SMART INDIA
HACKATHON
2019

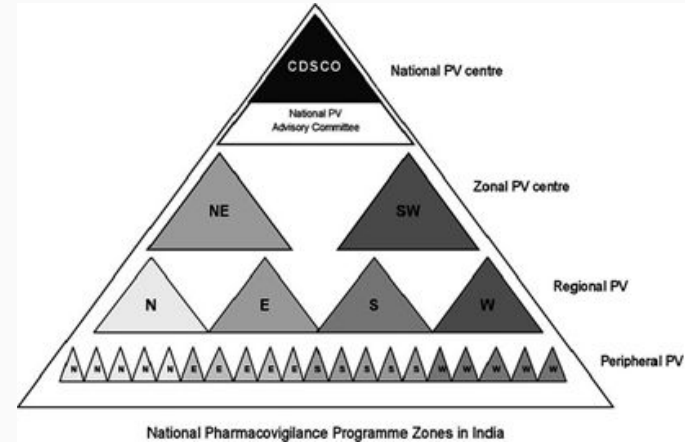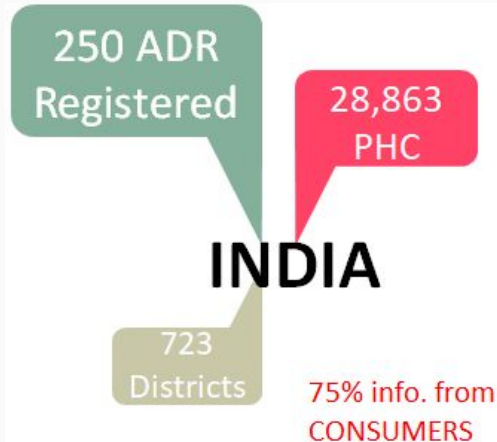# Epidemiological survey app

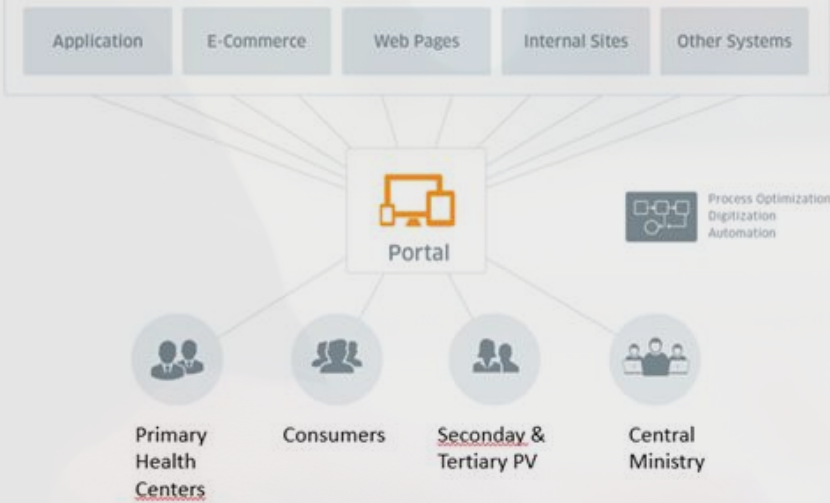## Builder's Info

Technology Bucket :   **Software-Mobile, App Development**

Category :   **Software**

Ministry Name :   **Ministry of AYUSH**

Problem Code :   **SH2**

College Code :   **U-0286 (AISHE)**

Team Leader Name :   **Pratyush Garg**

Solution/Idea

• Pharmacovigilance is an important untapped sector which needs serious amendments and solutions.
• SCOPE : - For ADR reporting rule out the middle parties and let the user directly interact in ADR reporting process, connect with various PV's and centres globally via our App and Web portal for central data transparency.

• 25% ADR reporting contribution is from market authorization holders (MAH) and around 75% comes from its integration with national health programmes and consumers.

• Our idea is to build a simple, user friendly app, multilingual in nature for the consumers and MAH
• A Web based portal for the IPC, district hospitals, PV's and Ministry of AYUSH to monitor the real time data analysis and significance and take necessary actions like withdrawal of medicine, instructions for beta testing etc..

