

Smart Health Solutions for Solapur Municipal Corporation

A Technology-Enabled Smart Public Health Management System

College Name : MIT WPU

Team Name : THINKFINITY

TEAM MEMBERS : Diya Kosambia(1272250013)
Dhruvi Dave(1272251251)
Vedika Tiwari(1272251232)
Kritika Pawar(1272250649)
Arnav Sandandshiv(1272251337)

Current Public Health Challenges in Solapur

01

Unequal Access to Healthcare Services:

Rapid urban growth in Solapur has led to uneven distribution of healthcare facilities. Many citizens, especially in densely populated/peripheral areas, face difficulties in accessing timely and quality medical services.

02

Delayed Disease Detection & Response:

Lack of real-time health data and integrated surveillance systems causes delays in identifying disease outbreaks. By the time action is taken, health risks often escalate and affect a larger population.

03

Fragmented Health Data & Limited Citizen Engagement:

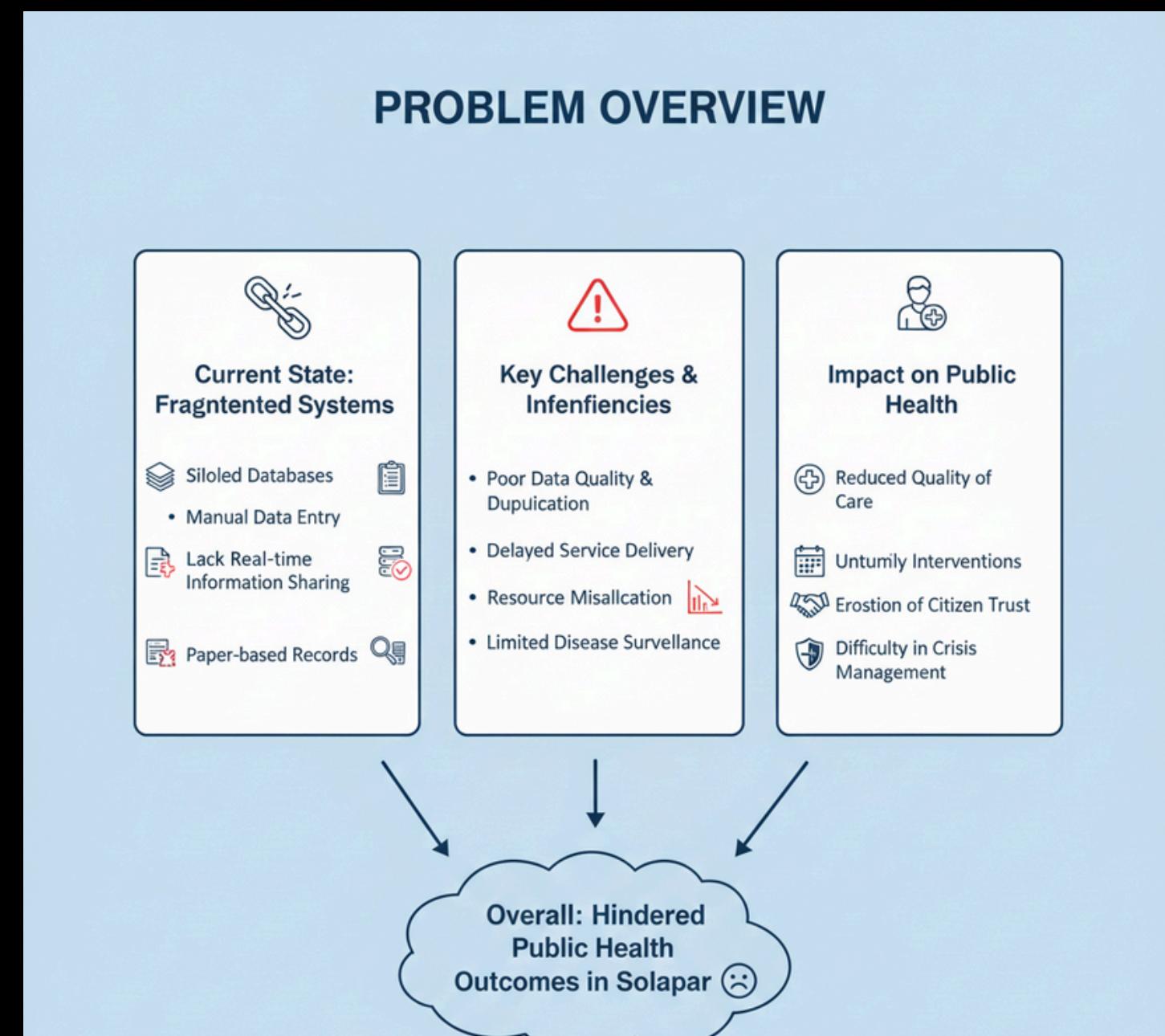
Health-related data is scattered across hospitals, laboratories, and municipal departments, resulting in poor coordination and slow decision-making. At the same time, citizens have limited digital platforms to receive preventive health information or share feedback.

Problem Overview

- Solapur Municipal Corporation serves a rapidly growing urban population with diverse healthcare needs. Despite ongoing public health initiatives, the city continues to face challenges in healthcare accessibility, disease surveillance, infrastructure monitoring, and citizen engagement.

