

ASA • AFRA ANNUAL CONFERENCE • LAS VEGAS • JUNE 2026



FROM IDEAS TO IMPACT

A 10-Point AI Plan for Aerospace Distribution Operations

A 90-minute working session for **operators**



THE QUESTION THAT SHOULD KEEP YOU UP AT NIGHT



What if every RFQ in your inbox became an **audit-ready quote** before your coffee got cold?



**Hours →
Minutes**

Manual quoting compressed by AI document reading



95-99%

Field-level extraction accuracy on PDFs, emails & specs



\$2-\$5

Cost per processed document, down from \$10-\$40

Who AI can help within your company



The Sales, Purchasing, & Operations Professional

Lives in the RFQ queue, the stock model, and the margin. AI turns inbound chaos into priced, sourced, winnable quotes — faster than the competitor down the street.



The Quality Professional

Owns AS9120 / ASA-100, traceability, and the next audit. AI becomes a tireless inspector that reads every C of C and never misses a missing signature.

Same tool. Two missions. One blueprint.

Four outcomes – not four buzzwords



Quote faster

Win more, with fewer errors



Stock smarter

Less cash on the shelf, fewer stockouts



Certify cleaner

Audit-ready traceability, every time



Decide sharper

Program-level forecasts you can act on

All claims backed by published 2025–2026 research — sources on the final slide.

Nine terms, in plain English

AI (Artificial Intelligence)	Software that handles tasks once needing human thought — reading, reasoning, deciding.
Machine Learning (ML)	AI that learns patterns from examples instead of being hand-coded rule by rule.
Generative AI	AI that creates new content — drafts, summaries, replies — not just sorts existing data.
Large Language Model (LLM)	The text engine behind tools like ChatGPT; it reads and writes natural language.
GPT Assistant	Generative Pre-trained Transformer (GPT) models An LLM tuned on your own data and rules to work like a digital coworker.
Prompt	The question or instruction you give an AI to get the answer you want.
OCR	Optical Character Recognition — turns scanned PDFs and images into searchable text.
Hallucination	When AI sounds confident but is wrong — the reason a human still reviews the output.
Human-in-the-loop	A qualified person reviews and approves AI output before it counts.

01

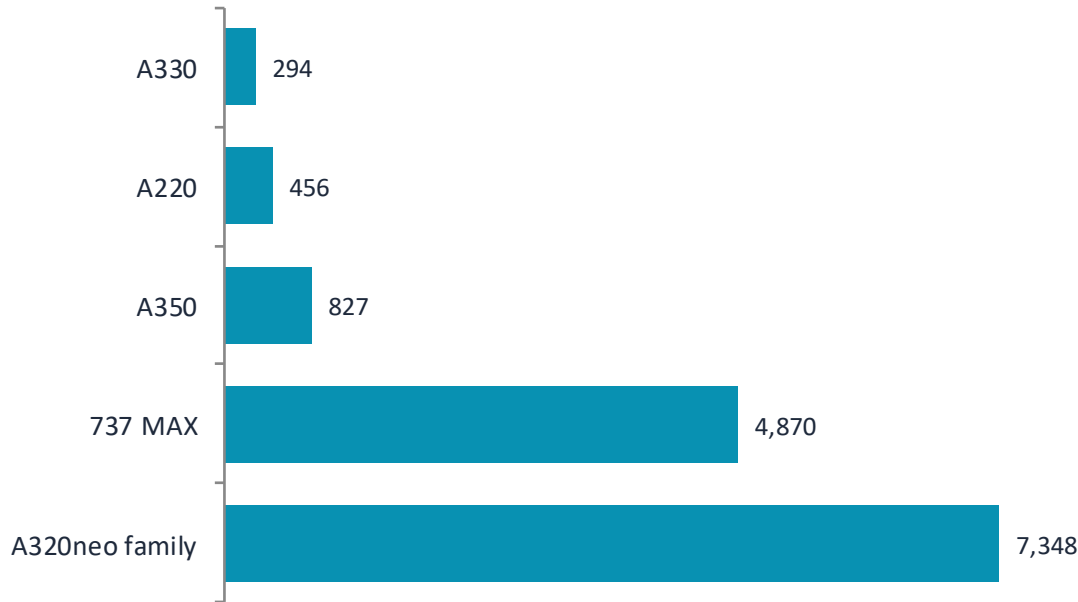


Why Now: The Perfect Storm

A decade of locked-in demand is colliding with a fragile supply chain — and a counterfeit problem that lands squarely on quality's desk.



