



# imuni Mobile App

2022 - Mobile app

**Stakeholders:** product manager & company C-level

## Background:

imuni, a newborn startup offering home-service vaccination, currently operates manually through Google Workspace and WhatsApp (as an MVP).

The challenge is to create an effective digital platform for vaccination registration and information, starting from scratch, without existing digital benchmarks.

## Objective:

Create an end-to-end vaccination registration and information platform to address inefficiencies in the current manual system. This platform will simplify the vaccination process, thereby enhancing overall user satisfaction.

The screenshots demonstrate the app's features:

- Jadwal vaksinasi:** Shows a vaccination schedule for "Adhitama Ananda Putra" (6 months old). It lists completed vaccinations (Hepatitis B ke-1, Polio-0 (oral)) and scheduled ones (BCG, DTP ke-1, Hepatitis B ke-2, Polio ke-1). A "Rekap Kelengkapan Vaksinasi" button is available.
- Hai, Anindya:** A welcome screen for "Anindya" with options for "Konsultasi vaksinasi" and "Pantau kesehatan". It includes a "Daftar vaksinasi" button and a promotional banner for "SEMUA VAKSIN DISKON 25.000".
- Layanan imuni:** A dashboard for "Bayu Pratama Ananda" (adult, 29 years old). It shows vaccination history, BMI (Body Mass Index) of 23.14 (healthy), and growth data (height 68 cm, head circumference 42 cm, weight 8.5 kg, all normal). It also displays a doctor's profile picture and a message of thanks for vaccination registration.
- Kelengkapan vaksinasi:** A detailed view of vaccination history for "Adhitama Ananda Putra" (6 months old), listing Hepatitis B ke-3, Polio ke-2, DTP ke-2, and HIB ke-2.
- Pertumbuhan:** Growth monitoring section showing data for the same child, with a note about macrocephaly (besar makrosefali).
- Data terakhir:** Recent data summary for the child, including a note about the start of operations on Monday and Saturday from 09.00-12.00 WIB.

# How this project started?

The project began after imuni's executives recognised the need for a digital system to enhance service quality. Feedback from frontline doctors (who regularly interact with users) highlighted the need for improvements at various touchpoints.

## Current pain points:

### Re-registration concerns



Repeated form-filling was tedious; users wanted a system to track vaccination history for **smoother re-registration**.

- "It's tedious to fill out the forms every single time. Don't you have a system to track our vaccination history?"
- "I've used imuni 6 times, why isn't there an option to use my vaccination record?"

### Tricky scheduling



Scheduling issues caused frustration; users desired **clearer, more reliable appointment details**.

- "My preferred time often changes to match the doctor's availability. It would be better if I only get truly available slots."
- "Why wasn't I informed earlier that my area isn't covered by imuni services?"

### Communicating difficulties



Multiple contact points were confusing; users preferred a **single, unified communication channel**.

- "I get calls from multiple numbers. This is confusing, isn't there a unified number for every department at imuni?"
- "Each doctor has their own contact, it's tough to keep track of every contacts."

### Payment options

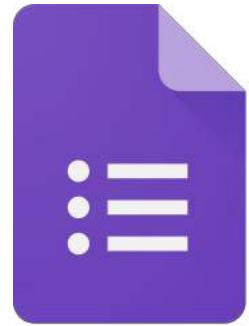


Users need for **more flexible payment options**, such as installment plans and e-wallets.

- "I wish there were more flexible payment plans, like I can split the payment with my credit card."
- "Why can't I use digital wallets? It would be so much easier!"

# How we operated our services

Since its inception in 2021, imuni has operated its vaccination services as a Minimum Viable Product (MVP) using a suite of digital tools to manage its processes.



For vaccination  
registrations



To manage incoming  
orders

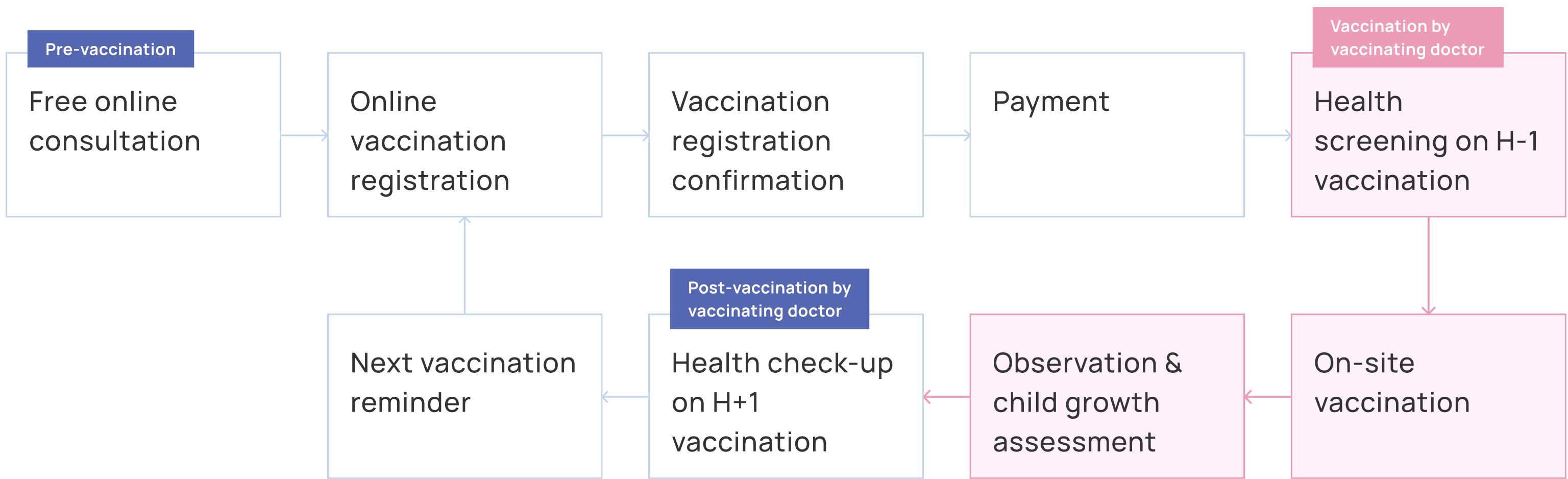


For coordinating  
vaccination doctors'  
schedules



As communication tools  
between us & our users

# Current customer journey



## Problem statement

While our existing service operations have successfully provided value to our customers, they lacked the efficiency needed for our growing services, prompting the need for a digital transformation.

### Effect on our users:

#### 1. Inefficient processes

Users faced complicated journeys, particularly in:

- Registration
- Scheduling
- Payment.

#### 2. Communication gaps

Ineffective interactions between patients and imuni's team due to too many contact points.

#### 3. Improper data management

Lack of integrated records regarding patient's vaccination & child development.

### Effect on our team:

#### 1. Data management issues

The absence of advanced features led to inefficient data management and analysis.

#### 2. Scheduling issues

Google Calendar was inadequate for scheduling doctors, causing delays.

# Characteristics of our users

Due to time and budget constraints, I couldn't conduct research with our customers. Therefore, I gathered insights from imuni's executives and doctors for insights into our user base.



## Age

The majority of imuni's users are young mothers, aged 25-35, with one or two infants.

## Traits

Typically well-educated and affluent professionals who highly value convenience and are tech-savvy. They are health-conscious and prioritize their children's well-being, often seeking out the latest and most effective health solutions.

## Expectations

A user-friendly & trustworthy app that's reliable and provides accurate information.

# Benchmarking on other competitors



## PrimaKu

PrimaKu acts as a digital child book with vaccination registration, partnering with the Indonesian Pediatric Society (IDAI) to provide quick and easy access to child health and development information.

### Pros:

1. Intuitive and user-friendly design, offering a seamless experience.
2. Comprehensive information on child growth and development, efficiently organized for users.

### Cons:

1. Users report delays and bugs when updating data, sometimes resulting in data loss, especially in growth and development tracking.
2. The app can be slow, making it unresponsive and difficult to use.

Vaccination registration	Vaccination information	In-app consultation with doctor	Child-growth monitoring
✗	✓	✗	✓



## Tentang Anak

Tentang Anak offers pregnancy and child growth tracking, doctor Q&A, and health articles, serving as a comprehensive parenting guide for optimal child development.

### Pros:

1. Provides extensive information for parenting, serving as an all-in-one tool.

### Cons:

1. The UI can seem outdated and not very user-friendly.
2. Certain features may be too complex, requiring more expertise to use effectively.

Vaccination registration	Vaccination information	In-app consultation with doctor	Child-growth monitoring
✓	✓	✓	✓

# Main features in our app

Considering the services we currently provide and the characteristics of our majority users, we decided on the following new features for our app:



**Streamlined vaccination registration**



**Improved communication  
(single communication channel)**



**Flexible payment options**



**Digital vaccination records**



**Health Monitoring  
(for both children and adults)**



**Streamlined next vaccination reminders**

In this project, I'm digitalizing our business across web & mobile platforms. However, in this writing I'll focus on details of [imuni's mobile app for users](#).

