

WarmWind

Cloud Team
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With the aggravation of the pandemic, many governments have implemented POD (Point of Distribution) policies for relief supplies.



1. Background

1. Background

Current systems of POD positioning are suboptimal as they rely on subjective projections made by human estimation. While selected locations may not be in heavily infected areas at time of positioning, they may need to be relocated as the pandemic situations worsens, greatly increased costs and risk of infection.

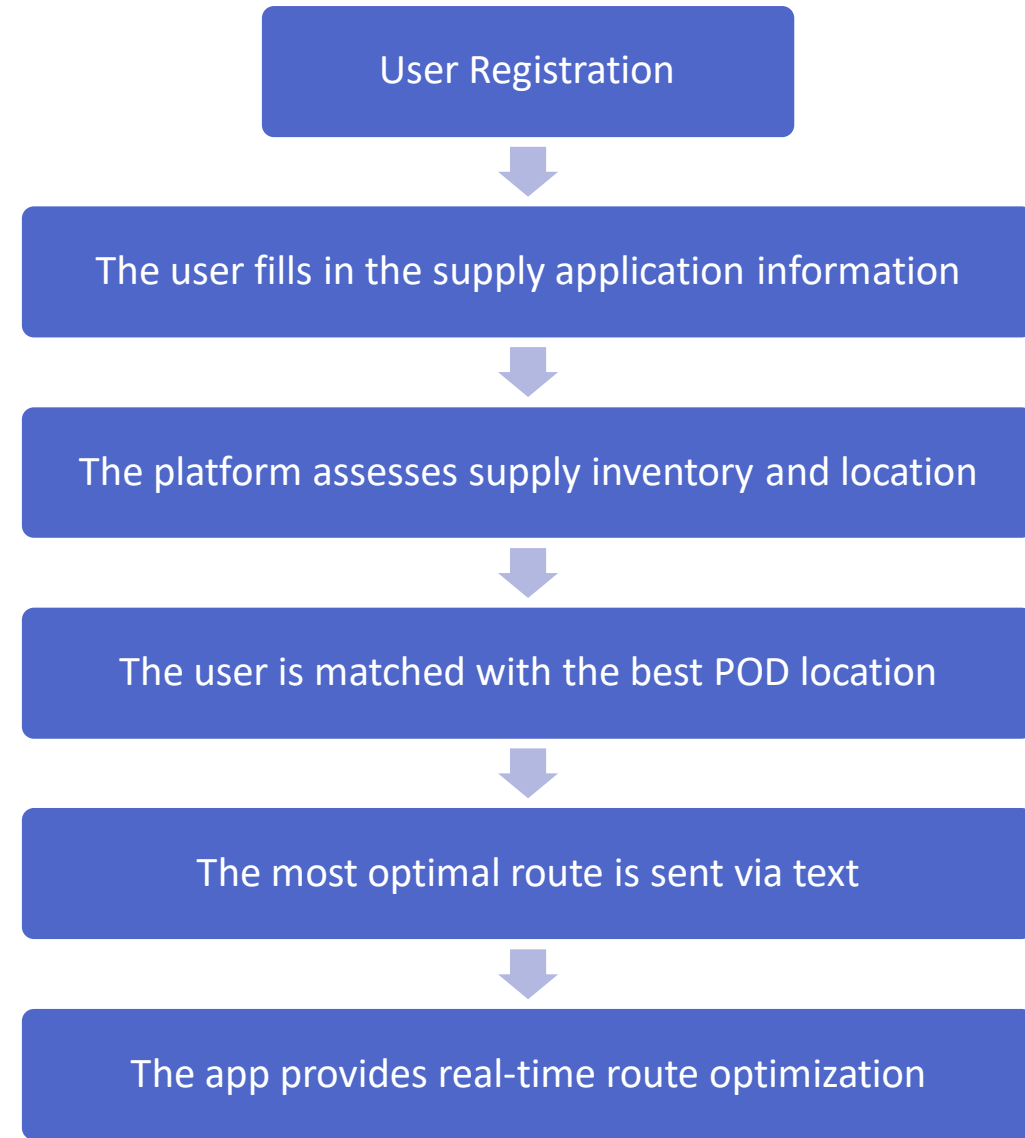
While the pandemic is ongoing, it's important to ensure proper routes between those in need of aid and the POD. Improper routes may increase risk of further infection.



