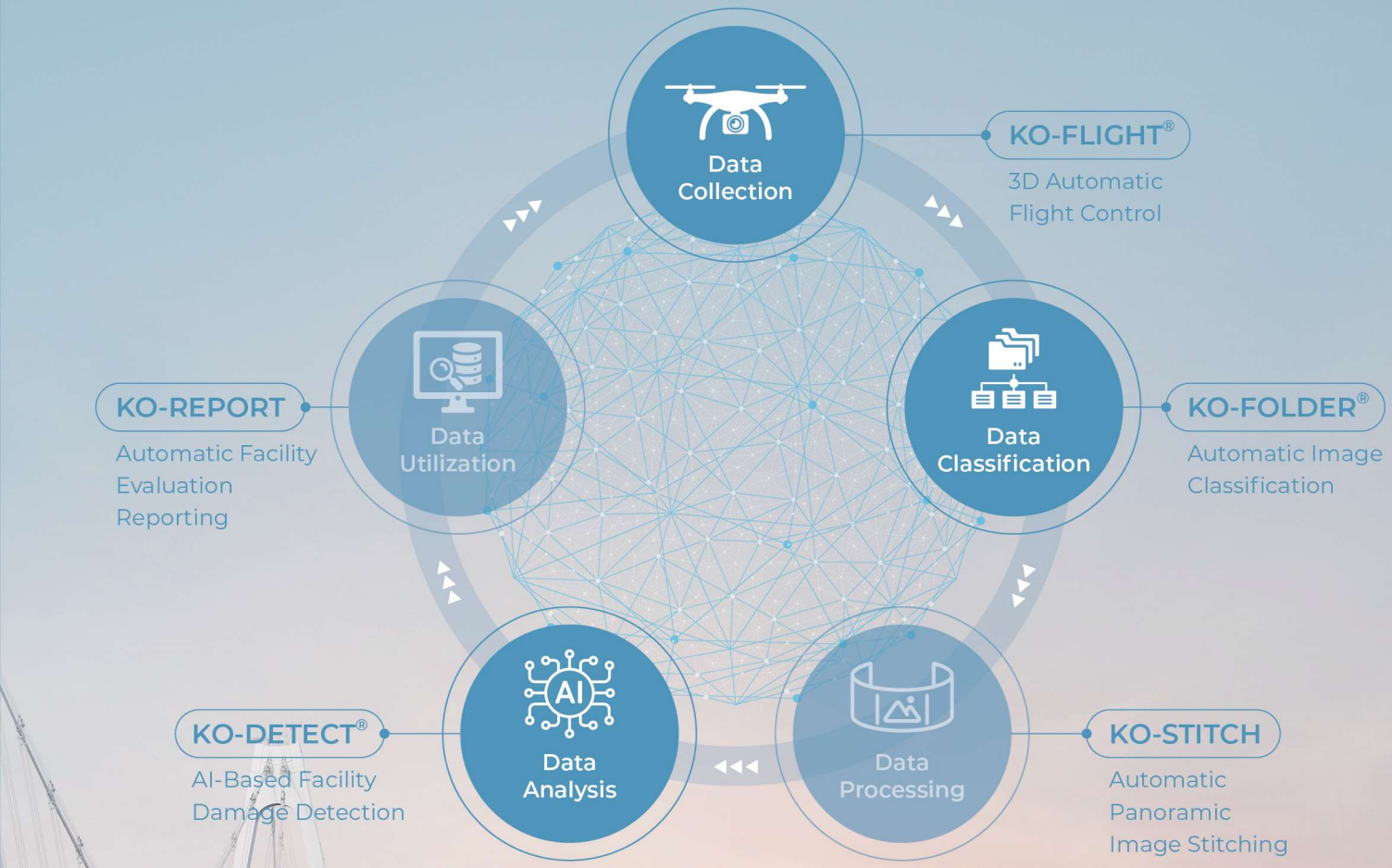
KO-FLIGHT | KO-FOLDER | KO-DETECT

SAFETY ALWAYS



DIGITAL SAFETY REVOLUTION

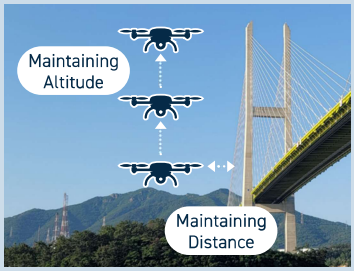
KO-MAPPER

Take **Safe & Comfortable** flights like an expert

An innovative solution that specializes in facility inspection through automated drone flight technology.
Even inexperienced drone operators can effortlessly gather consistent data through optimized flight planning.
KO-FLIGHT is not only much safer than visual inspection but also faster and more precise than manual drone flight.