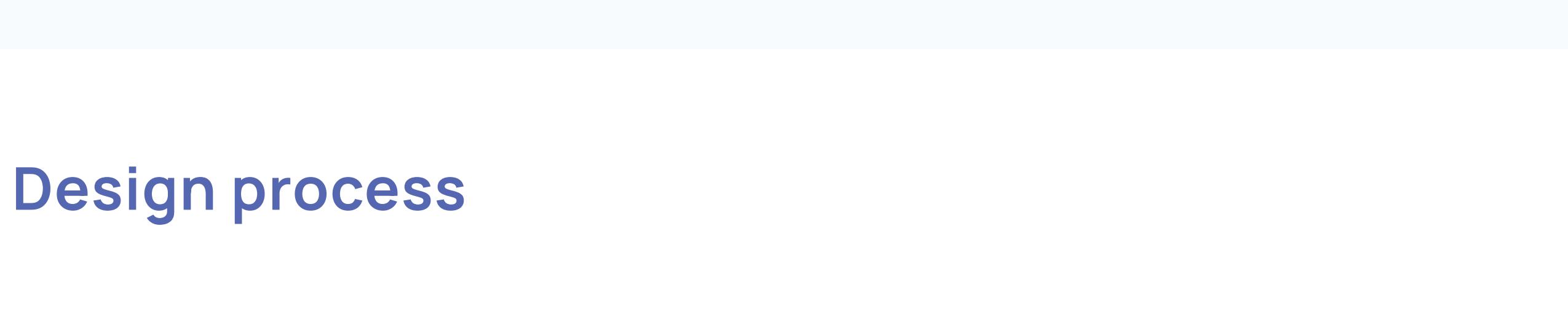
# Results

## Highlight 1: Streamlined vaccination registration

The existing method for vaccination registration (which using Google Forms) was requiring significant effort to fill out data and error-prone, leading to a negative user experience.

Our solution was to streamline the registration process by storing users' past data in simplified forms and automating form-filling for convenience.

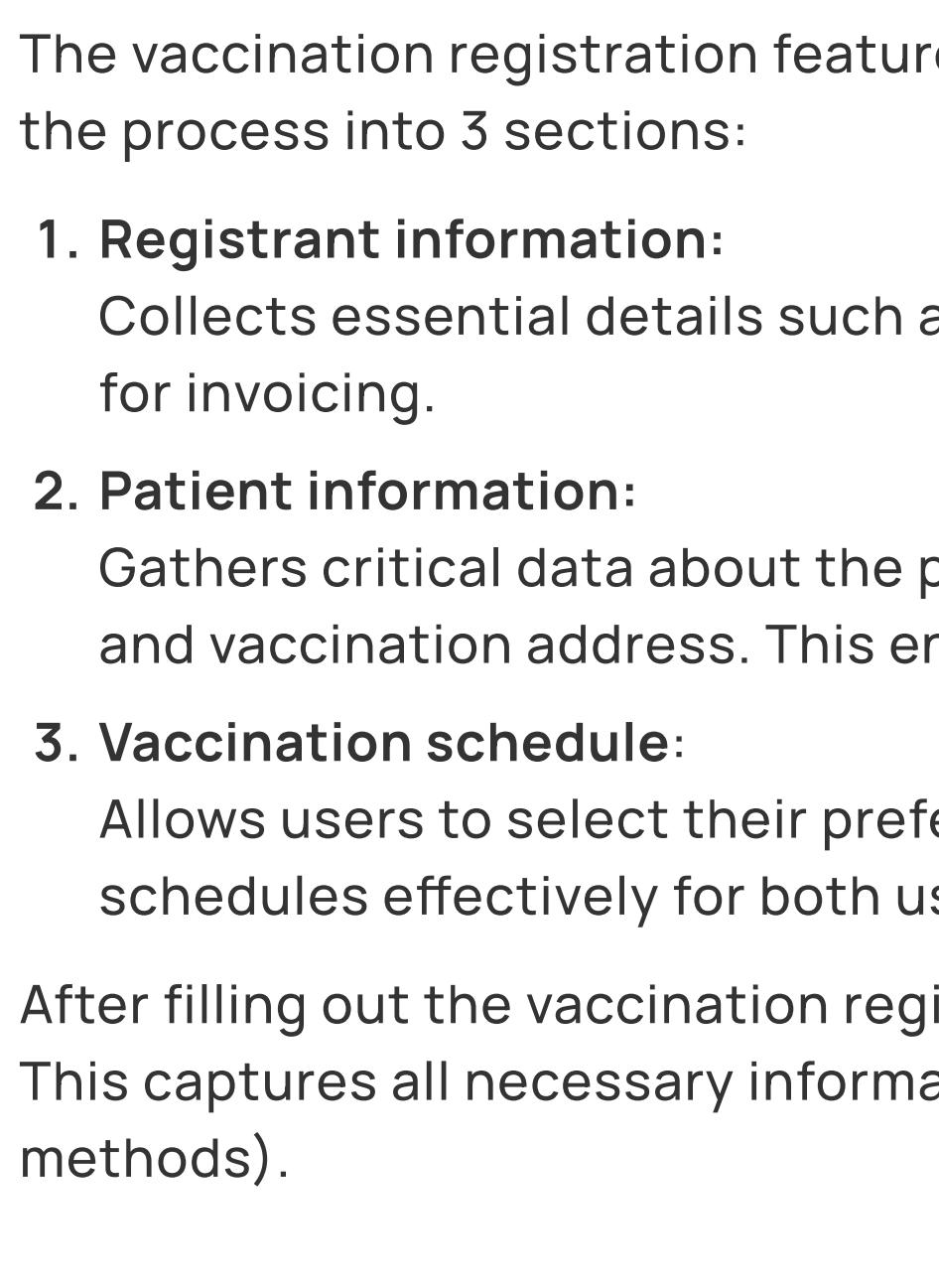
### User Flow



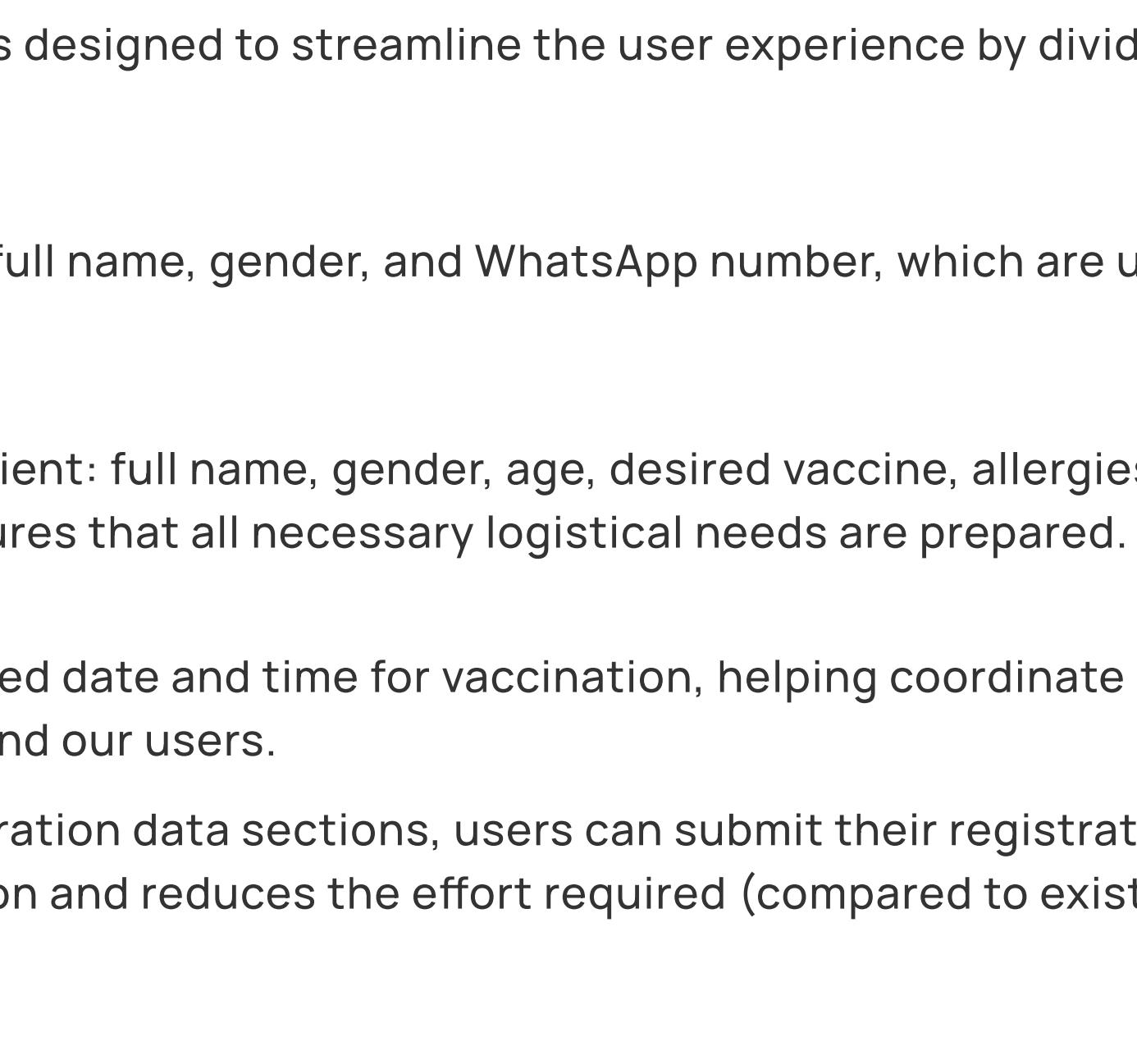
## Design process

### Vaccination registration

#### Wireframe



#### Hi-fi design



The vaccination registration feature is designed to streamline the user experience by dividing the process into 3 sections:

#### 1. Registrant information:

Collects essential details such as full name, gender, and WhatsApp number, which are used for invoicing.

#### 2. Patient information:

Gathers critical data about the patient: full name, gender, age, desired vaccine, allergies, and vaccination address. This ensures that all necessary logistical needs are prepared.

