

PREDICTING DISEASES.

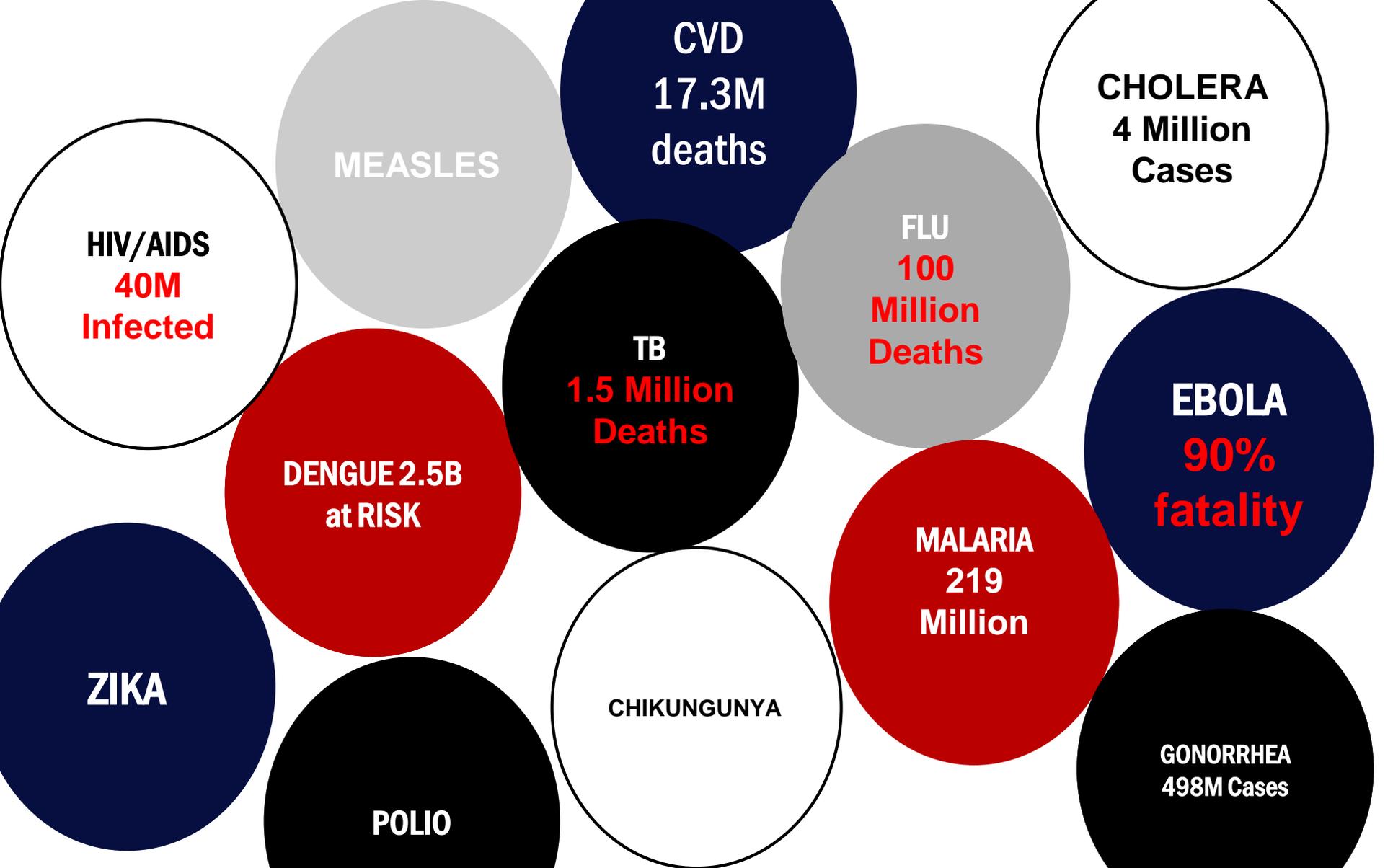
SAVING LIVES.

DR DHESI BAHU RAJA (MD, MPH, DrPH)

