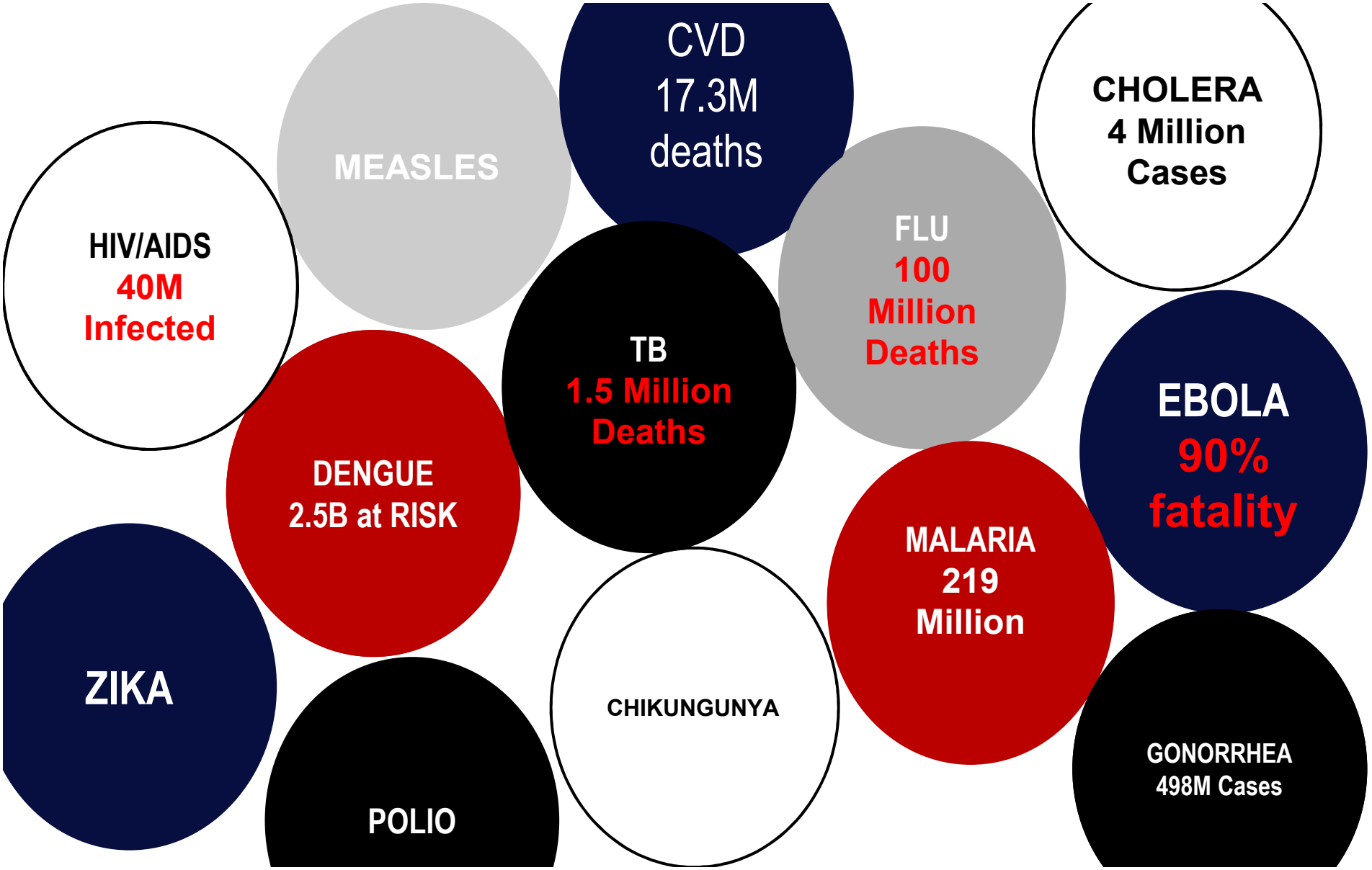
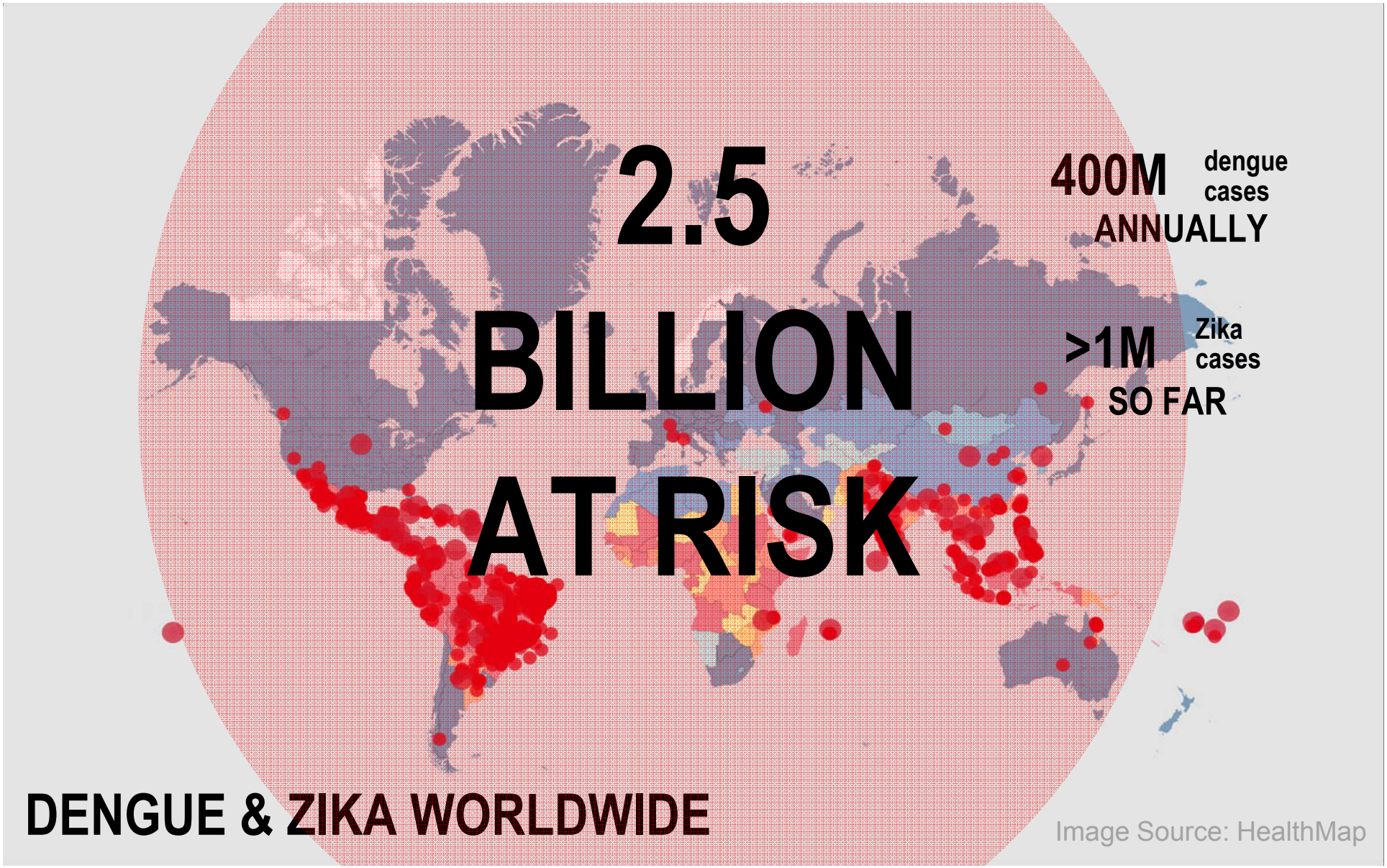
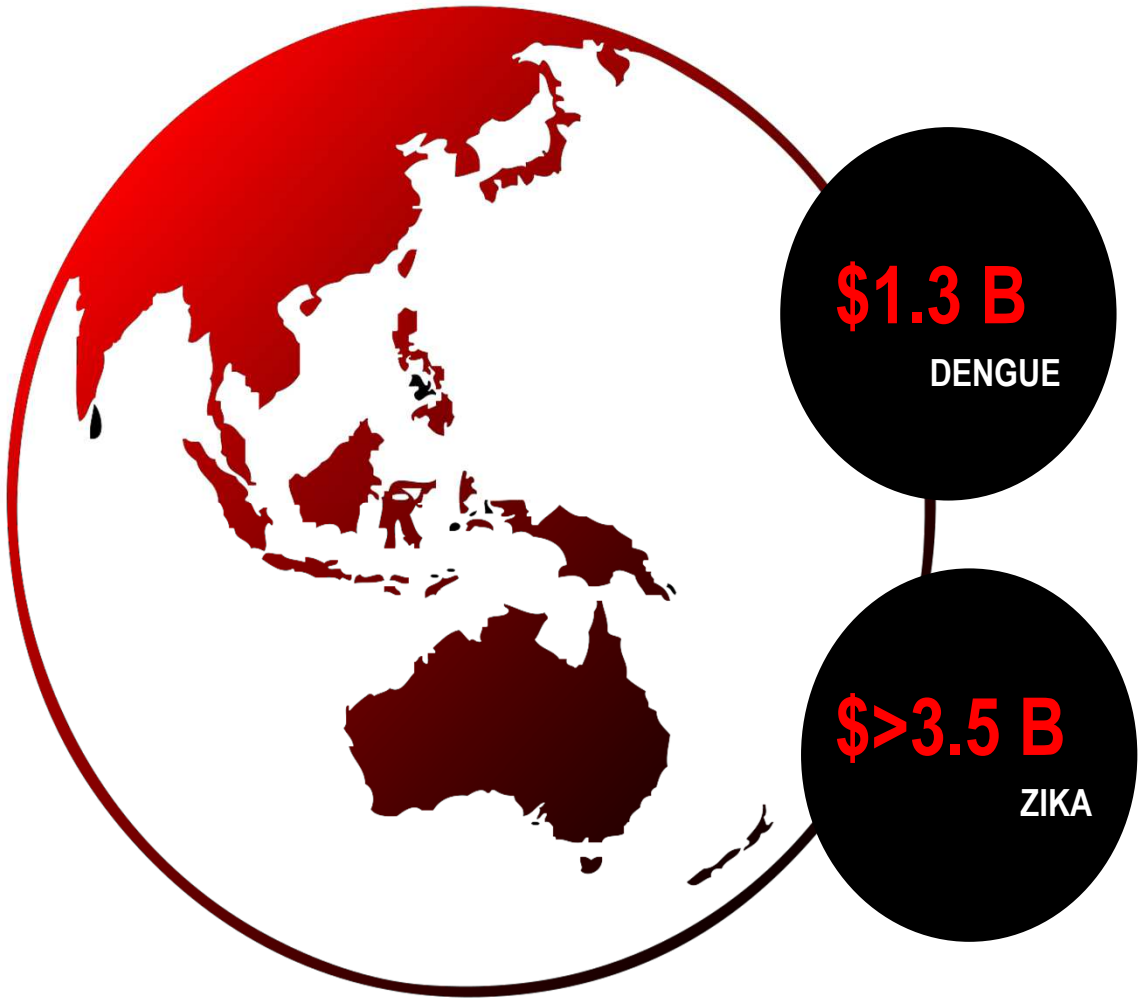
PREDICTING DISEASES.
SAVING LIVES.

