

# Digital Wildfire Reporting

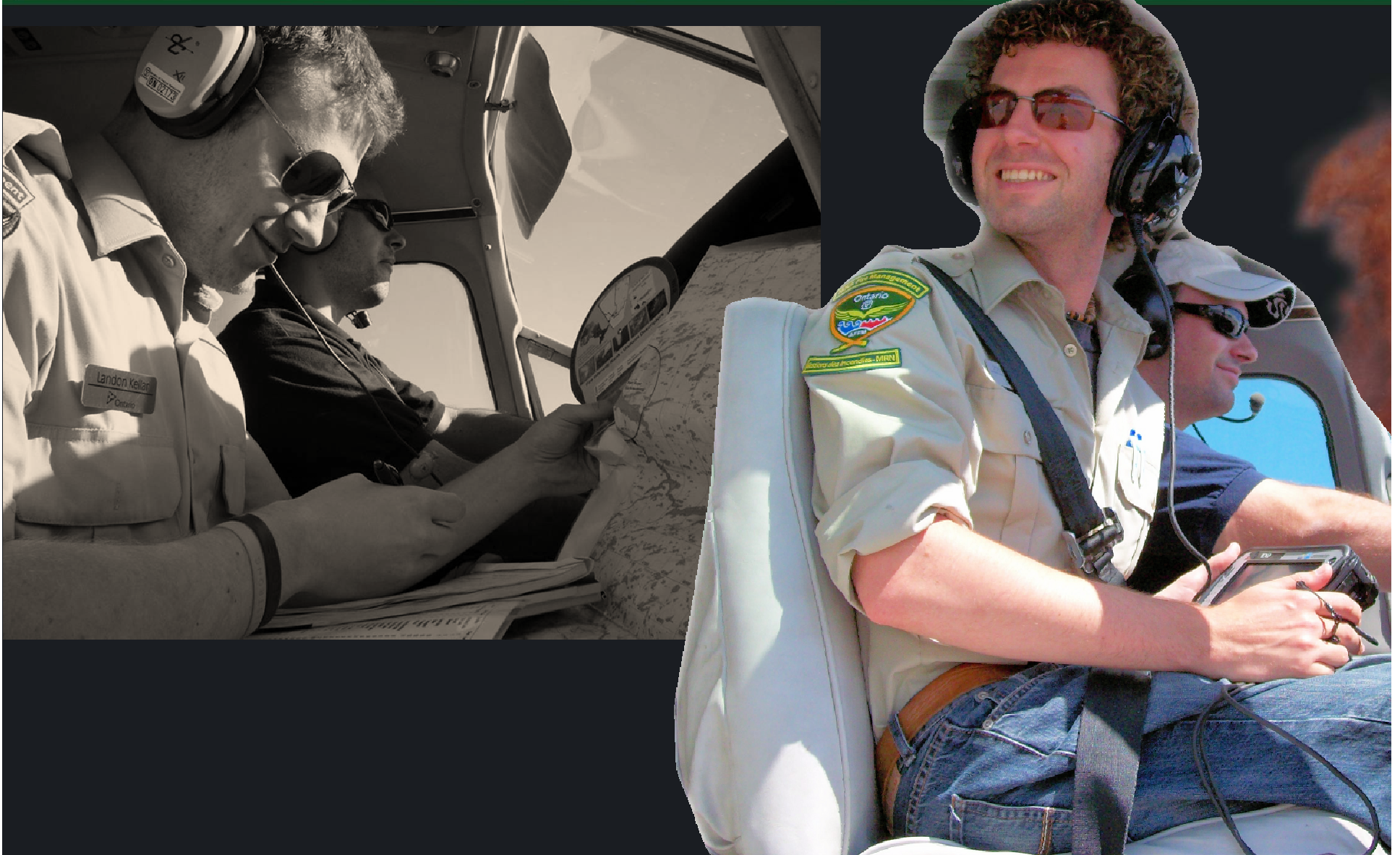
OPS Ideas & Innovation Fund Project

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Ontario Ministry of Natural Resources  
Aviation, Forest Fire & Emergency Services



# Fire Detection

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# Improving Communications - Radio

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**1** Relay Fire Report to Radio Op



