
A person is silhouetted against a night sky filled with stars and the Milky Way galaxy. The person is standing on a dark, rocky outcrop, looking up at the starry sky. The Milky Way is visible as a bright, colorful band of stars stretching across the sky, with a mix of purple, pink, and yellow hues. The overall scene is dark and atmospheric, with the stars providing the primary light source.

 **Groundhog**

# RealMotion Location Intelligence

Spatial Analysis to  
Understand Pandemic Exposure

## Who We Are



MIT spin-off with top scientists. Founded in 2001.



Global Representatives: Offices in USA, Japan, Taiwan, China, Singapore, Australia, Portugal, Saudi Arabia, UAE, etc.



Holding 39 patents on Geo-Location analysis, subscriber-based behavior analysis, more patents pending.



O-RAN Contributor.



ISO Certified

Awarded as the Best Network Operations - Network Management Solution at Telco AI Summit.

## Proven Results with Operators



### MNO

10 of the top 20 operators globally are our customers.

**1Billion+**

Combined subscriber base

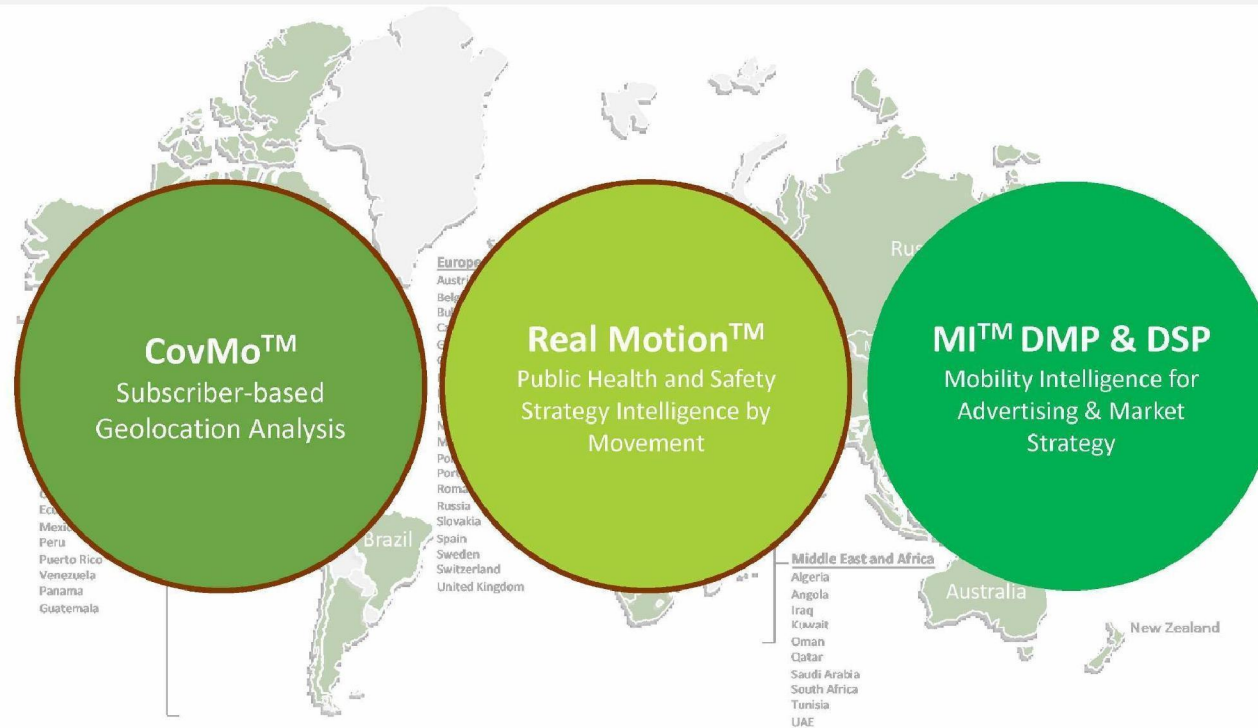


### NEM

Partnership with Nokia, Huawei, IBM, Anritsu, Polystar, etc.

