

**Requirements Survey**

* **Section 1: Basic Information**

Basic Environmental Information:

1. Communication Environment:   
Does your target operating area support 4G/5G network coverage and sufficient bandwidth? If there are any other situations, please note us in detail.

2. Positioning:   
What positioning system is used currently (GPS, or others) ? If there are any other situations, please note us in detail.

* **Section 2: Industry Information**

1. What is your industry? (such as smart city, emergency, power industry, renewable energy, oil and gas transmission inspection, forestry, or water patrol, etc.)

2. What is your inspection scenario and inspection content? Please describe in detail. For example:

Scenarios: Transmission lines, roads and bridges, construction sites, etc.

Content or Purpose: Monitoring the situation; Comparing two phases of images for monitoring analysis; Conducting safety inspections; Issuing timely warnings, etc.

**Scenarios List:**

* Smart City Solutions

**(1) Traffic scene inspection, identification, and warning:**

* Inspection of city roads, highways or streets
* Road surface damage/pothole identification
* Traffic flow statistics of pedestrians and vehicles
* Accident warning and evidence collection
* Vehicle safety identification and tracking, including vehicle model, license plate, seat belt, and face recognition (for both stationary and moving vehicles)

**(2) Municipal management:**

* Infrastructure and road facilities inspection
* Construction project schedule management
* Construction safety management
* Comparison of illegal construction sites
* Road collapse inspection
* Garbage incineration inspection
* Lakeside safety inspection
* Floating objects on the river and lake surface
* Patrol of dead trees in green areas
* Identification for theft prevention and damage protection

Other requirements or points to note \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

* Emergency Solutions

(1) **Emergency prevention**

* Fireworks recognition, infrared high temperature warning
* Fire point location positioning
* Fire exits are occupied
* Nighttime occupation of vital pathways
* Facial recognition/intelligent recognition of illegal activities

(2)  **Emergency response**

* Respond to the alarm immediately and dispatch the drone
* Inspect emergency linkage with water source info (e.g., fire hydrants)
* Real time on-site images and reports
* Participate in firefighting
* Two phase image comparison assists in post disaster assessment

Other requirements or points to note \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

* Power Industry Solutions

**Transmission and substation scenarios:**

* Equipment inspection and identification in a strong electromagnetic environment
* Damage analysis of equipment
* Monitoring of transmission towers and the transmission environment
* Accurate positioning and detection of defects in power fittings
* Identification and detection of key points of substation power equipment
* Temperature monitoring of power equipment in substations
* Identification of meters/instruments and their readings
* Construction of centimeter-level 3D models and digital twin of the power grid

Other requirements or points to note \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

* Oil And Gas Inspection Solutions

**Oil and gas transmission scenarios:**

* Identification of pipeline damage
* Equipment damage/damage analysis
* Ground cracking identification
* Temperature monitoring and warning
* Gas leakage monitoring and warning
* Human or vehicle occupancy recognition
* Warning around important equipment during construction period
* Illegal intrusion/identification of abnormal personnel activities
* Construction of centimeter-level 3D models and digital twin of the operating region

Other requirements or points to note \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

* Renewable Energy Industry Inspection Solutions

**Renewable energy industry scenarios:**

* Hydroelectric power station: linkage inspection of cameras and drones, identification of equipment damage
* Wind energy equipment: Wind inspection, identification and analysis of equipment failures or damages
* Photovoltaic equipment: predicting power generation through simulation design
* Photovoltaic equipment: infrared recognition of hot spot defects
* Large scale regional routine inspections
* 3D real-life model of the scene

Other requirements or points to note \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

* Smart Forestry Inspection Solutions

**Forest inspection scene:**

* Fire and smoke point recognition
* Identification of dead wood
* Identification of pest and disease prevention
* Anti theft and destruction recognition
* Two phase image comparison and intelligent evaluation
* Construction of forestry regional models and generation of intelligent inspection routes

Other requirements or points to note \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

* Smart Water Management Inspection Solutions

**Urban Water Stewardship: Rivers, Banks & Beyond:**

* Water ecological management
* River garbage dumping inspection
* Perception and analysis of flood season disasters
* Location of mountain flood situation and blockage points
* Assist on-site personnel evacuation and rescue
* Post disaster analysis
* Water level warning
* Quickly check the situation on site if personnel fall into the water
* Create a 3D water management scene with integrated IoT devices for unified control

Other requirements or points to note \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

3. What is your current inspection method and frequency? Approximately how many personnel or vehicles are deployed each year?

4. How much do you currently spend on inspections (monthly or annually)?

5. What specific hazards require detection? Please specify AI requirements (e.g.: wall crack identification, river surface debris monitoring, safety helmet compliance checks).

6. From your perspective, what solution would best address your current needs, and what outcomes are you targeting?