AIME

ARTIFICIAL INTELLIGENCE IN MEDICAL EPIDEMIOLOGY

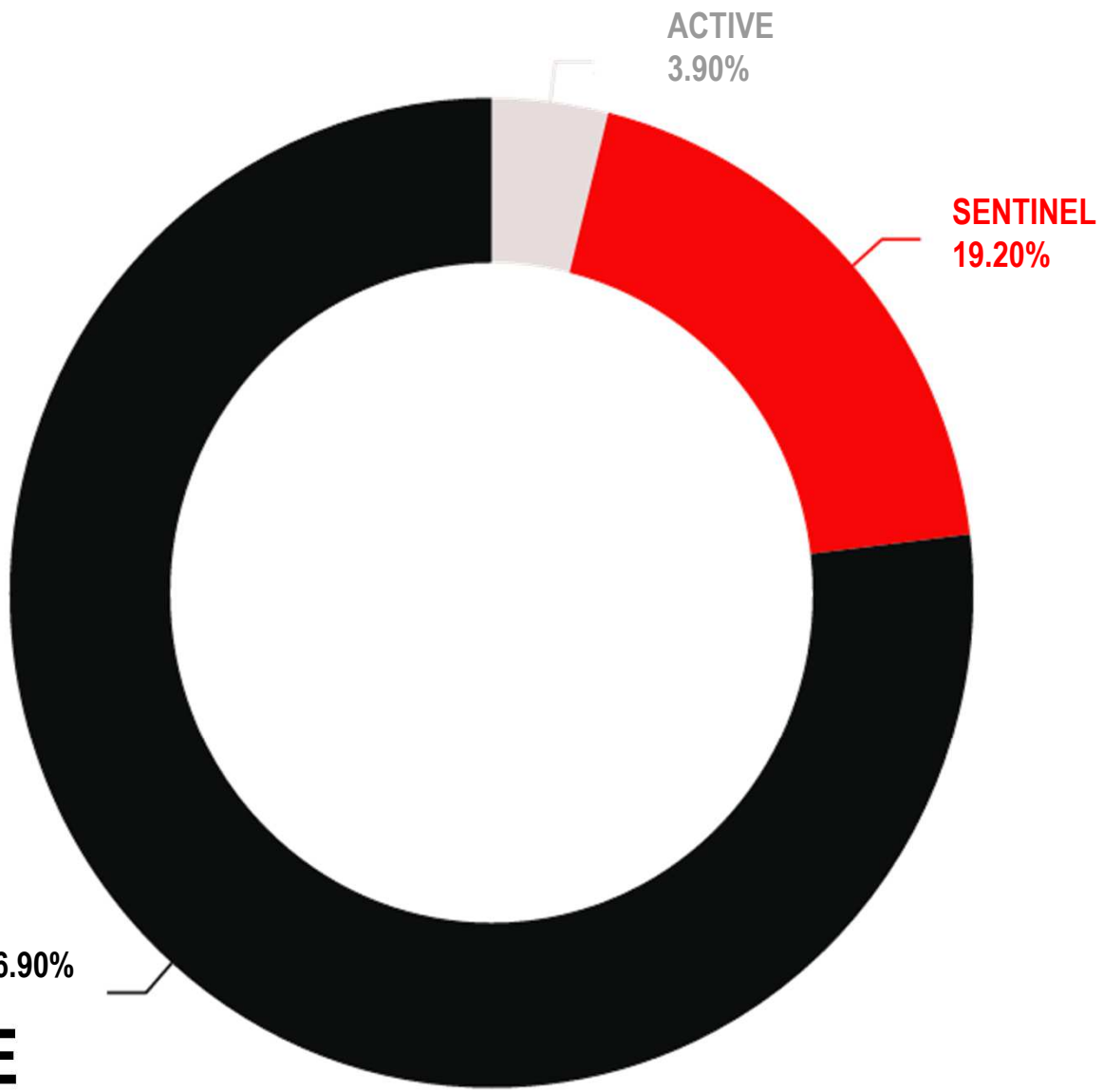

CVD
17.3M
deaths
MEASLES
CHOLERA
4 Million
Cases
HIV/AIDS
40M
Infected
FLU
100
Million
Deaths
TB
1.5 Million
Deaths
EBOLA
90%
fatality
DENGUE
2.5B at RISK
MALARIA
219
Million
ZIKA
CHIKUNGUNYA
GONORRHEA
498M Cases
POLIO


