

# Bridging between Manned and Unmanned Flight – the Optionally Piloted Aircraft



Of all the areas of human endeavour the one that thrills us most of all is FLIGHT



We take amazing risks to achieve it...

And come up with some amazing devices to make it happen



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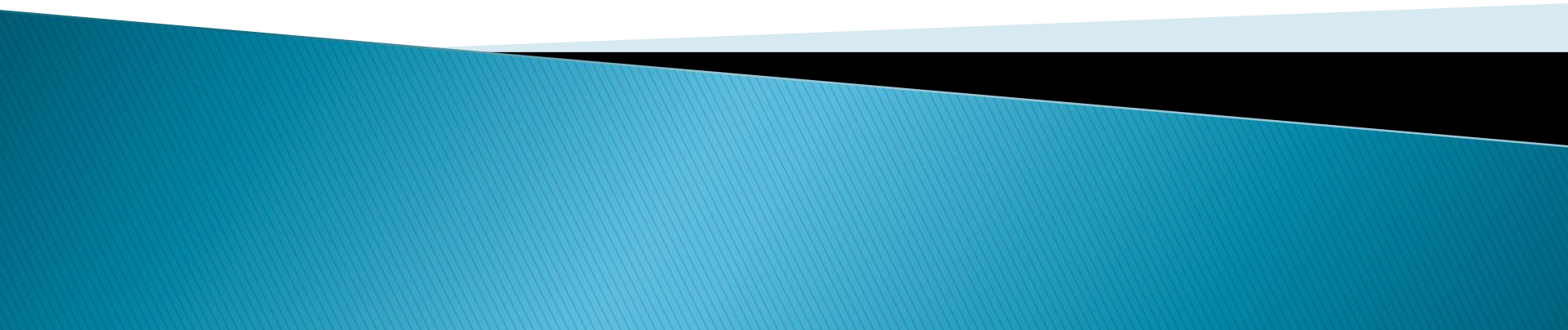


