

GAME OF DRONES



Presented by William Cho

Drone, UAV, UAS, RPA, RPAS, ...

- Unmanned Aerial Vehicle (UAV) Most common used by online community
- Unmanned Aircraft System (UAS) U.S. and U.K.
- Remotely Piloted Aircraft System (RPAS) Most formal by int'l aviation organizations
- Drones French speaking countries

Two Most Common Factors:

- A drone is an aircraft **without a human pilot onboard**
- A drone is controlled **remotely from an operator on the ground.**

Paper Airplane, A Drone?



Is This A Drone?

- a. Yes
- b. No
- c. Too Hungover To Answer

But What If?

Spirit
of Jan-Hugo

Paper Airplane w/ Bluetooth and a Propeller



Consumer Drones



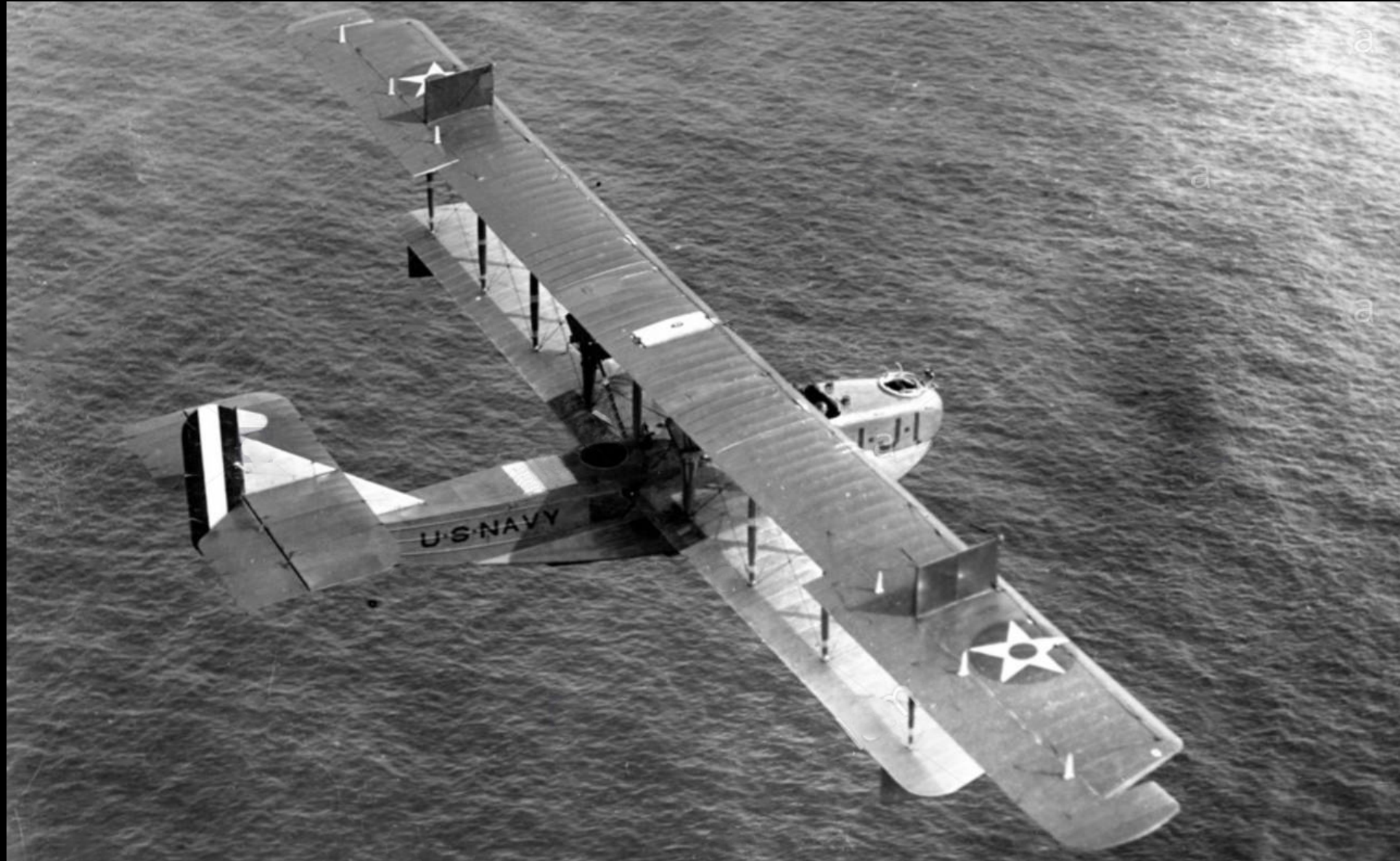
When was the very first drone invented?

