

# CLEO ROBOTICS

*Bringing Physical AI to Unreachable Places*



## Lack of Data Where It Matters Most: Delaying Decisions, Driving Costs, Risking Lives

**HIGH-RISK OPERATIONS**  
(Infrastructure, Energy, & Confined Spaces)



**Dangerous Inspections**  
Oil & gas, nuclear, mining, energy



**Digital Twins**  
Construction, manufacturing, aerospace



### The future of work:

- Elimination of dangerous jobs
- Automation of repetitive tasks
- Digitizing the physical world
- Utilizing AI for decision making

# Dronut<sup>TM</sup>



Unparalleled data capture where others can't go —  
AI-powered flight for the most critical and inaccessible spaces



## INTELLIGENT

A suite of sensors and an AI engine allow for autonomous operation



## EFFICIENT

Capture real - time data and make faster, safer and smarter decisions



## COMPACT

Collect data in places that no other robot or human can access



## SAFE

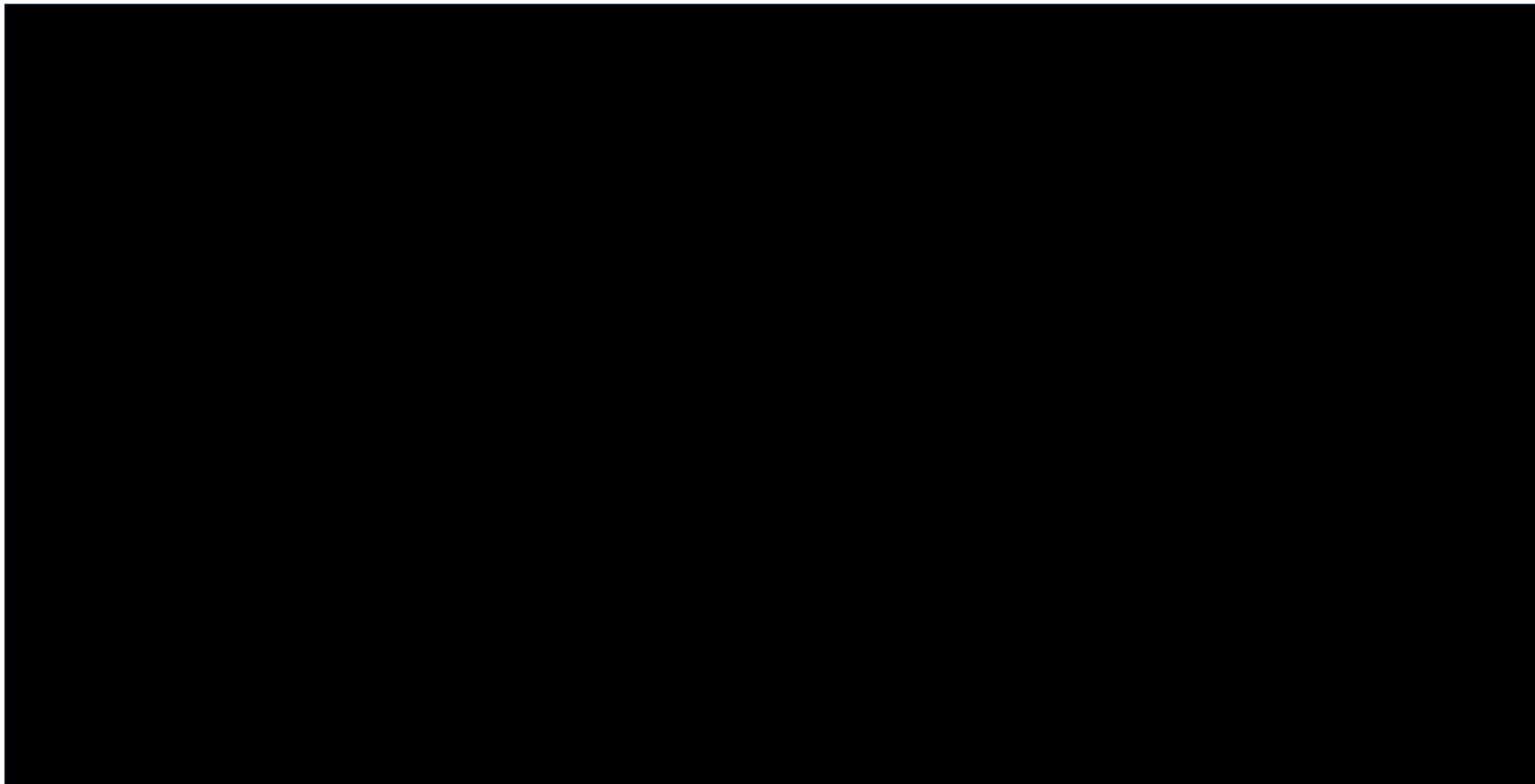
Fly safely around people and sensitive equipment



