NATIONAL INSURANCE CRIME BUREAU

2017 PROGRAM OVERVIEW

Geospatial Intelligence for Better Outcomes

GEOSPATIAL
INTELLIGENCE CENTER

Key Program Areas

1. CAT / **Disaster Response**
2. National **Imagery Program**
3. Digital **Delivery Platform**
4. Advanced **Analytics**
5. **Partner Network**

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1. CAT RESPONSE

Imagery Collection

Panoramic Street side

- “Street View” 360-degree imagery and LiDAR Capability has been **tested in numerous scenarios**

360 Aerial

“Streetside by Air” for roof and full property / structure damage assessment

- Incredibly accurate 3D mesh for analytics
- Accurate digital elevation and measurement

Wide-Area Aerial

- 38,000 pixels across the flight strip
- 9 kilometer swath width allows wide flight lines providing mass coverage in shorter time

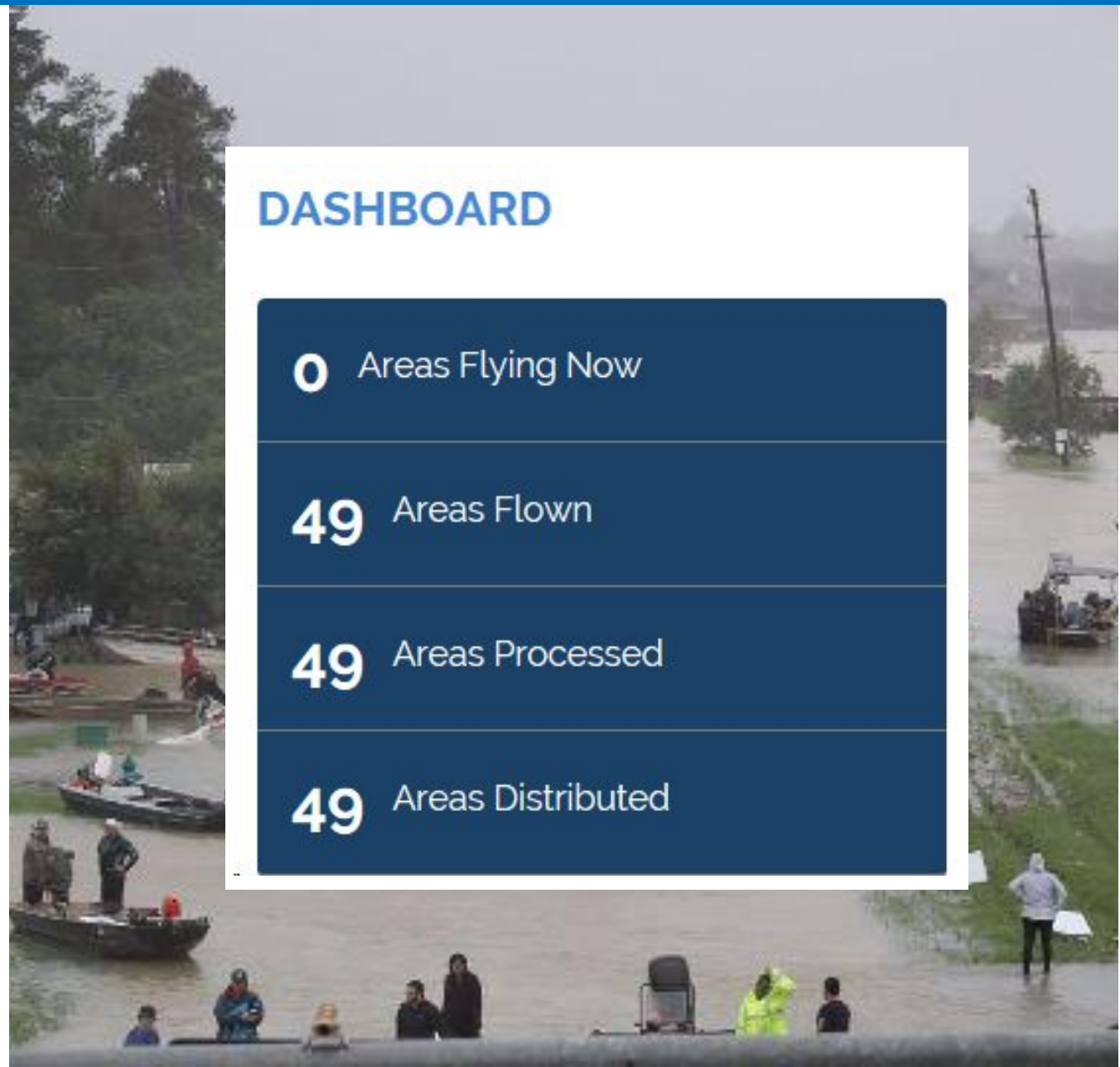
THE RESPONSE

Harvey, Irma, Maria, and CA Wildfires

Activities

- Handled all planning, collection, processing and hosting
- Uploaded imagery within 24 hours

- Distributed Imagery covering:
  - 65,800 square kilometers
  - 23.5 million population
  - 8.8 million homes



HURRICANE **HARVEY**
Neighborhood

HURRICANE **HARVEY**
Neighborhood detail

HURRICANE **IRMA**

A simple plea for help

HURRICANE **HARVEY**

Wind damage

Napa Wildfires
Before

Napa Wildfires
After

2. NATIONAL IMAGERY COLLECTION

Full coverage: immersive imagery and geospatial data updated annually

- **Entire U.S.** in high resolution imagery @ 15cm resolution with geospatial data

- Ultra high-res imagery and data of the **top 150 metro areas** @ 5cm resolution
  - 360 aerial oblique imagery: 45-degree from four angles
  - Ortho imagery: top down view
  - Panoramic street-view imagery and LiDAR
  - Complete 3D mesh with precise building geometry
  - Digital Terrain and Elevation models (DTM / DEM)