Market-specific partnership with Ericsson, Teradata, and HP.

## Global Experience



## The Urgent Need

### MANAGEMENT OF SITUATION

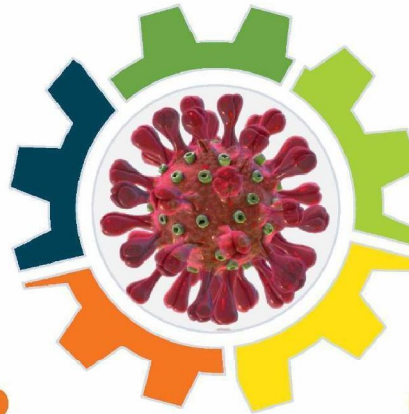
A major part of the pandemic management strategy is surveillance and monitoring of the spread and identification and isolation of infected persons – quarantining them to stop the spread of the disease and manage it locally.

### TECHNOLOGY

Technology globalized the markets and has eased travel across continents - which is also a major reason for the spread of these viral pandemics. And it is Technology which is also helping in finding solutions

### MEDICAL CHALLENGE

Medical interventions in investigating the virus and finding a possible cure for it needs time but the sudden and fast spread of the viral diseases is putting unmanageable pressures to control, cure and manage the diseases and before any medical intervention can kick in, massive number of deaths already occur.



### CHALLENGES OF A CONNECTED WORLD

In a global connected workplace, diseases and viruses, endemic to a country or community, fast become epidemic – spreading across populations and in our connected world, it does not take long for it to become a pandemic spreading across regions and continents and covers the entire world within days.

### FREQUENT & REPEAT OCCURENCES

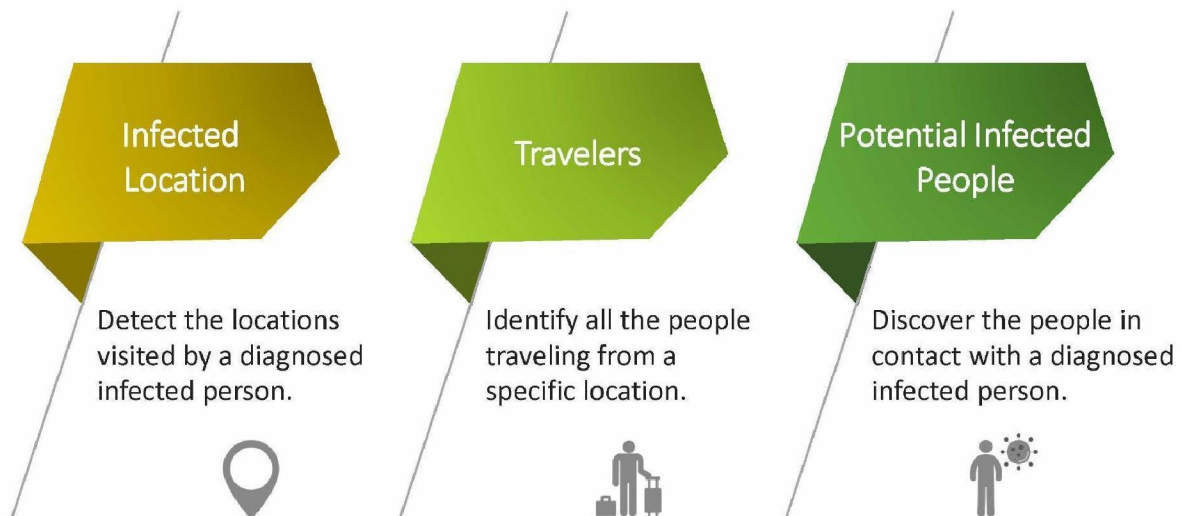
We have been seeing this repeatedly over the past decade – remember SARS, MERS-CoV, Ebola, Zika, Nipah.....