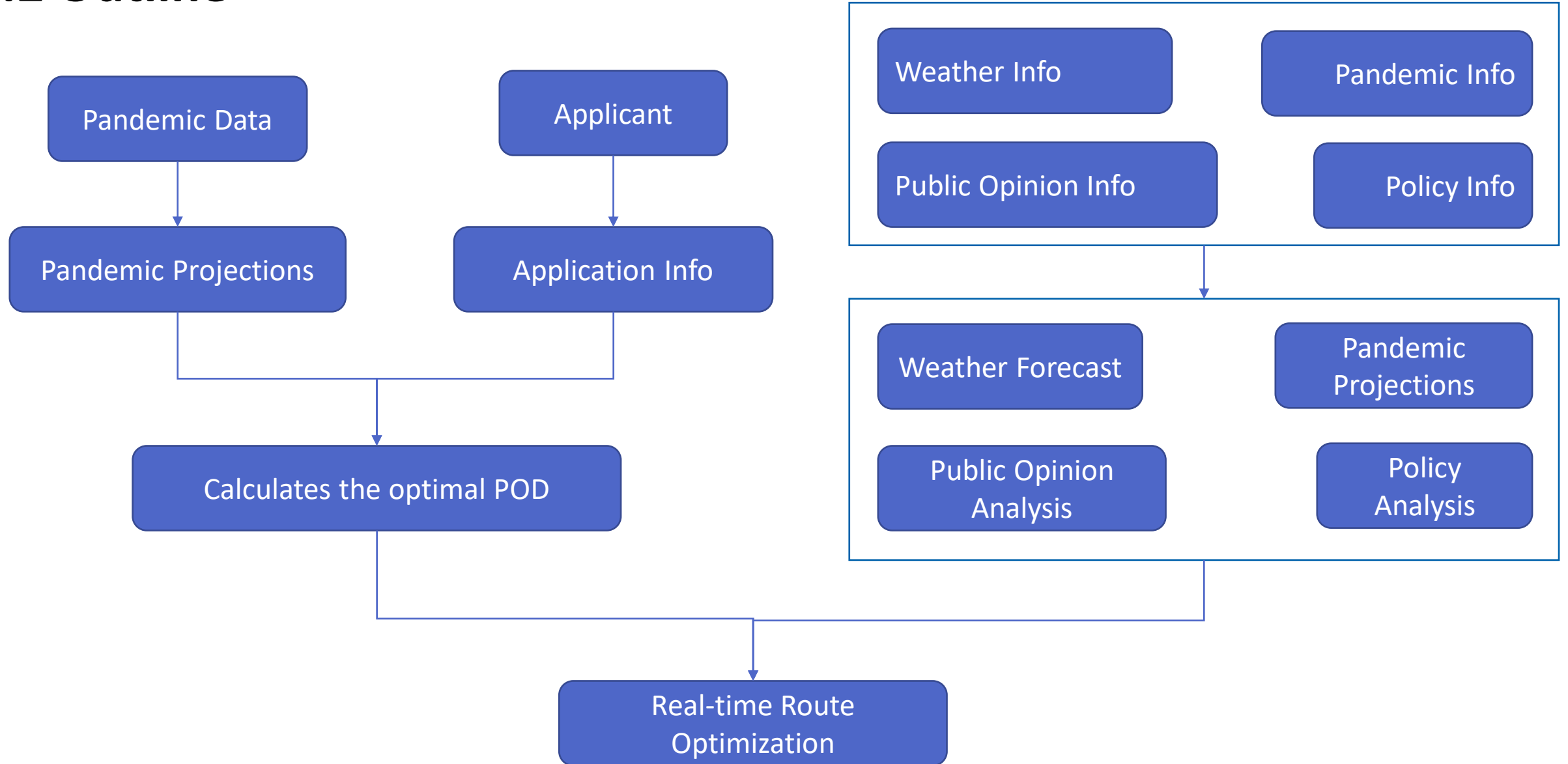
2. Outline

2.1 Outline

In order to solve suboptimal POD positioning and increased infection risk on routes, this solution feeds applicant information, pandemic data, weather forecasts, public opinion, and policy data into a big data AI algorithm capable of selecting optimal locations and routes to the POD.