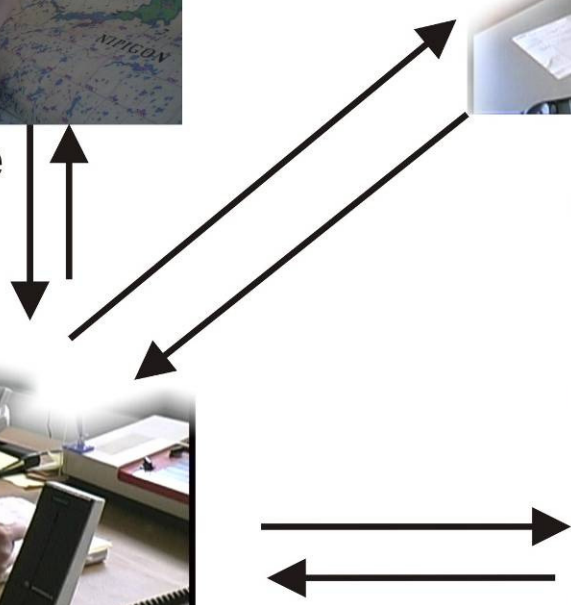
**3** Receive Report, Interpret & Relay Dispatch Decision



**2** Copy & Transcribe Report



**4** Copy Dispatch



# Digital fire Reporting Communications

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## 1 Collect



## Distribute

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Location  
Sector Response Zone: W06  
Fire Management Zone: Doreil Zone  
Location: 15 58555 40 82  
Township: GTP BLOCK 10 LOT: N/A CON: N/A

Report Date: 28/06/2010  
Report Time: 13:48:48

Condition  
Approx Size: 0.5-1 ha  
Fire Rank: 5  
Fuel Type: Mixedwoods-50 %  
Observed Values: 123456  
Mapped Values: 32  
Water Source Distance: 179 meters

Detection Agent: DAM  
Reporting Tool: DP  
Contact Info: D2 - C-FBNX

Response Notes  
*DIST. SIK FIRE# 104  
McCord Crew dispatched 14:05  
Fire responding & being held  
at 19:20  
Request for addition 400'  
hose @ 15:45*