Twitter: @DhesiMD



ARTIFICIAL INTELLIGENCE IN MEDICAL EPIDEMIOLOGY



HIV/AIDS
40M
Infected

MEASLES

CVD
17.3M
deaths

CHOLERA
4 Million
Cases

FLU
100
Million
Deaths

TB
1.5 Million
Deaths

EBOLA
90%
fatality

DENGUE **2.5B**
at RISK

MALARIA
219
Million

ZIKA

CHIKUNGUNYA

POLIO

GONORRHEA
498M Cases

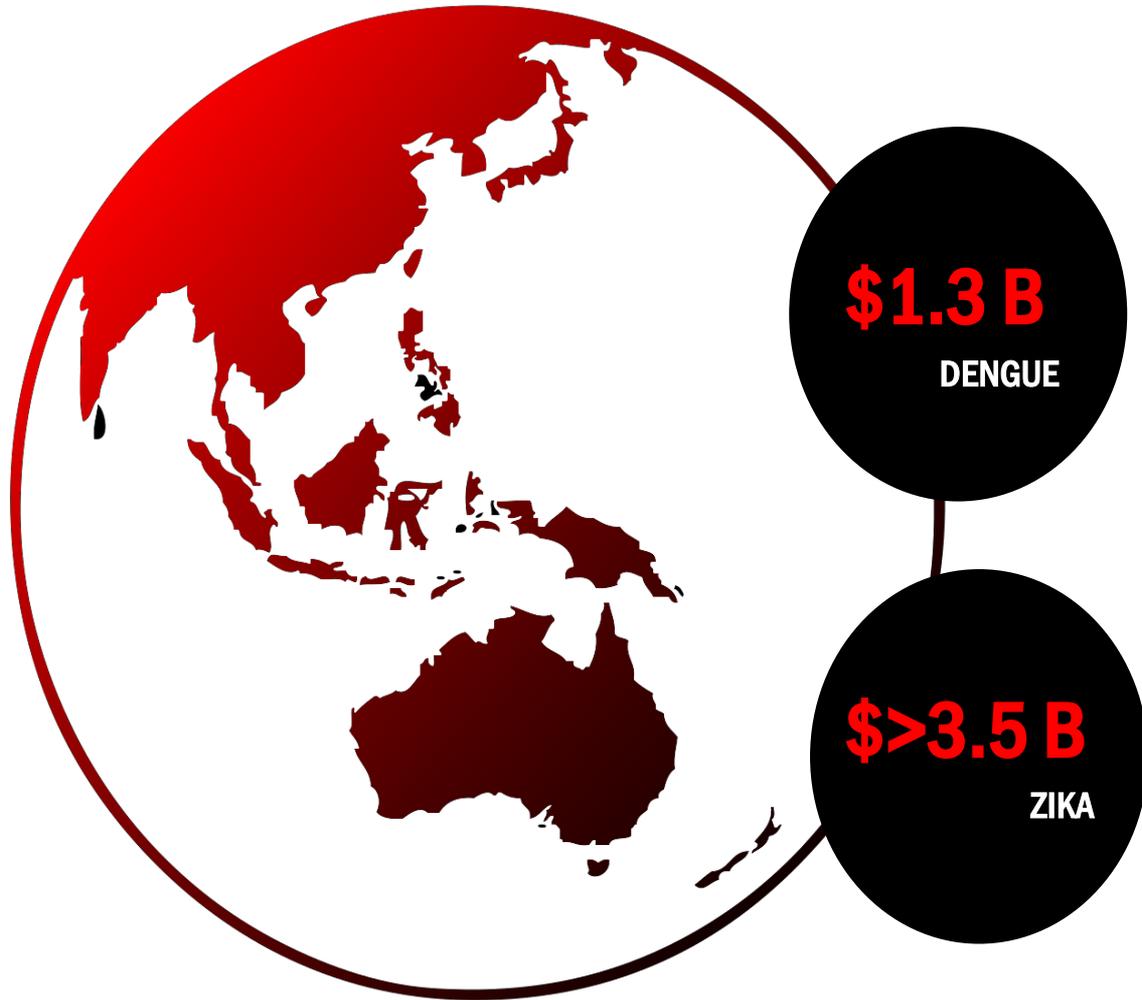
2.5 BILLION AT RISK

400M dengue cases
ANNUALLY

>1M Zika cases
SO FAR

DENGUE & ZIKA WORLDWIDE

Image Source: HealthMap



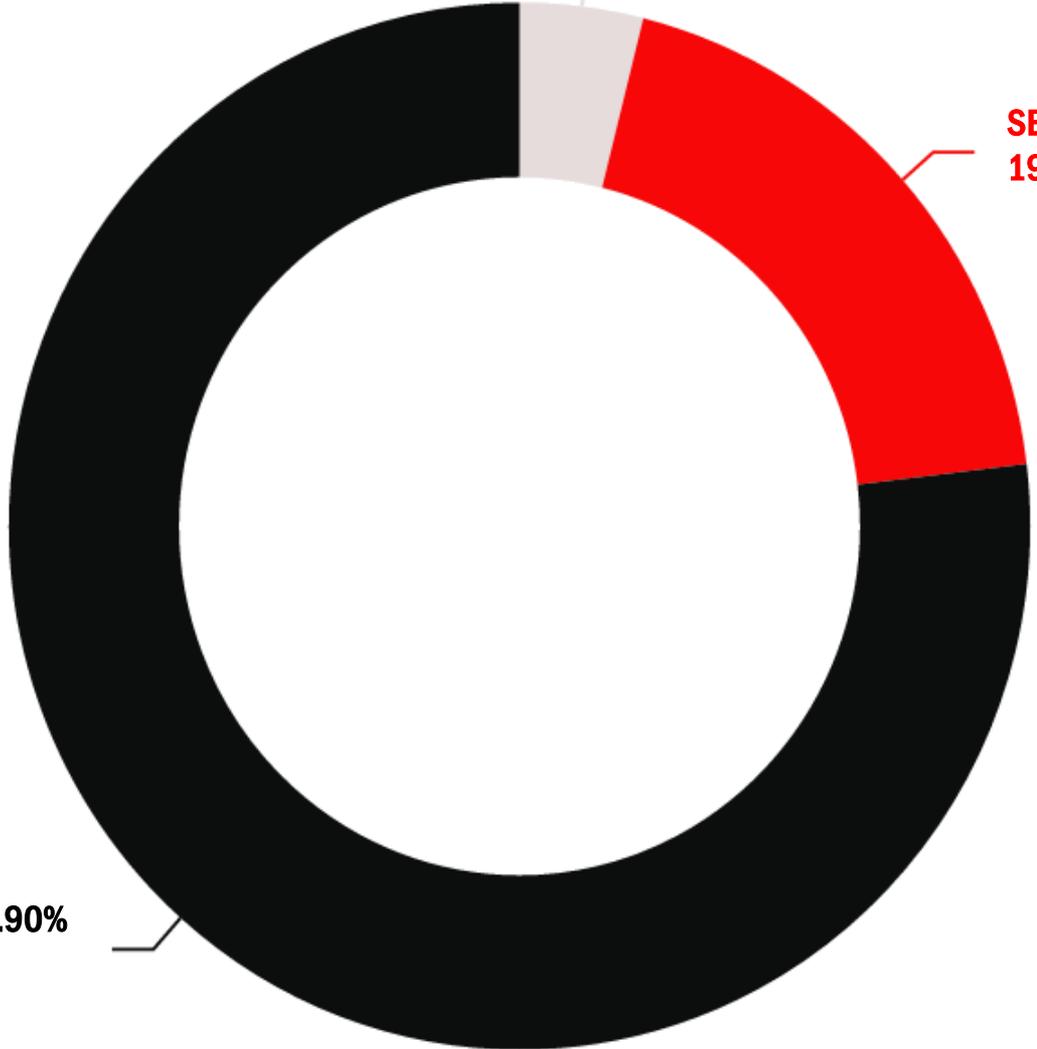
DENGUE & ZIKA ECONOMIC IMPACT

CURRENT RESPONSE

PASSIVE 76.90%

ACTIVE
3.90%

SENTINEL
19.20%





**UNKNOWN
OUTBREAK
AREAS**

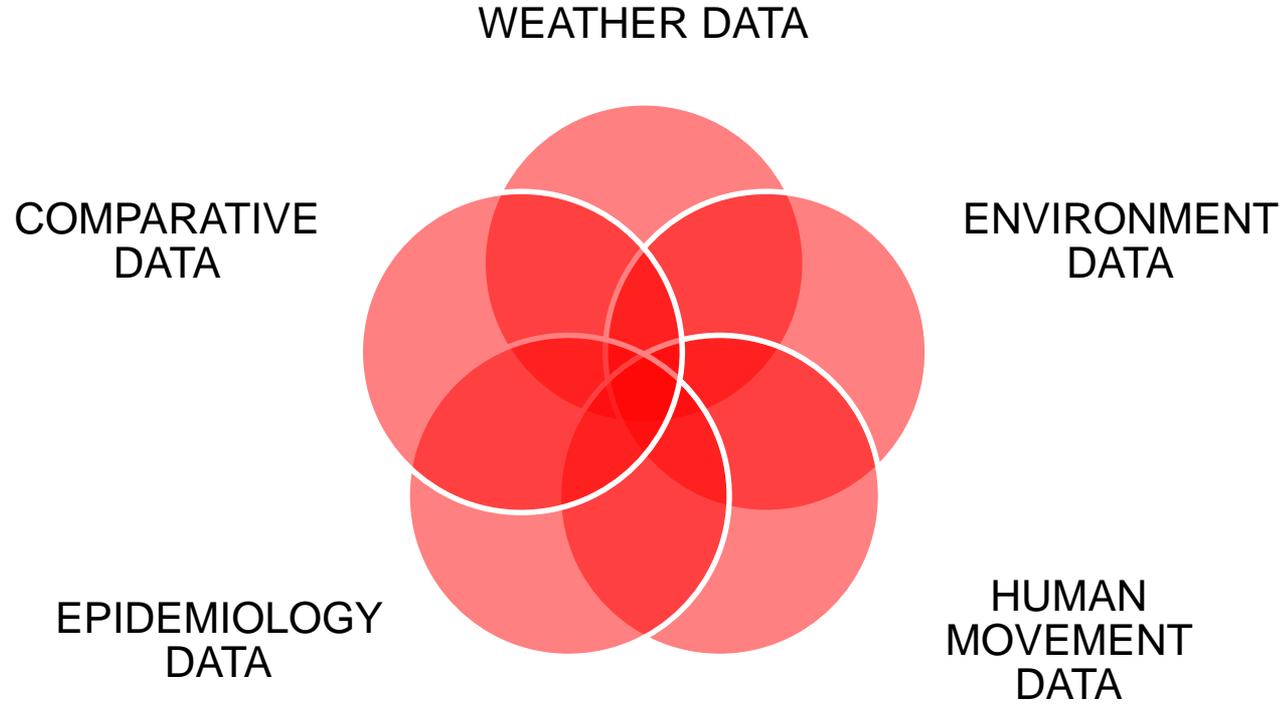
**UNPLANNED
MANAGEMENT**

**GENETICALLY
MODIFIED
MOSQUITOES**

**FOGGING &
LARVICIDING**

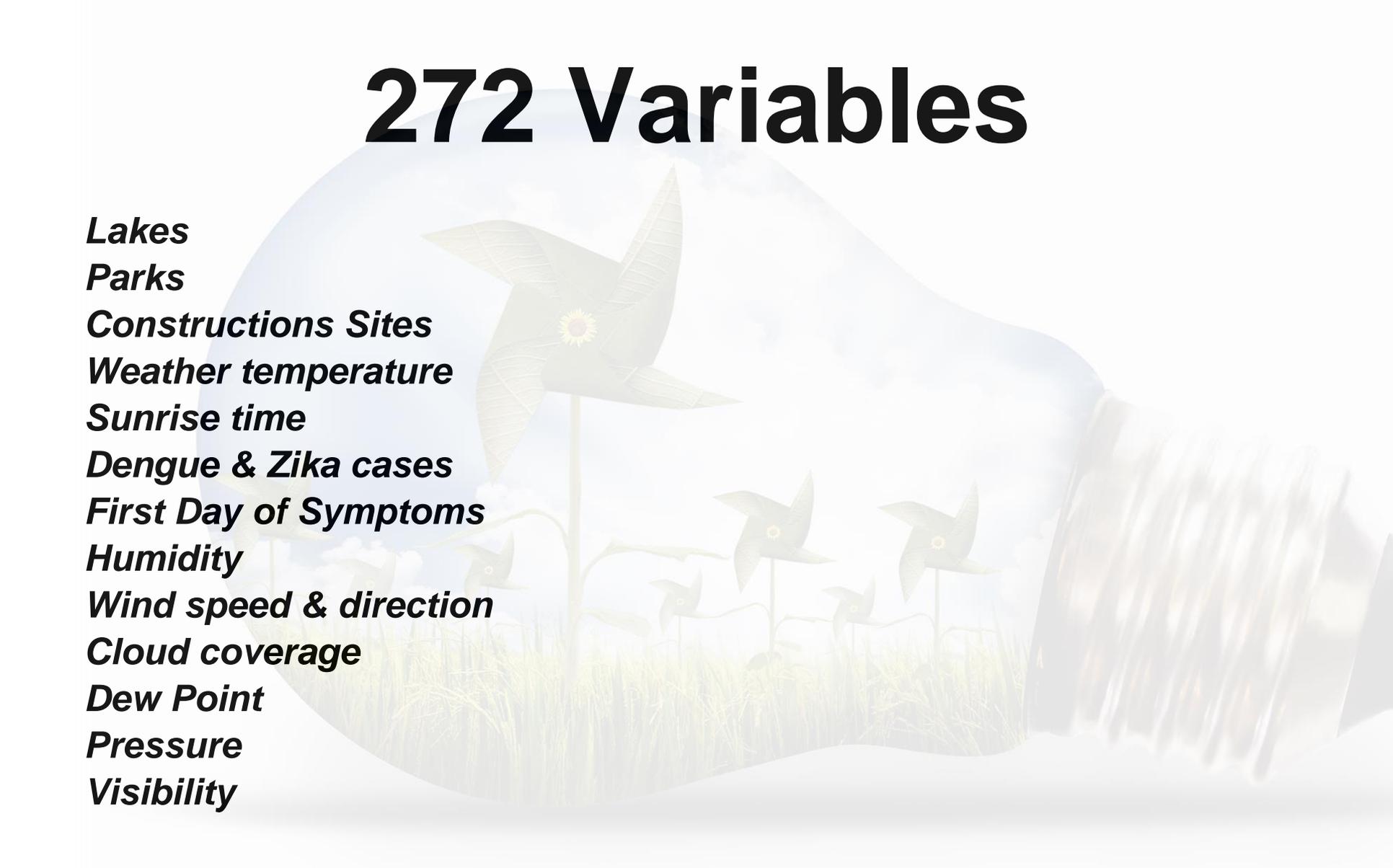