2.2 Outline



3. Design

1. The platform module primarily focuses on applications from those in need of aid, provision of information, the optimal amount and location of PODs, and references for route planning.

1a. Applicant information includes their location, health, etc.

1b. The amount of PODs depends on the policy decisions of government and related agencies.

1c. POD positioning is calculated through an algorithm that comprehensively analyzes applicants, pandemic situation, and active policies.

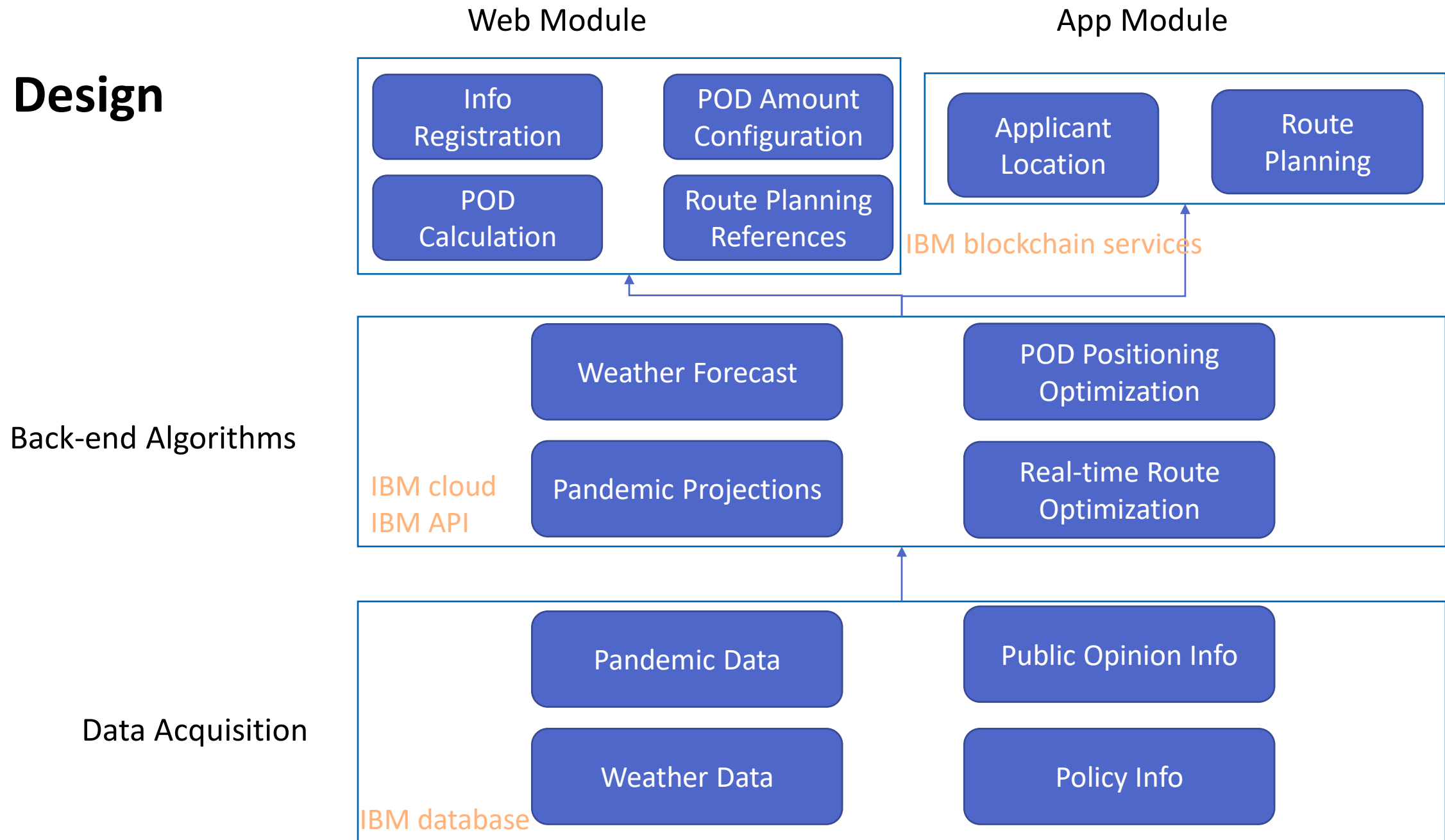
1d. Route references provides multiple viable routes from the applicant's location to the POD, along with outbreak risk, projected time, and projected cost.

