

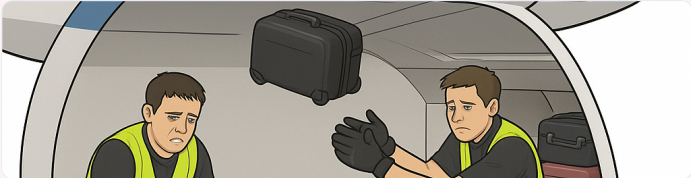


CARGOCOBRA

Intelligent Automation for Aircraft Cargo Loading

CargoCobra is the first low-CapEx, retrofit automation system that fully automates luggage loading in narrow-body aircraft, cutting labor by up to 100%—validated by Airbus.

⚠ The \$47B Industry Problem



- **Severe Constraints:** Handlers crawl into 1.1m–1.3m high holds to lift 30kg+ bags.
- **High Costs:** Injuries cost **\$2B+ annually** (55% staff chronic pain).
- **Labor Crisis:** Chronic shortage of staff for this grueling work.

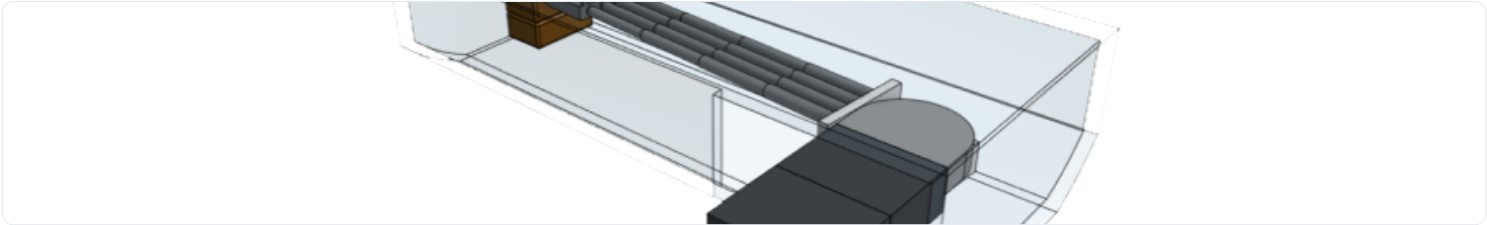
✅ The Solution: Smart Retrofit

- **Retrofit Ready:** Attaches to *existing* belt loaders. Low CapEx.
- **First-Mover:** The first viable solution to automate *inside* narrow-bodies.
- **Airbus Validated:** Proven POC demonstrating autonomous mapping.

📦 Product Portfolio: Scalable Automation

FEATURE	PRODUCT 1: SEMI-AUTOMATED	PRODUCT 2: FULLY AUTOMATED
Function	Mechanical Extension: Delivers bags to hands.	Autonomous Stacking: AI-driven stacking.
Role in Hold	Eliminates the "thrower" / passer.	Replaces human stacker entirely.
Labor Impact	50% Reduction (2 → 1 Staff)	100% Reduction (2 → 0 Staff)
Pricing & ROI	\$50,000 USD <1 Year Payback	\$90,000 USD (Hardware Only) + Service Charge (up to 50% of labor cost) <i>*Required for operation</i> <1 Year Payback

📷 System Overview: Inside the Hold



The CargoCobra unit extending from the cargo door deep into the hold, bridging the gap for seamless luggage transfer.

🏆 Competitive Landscape

Standard Belt Loader Status Quo	Powerstow High CapEx Incumbent	CargoCobra Low CapEx Disruptor
✗ 2 Staff Inside ✗ High Injury Risk	✓ 1 Staff Inside ⚠ Must Buy New Vehicle	✓ 0 - 1 Staff (Scalable) ✓ Retrofit Existing Fleet

🧠 Core Technology: Physical AI



- 🔧 **Telescopic Screw Mechanism**
Patented "screw-in-screw" design extends deep into the hold.
- 👁 **Vision-Guided Gripper**
Suction-cup end effector handles soft & hard luggage.
- 🧩 **Tetris-Style AI**
Proprietary algorithms optimize stacking density.

📈 Traction & Market

- ✅ **Validated:**
Airbus POC completed (Sept 2025); confirmed capability to map holds and grip luggage.
- 🗨 **Pipeline:**
Strategic discussions with SATS, Menzies, Swissport, and Unifi.
- 📊 **Market:**
Addressing an **\$18B TAM** (Top 100 global airports = \$2.5B SAM).