

Innovative Engineering Solutions

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# Technical Inspection Consultancy



SCAN ME



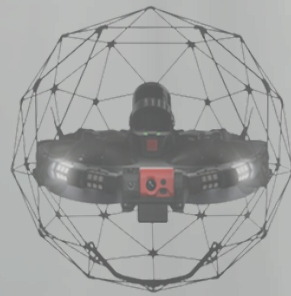


# Technical Inspection

## Who We Are

With over 40 years of expertise in the oil and gas industry, we are a trusted partner in providing innovative and comprehensive technical solutions for vessel inspection and maintenance.

## Our Mission



Deliver top-tier corrosion and visual inspection services to help ensure the safety, reliability, and longevity of your assets, using cutting-edge technology and industry-leading expertise.

## Proven Track Record

Over 100 corrosion studies conducted for ZAIMS, showcasing our commitment to providing high-quality, detailed, and actionable findings.

# Why Corrosion Inspection Matters

## **Preventing Structural Failures:**

Corrosion can lead to material degradation, structural weakening, and catastrophic failures, especially in the oil and gas sector.

## **Cost Savings:**

Early detection of corrosion minimizes costly repairs and operational downtimes.



## **Regulatory Compliance:**

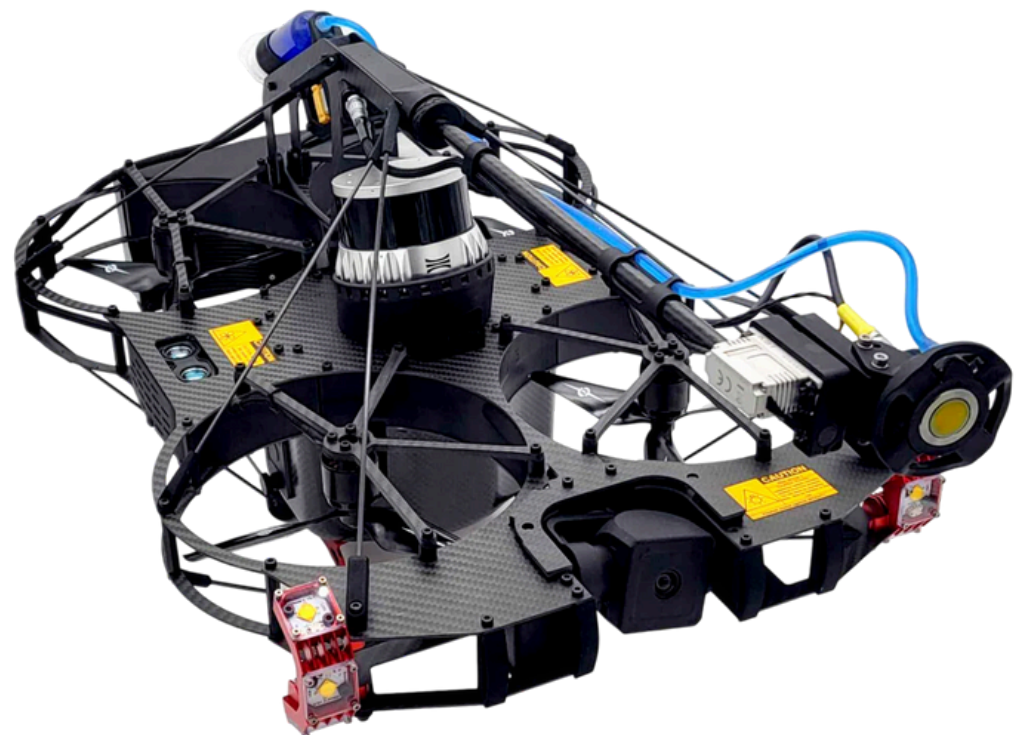
Ensuring that vessels and equipment meet industry safety and compliance standards is paramount to avoiding legal and financial repercussions.