### RAPID SPREAD OF DISEASES

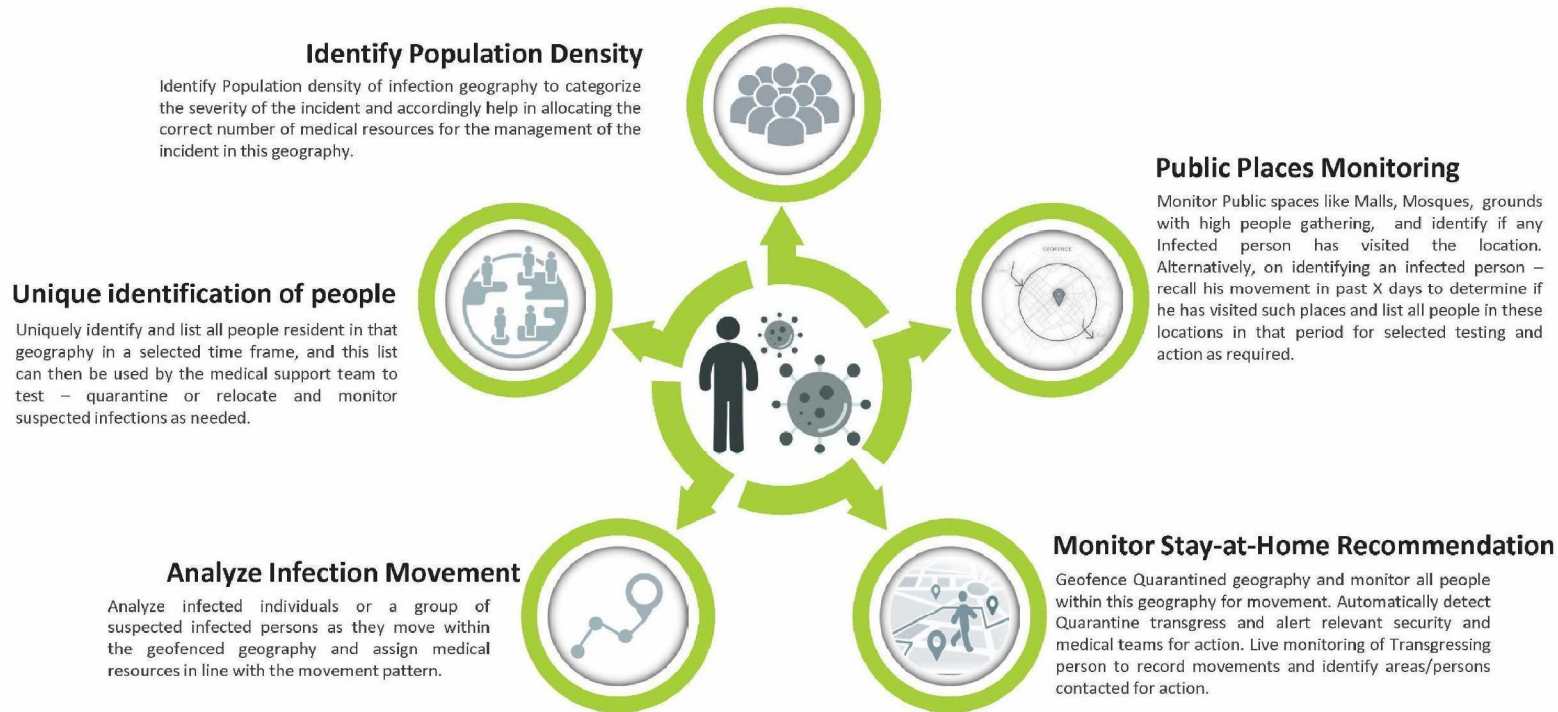
Endemic infections becoming epidemic and pandemic within no time, causing death and panic globally, is becoming one of the biggest challenge to manage in recent times.