2.5
BILLION
AT RISK
400M dengue cases ANNUALLY
>1M Zika cases SO FAR
DENGUE & ZIKA WORLDWIDE
Image Source: HealthMap

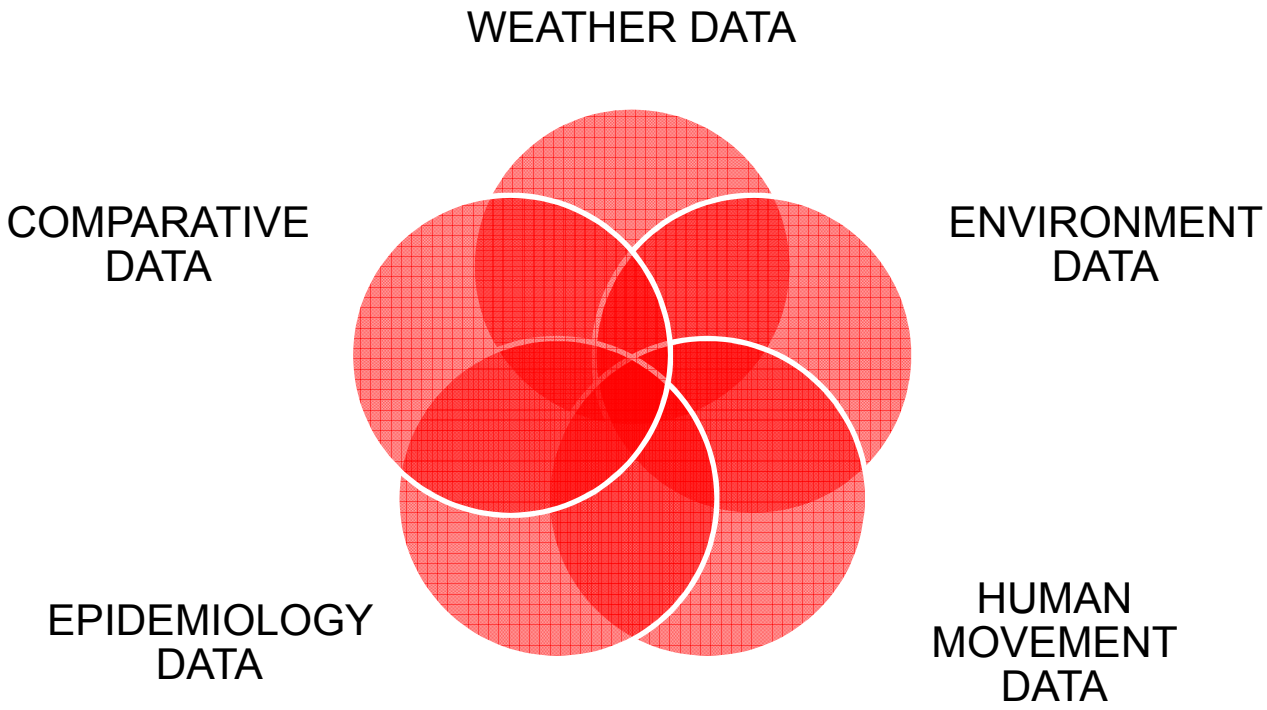


DENGUE & ZIKA ECONOMIC IMPACT

CURRENT RESPONSE

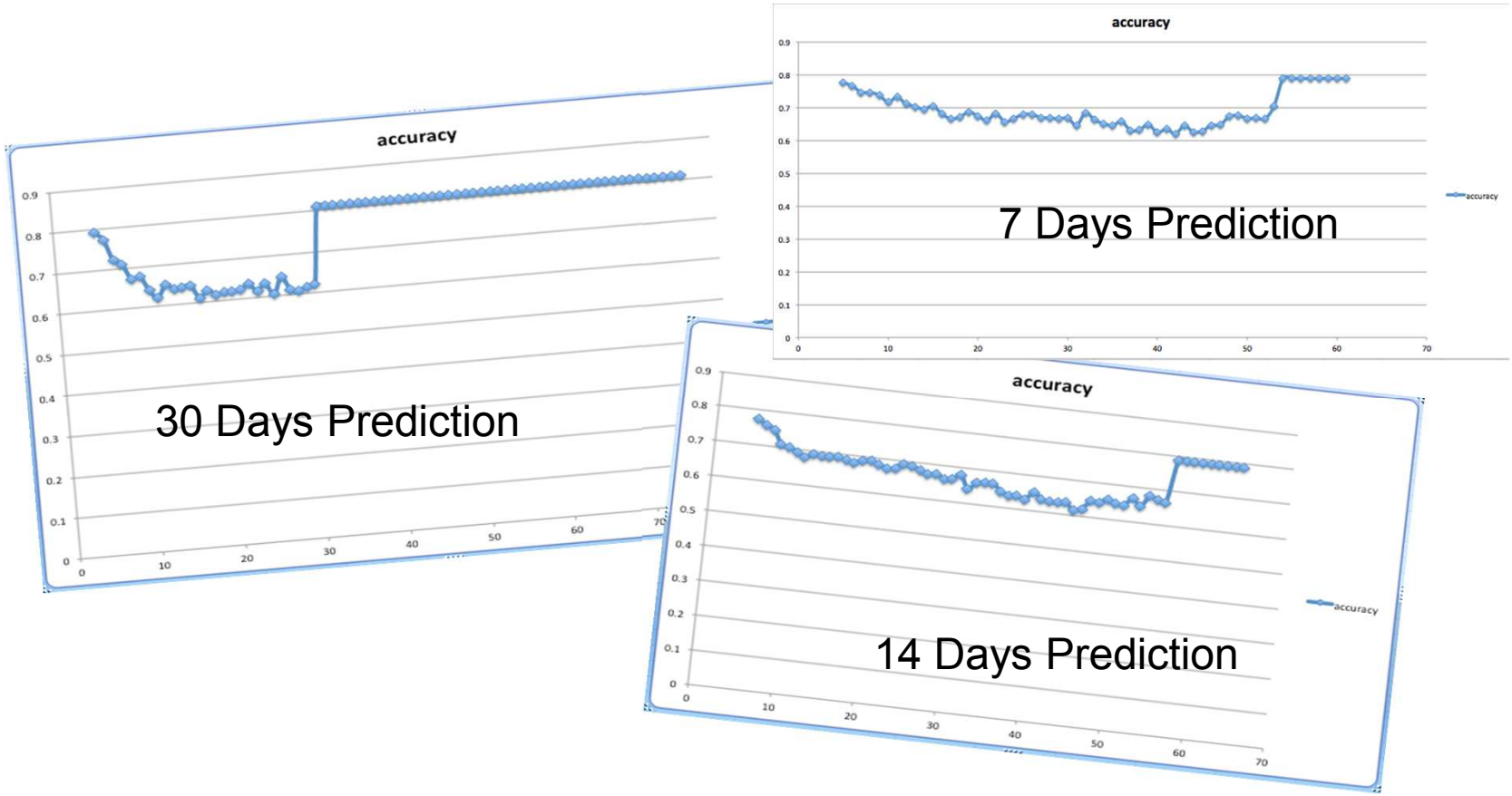


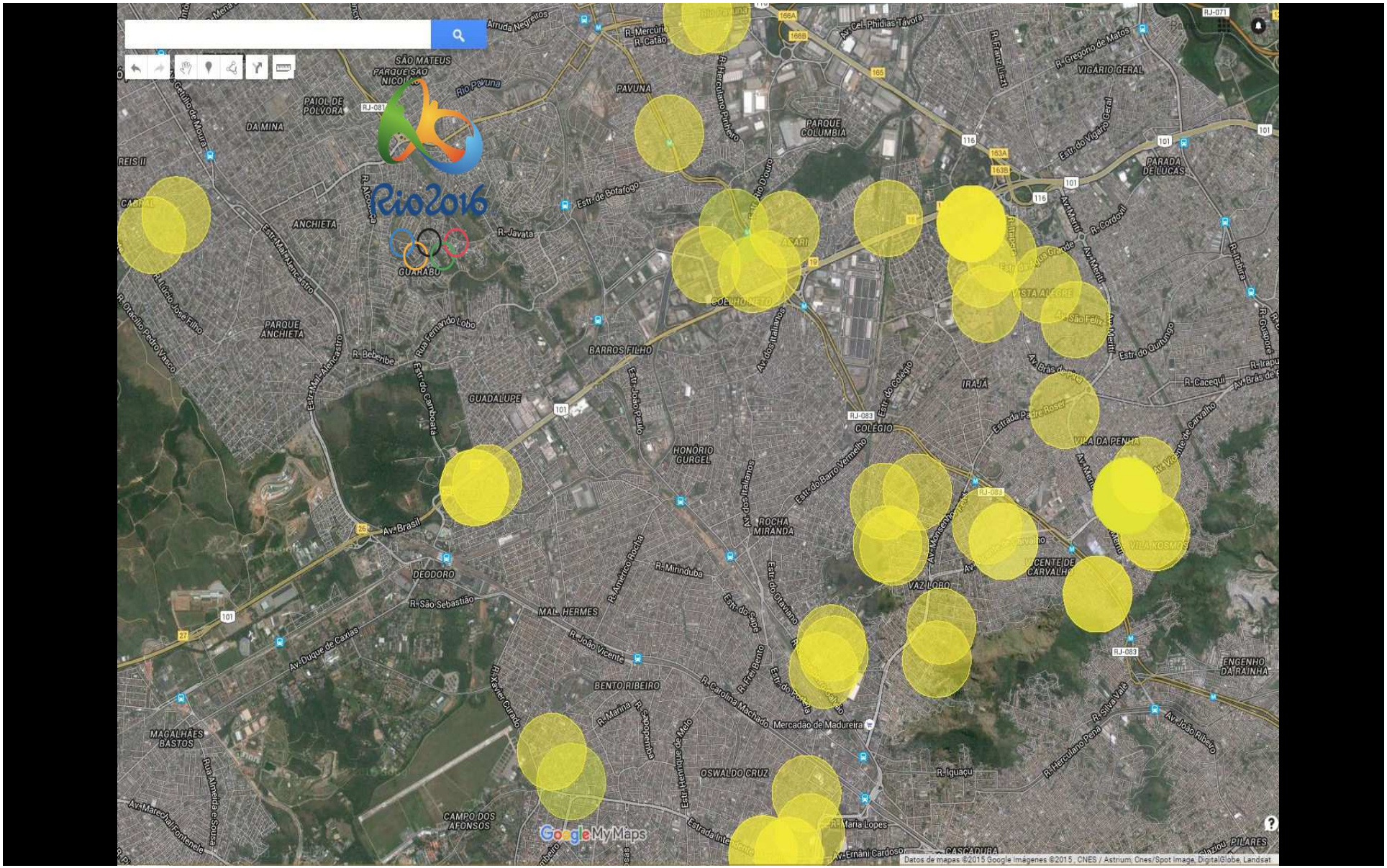
UNKNOWN OUTBREAK AREAS
UNPLANNED MANAGEMENT
GENETICALLY MODIFIED MOSQUITOES
FOGGING & LARVICIDING
HEALTH CAMPAIGNS
OUTBREAK MANAGEMENT

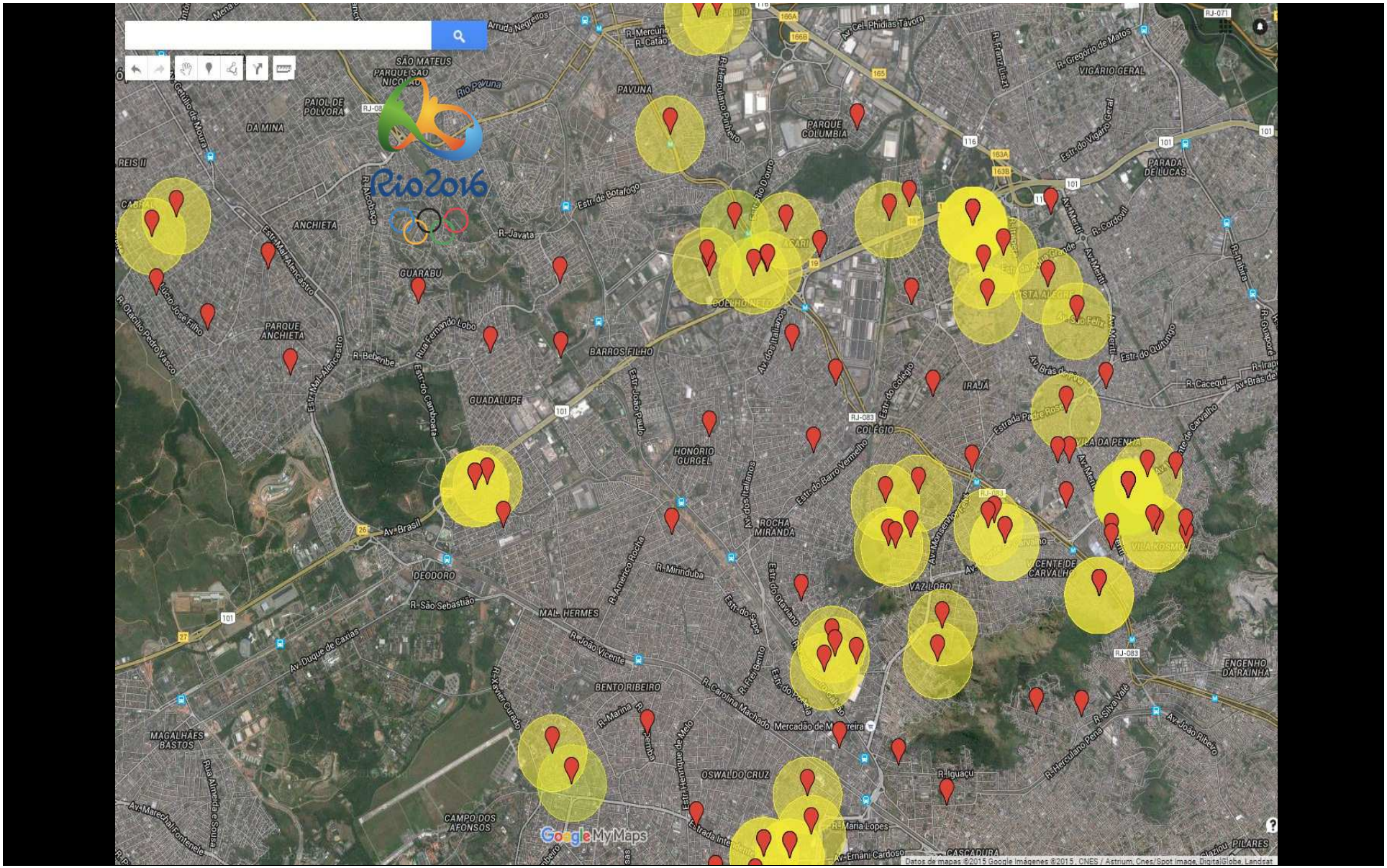


Tech Approach: Dengue-ZIKA EPIDEMIOLOGY + AI

Feature Selection




Rio2016
Google My Maps
Datos de mapas ©2015 Google Imágenes ©2015 , CNES / Astrium, Cnes/Spot Image, DigitalGlobe, Landsat
SÃO MATEUS
PAIOL DE POLVORA
DA MINA
REIS II
ANCHIETA
PARQUE ANCHIETA
GUARABU
PAVUNA
PARQUE COLUMBIA
VIGÁRIO GERAL
PARADA DE LUCAS
VISTA ALEGRE
IRAJÁ
COLÉGIO
VILA DA PENHA
VILA KOSMOS
VICENTE DE CARVALHO
VAZ LOBO
ENGENHO DA RAINHA
BARROS FILHO
GUADALUPE
HONÓRIO GURGEL
ROCHA MIRANDA
DEODORO
MAL. HERMES
BENTO RIBEIRO
MAGALHÃES BASTOS
OSWALDO CRUZ
CAMPO DOS AFONSOS
CASCADURA
PILARES
Rio Pavuna
Av. Brasil
Mercadão de Madureira


Rio2016
SÃO MATEUS
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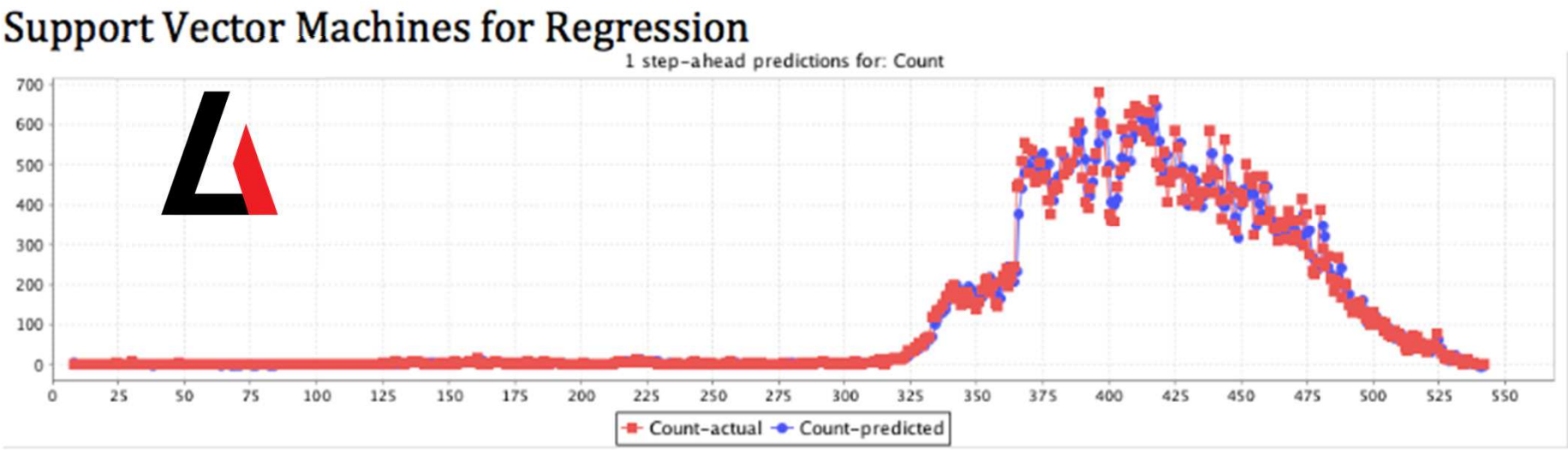
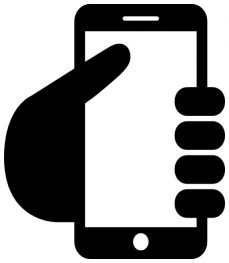
CASCADURA
PILARES
Av. Brasil
Estr. de Botafogo
Rio Pavuna
Google MyMaps
Datos de mapas ©2015 Google Imágenes ©2015 , CNES / Astrium, Cnes/Spot Image, DigitalGlobe, Landsat

LIVE, Dynamic & 100 Days Ahead (Ranges from hours to days)
ACCURACY: 81.55%



Magnitude Dynamic Prediction up to 100 Days in Advance

USERS OF THE COMMUNITY (VIA APP)