250 ADR Registered
28,863 PHC
INDIA
723 Districts
75% info. from CONSUMERS

CDSCO — National PV centre
National PV Advisory Committee
NE — SW — Zonal PV centre
N — E — S — W — Regional PV
Peripheral PV

National Pharmacovigilance Programme Zones in India

The solution

Main aim of the app is to capture

1. **QUANTITY** :- More ADR reporting and surveys possible via a simple, user friendly APP.
2. **QUALITY** :- Depending on the literacy level of the user we can add optional functionalities to let user enter some specific and intricate details.

Our app will ensure that the ADR reporting form can be made using a series of YES/NO functions so that even a layman can fill the form and report the drug effect (Form format provided on the portal)

Our central web portal will help ensure the hierarchy is maintained and flow of information is conveyed efficiently.

Mobile App

Users :-
• Consumers/Patients
• Market Authorization Holder (MAH)

Functionalities :-
1. User dashboard
2. File new ADR
3. ADR status tracking
4. Alert for problematic drugs
   (Drugs with more ADRs filed and their substitutes
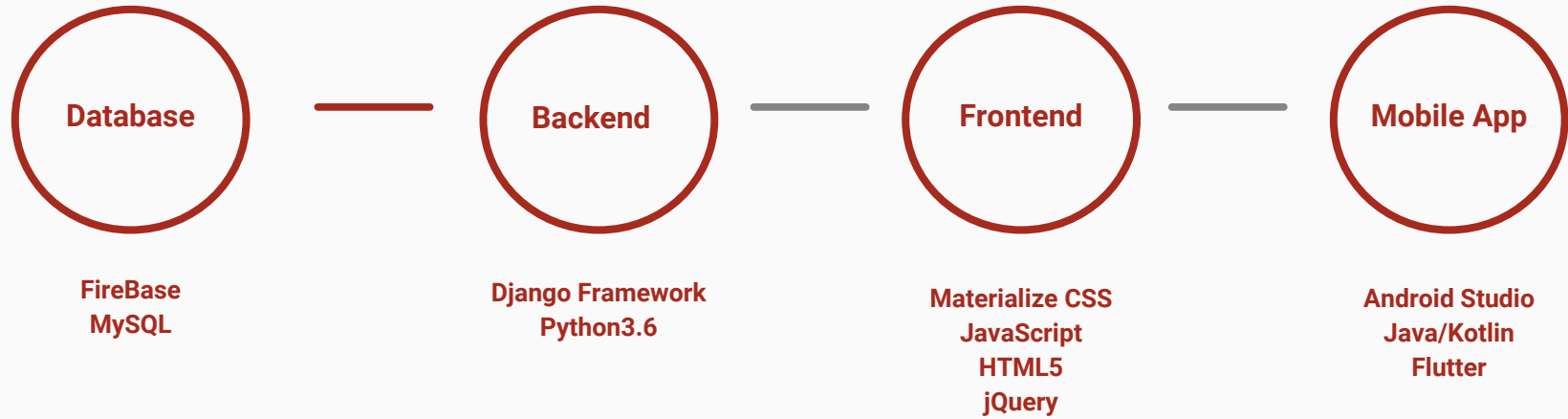   recommended)

Web Portal

Users :-
• Consumers/Patients
• Primary, Secondary, Tertiary PVs
• Nodal centres
• MAH

Functionalities :-
1. All functionalities of Mobile APP
2. Statistical analysis of ADR and their reported region
3. ADR review, archiving, forwarding (as per hierarchy) to
   primary, secondary, tertiary PVs

Development Stack

Database — **Backend** — **Frontend** — **Mobile App**

FireBase
MySQL

Django Framework
Python3.6

Materialize CSS
JavaScript
HTML5
jQuery

Android Studio
Java/Kotlin
Flutter

Dependencies

- Full database of ASU registered drugs for form validation

- ADR reporting form (available online)

- Details of Primary, Secondary, Tertiary PVs and nodal centers