



# Intelligent National Health Management Platform

*Revolutionizing Healthcare Access Through Digital Innovation  
Connecting Care, Saving Lives, Powering the Future of Medicine*

***Team DOT\_ZIP***

Kushal Prasad Joshi | Bibek Ghimire | Shasanka Acharya | Kamal Rokaya

# AGENDA

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The Problem

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The Problem



Our solution

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The Problem



Traction and Validation



Our solution

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Solution Architecture

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Platform Workflow



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Social Impact



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Sustainable Business Model



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National Rollout Strategy

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Infrastructure and Operational Cost



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Solution Architecture



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National Rollout Strategy

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-  The Problem
-  Traction and Validation
-  Platform Workflow
-  Sustainable Business Model
-  Infrastructure and Operational Cost
-  Our solution
-  Solution Architecture
-  Social Impact
-  National Rollout Strategy
-  Intelligence & Analytics Layer

# THE PROBLEM



NPR 50M+ estimated annual loss in Nepal alone from repeated tests.

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## Fragmented Medical Records

- ❑ Every hospital, every lab, every clinic is an island.
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- ☐ Repeat tests – waste of time & money
- ☐ Lost prescriptions – delayed treatment
- ☐ Emergency visits – doctors work blind



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## System Suffers

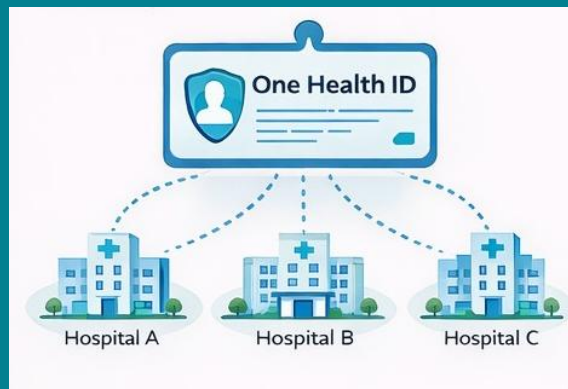
- ☐ No centralized health intelligence
- ☐ Outbreaks detected too late
- ☐ Billions lost in redundant diagnostics



**NPR 50M+ estimated annual loss in Nepal alone from repeated tests.**



# OUR SOLUTION






*"Centralized. Intelligent.  
Connected Healthcare."*

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## Our Platform

-  One platform. One lifetime record. Everywhere.
-  User device first design & encrypted cloud storage.
-  Emergency-ready architecture with instant override protocols

# OUR SOLUTION



- **Unified lifetime health record:** from birth to golden years
- **Global UUID:** every patient, hospital, doctor uniquely identified
- **Consent-first architecture:** patient controls who sees what
- **Break-glass emergency override:** seconds matter, audit trails protect
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# TRACTION & VALIDATION

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## Problem Validation

### Conducted a Google form survey

- ✓ Majority have lost prescriptions or medical report at least once
- ✓ 90% + face difficulty accessing medical history when visiting new hospital
- ✓ Overall satisfaction with current medical record keeping system is low to very low

## Solution Validation

### Survey responses indicate strong demand for:

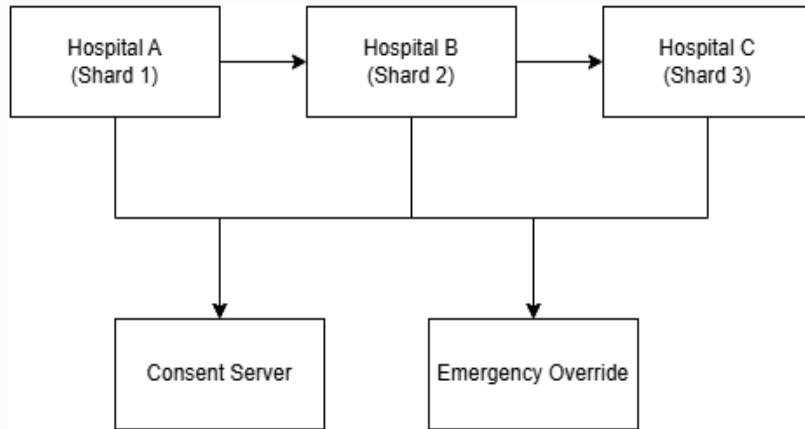
- ✓ Centralized digital medical records
- ✓ Easy access to medical history across hospitals

