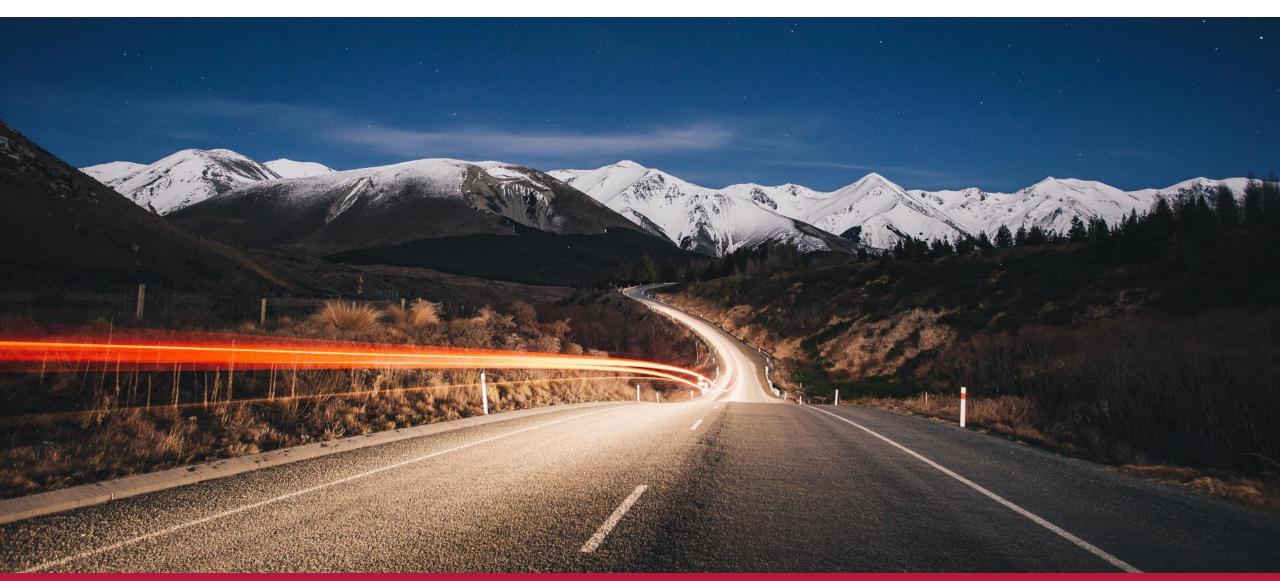
# **Transport Trends**





**Current Trends -** Change and Disruption

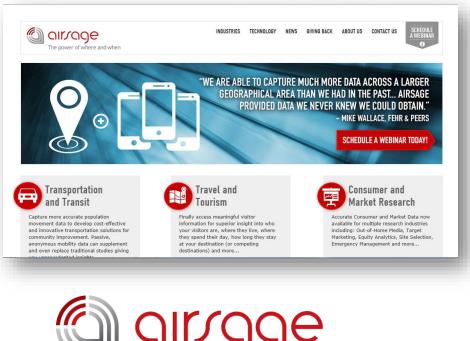
Increasing congestion in cities - connected and autonomous vehicles - decline in auto ownership by millennials - stagnation in public transport - growth of transportation network companies...



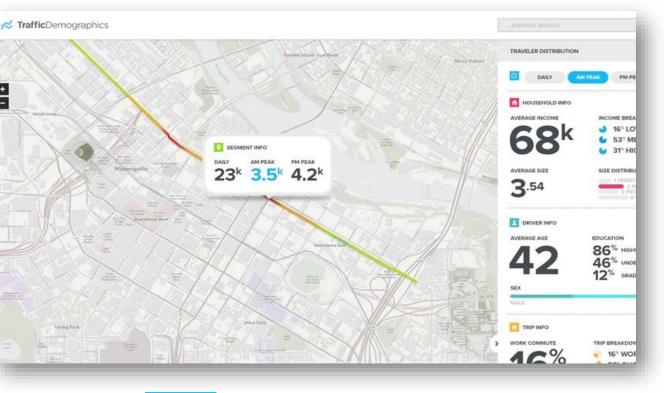
# **Current Trends -** *Opportunities*

New data sources to better understand mobility patterns – big data analytics and spatial analysis – breaking down the silos – smart cities and smart transportation





