

Make Inspection Easy

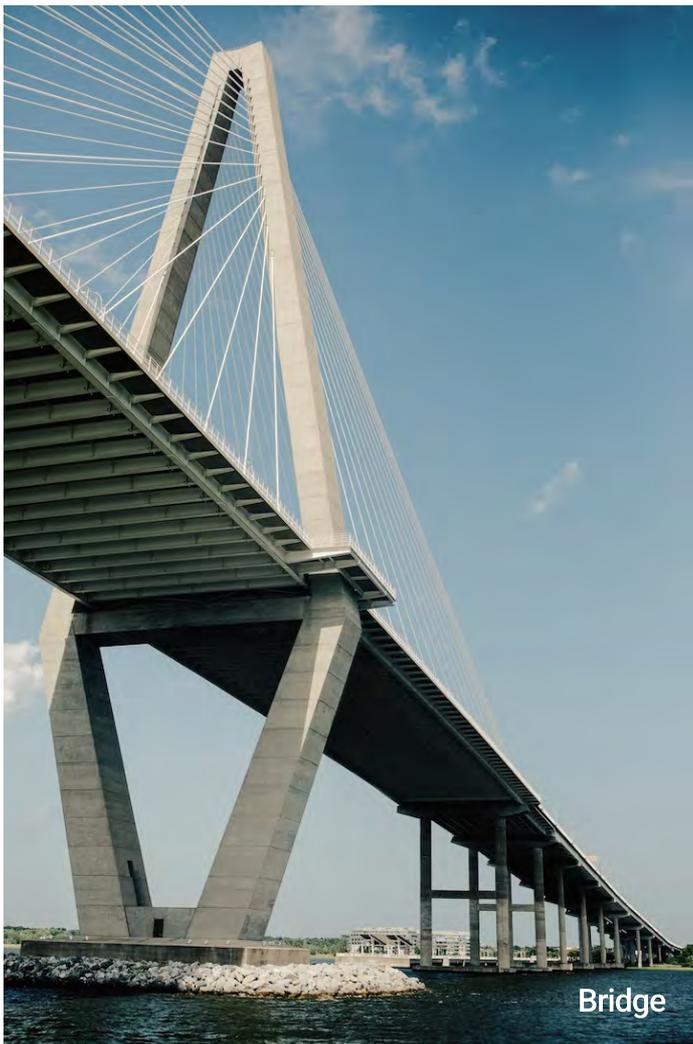
Data Management Platform

# zoomable™

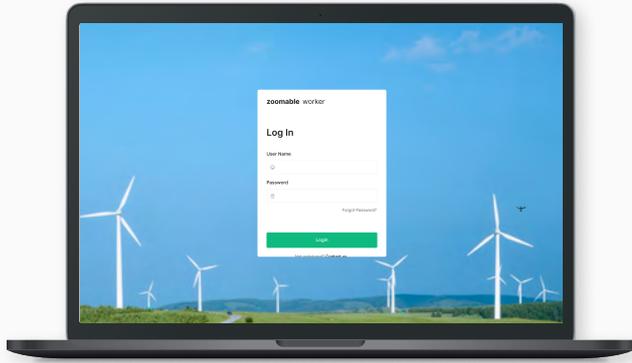
## Adding a New Perspective with Drones

Autonomous drones for capturing inspection data.

Smart Defect Analysis and Data Management Platform.



# Overview



## Zoomable in Brief

A cloud-based analytics platform designed to help industrial facilities manage their inspection data throughout its lifecycle.

From pre and post-processing to fault detection and reporting automation, Zoomable harnesses the power of cutting-edge AI to streamline the entire analytics workflow.

## Why Zoomable?

### Data Ingestion

Zoomable serves as a single source of truth for all your inspection needs.

Zoomable can extract and process images regardless of how they were collected in the first place - whether that be ground-based monitoring, rope access, or even drone inspections from other service providers. Users also have the option to bring over sizable datasets like orthopedic maps and three-dimensional models.

Zoomable stands out for its exceptional ability to exchange data seamlessly with external applications, allowing for effortless integration with legacy systems and existing processes.

### AI-Powered Cloud Computing

Unlike on-premise counterparts, the cloud-based platform in Zoomable comes with the ability to access encrypted data stored within highly secure servers regardless of location.