Wx Damage Legend  
Light Blotches  
Dark Blotches  
Severe Blotches

Detected Fire: 15 58555 40 82

## Enhance



## 2 Review & Dispatch



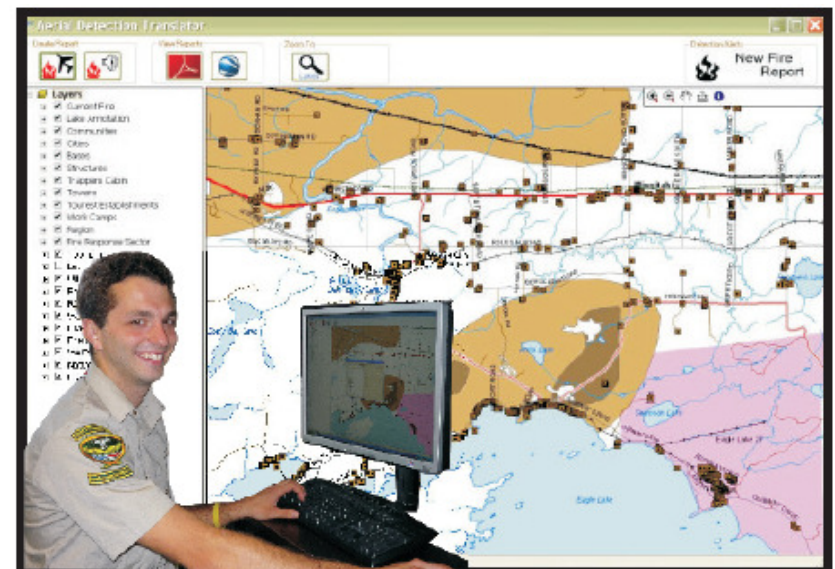
Digital

# The Equipment & Software

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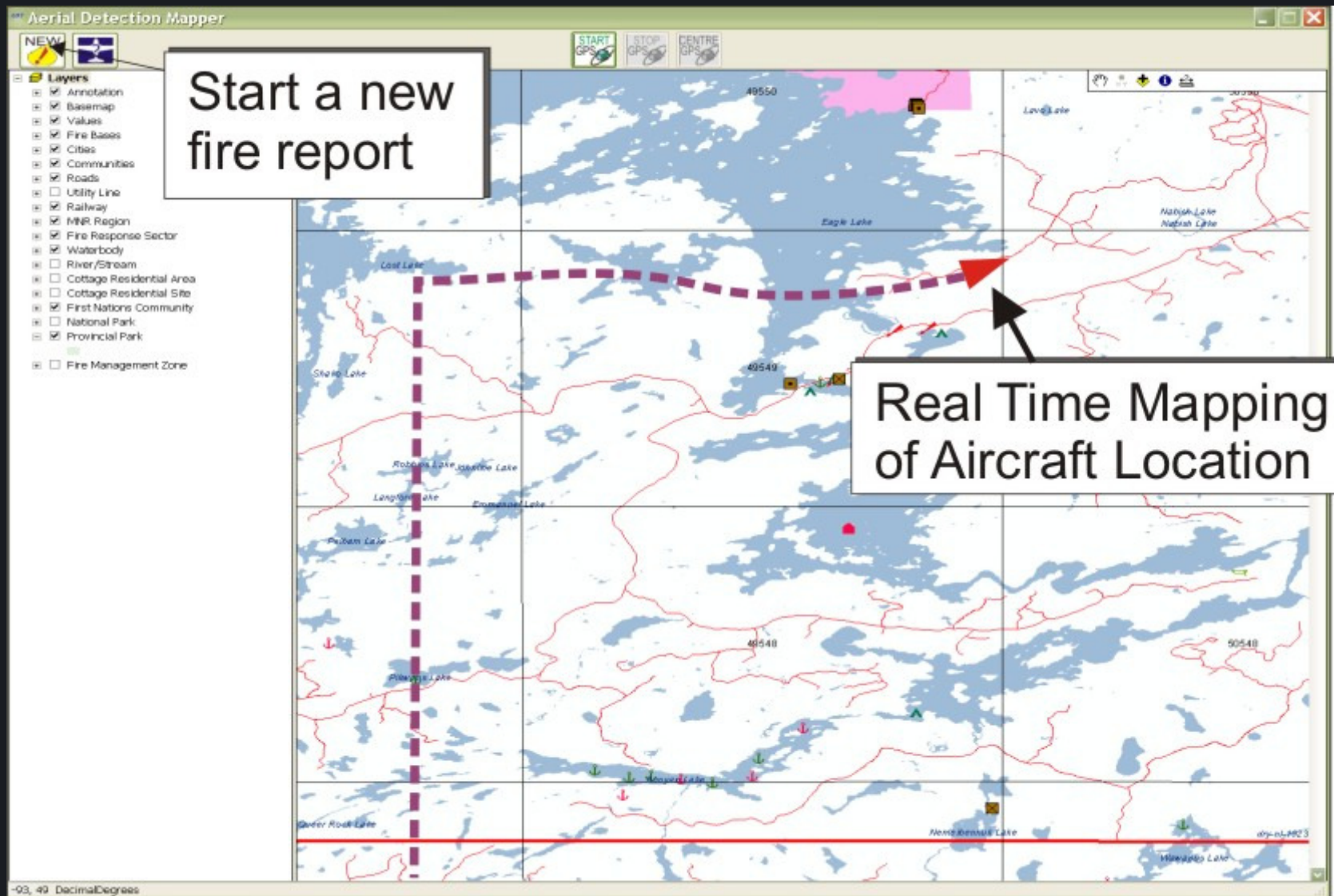


- Existing Equipment
- Data sent 20 character string
- Enhanced by ground PC



# Doing the Job in the Aircraft

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Start a new fire report

Real Time Mapping of Aircraft Location

# Collecting Fire Information

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**Aerial Detection Fire Report**

Fire Size | **FireRank** | Values | Fuel Type | Wind Direction | Detection ID | Validation

Rank 1

Rank 2

Rank 3

Rank 4

Rank 5

**Aerial Detection Fire Report**

Fire Size | FireRank | Values | Fuel Type | Wind Direction | Detection ID | Validation

**Check all that Apply:**

- Human Life
- Structures
- Industry Equipment
- Cut Wood
- Timber
- Transmission Line
- NO VALUES

TRANSMISSION LINES

**Aerial Detection Fire Report**

Fire Size | FireRank | Values | Fuel Type | Wind Direction | Detection ID | Validation

- Coniferous
- Deciduous
- Mixedwood
- Green Grass, Cured
- Cutover/Slash
- Plantation
- Insect Damage
- Weather Damage

INSECT DAMAGE

**Aerial Detection Fire Report**

Fire Size | FireRank | Values | Fuel Type | Wind Direction | Detection ID | Validation