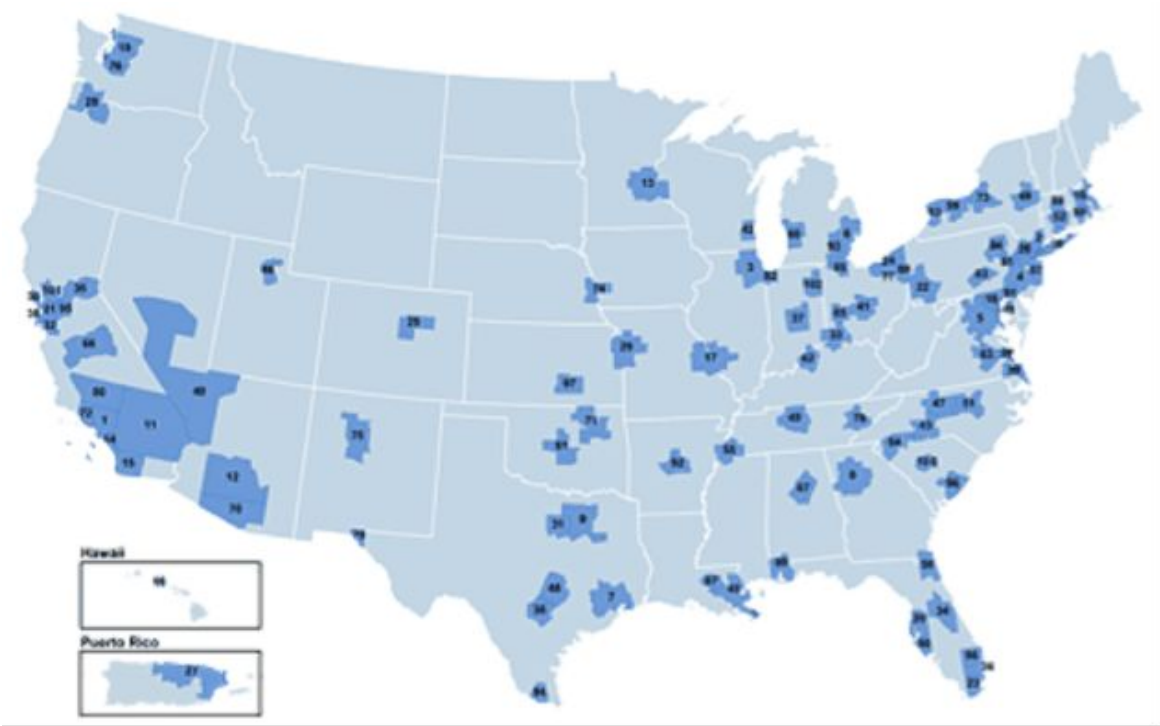
- Imagery and data meet the **highest geometric and radiometric standards** in the industry

