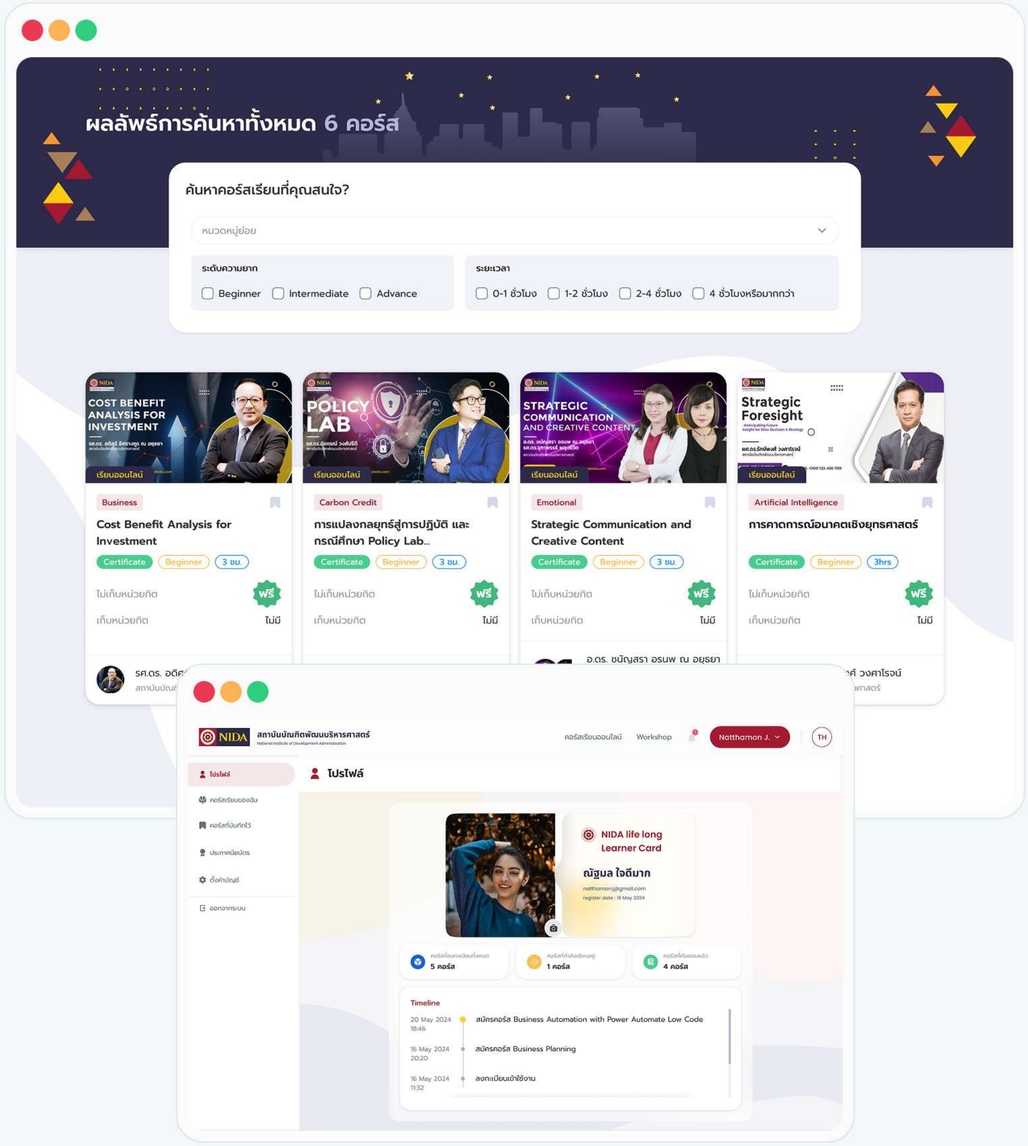
DESIGN PROCESS

01 - UX/UI Framework Design

Designed a reusable UX/UI framework for university learning platforms, covering workflow planning, user flows, and interface layouts. The framework was designed to accommodate different universities and their specific requirements.