Zoomable also boasts features backed by topline AI capacity, such as automated defect identification and 3D modeling.

### Effective Data Management

Packed with comprehensive range of features from data ingestion and processing to analysis and reporting, Zoomable ensures seamless and reliable management of inspection data for all types of industrial facilities, including but not limited to bridges, dams, and wind turbines.

Zoomable demonstrates its value through the breakdown of data silos and effective decision-making upon implementation.



# Inspection Service Process



## Step 1

### Data Ingestion

Images collected through Nearthlab's drones as well as data from outside sources can be imported into Zoomable.

## Step 2

### Smart Analytics

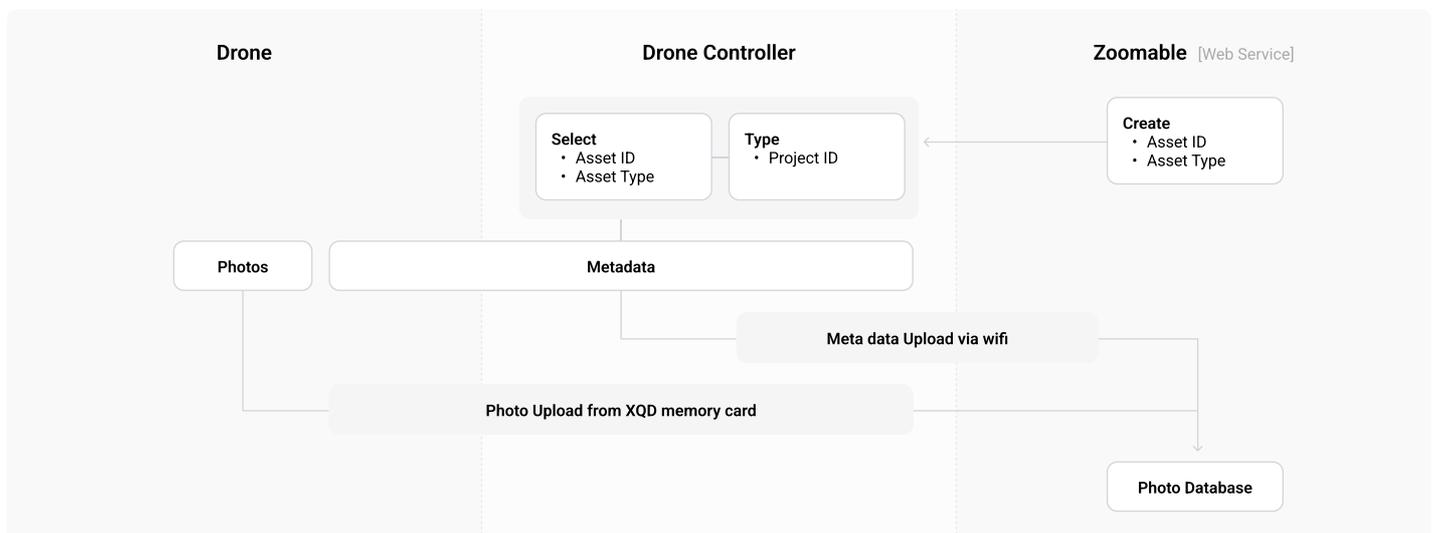
Nearthlab's proprietary AI harnesses the power of big data to categorize the defects according to type and severity before offering custom maintenance recommendations.