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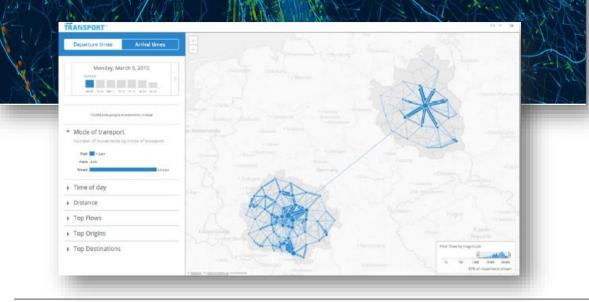
# arrage The power of where and when

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#### **TERALYTICS MOBILITY INSIGHTS**

Human Behavior from Telecom Data



<complex-block>



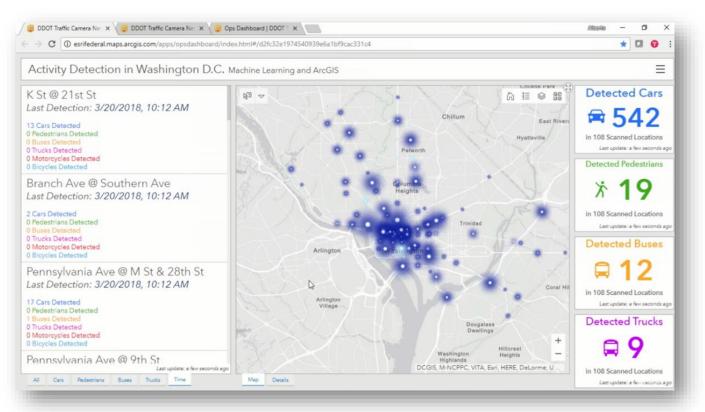
#### SAFEGRAPH

**Alabley** 









Leveraging Traffic Cameras for Real Time Counts and Speed Data



# **⊿**labley

**Big Data Transport Trends** 

Three V's of Big Data: Volume – Velocity - Variety

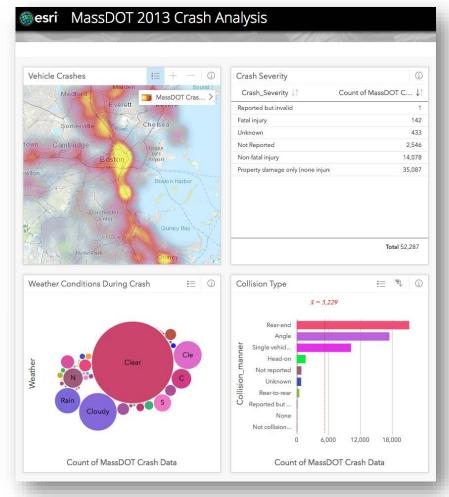
Sensor Information generating massive amounts of data magnifies the problem of understanding and context