- Approximately 60 petabytes of data per year

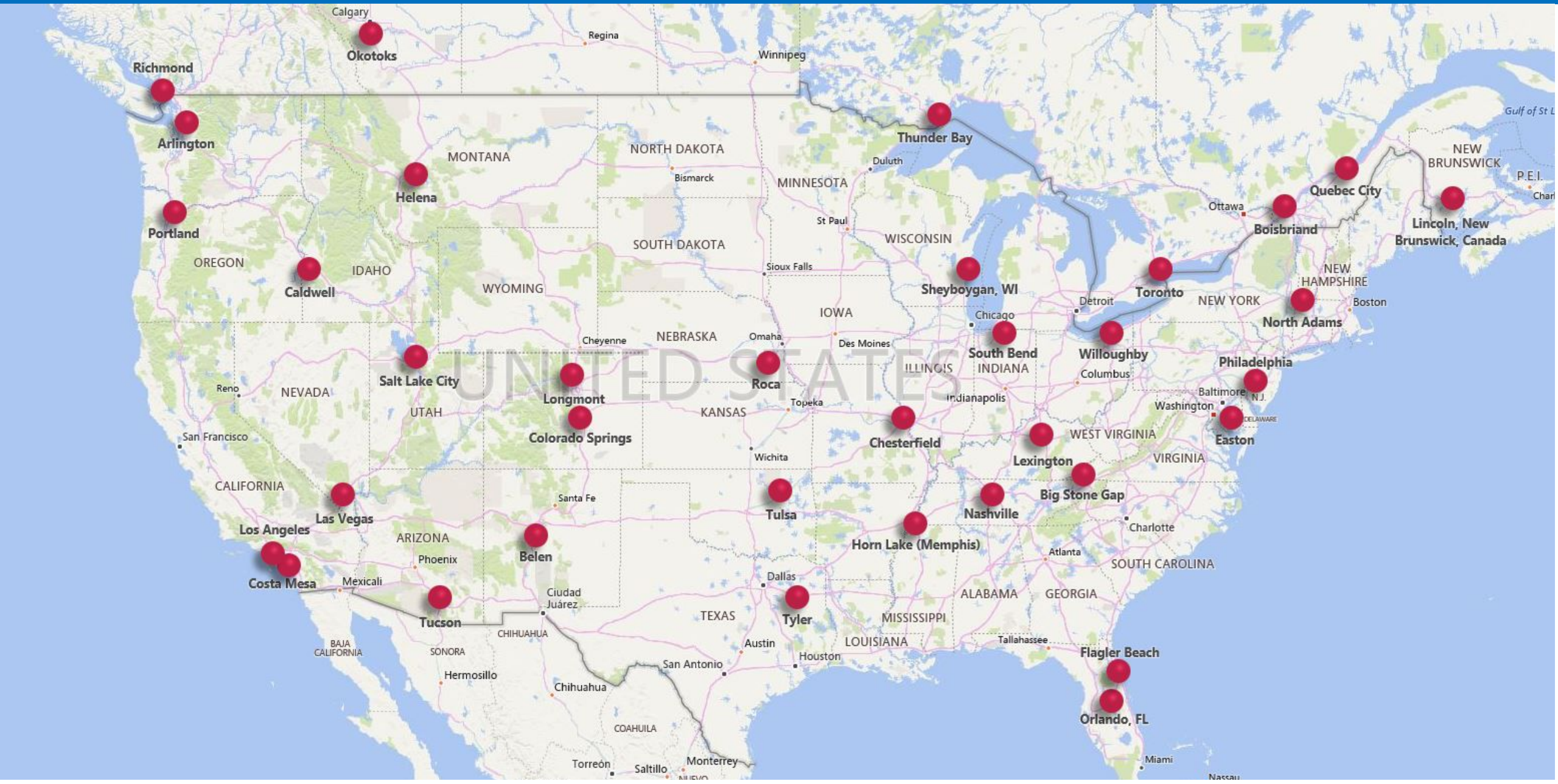
2. NATIONAL IMAGERY COLLECTION

Network effect: ability to collect nationally and respond quickly for CAT situations

- Collecting and processing imagery and data year-round based on consistent specifications
- Over **100 aircraft available today**, by far the largest fleet network in the U.S.
- Located across **25 hubs nationally**
  - Prepared to respond quickly when needed
- **Partnering with the top** U.S. aerial mapping companies and additional Vexcel-certified fliers in specific locations
  - Proven success from prior nationwide programs