## Step 3

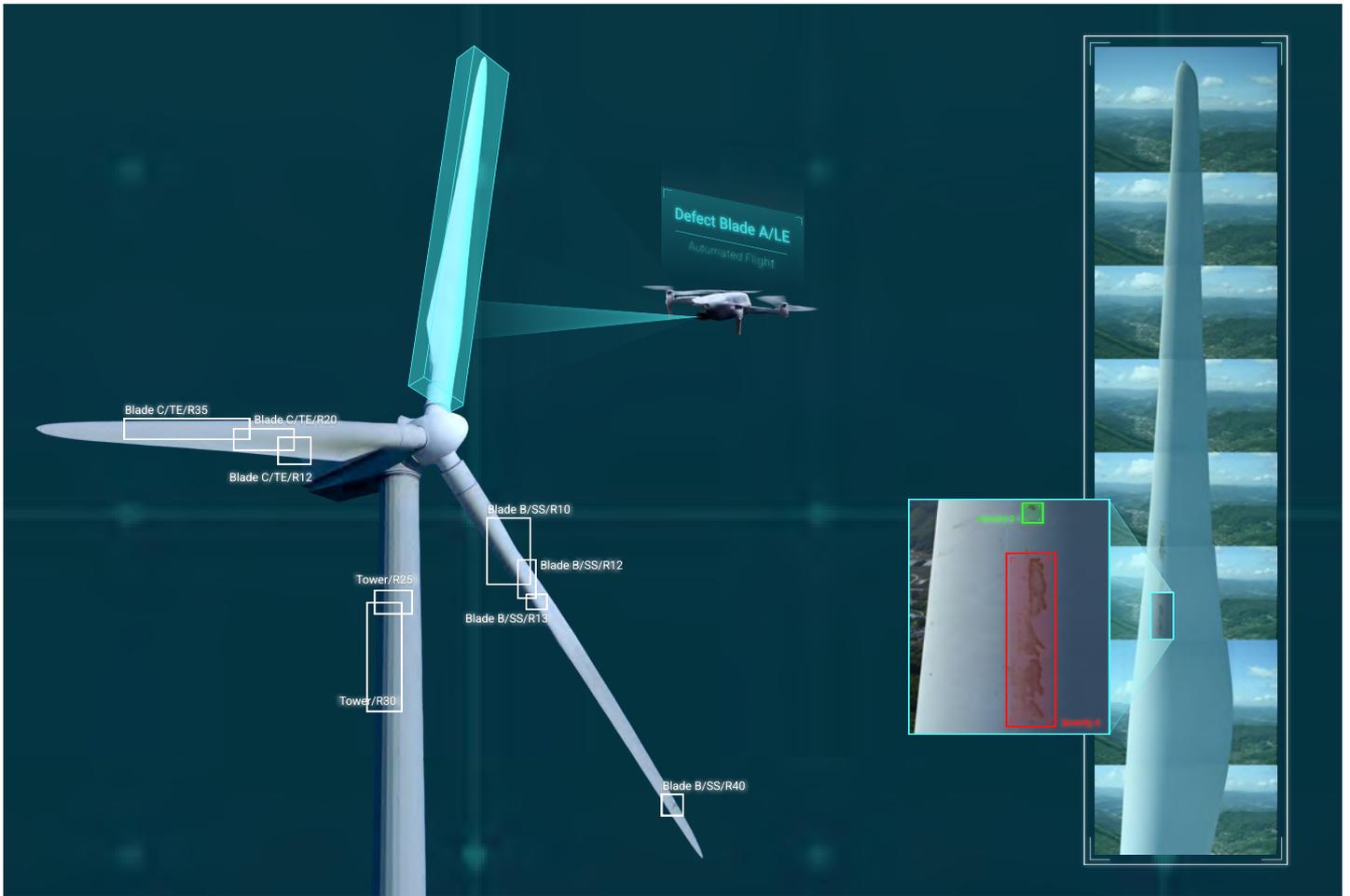
### Data Management

Extract actionable insights for enhanced decision-making and stay on top of datasets with topline management features.



