IIM SHILLONG

blTeSys
Systems and Analytics Club

ProdMad 4.0 - Genesis

BioMorph

TEAM

INNOVATORS

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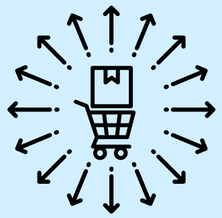
Problem Statement

Metropolis hospitals face high demand for bio-printed organs, challenged by logistics, timely availability and post-surgery monitoring.

Why this problem need to be solved

Rising Demand for Organ Transplants
As bio-printing becomes more accessible, patient expectations for timely transplants are higher, creating pressure on healthcare providers to deliver organs quickly and seamlessly.



Need for Personalized Healthcare
Organ transplants are complex and tailored to individual patients' DNA. A precise, automated system can help hospitals provide more personalized care, reducing the risks of rejection and complications.

Enhancing Recovery and Reducing Readmission
Proper post-operative monitoring can significantly decrease recovery time and reduce hospital readmissions, ultimately leading to better patient outcomes and optimized healthcare resources.

Major Challenges

Managing DNA integration, scheduling and equipment upkeep to ensure timely organ availability.

Ensuring patients follow post-transplant protocols with continuous health tracking to reduce complications.

Safeguarding sensitive health data and DNA information to maintain trust and comply with regulations.

USER PERSONAS

Primary Customer Segment: Patients

NAME Himesh Kumar

AGE 49

LOCATION Kanpur

HEALTH CONDITION	Recently diagnosed with chronic kidney disease, requiring a bio-printed kidney transplant.
USER NEEDS	1. Timely access to transplant 2. Transplant Updates 3. Post-surgery support
PAIN POINTS	1. Unavailability of Organs 2. Health Anxiety 3. Uncertainty of Timings

Secondary Customer Segment: Hospitals

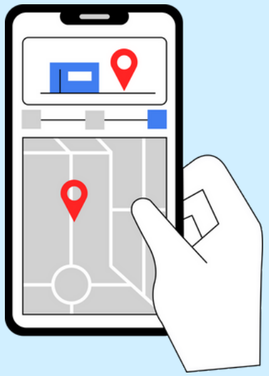
HOSPITAL SPM Hospital

SPECIALIZATION Kidney, Liver and Bladder Transplant

LOCATION New Delhi

CURRENT SITUATION	Diagnosing organ transplant patients through organ donation creating unavailability and kiosk.
NEEDS	1. Organ Bio-Print Efficiency 2. Real-time patient monitoring 3. Resourse Allocation and Optimisation
PAIN POINTS	1. High Demand, Scheduling Complexity 2. Post-transplant Monitoring Challneges 3. Cost Constraints and Resource Wastage

FEATURES



Real-Time Organ Tracking

For Patients: Provides timely updates on the bio-printed organ's progress, reducing anxiety related to waiting and uncertainty. Patients gain visibility into each stage of the printing process, fostering trust and reducing stress.

For Hospitals: Enhances resource allocation and reduces scheduling complexity. Hospitals can better plan patient admissions and staffing by tracking organ readiness, thereby optimizing workflows.

Personalised Notifications

For Patients: Sends tailored alerts for organ readiness, hospital appointments and post-op care. This feature ensures that patients stay informed without the burden of managing complex schedules, improving adherence to recovery plans.

For Hospitals: Automates communication, reducing administrative workload. This allows hospital staff to focus on core responsibilities while ensuring patients receive timely and accurate information.

FEATURES

Doctor-Patient Communication

For Patients: Offers in-app messaging and video consultations, enabling easy access to follow-up care and reassurance when needed. This communication channel helps manage post-surgery health concerns and alleviates stress around potential complications

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For Hospitals: Streamlines follow-up processes and improves monitoring efficiency by providing an organized platform for patient interactions, enhancing the quality of care and support provided post-transplant.