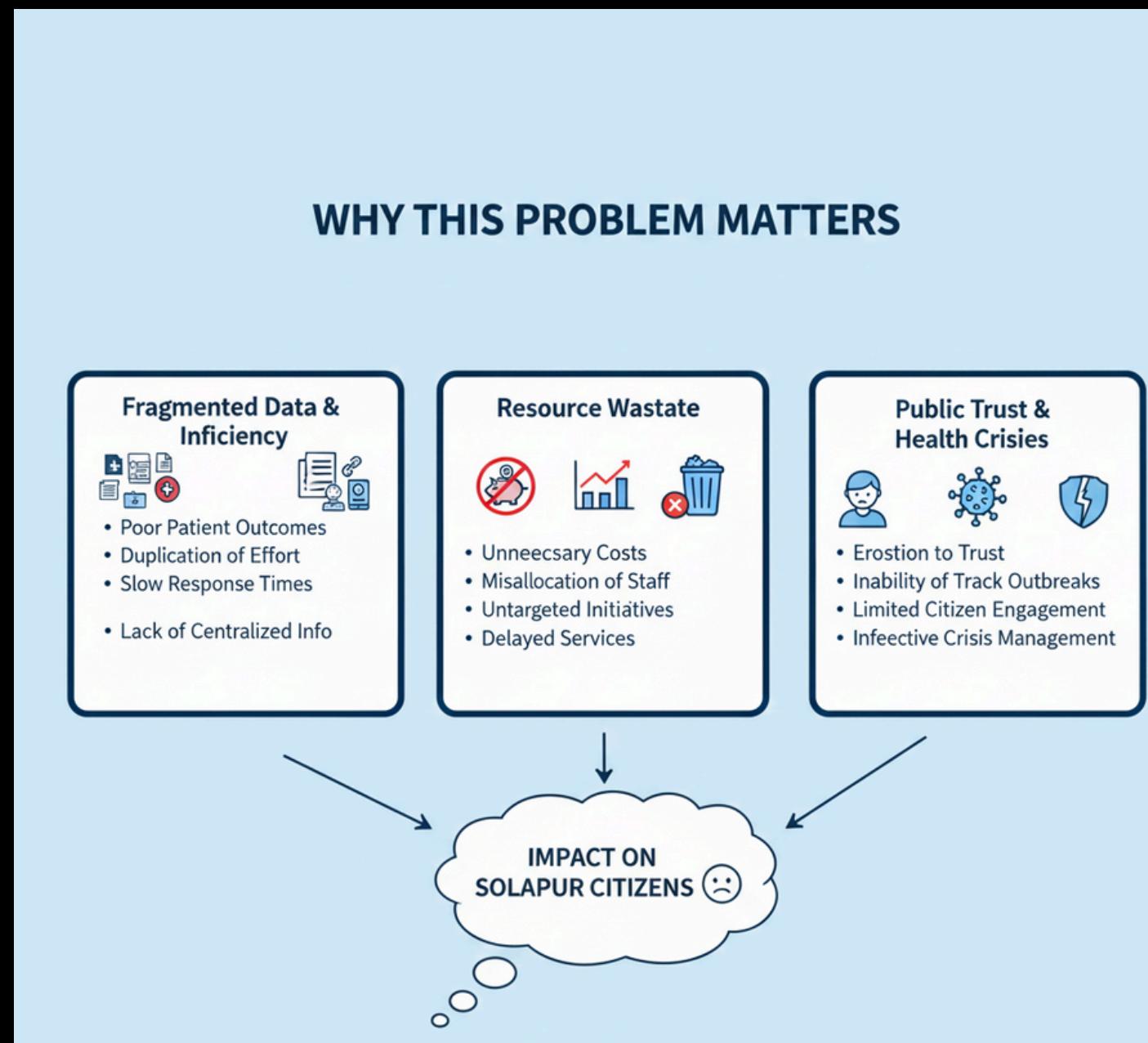
Key Issues Highlighted:

- Unequal access to healthcare
- Delayed disease outbreak detection
- Fragmented health data systems
- Limited preventive health awareness



Why This Problem Matters

- Public health directly affects productivity, economy, and quality of life
- Small delays in detection can turn into city-wide outbreaks
- Fragmented systems cause slow decision-making
- Citizens lack real-time health guidance



“A smart city is incomplete without a smart health system.”