Zoomable Data Generation and FlowChart

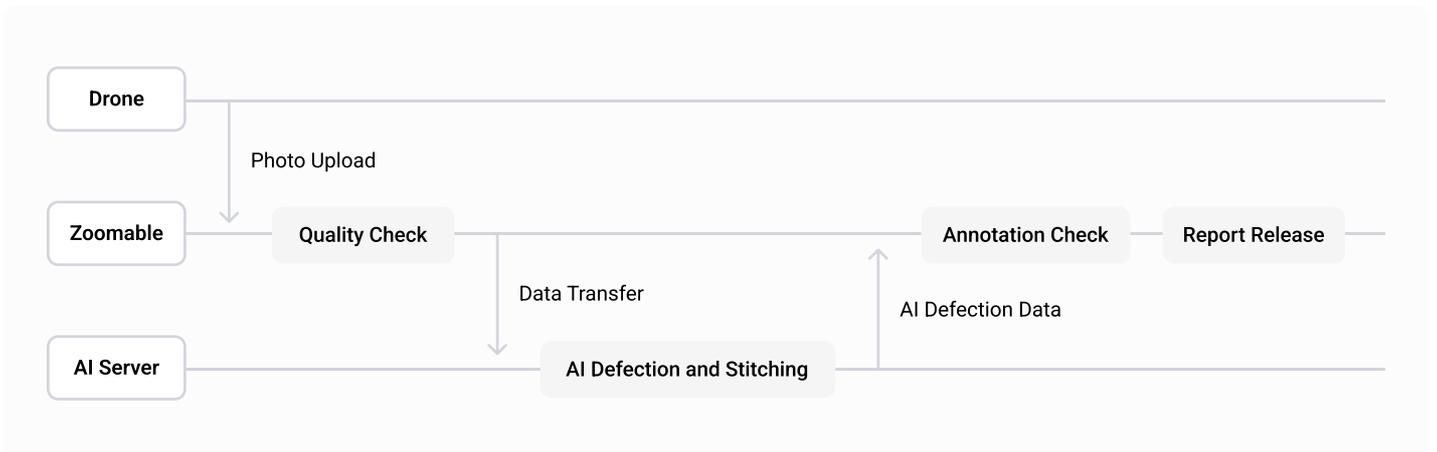
# AI Stitching and Detection



## Application of AI Technology

Zoomable boasts topline AI capacity. Namely, Zoomable comes with various post-processing features including but not limited to 2D registration to 3D construction through stitching technology.

Once stitching is done, Zoomable analyzes the images to pinpoint the defects, dramatically reducing the time it takes to process and analyze the inspection results.



Zoomable Data FlowChart

# Damage Growth Tracking

ZoomableDemo / ZoomableDemo Farm / Defect History

### Defect History

04-2023 PH2\_001 630582

Blade Blade Side Defect Type Severity

ID	Location	Defect Type
6...	A/LE/3	Flaking
6...	A/LE/5	Flaking
6...	A/LE/5	Crack
6...	A/LE/5	Crack
6...	A/LE/8	Crack
6...	A/LE/17	Chip
6...	A/LE/28	Flaking
6...	A/LE/28	Chip
6...	A/LE/30	Chip
6...	A/LE/30	Flaking
6...	A/LE/33	Flaking
6...	A/LE/33	Flaking

LOCATION: Blade A / LE / R3 Date: 2023

DEFECT TYPE: Flaking SEVERITY: 2

LENGTH: 79 WIDTH: 43 AREA: -

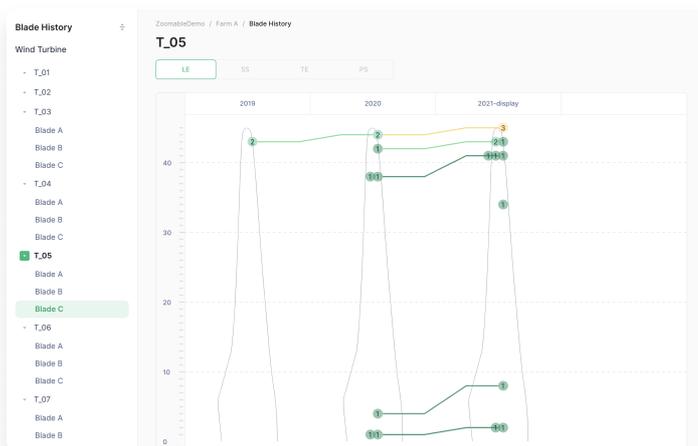
### Related Photos

2021	05-2022	11-2022
Blade A / LE / R12	Blade A / LE / R14	Blade A / LE / R16
Blade A / LE / R10	Blade A / LE / R11	Blade A / LE / R13
Blade A / LE / R7	Blade A / LE / R8	Blade A / LE / R10
Blade A / LE / R4	Blade A / LE / R5	Blade A / LE / R6
Blade A / LE / R1	Blade A / LE / R2	Blade A / LE / R2

## Defect Analysis

Manage inspection data in different ways: defect type, location management, numerical calculation, and more.

Get a bird's eye view of the asset to monitor defect status.