- 0.1
- 0.1-0.3
- 0.3-0.5
- 0.5-1
- 1-2

Mature Spruce or Jack pine approx. 20m

Natural Ruler

30m x 30m = 0.1 hectares  
Football field = 2 hectares

Size if over 2 hectares:

\*\*Round to the nearest 0.5 ha

# Enhanced Fire Report Information

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## Location

Sector Response Zone: W06  
Fire Management Zone: Boreal Zone  
Location: 15 58555 40 82  
Township: GTP BLOCK 10 LOT: N/A CON: N/A

Report Date: 28/06/2010  
Report Time: 13:48:48

## Condition

Approx Size: 0.5-1 ha  
Fire Rank: 5  
Fuel Type: Mixedwood-50 %  
Observed Values: Railway, Timber  
Mapped Values: 32  
Water Source Distance: 179 meters  
Detection Agent: DAM  
Reporting Tool: DP  
Contact Info: D2 - C-FBNX



## Response Notes

(For recording any dispatch info, control times etc)

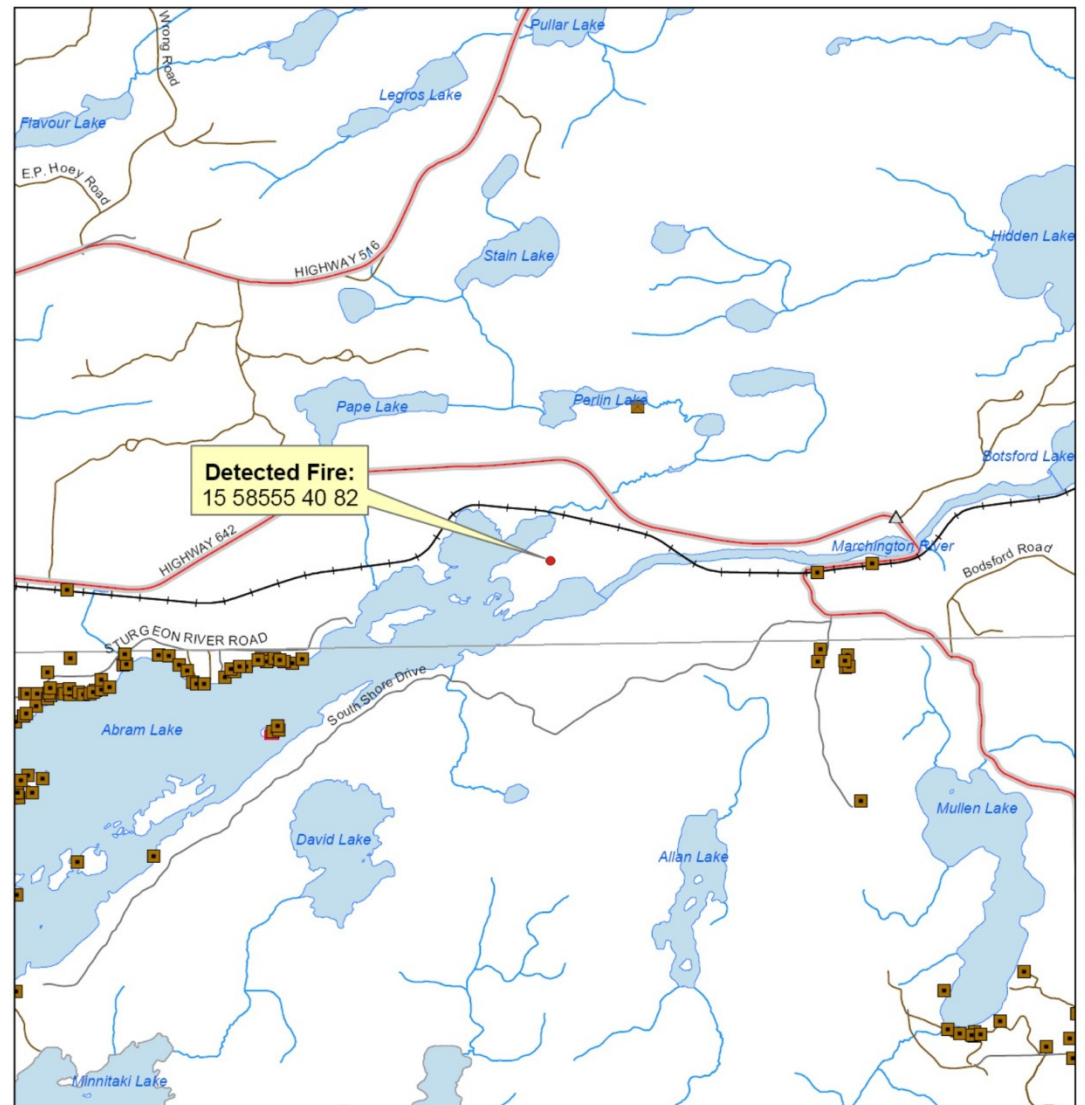
DIST Slk FIRE# 104

*McCord Crew dispatched, 14:05  
Fire responding & being held  
at 19:20*

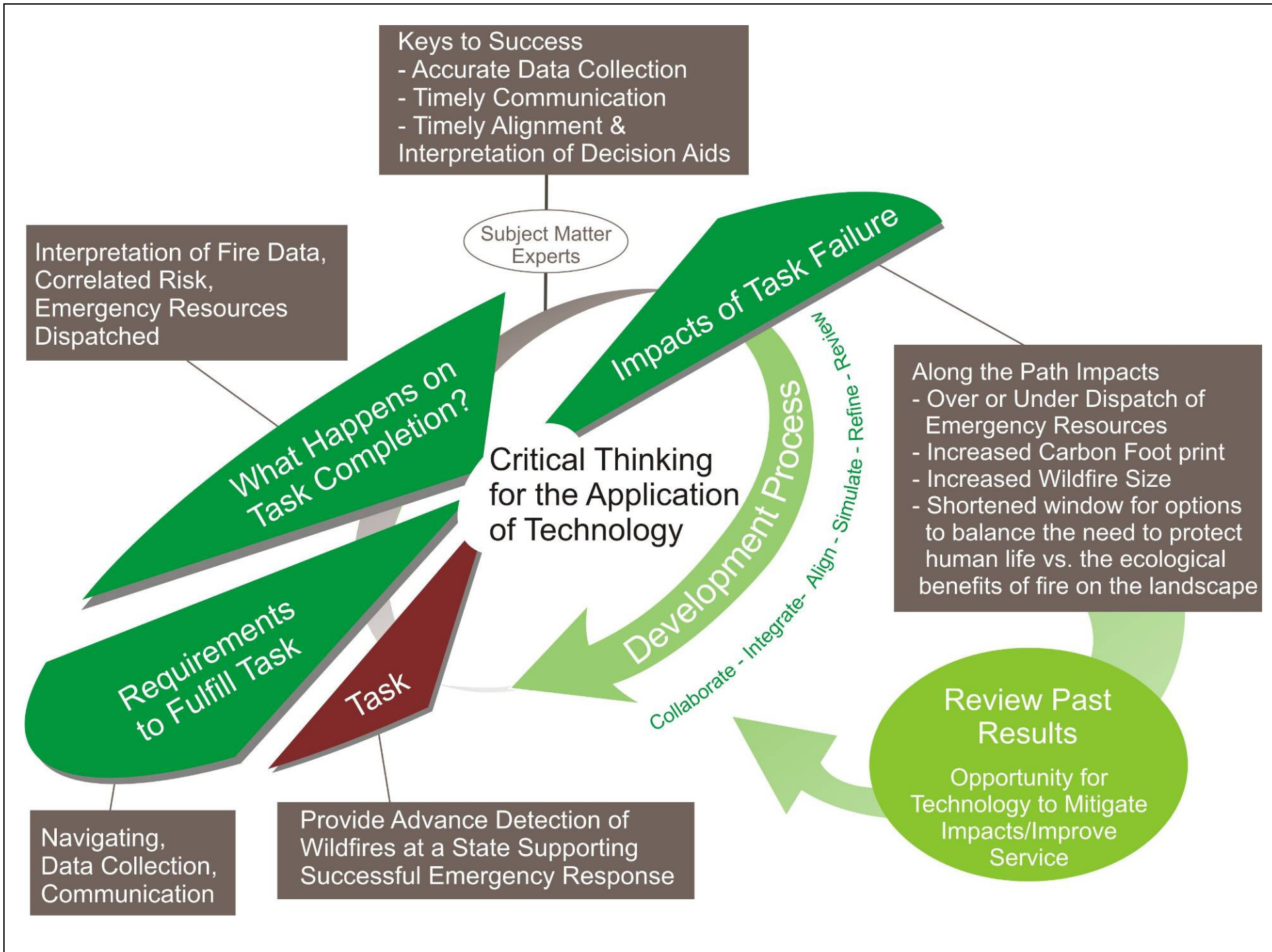
*Request for addition 400'  
hose @ 15:45*