- ~~a.~~ 1980
- ~~b.~~ 1977
- ~~c.~~ 1912
- d. 1924



The Very First Drone

- Curtiss F-5L in 1924



Evolution of Drones

- RQ-180



History of Lloyd's

- Lloyd's Market in 1688



People Have Evolved with Technology



Drone Applications & Benefits

- Root Cause Analysis – Roof Leakage



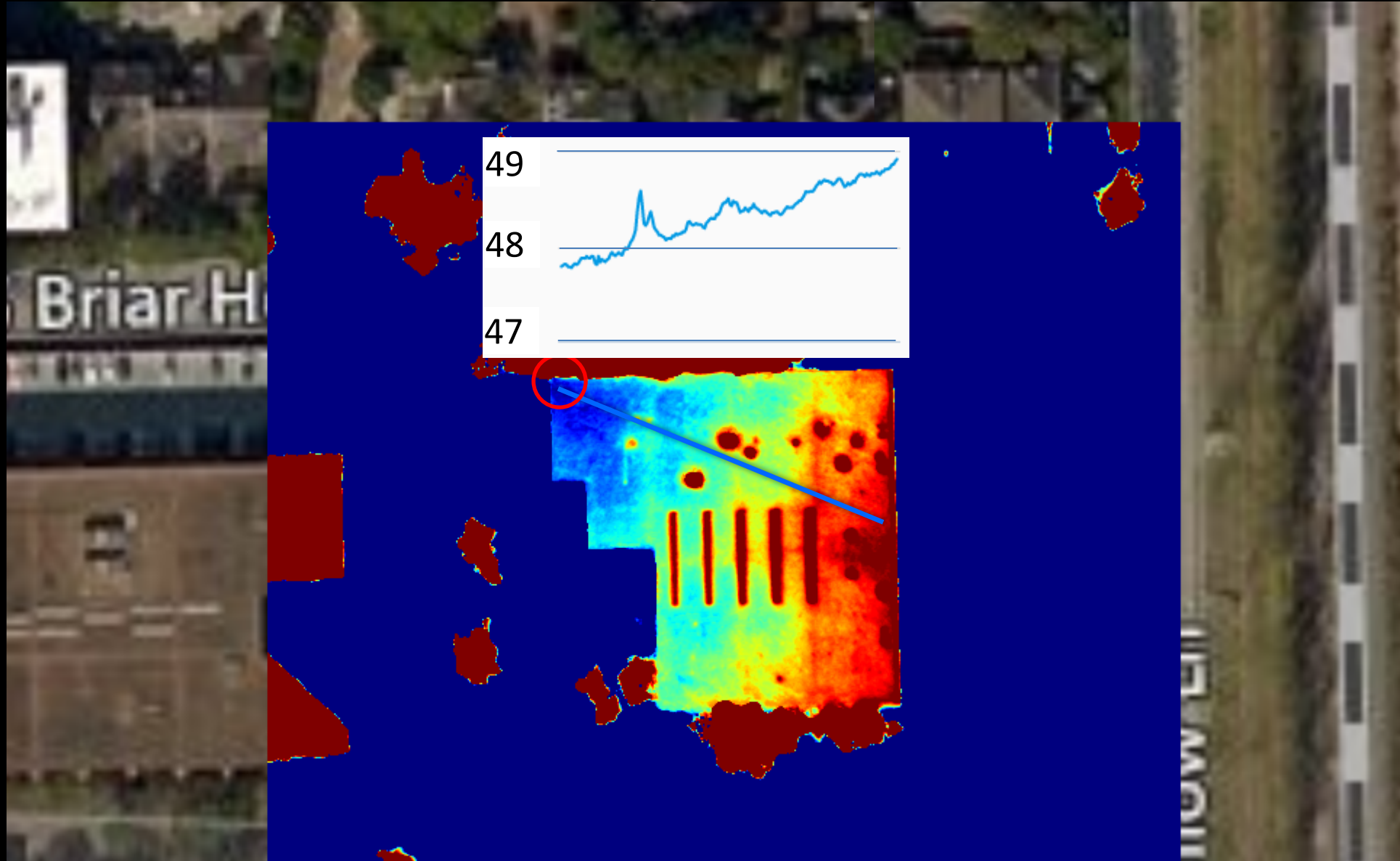
Drone Applications & Benefits

- Root Cause Analysis – 3D Rendering



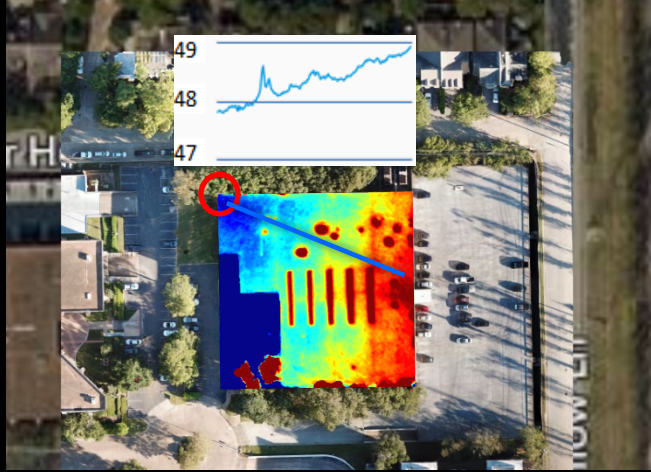
Drone Applications & Benefits

- Drone Solution: Measuring Roof Elevation



Drone Applications & Benefits

Root Cause Analysis



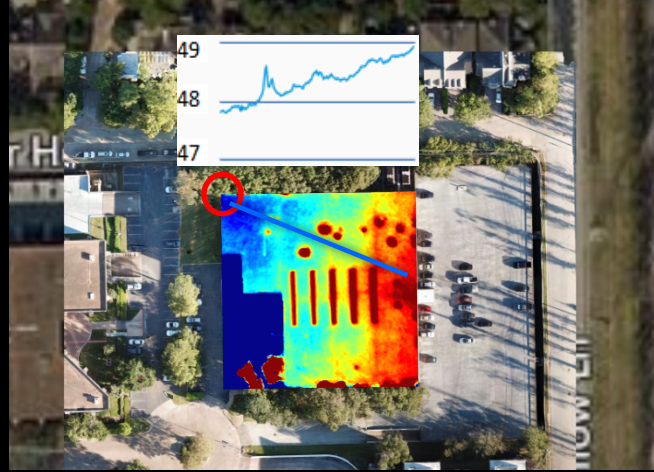
Drone Applications & Benefits