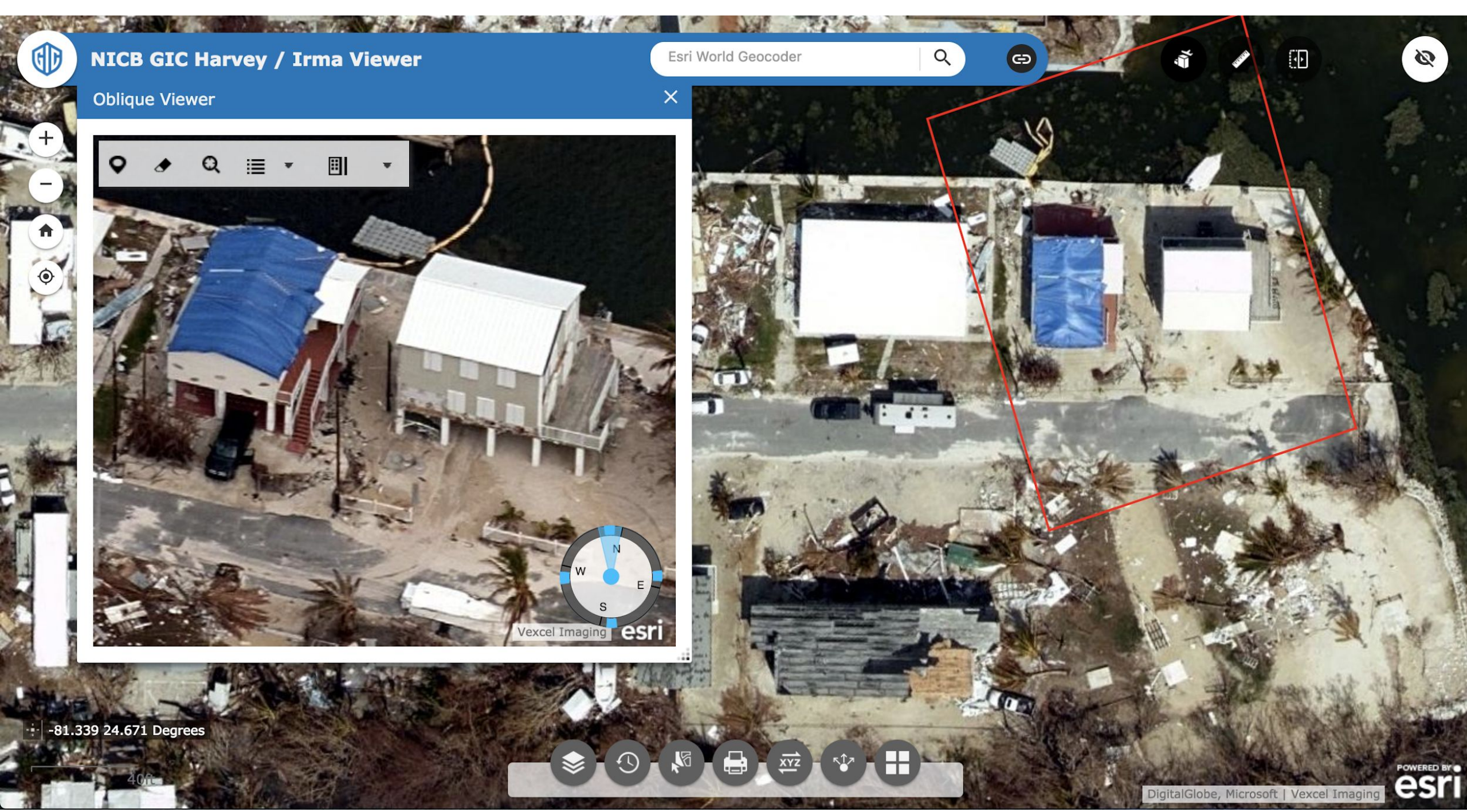
NICB SOLUTION : OPERATOR BASES



3. DIGITAL DELIVERY

Imagery Platform

- **Revolutionary platform that delivers** 360-degree immersive imagery as well as aerial photography to the most common devices.
- Can **process & deliver from CAT site**
- **Simple**, intuitive interface that provides disaster assessment per property, portfolio analysis, risk scoring for underwriting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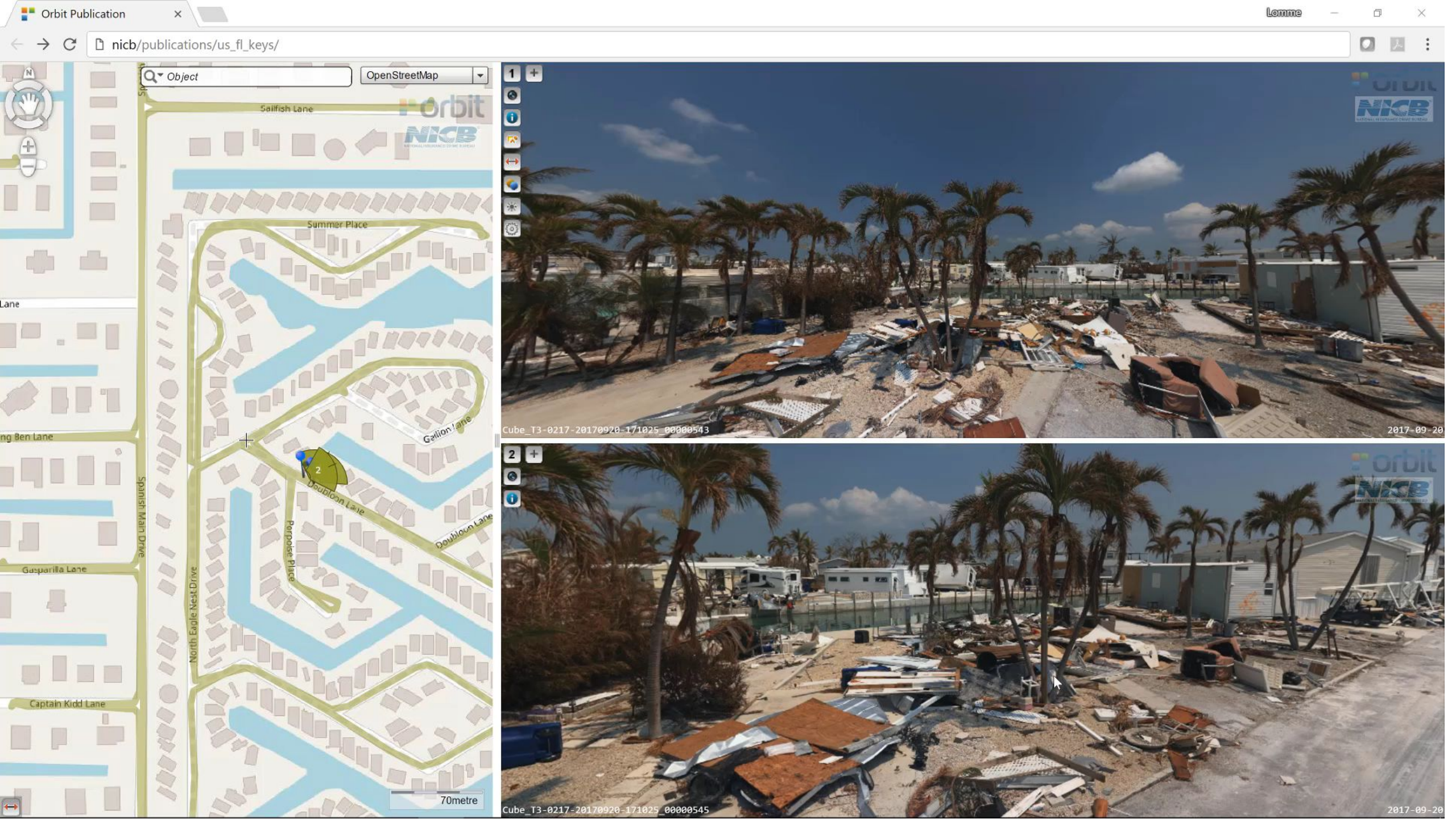
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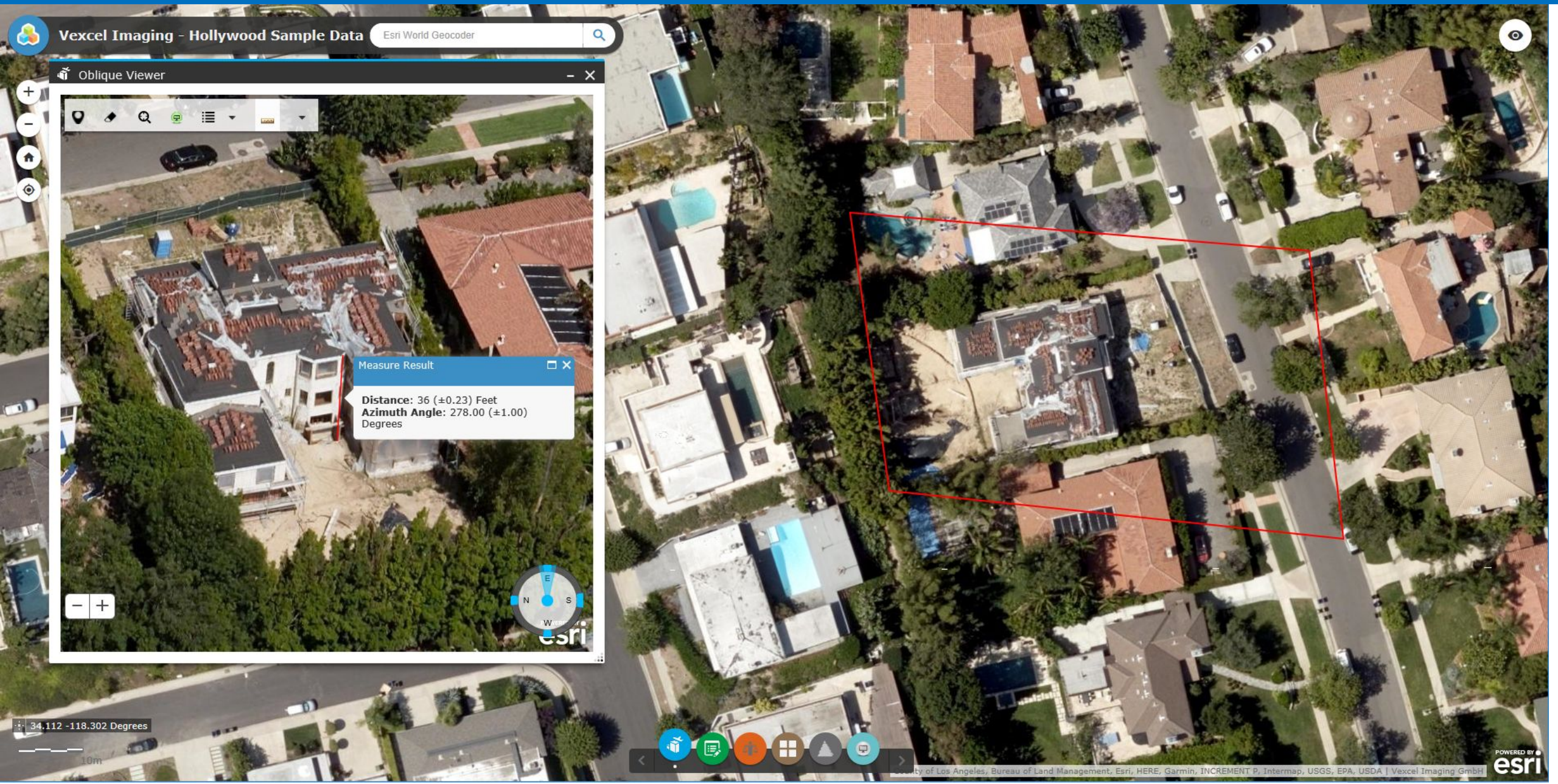
4. ADVANCED ANALYTICS