**HEALTH
CAMPAIGNS**

OUTBREAK MANAGEMENT



Tech Approach: Dengue-ZIKA EPIDEMIOLOGY + AI

272 Variables

A hand holding a globe with a field of pinwheels in the background. The hand is positioned on the right side, holding the globe. The globe is in the center, and the pinwheels are in the foreground, creating a layered effect. The background is a soft, light blue and white gradient.

Lakes

Parks

Constructions Sites

Weather temperature

Sunrise time

Dengue & Zika cases

First Day of Symptoms

Humidity

Wind speed & direction

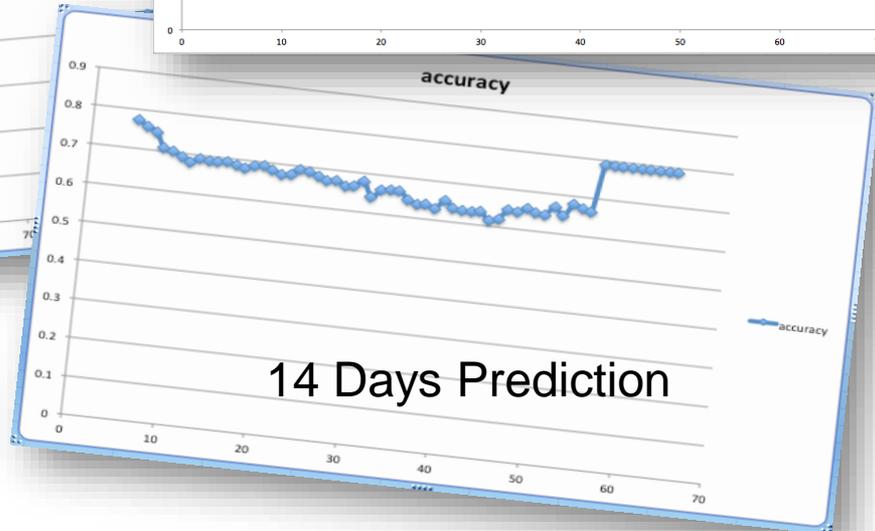
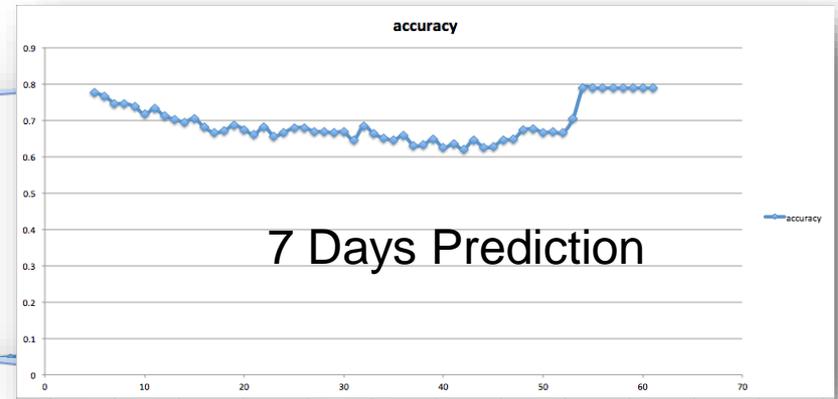
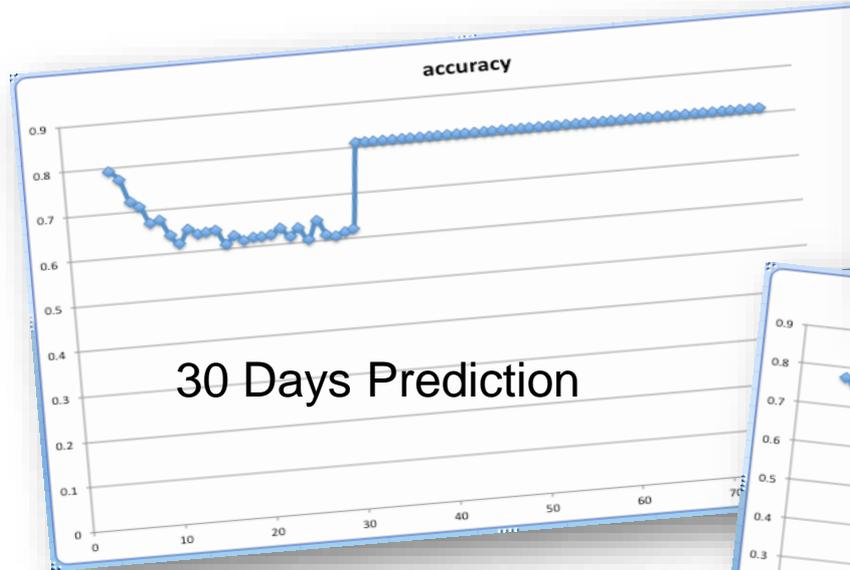
Cloud coverage

Dew Point

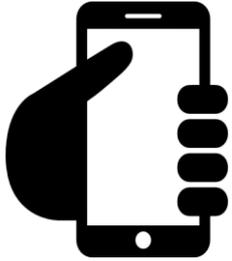
Pressure

Visibility

Feature Selection



USERS OF THE COMMUNITY (VIA APP)