## PATENTED TECHNOLOGY

Controlled by Cleo's proprietary thrust vectoring technology

## Dronut in Action



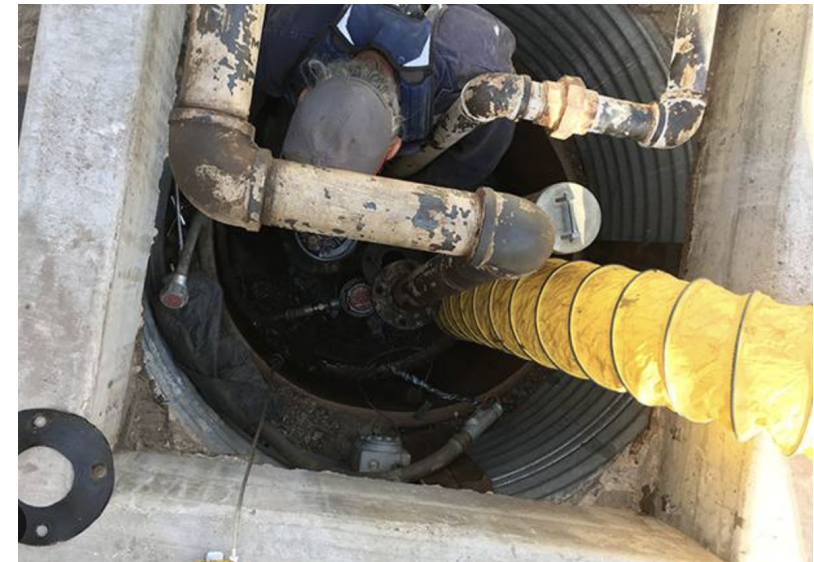
The Dronut isn't just a better drone —it enables entirely new capabilities

Dronut: The Only Solution for Operation in Confined Environments and Near People and Sensitive Equipment				
Attribute/Feature	Dronut	Traditional Drones	Legged Robots	Wheeled Robots
Compact Size	<div>✓</div> Ultra-Compact	<div>✗</div> Too Large for Confined Areas	<div>✗</div> Bulky & Requires Clearance	<div>✗</div> Space-Consuming & Rigid
Safe Around People & Equipment	<div>✓</div> Hidden Rotors, Collision-Resistant	<div>✗</div> Rotors Pose Safety Risk	<div>✓</div> Stable but Risk of Falling	<div>✓</div> Stable but Limited Mobility
Indoor Operation	<div>✓</div> Optimized for Indoor Use	<div>✗</div> GPS-Reliant & Prone to Collisions	<div>✓</div> Can Operate Indoors	<div>✓</div> Works Indoors, Limited Navigation
Confined Space Operation	<div>✓</div> Maneuvers in Tight Spaces	<div>✗</div> Too Large & Risk of Damage	<div>✗</div> Requires Significant Space	<div>✗</div> Cannot Access Confined Spaces
Autonomous AI-Powered Navigation	<div>✓</div> Fully Autonomous, No GPS	<div>✗</div> Requires GPS & Manual Piloting	<div>✗</div> Slow & Unstable in Tight Spaces	<div>✗</div> Limited to Open Floor Navigation