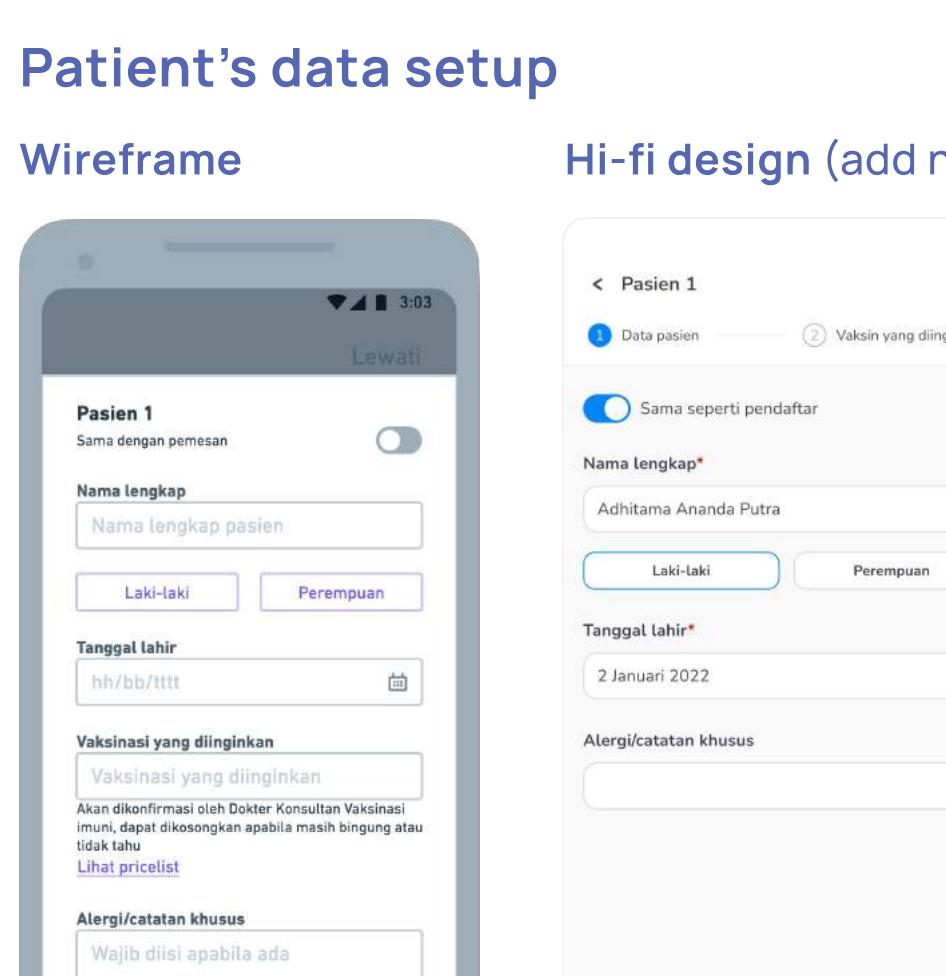
#### 3. Vaccination schedule:

Allows users to select their preferred date and time for vaccination, helping coordinate schedules effectively for both us and our users.

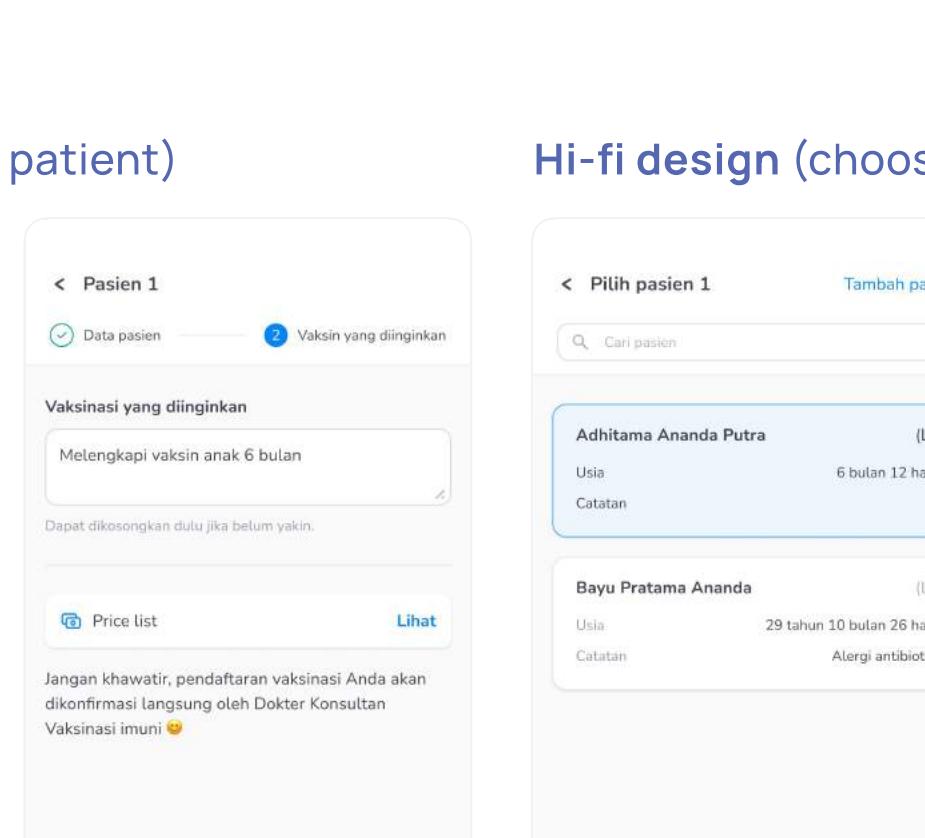
After filling out the vaccination registration data sections, users can submit their registration. This captures all necessary information and reduces the effort required (compared to existing methods).

### Vaccination address setup

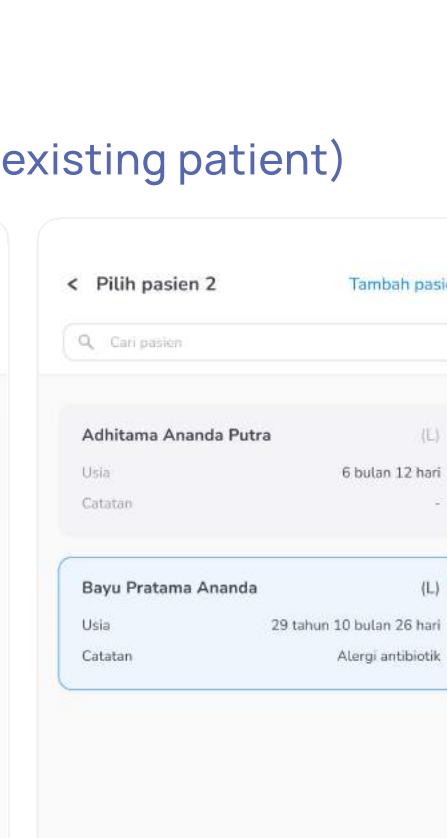
#### Wireframe



#### Hi-fi design (add new address)



#### Hi-fi design (choose existing address)



The vaccination address section is designed to simplify the process of selecting and adding addresses. Here's the breakdown:

#### 1. District selection:

It features a unique search mechanism where users only need to type 3 characters to search for their district. The system then displays a list of matching districts, making it quick and easy to select the desired location.

#### 2. Address information:

Users provide their full address (and any landmarks, if available) to help our doctors find their location easily. Alternatively, users can input our clinic's address if they prefer to get vaccinated there.

#### 3. Choose from existing address data:

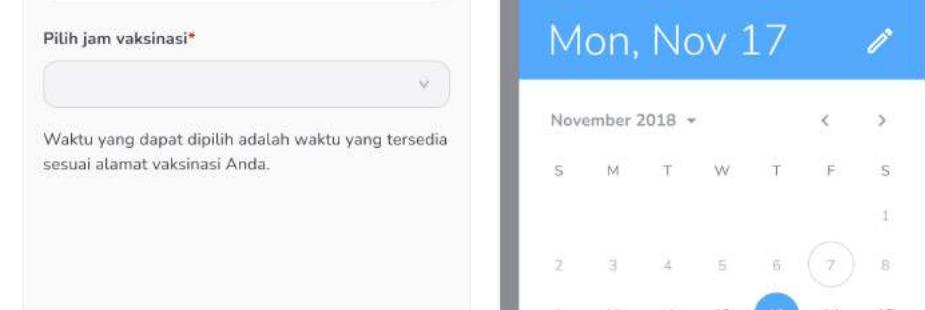
Users can also select their previously saved address, making the process more efficient.

### Patient's data setup

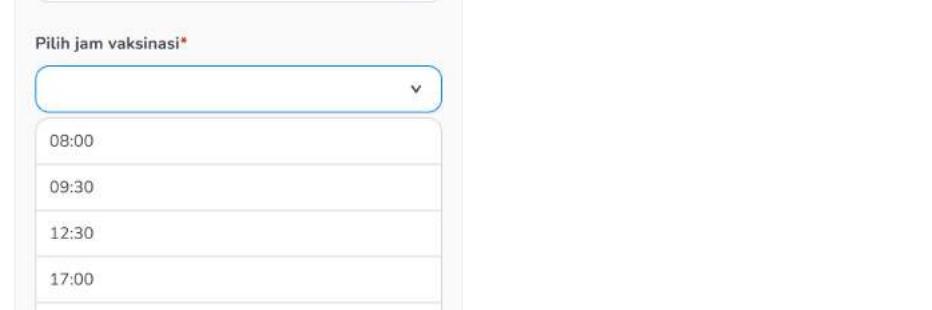
#### Wireframe



#### Hi-fi design (add new patient)



#### Hi-fi design (choose existing patient)



The patient's data setup section is designed to capture detailed vaccination data effortlessly:

#### 1. Detailed patient information:

For new patients, users are prompted to enter complete information, such as full name, gender, age, and any allergies, capturing all necessary medical details.

#### 2. Using existing patient data:

Users can select existing patient data and update vaccination details, eliminating the need to start from scratch (unlike with Google Forms).

#### 3. Vaccination details:

In the next step, users select the desired vaccination and are provided with up-to-date price information to help them make informed decisions.

This feature saves time and effort, allowing users to avoid filling out the form from scratch and simply update the vaccination details. These features ensure accurate data collection while enhancing the user experience.

### Vaccination schedule

#### Wireframe



#### Hi-fi design



#### Hi-fi design



To select a vaccination schedule, users first choose their preferred date. The system displays available dates based on the selected district, ensuring that only feasible options are presented. After selecting the date, users can choose a specific time slot (from the available options).