GOVERNMENTS & MULTILATERAL ORGANIZATIONS



USED BY



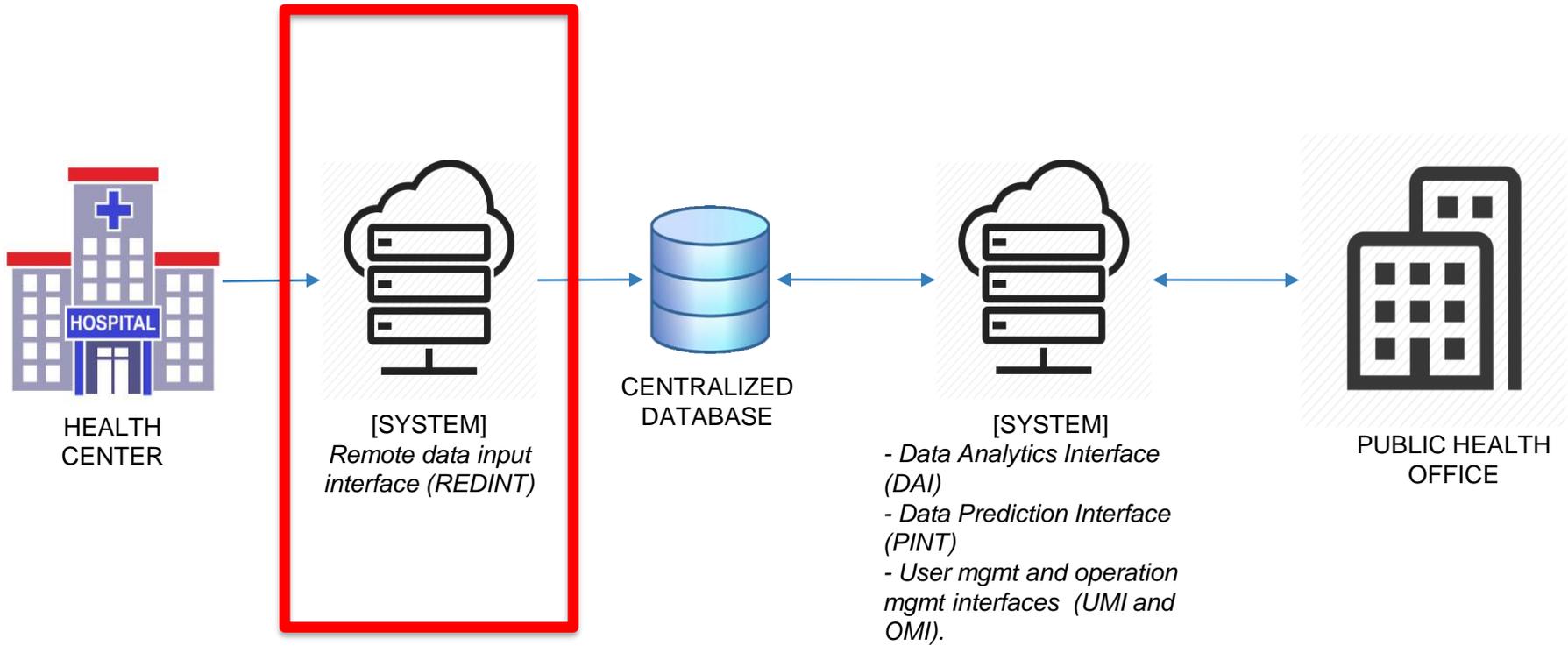
BACKED BY



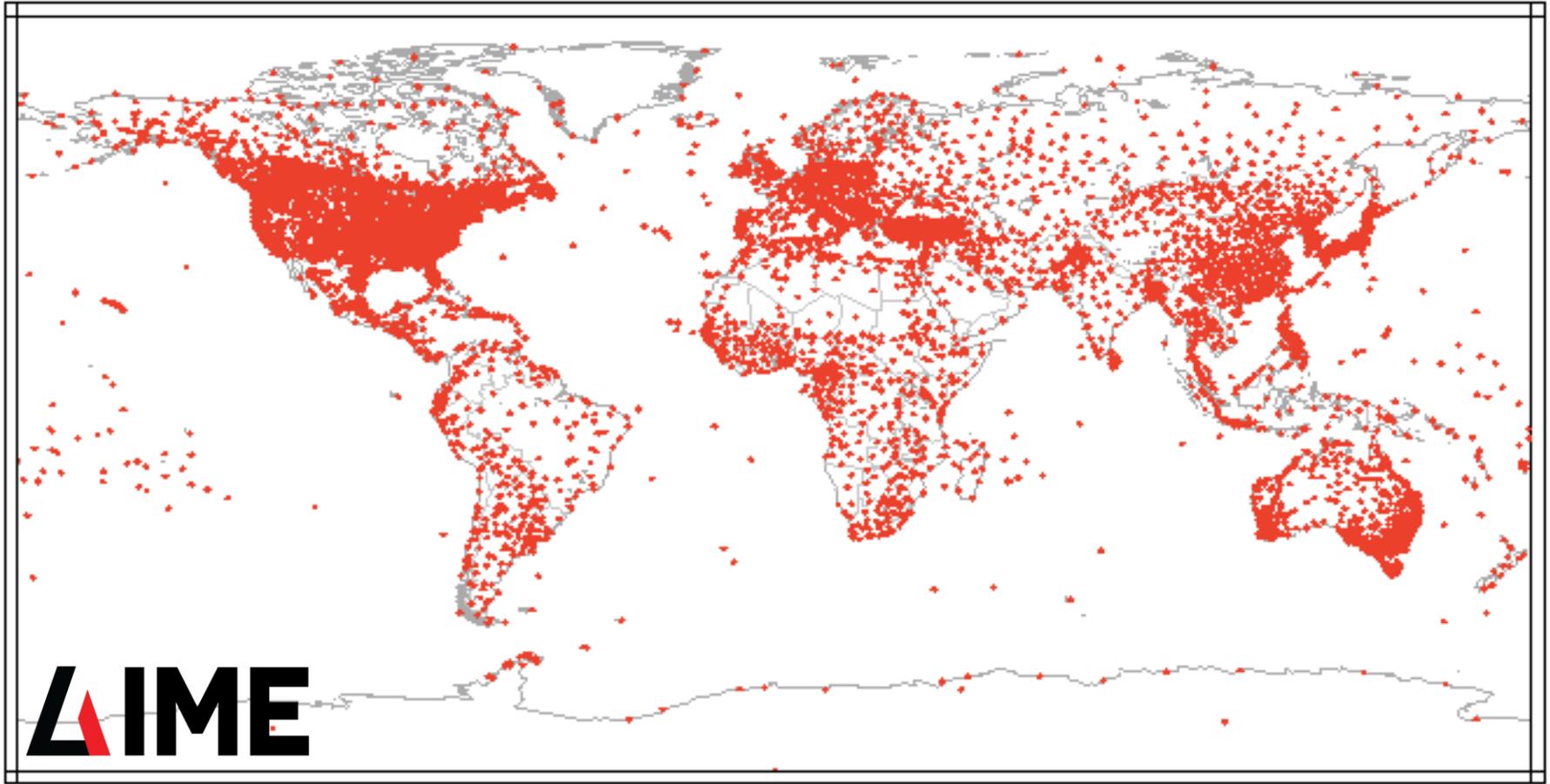
PUBLIC HEALTH OFFICERS (VIA ANALYTICS INTERFACE)



WORLD BANK GROUP



AIME MAIN SYSTEM



Within 23 Seconds We Tap 272 Variables For Prediction



Email

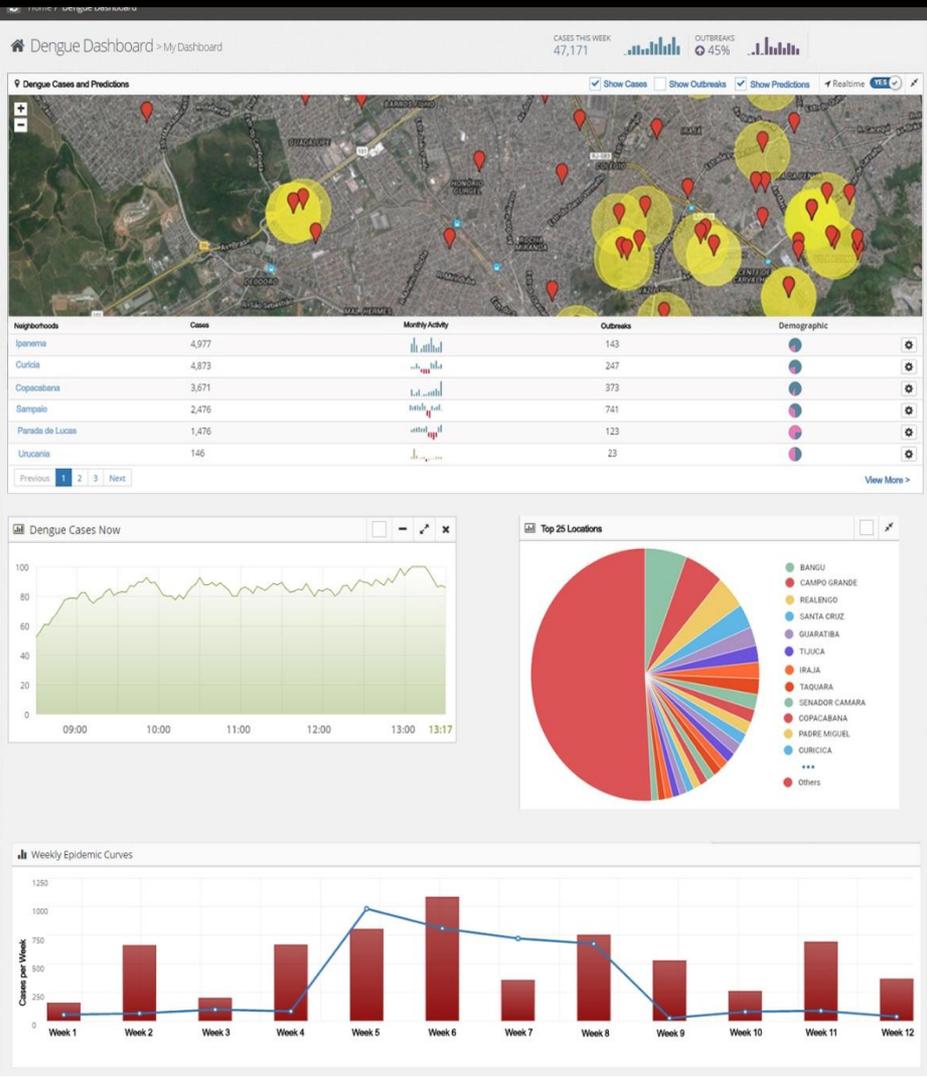
admin@aime.life

Password

Remember me

Log In

[Forgot Password?](#)



