



# Operational Remote Sensing and Intelligence



TFRSAC FALL 2022

# Presenters



PHIL SELEGUE  
DEPUTY CHIEF –  
INTEL BRANCH



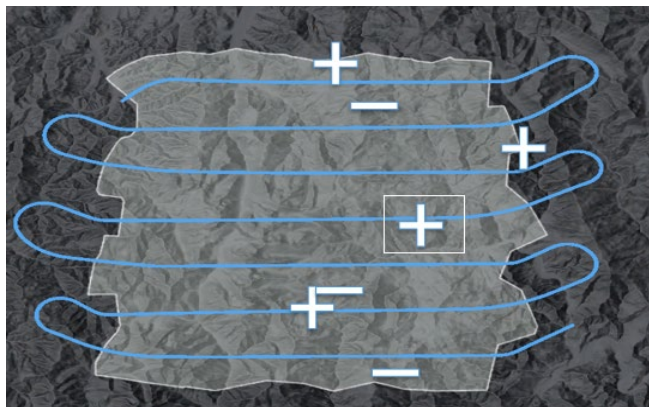
GREG DENTON  
FIRE AND EMERGENCY SERVICES  
OVERWATCH IMAGING



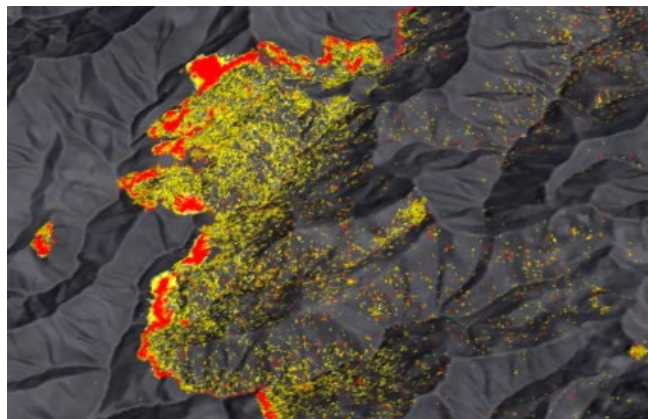
JORDAN WILSON  
FIREFIGHTER II  
INTEL BRANCH