Data to Insights

- **Processing -** automation software produces highest quality finished modules
- **Analysis** - apply AI, Computer Vision algorithms
- **Insights** – damage assessments remotely

DIFFERENCE : MEASURING HEIGHT OF THE HOME FROM THE EAST



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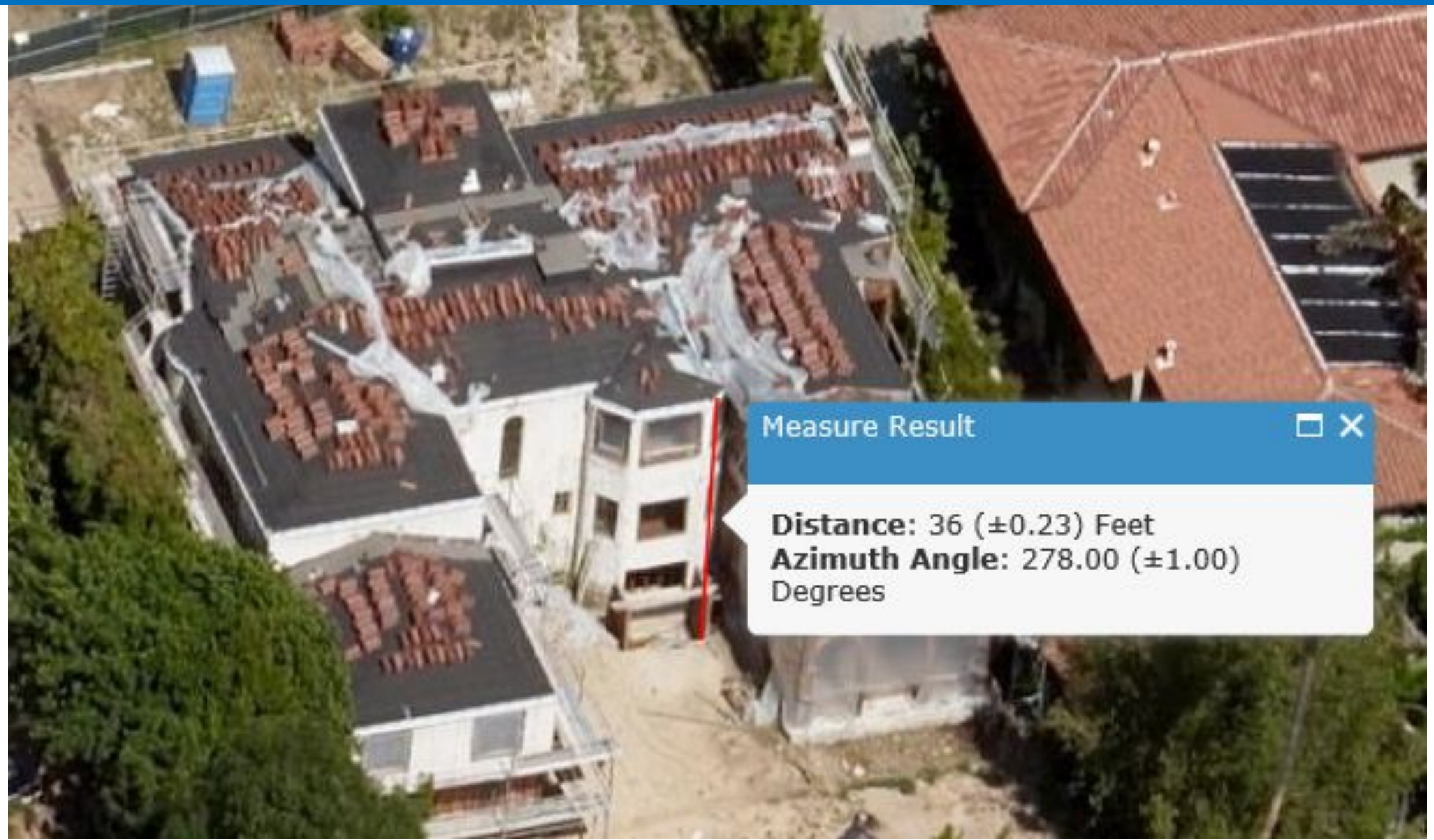

