



CYBERHAWK

Aerial Inspection and Surveying Specialists

# Drones & Our Use Cases

Presented by  
Chris Fleming - CEO



About CYBERHAWK





Click here for video  
<https://vimeo.com/241028964>

# Cyberhawk At A Glance



- **World Leaders**
  - UAV inspection, survey & asset management
  - Sectors: Oil and Gas, Wind, Utilities, Infrastructure
- **Safe and Proven**
  - Founded in 2008
  - >30,000 commercial flights safely executed
- **Qualified and Experienced Staff**
  - ASME/CSWIP qualified plant inspectors
  - Mechanical, structural, civil engineers
  - CAA/FAA qualified expert pilots







A photograph of an offshore oil platform's flare stack. Several large, intense fires are burning from the top of the stack, with bright yellow and orange flames rising into the air. The platform's metal structure, including railings and walkways, is visible in the foreground. The background shows the blue surface of the ocean.

# Flare Stack Inspection





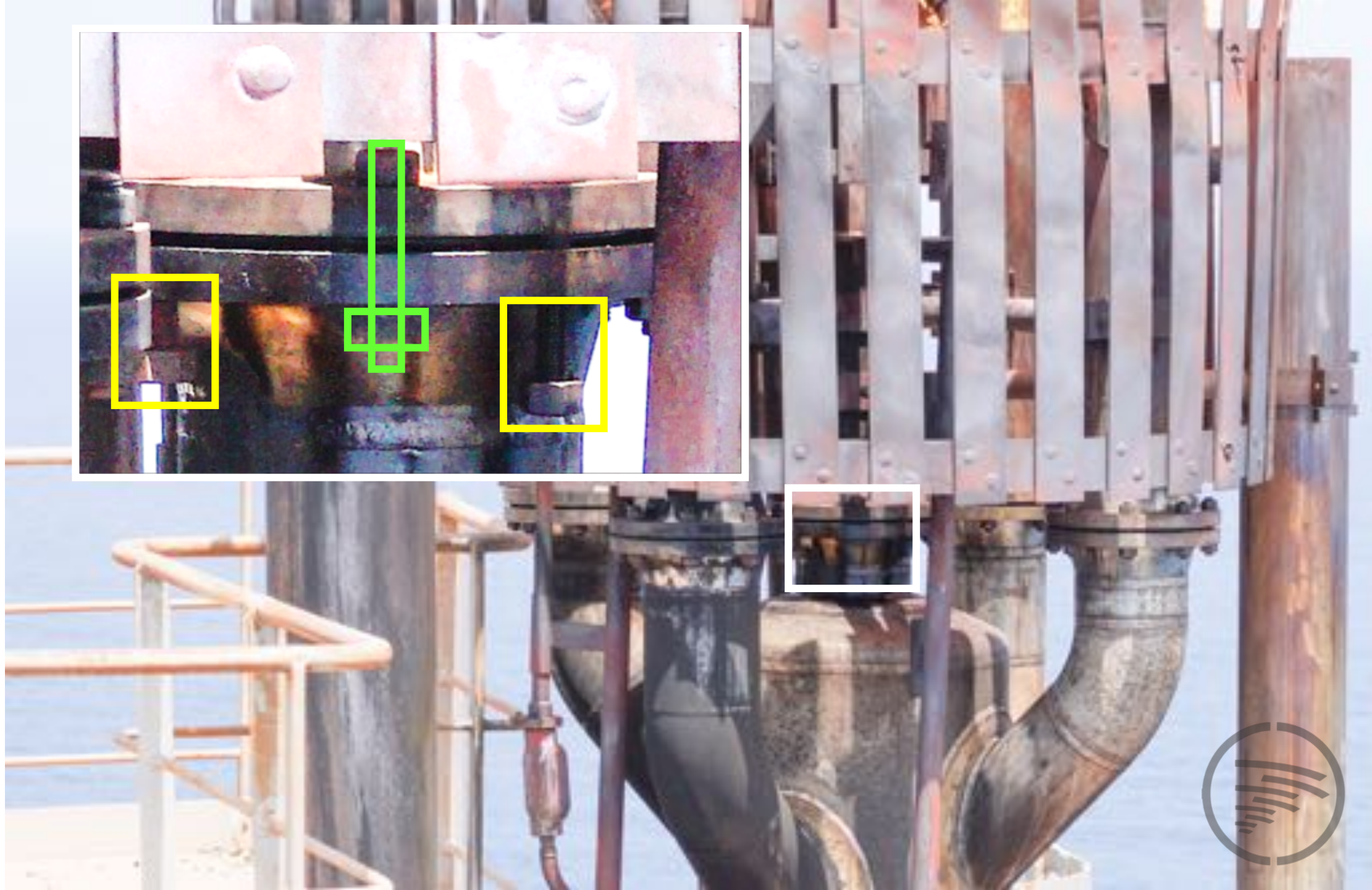
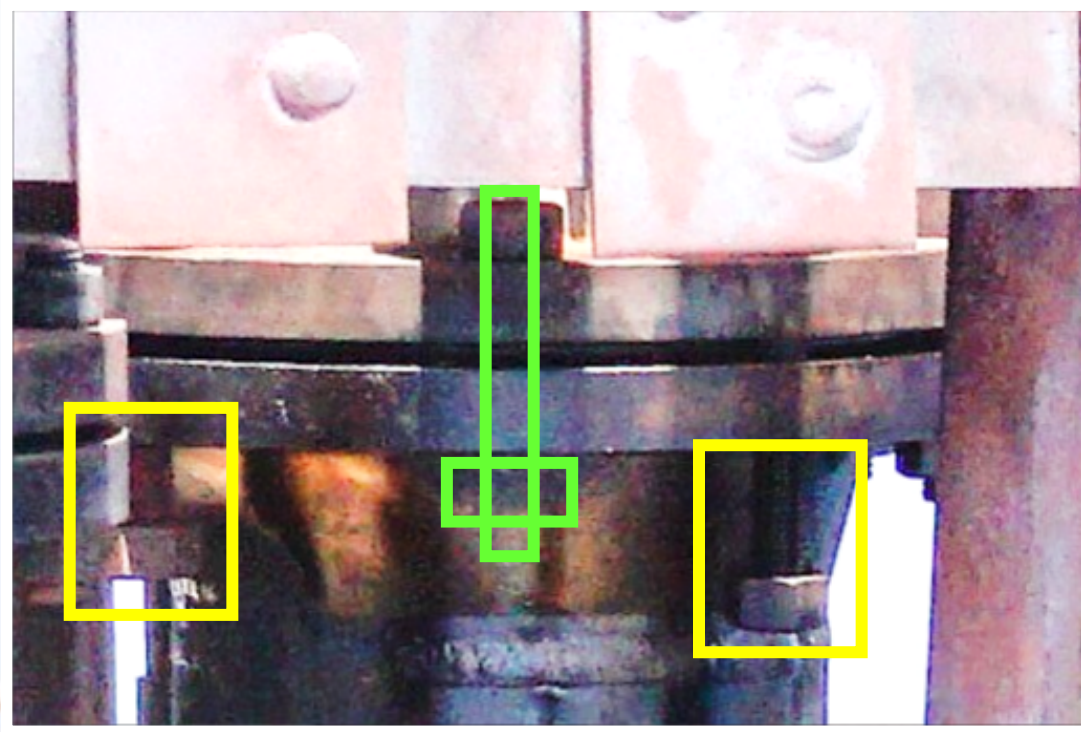
What's it for?