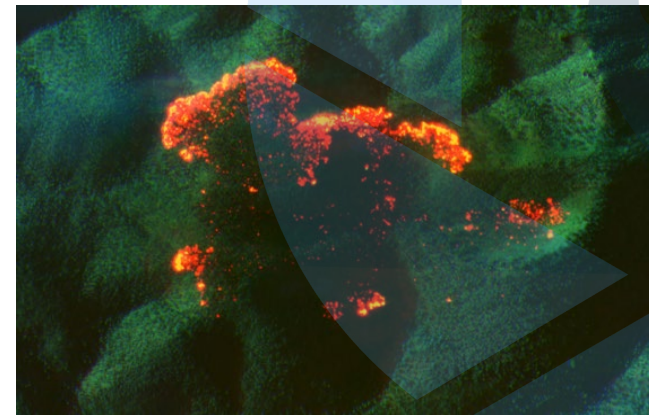
# Operational Mission Sets



Lightning Patrol



Tactical Fireline Updates



Fire Mapping



Damage Inspections



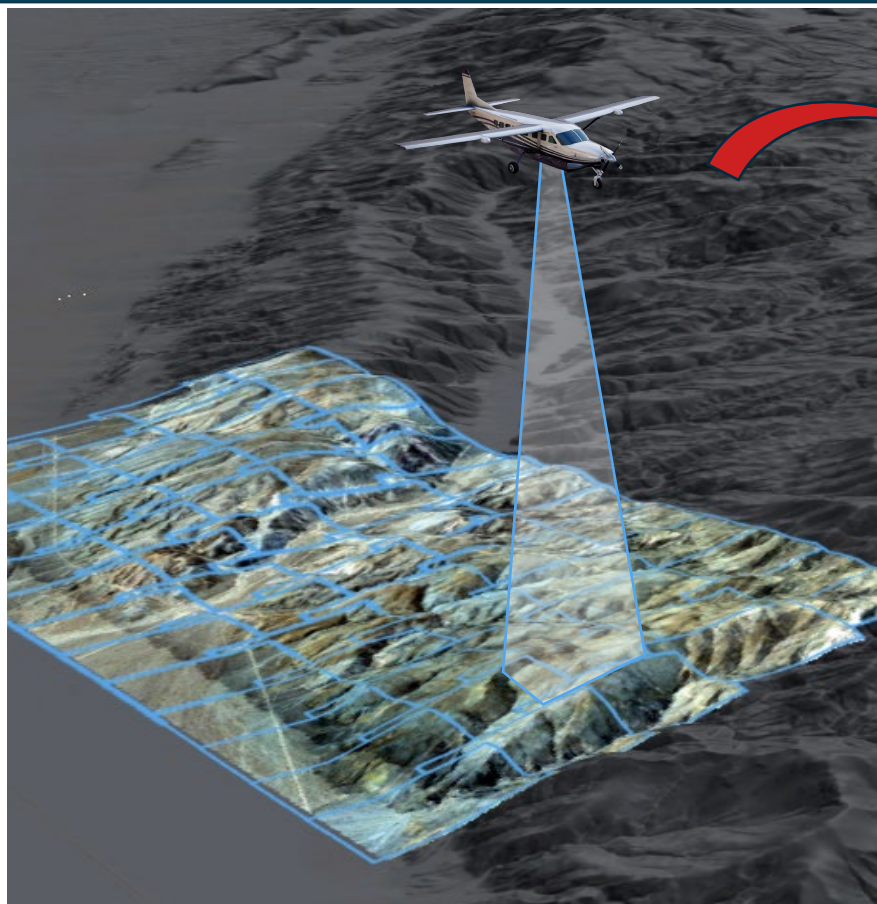
BAER Post-Burn Survey



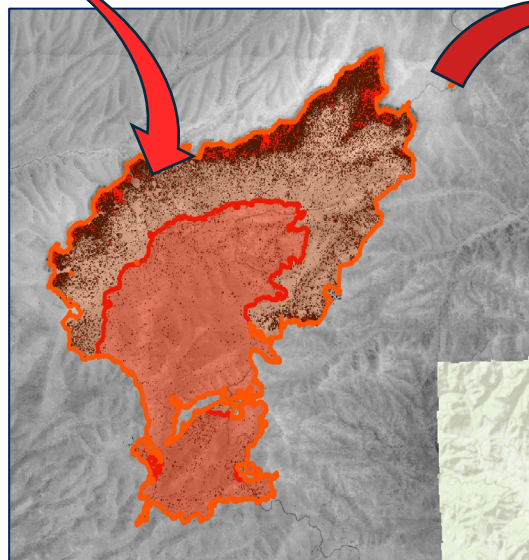
Landslide Risk / Extent Mapping



# Data Lifecycle and Access



REAL- TIME INTEL AND REPORTING



RAPID USE  
DELIVERY TO COP



LONG TERM ACCESS  
DELIVERY TO DATABASE

FIRELINE BOUNDARY DATA  
DAYTIME 4-BAND ORTHOPHOTOS  
THERMAL RASTERS

# CASE STUDY

The Mill Fire of Siskiyou County broke out September 2<sup>nd</sup>, and was driven to almost 4,000 acres on the first day by a strong Wind event. Destroyed 118 homes, and damaged 26 others. It also claimed 2 lives.