This two-step process—first selecting the date, then the time—ensures that users have a clear and straightforward path to schedule their vaccination.

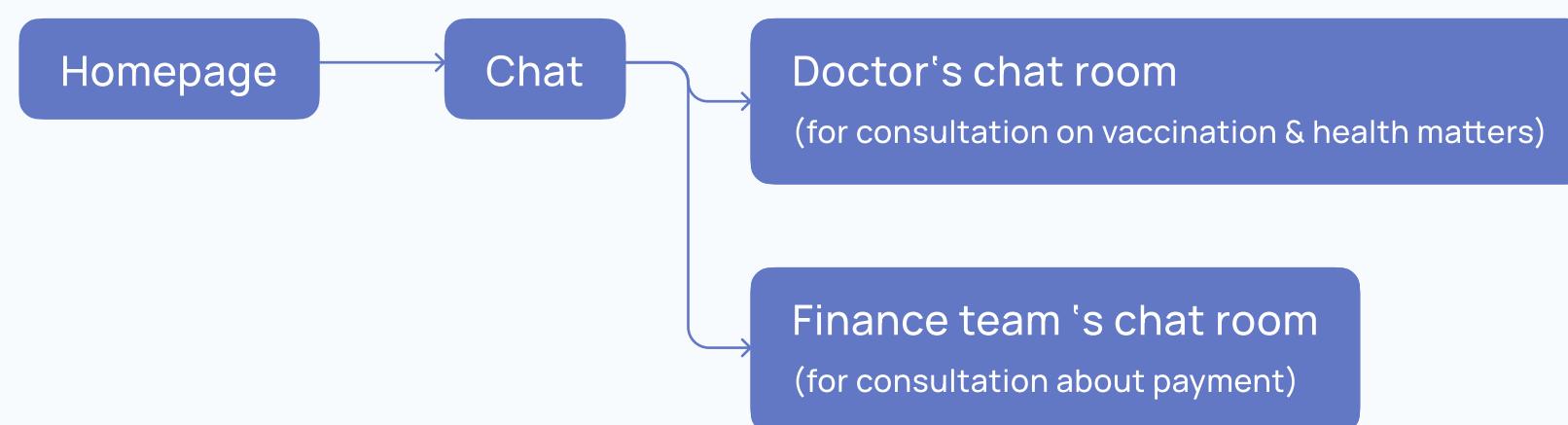
# Results

## Highlight 2: Improved communication (with a single communication channel)

Currently, users had to engage with 3 different representatives (consulting doctor, finance team, and vaccinating doctor), each with their own contact, which can be overwhelming.

By centralizing communication through an in-app chat, we ensure a better consultation experience with imuni's representatives.

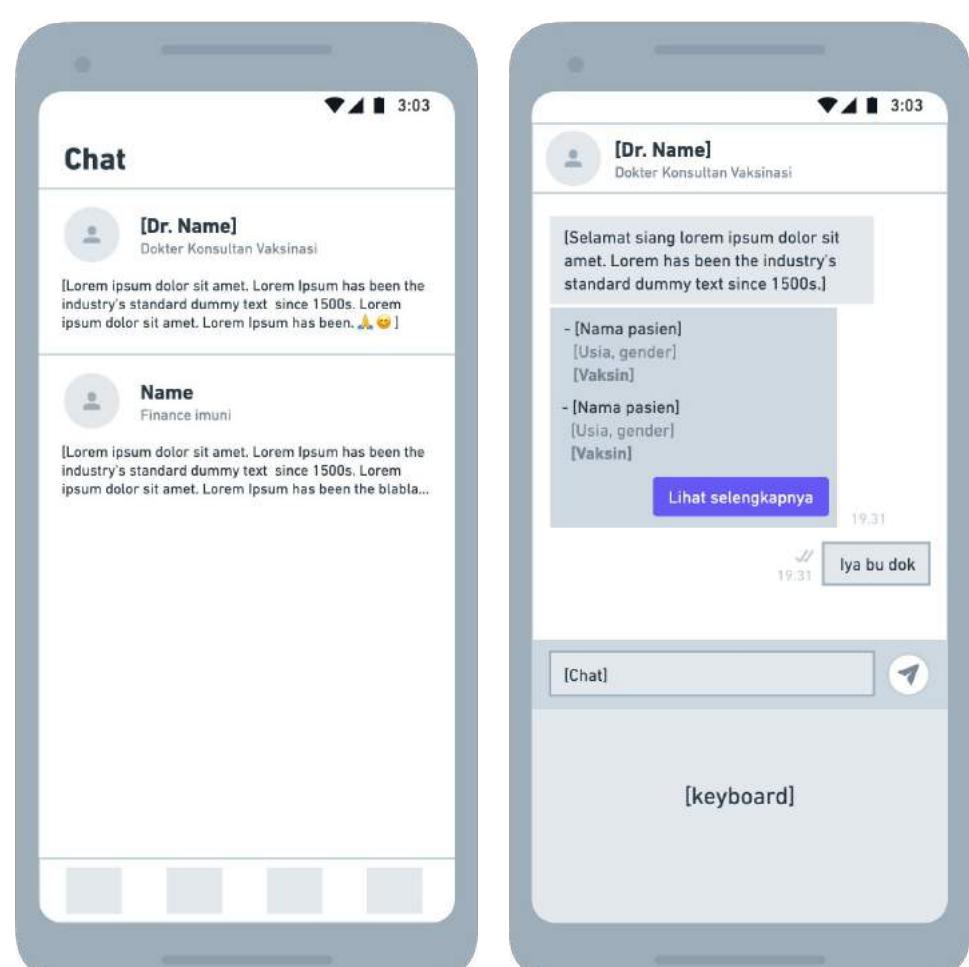
## User Flow



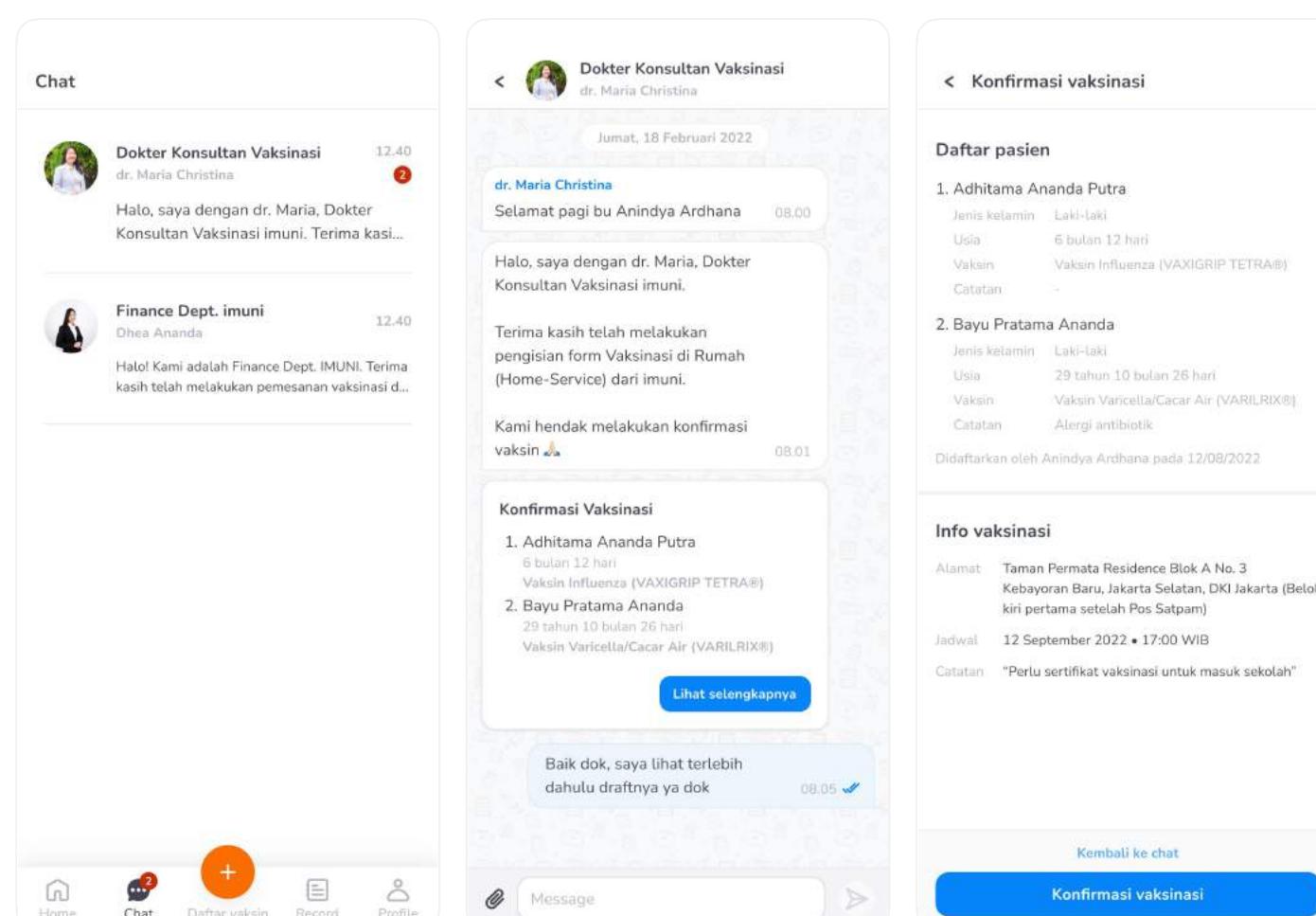
# Design process

## Communication channel (chat)

### Wireframe



### Hi-fi design



The chat feature is designed to simplify communication with imuni's team, where users previously had to interact with at least 3 contacts.

I designed a centralized chat platform with dedicated rooms for the doctor and finance team, providing a single, organized space for all communication needs and preventing overwhelm.