- Drone Solution: Keeping Track Of Construction Phases



Drone Applications & Benefits

Root Cause Analysis



Vulnerability Change



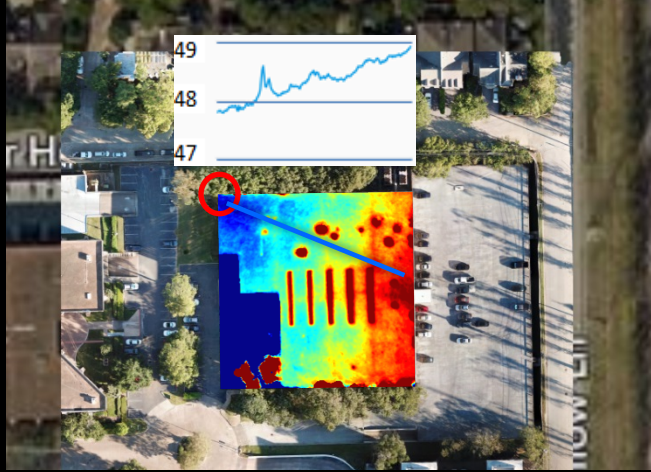
Drone Applications & Benefits

- Challenge: Employee Safety During A Condition Survey



Drone Applications & Benefits

Root Cause Analysis



Vulnerability Change

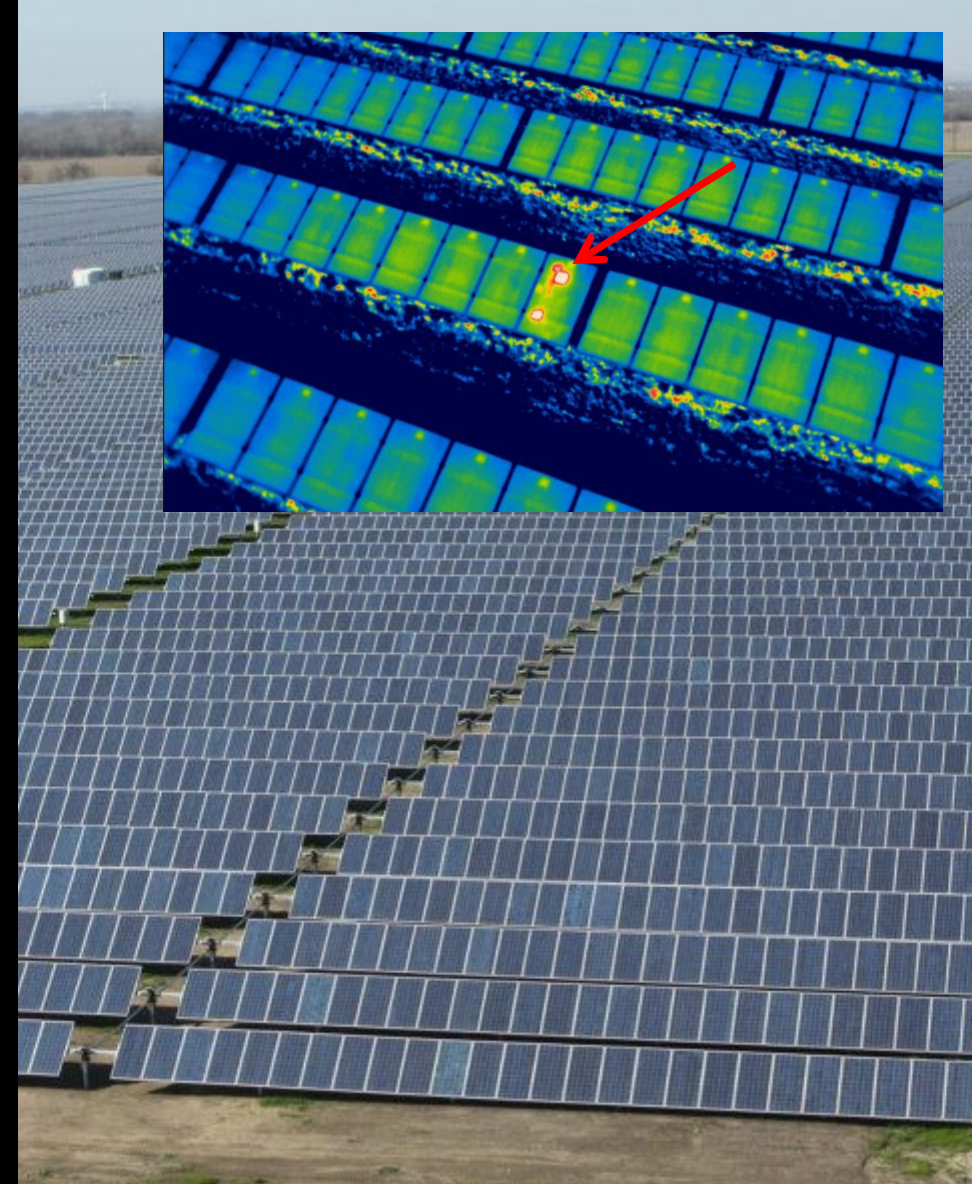


Condition Survey



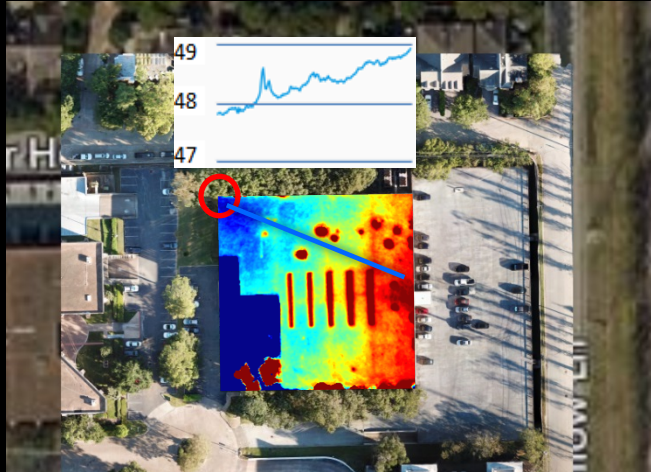
Drone Applications & Benefits

- On-site Solutions Many Types of Inspectors With Thermal Cameras



Drone Applications & Benefits

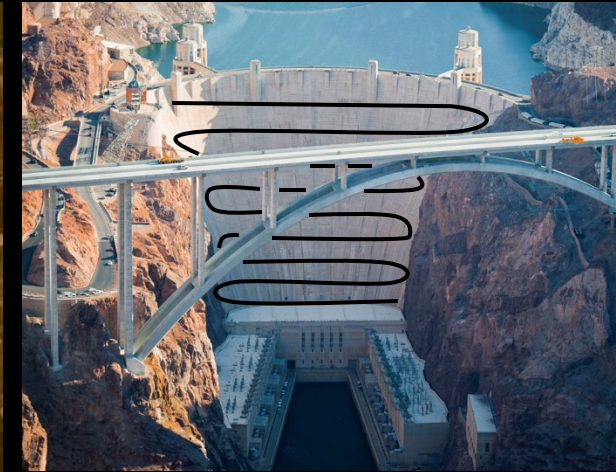
Root Cause Analysis



Vulnerability Change



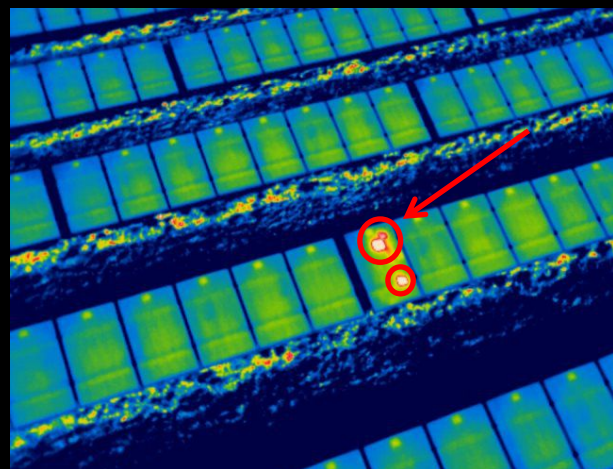