Health Progress Monitoring

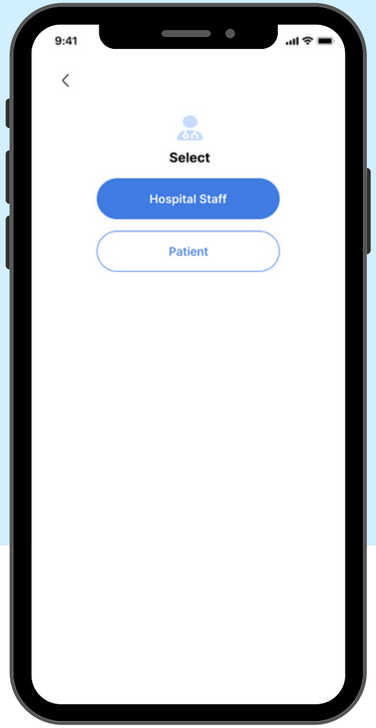
For Patients: Delivers personalized health metrics and recovery milestones, empowering patients to track their healing journey. By visualizing progress, patients feel more in control and can actively participate in their recovery.

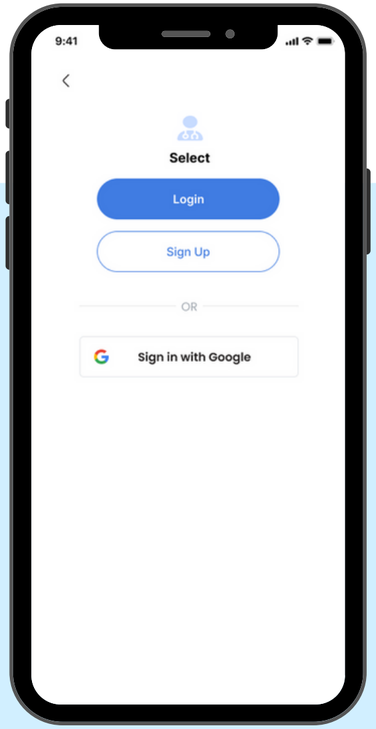
For Hospitals: Enables hospitals to remotely monitor patient recovery, reducing the need for frequent in-person visits and easing the strain on hospital resources. Data from patient health metrics also aids in adjusting treatment plans for better outcomes.

Process Flow Diagram (Intro and login)

The **INTRO** Page of the Application.

Choose between the two users (as mentioned in personas) and proceed to login.





The **LOGIN** and **SIGN UP** page (for both users)

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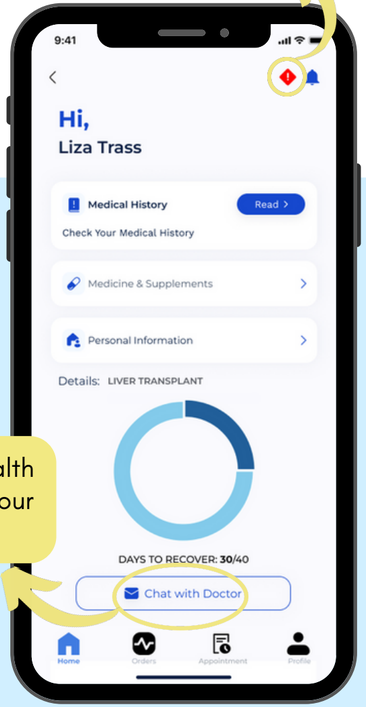
Process Flow Diagram (Patients)

