

MAKING DATA MEANINGFUL

**WE SPECIALIZE IN ENGINEERING-BASED DATA ANALYTICS
AND DEVELOPMENT OF CUSTOM SOFTWARE PRODUCTS**

- ◆ Proprietary Artificial Intelligence, Machine Learning, Computer Vision
- ◆ Multispectral Data Processing: HD Images, Thermography, LiDAR
- ◆ Data: Satellite, Drone, Aircraft, Vehicle, Sensors/Robotics, Database
- ◆ INFRAVIEU – Our Proprietary Data Analytics & Visualization Platform
- ◆ App Development – Android, iOS and Web



We Collect, Analyze and Visualize your Data!

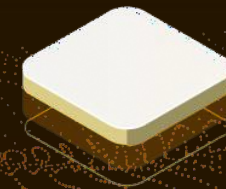
MACHINE LEARNING & DATA ANALYTICS AUTOMATION COMPANY

A high-tech team of:

- ◆ Computer scientists, Software, Systems, Aerospace & Mechanical engineers

A note about how we work with clients:

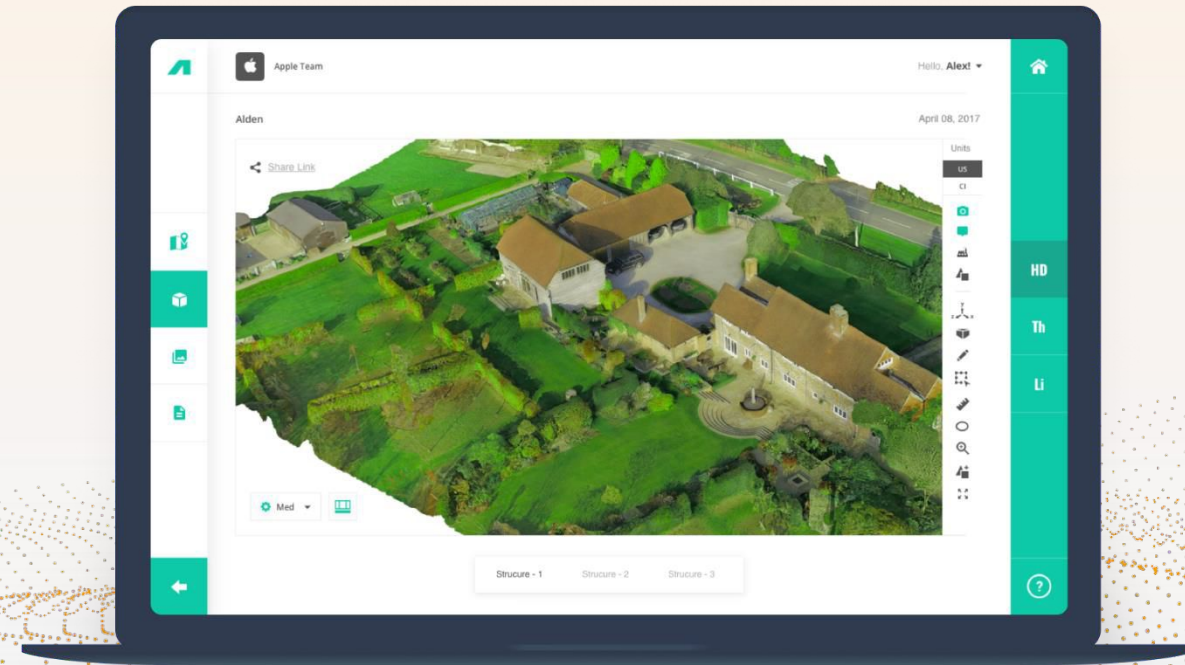
- ◆ Project Based
- ◆ Milestones
- ◆ On-Time and On-Budget



