Automated Oil Field Inspection

Workflow

01 .... **02** **03**

Mission Planning
Create a mission in FlightHub 2 and execute mission with DJI Dock.

Data Collection
DJI Dock will send out drone to execute mission and return to Dock.

Documentation & Reporting
Once drone is safely back into Dock, data / media will transfer to FH2 or 3rd Party Software for user to access data. No SD cards required.

Benefits of Utilizing Drones

Scalability

- The pilot can remain at a safe distance while flying low to medium altitude missions. VS The environment ranges from hazardous, brush filled, or surrounded by a body of water.

Automation

- Repeatable missions that can cover large areas. VS Inspector would need to drive or walk near the pipeline which would take some time to locate a problem.
- Mission planning software used to fly at medium to low altitude with zoom capable RGB camera and a methane detector. VS Inspector would visually check the outside of the pipeline and search for any visible holes, damage, or corrosion.

DJI ENTERPRISE

DJI ENTERPRISE

OIL & GAS
UAS-BASED SOLUTIONS

https://enterprise.dji.com
Follow us @DJIEnterprise

Tank Inspection

Workflow

01 — Data Collection
Fly manually in the DJI Pilot 2 app or 3rd party flight planning software.

02 — Real-Time Inspection
Pilot will start recording of floating roof tanks with DJI payload and look for corrosion; visible holes, tears or other openings in the seal.

03 — Inspection Remarks
The pilot will note the results of his inspection for each tank manually or use a flight logging software.

04 — Data Storage & Analysis
Pilot will land drone safely, remove SD card and offload to local server.

Benefits of Utilizing Drones

Efficiency

• 25 Tanks / Hour (Drones) vs 10 Tanks / Day (Inspector)

• Low altitude flights consisting of RGB cameras, thermal cameras, and/or LIDAR. VS Inspector walks around and climbs the tank to inspect the roof for any visible holes openings in the seal.
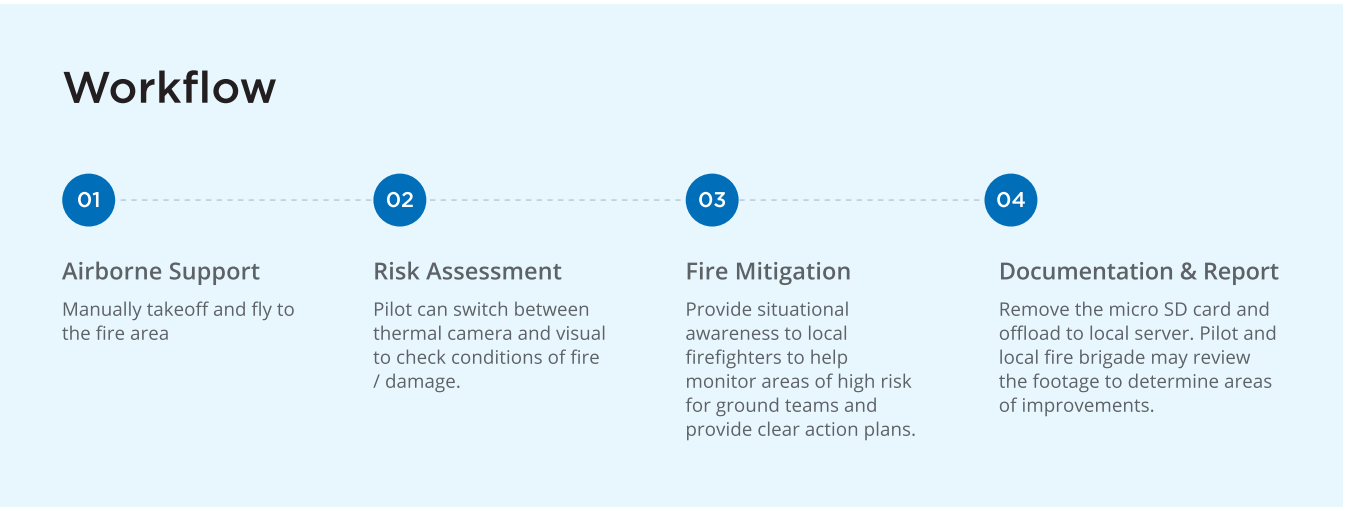

Safe

• The pilot can remain at a safe distance while flying low altitude missions. VS There are physical barriers that the inspector must enter in order to complete the inspection.

