Template: Multispectral and Thermal Scans with Drones

**1. Preparation**

* Determine client needs and scanning requirements.
* Select appropriate sensors (multispectral, thermal).
* Set flight altitude and grid pattern.
* Evaluate environmental factors and weather conditions.
* Prepare control points and calibration panels.
* Check regulations and permits.
* Inspect drone and battery status.
* Establish safety procedures and emergency plans.

*Example Risks and Measures:*

| **Risk** | **Impact** | **Measure** |
| --- | --- | --- |
| Reflections and emissivity loss | Incorrect temperature measurements | Calibration with reference objects |
| Insufficient resolution | Incomplete data | Set correct lens and altitude |
| Weather influences | Incorrect measurements | Scan only under suitable conditions |

**2. Scan Execution**

* Prepare drone and perform pre-flight check.
* Execute flight according to planned pattern.
* Monitor temperature data and spectra live.
* Continuously check data completeness.
* Perform additional scans if necessary.
* Land drone safely and store data.

*Detected Issues and Proposed Actions:*

| **Issue** | **Proposed Action** | **Priority** | **Status** |
| --- | --- | --- | --- |
| Heat leaks in buildings | Implement insulation measures | High | Open |
| Unhealthy vegetation | Irrigation or soil inspection | Medium | In Progress |
| Reflections in thermal images | New scan with correct settings | Low | Open |

**3. Processing and Analysis**

* Upload images and apply thermal/multispectral corrections.
* Analyze data and identify anomalies.
* Visualize results in thermal maps or vegetation indices.
* Prepare report with recommendations.
* Share final results with client.