PREDICTION REAL TIME

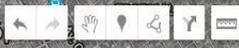


LOCATION & MAGNITUDE ANALYTICS



EPID CURVE & REPORT

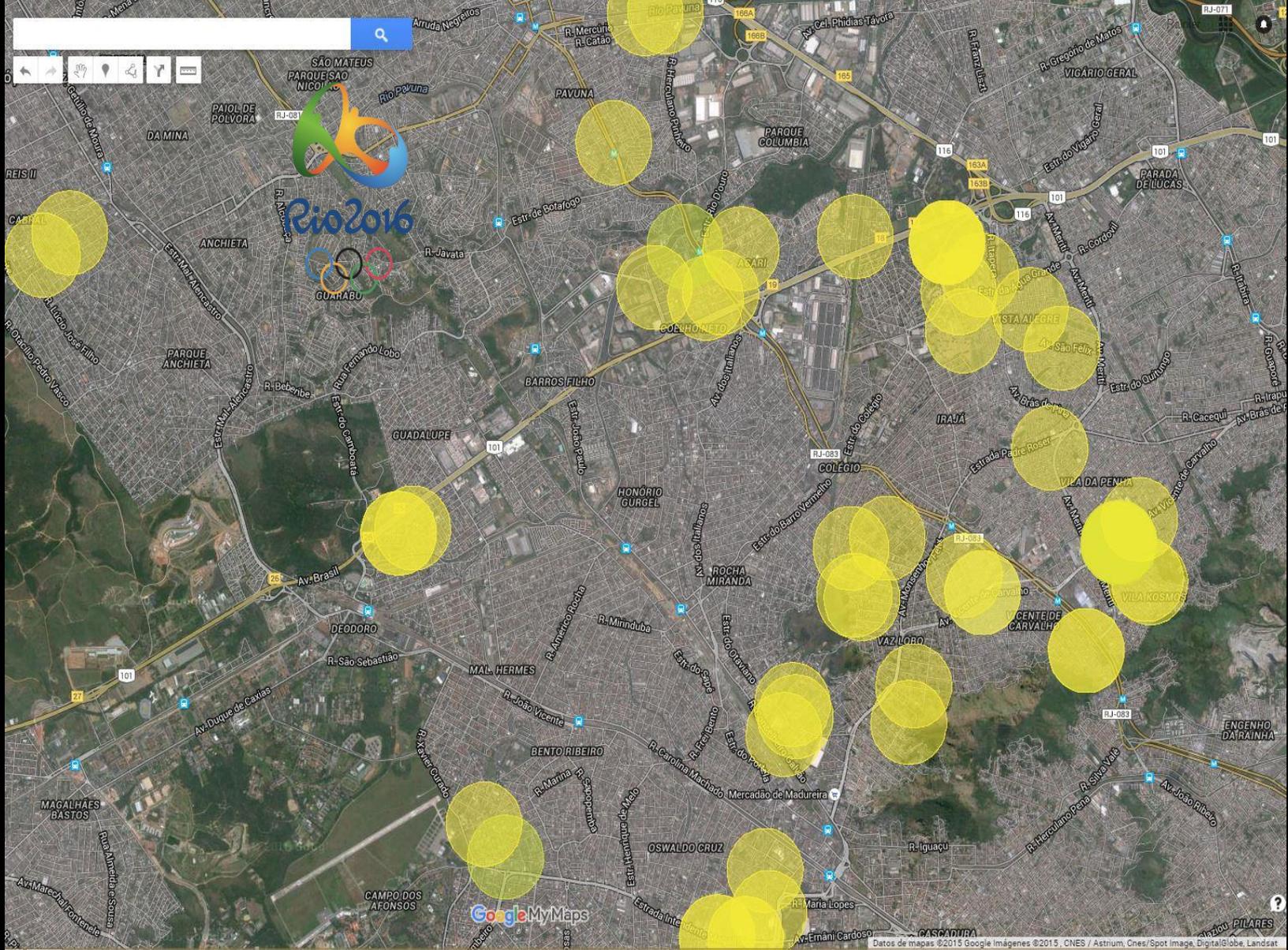
Search bar with a magnifying glass icon.



Rio 2016

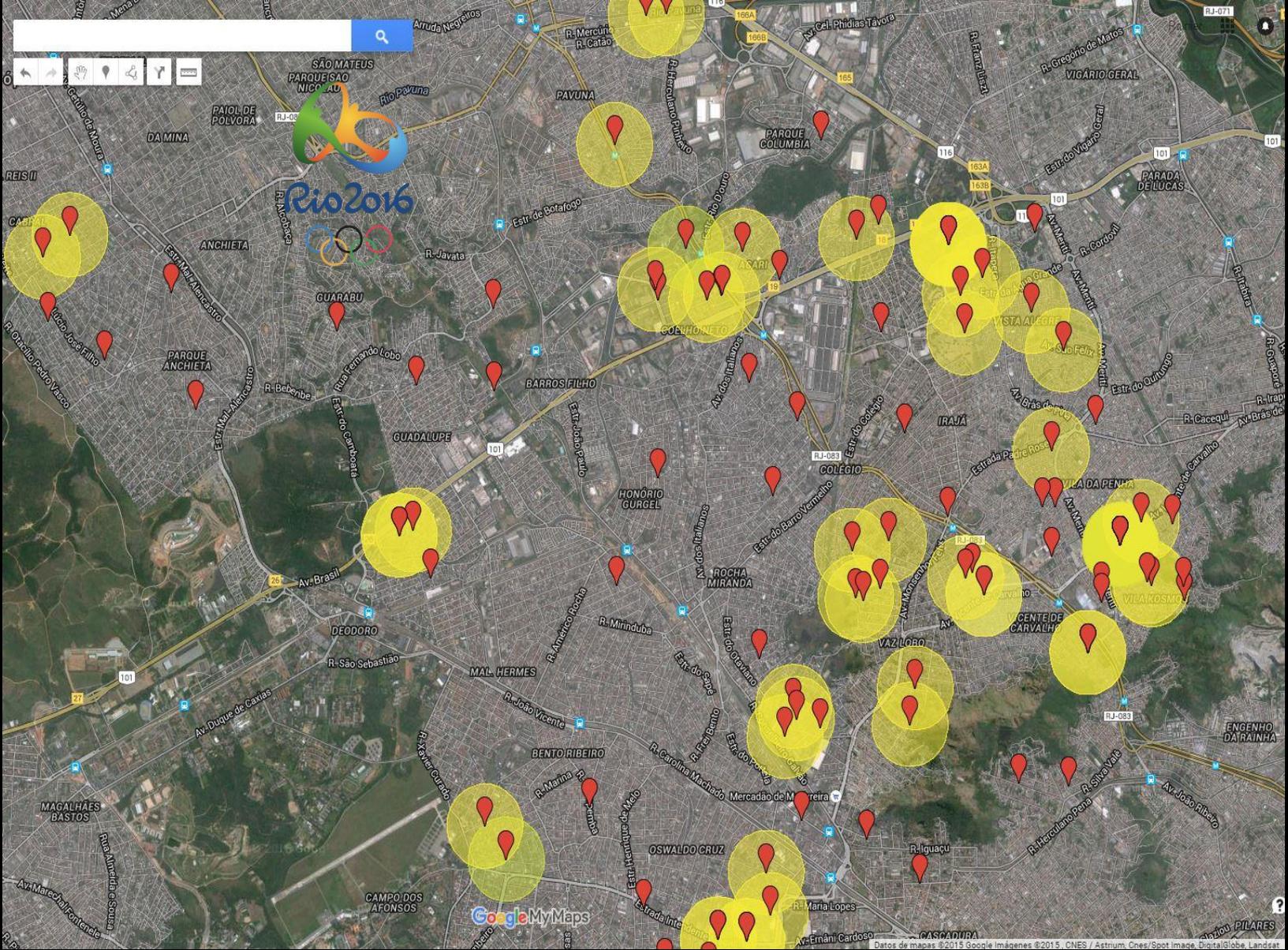
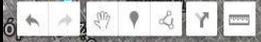