## Wx Damage Legend

	Light Blowdown		Light Snow
	Moderate Blowdown		Moderate Snow
	Severe Blowdown		Severe Snow



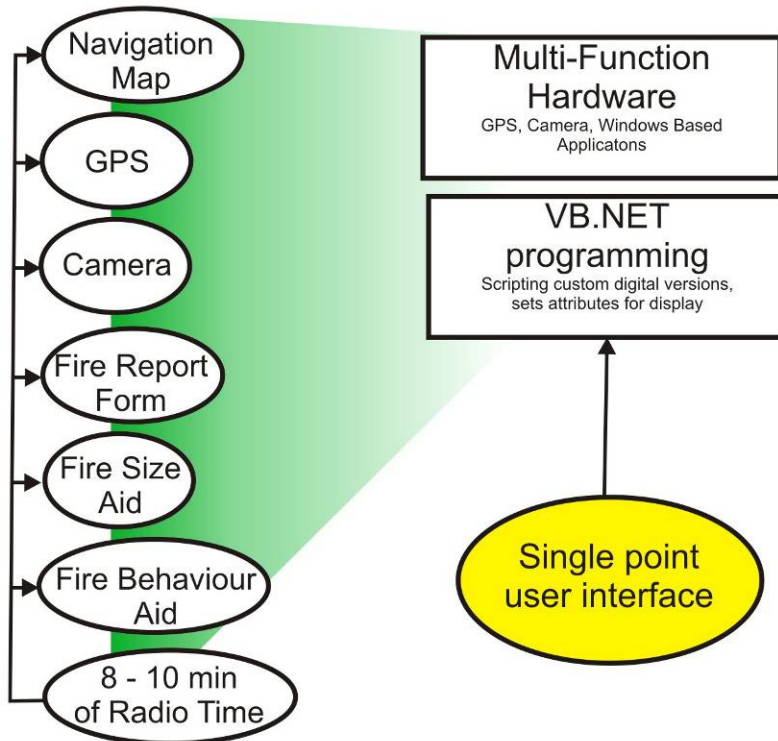




# Designing the two components

## In the Air

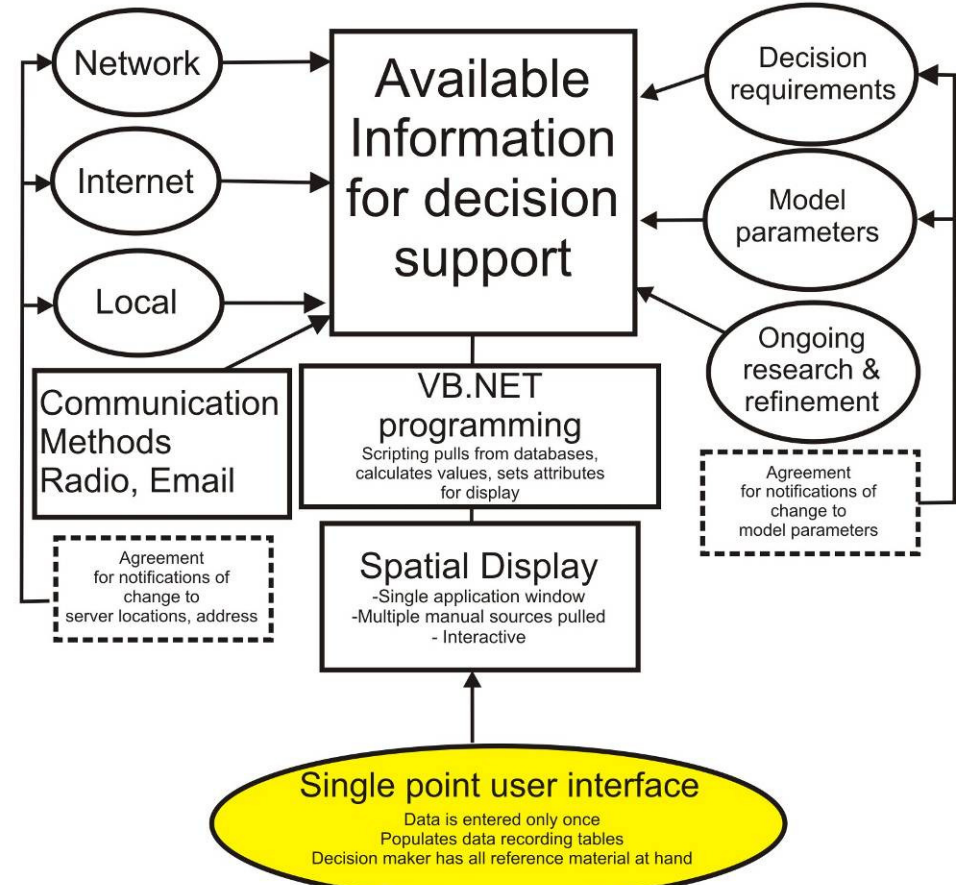
Alignment of Multiple Tools Needed for Detection patrol