II. The App module includes POD selection and real-time route optimization.

2a. Applicants can select the POD they wish to retrieve aid from.

2b. The positioning feature allows applicants to plan an optimal route through pandemic projections, weather forecasts, public opinion, and government policy.

3.1 Design



1,851,313

Confirmed

422,793

Recovered

114,144

Deaths

4.1 Data Acquisition Module

The data acquisition module primarily utilizes technology to obtain data from public platforms. This includes weather, pandemic, public opinion, and policy data, etc. This data is then stored on the IBM database. (IBM database)

4. Solution

Confirmed: 5600
Deaths: 235
Recovered: 0

Passaic, New Jersey, US
Confirmed: 5590
Deaths: 11
Recovered: 0

Fairfield, Connecticut, US
Confirmed: 5534
Deaths: 248
Recovered: 0

Suffolk, Massachusetts, US
Confirmed: 5359
Deaths: 86
Recovered: 0

Pakistan
Confirmed: 5230
Deaths: 11
Recovered: 0

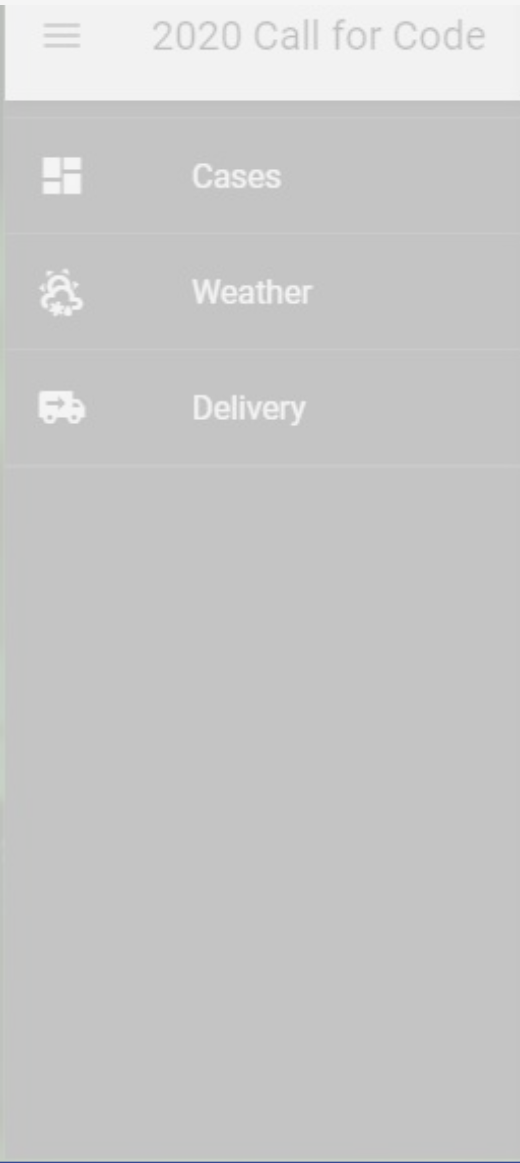
4. Solution

4.2 Algorithm Module

The algorithm module makes use of AI and route planning algorithms to calculate pandemic projections, optimal POD locations, and optimal routes. [\(It requires IBM cloud computing, API, and blockchain services\)](#)

- Pandemic Projection — Times series analysis is performed on historical data to create pandemic projections.
- Optimal POD Positioning — Finds optimal POD locations by performing cluster analysis on applicant locations and pandemic projections.
- Optimal Route — The safest and most optimal route is calculated from an analysis that includes pandemic projections, weather forecasts, public opinion, policy, along with applicant and POD locations.