And come up with some amazing devices to make it happen



Like airborne laser  
mapping

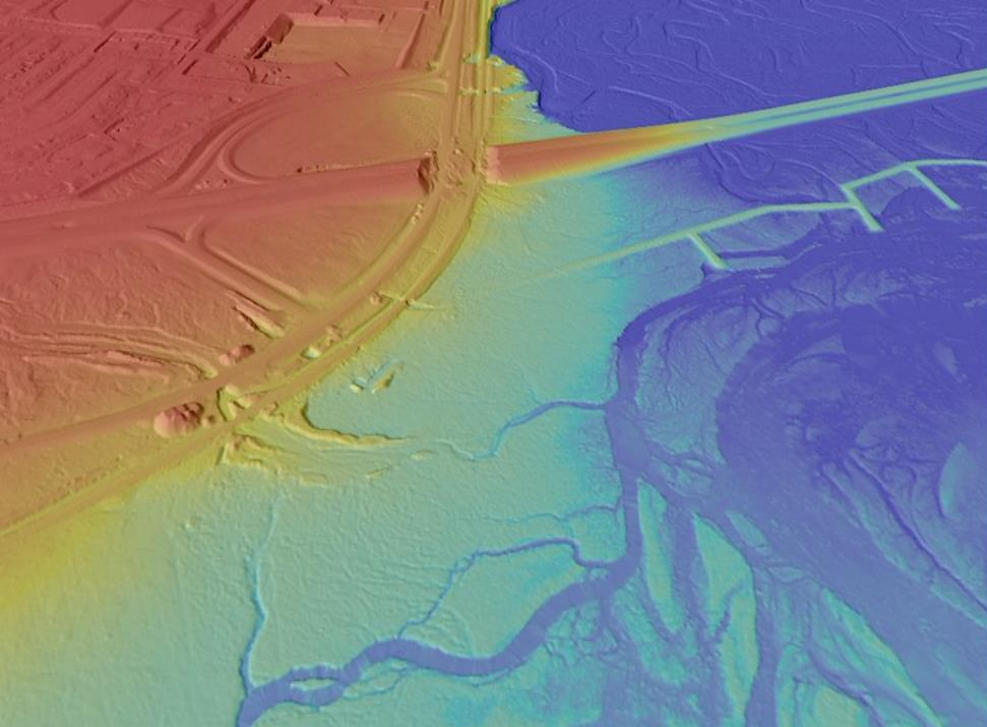
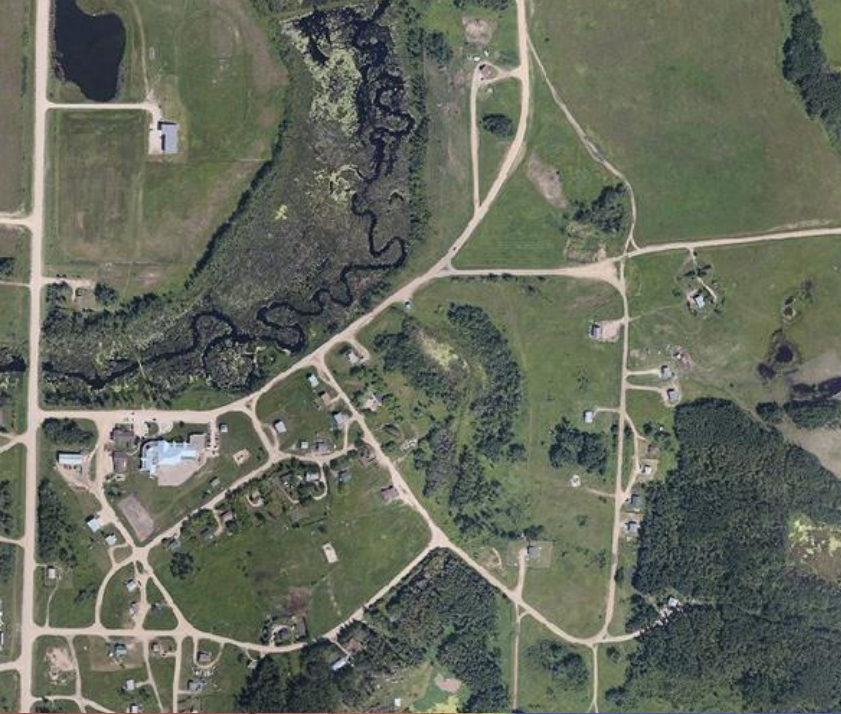