# CASE STUDY

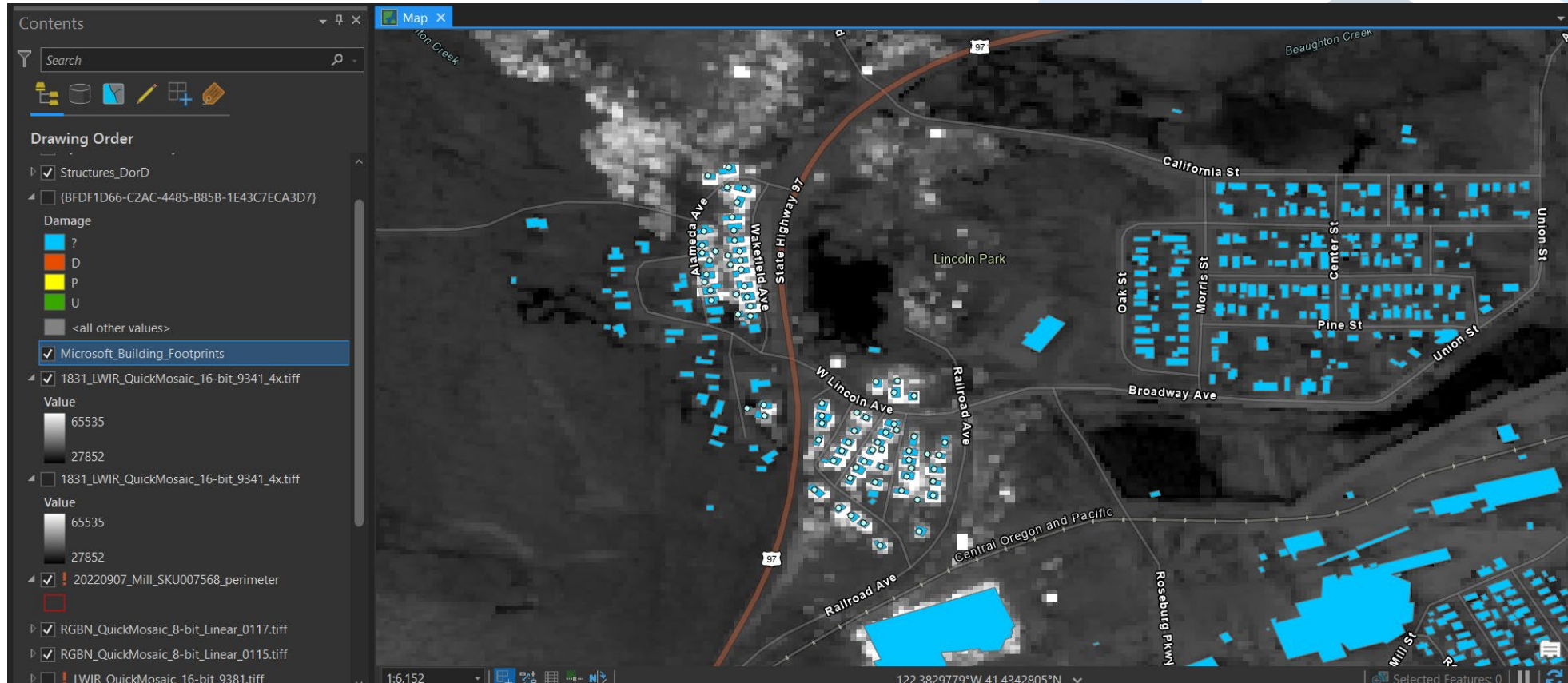
THERMAL IR @ 4x  
DOWNSAMPLE

BUILDING FOOTPRINTS

ALIGNEMENT IS KEY!