## **Big Data**



Big Data GeoAnalytics Esri's new IoT platform Esri Insights Space Time Cube



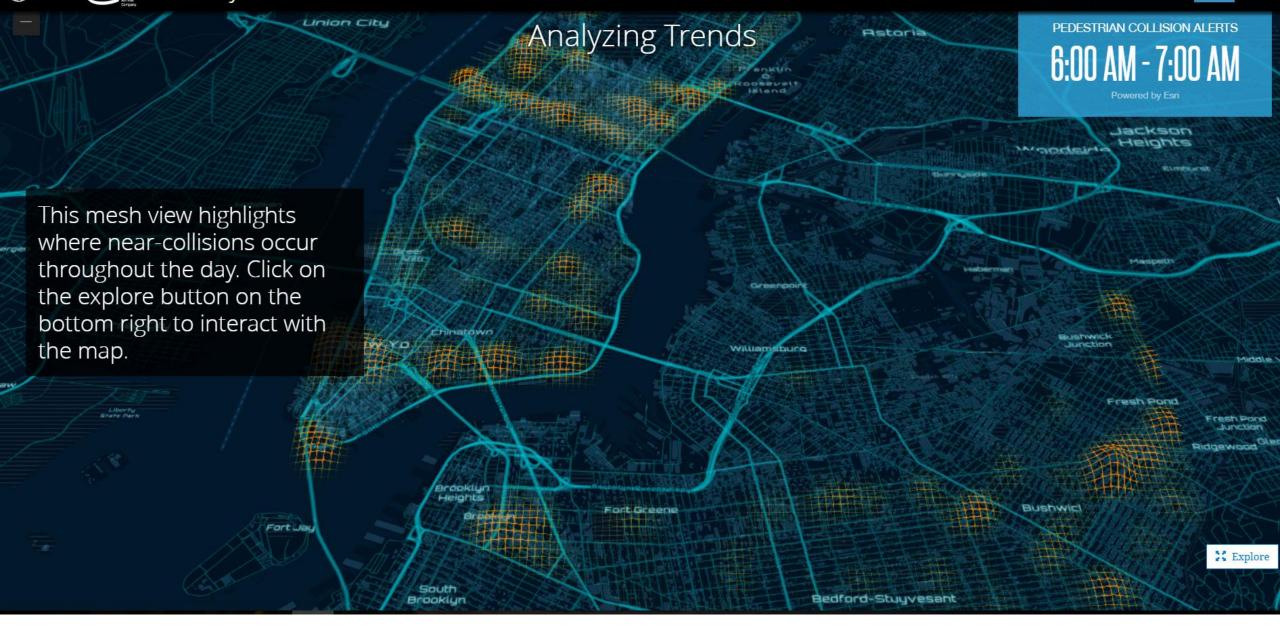
**Alabley** 

## **Big Data & Machine Learning**

New York City Buses & Cabs equipped with Mobileye Use of Machine Vision / Learning to Identify Pedestrians







# **Alabley**



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### Discovering Patterns 🔊

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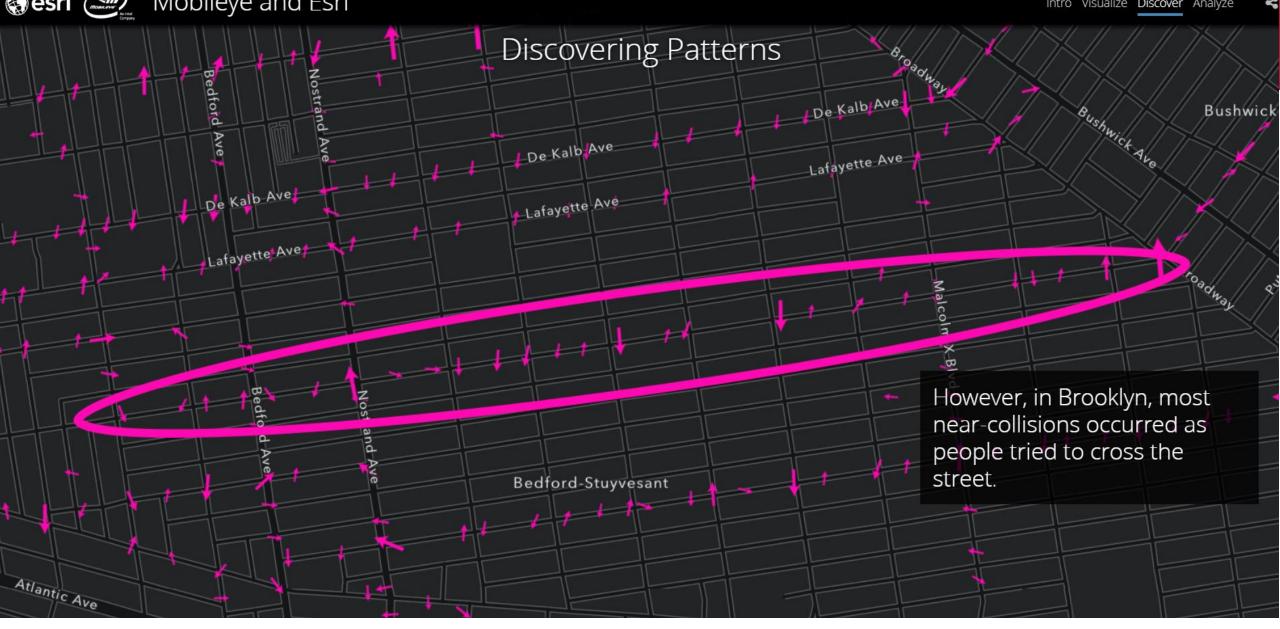
ELIAN

In Manhattan, the average heading of near-collisions is parallel to the street. This means that most warnings occurred with people who were moving in the same direction as the vehicle.