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## Inspection Report

Client: Supermajor North Sea

Asset: Platform

Description: HP/LP Flare Inspection

Inspection Date: 28-29/04/17

Report Ref:XYZ170702\_HPLPFLR\_MHV1

### Inspection Summary:

SonaJet HP/LP & Sour Gas Flare Tip + Flare Structure was inspected between the 28th and the 29th of April 2017.

The 14" HP tip was found with a possible hairline crack at the tip periphery.

The LP tip was found to be in poor condition. Deformation of the upper shell has resulted in a moderate sized tear on the East EL lifting lug weld. The deformation of the tip has also affected the overall cross section of the tip. Heavy liquid carry over was also found to be occurring on the low pressure flare. The sour gas flare was found to be in good condition.

The windstrake was found to be in poor condition. Multiple potential dropped objects found on flare deck. Access stairs handrails/backscratcher noted to have heavy corrosion/material loss – caution advised if used.

The overall flare structure appeared in good mechanical condition.

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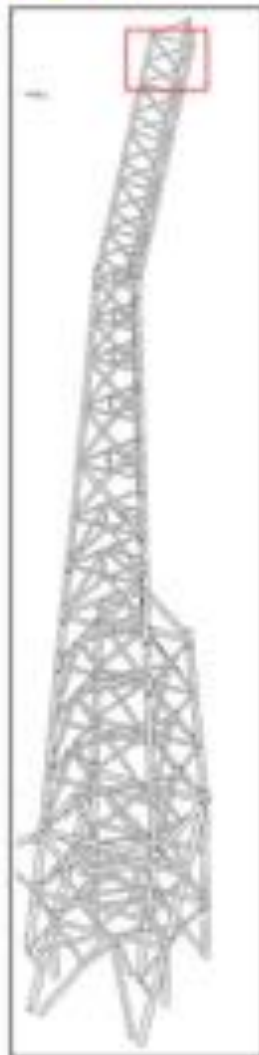
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## Flare Structure Findings (North El.)