CAPTURE TIMING

REMOTE DATA REVIEW





# CASE STUDY

## ANALYSIS BY INTEL

### DAMAGE CLASSES

? - UNKNOWN

D – DESTROYED

P – POTENTIAL EFFECTS

U - UNAFFECTED

1.5 HRS POST CAPTURE

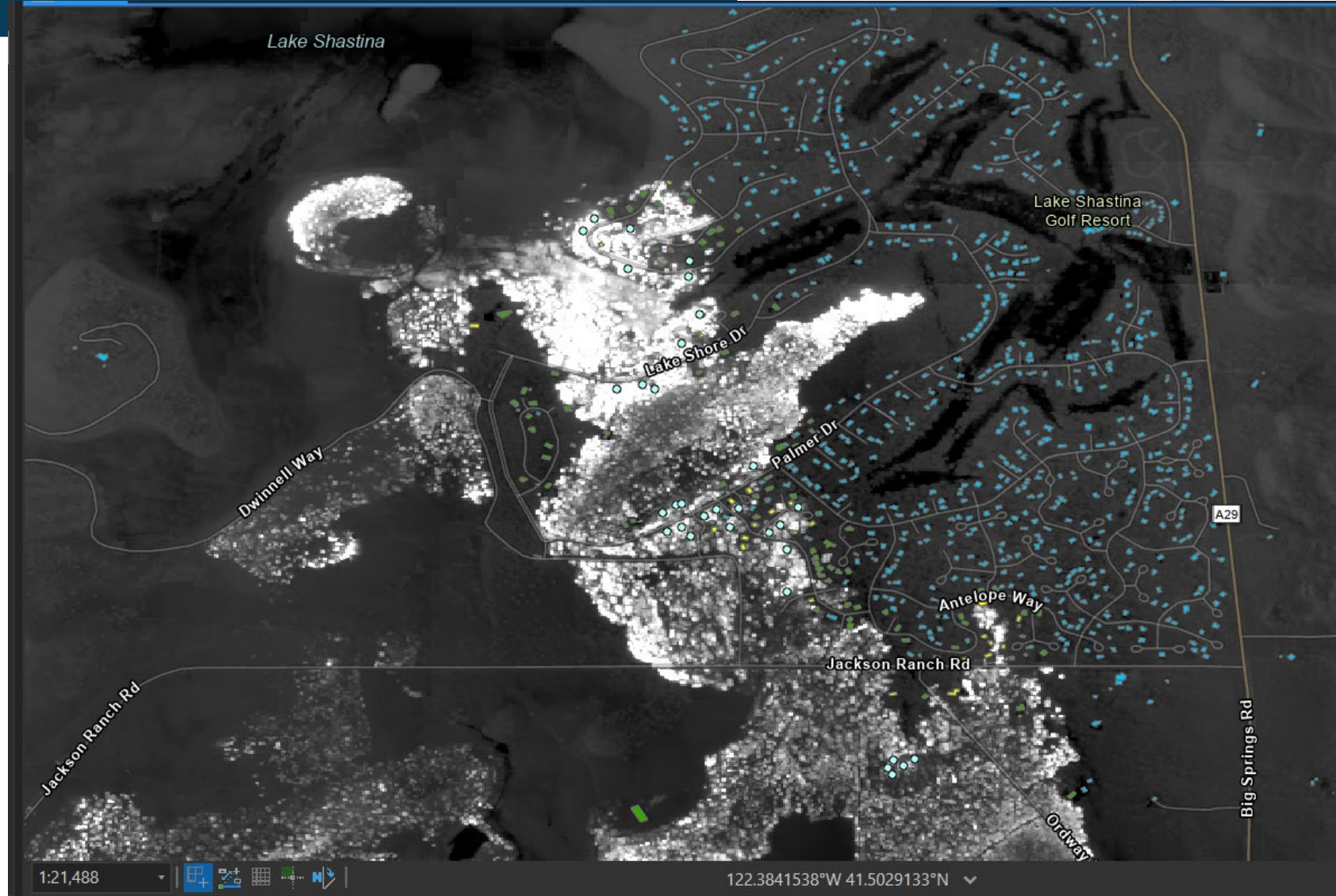