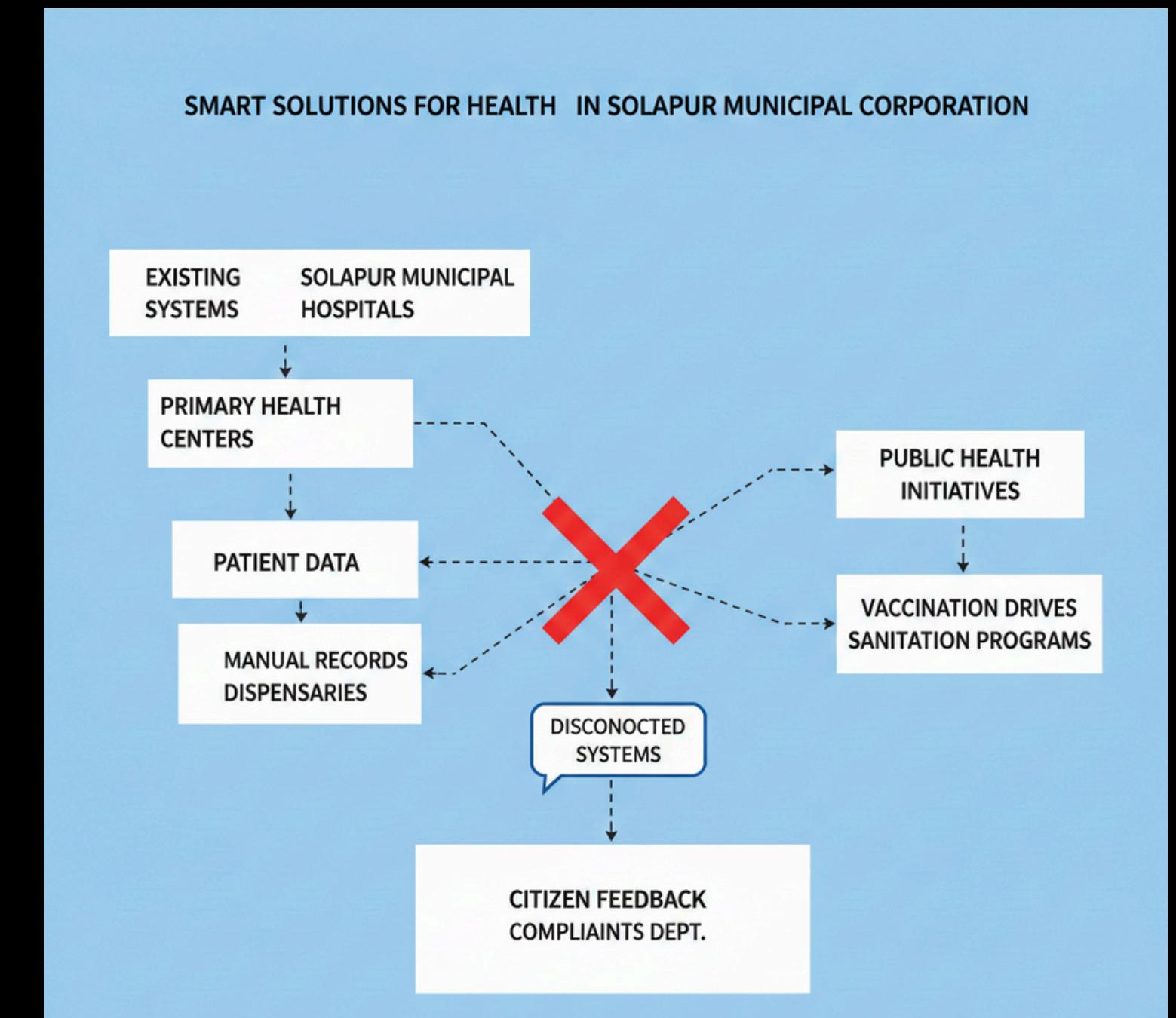
Existing System & Gaps

Current Scenario:

- Manual or semi-digital records
- Separate systems for hospitals, labs, and field workers
- No centralized health dashboard
- Reactive instead of proactive healthcare

Major Gaps:

- No real-time monitoring
- No predictive analytics
- Low citizen participation



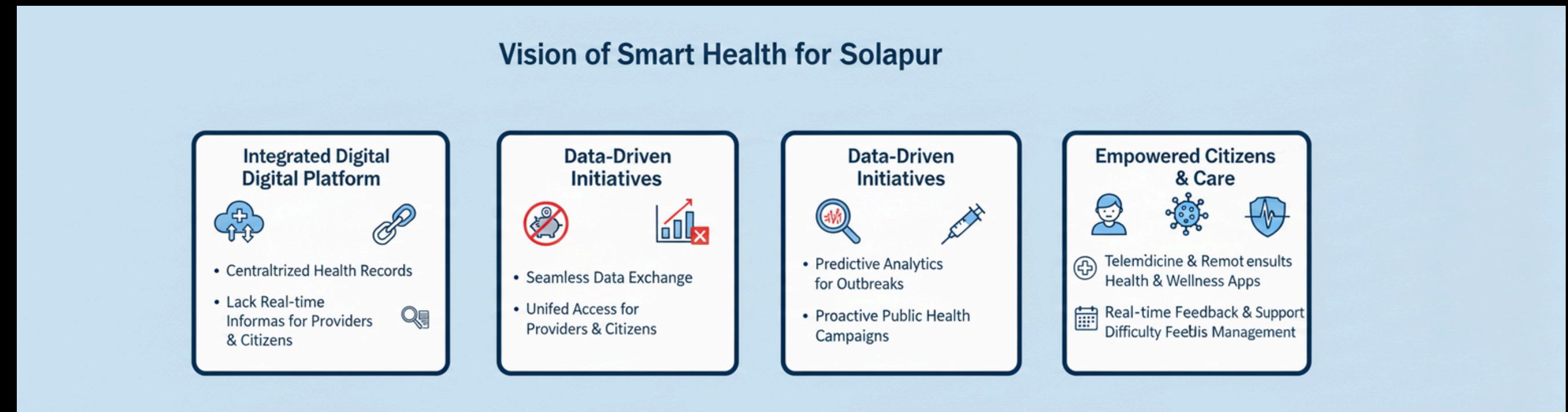
Our Vision

Vision of Smart Health for Solapur

- To build an integrated, real-time, data-driven Smart Public Health Management System that enables early disease detection, improves healthcare access, supports municipal decision-making, and actively engages citizens.