BEFORE

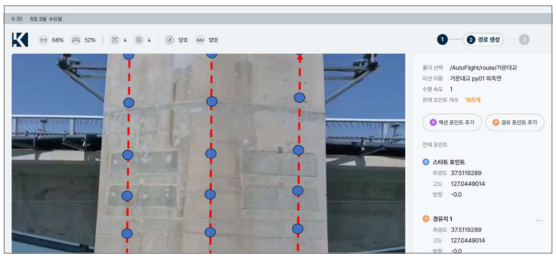
Drone inspection is conducted manually, making it hard to collect uniform data for inspecting the facility.



KO-FLIGHT

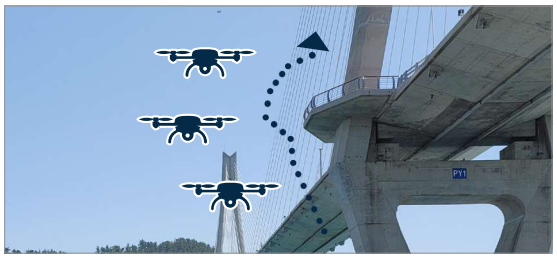
Ensure data collection consistency by autonomous flight of user-defined route at a constant speed and altitude

Features



3D Drone Flight Planning

Easily set up area for creating flight paths with real-time drone location or facility inspection records.



3D Autonomous Flight

Flight control is supported to ensure that even pilots with limited drone flying skills can effortlessly gather data.

Mission Management

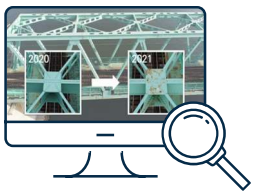
The details of the flight plan creation and execution are recorded.

Mission Sharing

Data collection can remain consistent even when the drone operator changes.

Use Cases

Regular Facility Inspection



Time Series Analysis

Flight Data Report

Effects

50%

- Optimizing data collection
- Reducing flight time by more than 50%.

- Minimizing human and material resources
- Reducing project costs by more than 30%.

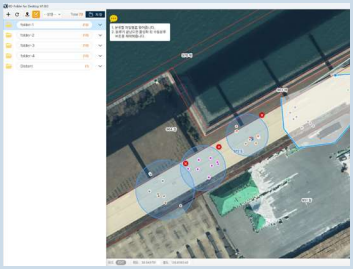
- Setting drone filming standards in the same location.
- Improving reliability and accuracy by more than 50%.

Image classification has now become **Easy & Simple**

An automatic classification solution clusters images based on their location information.
Intuitive UI can automatically categorize large amounts of images.
KO-FOLDER provides automatic foldering of images for convenient use.

BEFORE

A significant amount of time and manpower is required to classify a large number of similar images.



KO-FOLDER

Ensures systematic data management for vast amounts of similar images.

Features

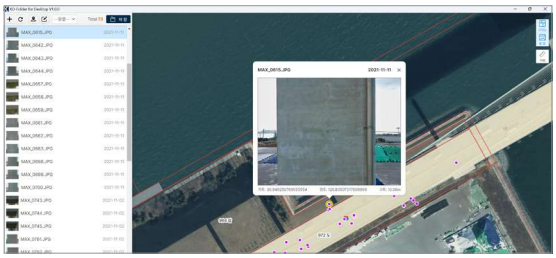
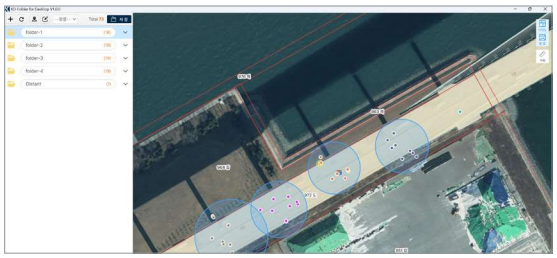


Image Preview

Easily identify the filming status.

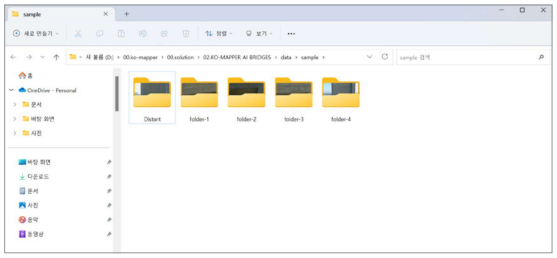


Location-based Automatic Image Classification

Our self-developed clustering algorithm classifies images automatically.