### Informal discussions with peers and healthcare worker confirm:

- ✓ Repeated diagnostics are common due to missing records
- ✓ Digital access would save time, money, and effort

# SOLUTION ARCHITECTURE

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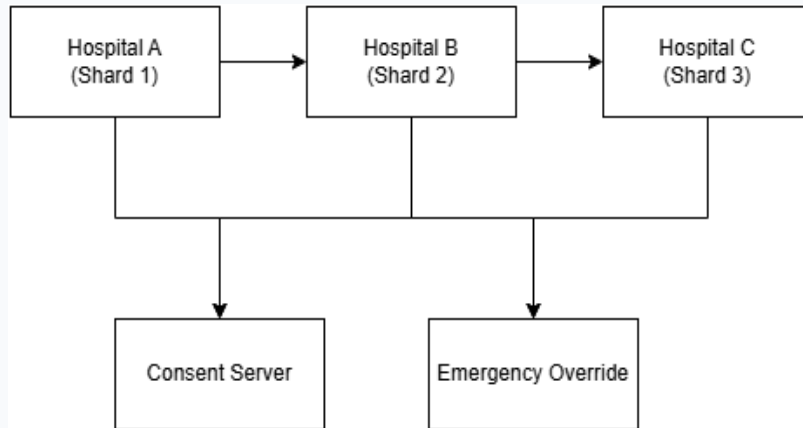


## Security Foundation

- End-to-end encryption
- Role-based access control
- Patient-controlled permissions

# SOLUTION ARCHITECTURE

## Core Components



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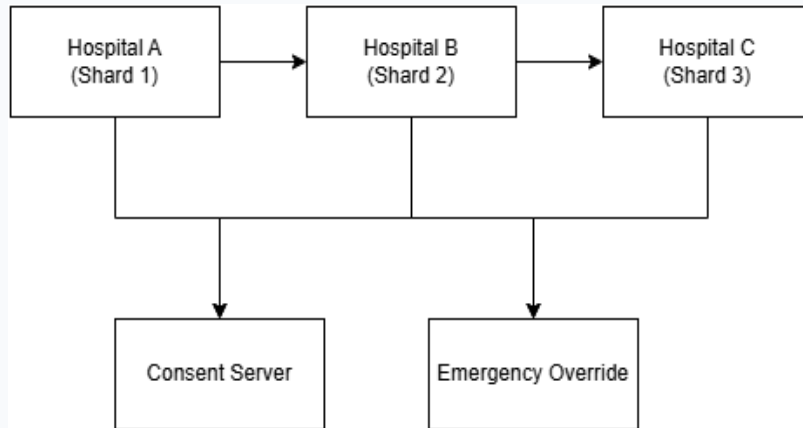
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## Core Components



**Patient are global**

- One UUID, One record



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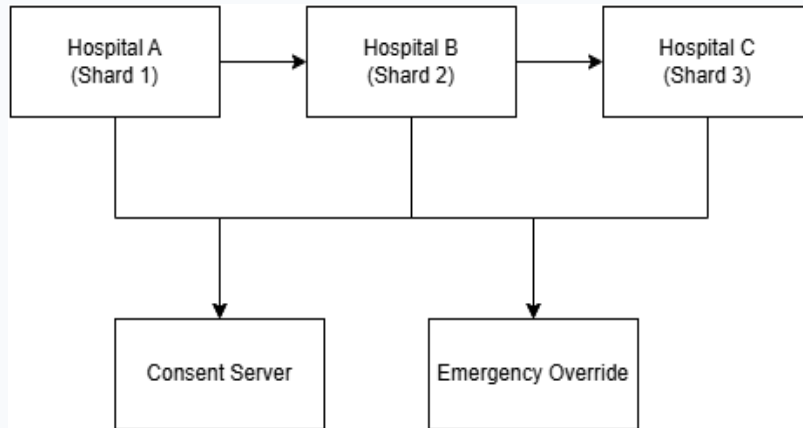
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### Doctors, Nurses, Labs are local

