

Impact

01 Lao PDR National Center for Laboratory and Epidemiology (NCLE) (2023)

We built a customised prototype for a dengue surveillance mapping platform and an analytics dashboard to predict future dengue outbreaks in the Vietnam capital. It helps the client in identifying dengue clusters and predicting future outbreaks, enabling them to strategically target their intervention.

02 Prudential, Malaysia (2023)

Al.rbo was implemented through a map feature in the client's Pulse App that displays information on the country's current dengue outbreak status. This feature provided the app users with useful information and raised their awareness on protection against dengue.

03 Takeda, Malaysia (2023)

The client set up a dengue surveillance website, powered by DoctorOnCall, to raise awareness on the risks of dengue outbreaks. This integration allowed their descriptive and predictive data to provide insights that can drive their business goals.

04 Federal Territory Of Kuala Lumpur, Malaysia (2019) Penang State Government, Malaysia (2018) Government Of Rio De Janeiro, Brazil (2016)

Al.rbo uses multiple data sources such as weather, socio-economic and demographic factors together with dengue cases listing to forecast potential cases that would start an outbreak as an index case. The output could be used to enhance their strategic planning for targeted prevention and intervention efforts in potential outbreak areas, leading to improved cost and resource allocation efficiency.

Testimonials

TESTIMONY 1



Lim Guan Eng
Former Penang Chief Minister

This game-changing surveillance system incorporates big data analytics and epidemiological research. We hope that (this technology) is capable of reducing the number of dengue cases and saving lives.

(Source: The Star, 21 Dec 2017)

TESTIMONY 2



"The pioneering project involves a collaborative endeavour between the Hayat team and Lao healthcare professionals for innovative dengue prediction system, Al.rbo, in combatting the pervasive threat of dengue fever in Vientiane. The project will examine the methodologies employed by healthcare experts in managing and preventing dengue outbreaks."

(Source: Vientiane Times Newspaper, 25 July 2023)

FAQ



How does the system identify dengue outbreaks and predict future ones?



It employs machine learning models to do so. It uses available information, such as fever onset, location, age, symptoms, geocoding as well as weather, landmarks, geographic and socioeconomic data, to analyse patterns and relationships. By applying machine learning algorithms and statistical techniques, Al.rbo can detect outbreaks and make predictions with a forecast horizon of up to 12 weeks at a 200-meter radius.



What is the significance of establishing a data-sharing pipeline in this system?



It is crucial as it enables the seamless flow of data from various sources. By connecting different data providers such as healthcare facilities, laboratories and relevant government agencies, the pipeline ensures that relevant and up-to-date data is available for analysis and prediction. This enables a more comprehensive and accurate surveillance and prediction system for dengue outbreaks.



What impact has Al.rbo made for clients?

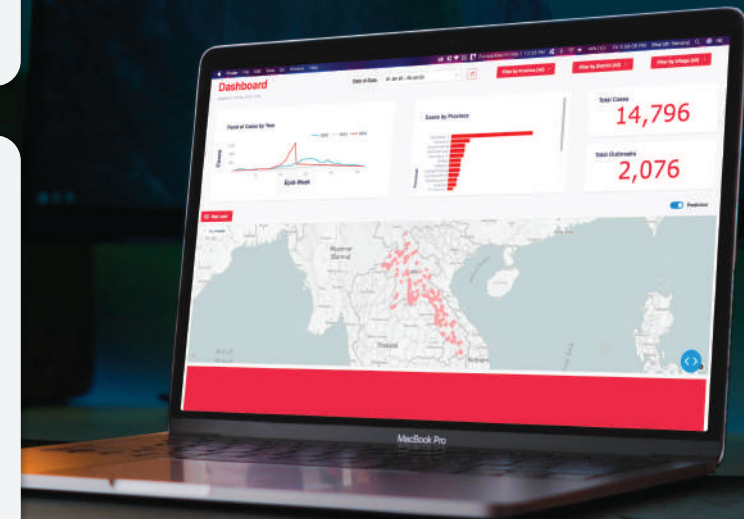


Al.rbo has been deployed as pilots in Brazil, The Philippines, Bangladesh, Laos and Malaysia. The benefits include:

- No sophisticated hardware nor IT infrastructure is needed – *no redundant data entry*
- Log into the web-based dashboard software from anywhere – *no worrying about backups*
- One solution across all devices: Shared group licenses – *an unlimited number of users*
- Data-driven and informed decision-making for vector control personnel. Cost reduction and focused interventions

Al.rbo

Arbovirus Outbreak Surveillance & Prediction System



Product Brief

What is it?

An AI-powered, Geographic Information System-based, mosquito-borne disease surveillance system equipped with predictive analytics of future outbreaks. This technology was developed to support clinical decision-making in infectious disease management.. Its predictive algorithm has been enhanced to cover other arboviral diseases like Zika and Chikungunya.