Firefighting

Workflow

01 — Airborne Support
Manually takeoff and fly to the fire area

02 — Risk Assessment
Pilot can switch between thermal camera and visual to check conditions of fire / damage.

03 — Fire Mitigation
Provide situational awareness to local firefighters to help monitor areas of high risk for ground teams and provide clear action plans.

04 — Documentation & Report
Remove the micro SD card and offload to local server. Pilot and local fire brigade may review the footage to determine areas of improvements.

Benefits of Utilizing Drones

Safety

• Pilot can monitor at a safe distance VS Local Fire brigade may be within the danger zone in order to monitor the situation.

• The pilot can keep the drone as close as possible without risking human life. VS Due to extreme temperatures, nearby equipment may be compromised which can worsen the situation.
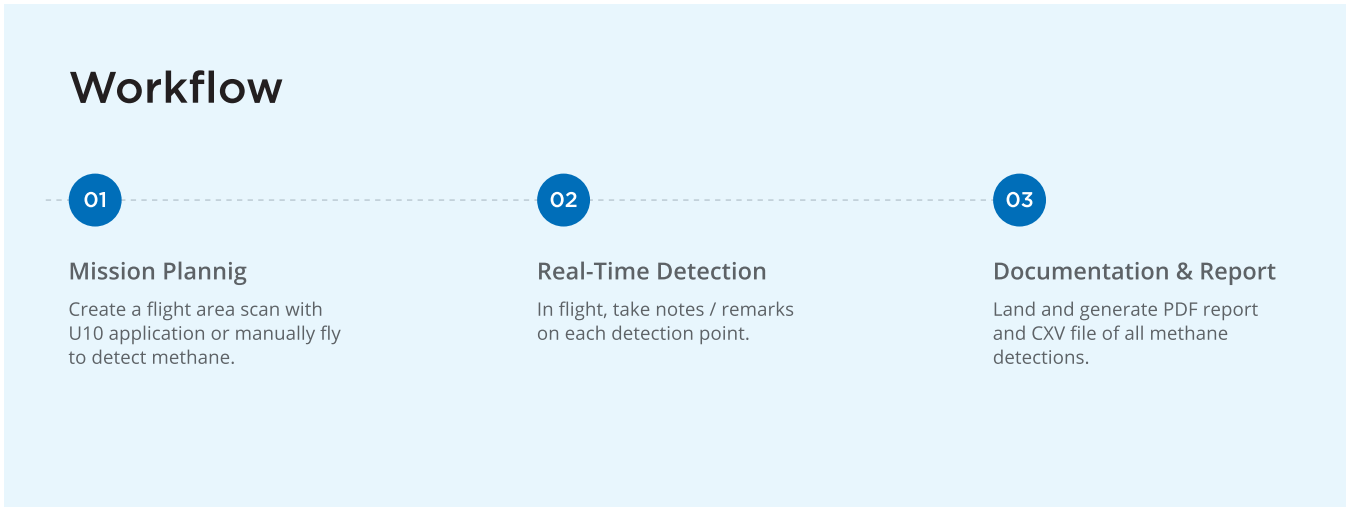

Situational Awareness

• Low altitude flights consisting of RGB and thermal cameras. VS Firefighters may need to rely on local support to help monitor the overall situation.

Leak Detection

Workflow

01 — Mission Plannig
Create a flight area scan with U10 application or manually fly to detect methane.

02 — Real-Time Detection
In flight, take notes / remarks on each detection point.

03 — Documentation & Report
Land and generate PDF report and CXV file of all methane detections.

Benefits of Utilizing Drones

Safety

• The pilot can remain at a safe distance while flying low to medium altitude missions. VS The environment ranges from hazardous, brush filled, or surrounded by a body of water.

Data Accuracy

• Repeatable missions that can cover large areas. VS Inspector would need to drive or walk near the pipeline which would take some time to locate a problem.

• Mission planning software used to fly at medium to low altitude with zoom capable RGB camera and a methane detector. VS Inspector would visually check the outside of the pipeline and search for any visible holes, damage, or corrosion.