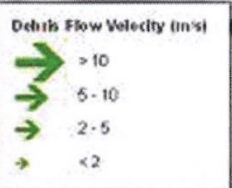
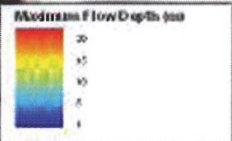
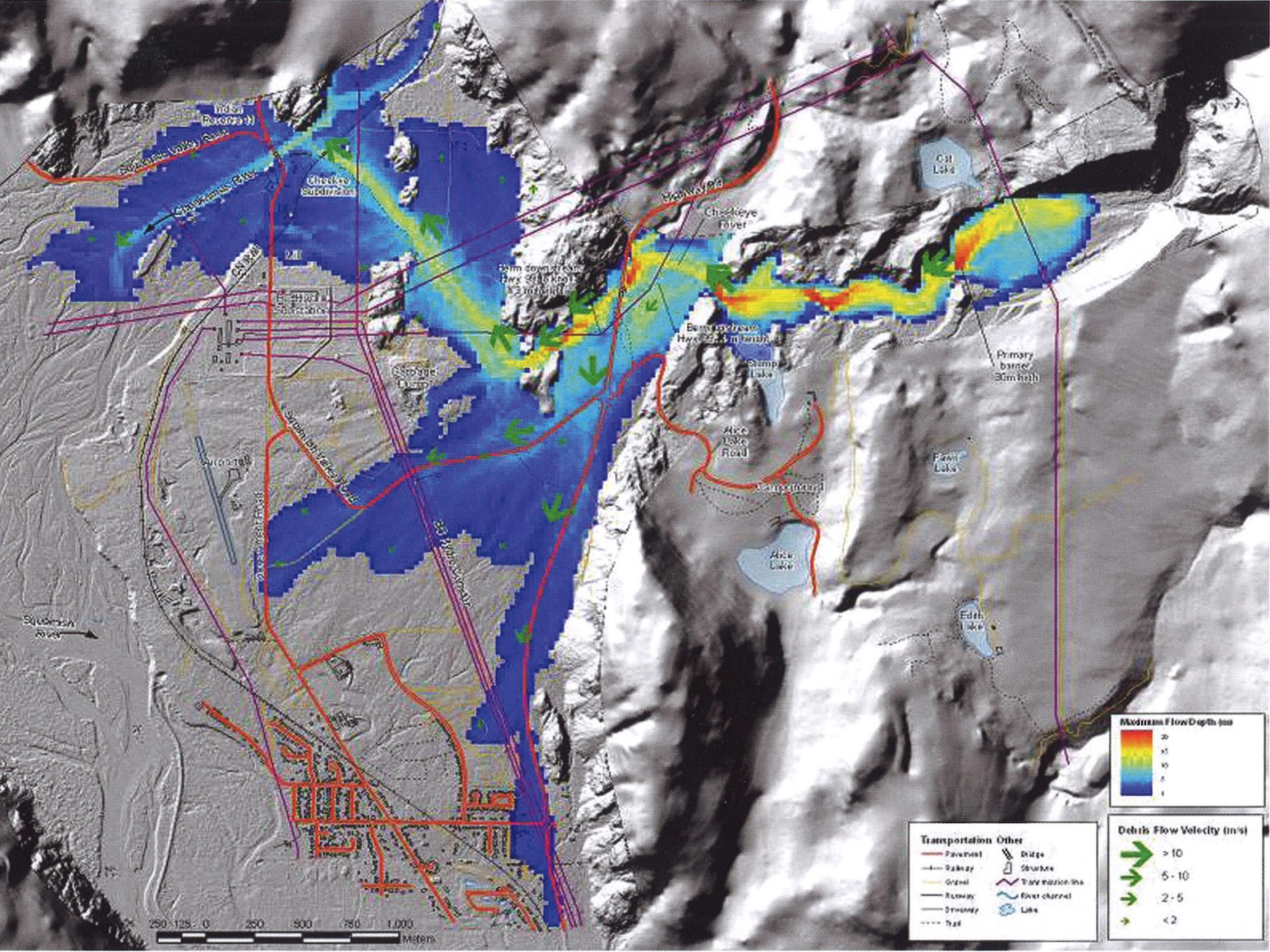


