



Technology Infrastructure Presentation



Author: Dr Cheelo

Created with Pi

CONTENTS

Project Vision

The Problem

Our Solution

Platform Users

Core Platform
Modules

Family Registration
System

Doctor Field App

Household Health
Records

Home Visit Workflow

Subscription
Payment System

Data Dashboard for
Operations

Public Health
Dashboard

Doctor Performance
Dashboard

System Architecture

Suggested Tech
Stack

Data Security
Requirements

Scalability

Development
Timeline

What We Need From
the Tech Team

The Bigger Vision

1. Project Vision

Bringing Family Medicine to Every Household

Goal:

Build a digital health platform that allows doctors to manage families instead of hospital queues.

The system will support:

Household registration

Home visit scheduling

Preventive health monitoring

Real-time health dashboards

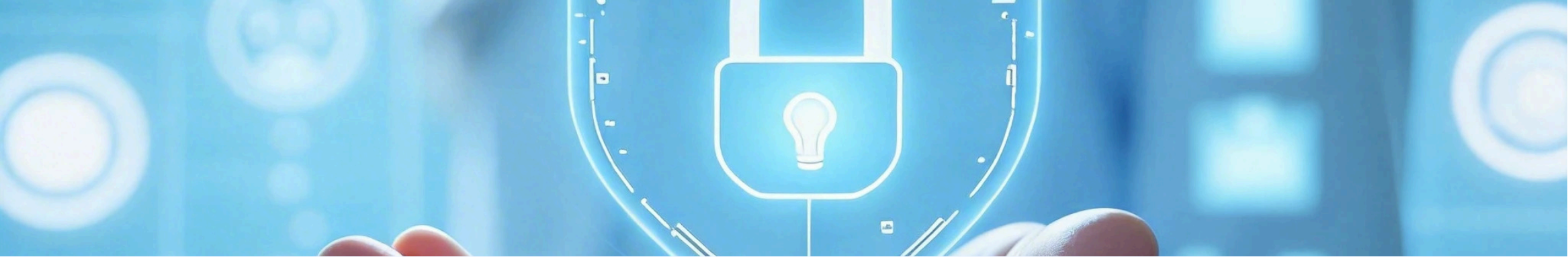
Doctor-family allocation

Electronic medical records

Chronic disease management

Target model:

1 doctor → 500 families



2. The Problem

Current healthcare system challenges:

Hospitals
overcrowded

Preventive care
neglected

No continuity of
care

Poor chronic
disease monitoring

Limited health data
for planning

What is missing:

A community-centered digital primary healthcare system.

3. Our Solution

A Digital Family Healthcare Management System

Key components:



Family Registration App



Doctor Field Application



Central Health Data Platform



Operations Dashboard



Public Health Analytics System

4. Platform Users

The system will have four main users:

Families

- 1 Register household
- 2 Request doctor visits
- 3 Track health history

Doctors

- 1 Manage assigned families
- 2 Conduct home visits
- 3 Update patient records

Operations Team

- 1 Assign doctors
- 2 Monitor visits
- 3 Track subscriptions

Management

Monitor system performance

Track revenue

Track health outcomes



5. Core Platform Modules

The technology will include six key modules.

Family Registration System

Doctor Visit Management

Electronic Health Records

Subscription & Payments

Health Monitoring & Alerts

Data Dashboards

6. Family Registration System

Families should be able to:



Register household members



Upload ID details



Enter medical history

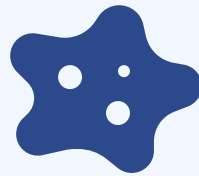


Provide location

Information captured:



Household size



Chronic diseases



Pregnancy status



Elderly residents

Output:

Each household receives a digital family health profile.



7. Doctor Field App

Doctors will use a mobile application.

Functions:

- 1 View assigned families
- 2 Schedule home visits
- 3 Record consultations
- 4 Prescribe medications
- 5 Flag high-risk patients

Doctor dashboard should show:

- 1
Number of families assigned
- 2
Visits completed
- 3
Upcoming visits

8. Household Health Records

Each household will have a digital health record.

