



**ALTO MAXX**  
PROFESSIONAL DRONE SERVICES

## The Advantages and Deliverables of Drones in the Roofing Sector



Conference 2025





# About us

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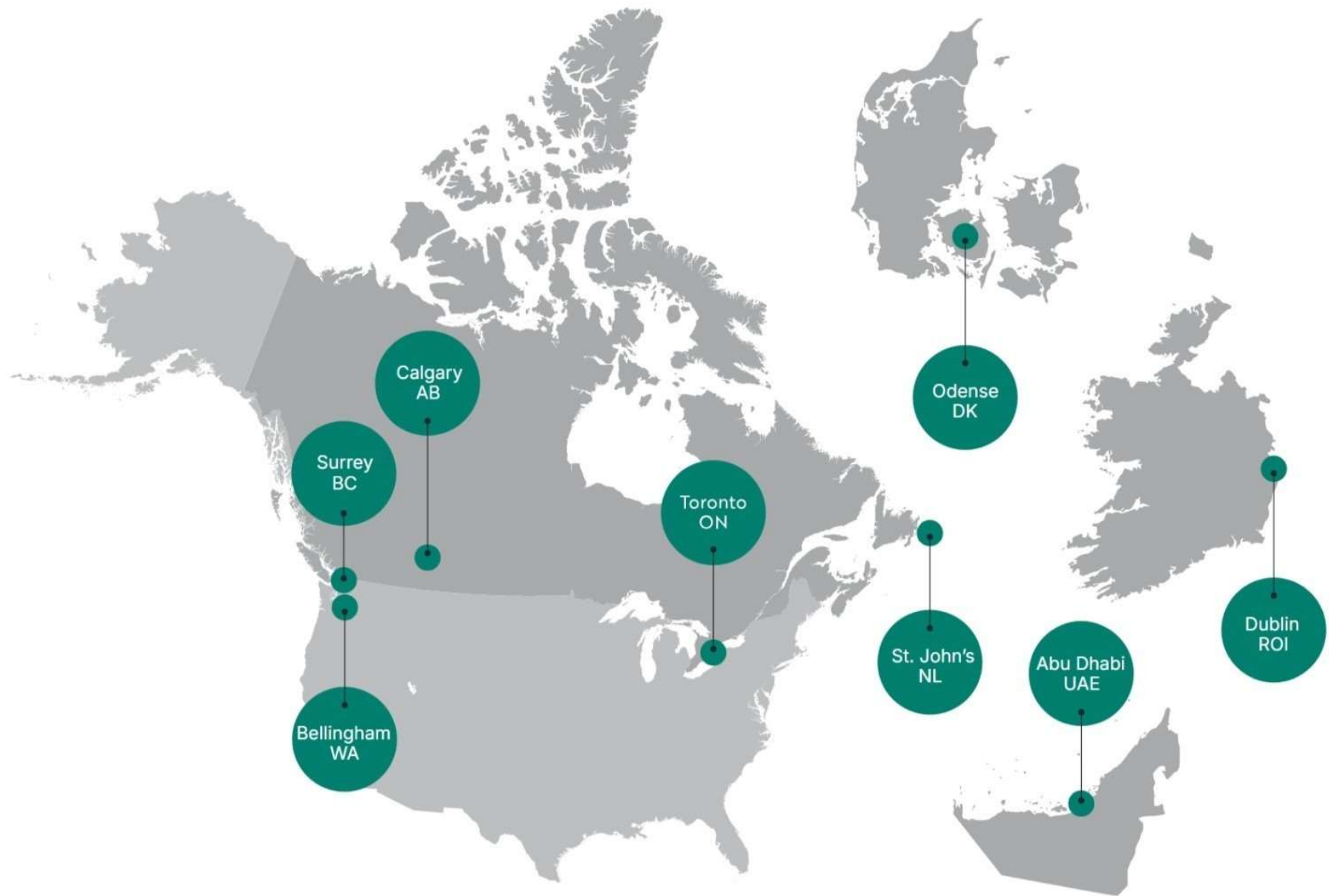
AltoMaxx Technologies was founded as a drone service provider in 2018, offering data acquisition, integrated solutions, and capacity building to an international client-base. Since then, AltoMaxx has emerged as an industry leader, driving the drone industry forward with its team of world-class technical experts, dedication to continuous improvement, and unwavering commitment to its clients.



# ISO 21384-3

- Altomaxx was the world's first accredited certification body
- Globally recognized
- Operational excellence in the safe use of drone technology
- Sets the standard for procedures and record keeping







# Drone Advantage

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# Efficiency

- Inspect difficult or impossible to reach areas
- Eliminates need to transport and assemble ladders or scaffolding
- Inspections can be performed more frequently
- Requires less crew on site
- Large scale inspections (entire subdivision, large building, etc.)