**RealMotion is the Ideal Solution for intelligent surveillance and identification of infected suspects/carriers to help in identification, Isolation and Management of the Pandemic**

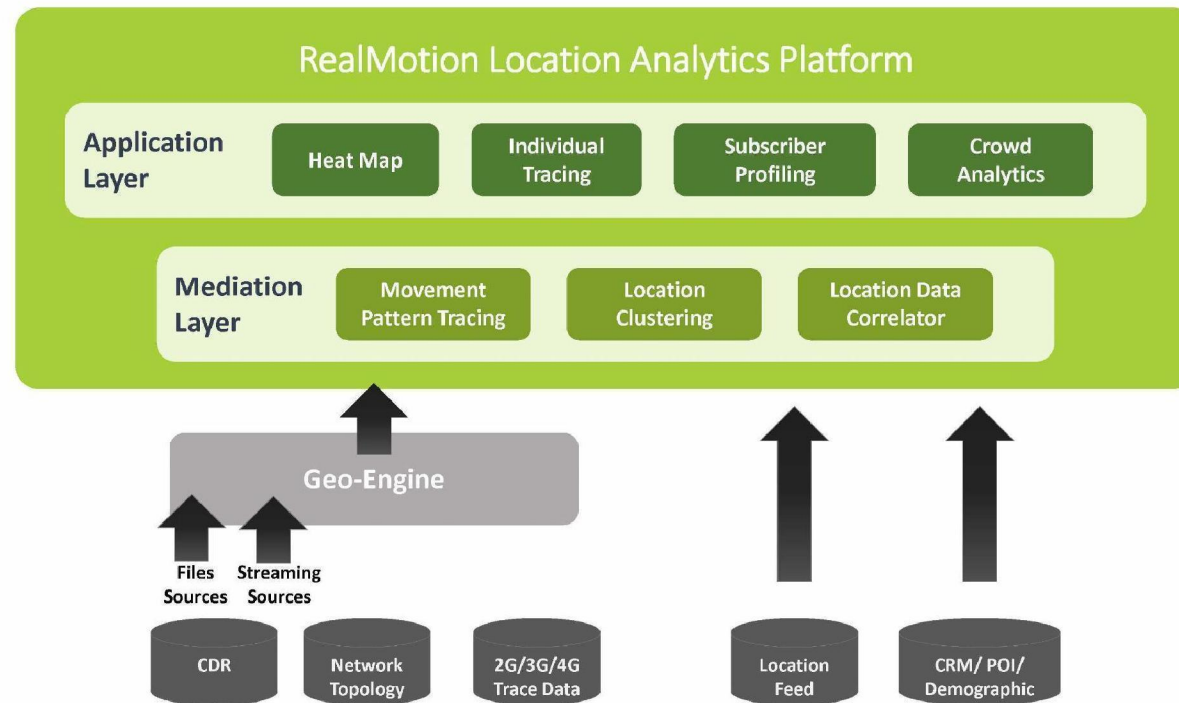
## How to Apply Location Intelligence to Epidemic Control