Platform Overview and Capabilities

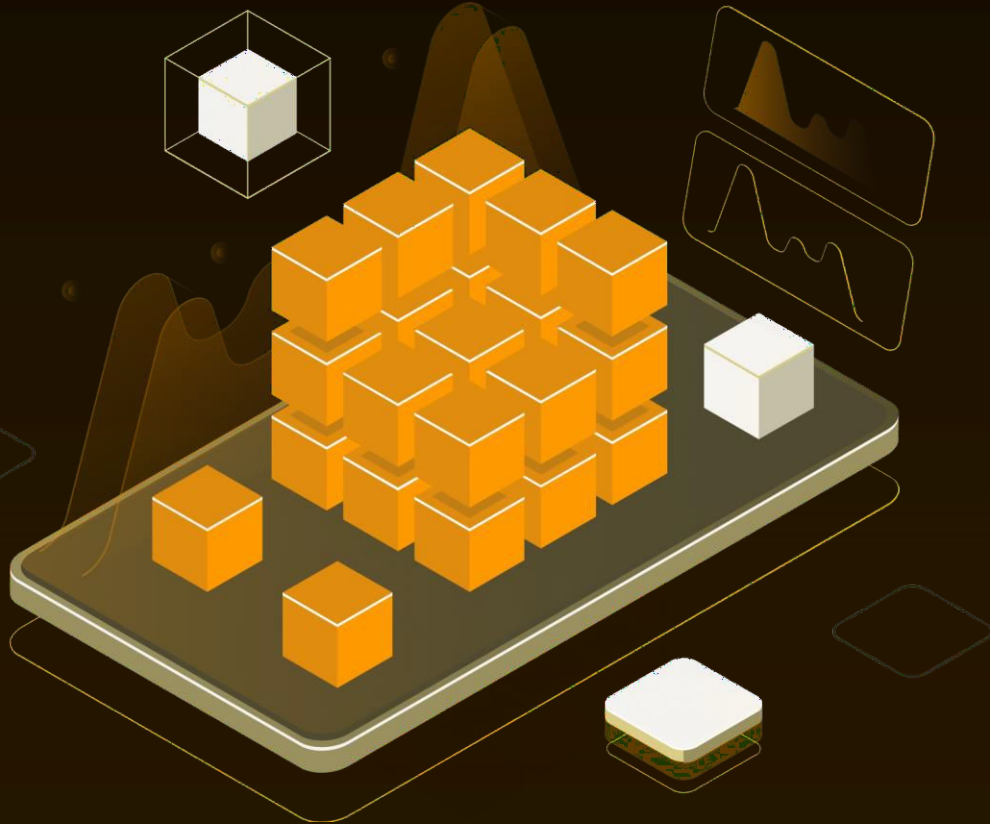
InfraVIEW

- ◆ Advanced Data Visualization Dashboard
- ◆ Engineering Data Manipulation Tools
- ◆ Custom AI & ML based Data Analytics
- ◆ View & Manipulate Data: HD, Thermal and LiDAR
- ◆ Clients may license, white-label or subscribe to InfraVIEW
- ◆ Cross Platform Application
- ◆ Currently being used by Fortune 500 Companies



Our Proprietary Data Analytics and Visualization Platform

Key Features



- ◆ 3D Annotation tool
- ◆ 3D Distance, Area & Volumetric Measurement Tool
- ◆ Orthomosaic Map View – HD, Thermal & Digital Elevation Models
- ◆ InfraVIEW Thermal Viewer
- ◆ Image Comparison Tool/Change Detection
- ◆ Augmented Reality Models On 3D Map
- ◆ Fully Automated Back-End Data Processing on Cloud Servers

Machine learning & AI algorithms

At InfraSix, we use proprietary algorithms for:

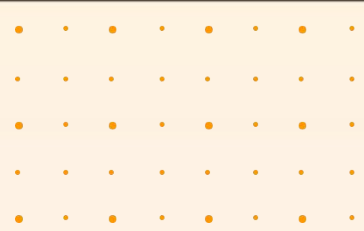
- ◆ Analyzing massive amounts of data
- ◆ Building & Structure Classification
- ◆ Automated measurements of structures & land
- ◆ Mapping and Surveying
- ◆ Change Detection and Monitoring



Automated defect & anomaly detection

- ◆ Proprietary Machine Learning
- ◆ Use inspection data to identify defects/anomalies
- ◆ Custom models based on client needs





When to Utilize Machine Learning

We Make Data Meaningful



Consistency and Quality Needed



Repetitive and Manual Processes

“ In the past 2 years, more data has been created than in the entire history of mankind.