# ZXR Inspection Technology

## UAV Drones:

- Flyability Elios 3 w/UTI Module
- Scout 137 w/UTI Module



## ROV:

- VideoRay Defender



## Capabilities added to Zentech:

- UT Gauging of Steel Structures via UAV Drones
- Under Water Inspections via ROV Drone



# Technology- Driven Inspections

## Flyability Elios 3:

- The Elios 3 is designed for confined space inspections and 3D mapping, providing visual and thermal data in hard-to-reach areas.
- The Elios 3 inspects assets like boilers, tanks, pressure vessels, stacks, and underground tunnels.
- Used in industries such as oil & gas, mining, power generation, infrastructure inspections, and wastewater management for thorough internal inspections.





# Technology- Driven Inspections



## Scout 137 Drone System:

- Ultrasonic Thickness Measurements (UTM): Accurate, non-destructive measurements to assess material thinning and corrosion.
- High-Resolution Visual Inspection: Captures detailed imagery, identifying areas of concern with precision.
- Simultaneous LiDAR and Visual Data Collection: Provides comprehensive inspection data in one seamless session, eliminating the need to switch equipment or compromise data quality.





# Technology- Driven Inspections

## ROV Defender by Video Ray:

- A robust ROV system designed for safe and efficient inspection of submerged structures.
- Enables real-time visual inspections in difficult-to-reach underwater locations







# Technology- Driven Inspections

## Scanning Equipment:

- FARO S120
- FARO S150
- Leica BLK-360
- NavVis VLX 3
- Elios 3
- Matterport Pro3





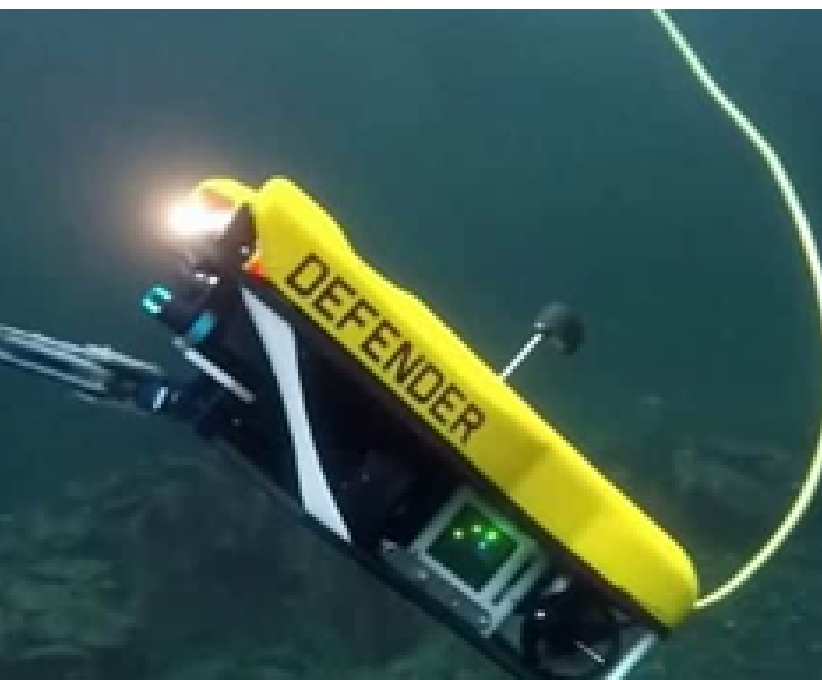
# Technology- Driven Inspections

## Software:

- FARO Scene
- FARO As-Built
- Leica Cyclone
- NavVis Ivion
- Flaybility Inspector 5
- Matterport
- Cloud Processing
- Autodesk RECAP

## Photogrammetry:

- Pix4D





# How We Conduct Our Inspections

## **1.Planning & Preparation:**

Define the scope and objectives of the inspection, focusing areas.