GUARABU



Google My Maps

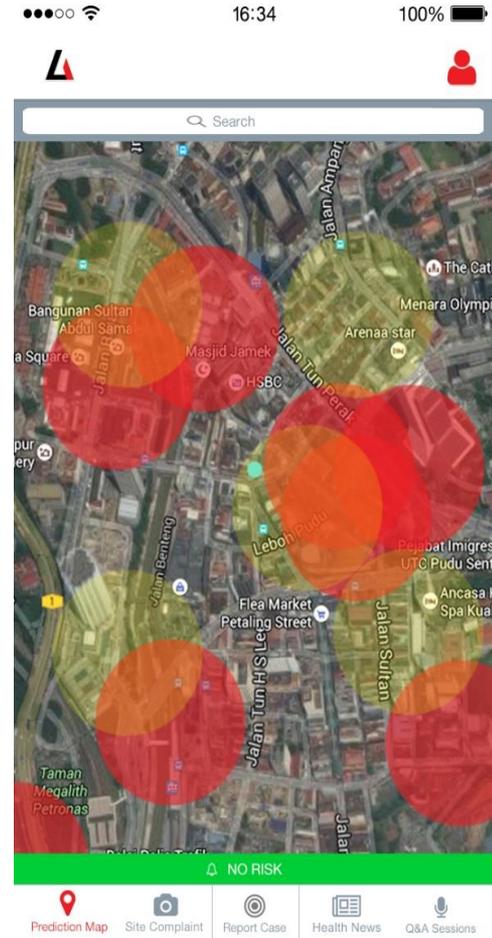
Search bar with a magnifying glass icon.



Google My Maps

Report Dengue Case







16:34 100%

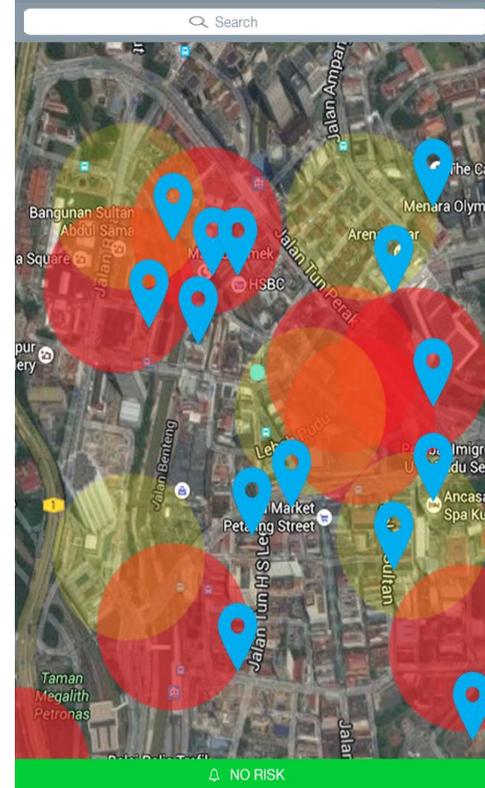


Say something about this picture....

Send

- Prediction Map
- Site Complaint
- Report Case
- Health News
- Q&A Sessions

16:34 100%



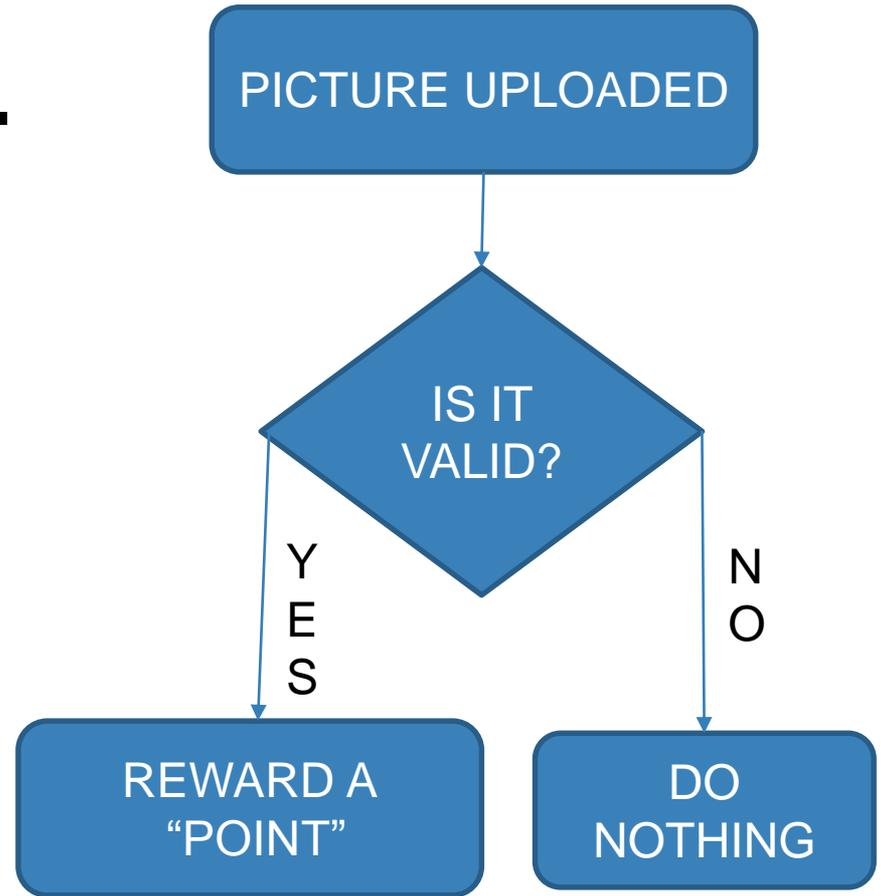
- Prediction Map
- Site Complaint
- Report Case
- Health News
- Q&A Sessions

3. Addition of a Reward System.

For each validated and confirmed breeding site uploaded, users would be able to obtain “Webe Points”.

These points could then later be exchanged by rewards set by telco / local / state government to the Community.

Targeted Health Campaign





CENTRALIZED
DATABASE



[SYSTEM]

- *Mobile PINT*
- *Crowd-sourced Input Interface (CIINT)*
- *Medical Sessions Interface (MESI)*



COMMUNITY

AIME MOBILE SYSTEM



HEALTH CENTER



[SYSTEM]

Remote data input interface (REDINT)



CENTRALIZED
DATABASE



[SYSTEM]

- *Data Analytics Interface (DAI)*
- *Data Prediction Interface (PINT)*
- *User management and operation management interfaces (UMI and OMI).*
- **COMMUNITY MGMT INTERFACE (COMI)**



PUBLIC HEALTH
OFFICE

[SYSTEM]

- *Mobile PINT*
- *Crowd-sourced Input Interface (CIINT)*
- *Medical Sessions Interface (MESI)*