- Must belong to a verified hospital/organization



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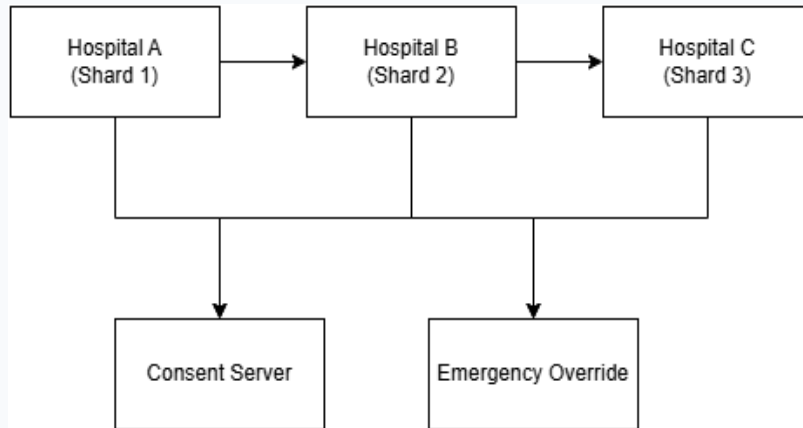
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- Approves every non-patient user (zero trust onboarding)



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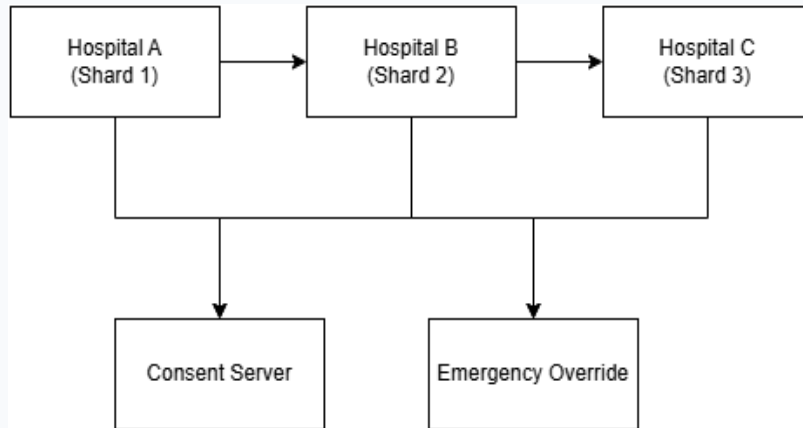
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### All Access Audited

- Who? What? When? Why? Immutable logs.



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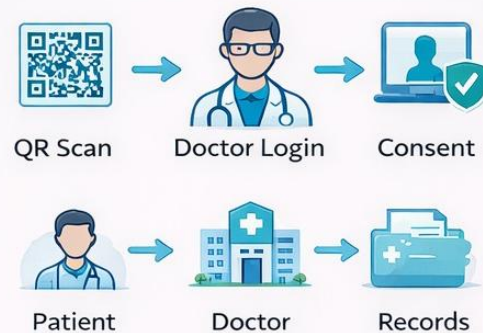
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# PLATFORM WORKFLOW

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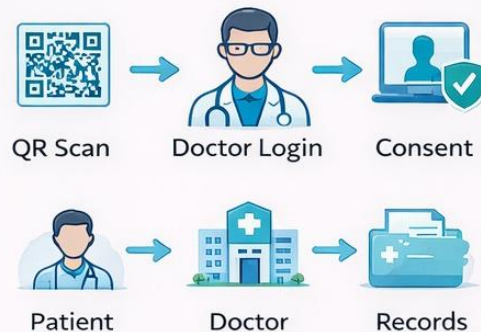
One secure **Health ID** connects patients, **doctors**, and **hospitals**—instantly.