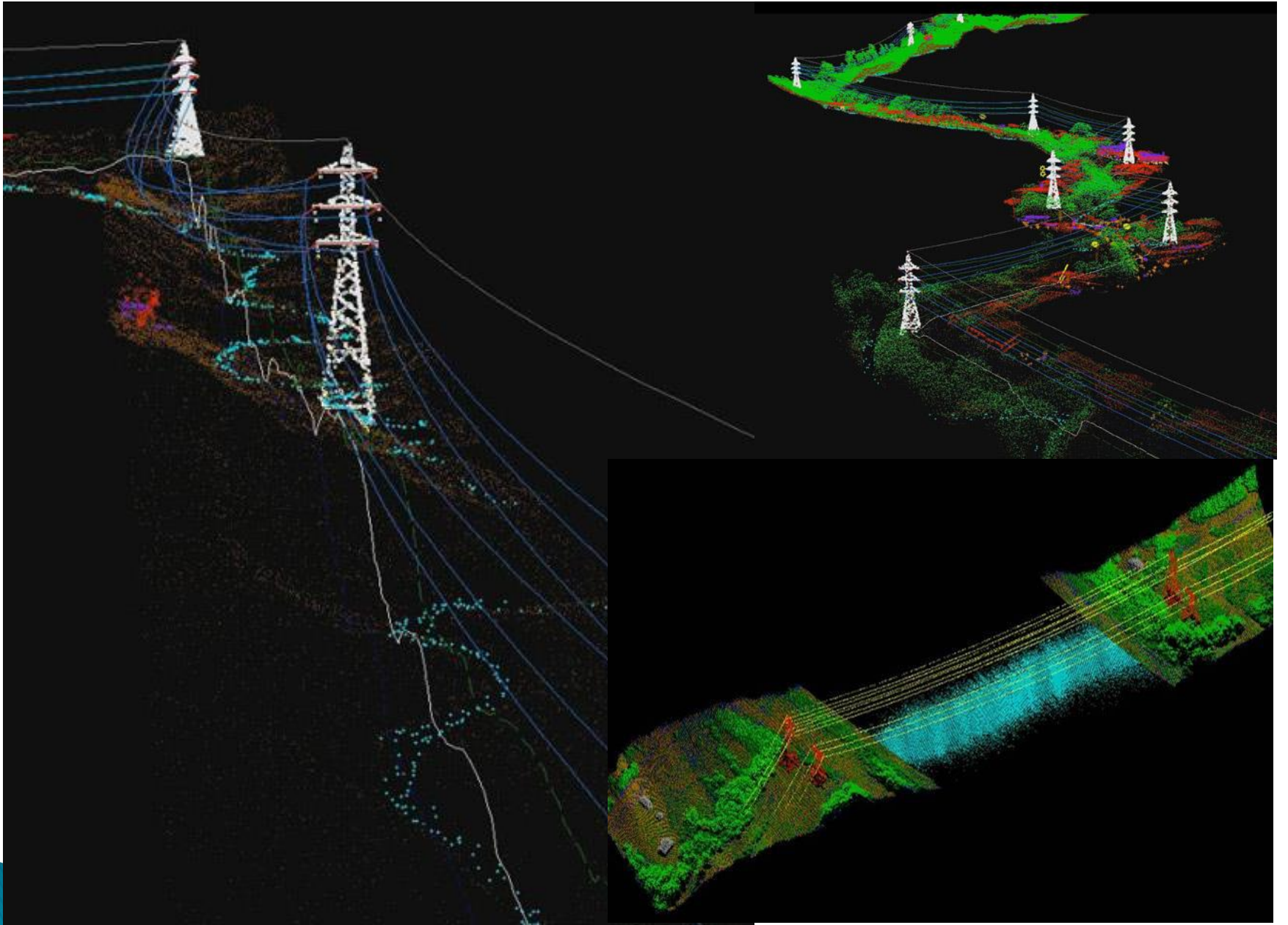
- ▶ 13 years in business as LiDAR Services International Inc.
- ▶ 315 successful LiDAR Projects
- ▶ Over 50,000 sq. km of LiDAR surveys
- ▶ Over 40,000 km of transmission line corridors
- ▶ 20 employees at our Calgary office
- ▶ 4 working shareholders
- ▶ 150+ years combined airborne laser mapping experience
- ▶ US Office in Nevada
- ▶ Gas Recon leak detection subsidiary in Calgary
- ▶ 77% of companies make up their own statistics