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## Enhanced Data Collection

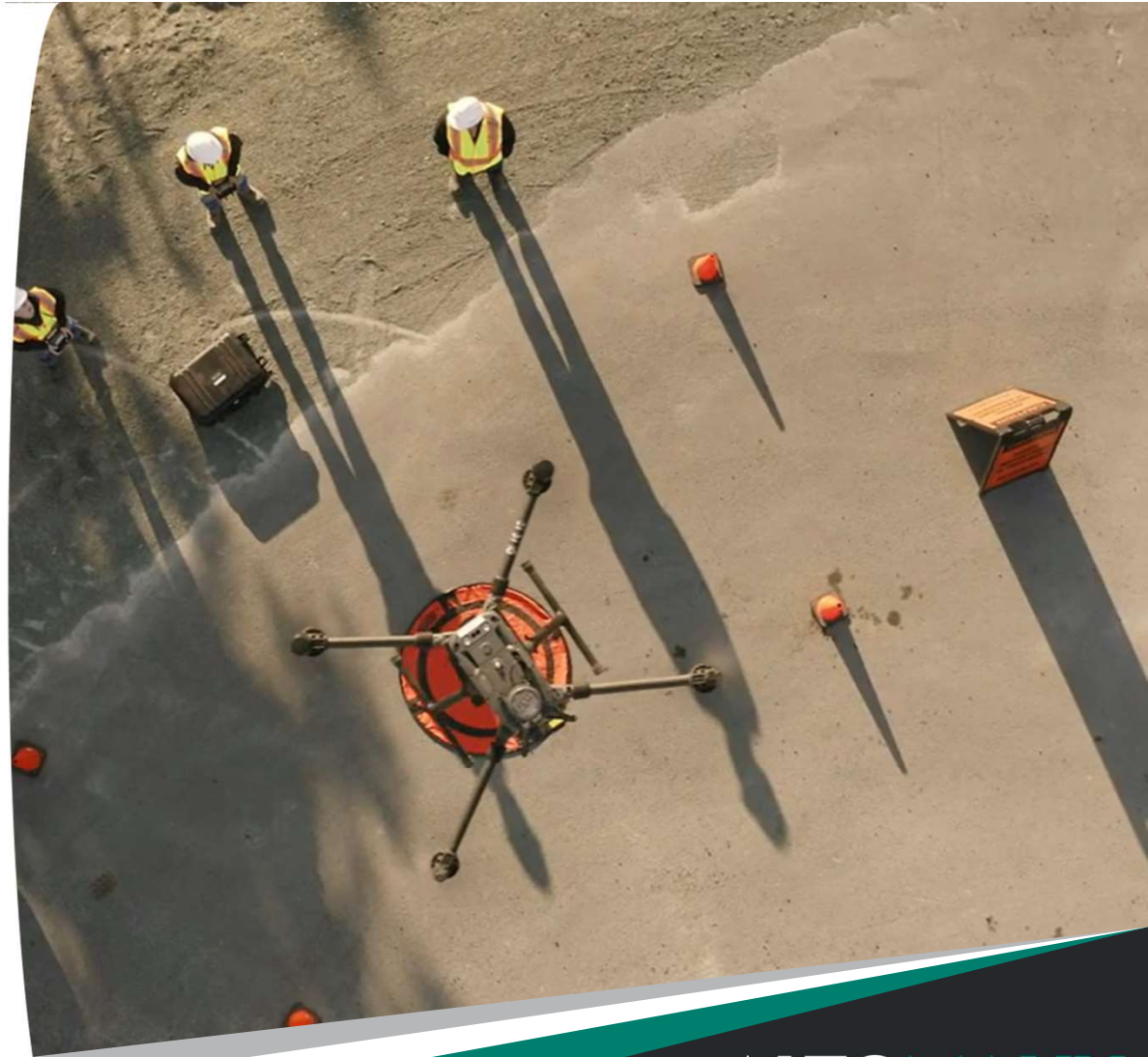
- Visual & thermal
- 3D modelling
- Downloadable & transferrable data





# Risk Mitigation

- Initial use of an RPAS reduces the risk of injury and/or property damage
- Avoid use of a ladder, as well steep, sloped, or weakened surfaces
- Roofers face a high workplace fatality rate among trades in North America