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Gets QR ready UUID



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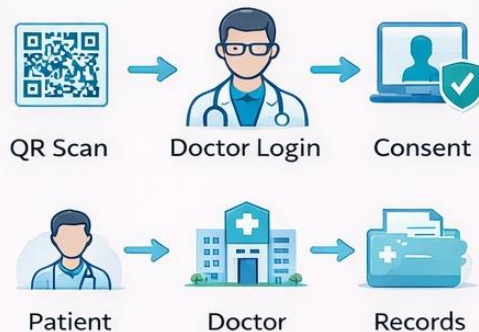
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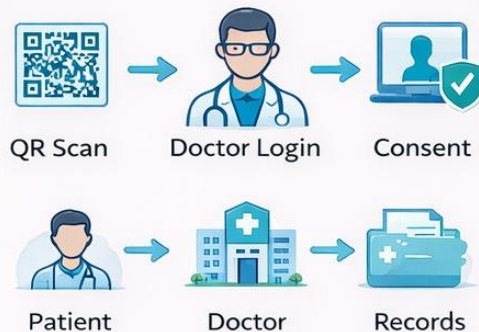
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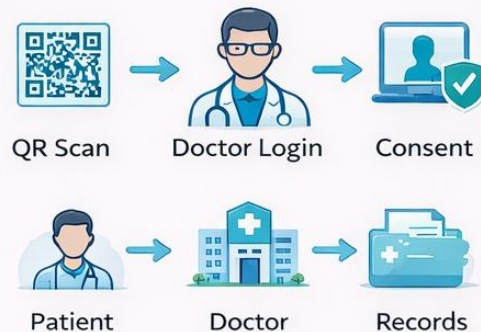
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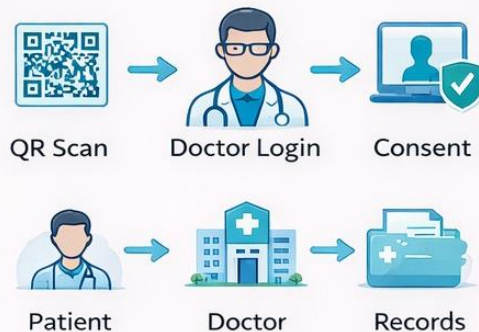
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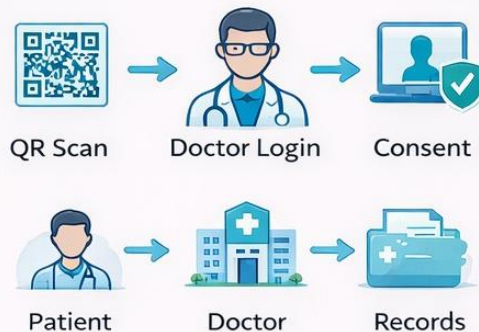
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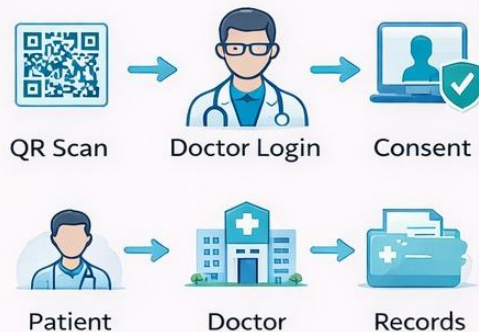
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## System Admin

See full audit trail



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## Patient-controlled consent

- OTP-based one-time access
- Time-bound (limited time access)
- Revocable anytime

## Emergency override (break-glass)

- One-click access with mandatory justification
- Permanent audit record, no deletion ever

