

# Sharper Shape

Established in 2013, Sharper Shape provides aerial inspection & analytics solutions for the utility infrastructure market. We are focused exclusively on delivering superior solutions for customers by providing T&D line inspections, vegetation management analysis services, & software tools that allow our customers to rapidly extract actionable information from remote sensing data.

The company is proud to be among the most qualified & professional aerial inspection companies in the world, collecting a weatlth of data for processing by our uniquely capable software suite that is specifically designed for multiple utility workflows.









20,000+ **T&D STRUCTURES** CAPTURED BY DRONE



DATA COLLECTED

# **CORE SERVICES**



Helicopter-based Inspections with multiple



Drone Automatic Detailed Inspection (ADI)



Drone Consolidated Linear Inspection (CLI)



**Vegetation Management Analysis of Utility** Corridors



Process, Analysis, and Visualization Full Stack Software

## **DIFFERENTIATORS**



ರ್\_ರ್\_ರ Deep utility experience in Management Team



Proven Vegetation Risk Analysis and Tree Species Identification Technology and Speed



Thousands of hours of safe aerial operations



0 6 years of trial and error embedded in machine learning and convulated neural networks



ऍन्रुल्म् End to End Software Suite that enables the transition to digital inspections

# Automated Drone Inspections of Vertical Structures



### WHAT IS ADI ABOUT?

Automatic Detailed Inspection is the precursor to more advanced UAS operations, including BVLOS. ADI uses software tools to transform LiDAR point cloud data into custom UAS inspection flight paths. Small commercial drones fly these inspection routes autonomously, with the ADI software running both the drone and the camera system. ADI facilitates the rapid capture of close-up images of all critical components at close range and from multiple angles, enabling utilities to focus on what really matters - the condition of those assets.

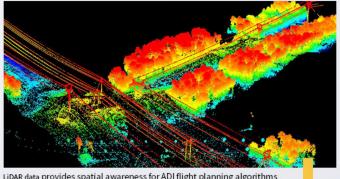
#### **HOW CAN ADI HELP?**

- Compared to manually piloted flights, **Inspection time is reduced** by at least 50
- Inspection data is more consistent, repeatable, and reliably high quality
- •Increased safety factors and decreased potential for drone line strikes
- ADI greatly reduces stress on UAS field crews, resulting in decreased mental & physical fatigue
- Minimizes the drone learning curve so that any operator can produce top quality inspection data
- Fully integrated **Sharper Shape CORE** software suite eliminates the headaches of organizing, uploading, inspecting and managing big data

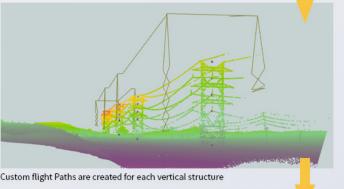
### ADI AIRCRAFT OPTIONS

Automatic Detailed Inspection is designed to work with small, readily available drones such as the DJI Inspire 2 or the DJI Matrice M200/210/300 aircraft. Other aerial platforms - including non-DJI UAVs - are being tested for release in 2021. Beyond their outstanding value as imaging platforms, the small size and maneuverability of this class of aircraft allows them to fly in tighter spaces, and their low-mass form factor means that safety concerns are also greatly reduced.

Pilot references are available upon request including the EPRI evaluation of ADI technology



LiDAR data provides spatial awareness for ADI flight planning algorithms





Flight paths are uploaded to the drone, and the mission is ready for execution





After the field inspection work is completed, ADI data is uploaded directly to the cloud-based data repository for processing with Sharper Shape's Cloud Optimized Remote Evaluation (CORE) software. These purpose-built applications provide an ideal data analysis platform. Post-flight analysis is further accelerated with CORE's integrated artificial intelligence tools.