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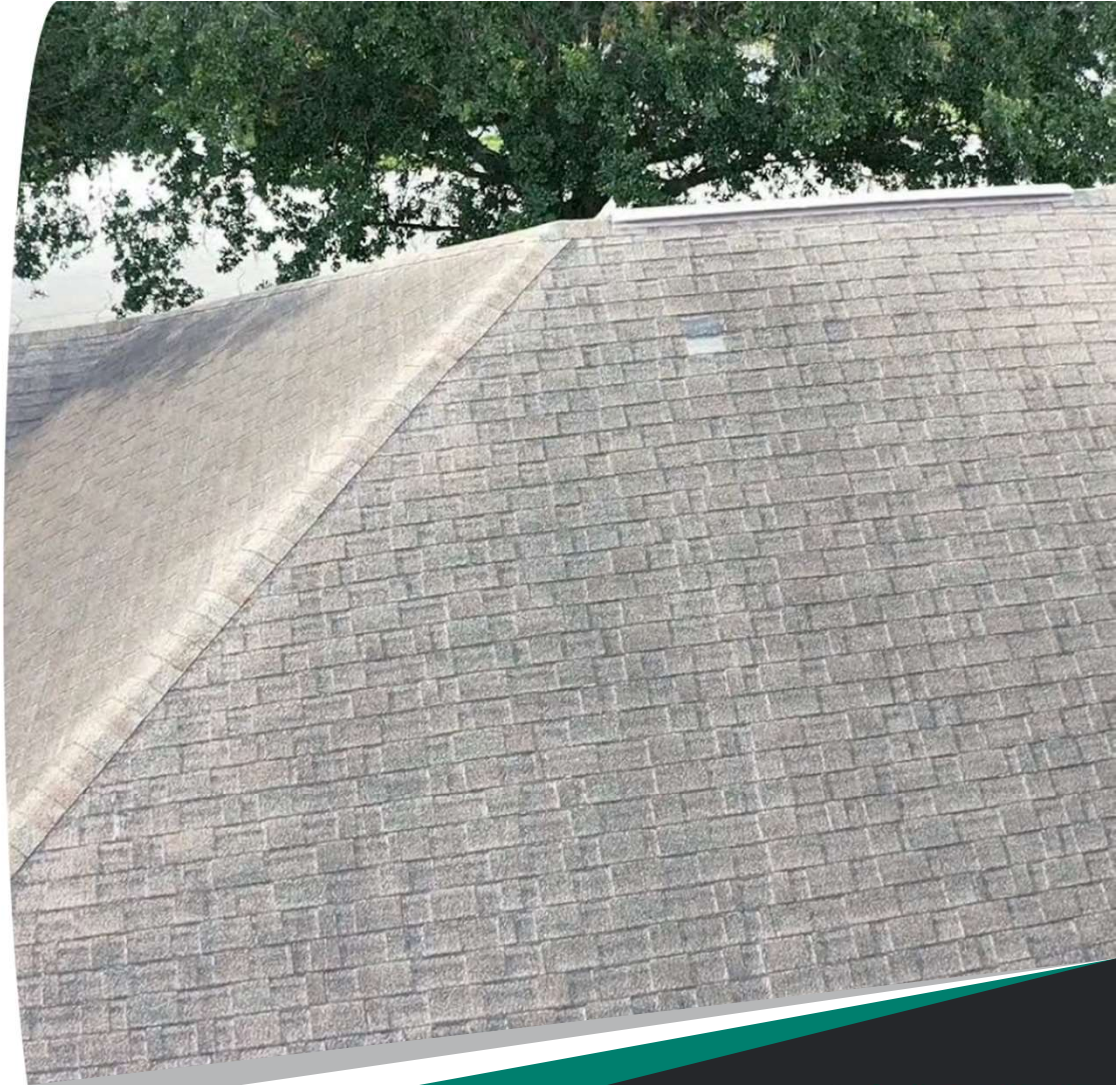


# Capabilities

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# Visual Inspections

- Drones can be deployed to quickly identify issues in residential properties as pictured here
- Being able to diagnose a roofing concern such as this in less than 5 minutes results in improved efficiency