Vision Keywords:

- Integrated
- Real-time
- Predictive
- Citizen-centric



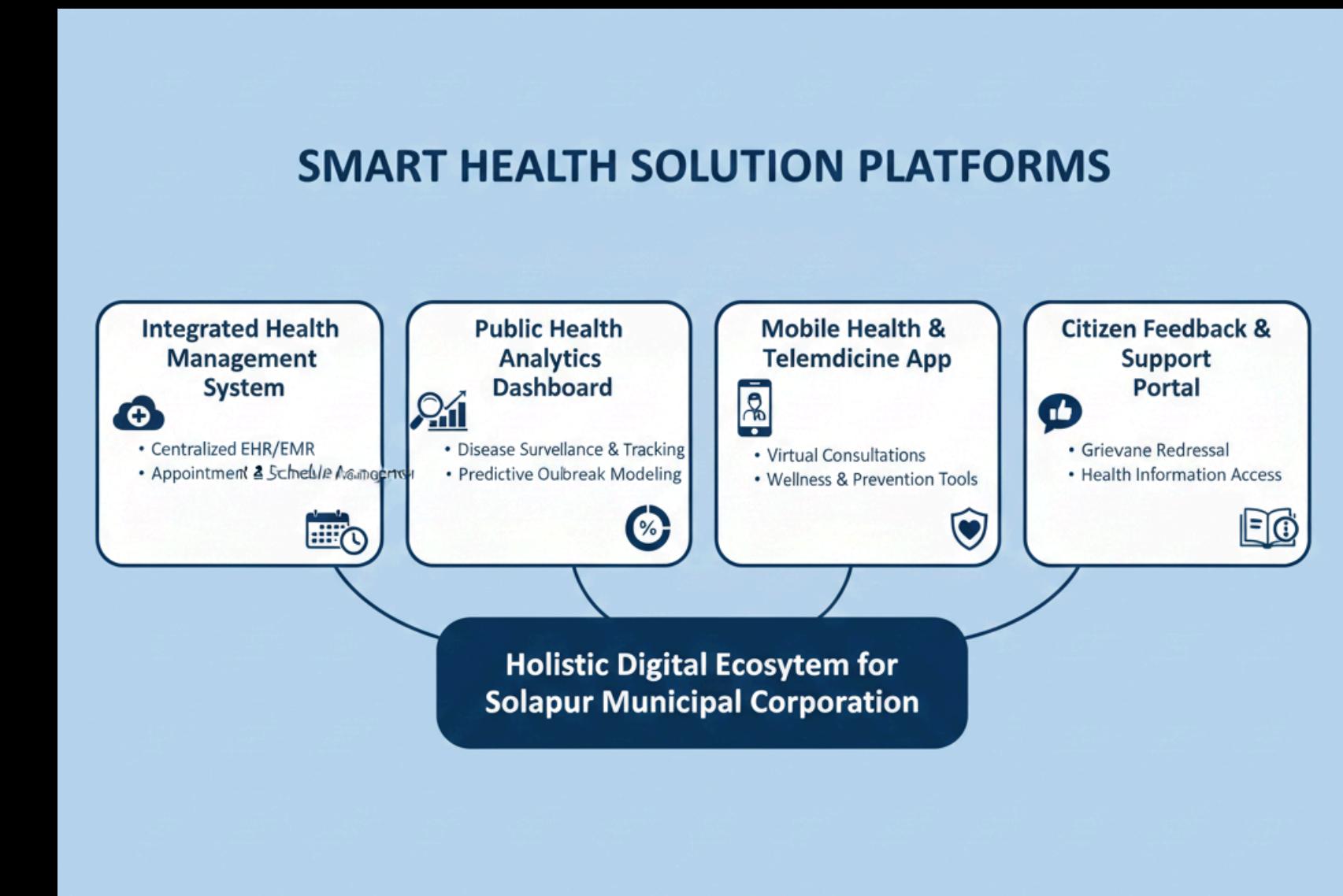
Proposed Solution – Overview

Smart Health Solutions Platform:

- We propose a centralized digital platform that connects hospitals, health workers, laboratories, municipal officials, and citizens into a single smart health ecosystem.