# CASE STUDY

INTEL REPORT -  
114 DESTROYED  
+/- 5 POTENTIAL

FINAL INSPECTION -  
118 DESTROYED

CAVEATS  
OVERHEAD VIEW  
PRELIMINARY REPORT





# CASE STUDY

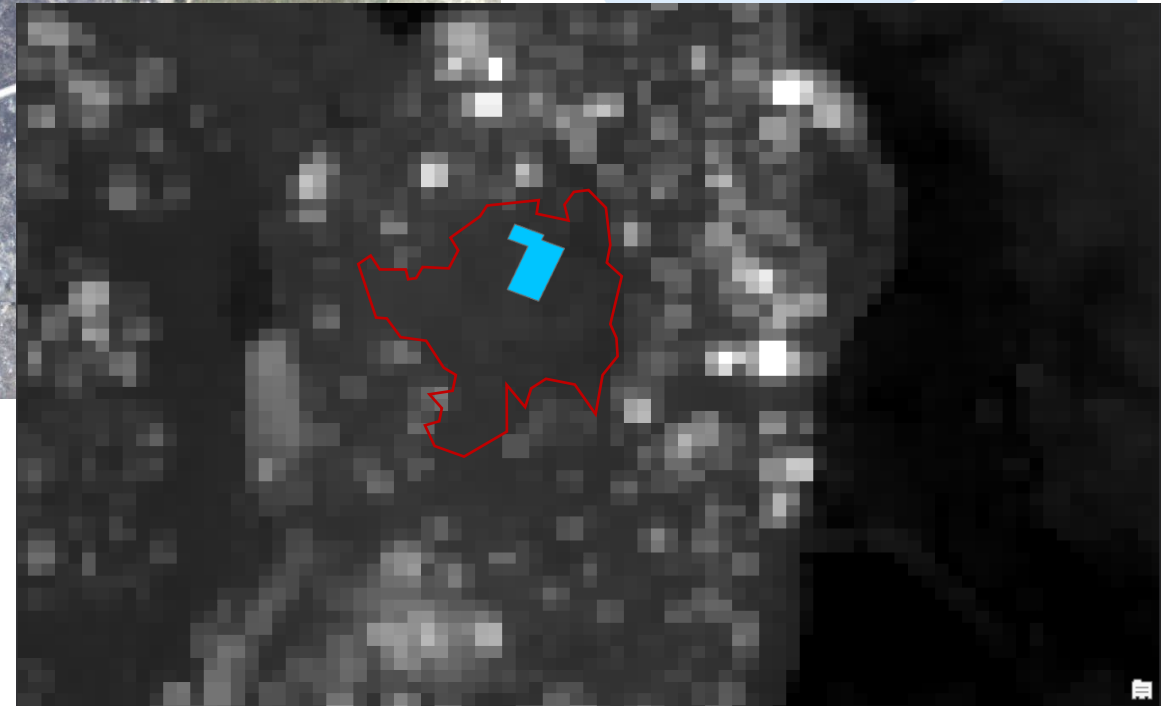
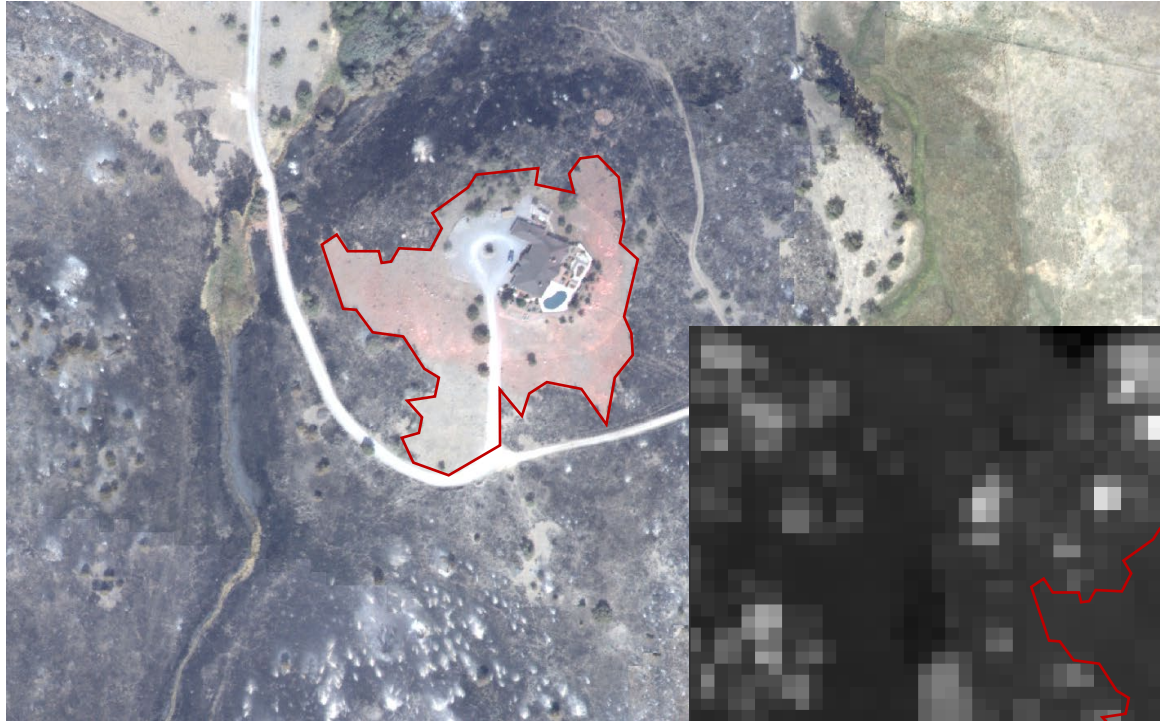


