Canadian UAVs is a Nationally Complaint ‘Unmanned-Airline’ company focussed on providing low-cost surveillance, monitoring, and reporting solutions for industrial and military clients through Unmanned Aerial Vehicles (UAVS). First company to fly BVLOS outside of restricted airspace - August 2018.

COMPANY OVERVIEW

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CUAVS PARTNERS:

QINETIQ

Largest UAV manufacturer in Canada with over 3 decade of military and commercial production experience.

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LOCKHEED MARTIN

Canada’s largest Ground Control Systems Software Developer

Des Nedhe DEVELOPMENT

Over 1.5 Million Flight hours

CDL SYSTEMS

Developer of UTM software VCSi

UTM Software controls Autopilot

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Canadian UAVs is automating the middle GROUND

Our UAV approach is based on reliable, historically proved methods from several other industries combined to create a new paradigm.

High enough to get scalability, but lower than satellite observations which often have tasking, atmospheric and resolution issues.
CUAVS BVLOS is focused on providing low-risk near term solutions for oil field data acquisition while building scalable long-term automated infrastructure inspection capabilities.

Formal letters of support:
5 Upstream oil and gas companies
1 Uranium company
1 Midstream pipeline company
1 Oil spill response corporation
Total Market Cap → over $204 Billion

Over 850,000kms of pipeline
All must be inspected annually, some 6 times a day

Western Canada in a glut of ‘land-locked’ oil due to lack of pipelines to tide water → 42% discount crude

10.6% of Canada’s GDP
22% of Canada’s exports
11% of direct Federal revenue

*** New Technology Needed ***
BEYOND VISUAL LINE OF SIGHT
BRINGING BVLOS TO CANADA

Phase 1
CURRENT CAPABILITIES – Line of Sight
• Lockheed Martin Indago with advanced sensors
• Commercial helicopter pilots who have been trained on military grade UAVS
• Range 45mins approx. 2km VLOS

Phase 2
BVLOS V.1 – Transport Canada Commercial Trials
• Lockheed Martin Indago with 4K Ultra High Definition imagery
• Commercial helicopter pilots who have been trained on military grade UAVS
• Extended coms link
• Airspace collision avoidance technologies
• 10km operating radius

Phase 3
BVLOS v2.0
• 25kg MGW Fixed wing
• Additional collision avoidance technologies
• 8+ hour flight endurance
• 50km operating radius

Phase 4
BVLOS V.3.0
• Multiple ground based + onboard collision avoidance sensors incoordination
• Full integration with VCS
• Fly-by-wire
• Automated collision avoidance
• ~300km range
BVLOS Project Milestones:

- Radar testing at Springbank Airport (Canada’s 5th busiest airport) December 2016  targets tracked past 90kms
- Foremost testing of Indago with radar March 2017
- Lockheed Martin Indago Complaint System October 2017
- CUAVS National Complaint Operator December 2017
- Formal bid application notice February 1st, 2018
- Application Submitted March 19th, 2018
- Formal letter of bid acceptance May 24th, 2018
- Risk assessment Draft, July 10th, 2018
- Transport Canada site audit (Ghost Lake) July 23rd to 24th, 2018
- Risk assessment complete, August 1st, 2018
- Phase 1: BVLOS Trials at Ghost Lake August 13th-17th, 2018
- Additional Radar testing @ Springbank and further SOP development, September 17th, 2018
- Phase two: BVLOS trials at Christina Lake, October 1st-4th, 2018  Indago tracked on radar past 2NM
- Unmanned Systems Canada, data presentation, October 31st, 2018
- Oil and gas Stakeholder meeting, TBD November 2018
VEGETATION & ELEVATION DATA ANALYSIS
MAKE INFORMED DECISIONS

HYDRA

Real Time Map Making
3D data manipulation, real-time geometric image stitching, Google Earth/GIS overlay