

STATUS: **EARLY 2026** // **CRITICAL UPDATE**



# CLEARING THE AIR: SECURING THE GLOBAL AEROSPACE SUPPLY CHAIN

Digital Solutions for the 2026 Regulatory Landscape

# THE 2026 MARKET PARADOX: RECORD DEMAND, STALLED PRODUCTION

## TRAVEL DEMAND



MARKET VALUE (2025):

**\$723.8 Billion**

Projected \$1.06 Trillion by 2032



AVERAGE FLEET AGE:

**16 Years**

Up from 14 years in 2019



NEW PART LEAD TIME:

**12+ MONTHS**



## OEM PRODUCTION



**THE CONSEQUENCE:**

Airlines are cannibalizing parked aircraft to survive the "Parts Drought".



# THE **DECENTRALIZED** REALITY OF GLOBAL MAINTENANCE



## GLOBAL FOOTPRINT:

**~977** FAA-CERTIFIED FOREIGN REPAIR STATIONS

## TREND:


**UP 30%** IN THE LAST 4 YEARS

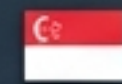



## OUTSOURCING:

**50%** OF MAINTENANCE SPEND IS NOW OFFSHORE.

## KEY HUBS:

 **CHINA (78 FACILITIES)**

 **SINGAPORE (54 FACILITIES)**

 **BRAZIL (22 FACILITIES)**

**HEAVY MAINTENANCE HAS SHIFTED FROM DOMESTIC HUBS TO LOW-COST GLOBAL CENTERS.**

# THE TRUST DEFICIT: THE AOG TECHNICS FALLOUT

The Catalyst: **AOG Technics Scandal**  
(Late 2023)

The Impact: Thousands of CFM56 engine parts sold with fake documentation. **Global fleet groundings.**

The New Requirement: Regulators now demand an **irrefutable "Dirty Fingerprint" trail** for every component.

The Reality: Paper verification is dead. **Digital verification is mandatory.**



# THE **REGULATORY HAMMER** HAS DROPPED (2024-2026)

## OLD VIEW (Pre-2024)

Foreign nationals exempt.

No surprise inspections  
(Visa/Notice required).

