Josh Phifer
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Drones and software to make livestock ranches more profitable and environmentally sustainable

Expertise in ranching, drones, product development, and aviation operations

Josh Phifer

- CEO / COO
- Funding, Partnerships, Flight Testing
- Background
  - Rancher
  - F-22 Instructor and Test Pilot
  - Air Force Academy, Wharton MBA

Will Peters

- CTO / CMO
- Product Development
- Background
  - Drone Expert
  - Director of Engineering, Icon Aircraft
  - MIT Aerospace Eng, Wharton MBA

Advisors

- Wharton Venture Initiation Program
  - Professor Jeffrey Babin
  - Professor Patrick Fitzgerald)

Traditional methods of monitoring livestock ranches are costly and often ineffective

$20-80k/Yr

Infrastructure Monitoring Costs

$50-175k/Yr

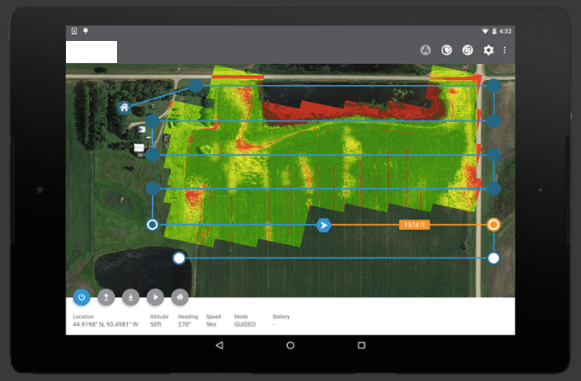
Lost Livestock (terrain, theft, sickness)

$30k-90k/Yr

Inefficient Land Use

Barn Owl uses drones to solve ranchers monitoring problems. We reduce monitoring costs 50-60% while improving livestock and land management

We provide a cost platform for automated, high value data



Our Airframe

- Long-range
- Low cost

COTS Components

- Sensors
- Processors

Our Software

- Flight Autonomy
- Livestock and Rangeland Analysis

- Our drones are low cost, fixed-wing platforms that enable long-range flight
  - Our flight range capability is currently 60 to 80 miles; we are seeking 100 mile range in our first production platform
- We use visual cameras for basic visual inspections, infrared cameras to locate livestock and conduct health analysis, and multi-spectral cameras to determine the health of vegetation.
- The drones are completely autonomous, allowing anyone to operate them
- Our software is tailor built for the needs of livestock ranchers and rangeland managers. Rangeland analysis empowers better decision making to improve profitability and environmental health

Huge land area, profitable market, doorway to larger markets

40% of the US
~ 15,000 Ranches

Total Addressable Market

Ranches
$240-413M

→

Broad Ag
$16.3B

Additional value created from improved land use on rangelands
~ $1.4-5.2B/Yr

MVP Development

- Hardware (March to May)
  - Identify COTS airframe for MVP (~$500)
  - Purchase COTS sensors (~$2000)
  - Purchase COTS components (~$500)
  - Build hardware MVP (~90 hours)

- Software (April to June)
  - Utilize open source S/W for basic flight capabilities (~4 hours to learn)
  - Build MVP data analysis workflow using open source software, 3rd party tools, and manual labor (~60 hours to identify and integrate tools)
  - Build a MVP user interface web application (~20 hours)

- Flight Testing (June)
  - Conduct on ranch testing and demonstrations with MVP
  - Partner ranches already identified in Wyoming, Colorado, and Texas