Isolated area of coating breakdown noted on bracing weld.

DSC00063.jpg

# Flare Inspection Savings

Oil and Gas Supermajor, Nigeria

- 5 flares inspected in <1 week, while fully operational, avoiding a shutdown
- Alternative methods of inspection such as rope access or scaffolding would have required a complete shutdown of the facility
- Saved the client >\$US11 million





# Flare Monitoring



Supermajor, North Sea, UK

- Monthly Inspections
- Defect monitoring over time
- Unplanned shutdown prevented
- Client savings in the millions



# Internal & Confined Space Inspections





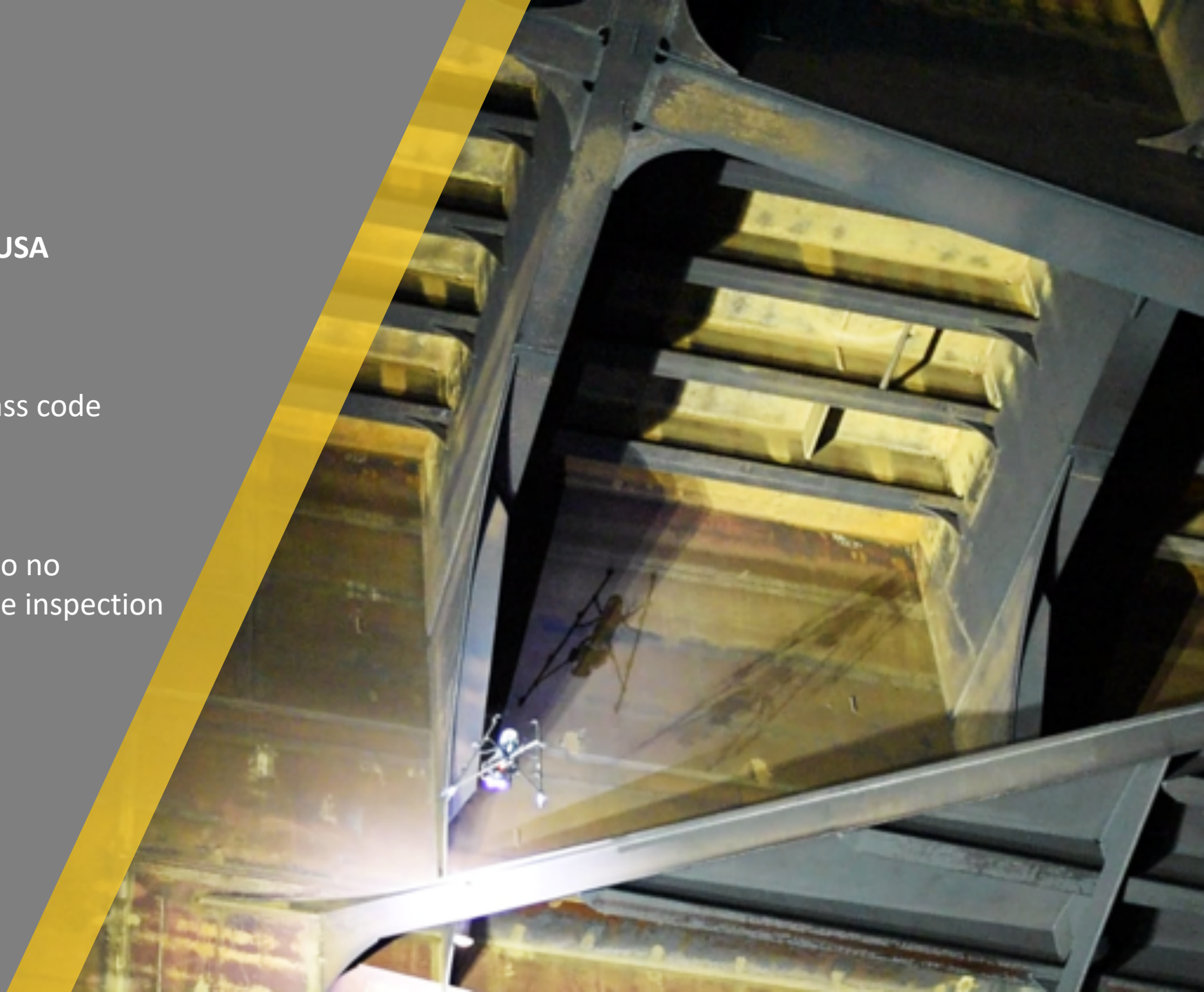
# Internal COT Inspection



# COT Inspection

## Oil and Gas Supermajor, West Coast USA

- 14 COTs inspected in 12 days
- Inspection approved by ABS to Class code
- No scaffolding or RATs used
- Client saved \$750,000 attributed to no scaffolding costs & efficiency of the inspection allowing for quick turnaround