## On the Ground

Alignment of Multiple Data Sources

Alignment of Subject Matter Experts



# Beta Testing Results

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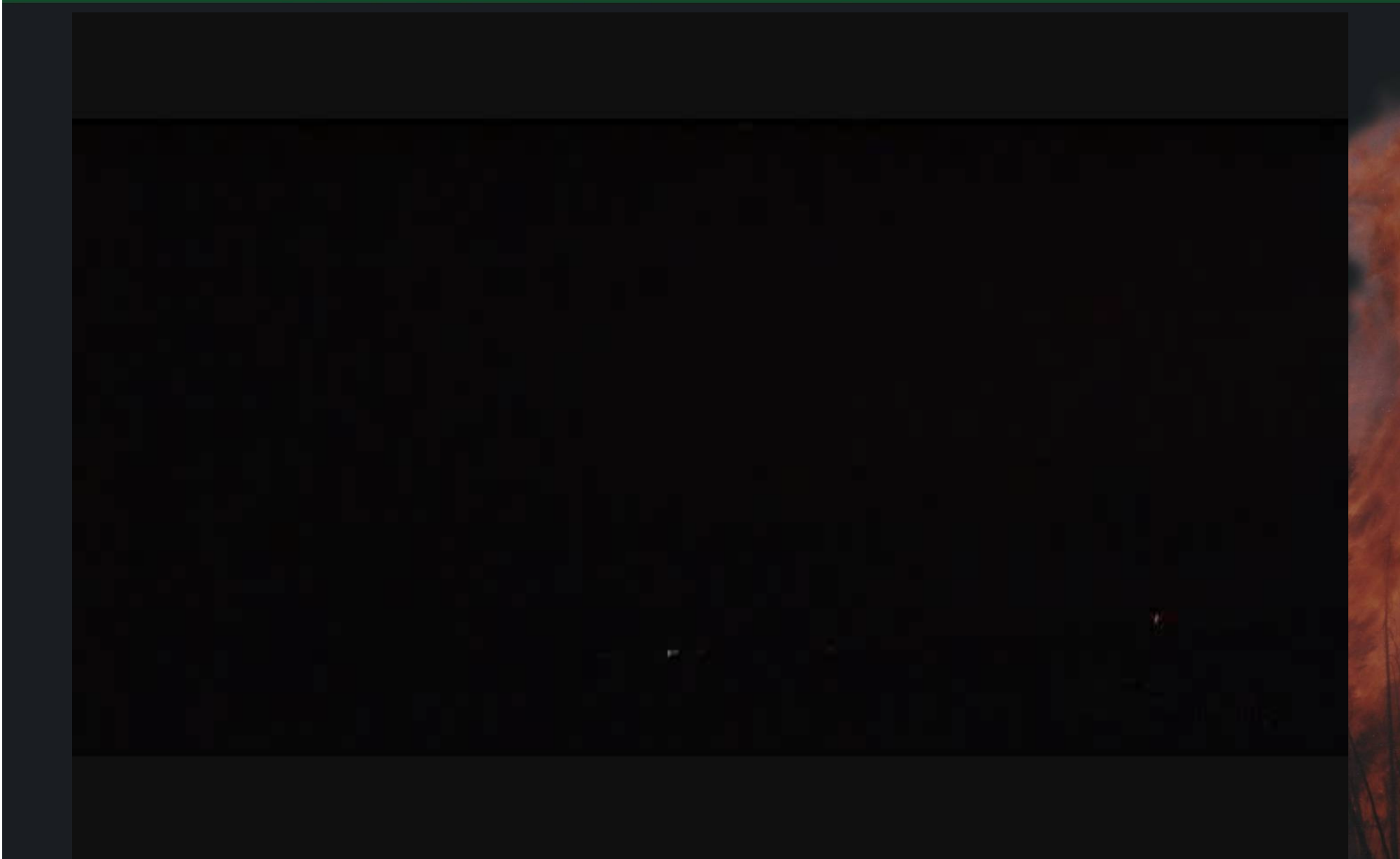