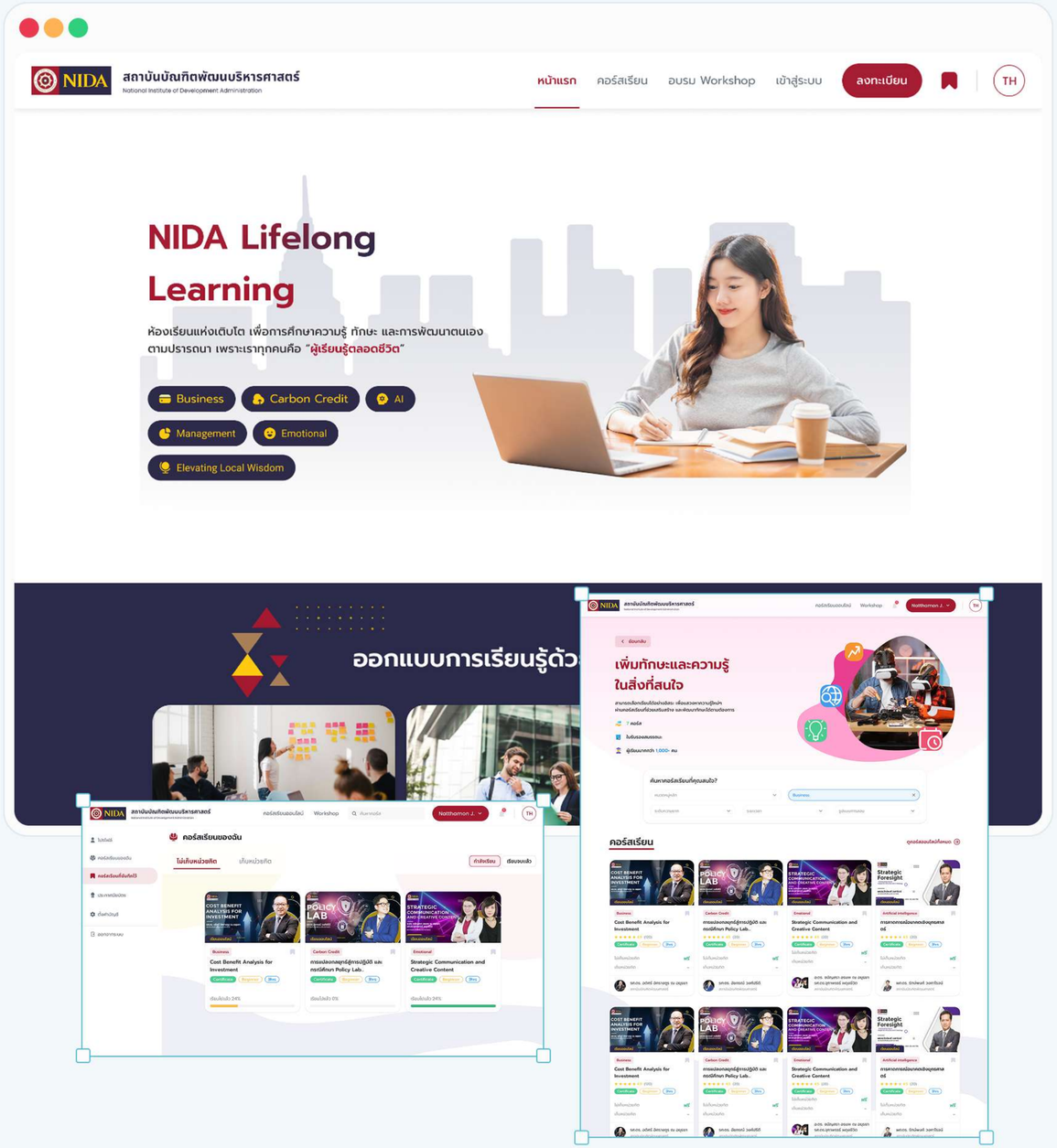






02 - UX/UI Adaptation

Translated the team's functional requirements and equipment specifications into product concepts, **designing the cordless steam cleaner and a smart dock** to organize and store the required equipment. Explored the designs through **sketch designs and 3D renders to visualize the proposed products for project pitching**.



OUTCOME

The project **adapted the reusable UX/UI framework into a learning platform tailored to NIDA's identity** and requirements. The result established a structured and consistent user experience while demonstrating the framework's flexibility for different university contexts.

Achievements

- **UX/UI Framework Design:** Created a reusable design framework for university learning platforms.
- **Design System Adaptation:** Redesign visual elements and UI components to align with NIDA's institutional identity.
- **Website Launch:** Successfully launched as a live platform.

Doi Kham

"แกะ ล้าง เก็บ" is a return-and-reward service concept developed in **collaboration with Doi Kham to encourage customers to return used product boxes**. The service allows customers to send boxes back through Thailand Post for greater convenience, while earning points that can be redeemed for discounts through an online rewards system via LINE OA, eliminating the need to visit Doi Kham stores.