## NEW REALITY (**Current Law**)

**Drug & Alcohol  
Testing**

**MANDATED.**  
(Dec 2024 Final Rule).  
Strict testing programs required.

**Inspections**

**UNANNOUNCED.**  
(FAA Reauthorization Act 2024).  
Mandatory annual surprise audits.

**The era of loose oversight is legally over.**

# THE COMPLIANCE GAP: THE 2027 DEADLINE

DEADLINE: DECEMBER 20, 2027

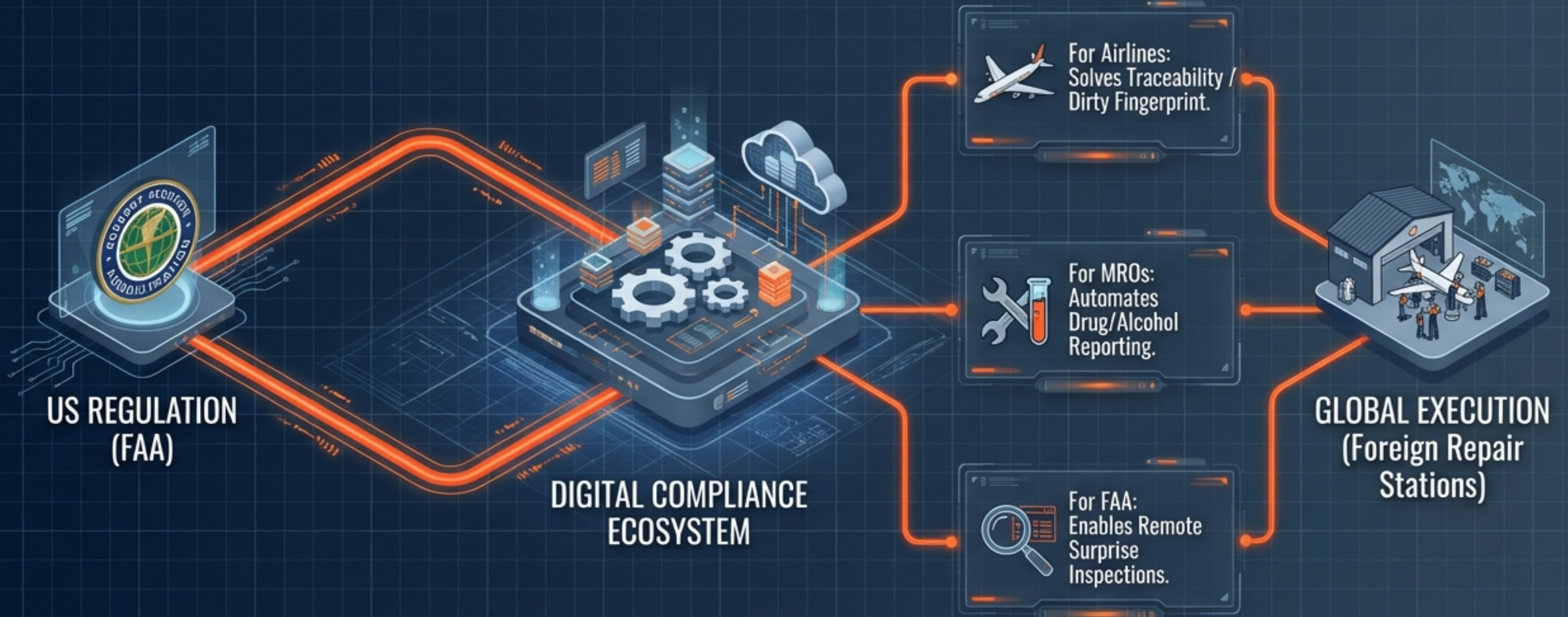


## LOGISTICAL NIGHTMARE

1. **977+** Stations must implement complex testing programs.
2. Inspectors are in Los Angeles. Work is in Beijing (6,500 miles away).
3. Physical oversight is impossible at scale.

**Digital oversight is the only path to the deadline.**

# THE DIGITAL BRIDGE: COMPLIANCE AS A SERVICE (CaaS)



# IRREFUTABLE TRACEABILITY: THE 'BACK-TO-BIRTH' STANDARD



Blockchain-verified history prevents fraud. Validates Form 8130-3 data instantly across all three supply streams.