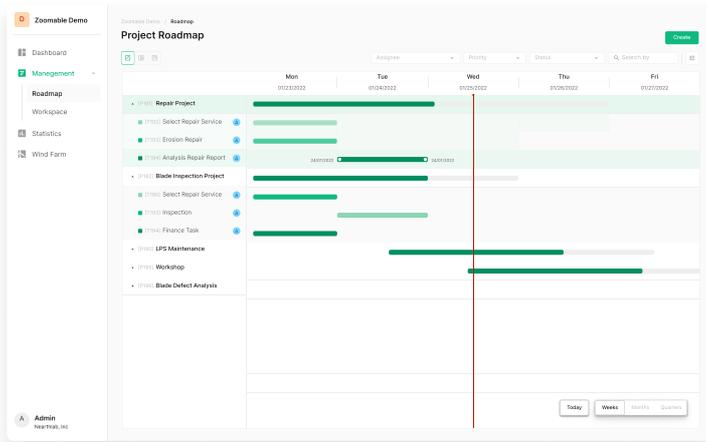
## Defect History

Zoomable supports time series analyses of assets through AI.

See how defects progress and are managed over time. Based on this information, Zoomable draws out insights as to what types of defects are spread across the assets and where coats are incurring.

## Zoomable Main Feature

# Project & Task Management



## Project Management

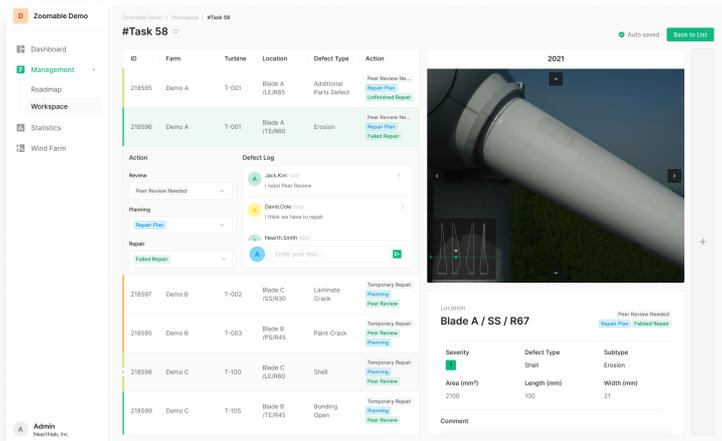
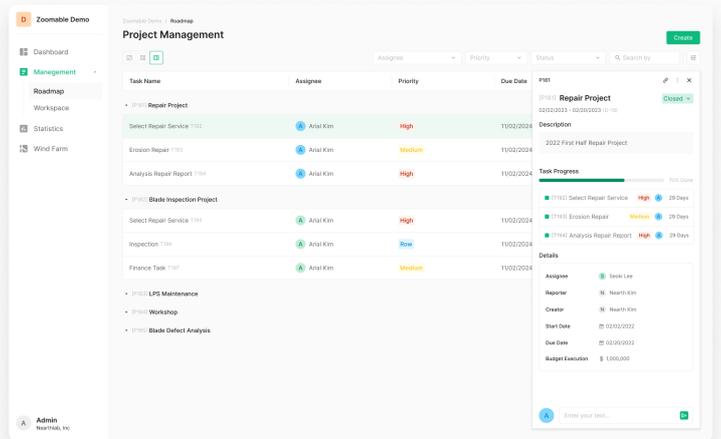
Create and assign various projects and tasks.

Streamline the entire project management process by looking over inspections and repair status before portioning out specific tasks.

## Task Assignment & User Permission

Manage attachments and worklogs.

Choose who sees what to prevent unwarranted disclosures particularly as regards to external users.



## WorkSpace and Action Tag

Manage data through Annotation.

