DashTricks: Pakistan
Team

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Problem

- Although vaccination has saved countless lives in Pakistan, many still die due to inefficiencies in the vaccine cold chain allocation and distribution system.
- Resource allocation for vaccine cold chains is time consuming and error prone.
- Problem areas have low visibility, potentially leading to vaccine shortages.
Solution

- Automate as much of the cold chain calculation as possible
- Allow users to simulate different types of scenarios
  - Epidemics, new vaccines, etc.
- Point out potential problem areas
- Suggest ways to deal with hotspots based on available resources
Customers

- Those with a vested interest in improving the cold chain network in Pakistan.

- Example customers include:
  - Regional / District Managers
  - Potential Donors
  - Vaccine Advocates
  - Aid Groups
Challenges

- **Technical**
  - Constrained to the Android platform
  - Complexity of cold chain modelling
  - Data not always in readily usable forms

- **Environmental**
  - Time
  - Data entry amount, format, & correctness
  - Lack of domain specific knowledge
  - Minimal feedback & product iteration with customers
Requirements

- Calculate cold chain resource requirements
- Model current resource levels
- Allow for easy extending of resource requirements
- Suggest future resource allocation
- Show potential problem areas
- Update to future data
UI & Workflow
UI & Workflow

DashTricks-Pakistan

Load Data

DashTricks-Pakistan

New Scenario
Load Scenario

Settings

- Map
  - Heat Map
  - Gradient Map
- Data
  - Import/Export Cold Chain
  - Import/Export Immunization Plan
- Accessibility
  - Color Blindness
UI & Workflow

Create Scenario

Immunization Plan
- Add New
- Load Existing

New Fridge Units: 10

Save... | Save As...

View

Scenarios
- Scenario 1
- Scenario 2
- Scenario 3
- Scenario 4
- Scenario 5
- Scenario 6
- Scenario 7
- Scenario 8

Load More
New Immunization Plan

Name

Doses per vial: 10

Doses per person: 2

Space Needed: 10

Timeline: 2 times per year

Notes:

Save As...

Load Immunization Plan

Plan 1

Plan 2

Plan 3

Plan 4
UI & Workflow

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System Architecture

- Immunization Data
- Cold Chain Data
- Immunization Plans, Resource Information, Scenarios, Settings, etc
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  Base Cold Chain Data

DataAccessor

- Visualization Map
- Other Displays
Work Plan

- Week 1: Introduction to domain and Android.
- Weeks 3 - 4: Required component creation.
- Week 5: Integration. Creation of minimum viable product.
- Week 6: Feature freeze. Dedicated testing and bug fixing.
- Week 7: Alpha test begins. Work on secondary features begins.
- Weeks 8 - 9: Alpha test feedback received, and incorporated. Secondary features finalized.
- Week 10: Feature freeze. Dedicated testing and bug fixing. Project write-up.
Questions?
HTTPS://GITHUB.COM/JAPACIBLE/DASHTRICKS-PAKISTAN