# 3D Mapping of Challenging Environments in Naval Vessels

# The Problem

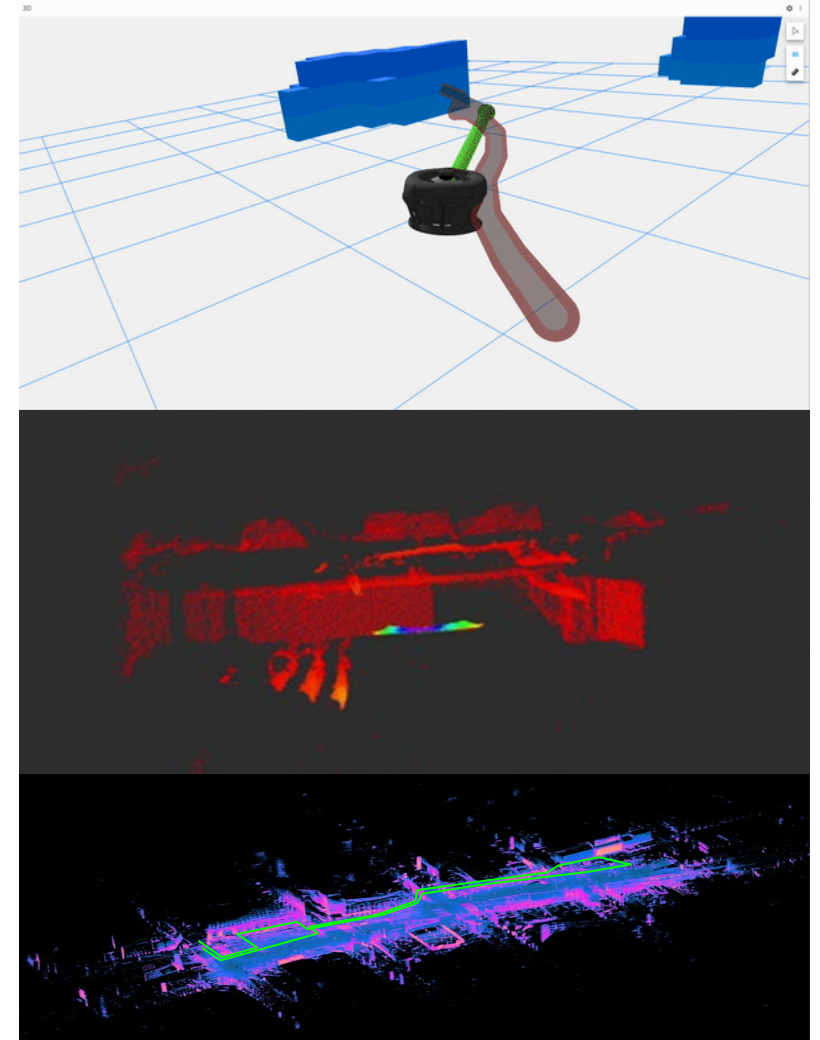
1. Existing 3D mapping technologies used by the BIW and the shipbuilding industry are difficult to deploy in tight spaces typically encountered aboard navy vessels, and often cannot be used in confined or hard to access areas
1. Due to line-of-sight limitations presented by fixed-point scanning, common scan techniques often leave “blind-spots”, resulting in incomplete compartment scans





# The Solution

- Cleo's solution collects data in these challenging environment in minutes, significantly reducing the manpower and time needed to 3D map entire ships
- Data collection includes LiDAR point cloud data and high resolution imagery. Data is then processed to generate high fidelity 3D maps