## Surveillance/Monitoring/Identification of Infected Location

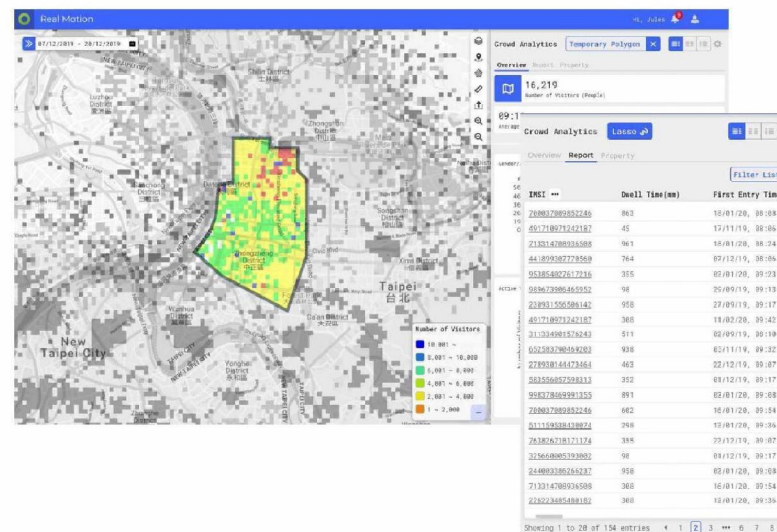


## RealMotion System Overview



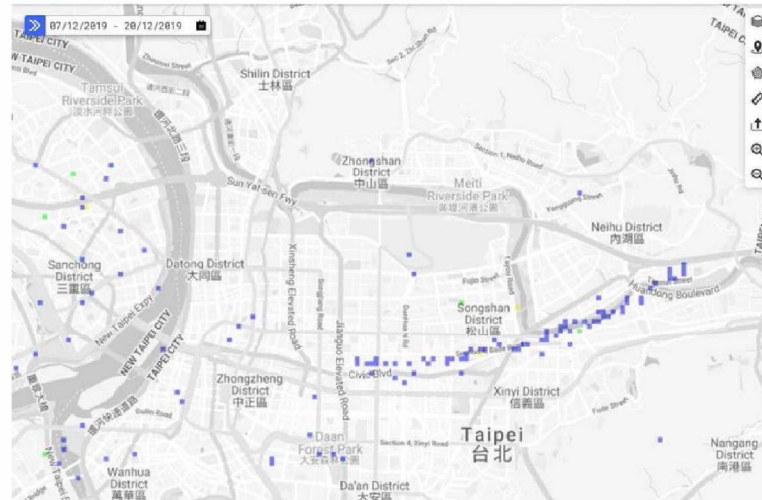
## Mass Monitoring (Crowd Management)

- Monitor public spaces like Malls, Churches, areas with high people gathering and identify if any Infected person has visited the location.
- Uniquely identify and list all people in that geography in a selected time frame and this list can then be used by the medical support team to test – quarantine or relocate and/or monitor suspected infections as needed.



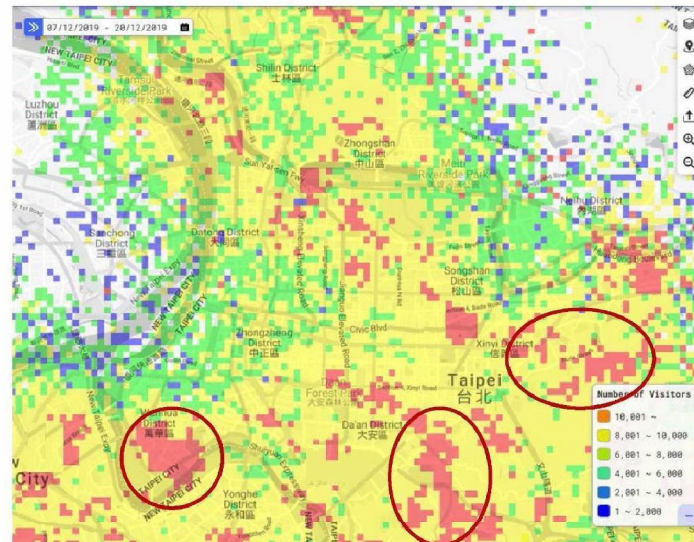
## Analyze Infection Movement

- Retrace an infected individual or a group of suspected infected individuals in the past days to identify the locations visited.
- To identify the geography they visited and assign medical resources in line with the movement pattern.