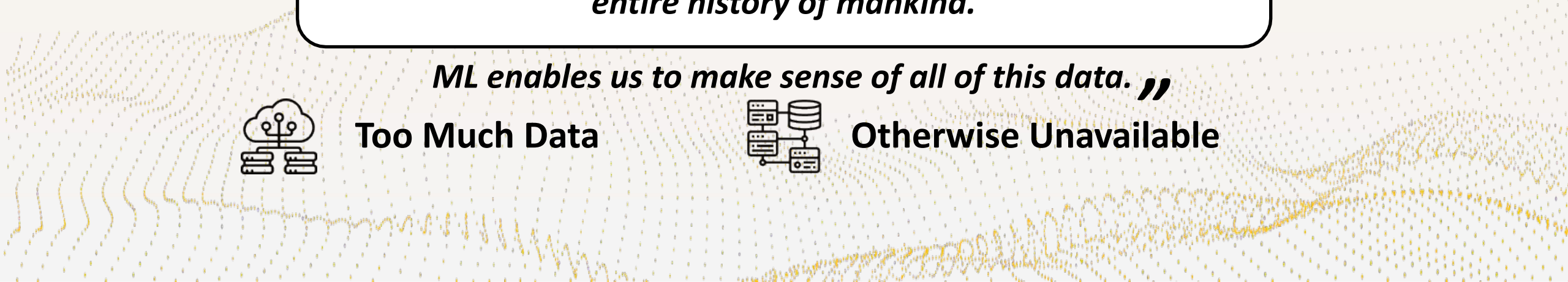
ML enables us to make sense of all of this data. ”