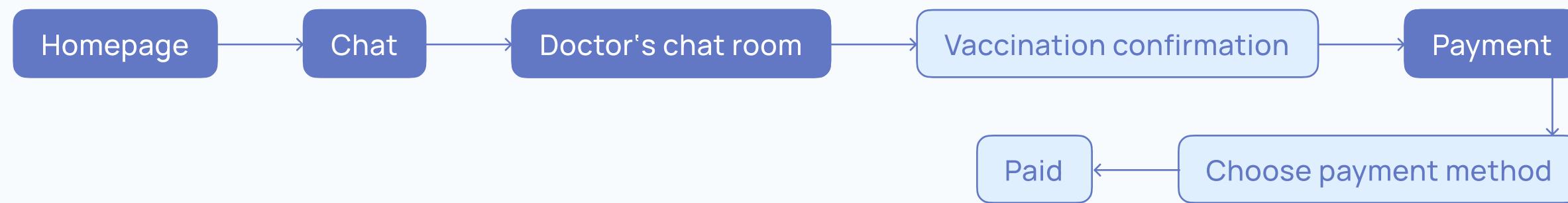
# Results

## Highlight 3: Flexible payment options

Due to payments being handled manually, users must initiate a bank transfer to proceed with their vaccination progress, which can be cumbersome.

Our app will collaborate with a payment gateway provider, offering diverse payment options such as virtual accounts, credit cards, and paylater options, making the payment process more flexible.

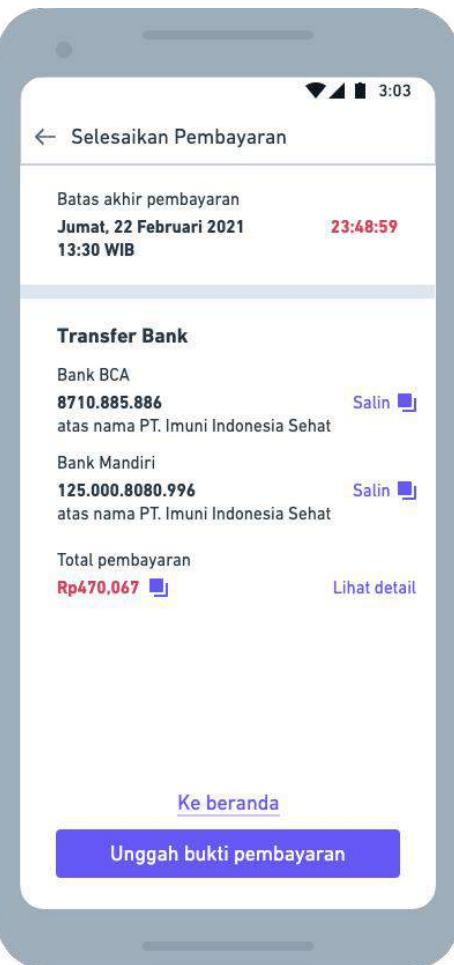
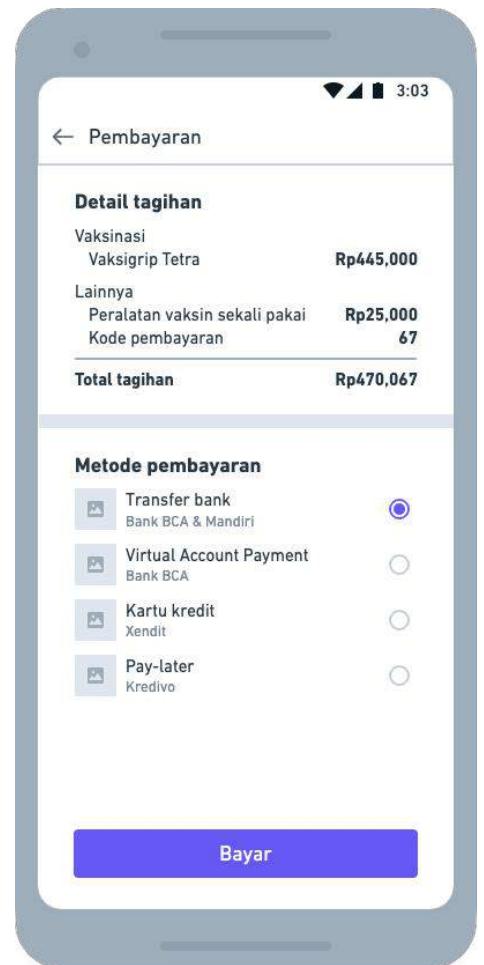
## User Flow



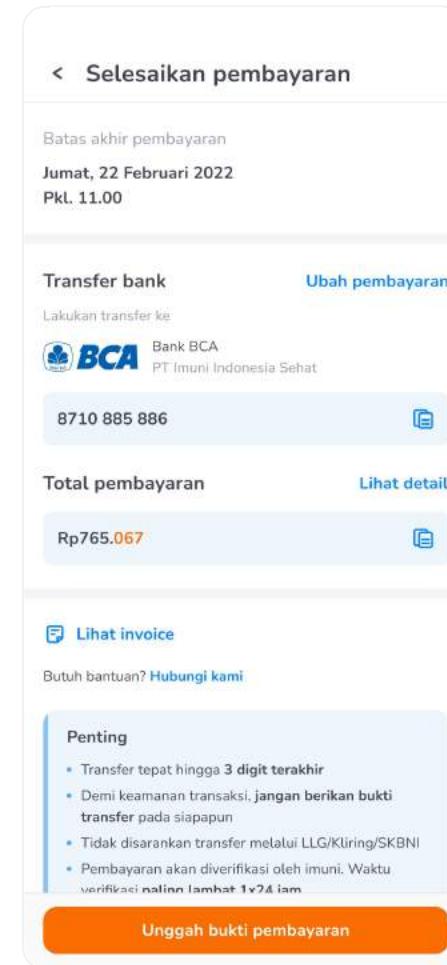
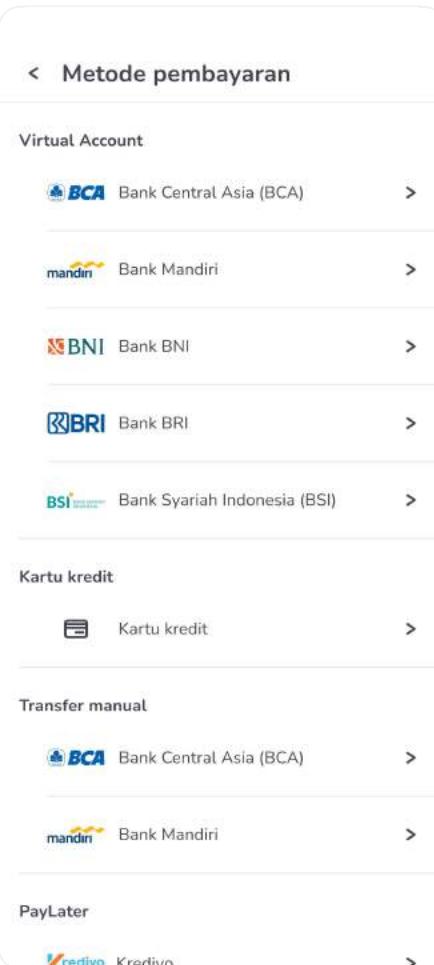
# Design process

## Payment

### Wireframe



### Hi-fi design



The payment feature is designed to address pain points during our MVP version services. Previously, users could only make payments via bank transfer, making the process inflexible and challenging, especially for those with high vaccination bills.

With the release of this app, we can now offer a variety of payment options by collaborating with a payment gateway provider. Users can choose from virtual accounts (VA), credit cards (CC), and paylater options. This flexibility makes the payment process more convenient, improving overall user experience.

# Results

## Highlight 4: Digital vaccination records

Previously, we used physical vaccination booklets and Google Sheets, which were impractical and vulnerable to damage, loss, and other issues.

Our app now allows users to save and access their vaccination history and upcoming vaccination schedule, ensuring worry-free and reliable record-keeping.