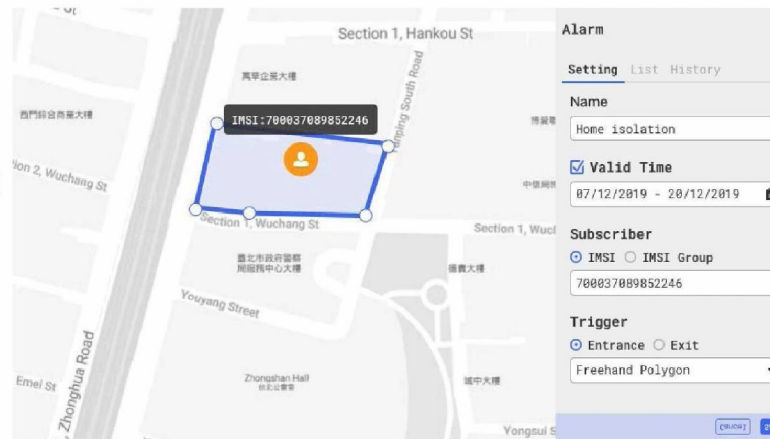
## Population Density

- Identify Population density of infection geography to categorize the severity of the incident.
- It helps in prioritizing and allocating the correct number of medical resources for the management of the incident in this geography



## Monitor Stay-at-Home Recommendation

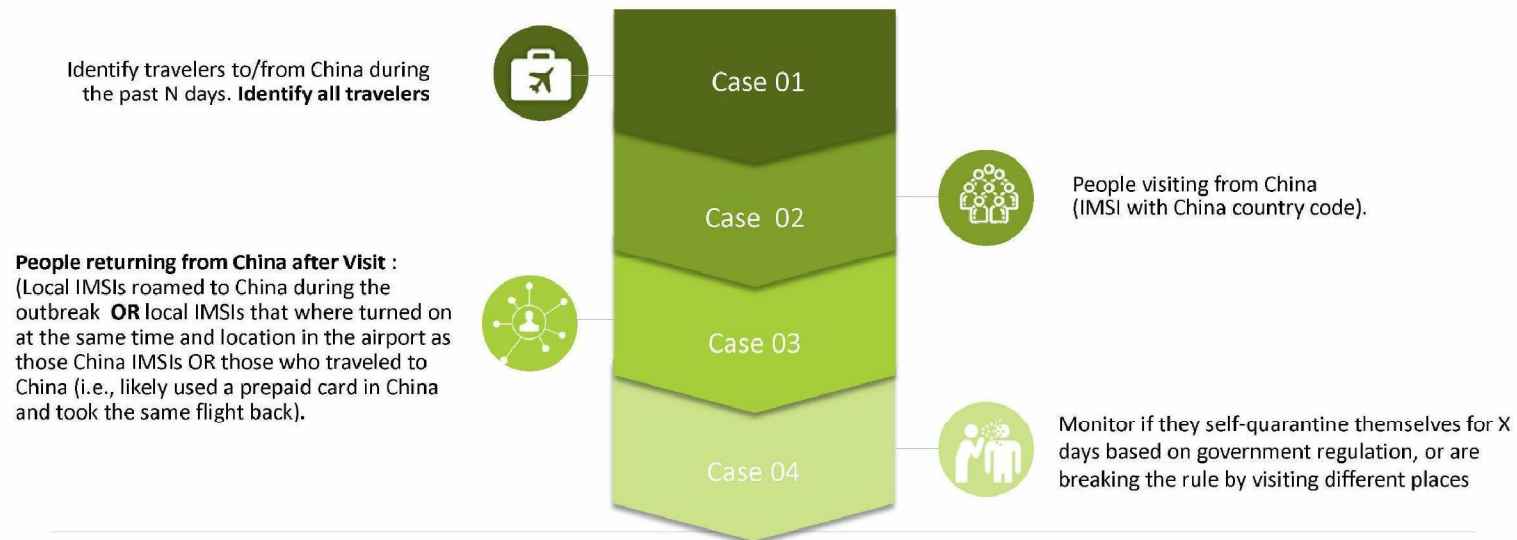
- Geo-fence Quarantined geography and monitor all people within this geography for movement.
- Automatically detect Quarantine transgress and alert relevant security and medical teams for action.
- Live monitoring of transgressing person to record movement and identify areas/persons contacted for action.