Focused on

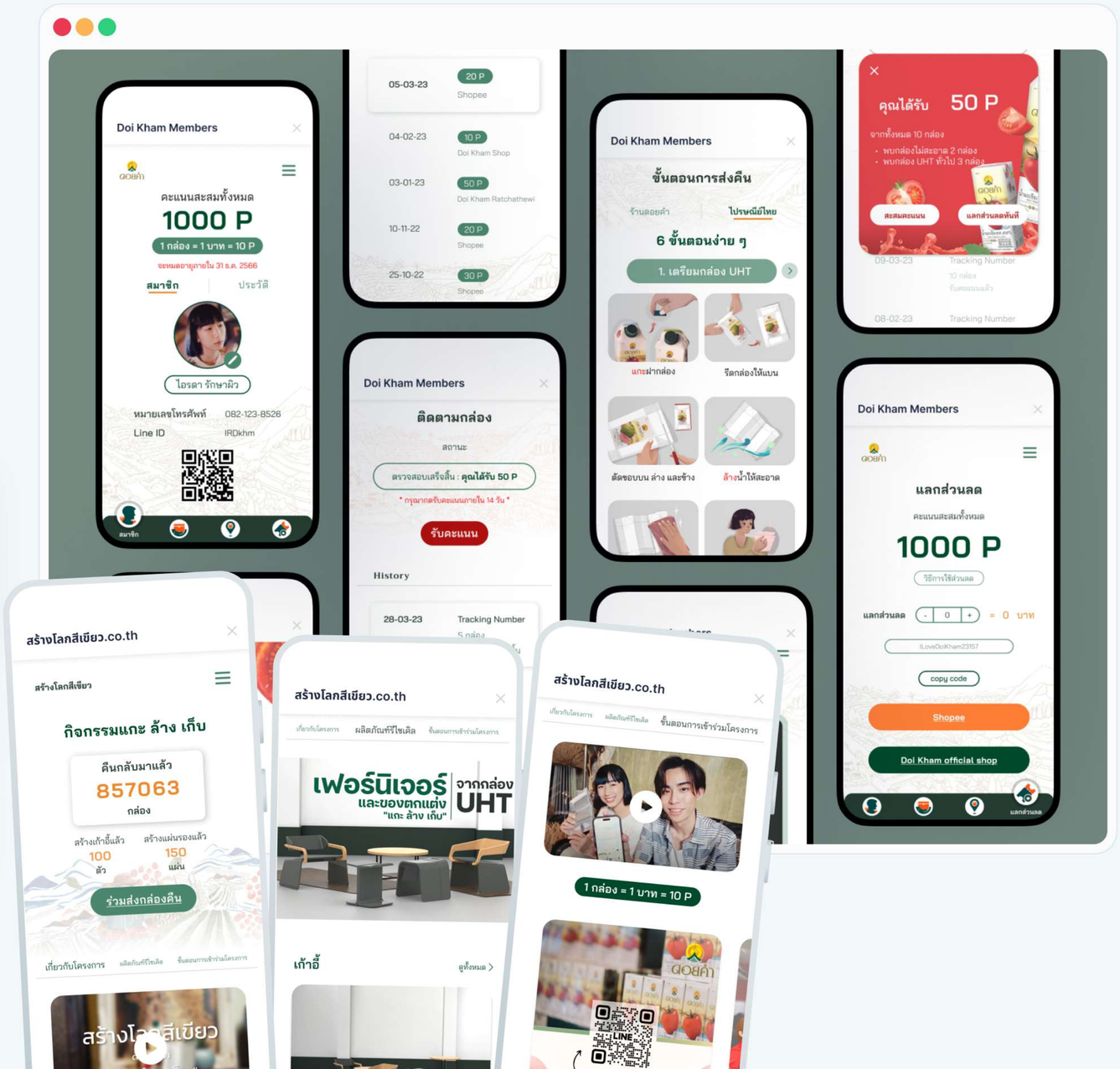
Academic Service & UX/UI Design

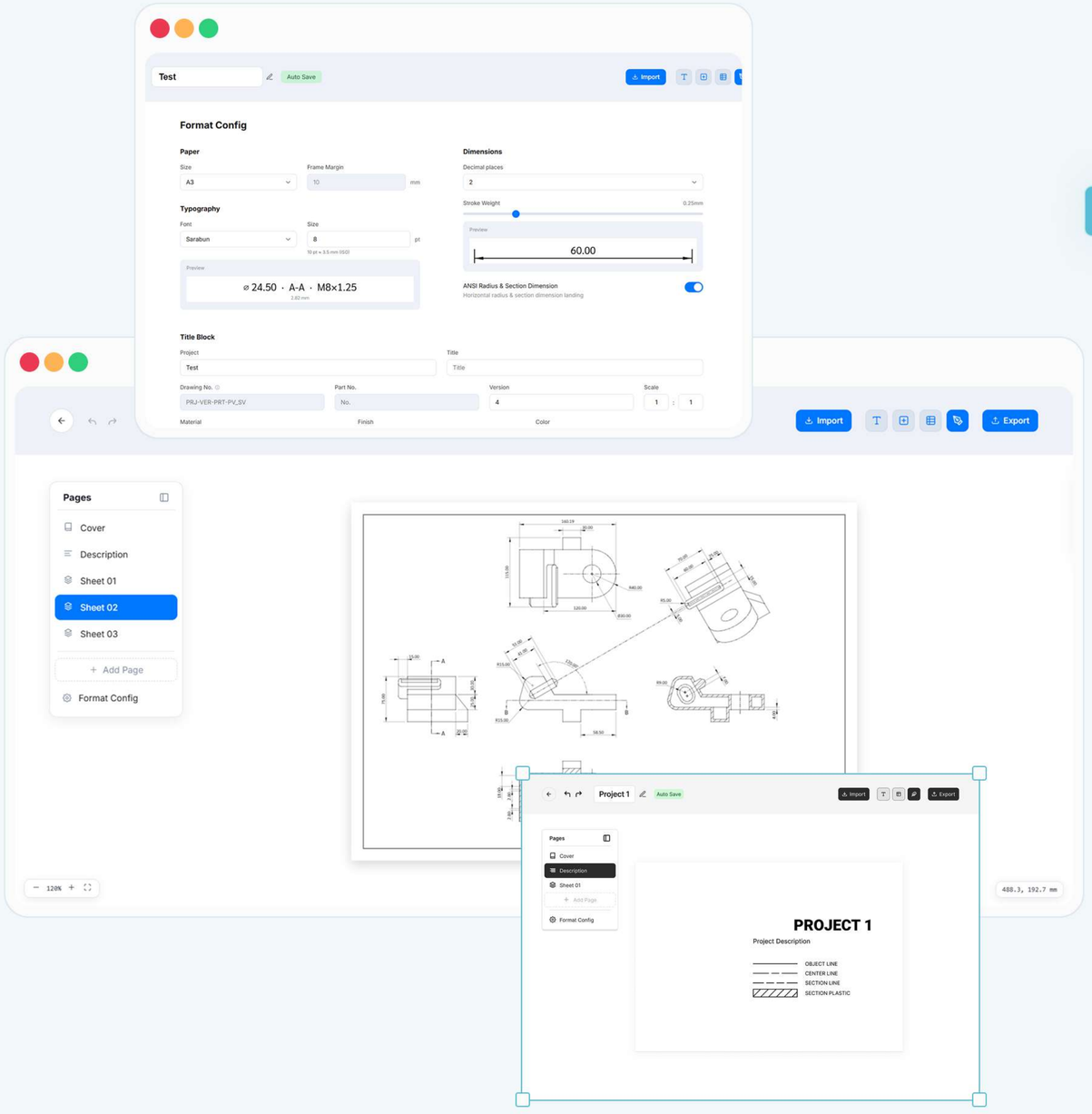
Highlight

- Collaborated with the team to analyze user needs and behaviors.
- Designed the membership web application
- Designed สร้างโลกสีเขียว website.

Outcome

Contributed to the development of an integrated return-and-reward **service by translating the proposed service concept into digital experiences. Designed the membership web application and service website** to support membership management, box return information, and reward interactions, making the service more accessible and convenient for customers.





Drawing Master

Drawing Master is an **internal web application designed to standardize technical drawings from different CAD software** into a consistent format. It allows users to import DXF files, edit drawing elements such as lines and arrowheads, apply standardized drawing styles, and **arrange sheets into factory-ready documents**.

Focused on

UX Design & Vibe Coding

Highlight

- Workflow problem-solving.
- Created wireframes and defined interface layouts and interactions to guide the AI-assisted.
- Used vibe coding to turn workflow requirements into a functional web application.

Outcome

Created a functional internal tool that brings technical drawings from different CAD software into a unified editing and formatting workflow. It helps **reduce repetitive manual adjustments**, improve drawing consistency, and streamline the preparation of technical documents for factory communication, **and improve consistency across engineering teams**.


Thank You
product
design