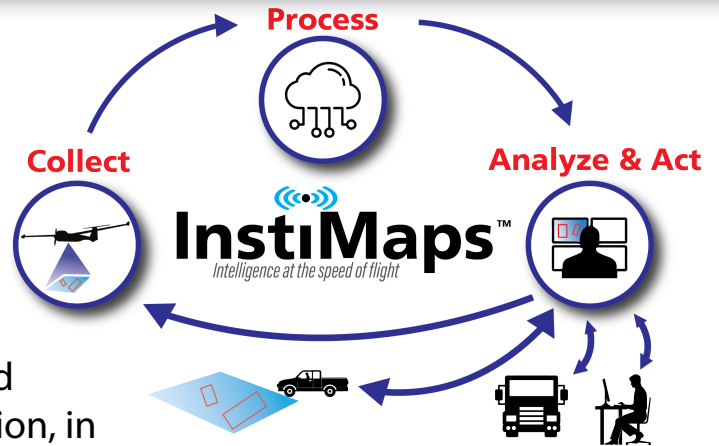


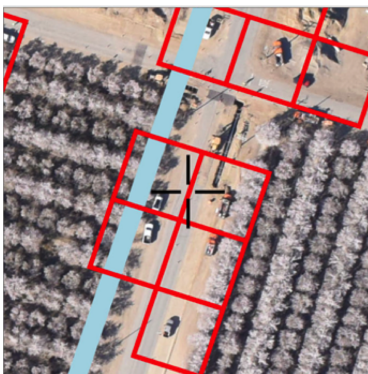
# InstiMaps™ Automated Threat Detection and Near Real-Time Reporting System for Pipeline Patrol

**InstiMaps™** is an end-to-end pipeline patrol threat detection and reporting system. InstiMaps uses advanced airborne sensors, real-time artificial intelligence (AI) and LTE communications to detect, identify and report imminent threats from aircraft patrolling geographically distributed critical assets in near real-time. Imagery and identified threats are delivered within minutes of detection, in formats that can be seamlessly integrated into customer visualization platforms



## How it works

InstiMaps™ is comprised of FAA compliant sensors, antennas, and a self-contained flight management system. The system is controlled by a tablet computer and operated by the patrol observer. Imagery is continuously acquired, processed, analyzed and recorded during flight. Visual markers of identified threats are automatically displayed on the tablet atop corresponding imagery and forwarded to the InstiMaps™ Cloud using 4G LTE. Map imagery is published and delivered to authorized damage-prevention personnel within minutes.



**for more information:**

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**InstiMaps™ Sensors.** Airborne sensors include high resolution visible and thermal infrared cameras. When flown at 2000' AGL, the visible camera provides 4" resolution imagery of a 2,000' wide corridor over asset centerline. The infrared camera spots and reports fires within 250' of the corridor centerline.

**InstiMaps™ Publishing.** InstiMaps™ automatically publishes threat imagery and markers, then rapidly forwards them to authorized personnel across the enterprise. All imagery acquired on routine patrols is uploaded to the InstiMaps™ Cloud post-flight where data products including orthomosaics and digital elevation models of all or part of the corridor can be produced. These data products provide a historical record of threats and conditions along the entire corridor that can be of value to damage prevention and other oversight functions.



The InstiMaps™ Cloud supports company-wide operations, simultaneously publishing threats from multiple InstiMaps™-equipped aircraft operating across the network.

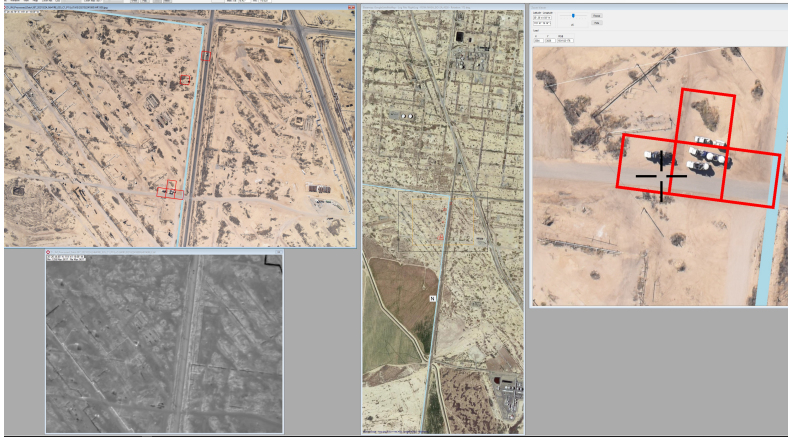
**Threat Reports.** Near-real time threat reports are generated by combining high resolution aerial photography, machine learning and observer input. A photograph of each threat is included as an appendix to the standard patrol form. The image includes an overlay with pipeline segment ID, pipeline shapefile ID, nearest mile marker, coordinates and threat level designated by a colored threat box or marker.

**Data Delivery.** InstiMaps™ delivers threat imagery, alerts and post-flight data products to any Open Geospatial Consortium (OGC) compliant web mapping application including ESRI's ArcGIS, Google Earth, or other customer specified interfaces.



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**Data Visualization.** Data can be ingested into customers' existing digital pipeline management systems. AATI also offers visualization tools to enhance analytical value and provide rapid access to data in the office and the field.

**Data Management and Storage.** Complete Right-of-Way and threat image layers remain accessible in the form of web compliant map layers for a period of one month, before being archived. Once archived, image layers are stored for a period of one year unless otherwise specified. Archived imagery will be available within three days of request in the form of map layers and geolocated imagery. All threat data points remain accessible for the life of the pipeline to allow for predictive analytics.



**About American Aerospace Technologies, Inc.**

Founded in 2002, AATI is a leader in airborne sensing, intelligence and communications services for Oil & Gas and other critical infrastructure. We deliver services with conventional aircraft, drones and medium altitude, long endurance unmmanned aircraft.

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