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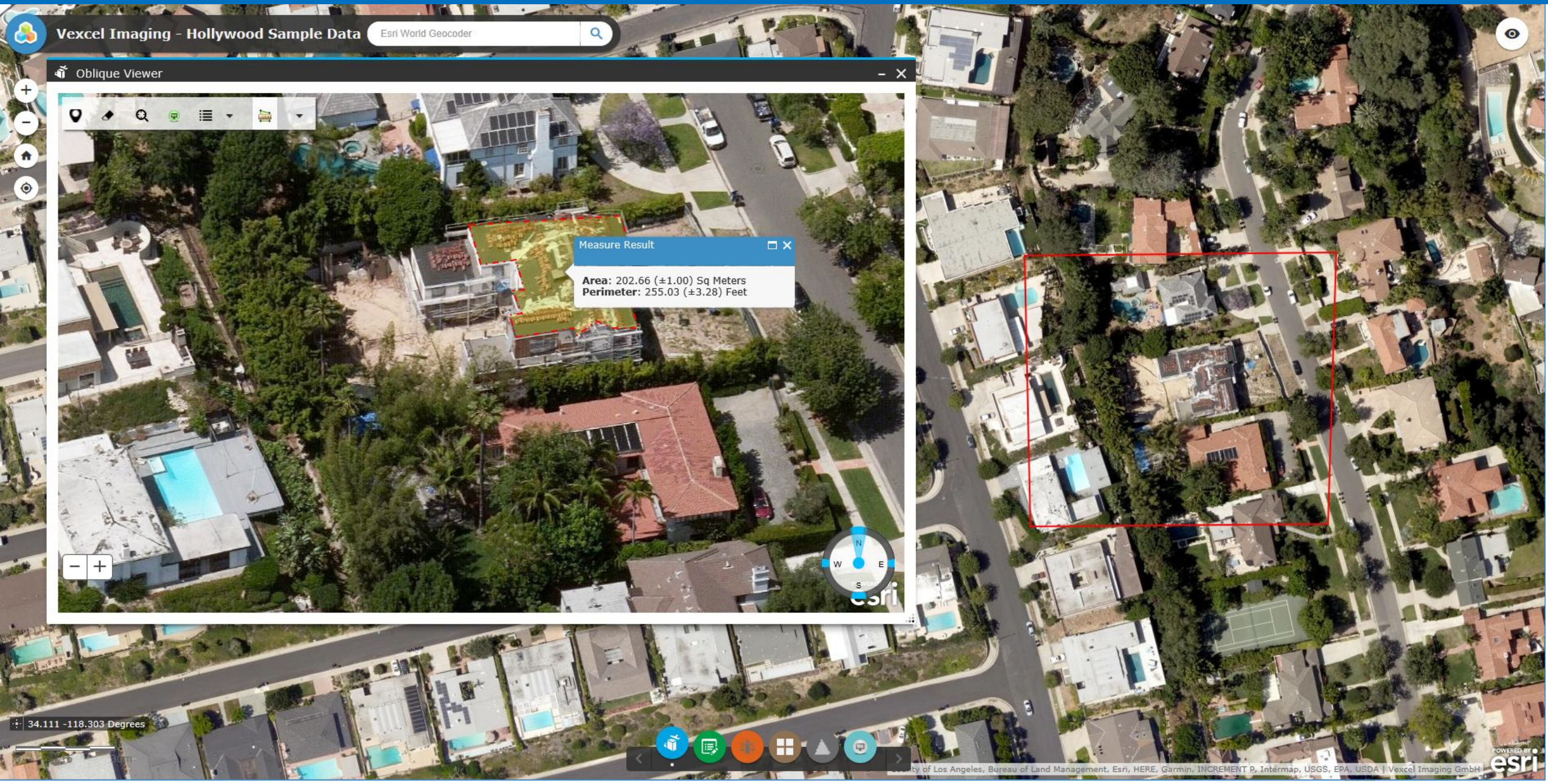