## **2.Use of Technology:**

Use our equipment depending on the SOW

## **3.Data Collection:**

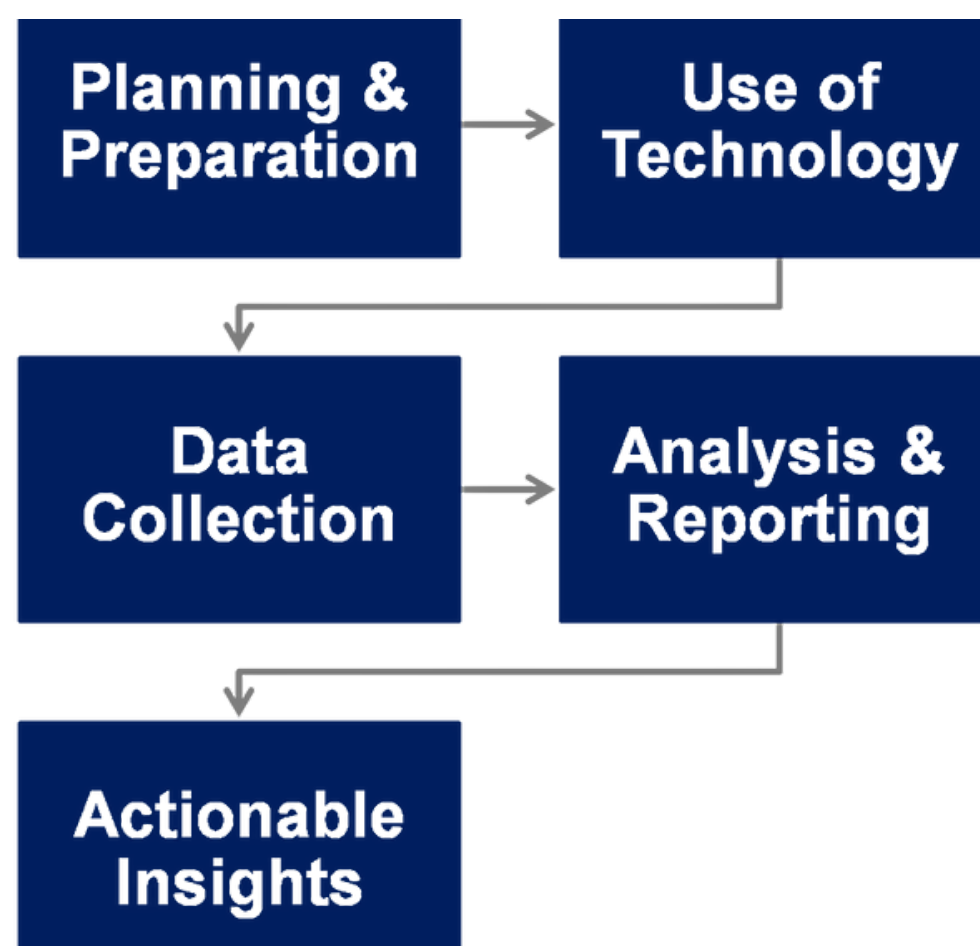
Gather detailed imagery and precise measurements during a single inspection session, ensuring maximum efficiency.

## **4.Analysis & Reporting:**

Process and analyze the data to identify corrosion trends and areas requiring attention.