# 3D Models & Asset Visualisation

# Maximising the Benefits

A Screening Tool



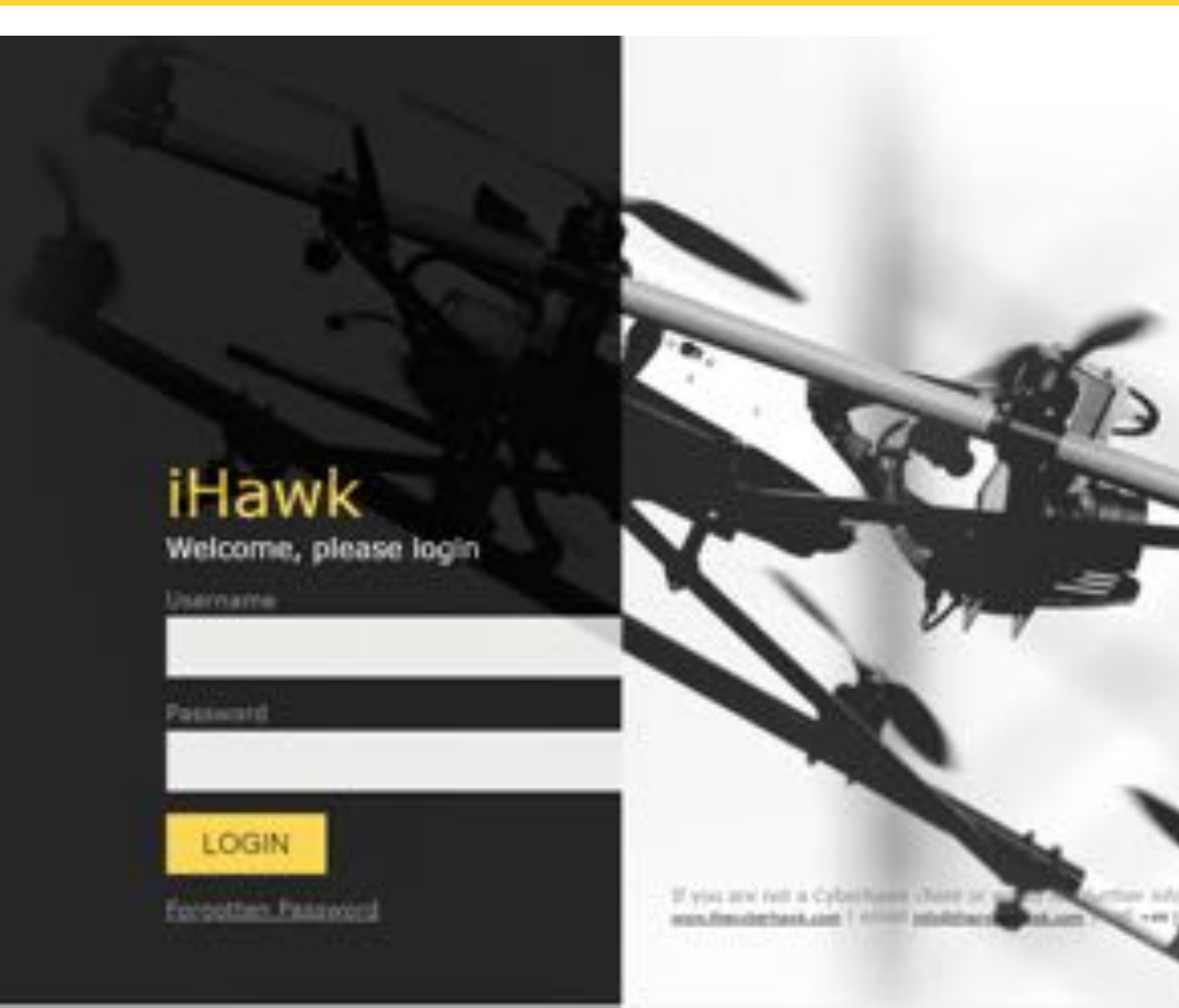


# Multiple Workscopes





# iHawk Visual Asset Management – Project Management





# iHawk Visual Asset Management – Orthophoto





# iHawk Visual Asset Management – Zoom to interest





# iHawk Visual Asset Management – Side by Side





# iHawk Visual Asset Management – RFI Tagging

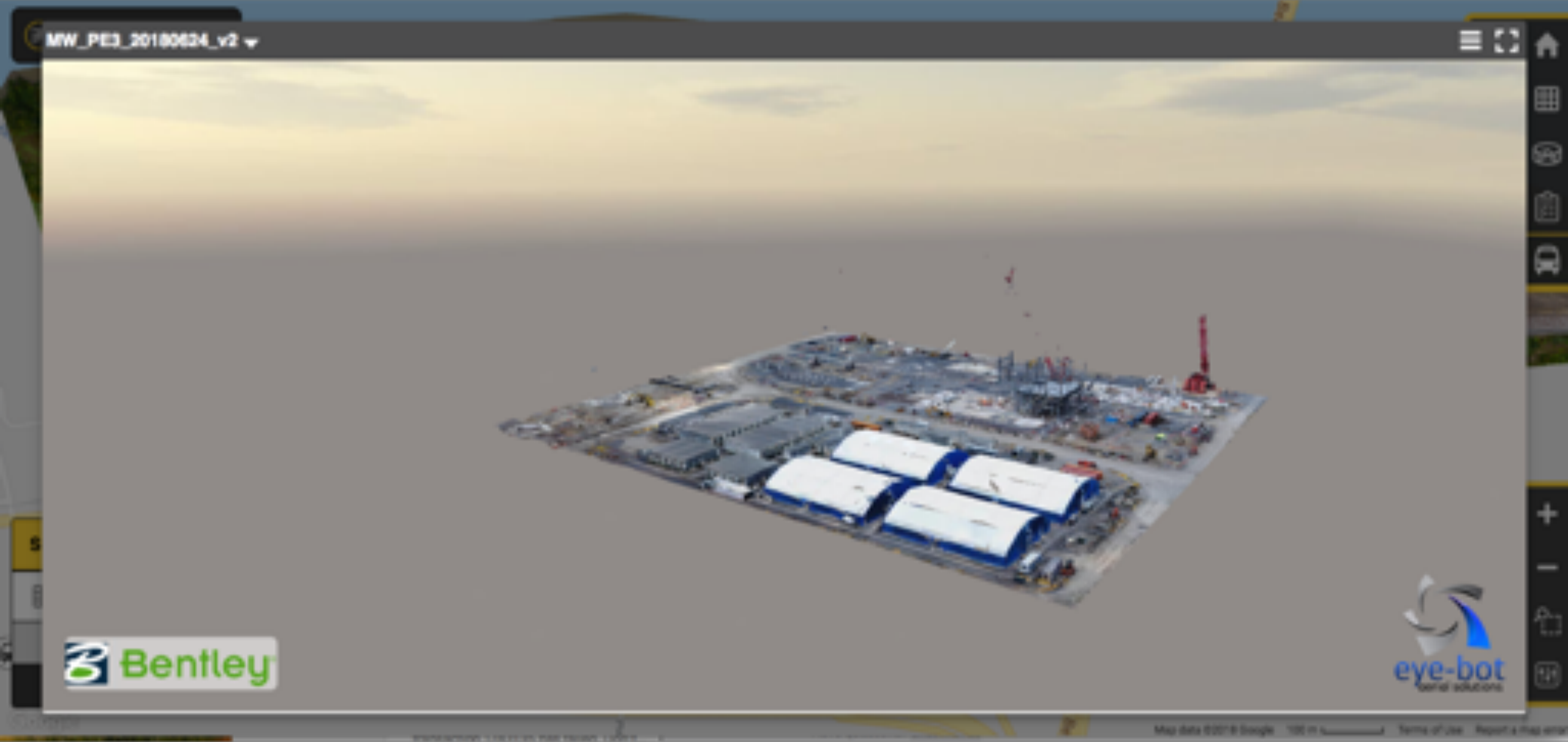




# iHawk Visual Asset Management – IBM Watson Traffic



# iHawk Visual Asset Management –Bentley 3D plant model





# iHawk Visual Asset Management – 12 Time Lapse Locations





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