

# ADCIS

PROVIDER OF UAS INSPECTION AND  
SURVEILLANCE SOLUTIONS

***UAS (Unmanned Aircraft System) is a powerful, economical, and easy-to-operate tool for automated inspection and security tasks***

- Monitoring of mid-level security sites
- Construction site supervision  
safety management, progress monitoring, materials management
- Infrastructure condition evaluation  
of buildings and engineering structures
- Terrain analysis
- Gas leak monitoring
- Search and rescue
- Military applications, etc.

- Cost-saving
- Operate in difficult to access and hazardous environments
- Accurate analysis of data collected by high-def, thermal, hyperspectral, and lidar sensors
- Georeferenced Information



***ADCIS,  
a long-standing player in Image Processing***

Since its inception in 1995, ADCIS has been a world leader in image processing and analysis and over the past decade in Deep Learning technology applied to image understanding.

Since 2017, ADCIS has been one of the main partners in the CEOS project, in charge of image analysis. This collaborative R&D project provides solutions for monitoring sensitive and high security sites and infrastructures using professional drones (UAV) and image understanding.

Penstock Pipe Surveillance



***Solutions for intensive and routine inspection***

The ability to process the huge amounts of data collected by UAS for temporal monitoring of infrastructures and building construction is a tremendous challenge of the coming years. To meet this challenge ADCIS is providing turnkey solutions for inspection and surveillance of such sites.

- Data collection by UAS (ADCIS is working with partners to propose a large range of services)
- Generation of orthophotographs or 3D point cloud images (data)
- Supplying annotation software or service to annotate images/video for generating training databases
- Supplying software to automatically:
  - Detect and identify defects or damages in infrastructures, buildings, fields, etc.
  - Track and analyze changes between measurement sets of images captured at a different time line
  - Detect vehicular or personnel intrusions

## ▶ ADCIS automated data processing solution offers the following benefits:

- Processes much larger amounts of data at much lower cost than an operator
- Faster and more repeatable analysis of collected data
- Fully automatic analysis
- 24/7 operation

Automated inspection of 185,000 miles of medium-voltage power lines



### *3 examples of automatic defect detection using Deep Learning*



#### ▶ Inspection of penstock pipes

- Vision-assisted flyover in high and medium mountains
- Defect detection (cracks, joint defects, rust)



#### ▶ Inspection of fences

- Flight along airport fences
- Defect detection (damage caused by animals, broken or damaged mesh, open gates)



#### ▶ Inspection of medium-voltage power lines

- Drone (UAV) control by image processing (for power line tracking)
- Defect detection (electric poles, insulators, vegetation growth)



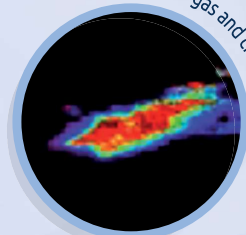
## ▶ A powerful solution for diagnosis

ADCIS solution leverages the computing power of the latest generation of graphic processors providing the rapid communication of the surveillance information and analysis. The ground station benefits by being able to quickly and appropriately respond to repair or stop damage or unwanted intrusion at the site.

Inspection of rooftops and solar panels



Monitoring of gas and chemical leaks



More information available at [www.adcis.net](http://www.adcis.net)  
or by phone at +33 231 062 300 (Europe), or 877-664-8772 (US)