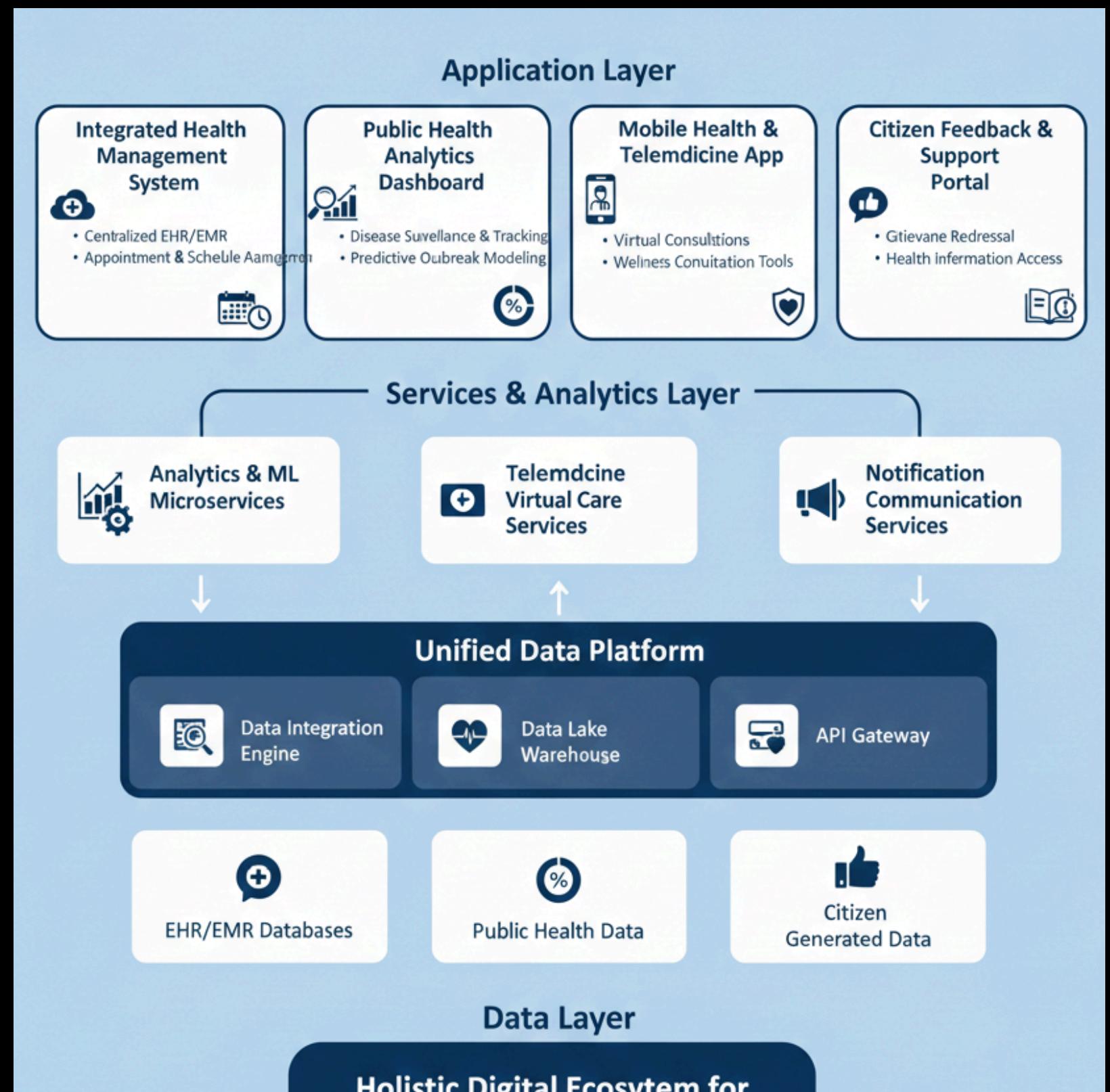
Core Components:

- Central Health Dashboard
- Disease Surveillance Module
- Infrastructure & Resource Monitoring
- Citizen Health Engagement App