DEFENSIBLE SPACES

CLEARLY VISIBLE IN IR

VISUALIZE AND MEASURE  
THE EFFECTS OF FUEL  
MANAGEMENT

NICE WORK LANDOWNER



# Incident Intelligence, Data Management and Data Integrity

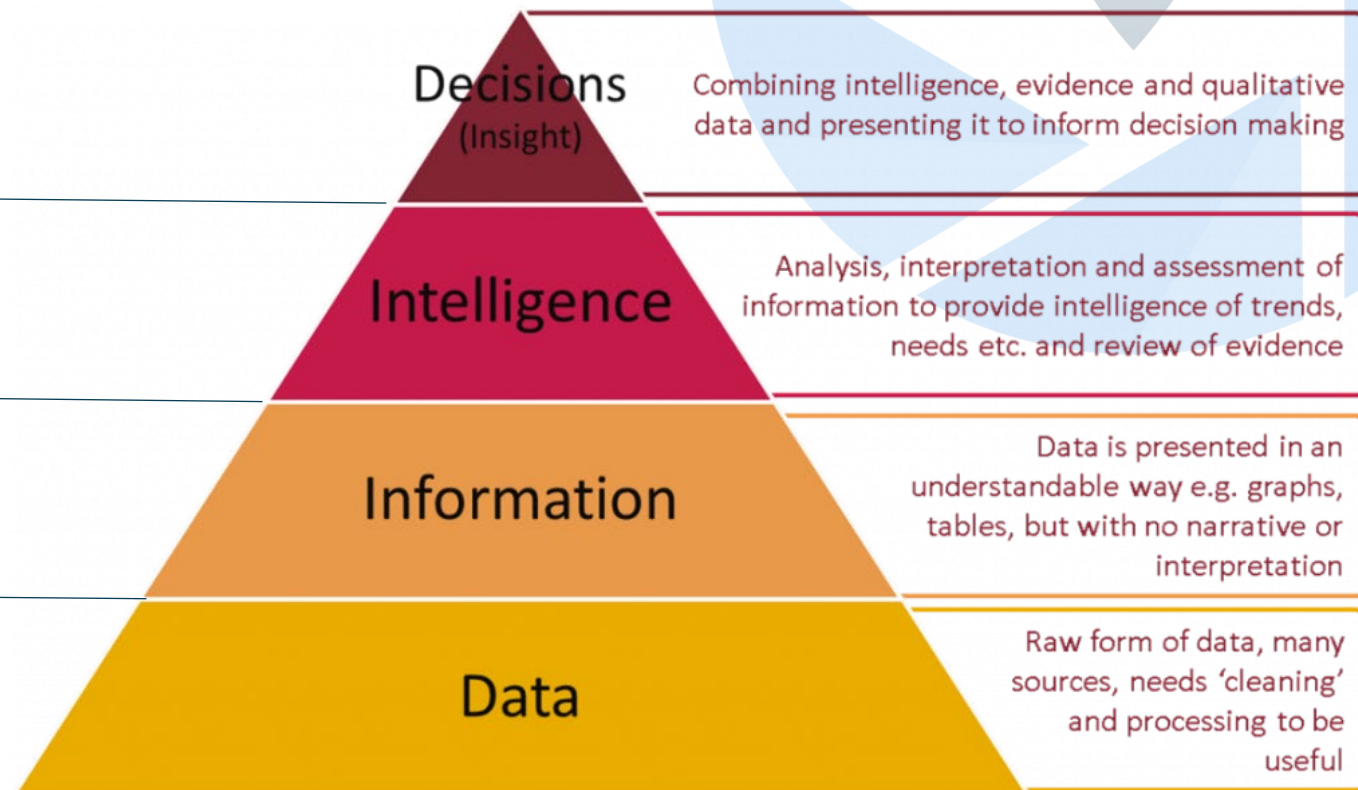
Q - How do we transform data into better decisions?