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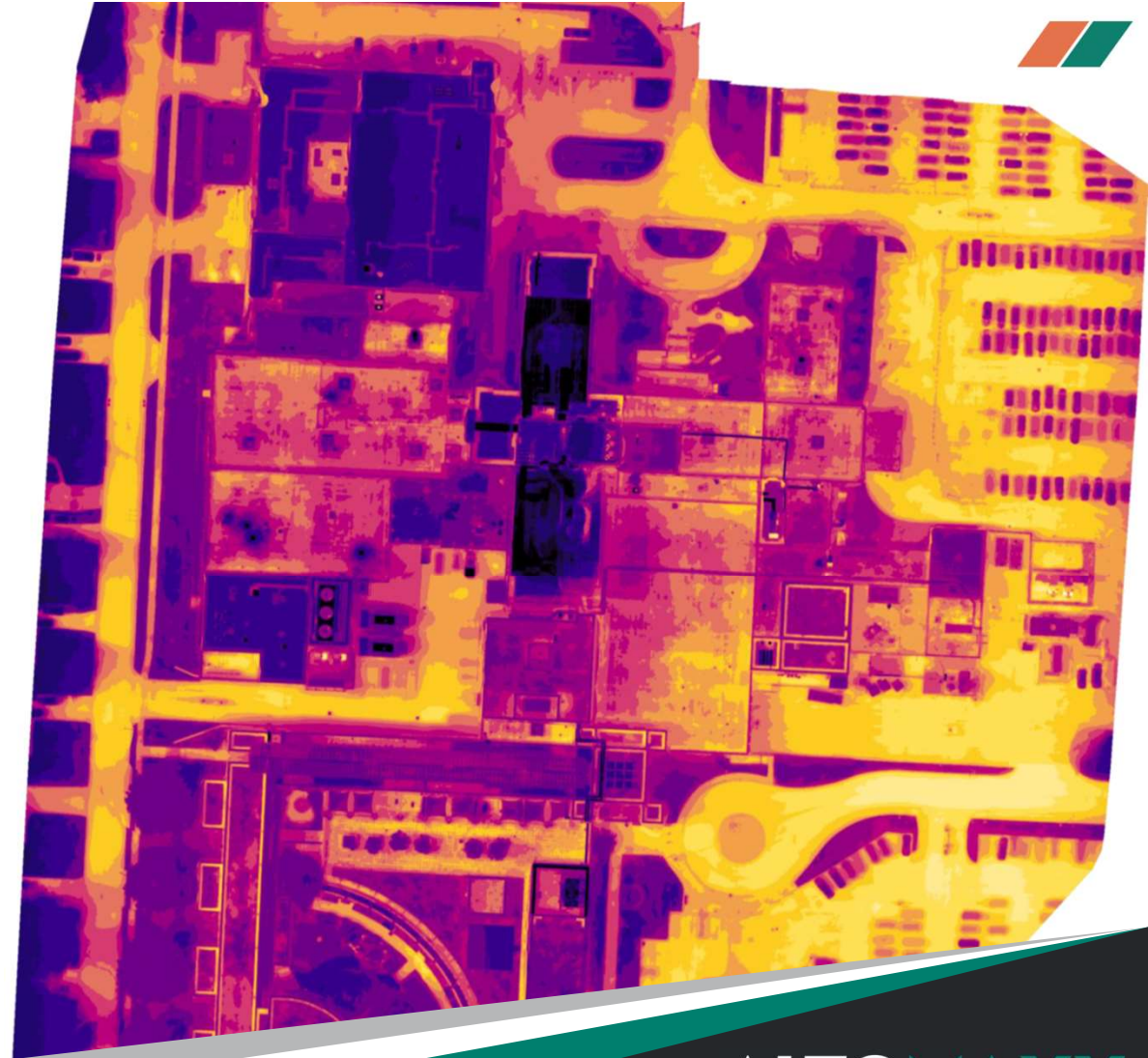


# Visual Inspections

- Distance from the roof is not an issue
- This sensor can clearly read text on a small streetlight cap from 150 feet away