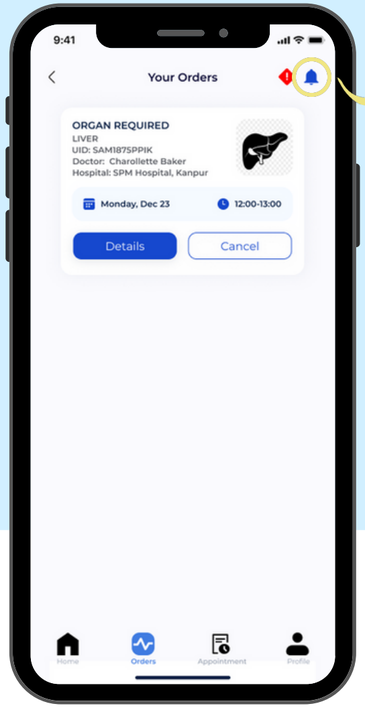
For any emergency, click the button



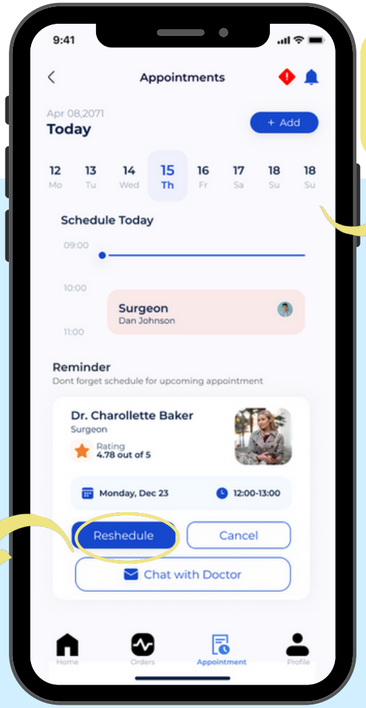
Ask for health tips from your doctor

The **HOME** page where the patient can see his medical history, personal information and recent transplant details.

YOUR ORDERS section shows the bio organ order details and easy-tracking with a single click.



Notifications received will be displayed here.

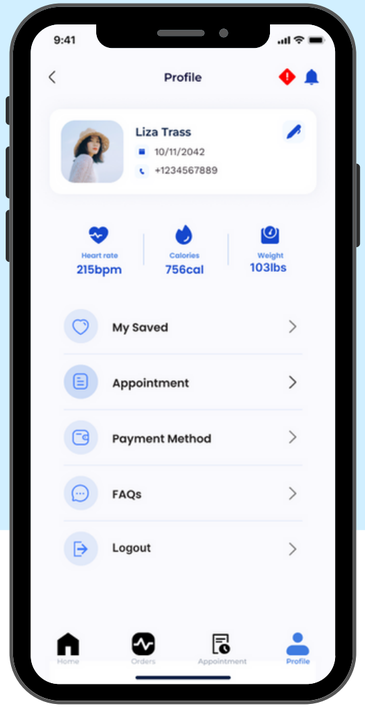


Surgery/ Appointment schedule linked with calendar

Easy reschedule button

The **APPOINTMENTS** section contains detail page for the patient containing the information of arrival of the organ and the schedule of surgery.

The **PROFILE** page displays all the related details, previous payments and FAQs.



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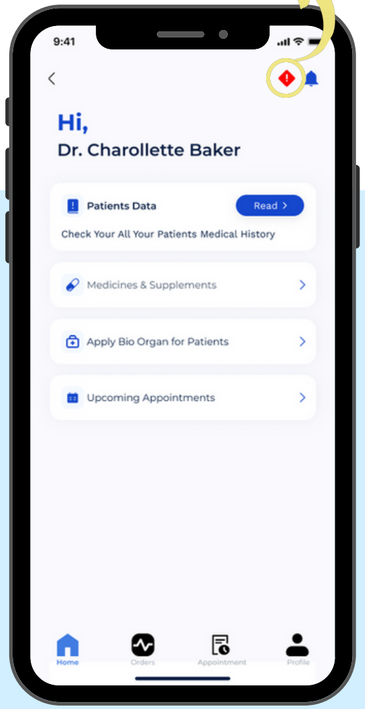
Process Flow Diagram (Doctors/Hospital)

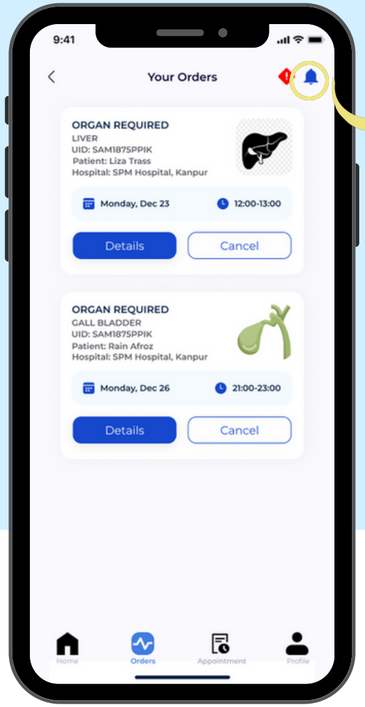
Previous emergency treatments

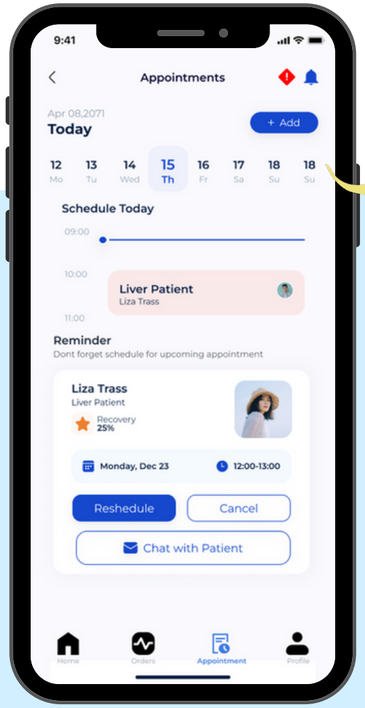


The **HOME** page for the doctor including the patient's data, bio organs application and upcoming appointments.