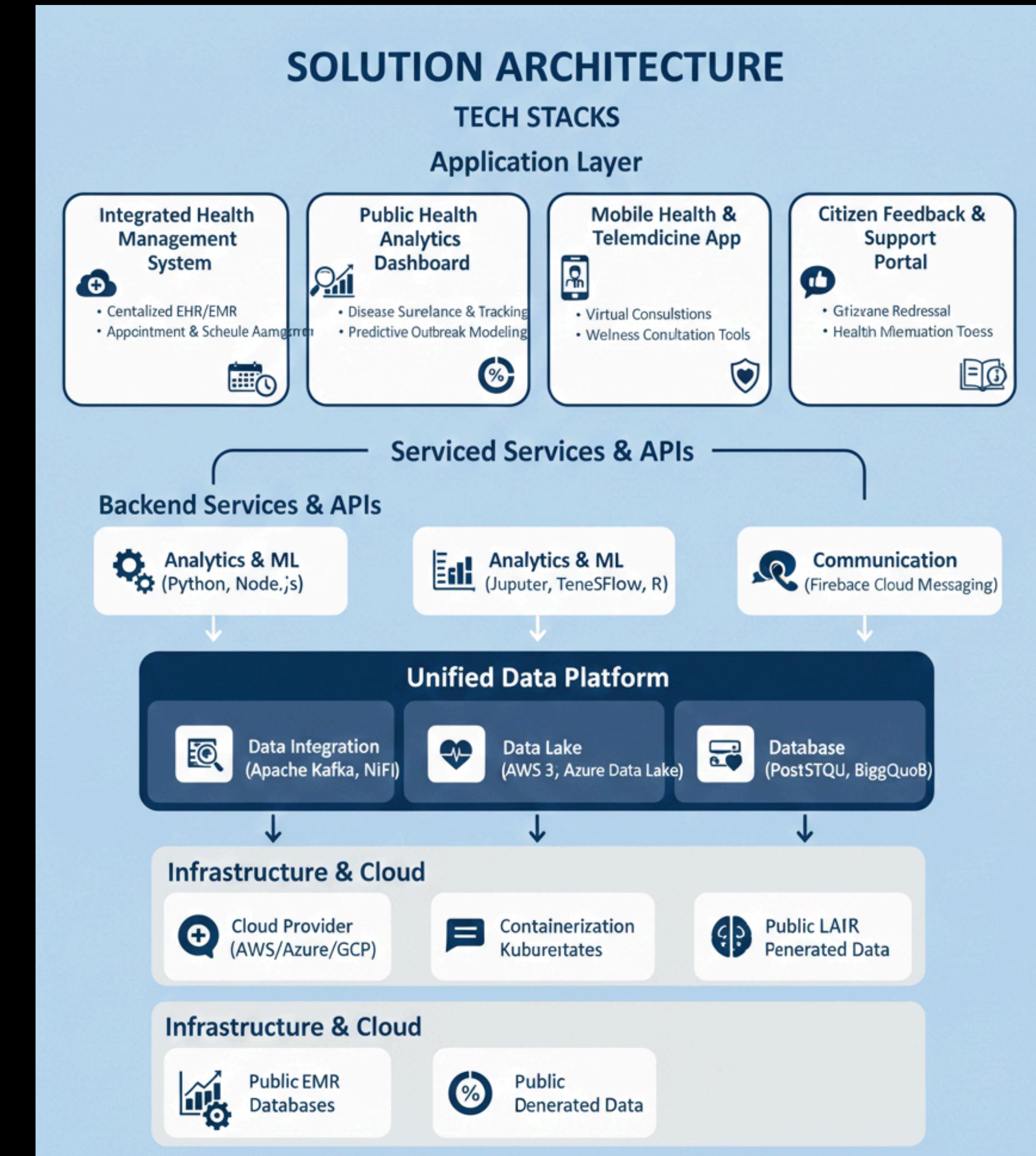
Solution Architecture

- Data collected from hospitals, clinics, labs, and field workers
 - Centralized EHR/EMR
 - Appointment & Schedule Management
- Real-time data sent to a central cloud system
- AI & analytics engine processes data
- Dashboard for officials + mobile app for citizens



Also in the Persepctive of Tech Stack:

- Cloud platform
- IoT (optional future scope)
- AI/ML analytics
- Mobile & Web Applications



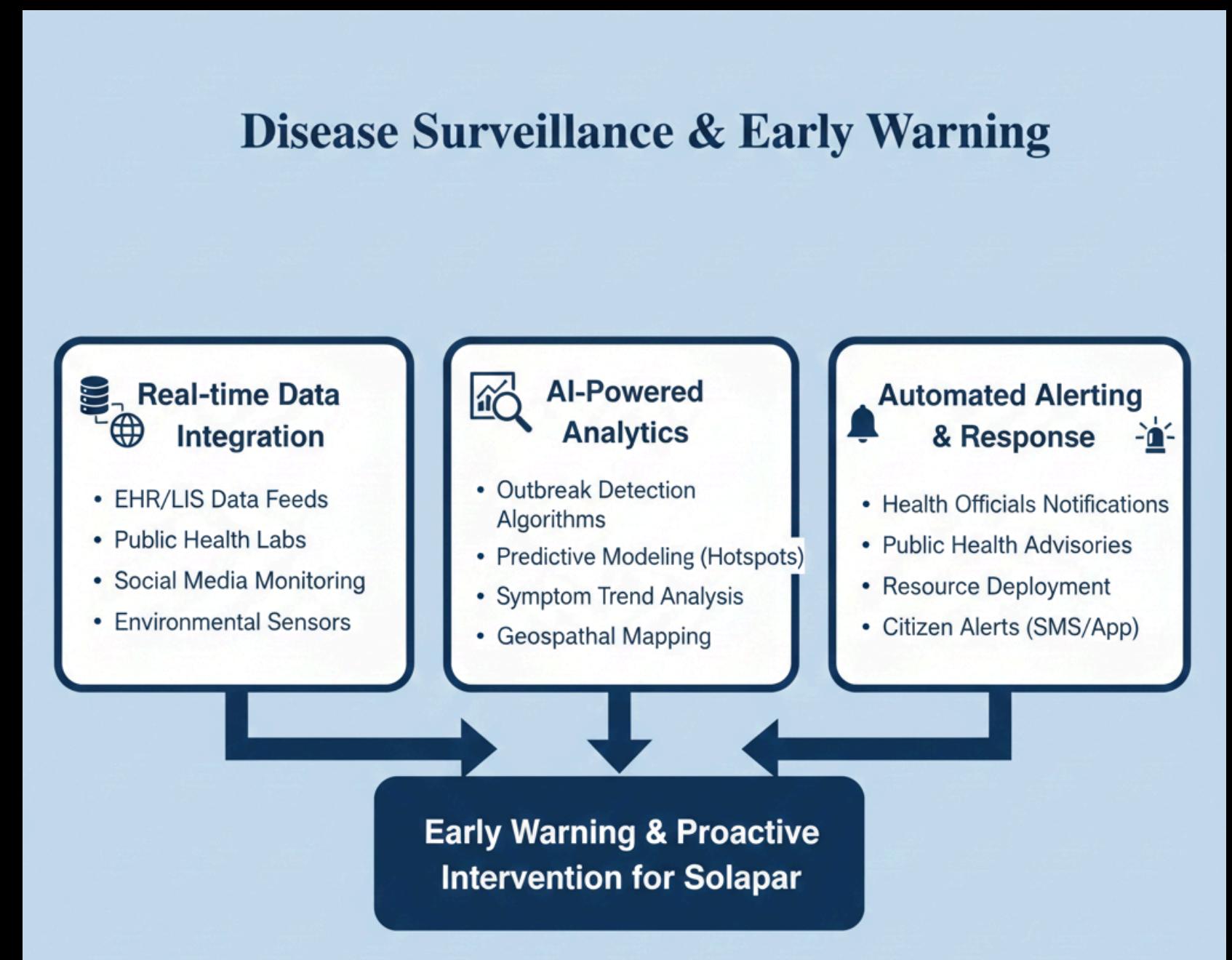
Key Feature 1 – Disease Surveillance & Early Warning