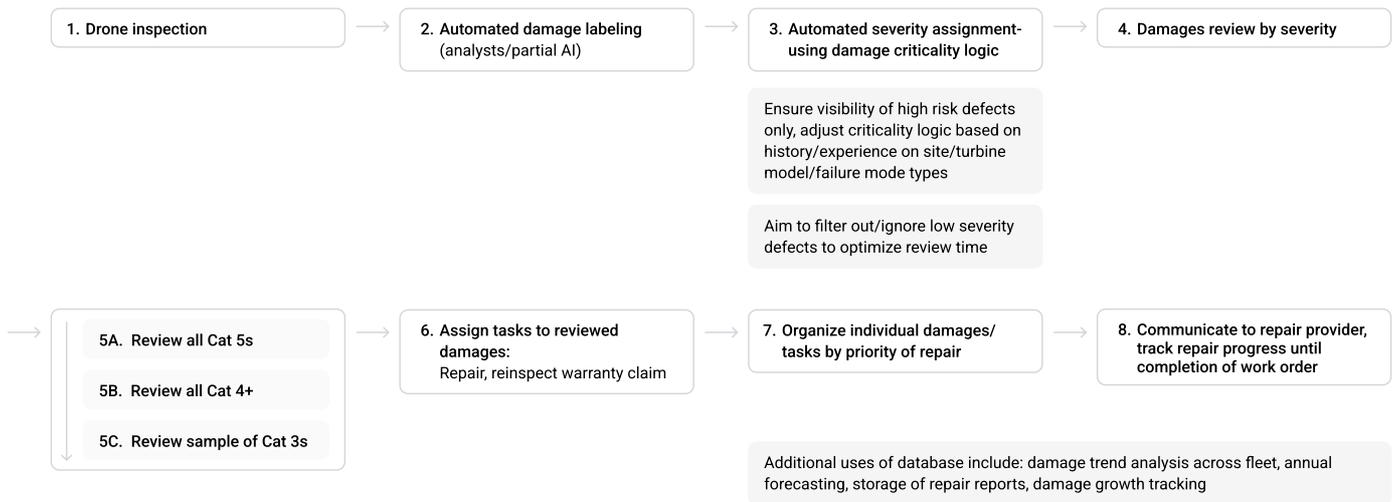
Comparison with historical data and access from various parts are all possible. Annotation can also be managed every step of the way from Review and Planning to Repair through Action Tag.

# Wind Turbine Management

## Case Study : Application of Maintenance Life Cycle

Zoomable lets users manage inspection data in different ways.

Further, users can bring over their own management process to handle wind projects.



## Case Study : Cost Efficiency through Multi-data Analysis

Clients can bring years of data over to Zoomable.

By ingesting vast libraries of images, the data can be unified without having to worry about working through silos. Plus, being able to cross-reference the inspection results with historical data makes it easier to gauge repair costs.

S	ID	WTG#	Blade	Side	R	Defect
3	640352	PRW_056	B	LE	34	Erosion
4	640355	PRW_056	B	LE	42	Erosion
5	640369	PRW_056	C	LE	40	Erosion
3	640370	PRW_056	C	LE	40	Erosion
3	640371	PRW_056	C	LE	40	Erosion
3	640372	PRW_056	C	LE	40	Erosion
3	640373	PRW_056	C	LE	40	Erosion
3	640374	PRW_056	C	LE	40	Erosion
3	640648	PRW_065	A	LE	40	Erosion
3	640660	PRW_065	B	LE	39	Erosion
3	640661	PRW_065	B	LE	41	Erosion
5	640662	PRW_065	B	LE	41	Erosion
3	640663	PRW_065	B	LE	41	Erosion
3	640670	PRW_065	C	LE	41	Erosion
3	640676	PRW_065	C	LE	42	Erosion
3	640800	PRW_069	A	LE	40	Erosion
3	640804	PRW_069	A	LE	42	Erosion
3	640813	PRW_069	B	LE	42	Erosion
3	640828	PRW_069	C	LE	39	Erosion

Removed List

Defect Info: Defect #640828, Severity 5, Defect Type: Erosion, Length: 71mm, Width: 43mm. Comment: Pothole through the laminate. Risk of water ingress. Painting/coating wore away completely and laminate is clearly exposed and damaged. Repair as soon as possible.

Zoomable Reference

# Infrastructure Management

## Case Study: Bridge

Zoomable brought digital transformation to the world of bridge inspections, which used to be managed manually.

Clients have inspected not just the outside but the inside of the bridges with the help of Zoomable.