How is it used?

Al.rbo uses multiple data sources such as weather, socio-economic and demographic factors together with dengue case listings to forecast potential cases that would start a dengue outbreak as an index case.

What are the outcomes?

Our clients could leverage the forecast output to better strategise their targeted prevention and intervention efforts in potential outbreak locations, resulting in a more efficient cost and resource allocation.

Problem Statement

Despite the availability of effective preventive measures, dengue continues to cause outbreaks in many parts of the world, leading to high morbidity and mortality rates.

Traditional methods of dengue control, such as vector control and health education, have shown limited success in curbing the spread of the disease.

The high cost of treatment and hospitalisation for severe dengue cases put a significant financial burden on patients, healthcare systems, and communities.

The lack of real-time data on dengue outbreaks makes it difficult to plan and implement effective interventions and allocate resources in a timely manner.

Traditional approaches to dengue surveillance are labour-intensive and time-consuming, leading to delays in outbreak detection and response.

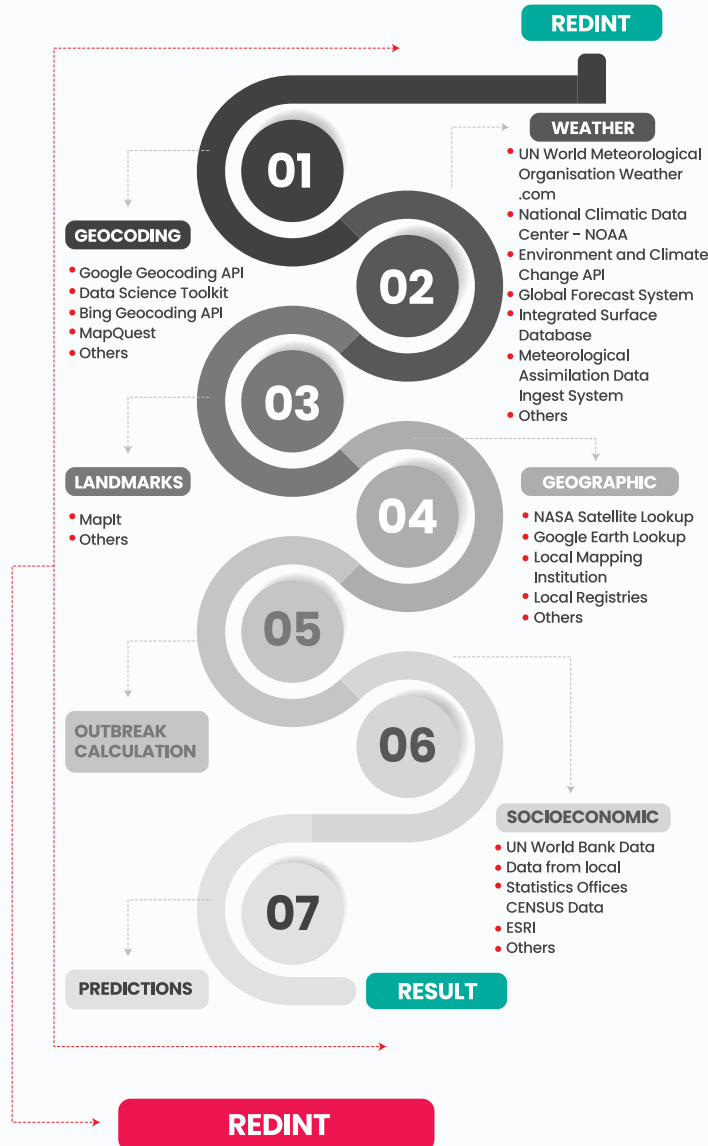
Advantages

- Early Detection
- Real-Time Alert
- Cost Effective
- Efficiency
- Data Collection
- Accuracy

Platform

Al.rbo Dengue Dashboard

The Dengue dashboard use **REDINT (Remote Data Input Interface)** to assists in **collecting more information** such as geocoding, weather, landmarks, geographic and socioeconomic in order to calculate the outbreaks and future outbreaks.



Platform

Al.rbo Dengue Dashboard

The Dengue dashboard provides a comprehensive set of features to enhance **dengue outbreak surveillance** and prediction.

It includes descriptive dengue data analytics, allowing users to **gain insights** into the **trends** and **patterns** of dengue cases.

The geocoded **map feature** displays the distribution of cases, along with current and past outbreaks, providing a visual representation of the affected areas.

Furthermore, the dashboard incorporates a predictive dengue model that leverages **Machine Learning Algorithms** to forecast future outbreaks, aiding in proactive planning and resource allocation.



Request a Demo

Experience Al.rbo Today!



Through our projects and partners worldwide, we've established a strong track record.

Join us in exploring new possibilities together.



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