Condition Survey



Wind Energy



Solar Energy



Oil & Gas Energy Claim

GAO
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Case Study

Salt Water Disposal Facility in West Texas



Traditional Method of Information Delivery

- Challenge: Showing Full Scope of Damage



Rethinking Information Delivery

- Drone Solution: Aerial Birds-eye View



Rethinking Information Delivery

- Drone Solution: “Go Where No Man Can Go”



Rethinking Information Delivery

- Drone Solution: Aerial Birds-eye Video



Combining Drone Capabilities with Live Broadcasting

LIVE LOSS ADJUSTING™

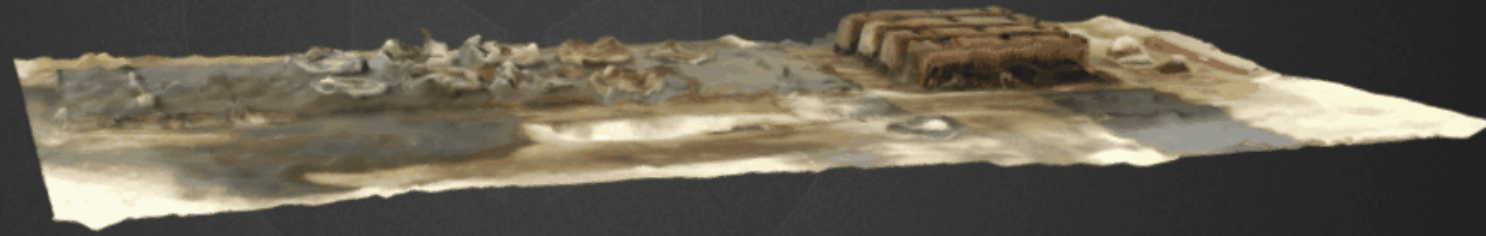
Live Loss Adjusting™ utilizes state-of-the-art drone technology. Our U.S. adjusters are equipped with drones with a real-time live feed capability, enabling stakeholders and adjusters to assess the nature and severity of damage together in real-time. Stakeholders can instruct the adjuster onsite to zoom in on certain aspects of the claim, often inaccessible by foot. A photograph is worth a thousand words. Video footage is worth far more, particularly when it provides instant access to loss sites that stakeholders require to expedite the claims adjusting process.

Note: We keep photos and videos in our password-protected web-portal only until the respective claims file is concluded.