## Surveillance/Monitoring/Identification of Travelers

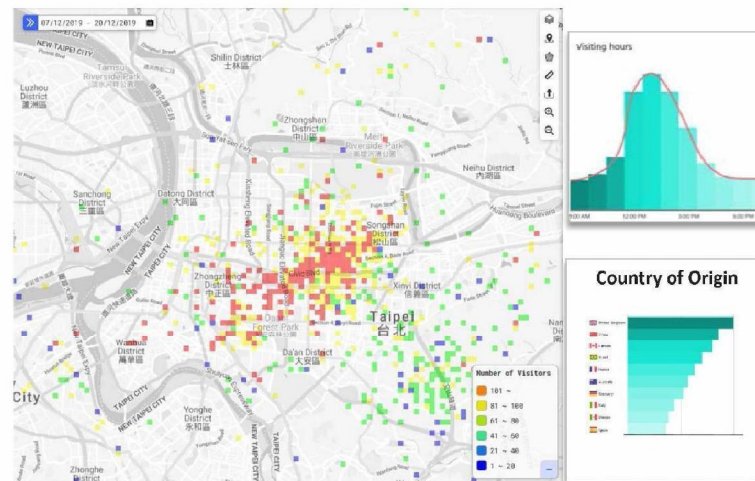
Once the source location of infection has been identified, use RealMotion to identify all persons traveling from that location and visitors to that location for further surveillance monitoring.

- > As an example, as the current Corona Virus is identified as having started from China, this module can be used to