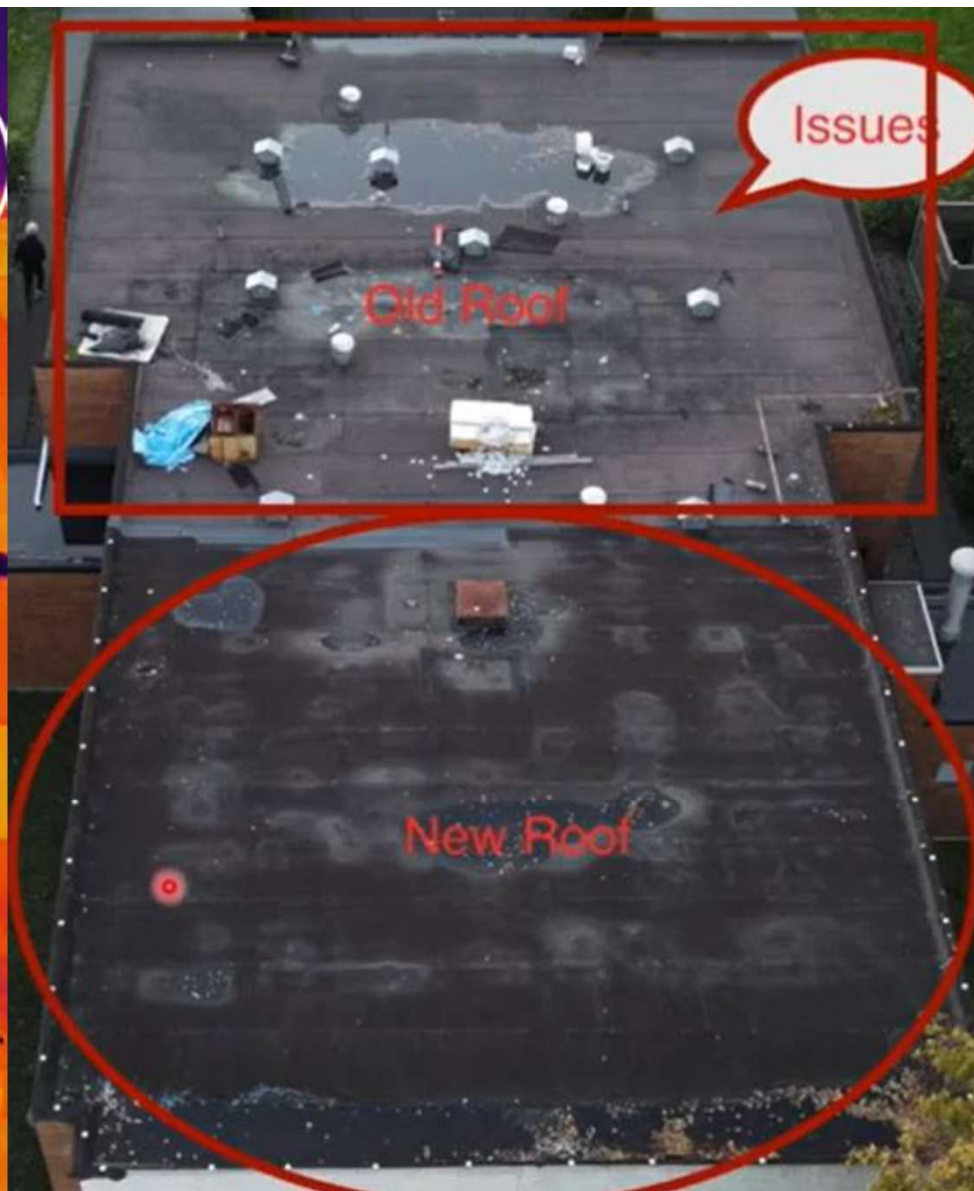
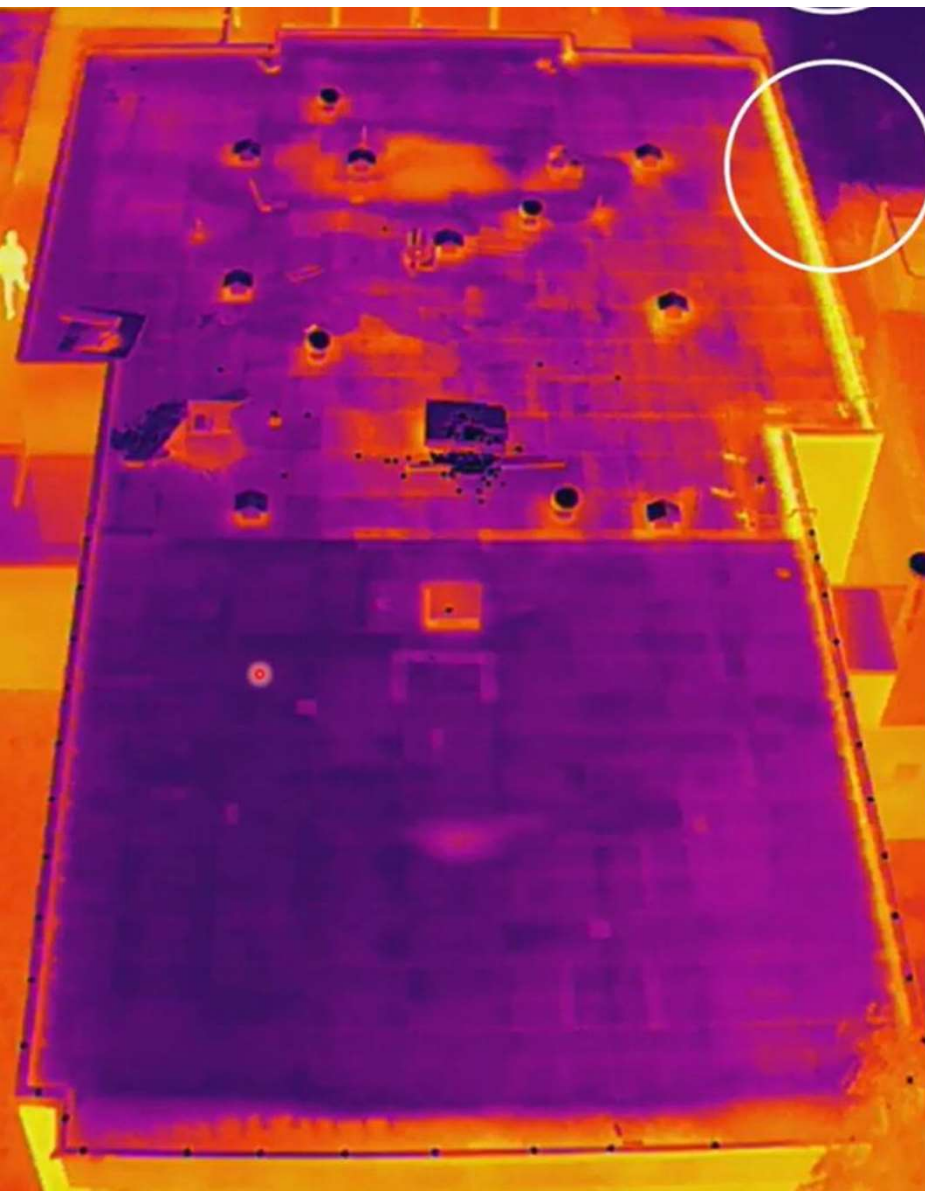
# Thermal Inspections