USED BY

LIME

BACKED BY

GOVERNMENTS & MULTILATERAL ORGANIZATIONS

RIO PREFEITURA SAÚDE

GOVERNO DO ESTADO SÃO PAULO

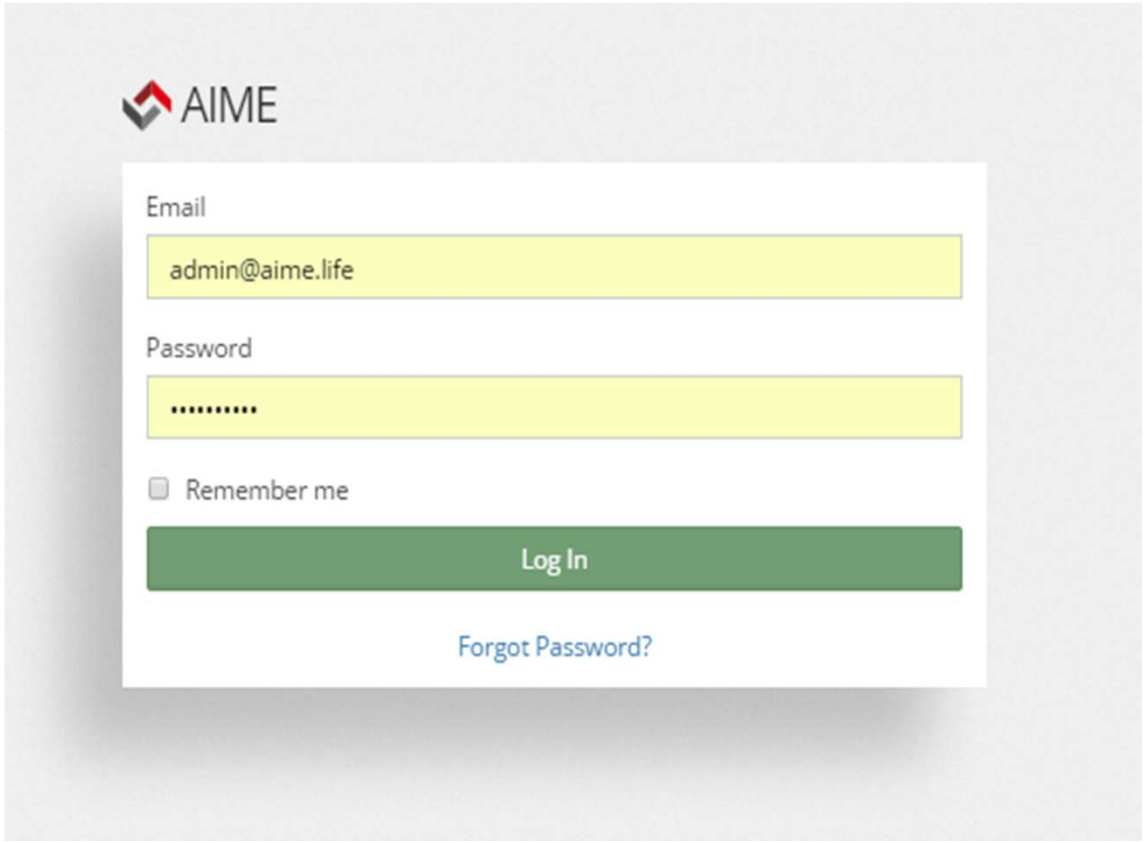
REPUBLIC OF THE PHILIPPINES DEPARTMENT OF HEALTH

VIVARIO

WORLD BANK GROUP

PUBLIC HEALTH OFFICERS (VIA ANALYTICS INTERFACE)

AIME PREDICTION AND ANALYTICS FEATURES


AIME
Email
admin@aime.life
Password
Remember me
Log In
Forgot Password?

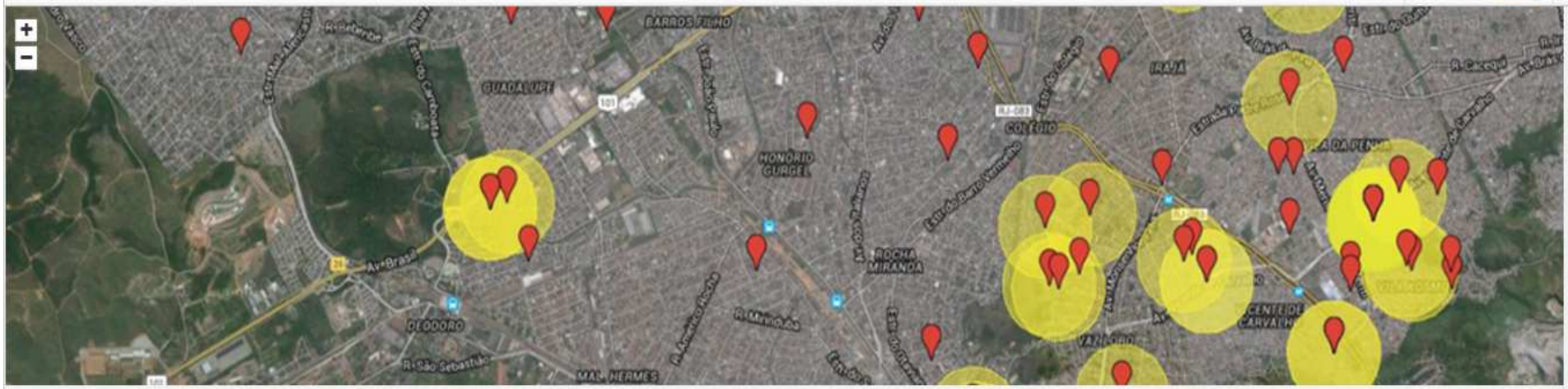
PREDICTION REAL TIME

LOCATION & MAGNITUDE ANALYTICS

EPID CURVE & REPORT

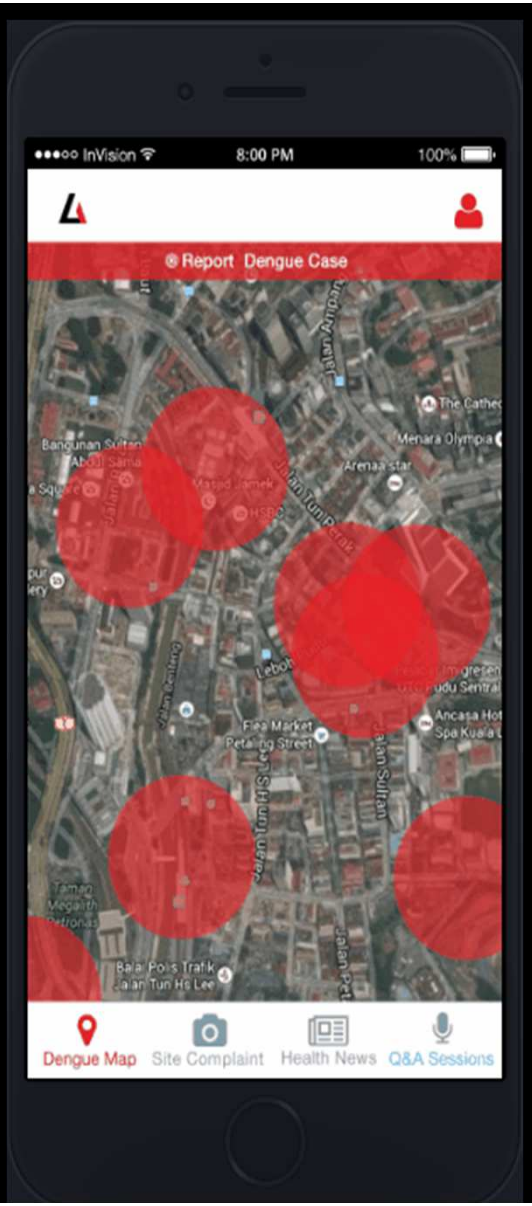
Dengue Cases and Predictions

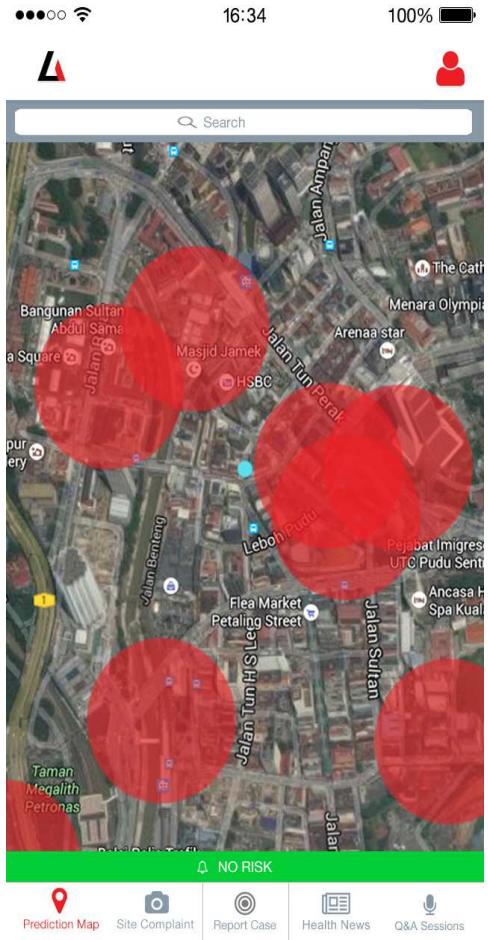
Realtime YES

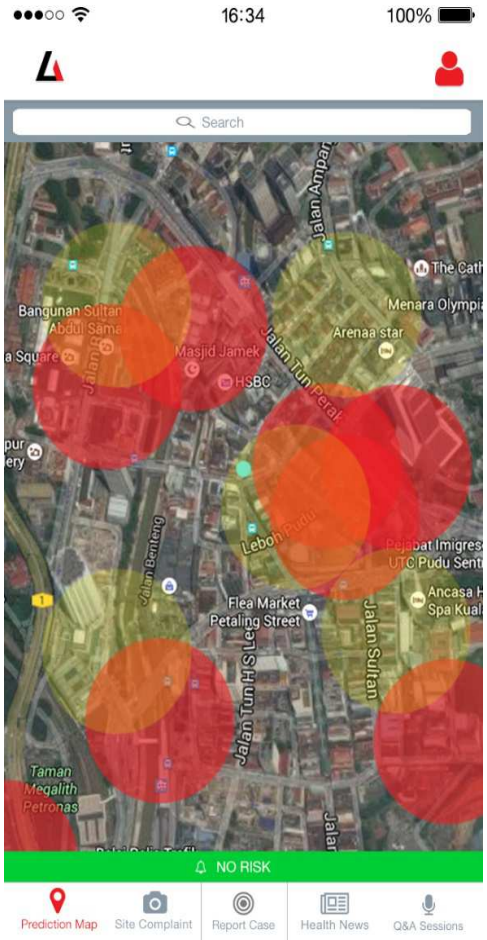


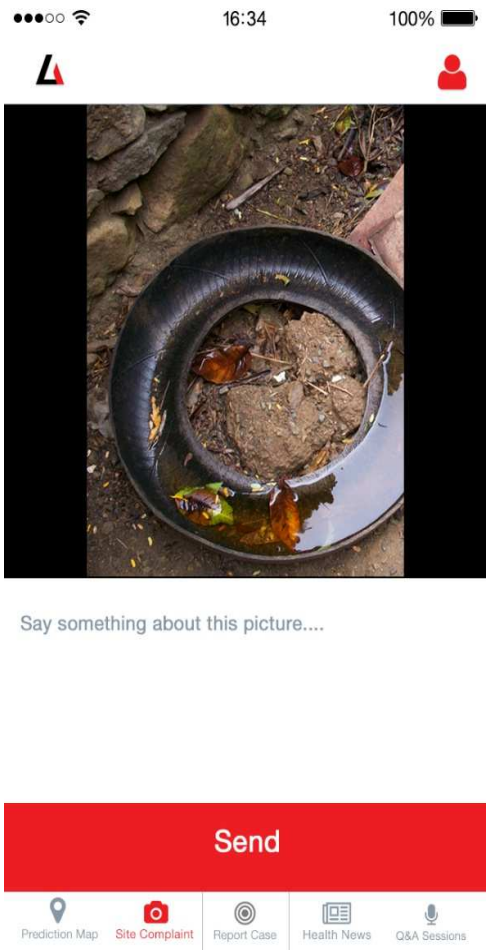
Neighborhoods	Cases	Monthly Activity	Outbreaks	Demographic
Ipanema	4,977		143	
Curicia	4,873		247	
Copacabana	3,671		373	
Sampaio	2,476		741	
Parada de Lucas	1,476		123	
Urucania	146		23	