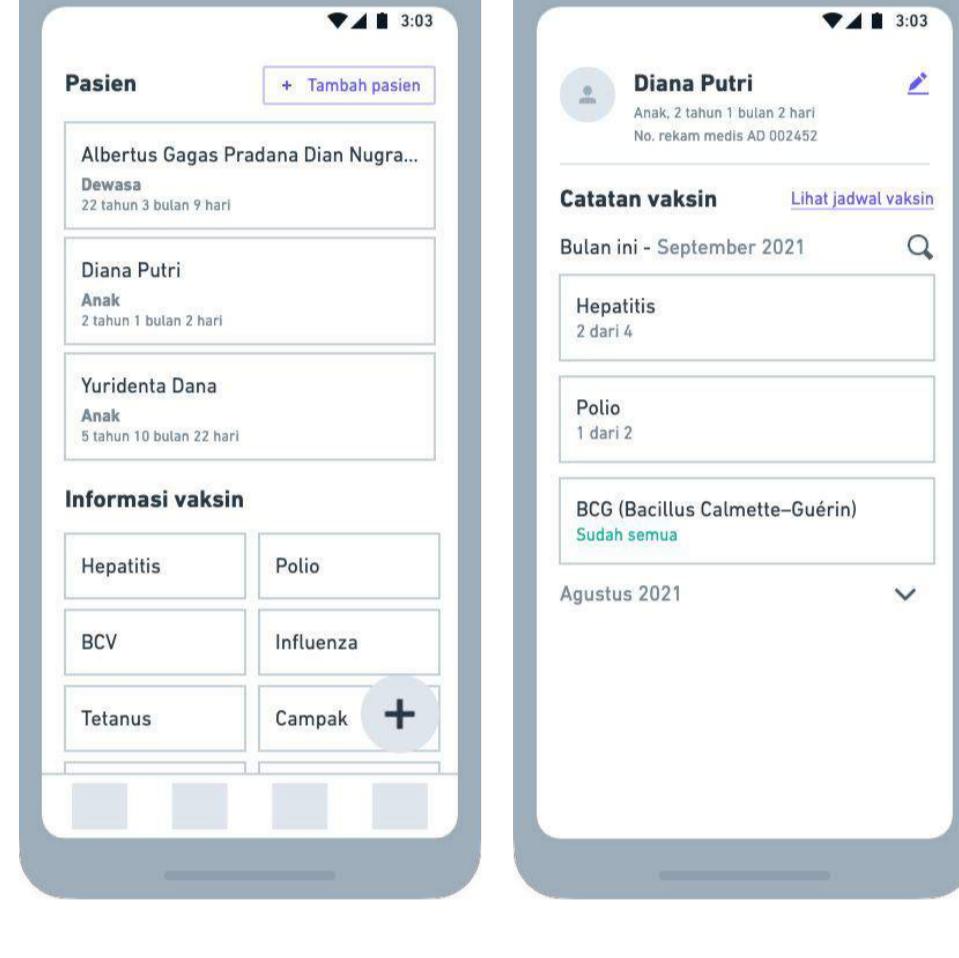
### User Flow



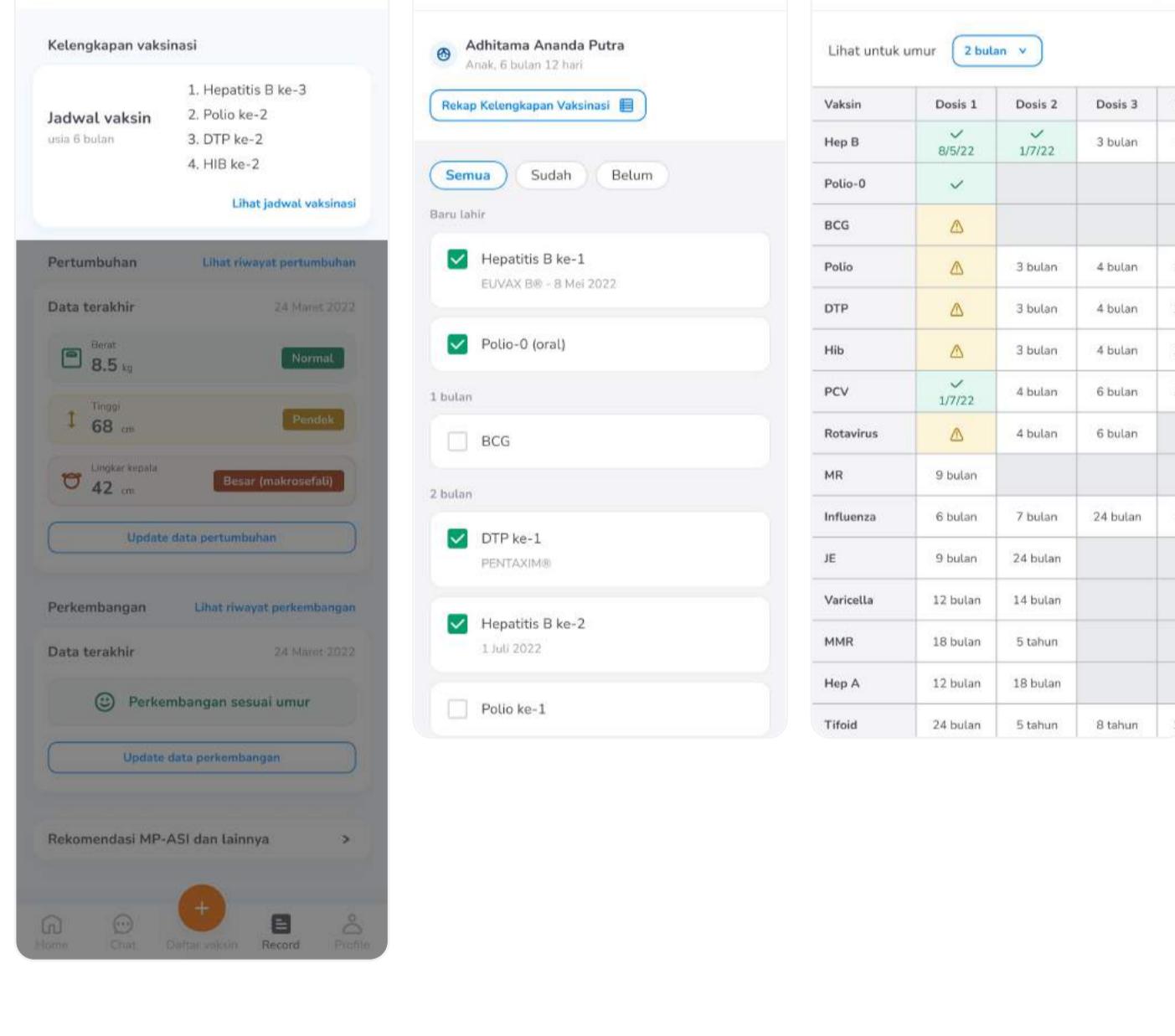
## Design process

### Vaccination records

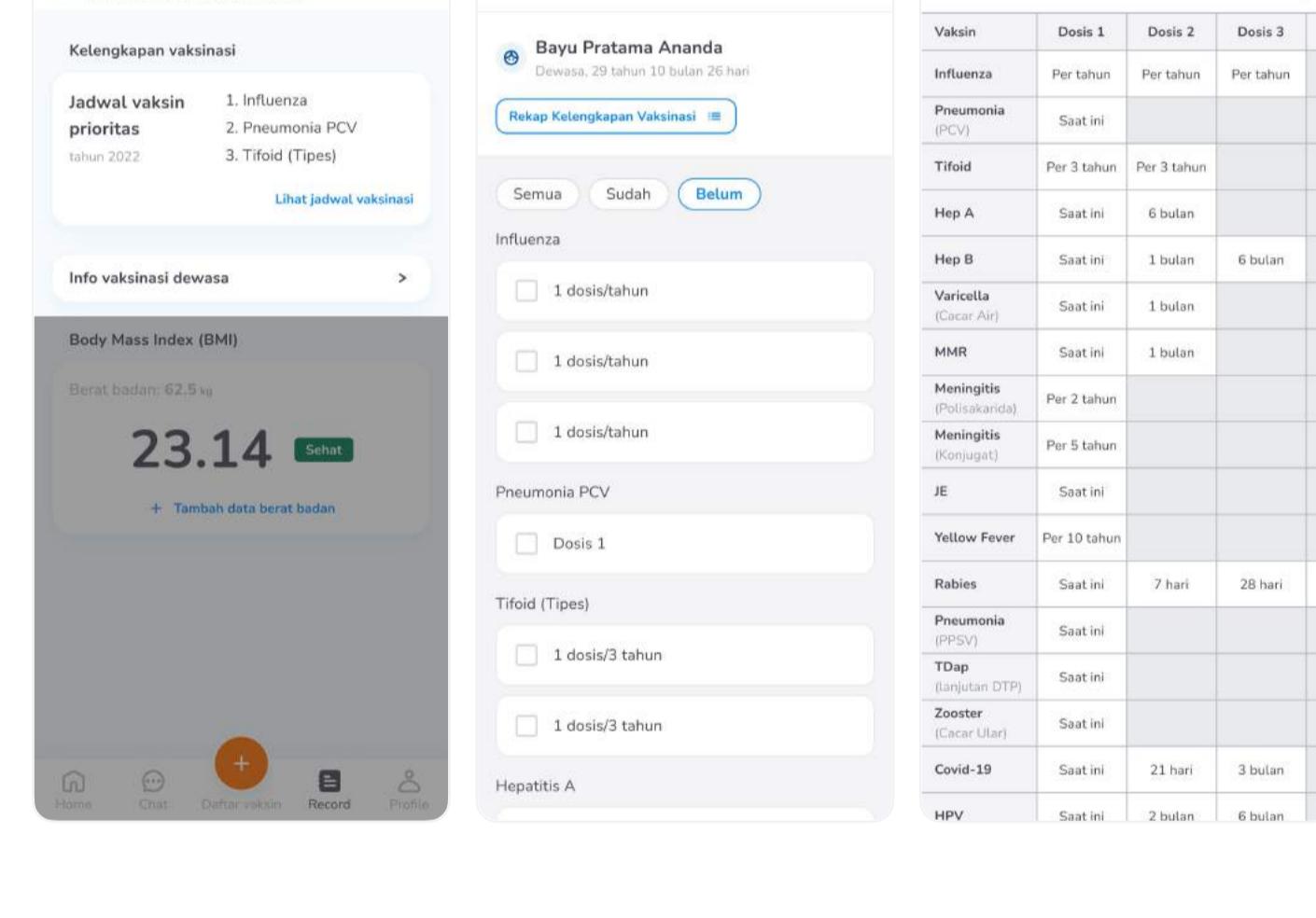
#### Wireframe



#### Hi-fi design (for kids)



#### Hi-fi design (for adults)



The digital vaccination records feature solves the issues associated with physical booklets and Google Sheets. Storing data in the app ensures automatic updates and easy maintenance, eliminating concerns about damage or loss. This also allows our team to effortlessly revisit patient records.

#### 1. For kids:

- Record page:**

Displays vaccination completeness information based on the child's age.

- Vaccination schedule page:**

Shows the patient's vaccination schedule and indicates whether the vaccine has been administered or not.

- Vaccination recap page:**

Provides a summary of all vaccinations the patient has received.

#### 2. For adults information:

- Record page:**

Displays recommended vaccinations based on gender.

- Adult vaccination information page:**

Includes information about the importance of adult vaccinations, highlighting the need for vaccinations that are often overlooked.

- Vaccination schedule page:**

Shows suggested vaccinations and indicates whether the patient has received them.

- Vaccination recap page:**

Provides a summary of all vaccinations the patient has received.

These features ensure accurate and reliable vaccination record-keeping in our app, enhancing the user experience and simplifying vaccination management for both users and our team.