Intuitive Editing

The user-friendly UI/UX allows the operator to edit freely.



Automatic Foldering

Tens of thousands of images can be automatically grouped, enabling efficient management of project files.

Use Cases

Classifying by Composition

On-site Verification

Project References

Effects

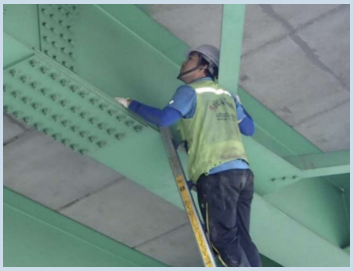
- High-resolution image classification(10,000 photos/min)
- Reducing image processing time by more than 80%

- Minimizing human and material resources
- Halving the image processing cost

- Comparison and analysis with existing image data
- Validation by management purpose

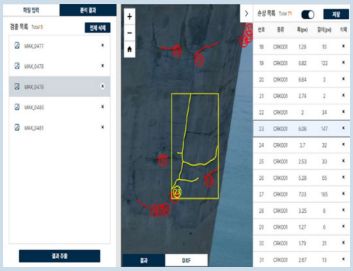
Detects facility damage **Quickly & Accurately**

AI solution to detect and analyze damage information of facilities.
Quickly analyze images to detect damaged areas.
KO-DETECT provides systematic reporting with precisely detected data.



BEFORE

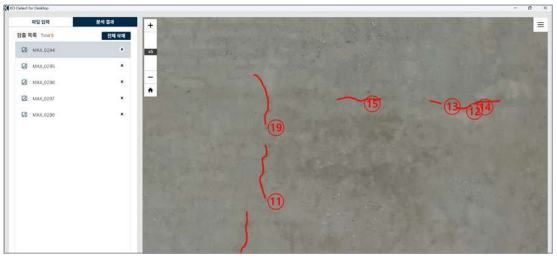
Visual inspection relies on the subjective judgment of the workers.



KO-DETECT

AI automatically detects and analyzes facility damage to facilitate quick and objective decision-making.

Features



Deep learning-based Facility Damage Detection

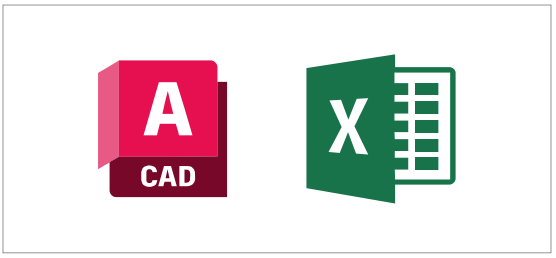
AI automatically and promptly detects facility damage.

Scale to Actual Size

Accurate analysis is possible by converting the damage detected in the video to the actual size (px -> cm).

Edit Detection Results

The operator can perform additional editing for further decision analysis.

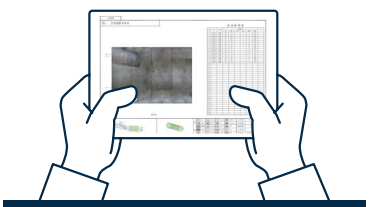


Output Analysis Result

Various file formats, such as DXF and XLSX, are supported to enhance the required versatility in the inspection field.

Use Cases

Real-time On-site Survey



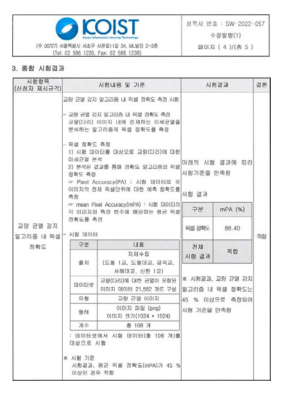
Facade Inspection Report

Facility Condition Assessment

Effects

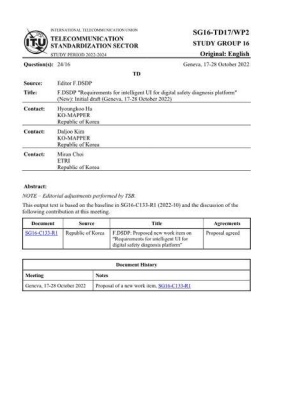
- Reducing inspecting period by more than 85%, compared to the current inspection
- Reducing project budget by more than 30%, compared to the current inspection
- Quantification of objective damage information (Up to 0.1 mm)

Technical Certification



Performance Evaluation

Patents



ITU-T

Business Application

Facility Management

- Inspection Management
- Damage Detection
- Time Series Analysis

Construction

- Progress Management
- Supervision Support
- Safety Monitoring

Land Information

- Terrain Change Detection
- Slope Stability Analysis
- Digital Mapping

Performance Evaluation

- Vegetation Distribution
- Pest Distribution
- Disaster Prevention Decision Support