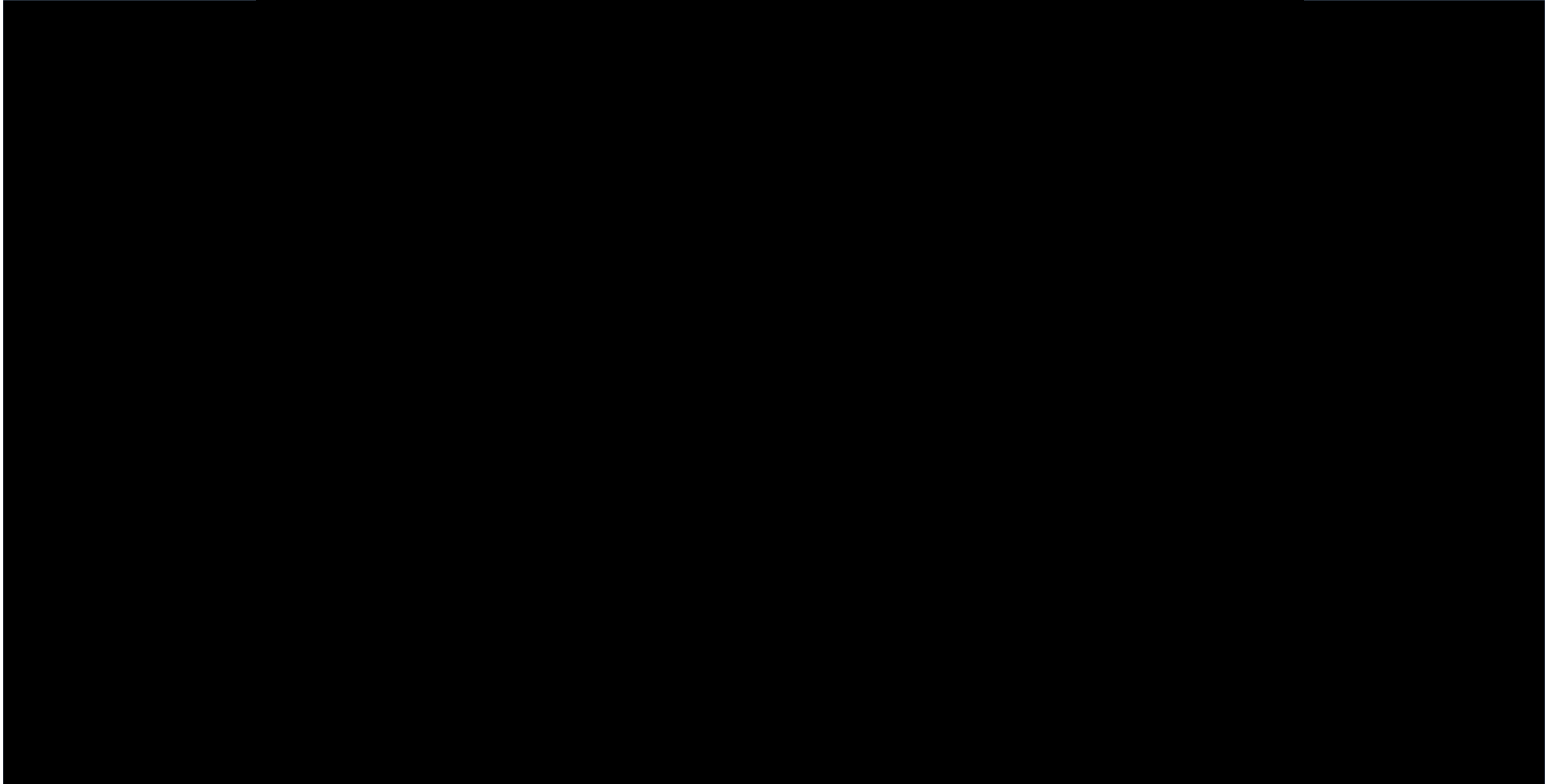


# Cleo's Solution: Key Features

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- 4K video capture
- Collection of 30,000 Lidar data points per scan at a frequency of 10 scans per second
- Reliable operation in confined and challenging shipboard environments
- Operation by unskilled drone operators with minimal training (3 hours)
- Data is stored on SD card
- Data is processed to generate colorized 3D digital reconstructions
- Digital reconstructions are generated at a rate of 15 minutes per 100 sqft

# Digital Reconstruction Example



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## Enabling Physical AI in Unreachable Places

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