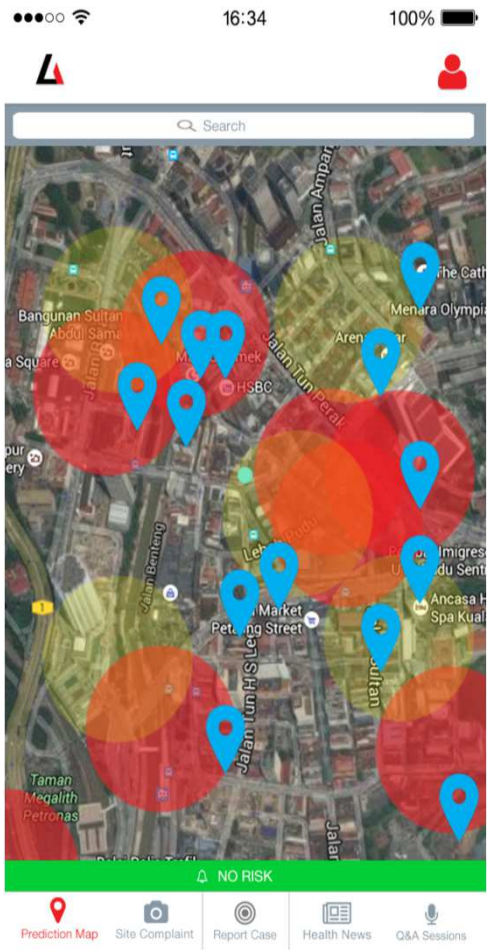
Previous 1 2 3 Next


InVision
8:00 PM
100%
Report Dengue Case
Dengue Map
Site Complaint
Health News
Q&A Sessions


16:34
100%
Search
Jalan Ampang
The Cath
Menara Olympia
Bangunan Sultan Abdul Sama
Arenaa star
Masjid Jamek
HSBC
Jalan Tun Perak
Jalan Bentong
Flea Market Petaling Street
Jalan Sultan
Taman Megalith Petronas
NO RISK
Prediction Map
Site Complaint
Report Case
Health News
Q&A Sessions


16:34
100%
Search
Jalan Ampang
The Cath
Menara Olympia
Bangunan Sultan Abdul Sama
Arenaa star
Masjid Jamek
HSBC
Jalan Tun Perak
Jalan Bentong
Flea Market Petaling Street
Jalan Sultan
Taman Megalith Petronas
NO RISK
Prediction Map
Site Complaint
Report Case
Health News
Q&A Sessions

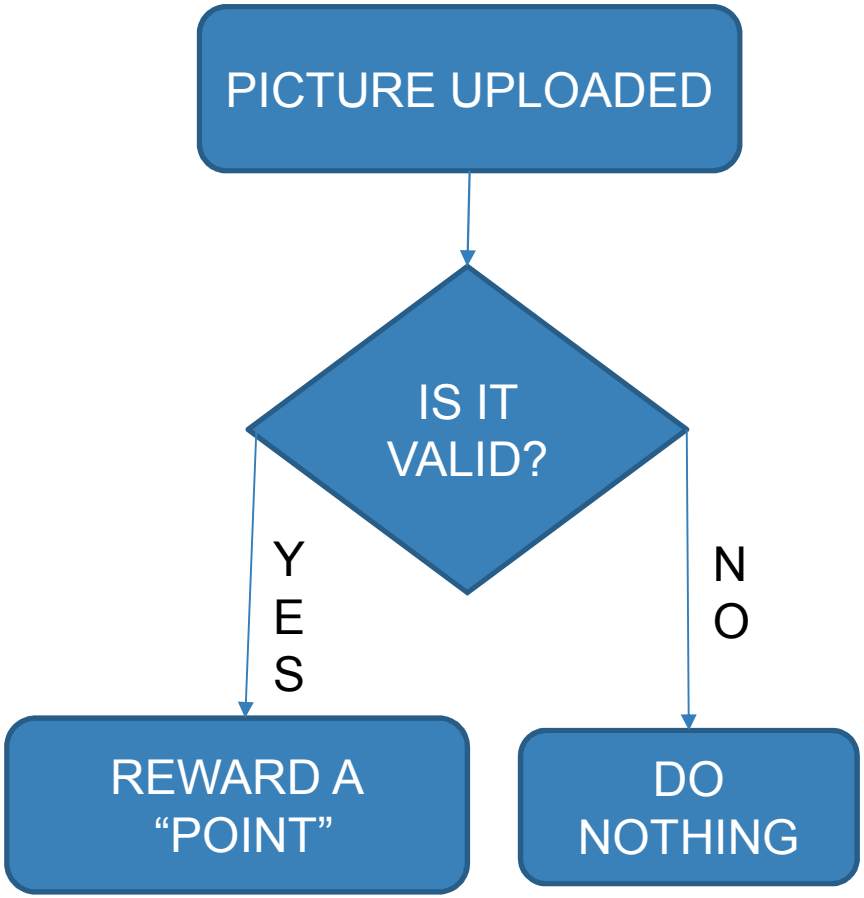

16:34
100%
Say something about this picture....
Send
Prediction Map
Site Complaint
Report Case
Health News
Q&A Sessions


16:34
100%
Search
Jalan Ampang
Bangunan Sultan Abdul Samad
Menara Olympia
HSBC
Jalan Tun Perak
Jalan Bentong
Jalan Tun H.S. Lee
Taman Megalith Petronas
NO RISK
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”.

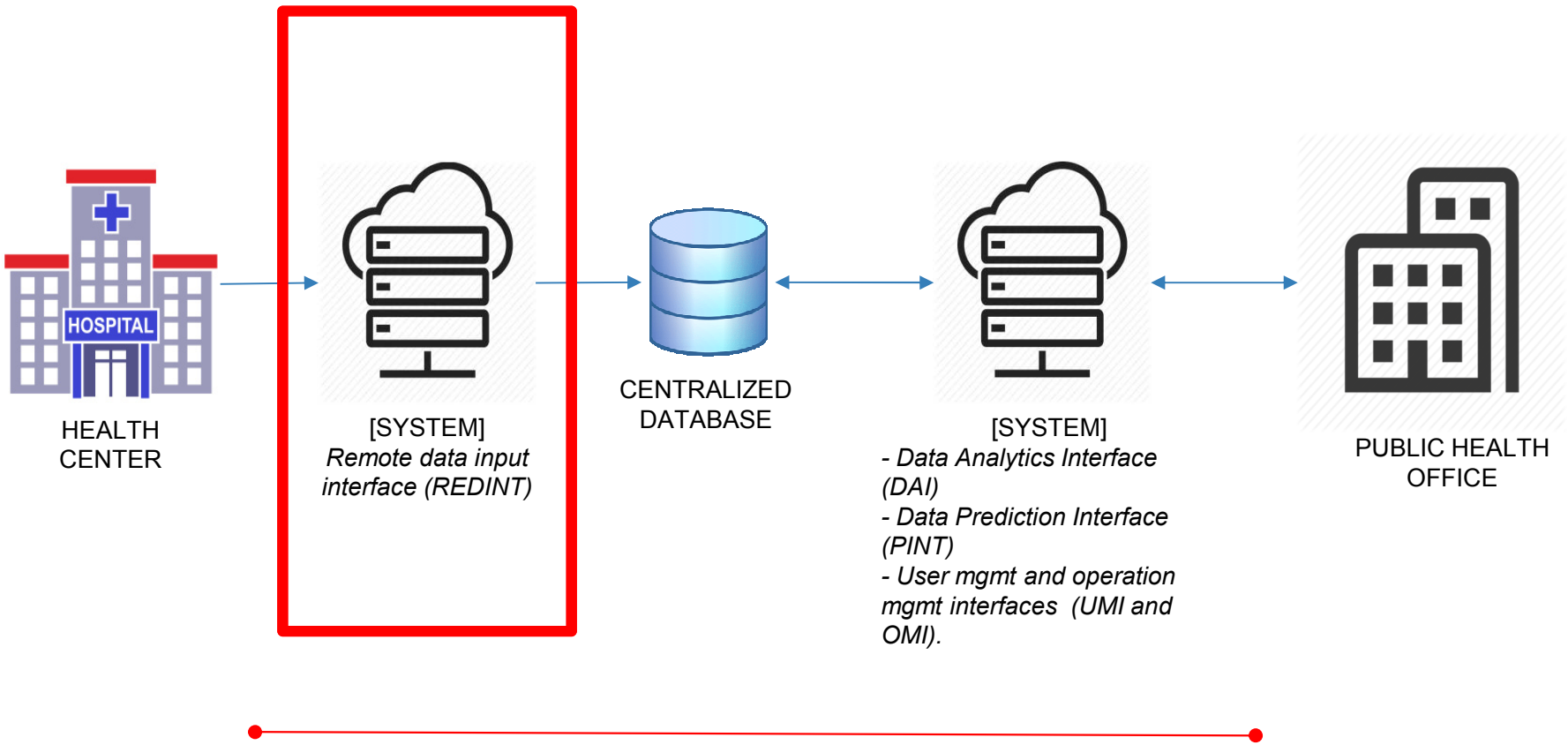
These points could then later by exchanged by rewards set by telco / local / state government to the Community.