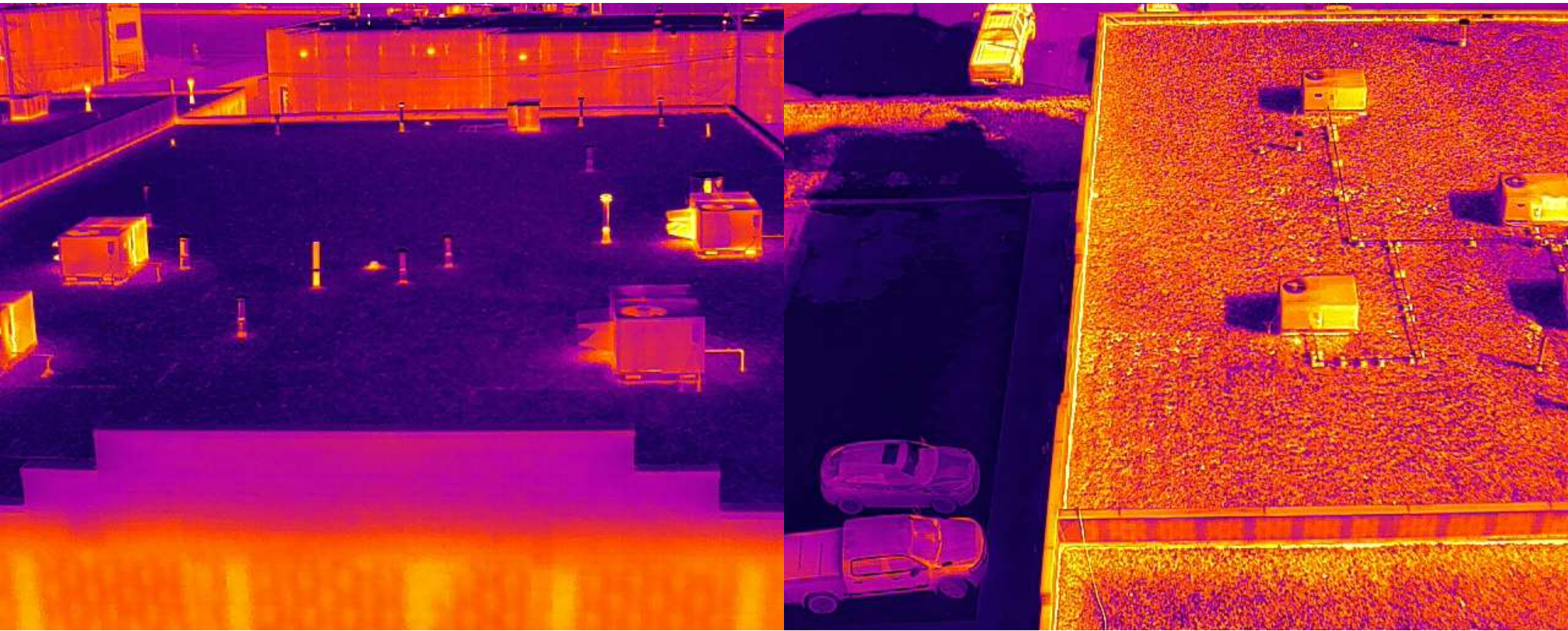
- Locate faults invisible to the naked eye
- Detect heat loss and leaks
- Inspection take place at night for best results



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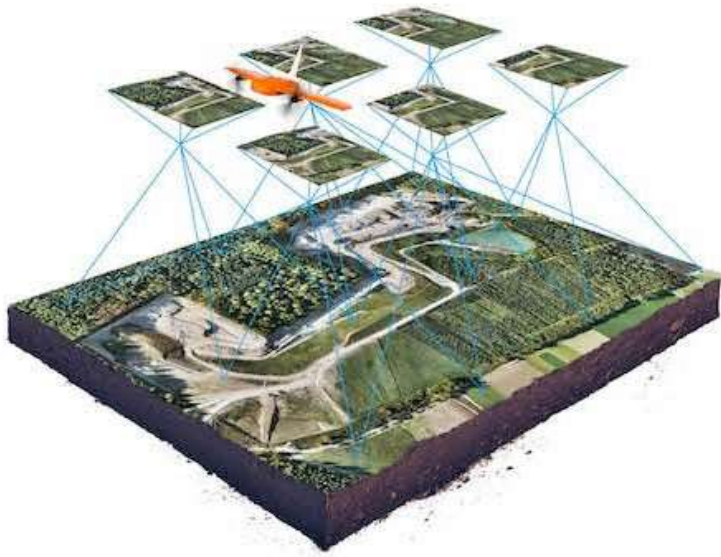
## Daytime vs Nighttime Thermals