Sample Video Footage



Combining Drone Capability with 3D Rendering Technology



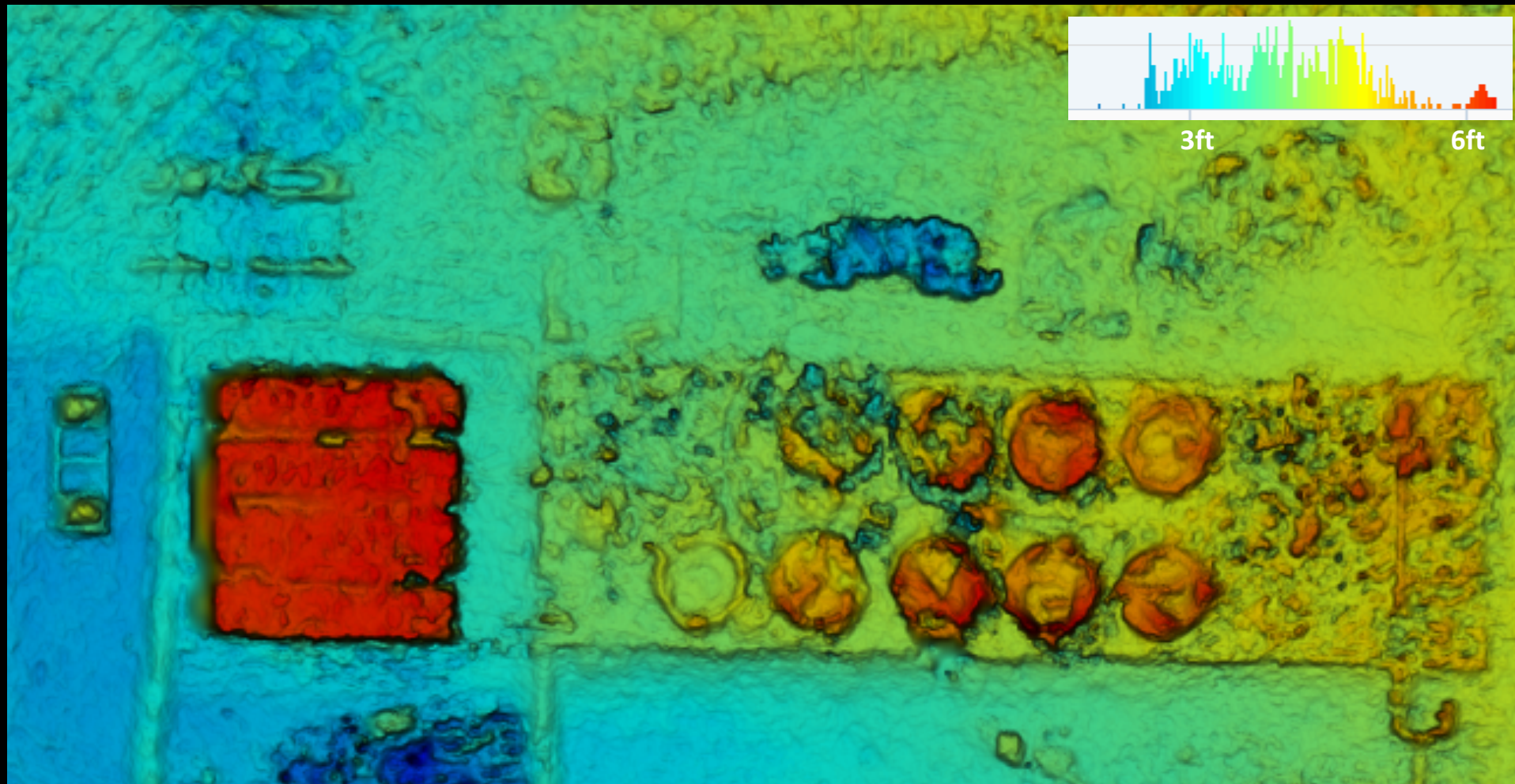
Combining Drone Capability with Computer Algorithms

- Drone Solution: Measurement Analysis
Volume of Oil Spill in the Main Contamination Area = 309.6 m³



Pushing Analytical Boundaries

- Drone Solution: Elevation Analysis
Investigating Any Grade Issues



Combining Drone Capabilities with 3D Printing

MatthewsDaniel
a Bureau Veritas Group Company



Key Benefits

- Take birds-eye view pictures at little or no cost
- Access to otherwise inaccessible area
- Quicker information delivery & Real-time feedback via live streaming
- Digital model of the loss site in the “palm of your hand”
- Computer algorithms to measure lengths, areas, volumes, elevations

Other Possibilities

- Pre-loss condition survey
- JH143, Shipyard Survey



Potential.Unlimited.