## **5.Actionable Insights:**

Provide detailed, actionable recommendations, if required



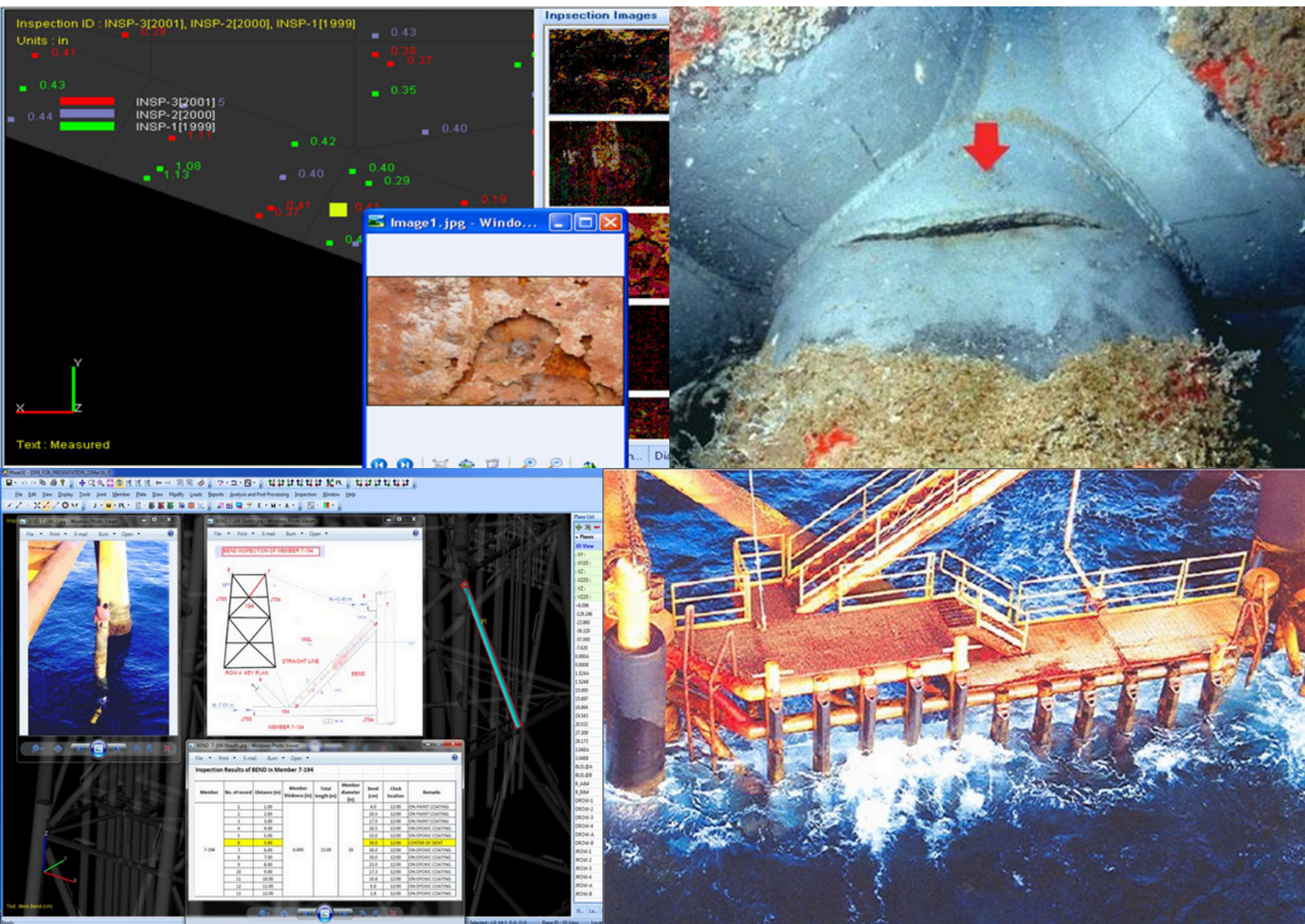


# Example of Projects

## Offshore Platform Inspection

**Challenge:** A remote offshore platform was experiencing unexplained material degradation in critical structural components.

**Solution:** A comprehensive inspection revealed localized corrosion, allowing for targeted maintenance and extending the asset's life.





# Example of Projects

## Tanker Vessel Corrosion

- **Challenge:** A major tanker was showing signs of corrosion in multiple areas, threatening operational safety.
- **Solution:** Our ultrasonic thickness measurements pinpointed the most affected areas, which were promptly addressed, preventing a potential catastrophic failure.



**Offshore Platform Inspection:** The platform suffered severe collision by boat

- **Challenge:** A remote offshore oil rig was experiencing material degradation in critical structural components.
- **Solution:** A comprehensive inspection revealed Partial detachment of weld at deck leg to pile connection, Big dent in the same leg below the leg-pile seam connection.



Partial detachment of weld at deck leg to pile connection



Big dent in the same leg below the leg-pile seam connection







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# Contact Us

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