# Results

## Highlight 5: Health Monitoring (for both children and adults)

For children (who are under 20 years old), this feature includes monitoring of vaccinations, growth, and development, with additional parenting tips.

For adults, it offers health check features, including tracking vaccination completeness and BMI self-monitoring, catering to the entire family's health needs.

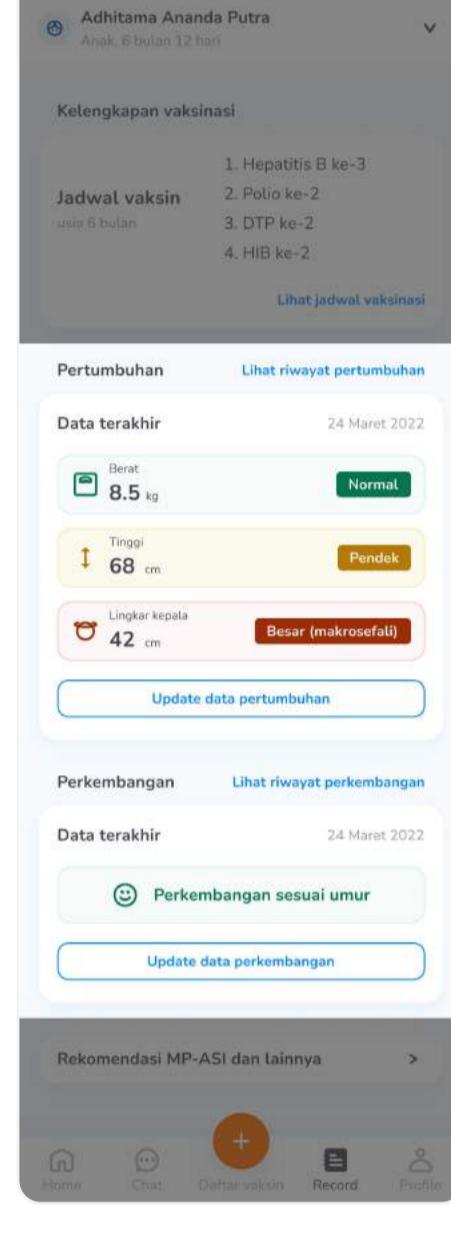
### User Flow



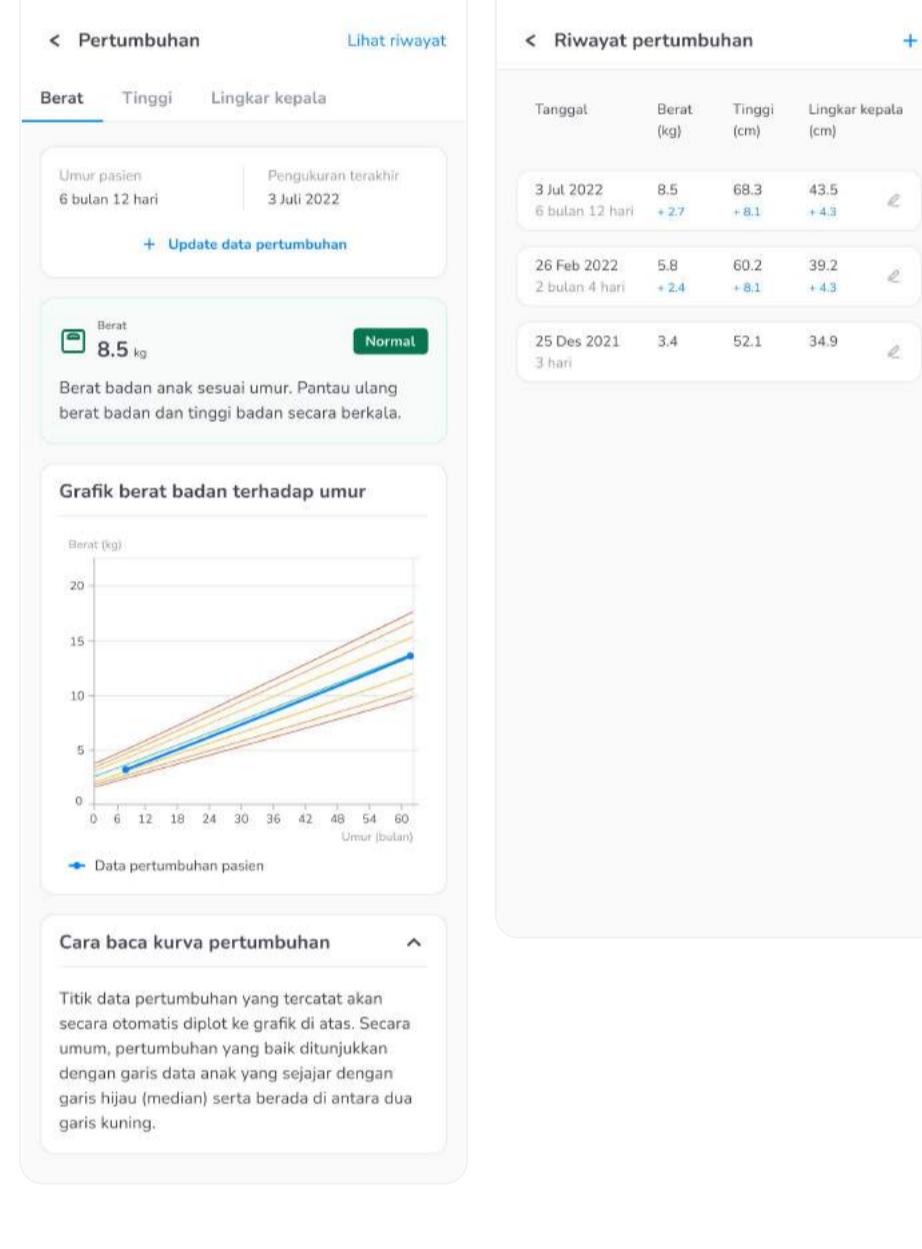
## Design process

### Children growth & development monitoring

#### Hi-fi design



#### (Growth monitoring)



#### (Development monitoring)

As an additional value for our users, we have included a feature for monitoring the growth and development of children:

#### 1. Growth monitoring:

Users can input data such as weight, height, and head circumference. This data is compared with standards from our doctors to determine if the child's growth is within the normal range for their age.

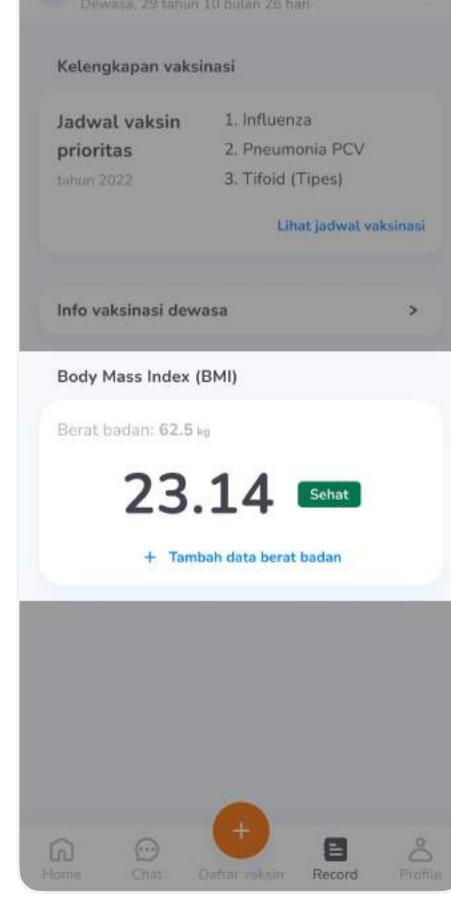
#### 2. Development monitoring:

Users answer questions about their child's developmental milestones. The answers will determine if the child is achieving motor skills and developmental milestones appropriate for their age.

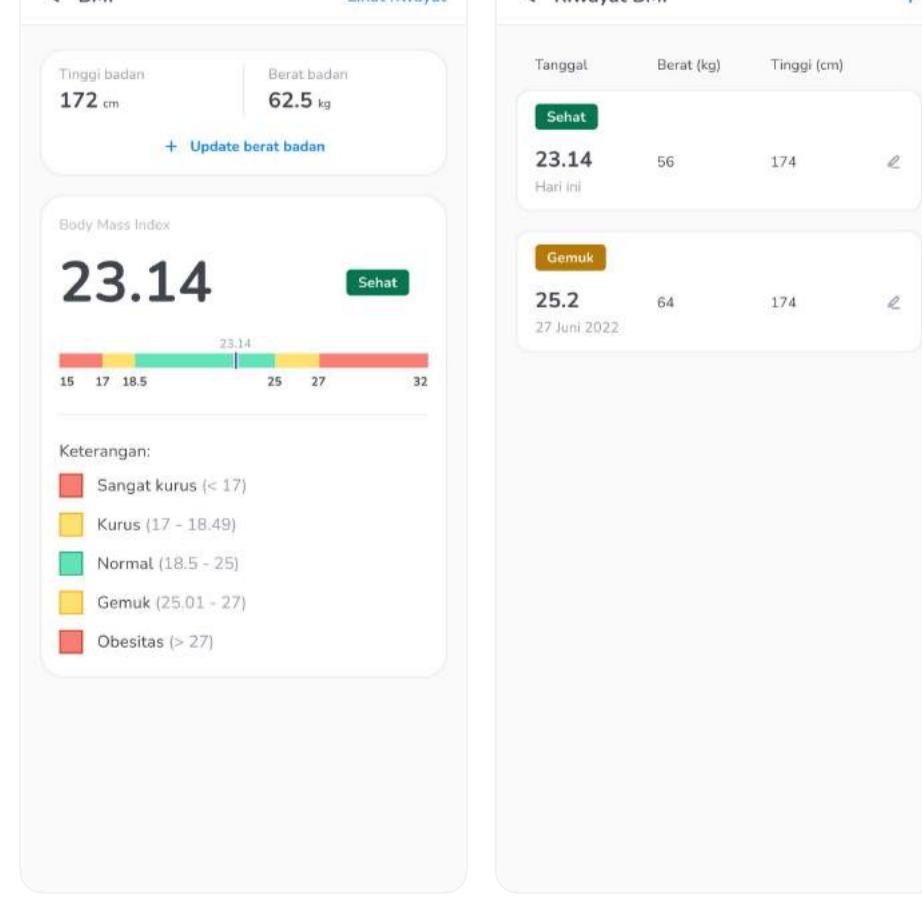
These features offer parents valuable insights into their child's growth and development, allowing them to monitor their child's health and seek immediate medical advice if necessary.