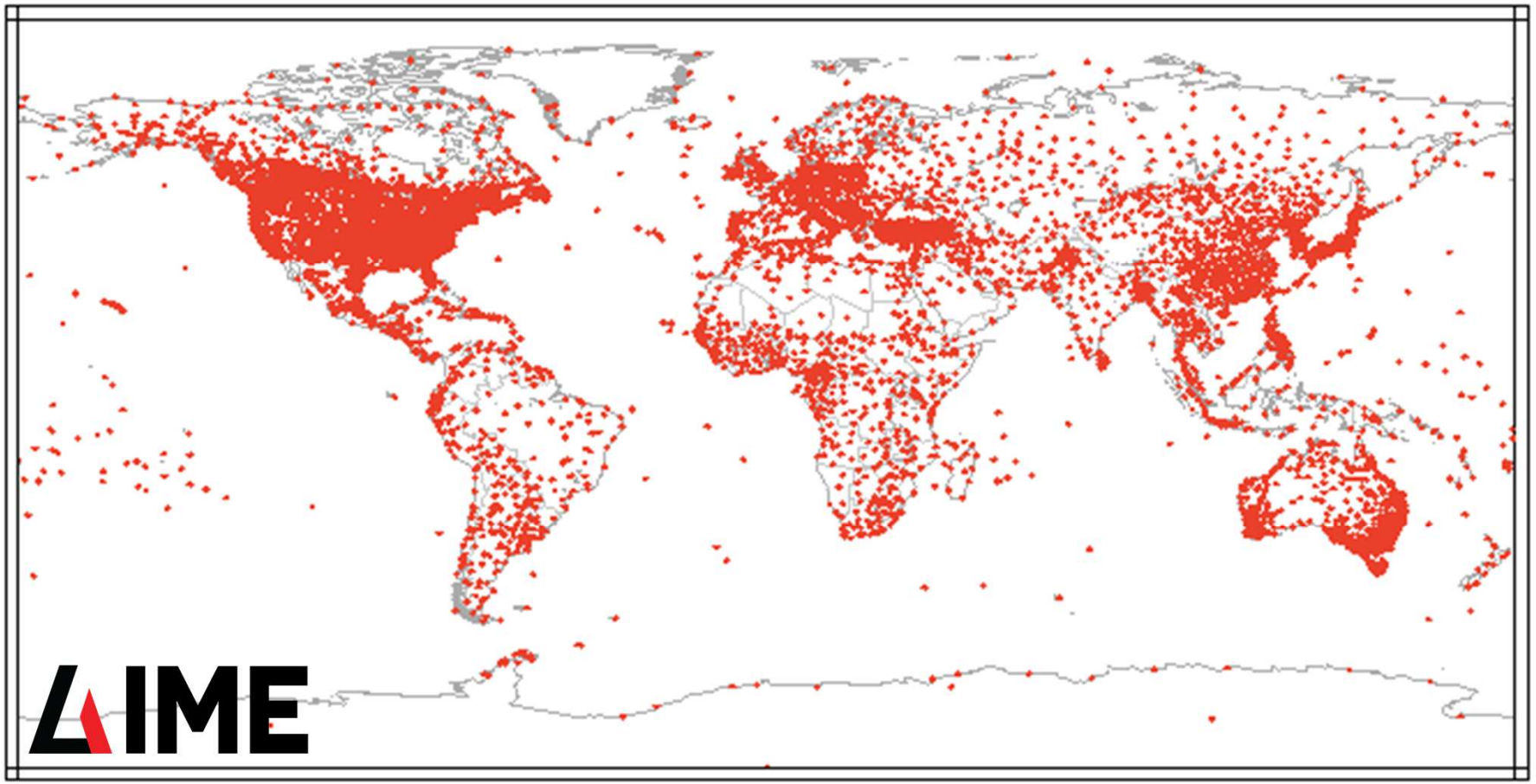


4. Ability for Administrators to open “Health Campaigns”

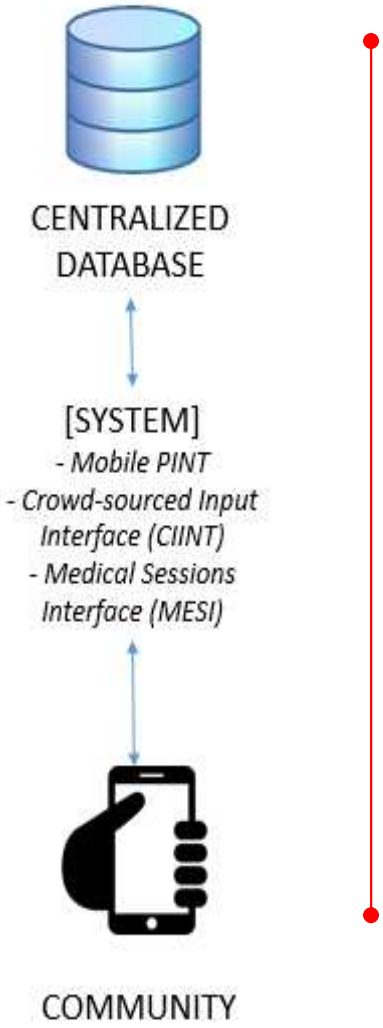
With this, administrators of the app would **be able to mark <u>an area</u> in the map, and send notifications to the users** of the app (both once a user enters the marked area, and once the campaign starts).

The **idea of the campaign is to clean and remove areas that show breeding sites that have been reported in the app**. Administrators will be able to give “Points/Credits/Movie Pass”

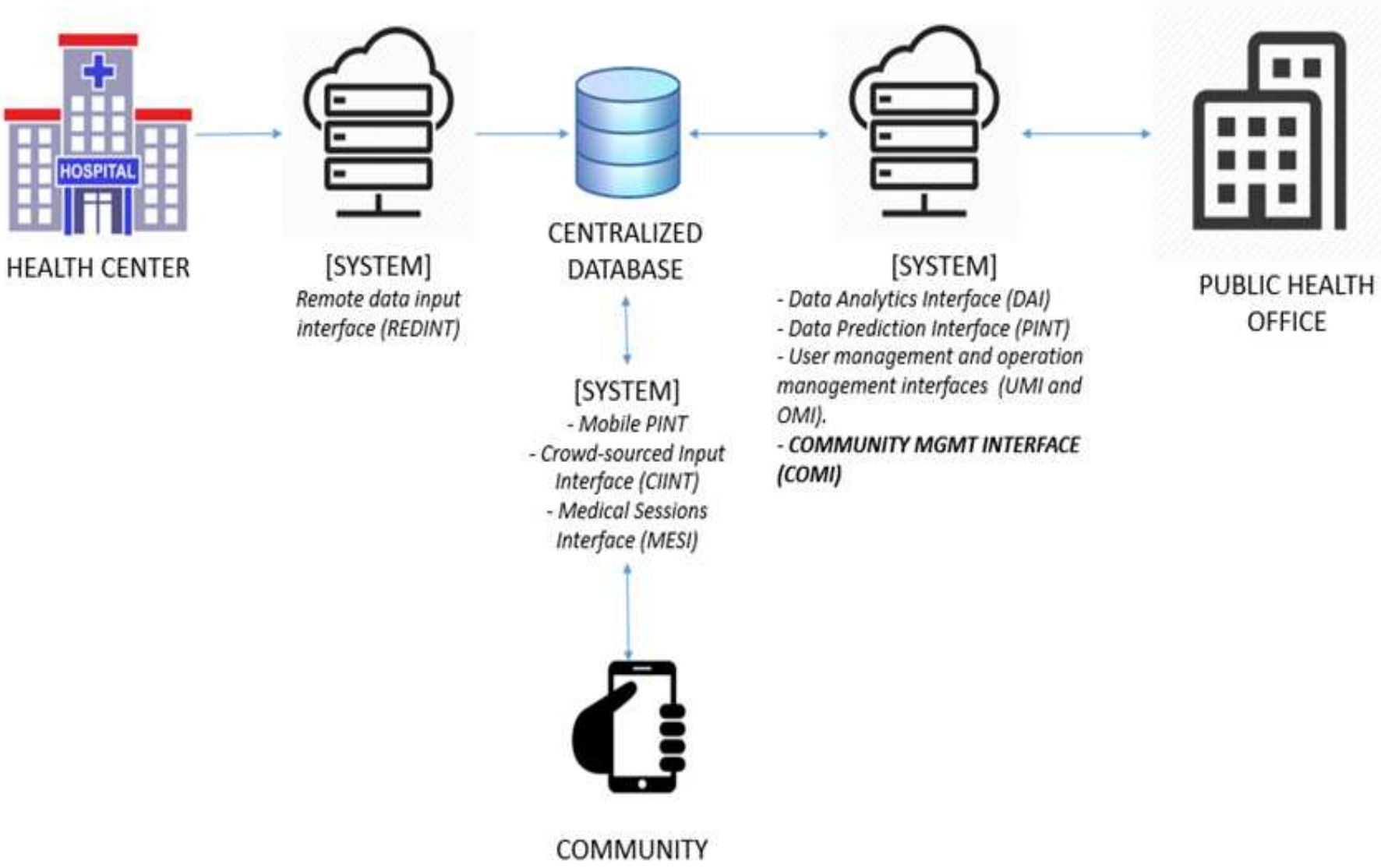

HOSPITAL
HEALTH CENTER
[SYSTEM]
Remote data input interface (REDINT)
CENTRALIZED DATABASE
[SYSTEM]
- Data Analytics Interface (DAI)
- Data Prediction Interface (PINT)
- User mgmt and operation mgmt interfaces (UMI and OMI).
PUBLIC HEALTH OFFICE
AIME MAIN SYSTEM



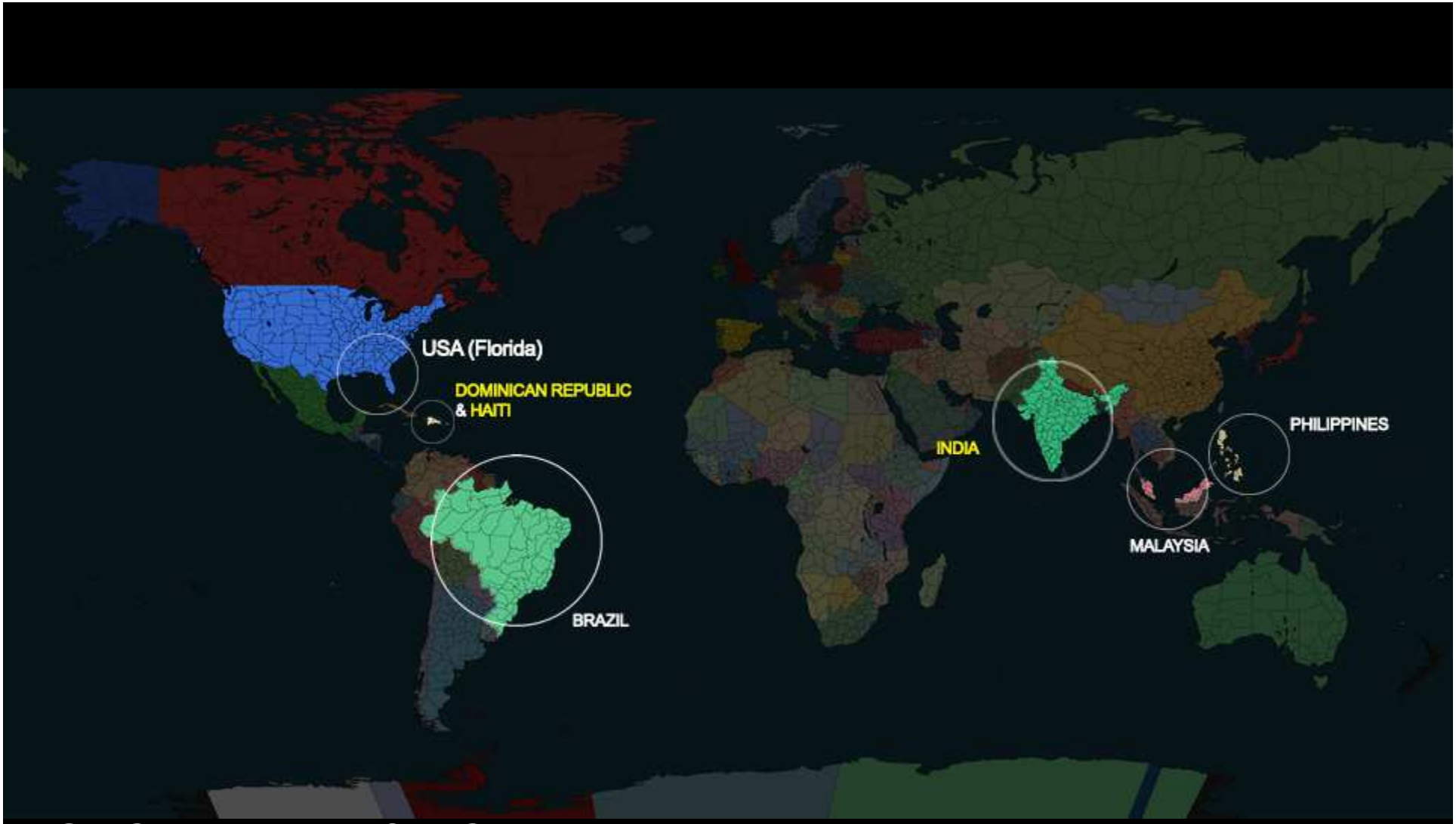
Within 23 Seconds We Tap 272 Variables For Predi