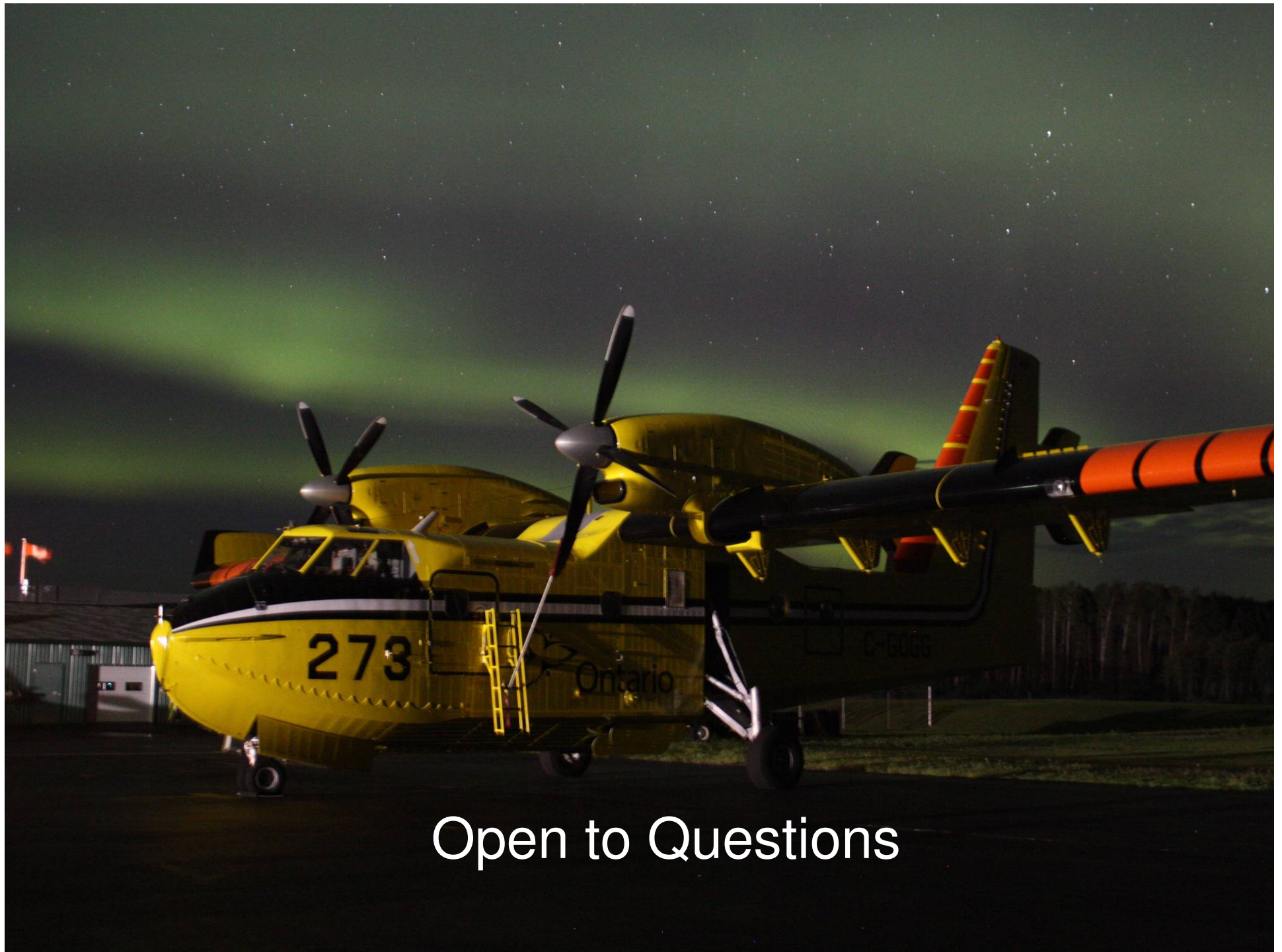
## Improved:

- Data collection Aircraft cockpit management
  - Timeliness of data transfer(66% faster)
  - Removed redundancy of data transfer
  - Methods for the analysis & interpretation of data
  - Aircraft will spend less time in the air while providing the same level of service.
- 
- Showcase Ontario Diamond Award – Innovation Category I&IT

# Digital Fire Reporting Process

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Open to Questions