DRDrN

34th-St

# **⊿**labley





#### NEWS

# NYC's pedestrian fatalities reached an alltime low in 2017

Mayor Bill de Blasio announced that under Vision Zero, traffic-related deaths are down overall

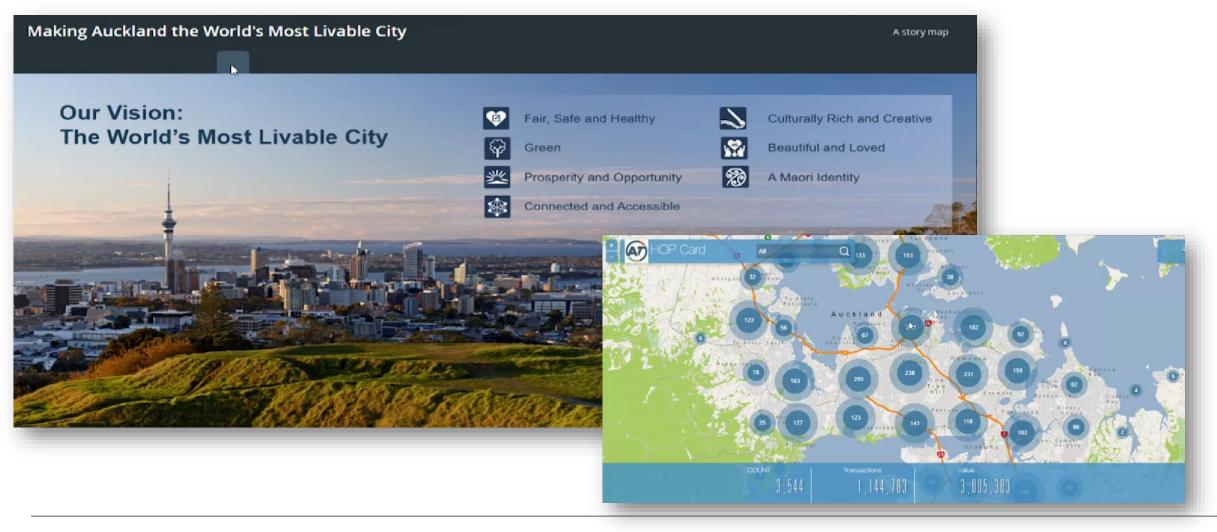
By Ameena Walker | Jan 8, 2018, 12:15pm EST