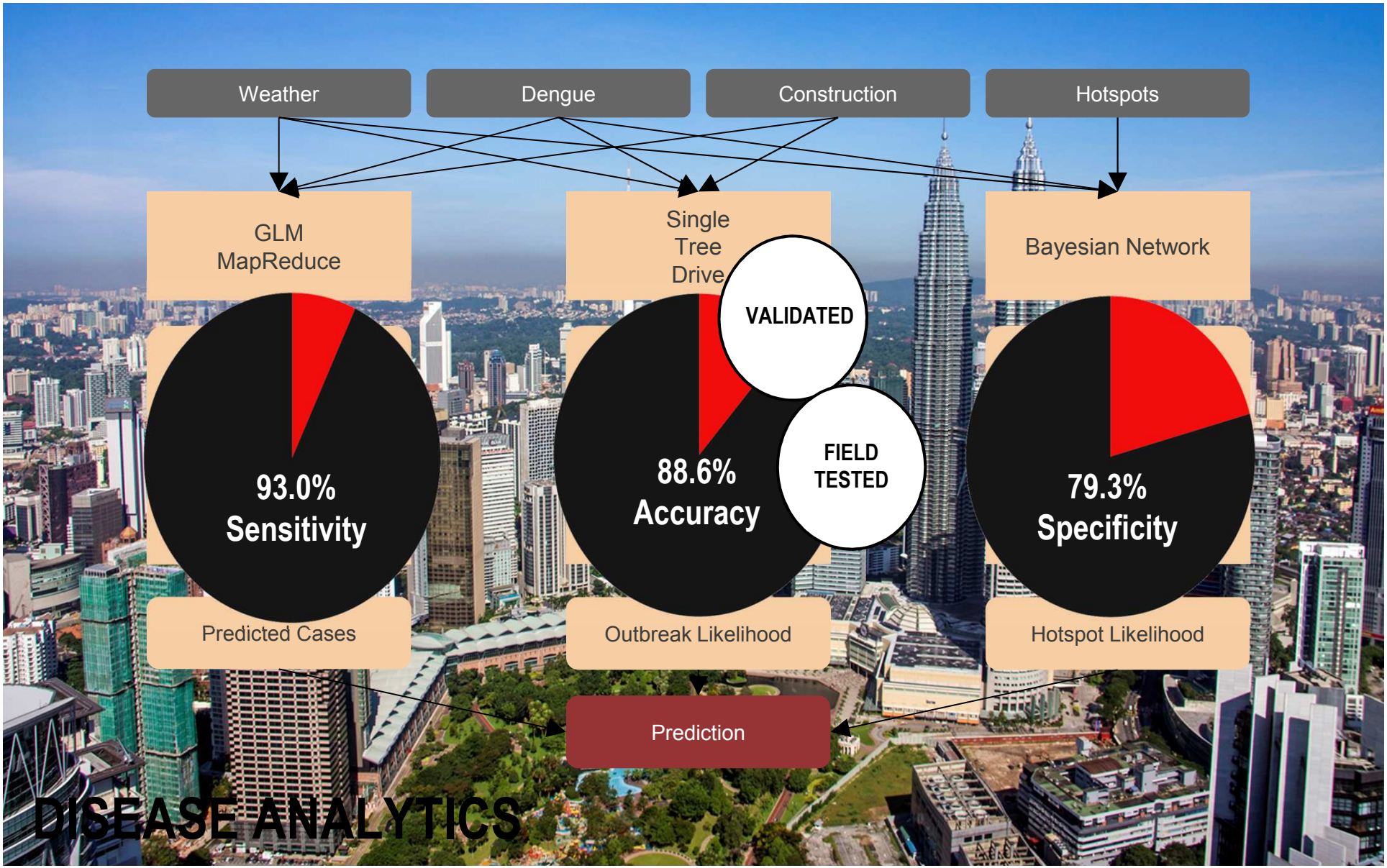
AIME MOBILE SYSTEM


HOSPITAL
HEALTH CENTER
[SYSTEM]
Remote data input interface (REDINT)
CENTRALIZED DATABASE
[SYSTEM]
- Mobile PINT
- Crowd-sourced Input Interface (CIINT)
- Medical Sessions Interface (MESI)
COMMUNITY
[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

AIME’S ACHIEVEMENTS GLOBALLY



GLOBAL TRACTION


Weather
Dengue
Construction
Hotspots
GLM
MapReduce
Single
Tree
Drive
Bayesian Network
VALIDATED
FIELD
TESTED
93.0%
Sensitivity
88.6%
Accuracy
79.3%
Specificity
Predicted Cases
Outbreak Likelihood
Hotspot Likelihood
Prediction
DISEASE ANALYTICS

Accuracy of

84.11%

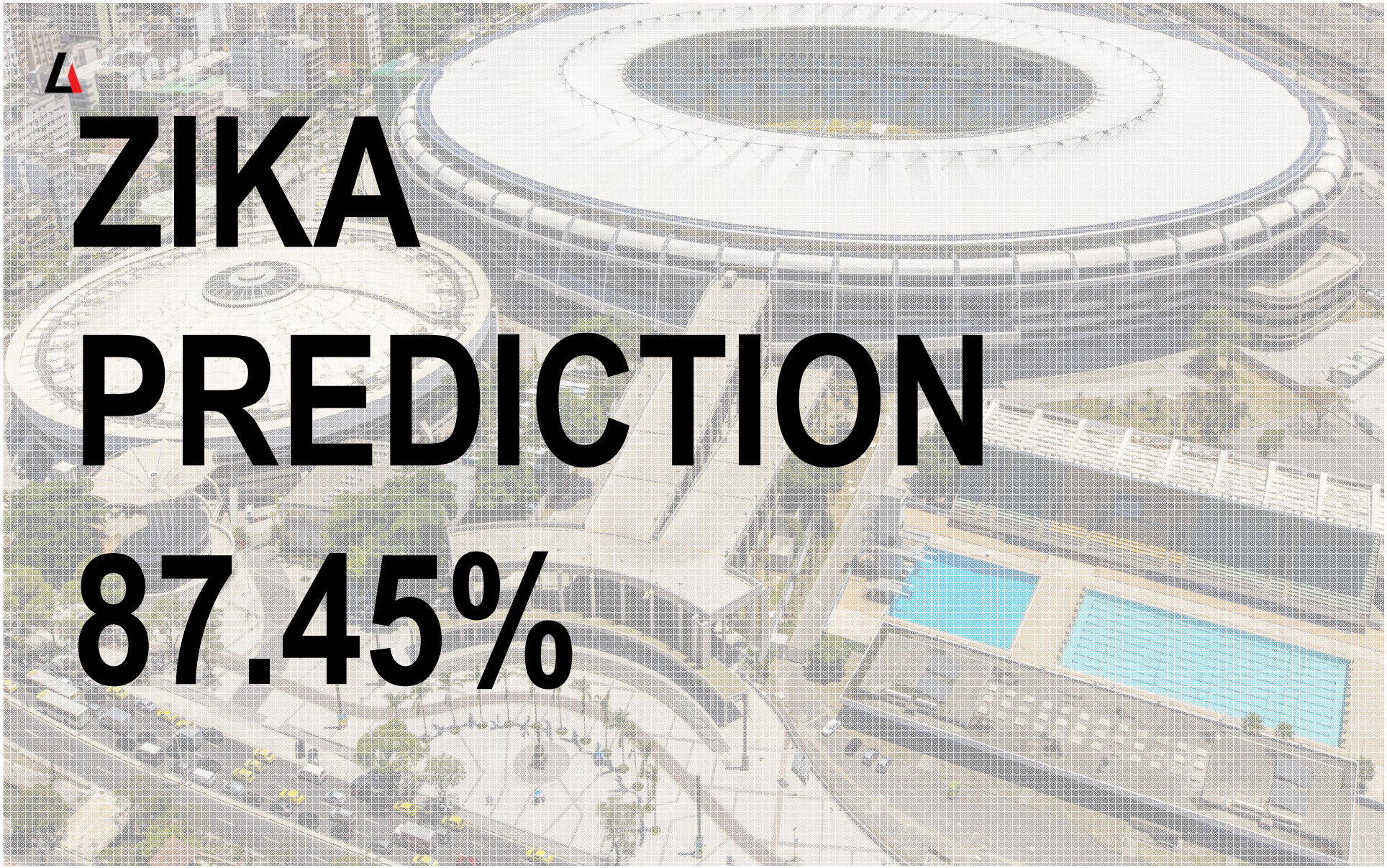
5 days of Data Analysis
With Limited Resources

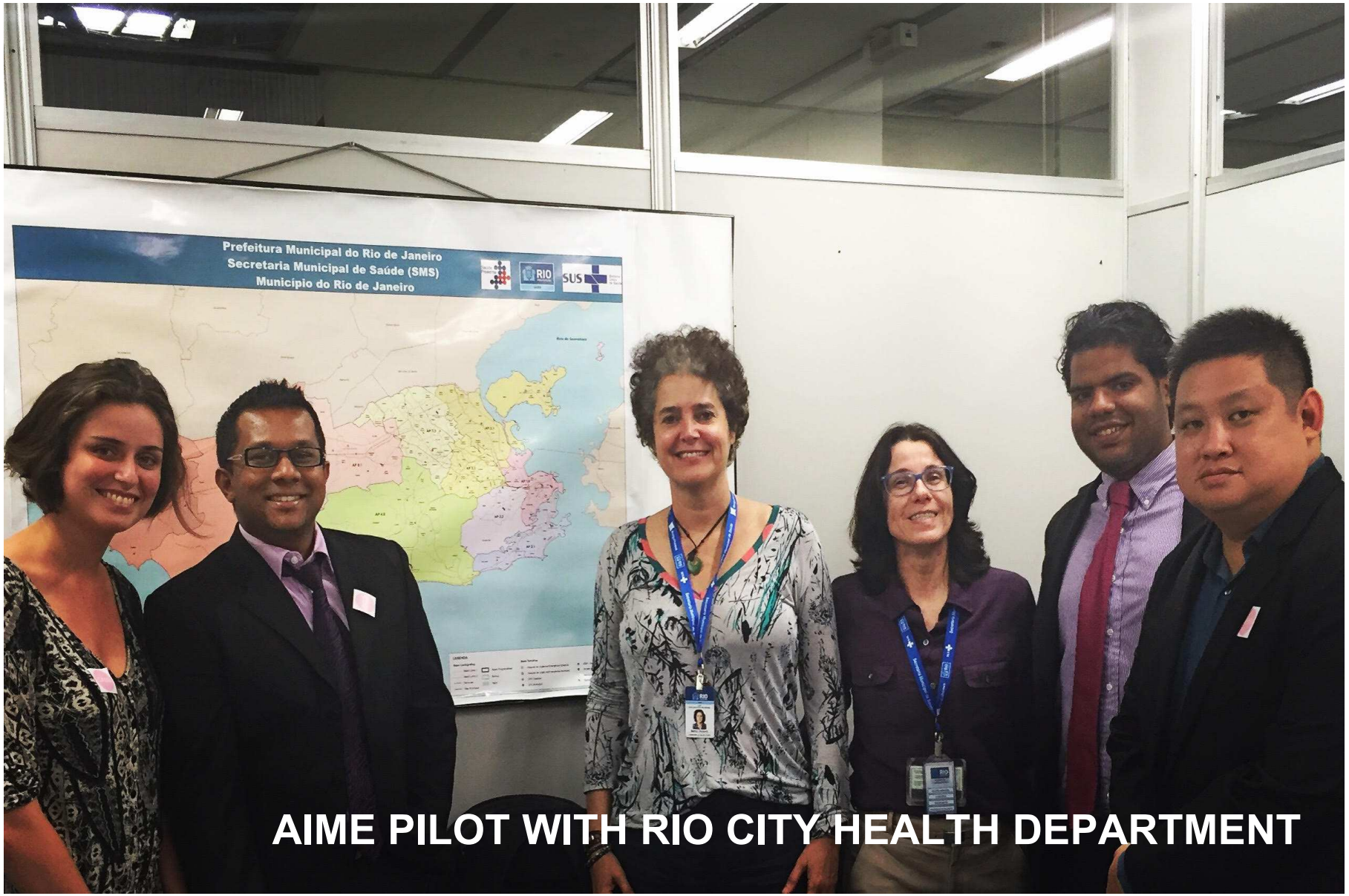
Rio2016

VIVARIO

DISEASE ANALYTICS

MANILA, Philippines
30 Days Prediction
84.87%
REPUBLIC OF THE PHILIPPINES
DEPARTMENT OF HEALTH
FLOREAT SALUBRITAS POPULI