4. Solution



4.3 Web Module

The web module is geared towards supply donors. It supports registration of and applications for supplies, along with positioning of PODs. It requires IBM cloud computing, API, and blockchain services. (It requires IBM cloud computing, API, and blockchain services)

4. Solution

4.4 App Module

The app module is geared towards supply applicants. It supports registration of and applications for supplies, route planning, etc. It requires IBM cloud computing, API, and blockchain services. (It requires IBM cloud computing, API, and blockchain services)

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Application

Name:

Jon Sam

ID:

012 345 678

Sex:

Male

Goods:

Rescue package 1

Date:

2020-10-01

Phone:

135 4367 8888

Code:

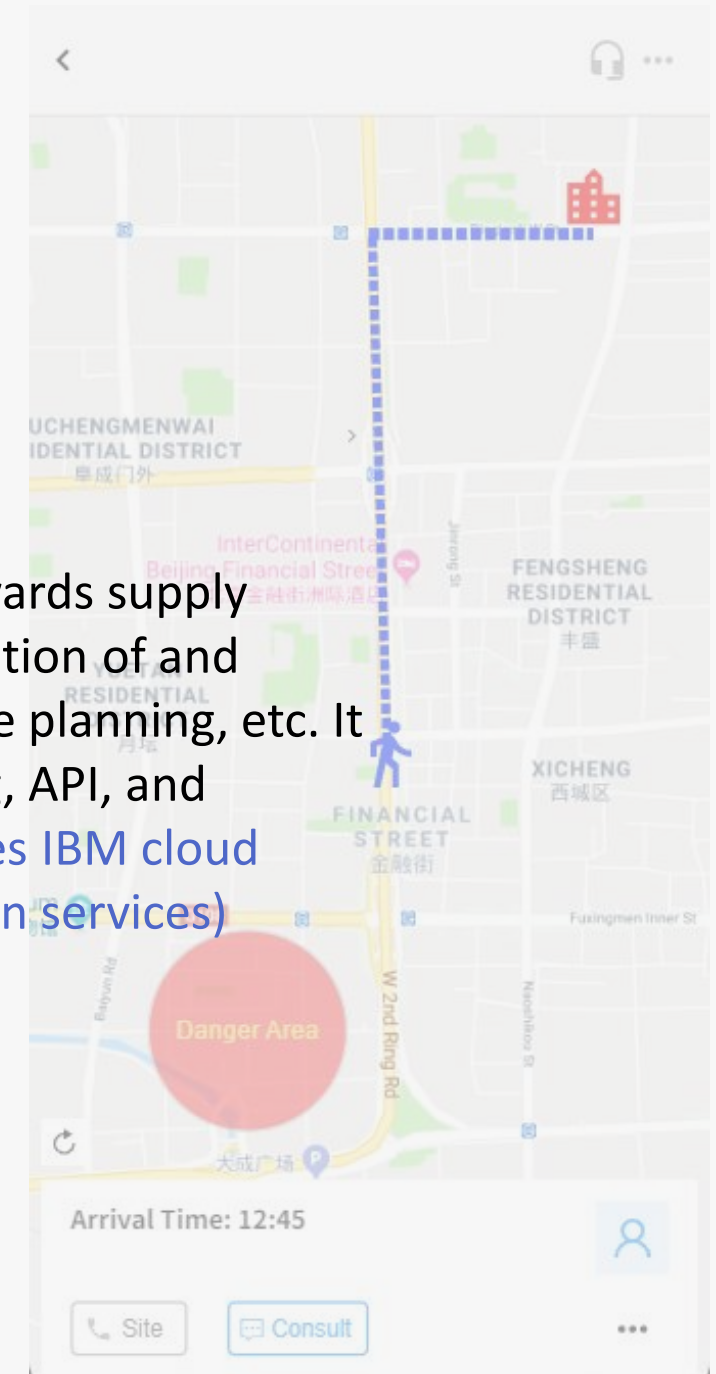
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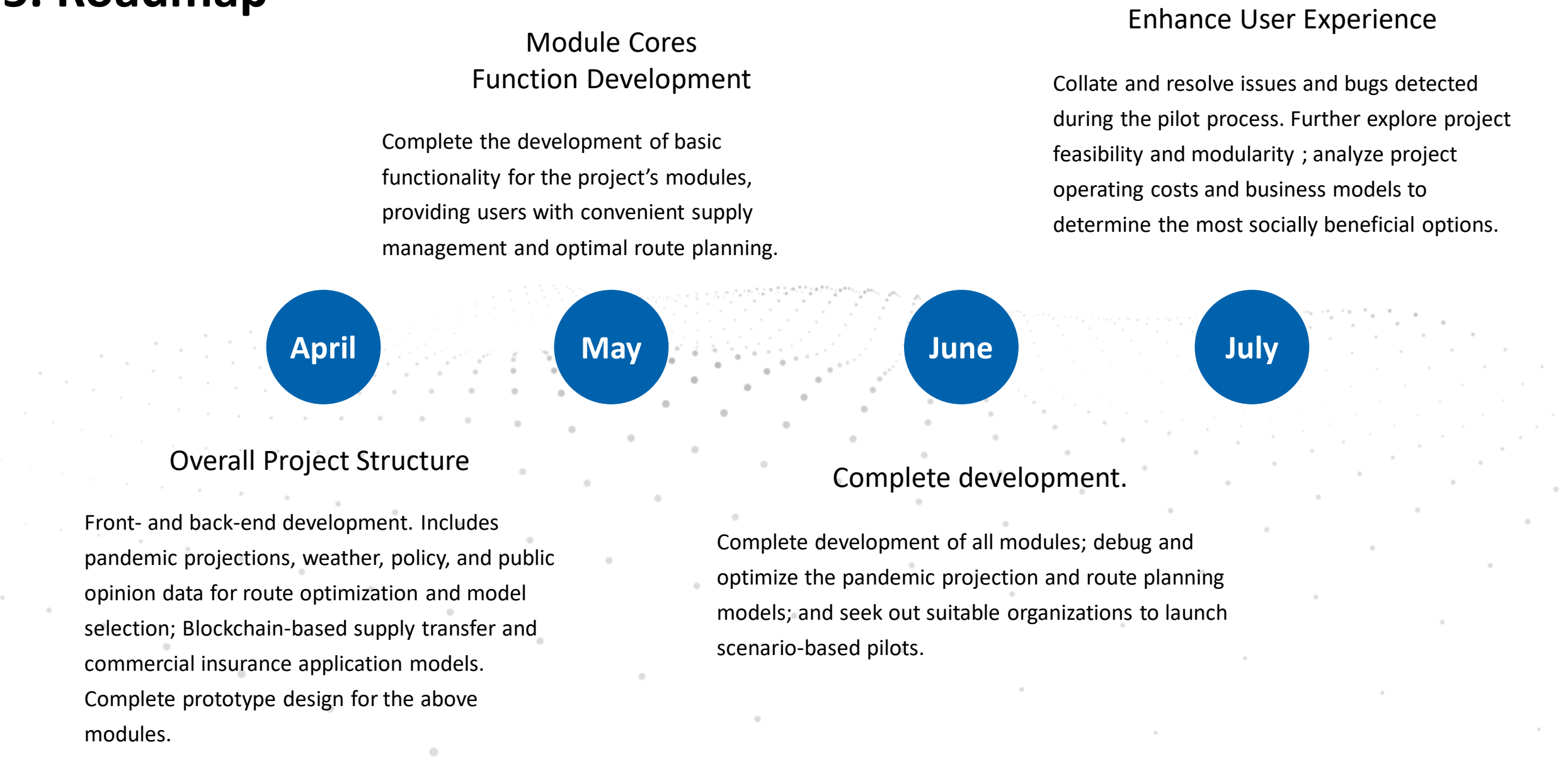
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OK

CANCEL



5. Roadmap



Take on COVID-19
There we will be !

Cloud Team

THANKS