The **YOUR ORDERS** section displays the previous order details (only doctors/hospital staff can order a bio organ for a patient)

Notifications about the further treatments and chats



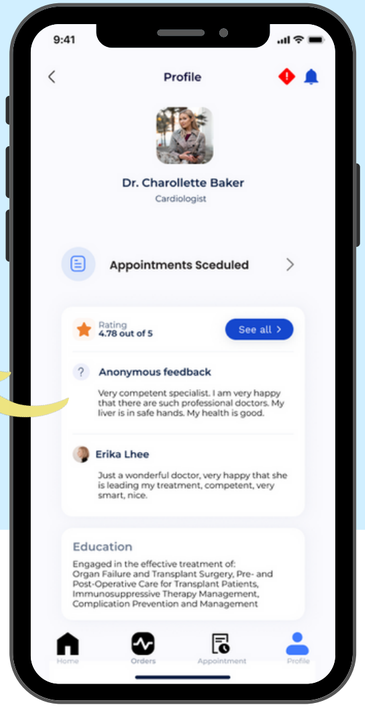


Surgery/ Appointment schedule linked with calendar

The **APPOINTMENTS** page contains the information of all the appointments and surgery.

The **PROFILE** page contains the details of previous appointments, feedback etc.

Feedbacks of the doctor (anonymous or named)



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Phased GTM

0-6 Months

Build Awareness

- Partner with top hospitals for early credibility and testing.
- Publish content (whitepapers, case studies) on bio-printing.
- Host webinars and demo sessions.

Channels: Conferences, biotech journals, webinars.

6-12 Months

Pilot Programs

- Launch 3-5 pilot partnerships with leading hospitals in tier 1 cities.
- Gather feedback from doctors & patients for improvements.
- Engage with healthcare influencers for advocacy.

Channels: Direct sales, social media, professional networks.

12-24 Months

Expansion

- Launch sales teams for secondary hospitals in tier 2 and 3 cities.
- Provide staff training & certifications.
- Set up referral programs with early adopters.

Channels: Direct outreach, certifications, referrals.

Pricing Strategy

- **Subscription Model** with tiered packages based on hospital size and needs.
- **Volume Discounts** for large hospital networks.

Key Partnerships

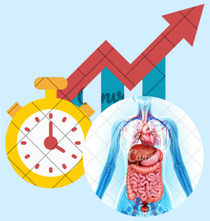
- **Tech Providers:** For advanced AI and bio-sensor capabilities.
- **Data Privacy Firms:** Ensuring security & compliance.
- **Research Institutions:** Collaboration for ongoing innovation.

METRICS

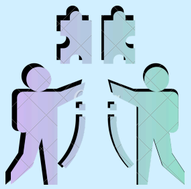
Adherence Rate to Post-Transplant Protocols: Percentage of patients who consistently follow prescribed post-transplant protocols

Adoption Rate in Target Hospitals Percentage of hospitals making use of the BioMorph app.

Patient Trust Rating: Percentage of patients expressing satisfaction with data privacy measures in surveys.



Organ Production Efficiency: Time taken from order placement to bio-print completion.



Organ Compatibility Rate: Percentage of organs accepted without complications.

Post-Op Recovery Rate: Rate of recovery as per patient adherence to optimized post-transplant protocols.

User Engagement: Frequency of doctor and patient interactions with the BioMorph Hub for feedback and monitoring.

Data Security Compliance: Measured by incident rates or breaches per year.

User Feedback and Ratings: This can provide qualitative insights into user satisfaction, feature requests, and issues.

BioMorph App redefines the organ transplant experience - bringing transparency, real-time tracking and personalized care to patients' fingertips.

THANK YOU

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