## Defense in depth

- JWT with role-based access control (RBAC)
- Column-level encryption for PII (national ID, phone)
- Bcrypt password hashing (production ready)
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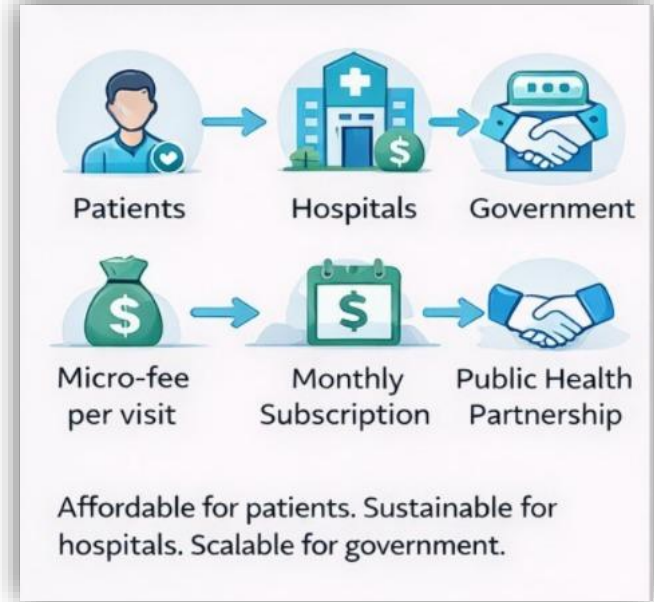
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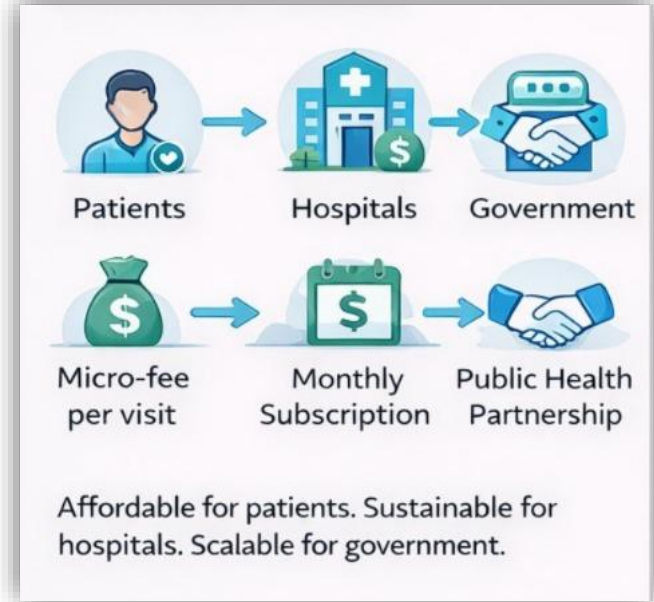
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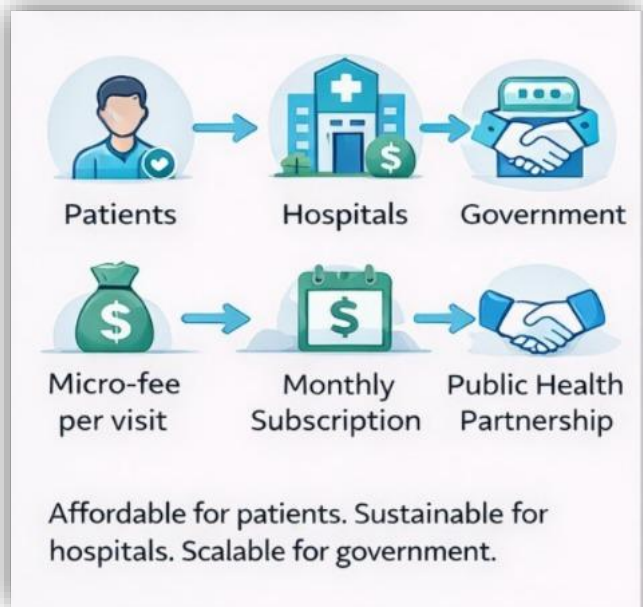
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We designed for scale from day zero.

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Every patient's lifetime health journey → the richest dataset on earth.



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Empowers the nation: data-driven health policy.

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Government pays: for national intelligence & outbreak control

# THANK YOU

*Together, we can transform healthcare for every citizen.*