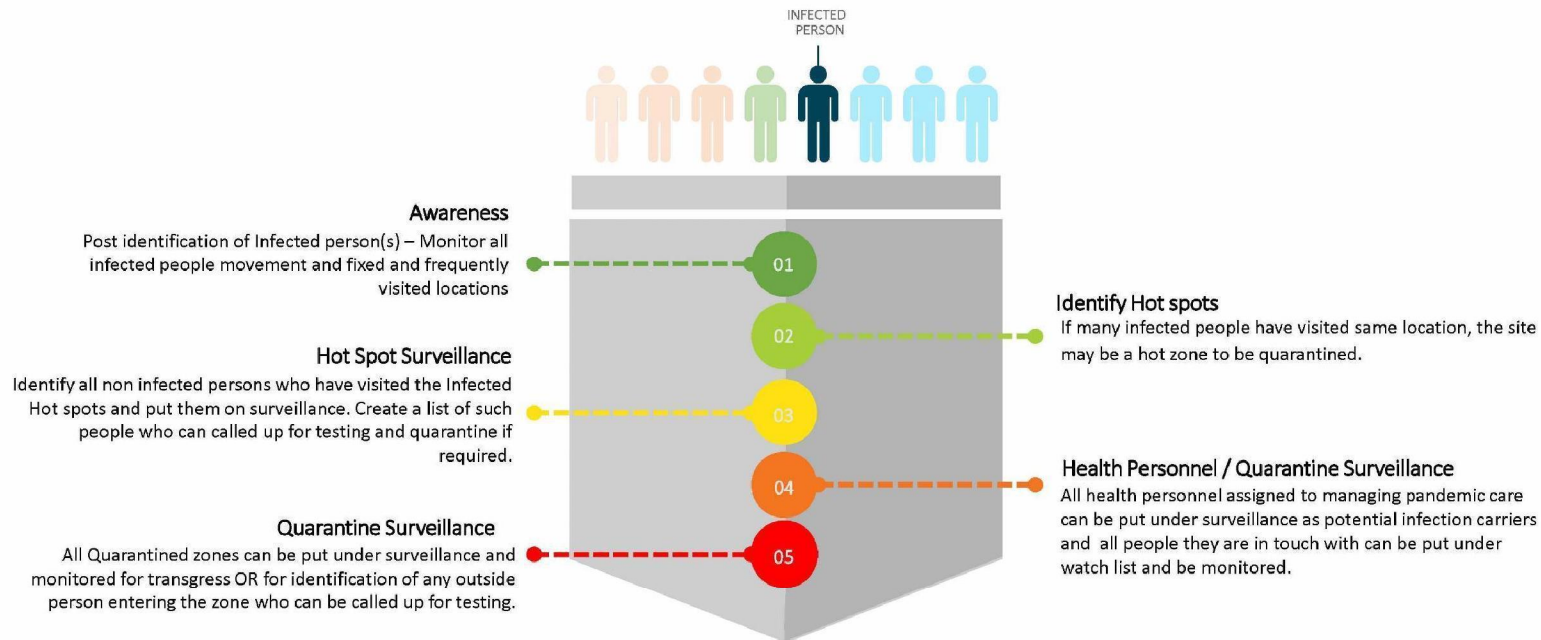


## In-bound Traveler Analysis

- Identify the hotspots of travelers, especially from high-risk countries and retrace the location visited for further surveillance monitoring.
- Monitor if they self-quarantine themselves for X days based on government regulation, or are breaking the rule by visiting multiple places

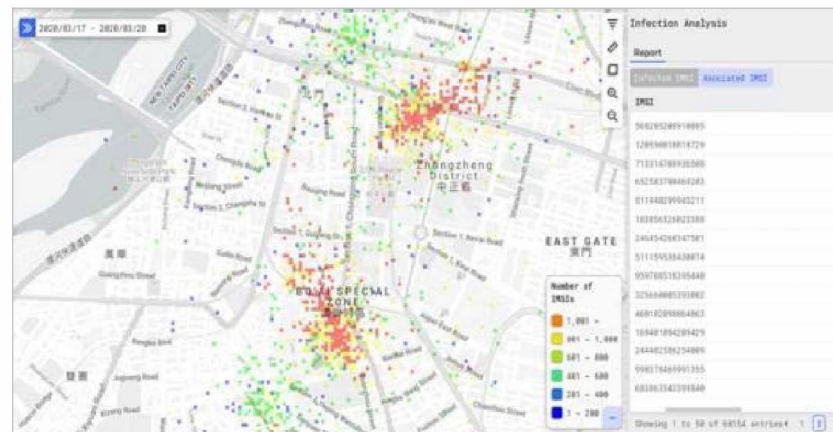


## Surveillance/Monitoring/Identification of People in Contact with Infected Person



## Asymptomatic COVID-19 Carrier Detection

- Identify Asymptomatic Carrier- someone infected by the virus but who displays little, no symptoms or delayed symptoms of the disease.
- Recall all past movements of an infected person to determine and list all people in proximity during that period for detecting Asymptomatic Carriers.



## GDPR Compliance (Optional)

- RealMotion's design provides a high-level of adaptability to different use-cases while keeping subscriber data secure.



**Thank you.**



**Groundhog Technologies Inc.**

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## Telecom Location Intelligence to Pandemic Control

Groundhog RealMotion™ is a Public Health Management Solution to help governments manage the pandemic with existing data and a proactive approach.



Hot Zone & Gathering



Potential Infected People



Asymptomatic Carrier Detection

### Data source

Call Detailed Record (CDR) data

Accuracy: 500x500m<sup>2</sup>+

Availability: Highly common in all telecom

Geo-Location Data (Preferred)

Accuracy: 50x50m<sup>2</sup>+

Availability: By telecom

Not limited to data provided by specific vendors.

# ISO Certified



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**ISO 45001 : 2018**  
 For the following Scope  
 "Telecom Analytics Software and Telecom Big data Software"

Certificate Number :	2002270800111
Issue Date:	27 <sup>th</sup> Feb 2020
Valid Until:	26 <sup>th</sup> Feb 2023
1 <sup>st</sup> Surveillance on or before:	27 <sup>th</sup> Jan 2021
2 <sup>nd</sup> Surveillance on or before:	27 <sup>th</sup> Jan 2022
Revision:	00



*Signature*

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 Website: www.frenchcert.com

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