Continuous monitoring of reported symptoms and cases

- Automatic pattern detection for unusual spikes
- Early alerts to health officials
- Faster response to prevent outbreaks

Impact:

- Prevents epidemics
- Saves lives
- Reduces healthcare burden

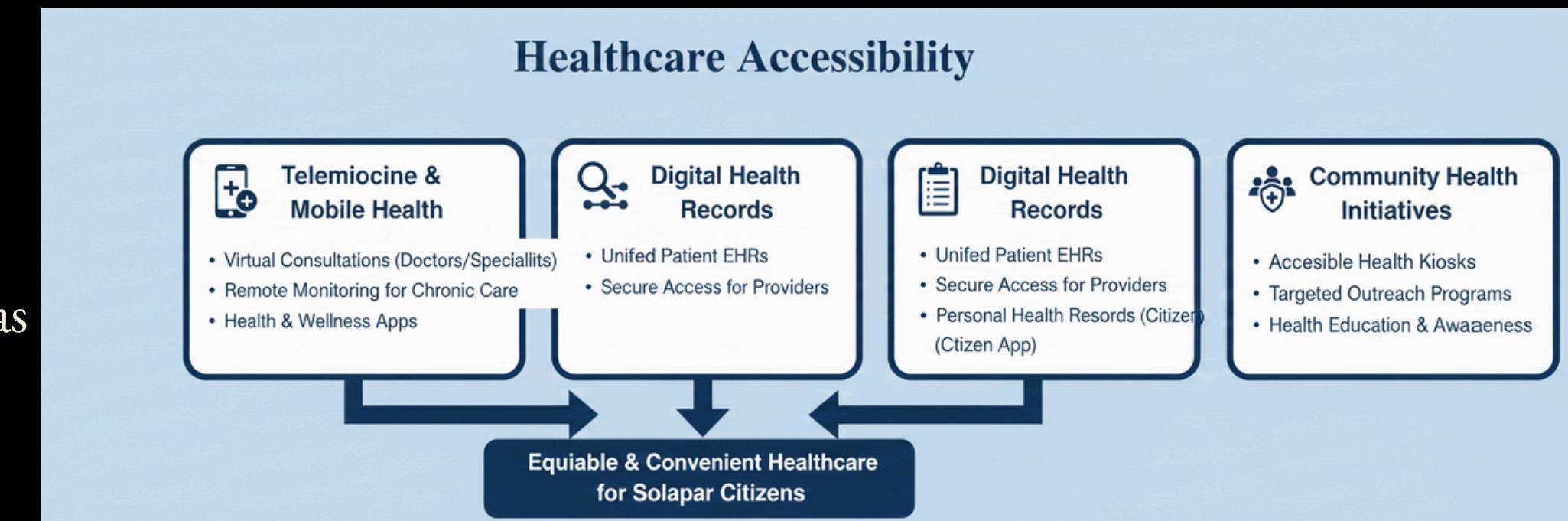


Key Feature 2 – Healthcare Accessibility

- Live information about nearby hospitals and clinics
- Availability of doctors, beds, and essential medicines
- Digital appointment booking
- Priority handling during emergencies

Impact:

- Reduces waiting time
- Improves healthcare reach in underserved areas

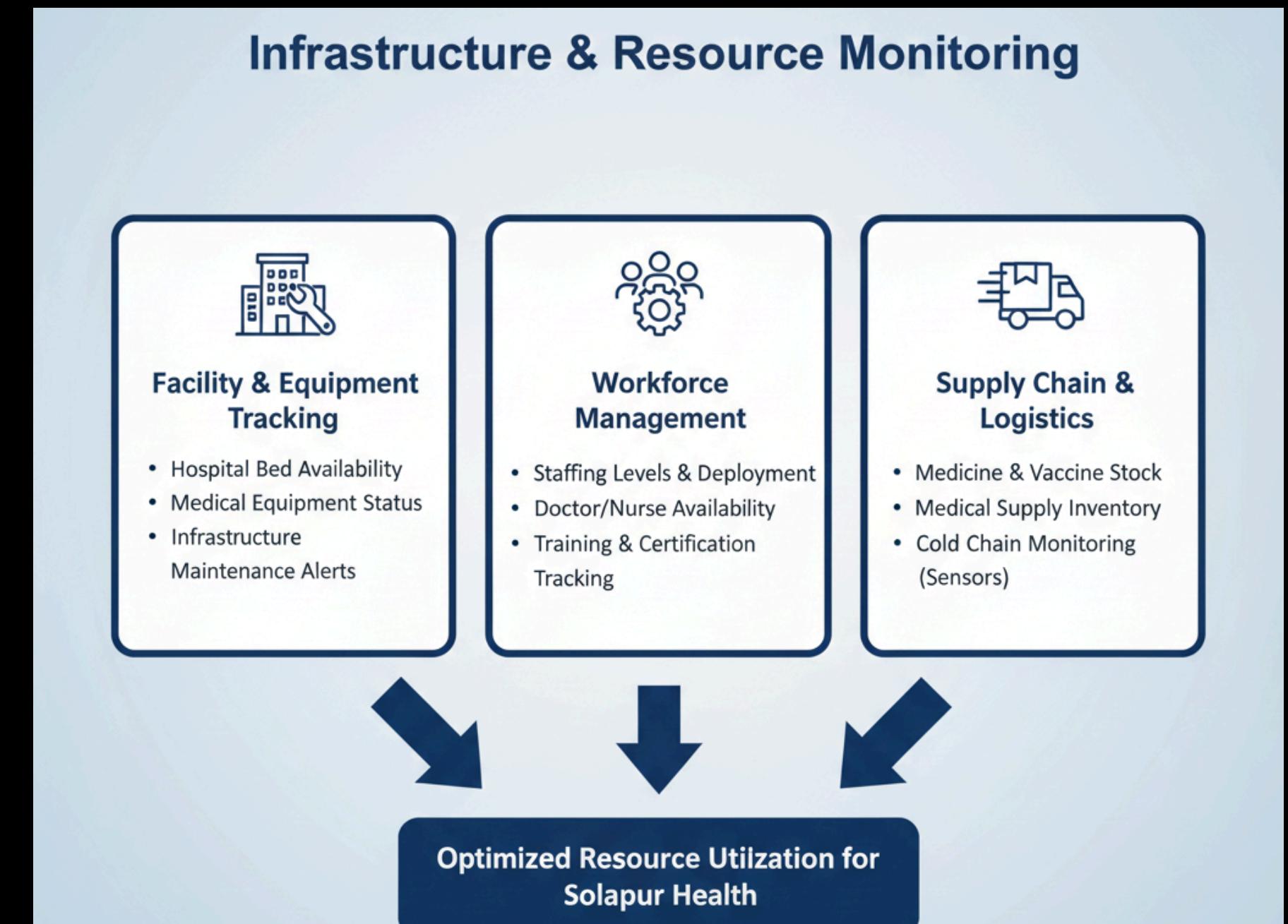


Key Feature 3 – Infrastructure & Resource Monitoring

- Monitoring of hospital equipment, ambulances, and facilities
- Resource utilization tracking
- Predictive maintenance alerts

Impact:

- Better utilization of public health resources
- Reduced downtime
- Improved service quality



Key Feature 4 – Citizen Engagement & Preventive Care

- Health awareness notifications
- Vaccination reminders
- Disease prevention guidelines
- Feedback & grievance reporting system

Impact:

- Increases public participation
- Shifts focus from cure to prevention

– Citizen Engagement & Preventive Care



Health
Notifications



Vaccination
Reminders



Disease Prevention
Guidelines



Feedback &
Reporting

Value Creation & Differentiation

01

Integrated, Data-Driven Public Health Management

The solution brings citizens, healthcare providers, and Solapur Municipal Corporation onto a **single unified digital platform**, enabling real-time data sharing, predictive analytics, and faster decision-making. This integration transforms the public health system from **reactive to proactive**, improving service efficiency.

02

Citizen-Centric & Scalable Smart Health Solution

Designed with a **citizen-first approach**, the platform improves healthcare accessibility, awareness, and engagement while supporting municipal authorities with actionable insights. The solution is **scalable, cost-effective, and replicable** across other cities, making it a sustainable long-term smart city health model.

Future Scope

Possible Extensions:

- AI-based disease prediction
- Wearable health device integration
- Telemedicine services
- State-level and national integration



Conclusion

Closing Message:

Smart Health Solutions will transform Solapur's public health system from reactive to proactive, fragmented to integrated, and manual to intelligent—ensuring healthier citizens and a stronger city.

End With:

Healthy citizens build smart cities.



THANK YOU