Too Much Data



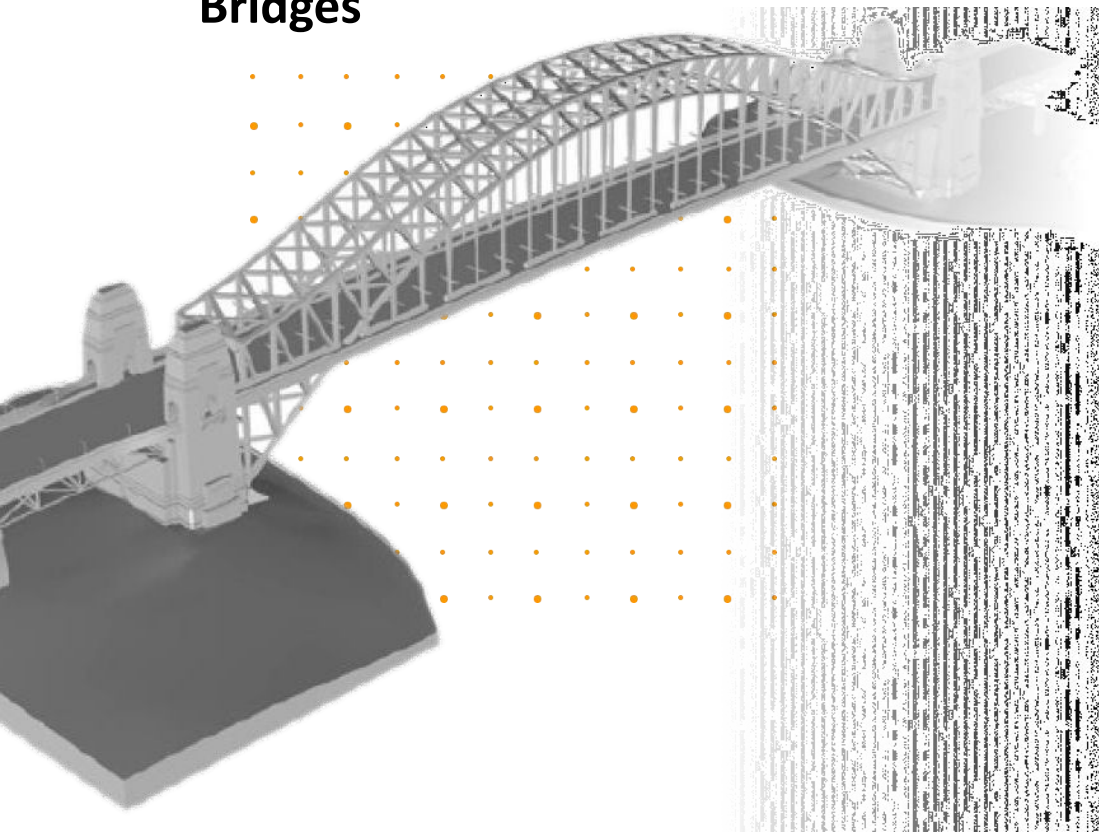
Otherwise Unavailable



Infrastructure Service Examples

Utilizing data from satellites, aircraft, drones, vehicles, hand-held
Data formats including: HD, 3D, Thermography, LiDAR and more!

Bridges



Bridge Inspection

- ◆ Damage/defect detection and rating
- ◆ Analysis of bridge structural components
- Initial documentation and ongoing change detection for: corrosion, stress, tolerances, heat output, defects and other indicators
- ◆ Analysis of damage after situations including earthquakes, fires, hurricanes, other
- ◆ Obstruction detection and analysis
- ◆ Automated report generation

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Bridge Construction & Planning

- ◆ Topography mapping and dimensioning
- ◆ Volumetric measurement for earth moving,
cut and fill
Construction monitoring
- ◆ Change detection
- ◆ HD, Thermography and LiDAR



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Oil & Gas



Oil & Gas Inspection

- ◆ Sensor Monitoring and Alerts for:
 - ◆ Storage facilities
 - ◆ Refinery facilities
 - ◆ Pipelines
 - ◆ Harmful gasses (H₂S, others)
 - ◆ IoT sensors (Internet of Things)
 - ◆ Security
- ◆ Defect & anomaly detection

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Oil & Gas Construction

- ◆ Topography and distance mapping
- ◆ Pipeline route obstruction detection,
itemization and geotagging
Route planning, volumetric
- ◆ measurements Construction monitoring
- ◆ Change detection



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Utilities



Utility Inspections

- ◆ Automated sensor monitoring and alerts
- ◆ Water, pipelines, treatment facilities
- ◆ Power lines, poles, line sag
- ◆ Power stations
- ◆ 3D mapping & Building Information Models (BIM)