What decisions will be supported by program?

What intel reports will support those decisions?

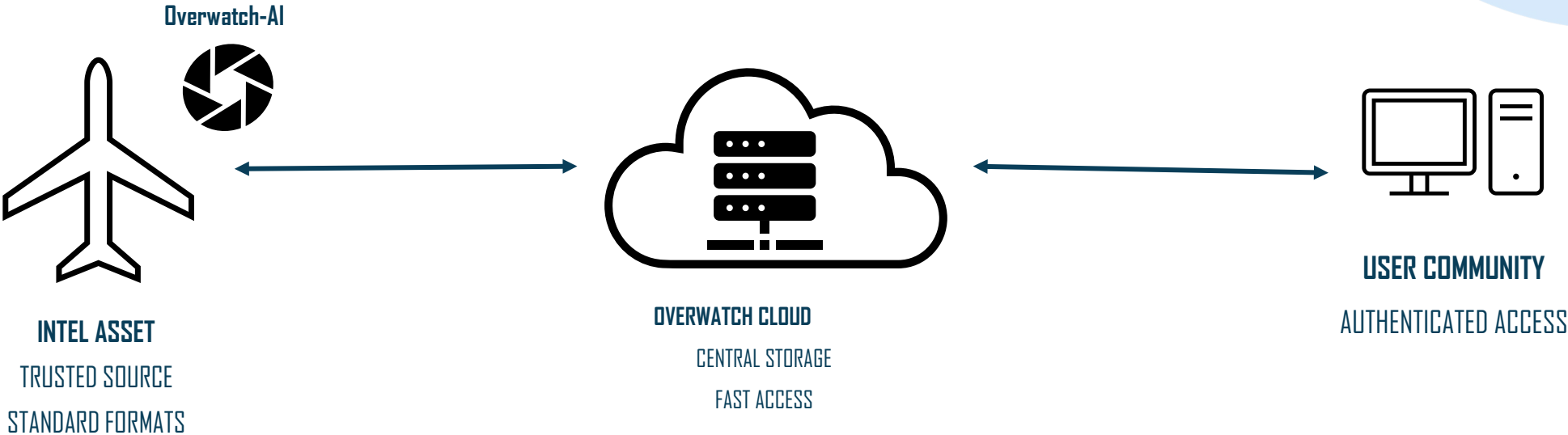
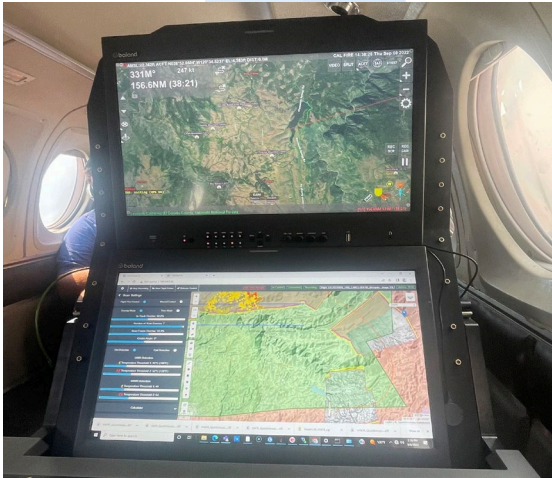
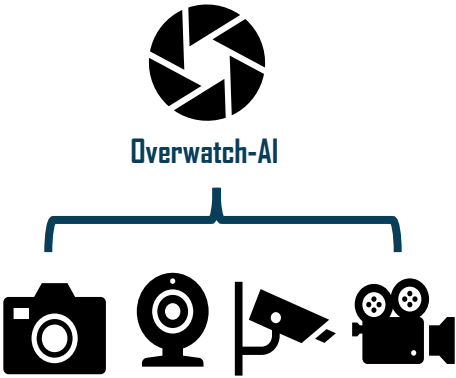
What information is required to form intel reports?

What data is required for analysis?





# Multi-Sensor Data Management





THANK YOU