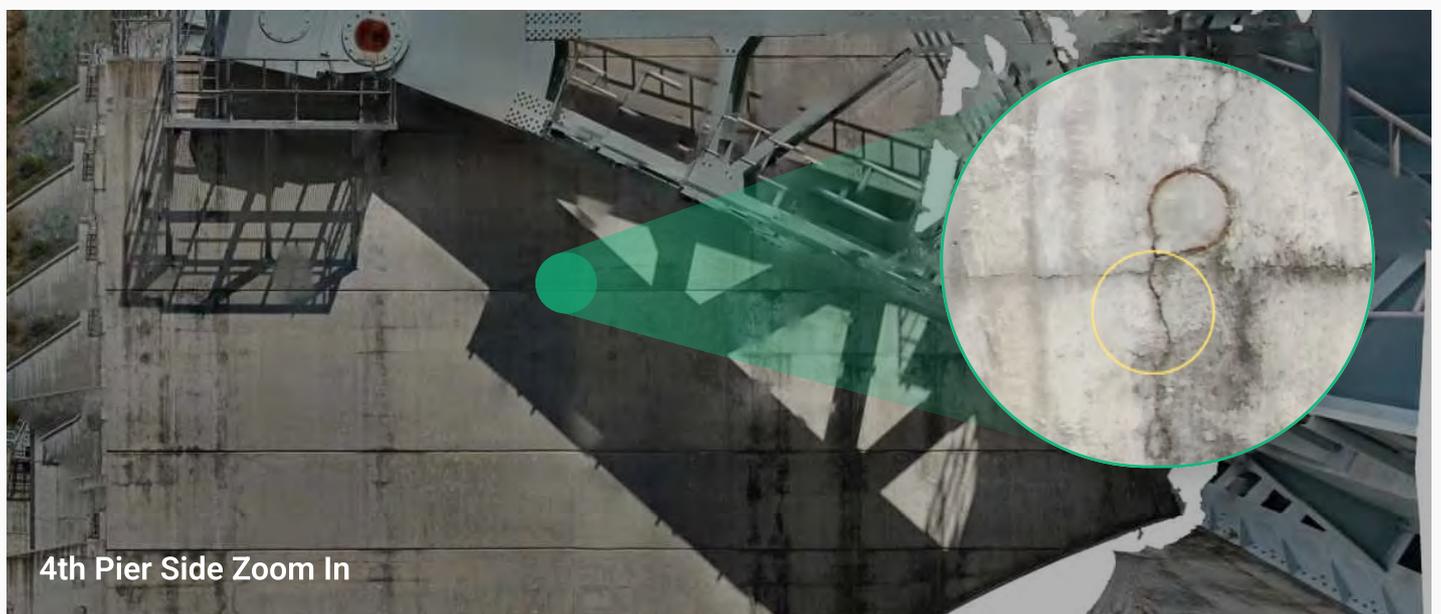
Zoomable's automatic reporting function streamlines the repair process by generating custom reports that are then handed off to maintenance companies.



## Case Study: Dam

Size isn't a concern. Mammoth infrastructure like dams is being managed through Zoomable.

Tracking down the exact location of the defects is particularly difficult with dams. However Zoomable leverages both 3D modeling and 2D orthographic maps to identify and manage the defects.

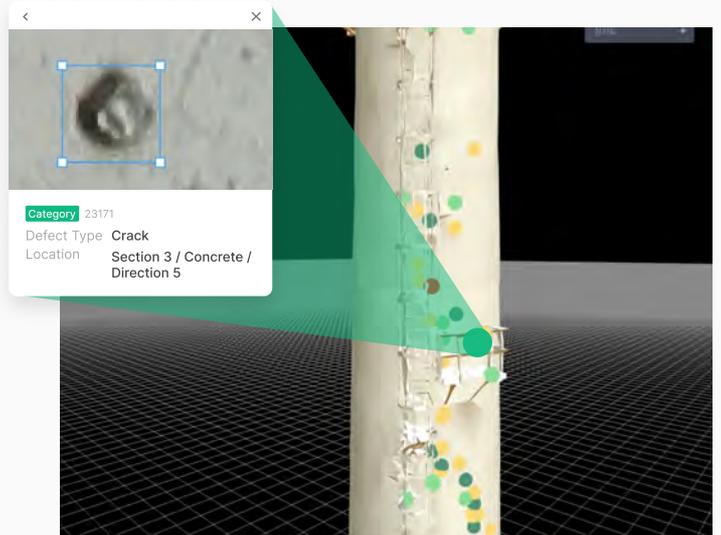


4th Pier Side Zoom In

# Other facilities

## Case Study: Others

Industrial facilities are incredibly tricky to inspect manually. Yet, Zoomable has been developed to be customizable in terms of defect types and classification standards in line with various facilities such as apartments, concrete stacks, and communication towers.



## Case Study: Indoor Inspection

Nearthlab's cutting-edge drone technology goes beyond external inspections. From construction sites and inside of the blades to warehouse and inventory management, Zoomable can be relied upon even for internal inspection purposes.