# THE 'REMOTE' SURPRISE INSPECTION



**The Technology:** Digital Twins + IoT + Augmented Reality.



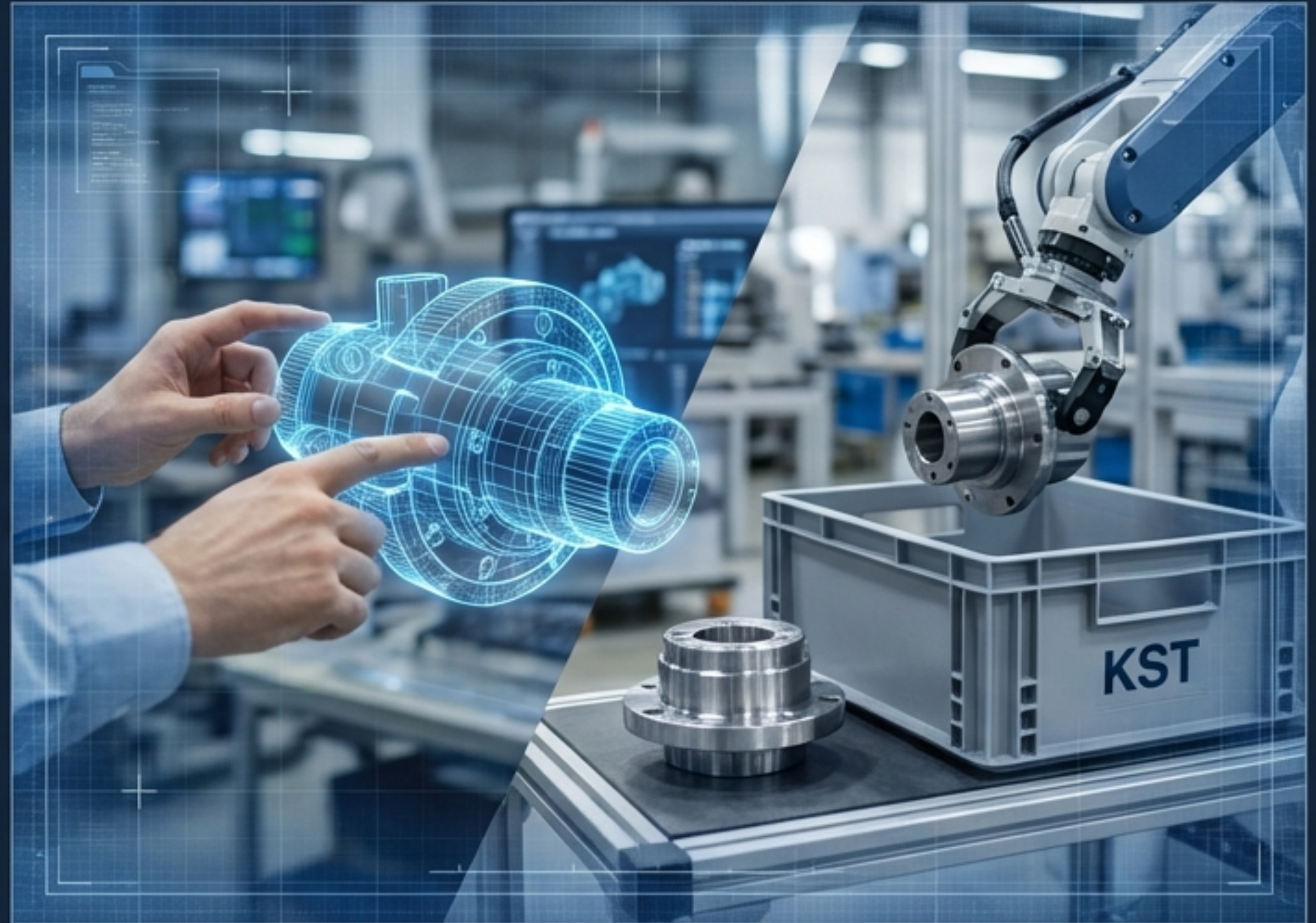
**The Capability:** Allows FAA inspectors to “walk” a foreign floor virtually from the US.



**The Win:** Satisfies “Unannounced Inspection” mandates without visa delays.



**Bonus:** Predictive maintenance analytics reduce equipment failure.



# AUTOMATED WORKFORCE COMPLIANCE

## The Challenge:

Tracking drug & alcohol testing for thousands of foreign mechanics across varying privacy laws (GDPR).

## The Solution:

Secure, privacy-compliant tracking module.

Automated "Red Flag" alerts for the Dec 20, 2027 deadline. Prevents certification loss.

# FUTURE-PROOF LOGISTICS: BYPASSING THE BOTTLENECK

➔ Shift from 'Just-in-Time' to 'Just-in-Case'.



Capabilities: Integration with autonomous delivery systems for critical AOG (Aircraft on Ground) parts.



Result: Reduces last-mile friction and downtime.



# STRATEGIC PARTNERSHIPS & EXECUTION



## BETA TECHNOLOGIES

Leveraging **eVTOL leadership**.  
Partnering on **'Standardized Mechanic Certification'** to ensure foreign labor meets FAA standards.



## VMEC (Vermont Manufacturing Extension Center)

**Supply chain optimization** and  
manufacturing support.

# FUNDING LANDSCAPE: NAVIGATING THE SBIR CYCLE



**FOCUS AREAS: NAVY (SMART AIRCRAFT DATA) AND AIR FORCE MAINTENANCE TRACKING.  
WE ARE PREPARED FOR THE RESUME DATES.**

LAT: S1.8622, LONG: -116.2437  
WIND: CALM  
VISIBILITY: UNLIMITED

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SYSTEM STATUS: NOMINAL

# STABILITY IN TURBULENCE

**SAFETY:**  
Irrefutable  
Back-to-Birth  
Traceability.



**COMPLIANCE:**  
Automated Tracking  
for 2027 Deadline.



**EFFICIENCY:**  
Remote Digital  
Oversight.



LAT: S4.0822,  
LONG: -118.2437

WIND: CALM  
VISIBILITY: UNLIMITED  
SYSTEM STATUS: NOMINAL

**WE PROVIDE THE DIGITAL INFRASTRUCTURE TO KEEP THE GLOBAL FLEET FLYING.**