# Photogrammetry

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# Photogrammetry

- Accurate models
- Monitor change over time
- Automated drone flight collects data in minutes









# LiDAR

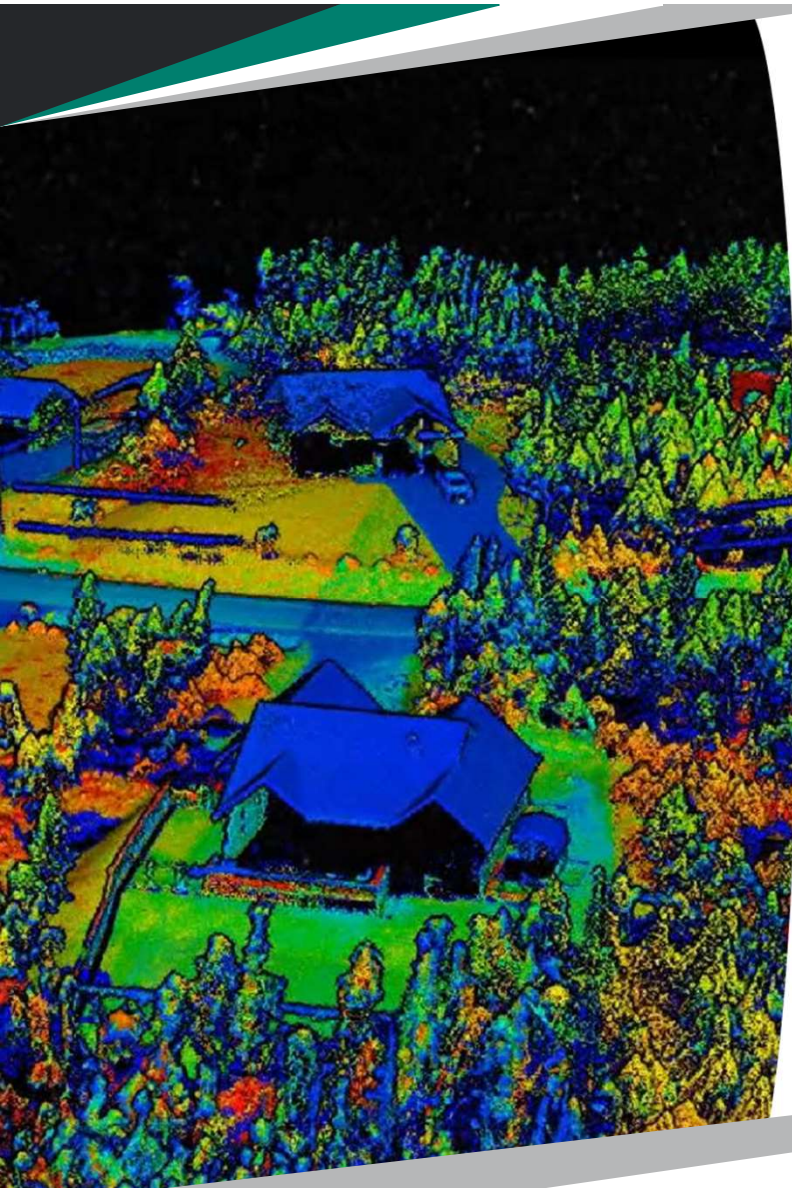
- Light Detection and Ranging
- Alternative method for creating 3D models
- Uses a laser scan instead of photography
- More accurate than photogrammetry