NICB SOLUTION : COLLECTION, ANALYSIS & DELIVERY PLATFORM

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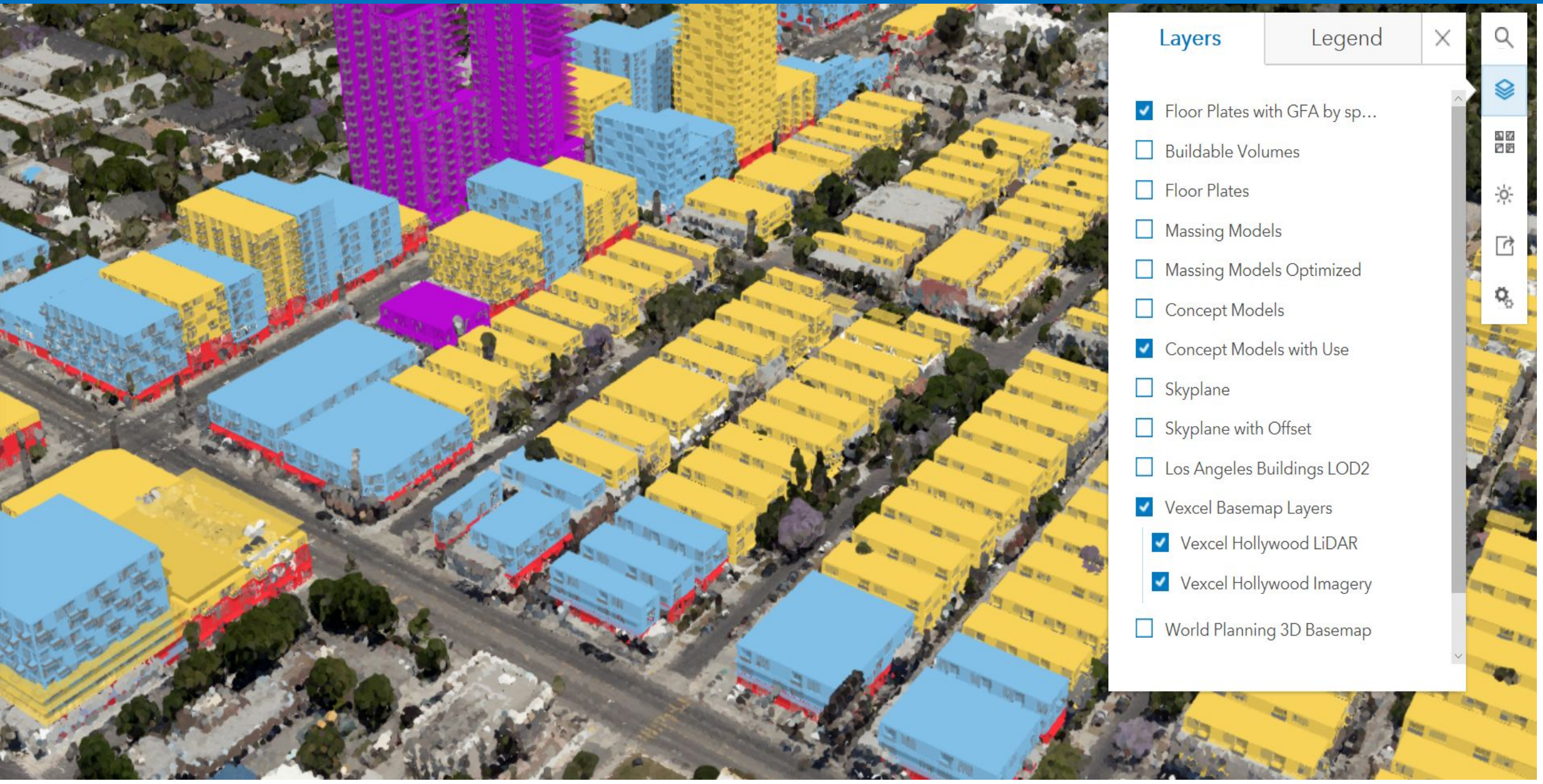
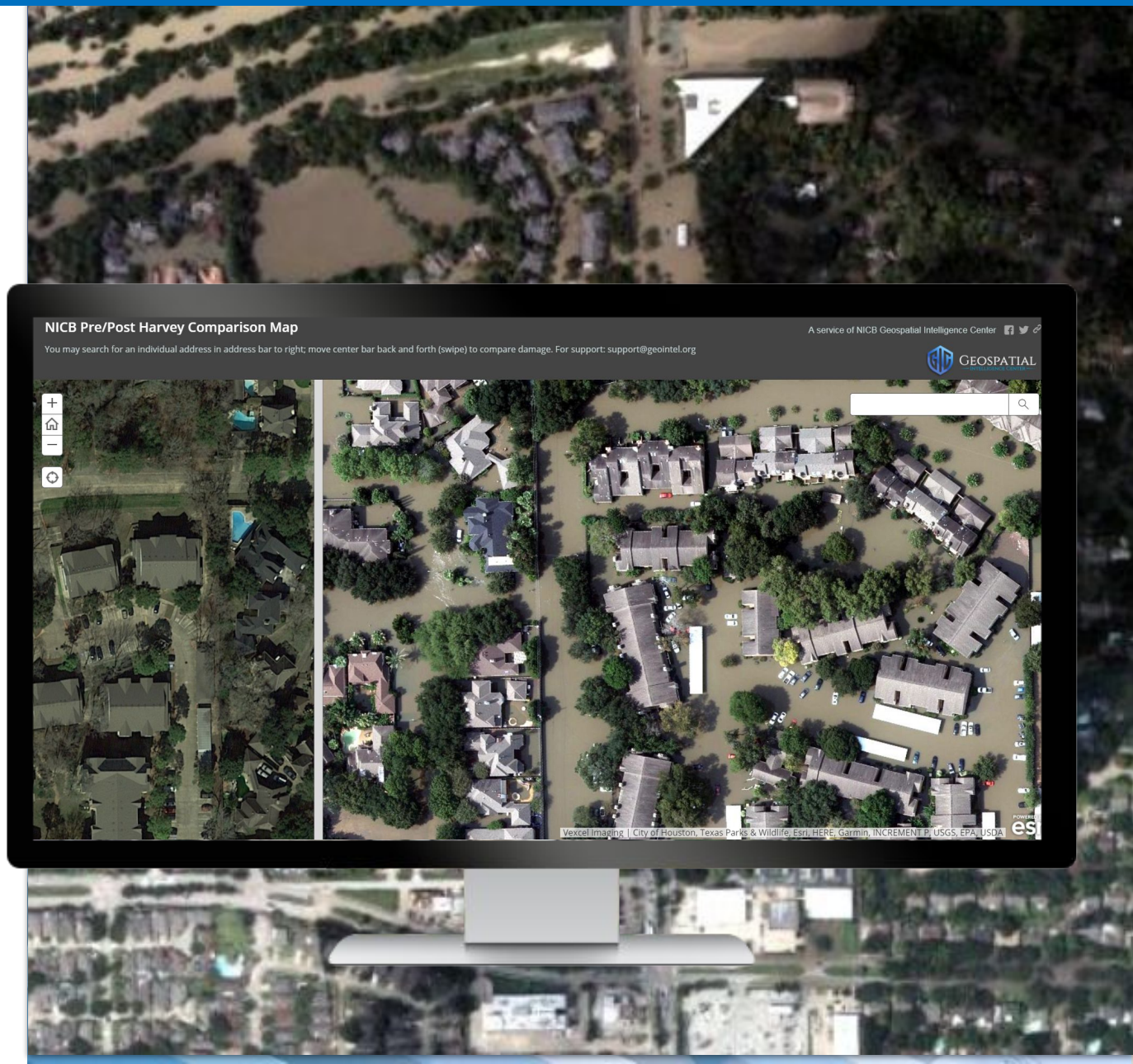