# **Breaking down the silos**

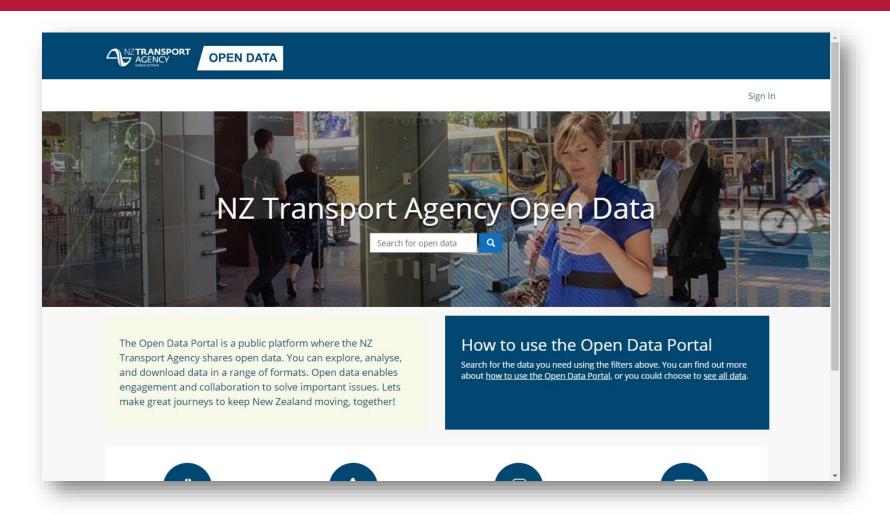


# **Breaking down Silos**





## **Breaking down Silos**







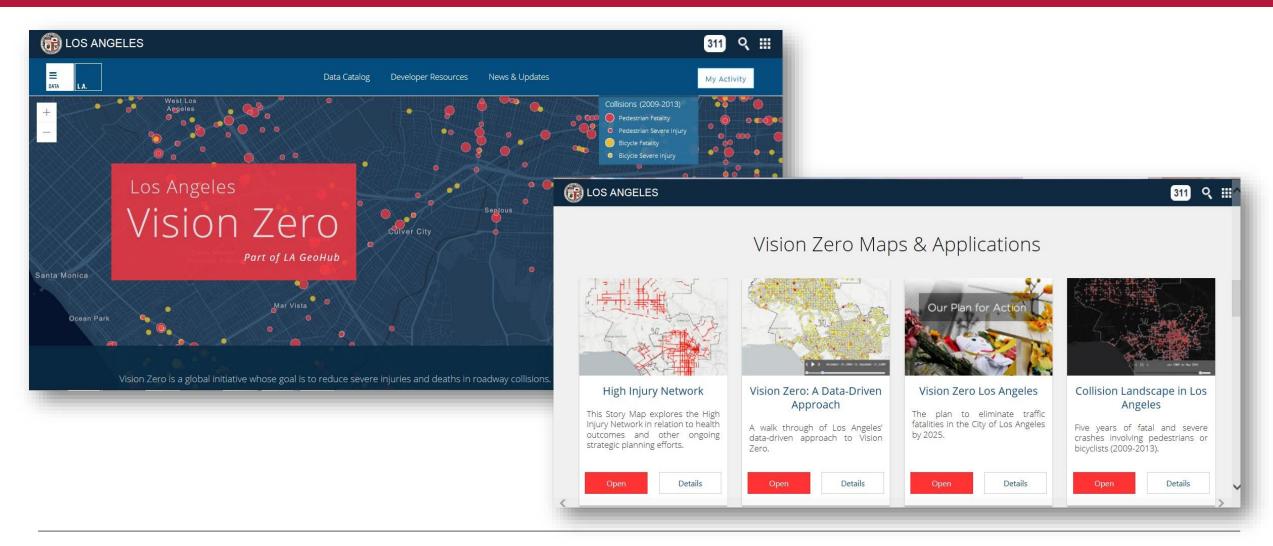




# **Smart Cities**



## **Smart Cities**





#### City of Los Angeles

#### Is Already Implementing a Community GIS

#### **Solutions Cross Departments**



### Expanding Their GIS to Support Everyone



#### Smart GIS Enables New Types of Collaboration

Connecting Individuals, Organizations and Communities



## **Smart Cities**

1. URBAN CONTEXT

These maps represent the physical and regulatory context of the city. Click on the buttons below to see the city in various ways.

🌣 Edit ×

Traditional maps were 2-dimensional and static, representing a limited view fixed in time.

#### Traditional 2D Map

Dynamic 3-dimensional scenes allow you to 'mash up' visual information to see the city in a new way. These buildings represent the city schematically and make a great base for visualizing information.

#### 3D Schematic View

These buildings represent the city realistically and help provide a sense of place – the feeling of understanding a real place, even if virtually.

#### **3D Realistic View**

Volumes of current height districts can be shown along with realistic buildings.

#### Current Height Distric

While current land use can be visualized on the buildings themselves.

Current Land Use by Building

#### 2. UNDERSTANDING GROWTH CAPACITY

The next few sections show how much capacity is possible at three important scales – at the neighborhood level, by transportation analysis zone, and by parcel. It is easier to see patterns when the data is shown at a parcel level, but more difficult to understand overall totals at the neighborhood level. Transportation analysis zones (TAZ)



# **Alabley**

# The future of transport is...