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Utility Applications

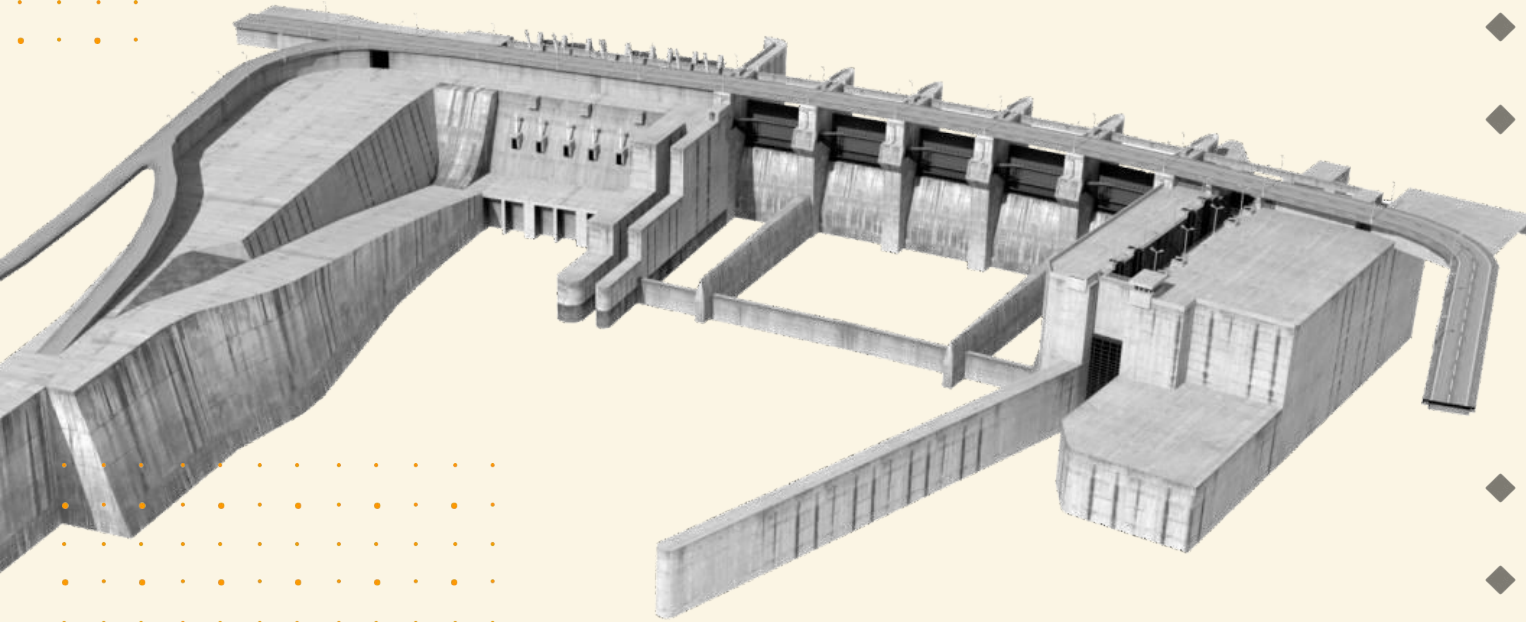
- ◆ Powerline scanning for vegetation
- ◆ Tower/Pole/Component classification & defect identification
- ◆ Make-ready engineering for utility pole additions such as new lines or antennas for power, cable, phone, cell transmission (5g)
- ◆ Mapping of pole ownership by city/town/utility
- ◆ Smart City - weather derived electricity and water demand prediction



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Water & Dam



Water & Dam Inspections

- ◆ Automated sensor monitoring and alerts
- ◆ Inspection of dams:
 - ◆ Concrete cracks
 - ◆ Flow
 - ◆ Change detection
- ◆ Damage & defect detection
- ◆ Wetland identification
- ◆ Runoff detection
- ◆

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Water & Dam Construction

- ◆ Topography and distance mapping
Volumetric measurements
- ◆ Digital elevation for water basin
- ◆ Construction monitoring



Infrastructure Service Examples

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Additional Services - Machine Learning Examples



Inspections

- ◆ Automated sensor monitoring and alerts
- ◆ Defect/anomaly detection and rating
- ◆ Change detection
- ◆ Automated report generation



Construction

- ◆ Topography and dimensioning
- ◆ Digital elevations
- ◆ Volumetric measurements
- ◆ Construction monitoring
- ◆ Change detection



Applications

- ◆ Airports
- ◆ Railroads
- ◆ Marine ports
- ◆ Municipalities
- ◆ Critical Infrastructure
- ◆ Nuclear Reactors
- ◆ Military installations
- ◆ Highways & Roads
- ◆ And more

NEXT STEPS

- ◆ Introduction to **InfraLytics** – Our Technical Team
- ◆ Review of Relevant Case Studies
- ◆ Technical Q&A
- ◆ Discussion of Potential Applications

Reach out to us at:

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