

2. Soft Robotic Climbing & Repair

Blades: Erosion, Cracks

Tower: Corrosion,
Structural Defects

Repair Commandants

3. The Autonomous "AI Brain" Sensor Fusion & Swarm Intelligence

1. Bio-inspired Aerial Inspection

Gecko-Inspired

Vision

Sonar

LiDAR

Gyroscope

Path Planning

Swarm

Damage

Assessment AI

Ant Colony

Foundation: Scour,
Marine Growth

Inspection
Tasks

Repair
Missions

Structural
Health Report

"High-Resolution NDT
Scanning
(e.g., LiDAR, Ultrasound)

Whale-Fin-Inspired
Morphing Wings for Gust Stability

