



Drone Startup Looks at New Markets

SITUATION

The SearchLite was engaged by a Drone Startup. The client's automated robotic technology enables wind farm owners, independent service providers and OEMs to easily monitor and inspect the health of their wind turbines. The single push of a button launches the drone, which then surveys all sides of all three blades, collecting high-resolution images that identify damage down to the smallest crack. Data is immediately transported to the client's data portal for viewing, annotating and generating reports. The Drone technology delivers asset inspections faster, easier and more affordable, measurably minimizing downtime and maximizing lifespan.

ACTION

The SearchLite was tasked to investigate the Oil and Gas industry for best fit opportunities. Key questions included: What parts require regular inspection? Who are the customers? How do they buy? The primary criteria that was chosen for evaluation of alternative oil & gas inspection applications included

- Time to market - short development time, customer pull, fit to existing client drone tech
- Autonomous advantage - difficult for piloted operation, consistent and repeatable Inspection
- Reasonable regulatory hurdles - FAA regulation, airspace classification, line of sight operation
- Total Available Market - ideally greater than \$250M

In all, we spoke with 16 subject matter experts from the major oil and gas companies including BP, ConocoPhillips and Shell.

RESULTS

Over the course of our research, it became clear that despite the general hype by Oil & Gas companies and Drone Service companies regarding the emerging Oil & Gas UAS inspection applications, there were significant challenges to market adoption compared to the Wind Energy sector.

In lieu of the challenges, however, it was clear that there was growing investment and opportunity for drone applications in the Oil & Gas industry. The primary and secondary research was clear that companies that fail to adopt drones to reduce operational costs will be at a competitive disadvantage. The question was which, if any, of the emerging applications align best with the client's technology goals and business model. We researched 10 potential applications both on-shore and off-shore, upstream, midstream and downstream. From those we narrowed down to three focus applications that seemed to hold promise in terms of a possible compelling product-market fit.

| | Short time to market | Autonomous advantage | Reasonable regulatory hurdles | TAM ideally > \$250M |
|--|----------------------|----------------------|-------------------------------|----------------------|
| Flare Stack inspection – condition and defects | Moderate | Moderate | Moderate | Weak |
| Pipeline patrol and inspection – condition and leak | Moderate | Moderate | Weak | Moderate |
| Above Ground Storage Tank Inspection – condition and leak | Moderate | Moderate | Weak | Moderate |
| Off-shore rigs and structures – condition and loose objects | Weak | Moderate | Weak | Weak |
| Well site monitoring – Operating condition | Weak | Strong | Moderate | Moderate |
| Christmas tree inspection – condition and leak | Weak | Strong | Weak | Moderate |
| Crane inspection – condition | Moderate | Moderate | Strong | Moderate |
| Derrick and Mast inspection – condition | Moderate | Moderate | Moderate | Weak |
| Hoisting lines, drill lines and other wire rope inspection – condition and defects | Moderate | Moderate | Moderate | Weak |
| Digifying laydown inventory sites | Strong | Moderate | Strong | Weak |