The system should track:

Medical history

Vital signs

Chronic diseases

Medications

Vaccinations

Important feature:

Doctors must access records offline during home visits.



9. Home Visit Workflow

Step 1: Family registers

Step 2: System assigns doctor

Step 3: Doctor schedules visit

Step 4: Doctor conducts home consultation

Step 5: Medical data uploaded to system

Step 6: Follow-up reminders generated



10. Subscription Payment System

Families pay \$30 per month.

Technology must support:

- 1 Mobile money payments
- 2 Subscription tracking
- 3 Payment reminders

Integration required with:

- 1 Airtel Money
- 2 MTN Mobile Money
- 3 Zamtel Money



11. Data Dashboard for Operations

Operations team must monitor:

1

Total families registered

2

Active subscriptions

3

Doctor workload

4

Visits completed

5

Missed visits

Dashboard must update in real time.



12. Public Health Dashboard

Management dashboard should track:



Hypertension prevalence



Diabetes prevalence



Pregnancy tracking



Vaccination coverage

This creates population health intelligence.



13. Doctor Performance Dashboard

Track:

1 Families per doctor

2 Visits per week

3 Patient satisfaction

4 Chronic disease outcomes

Helps ensure quality care delivery.

14. System Architecture

The system should include:

Mobile Applications

Family App

Doctor App

Backend System

Cloud database

API infrastructure

Web Dashboard

Admin panel

Analytics dashboard





15. Suggested Tech Stack

Possible technologies:

Frontend

Flutter or React Native

Backend

Node.js / Python

Database

PostgreSQL

Cloud infrastructure

AWS or Google Cloud

Analytics

Power BI or Metabase



16. Data Security Requirements

The system must include:

1 Encrypted
medical records

2 Secure
authentication

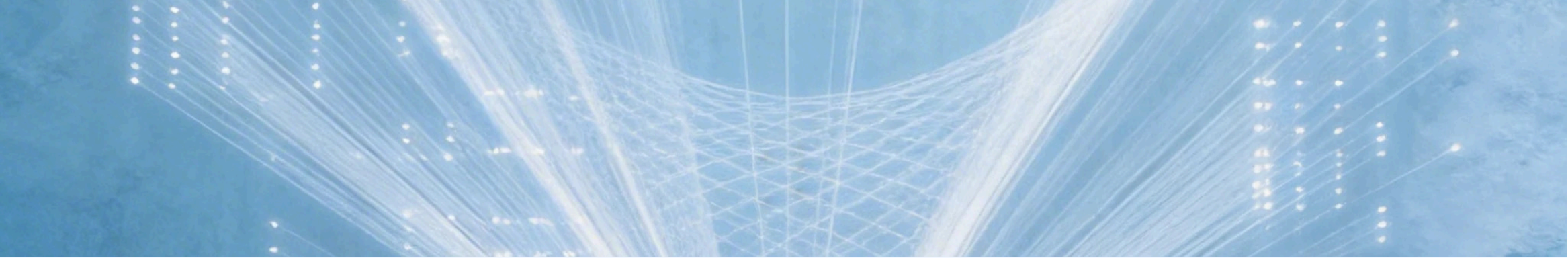
3 Role-based
access

Compliance principles:

Patient
confidentiality

Secure data storage

Audit logs



17. Scalability

The system must support future expansion to:

- 1** 10,000 families
- 2** 20 doctors
- 3** Multiple districts

Design for national scalability.

18. Development Timeline

Expected timeline:

Month 1: System design

Month 2: Prototype development

Month 3: Testing and pilot launch

Initial deployment:

Chongwe pilot program





19. What We Need From the Tech Team

We need the team to:

- 1 Design system architecture
- 2 Build mobile applications
- 3 Build backend infrastructure
- 4 Develop dashboards
- 5 Maintain platform

Technology partners will receive:

8% of total revenue



20. The Bigger Vision

This platform can evolve into:

Zambia's largest primary healthcare network

A national disease surveillance system

A digital community health platform

Future potential:

Expansion across Africa.

A blue wax seal with a floral design is centered on a white envelope. The seal is circular and features a detailed, embossed floral pattern. The envelope is partially open, showing the flap on the left side. The background is a soft, light blue gradient.

Thank You