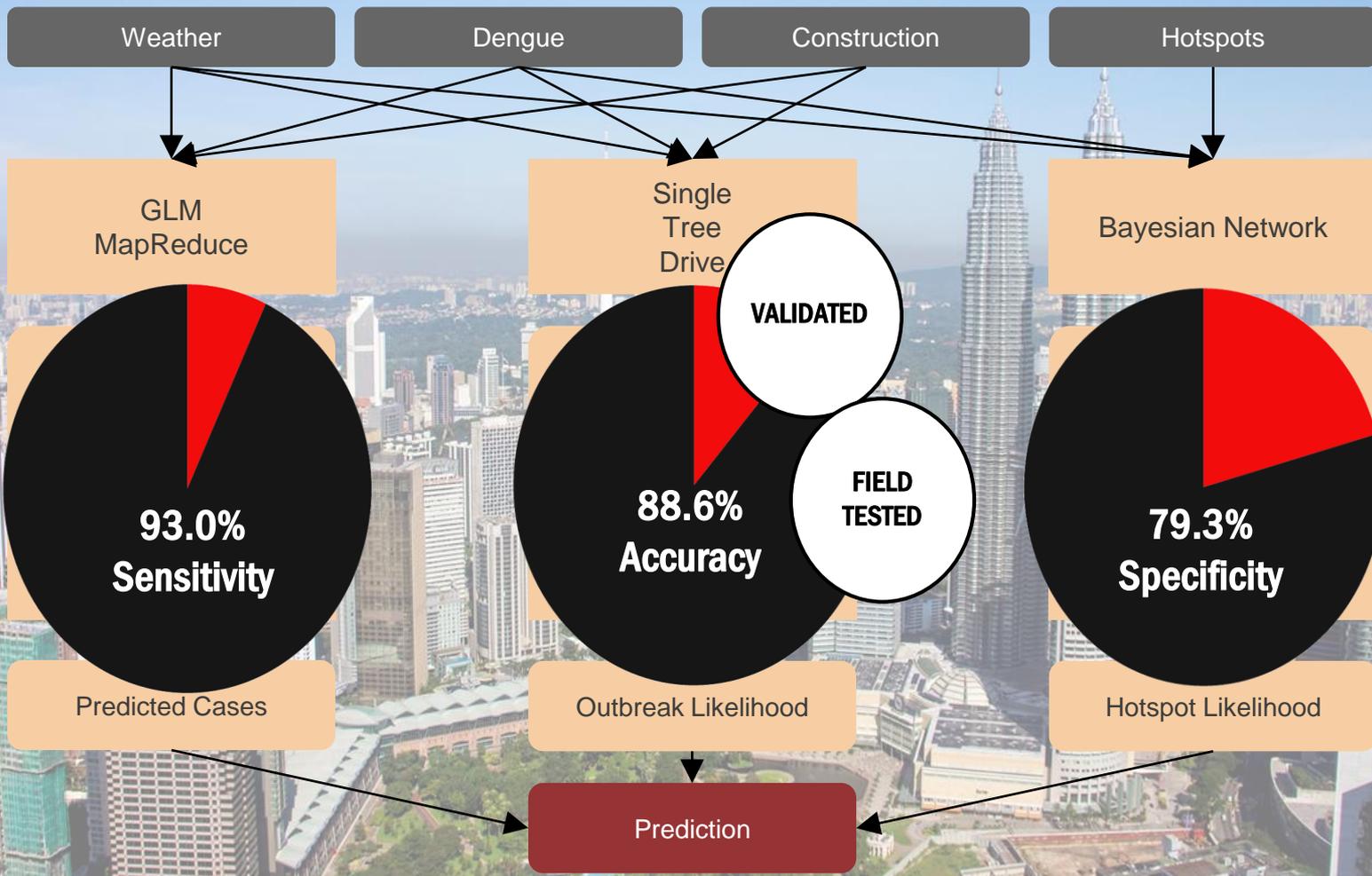


COMMUNITY

AIME'S ACHIEVEMENTS GLOBALLY



GLOBAL TRACTION

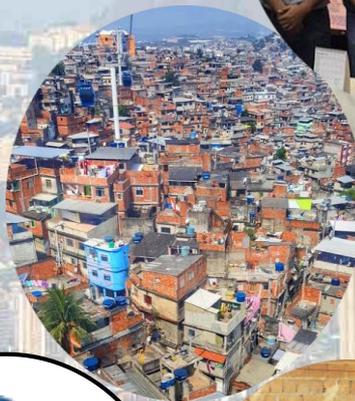


DISEASE ANALYTICS

Accuracy of

84.11%

5 days of Data Analysis
With Limited Resources



DISEASE ANALYTICS

MANILA, Philippines



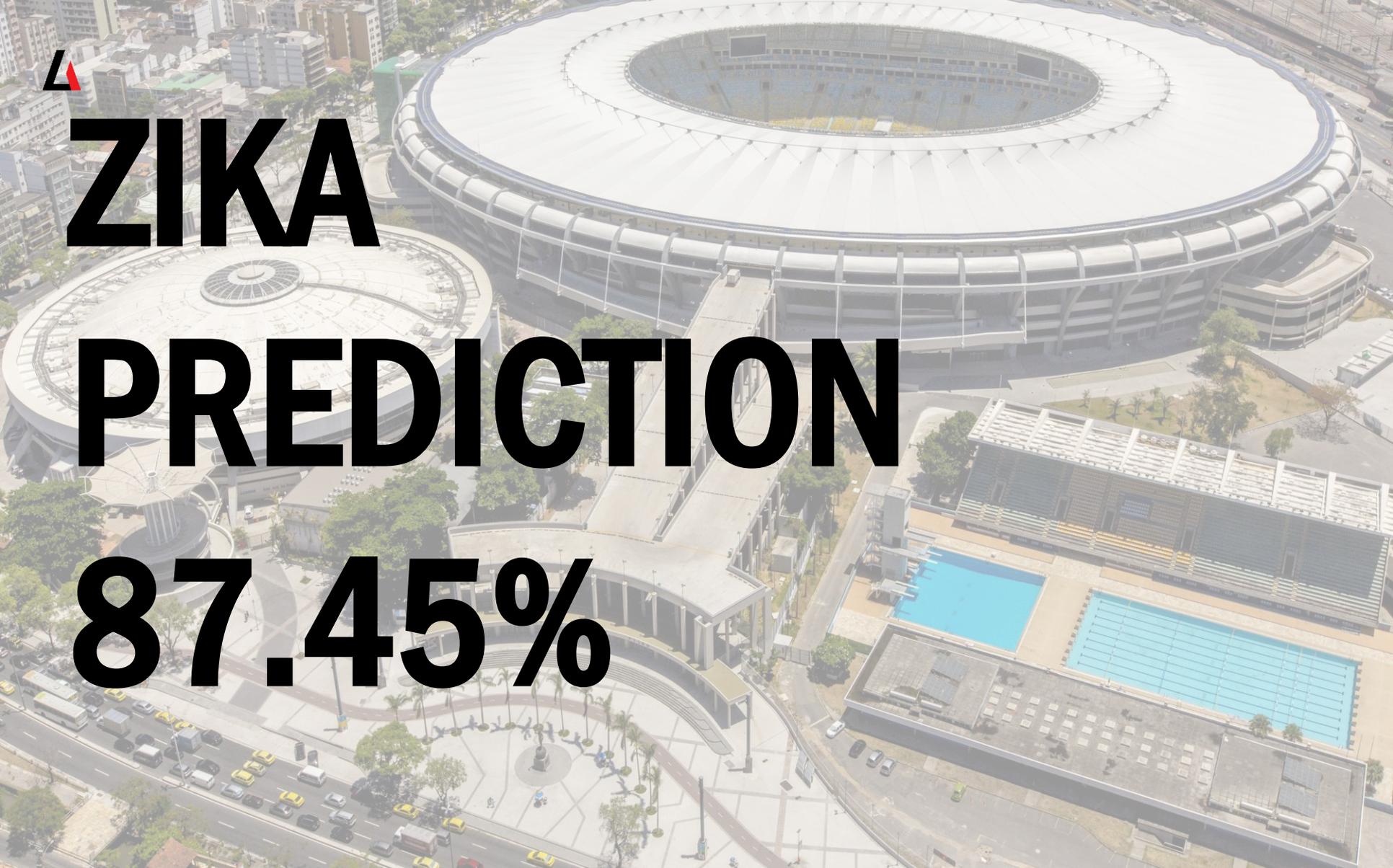
30 Days Prediction
84.87%



ZIKA

PREDICTION

87.45%





AIME PILOT WITH RIO CITY HEALTH DEPARTMENT

AIME Inc WITH THE GOVERNMENT OF PHILIPPINES



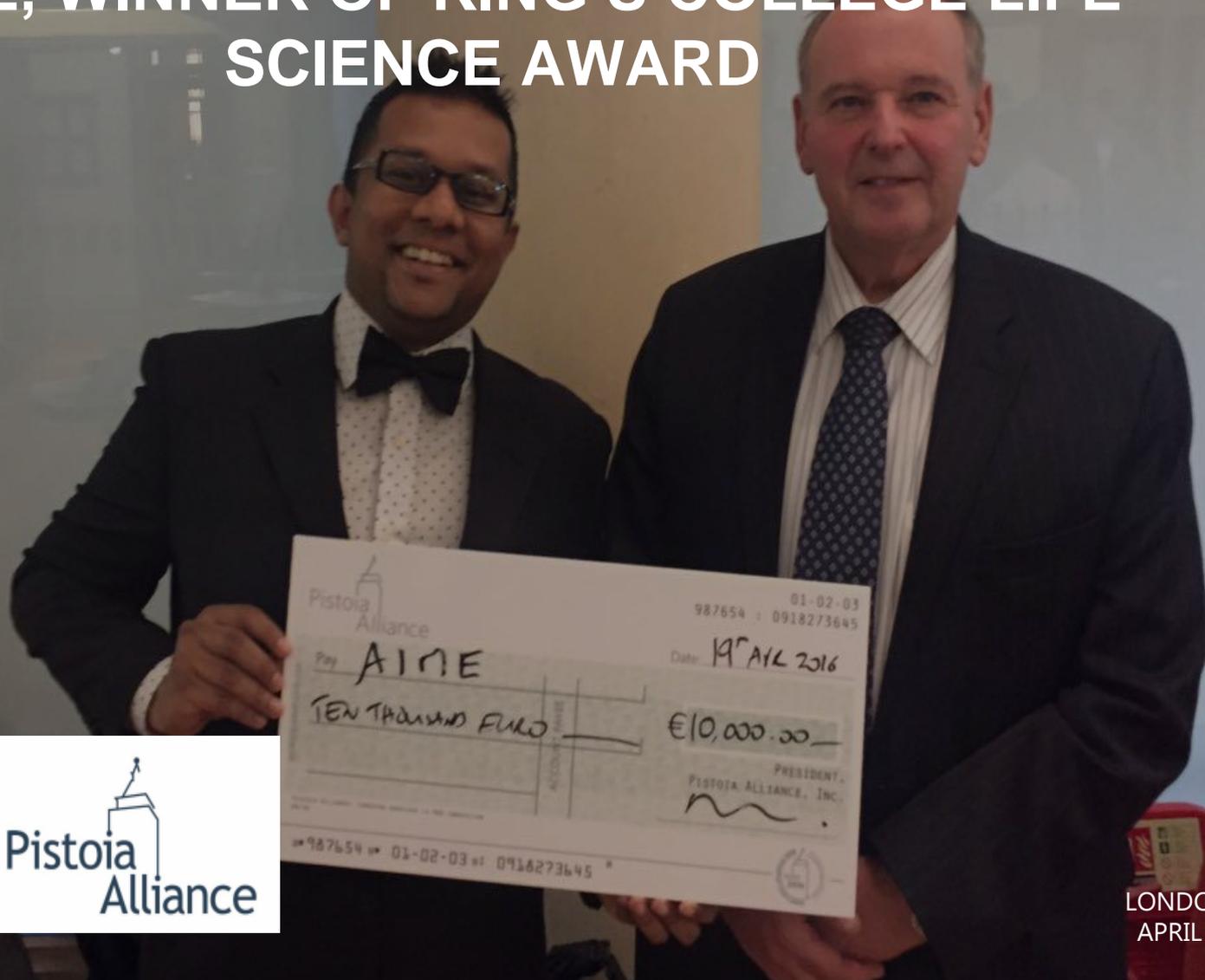
MANILA, PHILIPPINES
JULY, 2016

AIME AWARDED FOR ITS EFFORT FROM THE CLINTON FOUNDATION



CALIFORNIA, USA
MARCH 2016

AIME, WINNER OF KING'S COLLEGE LIFE SCIENCE AWARD



LONDON, UK
APRIL 2016

AIME AS THE GLOBAL TOP 8 HEALTH INNOVATOR AWARD

YHIF
Boston
Competition



THE GLOBAL HEALTH SUMMIT

Monday, July 18, 2016 12:00 PM
PM 1:00 PM



HARVARD
SCHOOL OF PUBLIC HEALTH

MASSACHUSETTS, USA
JULY, 2016

Top **10 Exceptional Scientist & Innovations of the United Nations** Solution Summit during the United Nations General Assembly 2016, New York



**AIME Inc invited as EXPERTS
to lead Vaccine Deployment site in United States of America & Latin America**



OCT 12, 2015 @ 8:00 AM 6,887 VIEWS

Infectious Disease: The Beginning Of The End



Brian Rashid
CONTRIBUTOR

I share leadership
insights that work for
me and others.

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own.

You vomit. You sweat. You get a rash. Your body hurts all over. You may even die. Not fun.