### Adults health monitoring

#### Hi-fi design



#### (BMI monitoring)



For adults, we have included a health monitoring feature focused on BMI (Body Mass Index) checks. Users can enter their weight and height to calculate their BMI and determine if they have an ideal weight based on their BMI score.

# Results

## Highlight 6: Streamlined next vaccination reminders

Previously, we manually reminded users a week before their next vaccination, requiring labor-intensive re-registration for each patient.

Our app's next vaccination reminder feature automates this process, allowing users to input details, review, and directly proceed with payments, significantly simplifying the process.

## User Flow



# Design process

## Next vaccination reminders

### Hi-fi design

The image shows two side-by-side screenshots of a mobile application's user interface. Both screens have a header 'Konfirmasi vaksinasi selanjutnya' with tabs 'Vaksinasi' (selected) and 'Pembayaran'.  
The left screen shows:

- A section 'Daftar pasien' with two entries:
  - 1. Adhitama Ananda Putra: Laki-laki, 6 bulan 12 hari, Vaksin: Vaksin Influenza (VAXIGRIP TETRA®)
  - 2. Bayu Pratama Ananda: Laki-laki, 29 tahun 10 bulan 26 hari, Vaksin: Vaksin Varicella/Cacar Air (VARILRIX®)
- A note: 'Klik di sini bila ada data pasien atau vaksin yang ingin diubah'
- A section 'Data pendaftar' with: Anindya Ardhana (P), 0822 4817 2839
- An 'Alamat vaksinasi' section with: Taman Permata Residence Blok A No. 3, Kebayoran Baru, Jakarta Selatan, DKI Jakarta (Belok kiri pertama setelah Pos Satpam)
- A 'Waktu vaksinasi' section with: 12 September 2022 • 17:00 WIB

A blue 'Selanjutnya' button is at the bottom.

  
The right screen shows:

- A section 'VAXIGRIP TETRA®' with: Vaksin Influenza Kuadivalen, 1x Rp400.000
- A section 'VARILRIX®' with: Vaksin Varicella/Cacar Air, 1x Rp700.000
- A summary table:

Total harga	Rp1.100.000
Harga sudah termasuk jasa dokter, biaya transportasi, dan PPN.	
Disposables & Personal Protective Equipment	Rp25.000
Payment Code	67
Total pembayaran	Rp1.125.067
- A 'Metode pembayaran' section with: BCA Virtual Account, Bank Central Asia (BCA) and Invoice
- A note: 'Pastikan metode pembayaran yang dipilih sudah tepat.' and 'Setelah klik "Bayar", Anda tidak dapat lagi mengganti metode pembayaran.'
- A large blue 'Bayar' button at the bottom.

For each upcoming vaccination, the doctor inputs the details of the patients who need to be vaccinated and the specific vaccines required, based on the agreement made during the previous visit. This pre-filled information allows users to simply confirm the details: the registrant, vaccination address, and the schedule.

Once all the necessary information is confirmed and complete, users can review the data and proceed to payment. This design reduces the effort from users, ensuring a more efficient process for scheduling and confirming their next vaccination appointment.

# Results

## Highlight 7: Homepage

The homepage of the app is designed to highlight all user needs and display important information accessibly.

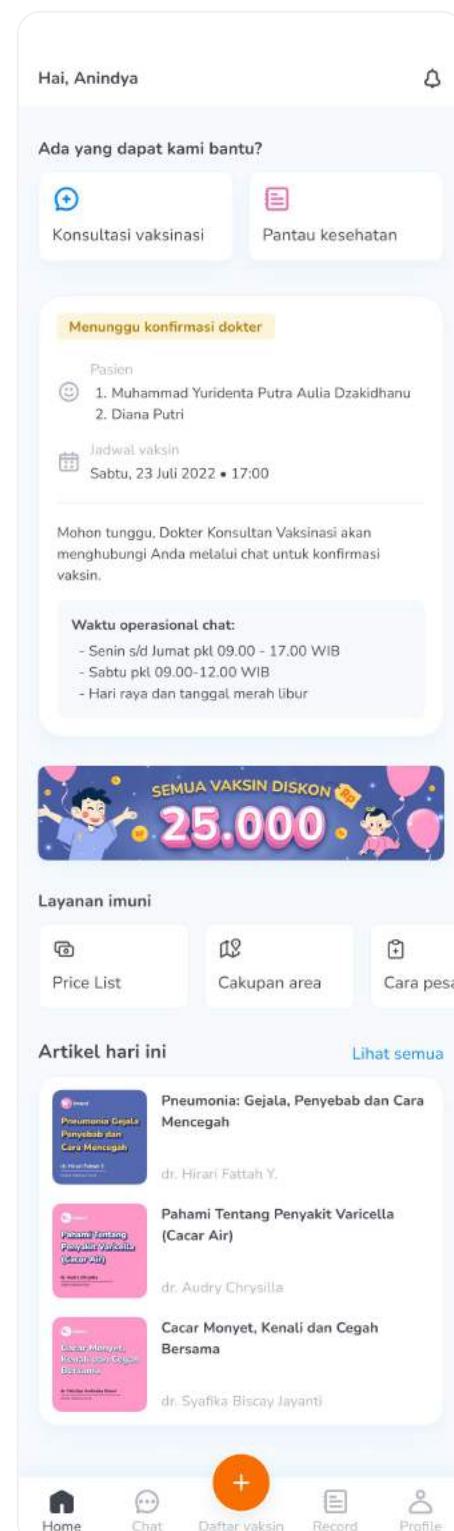
## Design process

### Homepage

#### Wireframe



#### Hi-fi design



The homepage allows users to easily access imuni's core services, such as vaccination consultations with doctors and patient health monitoring. Users can also view real-time updates on their vaccination process from the homepage.

Additionally, the homepage features the latest information about imuni, including available promotions. It also provides details about our various services, ensuring our users are aware of all their options. Finally, the homepage includes health-related articles.

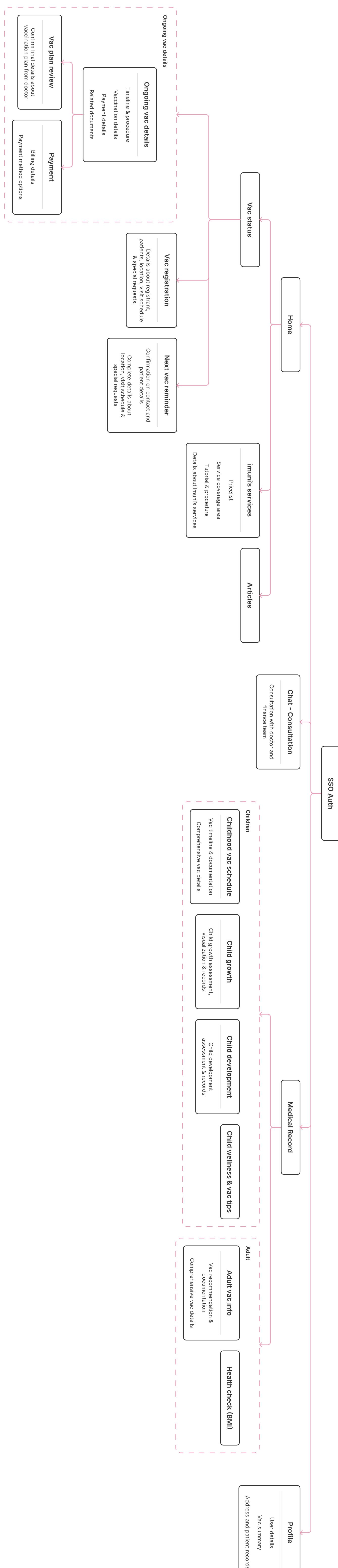
## Achievement

Achieved 80% of our sales revenue through our new digital system

As a result of our innovative digital system (which consists of our user mobile app and dashboard), we were able to achieve 80% of revenue through digital channels.

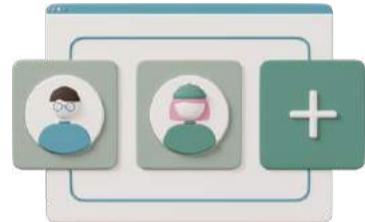
# Site map

With the sitemap, we can estimate the effort needed to implement the entire system, especially the mobile app.



# Other impacts

Our initiative to create an integrated digital system, consisting of a mobile app for users and a back-office web for our team, has led to several significant impacts:



## 1. Better onboarding

Faster and more user-friendly new user registration, resulting in rapid growth of our users and orders.



## 2. Efficient order processing

Centralized vaccination records have reduced errors and data loss, making the order processing more efficient.



## 3. Scalability

Designed for our growing user base & order volume, this system able to accommodating our expanding operations.



## 4. Data-informed decision making

The system provides valuable insights, allowing us to make data-driven improvements in our services and user engagement strategies.

# Things I've learned from this project

## 1. Interdisciplinary collaboration

I learned effective interdisciplinary communication, especially about the value of diverse expertise collaboration.

## 2. Alignment with developers

I gained insights into collaborating with the tech team, emphasizing the significance of aligning goals and perspectives to ensure project quality.

## 3. Efficient customer journey

I learned how to design streamlined & flexible user flows, optimizing our customer journey for diverse scenarios.