Data to Insights

- **Imagery captured -** immediately after the event
- **Nadir & Oblique**
- **Insights** – Pre and post views of property

Leading Insurer: “What used to take **weeks** has been **compressed** to a matter of **days**”



Supporting Desk Adjusting

- **Measure Impacts**
- **Inform Replacement Estimates**
- **Claim Level Detail**

“The imagery is very **detailed** and allows us to **quickly** and accurately measure buildings ”

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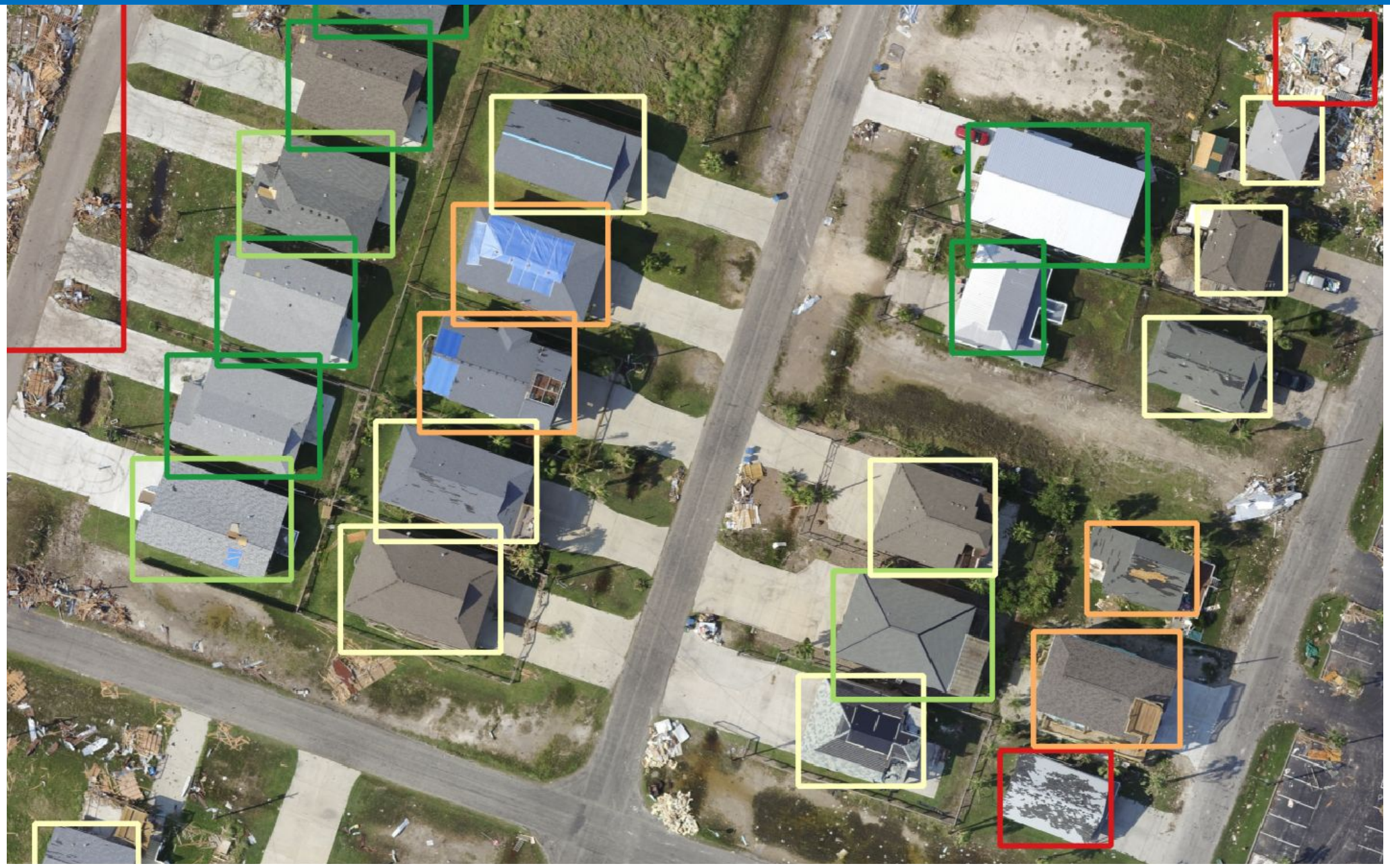

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Analytic Foundation

- **Digital Surface Model (DSM)**
- **Digital Elevation Model/ Digital Terrain Model (DEM/DTM)**
- **Point Cloud**
- **3D Textured Mesh**

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Thank you.

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