Performance Evaluation

- Non-point Source Pollution
- Contamination Distribution
- Algal Bloom Distribution

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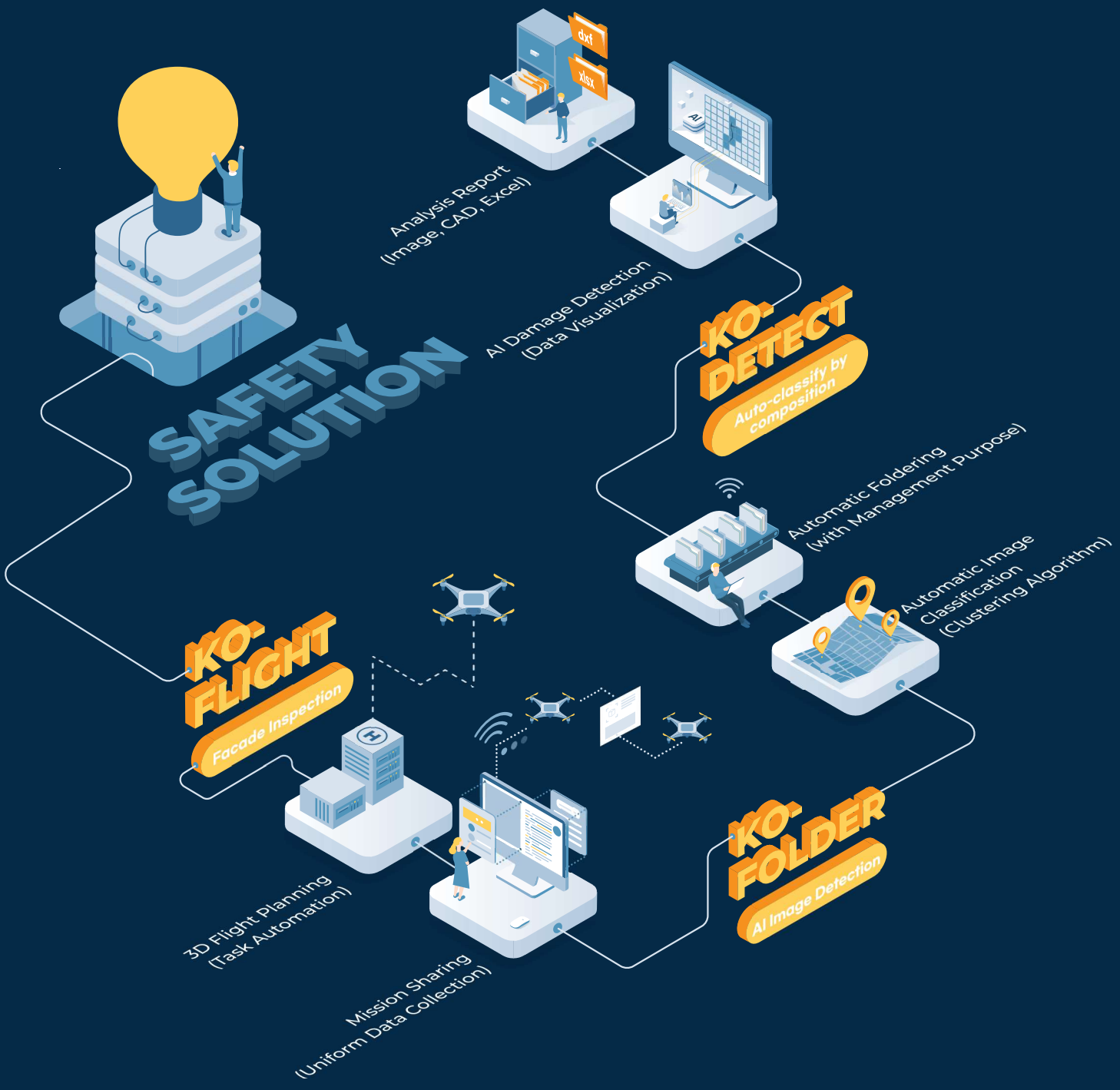
Digital Safety Inspection **One-Stop Package**



Procedure	Administrator	Inspector	Operator	Remarks
Facade Inspection			0	Autonomous Flight
Damage Analysis		0		AI Image Detection
Quantity Takeoff		0		Numerical Analysis
Project Management	0			Process Control
Time Series Analysis	0			Damage Assessment Tracking
Inspection Report		0	0	Project References
On-site Verification	0			Matching location information