Bell 206B Jet Ranger LiDAR Installation  
LiDAR Services



AS350 - France  
LiDAR Services



Vulcanair / Partenavia P68 Observer  
LiDAR Services





Cessna 185F - Instrument Rack  
LIDAR Services

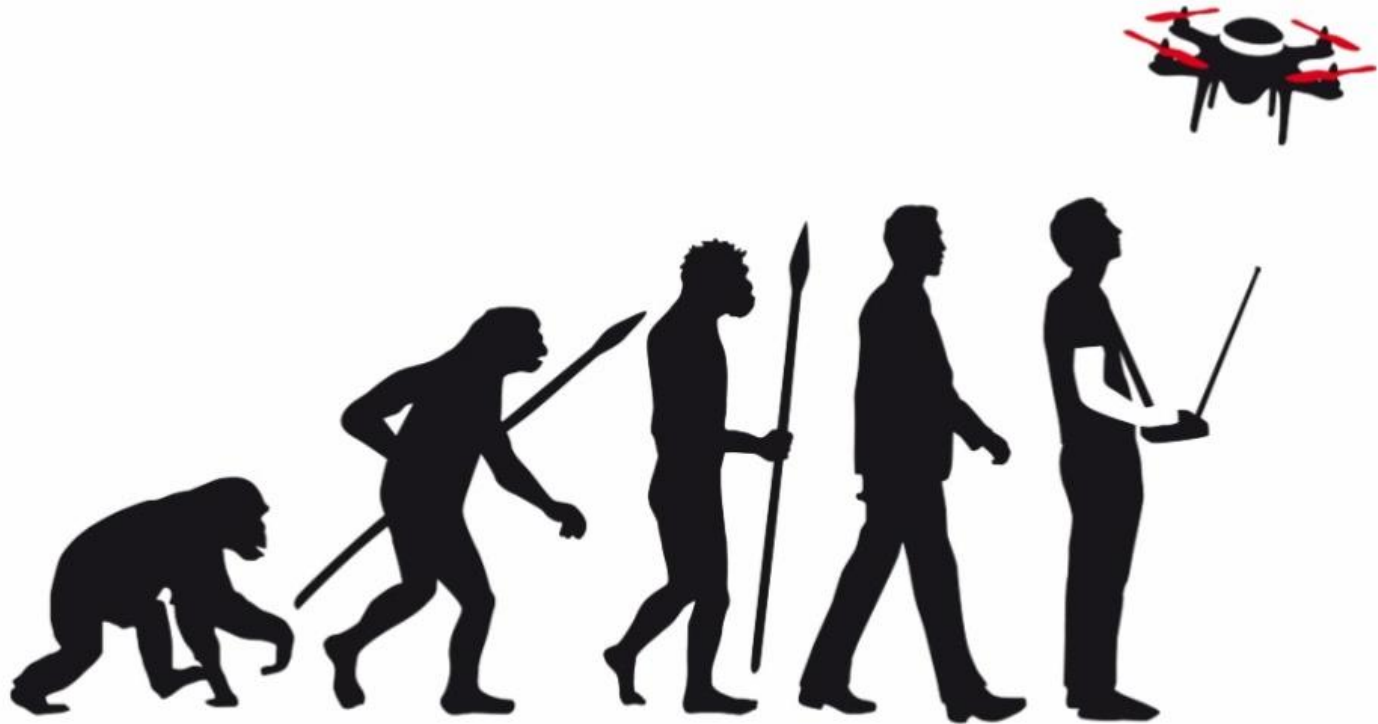


Cessna 185F Sensor Plate  
LiDAR Services



Cessna 185F Skywagon  
LIDAR Services

But getting back to this universal dream of flight, the odd thing is this new fascination with UAVs. For some reason the human race is now obsessed with sending aircraft aloft without ourselves in them.



And no matter whether we love them or fear for the privacy and safety of our skies...



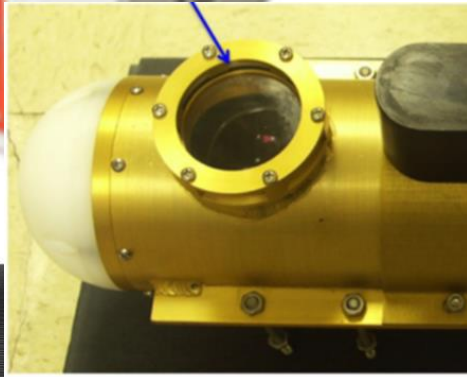
**DRONES ARE HERE TO STAY**

# An Example of a UAV User



- LiDAR Services International is a good example of a company that needs and yet doesn't need UAVs.
- Our clients include large utility systems and engineering firms that require large amounts of accurate data.
- Our current, proven remote sensing systems use high capacity, long range, large area sensors.
- Single sensors are not enough – “Multi-Sensor Fusion” of new technology is necessary in many ways.





# LSI's Primary Remote Sensing Needs:

- Carry complex, variable sensor systems
- Fly in and between all available airspace zones
- Fly long endurance missions
- Be as cost effective as possible
- Make immediate use of all existing sensors as much as possible



# LSI's Primary Remote Sensing Needs:

- We need to have the full equivalent of an on-board pilot in terms of:
  - Control
  - Communication
  - Situation awareness
  - Decision-making
  - Safety
  - Reliability



In other words, we like to use a PILOT when we need one



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We like to use a **DEPENDABLE PILOT** when we need one

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But prefer to leave him at home when we don't.





With that in mind, LSI, in conjunction with Innovage Microsystems, is entering the Age of UAVs through the use of the **Berkut II Optionally Piloted Aircraft**



# A Background in Aviation, Innovation & Operations



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