ZIKA
PREDICTION
87.45%



AIME PILOT WITH RIO CITY HEALTH DEPARTMENT

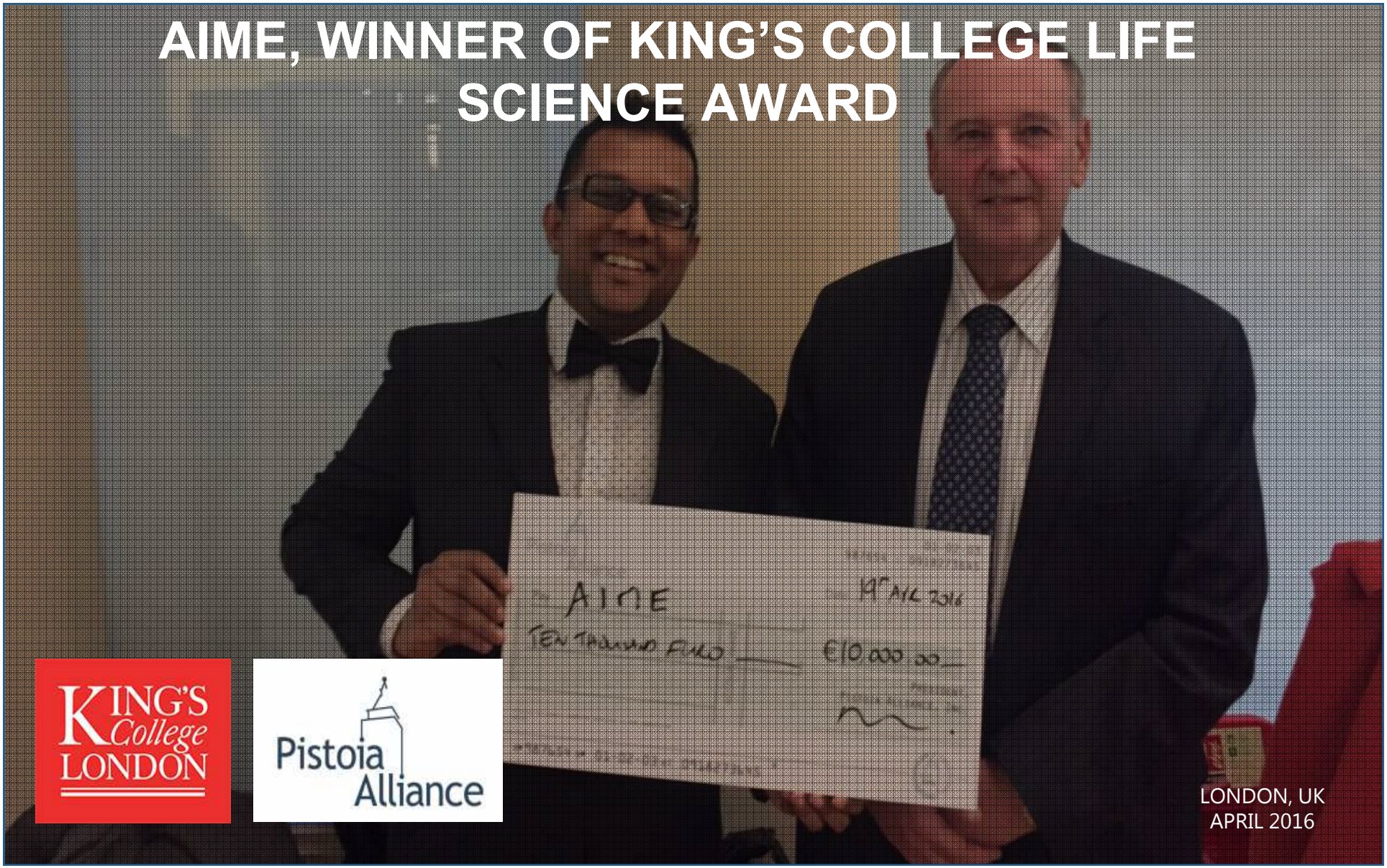
AIME Inc WITH THE GOVERNEMT OF PHILIPPINES

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



KING'S College LONDON

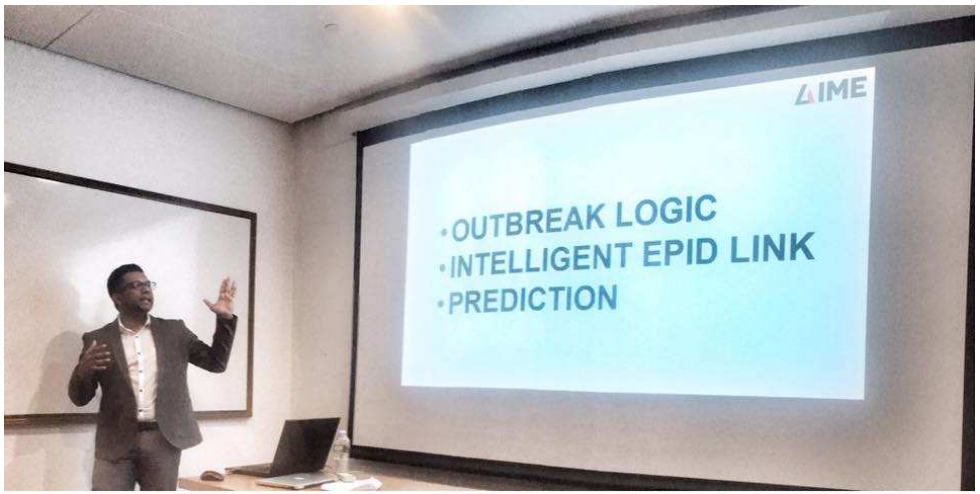
Pistoia Alliance

LONDON, UK
APRIL 2016

AIME AS THE GLOBAL TOP 8 HEALTH INNOVATOR AWARD

HARVARD
SCHOOL OF PUBLIC HEALTH

MASSACHUSETTS, USA
JULY, 2016



MASSACHUSETTS INSTITUTE OF TECHNOLOGY
Building 32-D542
32 VASSAR STREET
CAMBRIDGE · MASSACHUSETTS 02139

August 19th, 2016

Co-Founder & Scientist
Artificial Intelligence in Medical Epidemiology (AIME) Inc
8339 NW 66th Street
Wicarga Miami, Florida 33166-2626, United States

Dear Dr. Dhesi Baha Raja;

On behalf of the MIT Universal Village Program, I am delighted to invite you to visit Massachusetts Institute of Technology and give keynote talk at MIT Universal Village Forum on September 20th.

Newly proposed by MIT, Universal Village exemplifies a desired future society that pursues human-nature harmony through the wise use of technologies. The concept calls for innovative new lifestyles which promise sustainable happiness for humanity's future. MIT Universal Village program expects to develop cutting-edge intelligent and automatic technologies that are making relevant components of future community more efficient and perfection. Those will include but not limit to intelligent healthcare, intelligent community, etc., and call for collective effort across multi-disciplinary fields beyond the traditional boundaries of research fields.

We believe that your innovative visions and great leadership in the areas of intelligent healthcare would bring in very interesting perspective on future UV development. We are looking forward to your involvement and support. Please feel free to contact me at yjfang@mit.edu or 1-617-528-9868 for any further questions.

Massachusetts
Institute of
Technology

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

Forbes / Leadership

The Little Black Book of Billionaire Secrets

OCT 12, 2015 @ 09:05 AM 6,887 VIEWS

Infectious Disease: The Beginning Of The End

Brian Rashid
CONTRIBUTOR

I share leadership lessons that work for me and others.

FOLLOW ON FORBES (19)

FULL BIO >

Opinions expressed by Forbes Contributors are their own.

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

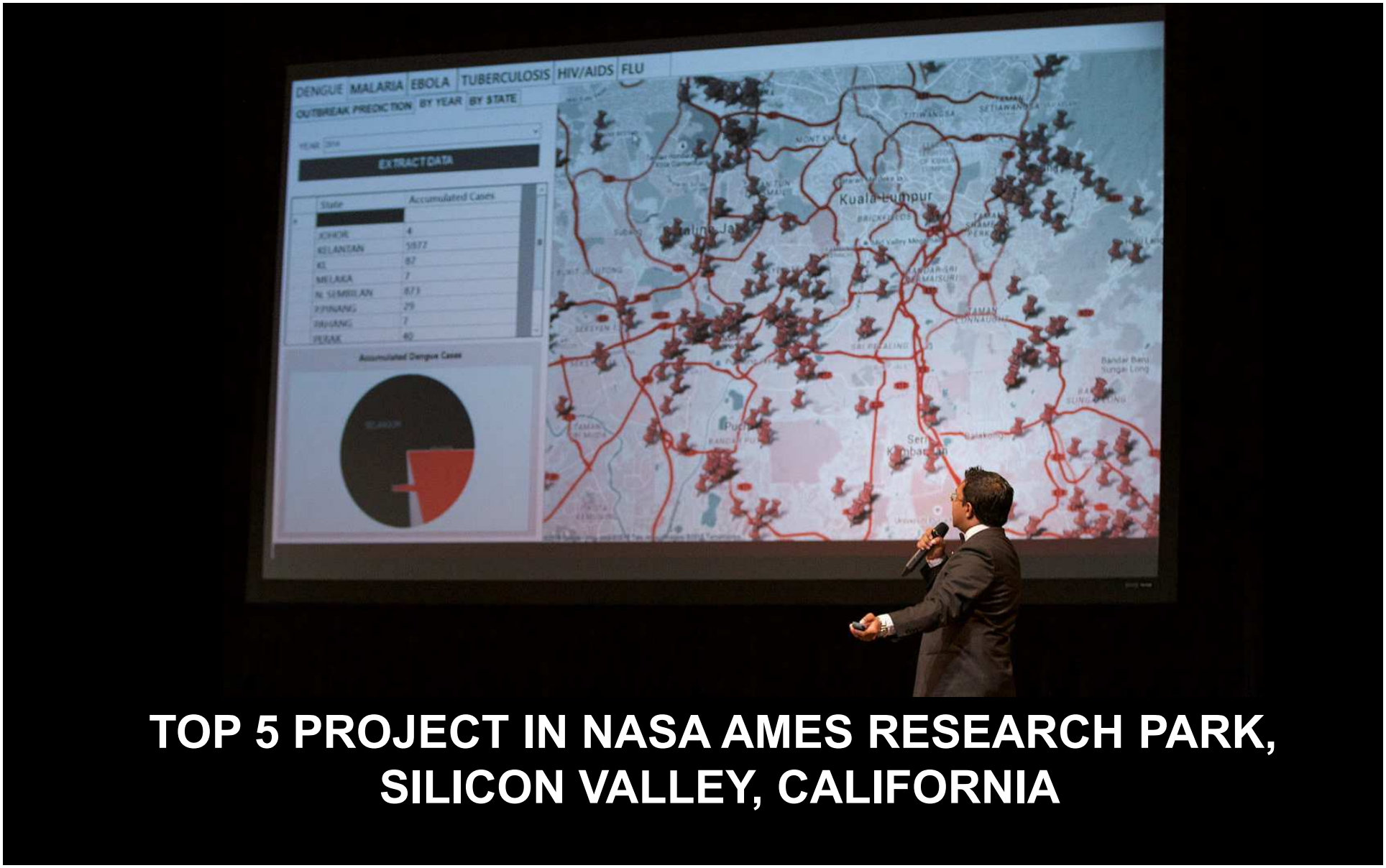
Every year, 2.5 billion people are at risk of catching Dengue fever. And there is almost nothing you can do about it. I was told that there is no current vaccine for Dengue fever. I was surprised this was true, but according to a bunch of sites on the internet, it is true. Also not good. So if there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



TOP 5 PROJECT IN NASA AMES RESEARCH PARK, SILICON VALLEY, CALIFORNIA

@AIMEforLIFE

FOLLOW US