# LiDAR

- Laser accurate models
- Fault monitoring
- Actionable data





# Deliverables & Implementing Drone Technology

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# Planning

Roofing measurements and calculations

- Accurate budget estimates
- Efficient bids and proposals

Worksite planning

- Documenting initial roofing conditions



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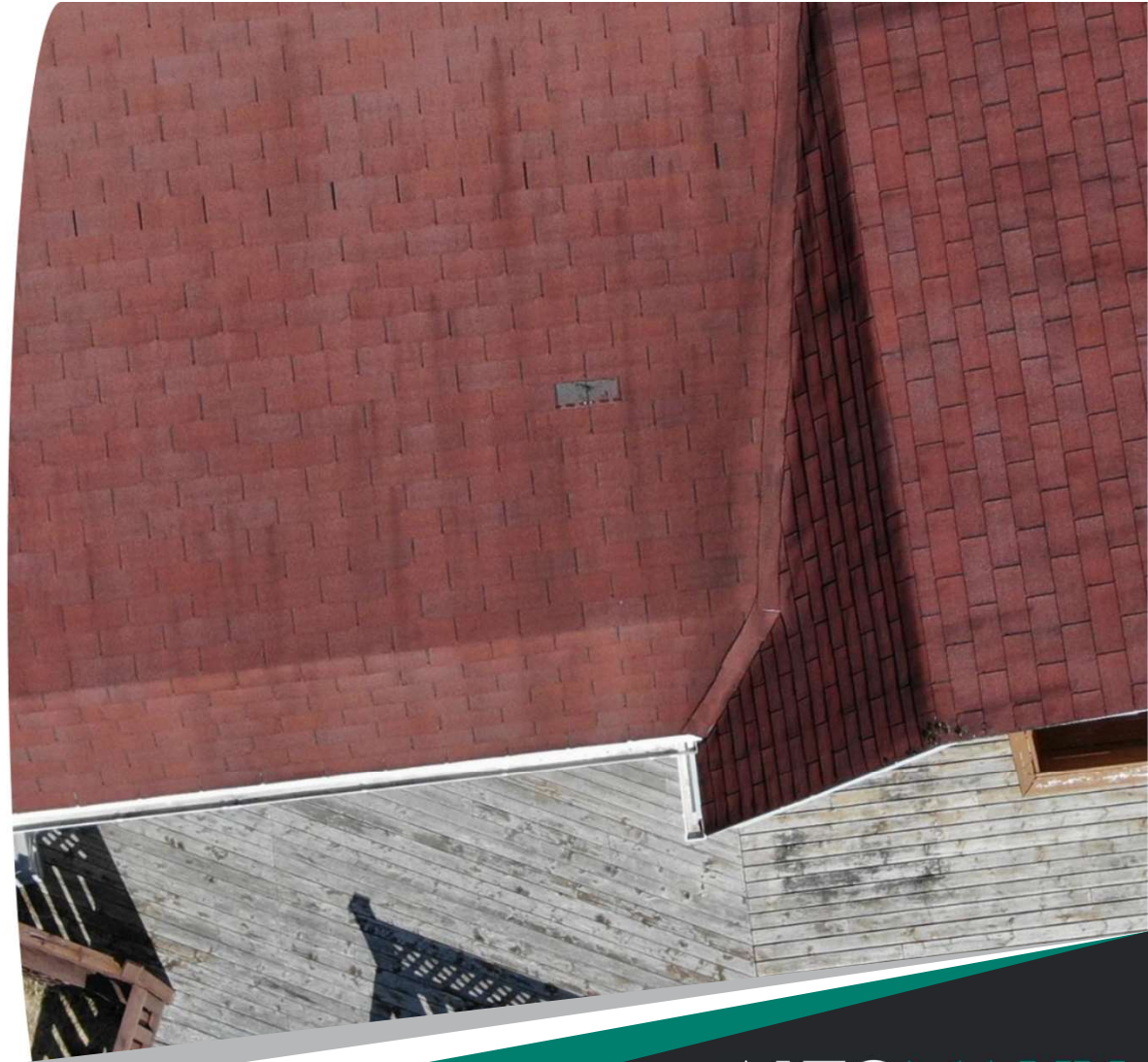
# Building

- Building intelligence modelling
- Accurate progress reports
- Quality control checks
- Documenting final roofing condition



# Maintaining

- Identifying defects
- Routine inspections
- Assessing hard to reach areas



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# Repairing

- Identifying hazards and safety concerns
- Warranty claims and investigations
- Natural disaster remediation
- Proving ROI





# Drone Platforms

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## DJI MINI

- 249 grams –not subject to federal regulations
- 4x zoom
- 38 min flight time







# DJI Matrice 4

- Up to 28x zoom
- Thermal
- Pre-planned missions
- RTK





# DJI M350 RTK

- 200x zoom
- Advanced wind / weather resistance
- Variety of payload options
- Pre-planned missions





Skydio X2



Skydio 2+



Parrot Anafi







# Training & Integration

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# Federal Regulations



Transport  
Canada

Transports  
Canada

- Remotely piloted aircraft systems (RPAS) are subject to Part IX of the Aeronautics act, under the Canadian Aviation Regulations.
- RPAS weighing over 250 grams must be registered and are subject to airspace restrictions.
- Pilots require an advanced operations license from an accredited flight school.
- A parachute is required for operations over heavily populated or urban areas.
- AltoMaxx is a Transport Canada approved flight school.

[Pilot Certification »](#)



# Airspace

- Use of drone technology is heavily restricted near airstrips and heliports.
- Pilots must apply before conducting operations within certain zones.



# Contact Us



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