Every year, 2.5 billion people are at risk of catching Dengue fever. And there is almost nothing you can do about it. I was told that there is no current vaccine for Dengue fever. I was surprised this was true, but according to a bunch of sites on the internet, it is true. Also not good. So if there is no current vaccine, what is the solution?

Prevention. But how?

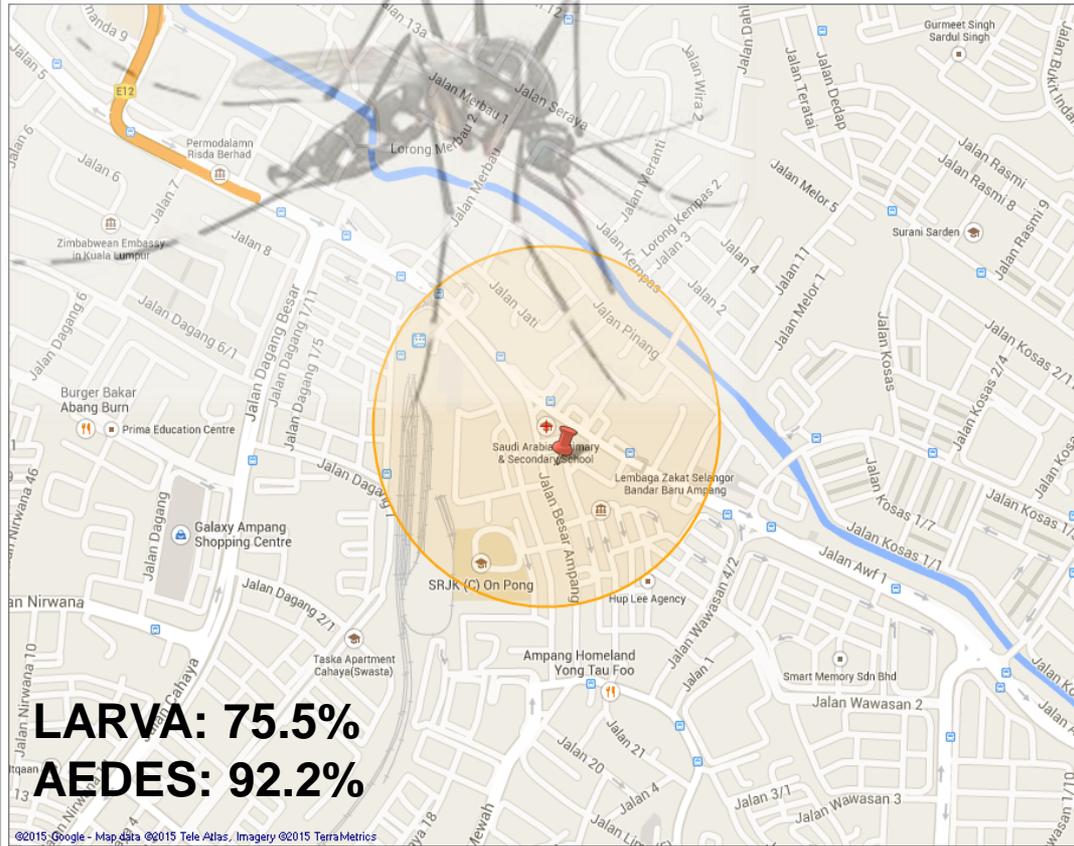
AIME (Artificial Intelligence in Medical Epidemiology) is a company out of Singularity University that developed an algorithm capable of predicting outbreaks of Dengue. I have written about Singularity University before, but basically it assembles the best and brightest minds from around the world to solve problems that affect one billion people. In fact, Singularity only works with people that focus on solutions that will help at least 1 billion people. I love Singularity University. I go any chance I get. AIME is a perfect example of the genius that comes from the program.



Forbes

FORBES TOP 40 WORLD CHANGERS

Dengue Cases Distribution



OUTBREAK PREDICTION

By Year By State **Outbreak Prediction** My Area

- LOCATION: Ampang
- Altitude: below_47
- House Type: High_Rise
- Development: No
- Race: Mix
- Population Density: s_4_up
- Wind Direction: below_150
- Accumulated Total: s_56_113
- Total Previous Week: below_129
- Duration of Outbreak: below_129
- Wind Speed: below_7
- Rain Volume: below_5
- Thunderstorm: below_9

ANALYSE

OUTBREAK PROBABILITY: 69.99%

@AIMEfOrLIFE



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