~15,800 aircraft on backlog ≈ a decade of work



~ 10 yrs

of production coverage at today's
delivery rates

\$695B

Boeing's record total backlog —
narrowbody-led demand favors parts
distributors

Record demand. Fragile supply.

Deliveries fell ~30% short of forecast through 2024. Parts are scarce, lead times are long — and that pressure is exactly where AI earns its keep.



\$11B+

Supply-chain friction cost to airlines in 2025 (IATA / Oliver Wyman)



\$1.4B

Extra surplus-inventory holding cost as buyers over-stock to hedge



42 → 52

Boeing's monthly 737 rate climb — more build, more parts demand

THE THREAT THAT LANDS ON QUALITY'S DESK

520,000

counterfeit or unapproved components
are estimated to enter aircraft every year
(FAA).

One forged C of C. One missing signature. One **“too-good” price**. Your documentation review is the last line of defense — and it's the one task AI never gets tired of.

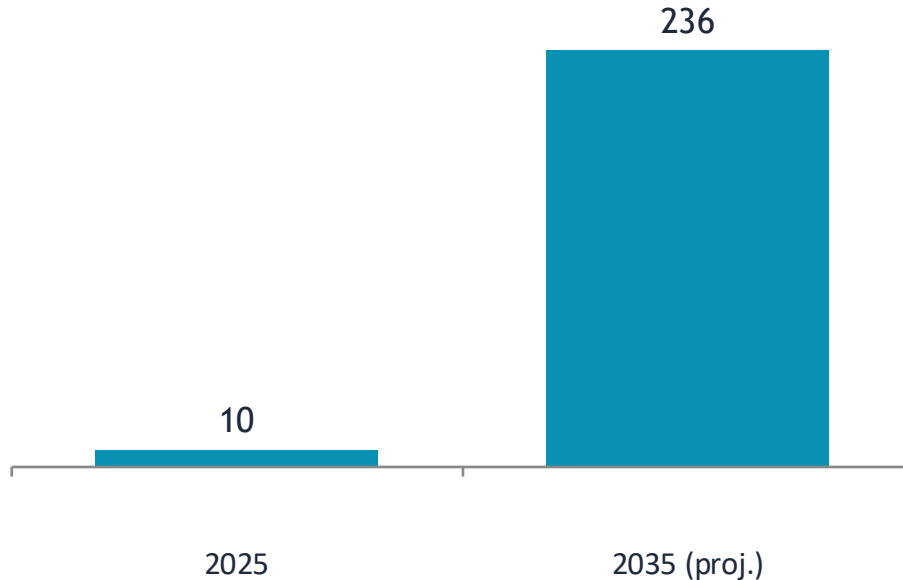


Aviation Supply Chain
Integrity Coalition

Founded 2024 by Airbus, Boeing, GE
Aerospace & Safran to stop
unauthorized parts at the source.

*Tighter inspection, longer verification,
rising compliance cost — the industry's
direction is set.*

A \$9.9B market becoming a \$236B one



94%

plan to use AI or GenAI for decision support within two years

72%

of logistics employees adopted AI tools in 2024 — #1 of any industry

23%

— yet only this many have a formal AI strategy in place

AI-mature operators are pulling away

WAIT-AND-SEE

- Quotes take hours; some never get sent
- Inventory tied up in slow movers
- Audit prep = weeks of manual document hunting
- Decisions on gut feel and last year's spreadsheet

AI-ENABLED

- Quotes drafted in minutes, errors flagged automatically
- 20–35% leaner inventory, fewer stockouts
- Audit prep in hours, with a clean evidence trail
- Program-level forecasts driving stocking decisions

AI-mature supply chains are **23% more profitable** than their peers (Accenture).



SECTION 02

02

Your New Digital Coworkers

Forget chatbots. GPT assistants are configured on YOUR data — RFQs, POs, certs, quality procedures — to work the way your business already works.

A GPT assistant is a digital coworker

It reads documents, answers questions, automates workflows, and supports decisions — trained on what your company actually does.



Reads RFQs, emails & PDFs



Knows your POs & pricing



Validates C of C & 8130-3



Follows your quality procedures

Not a chatbot.

A basic chatbot guesses from the public internet. A GPT assistant reasons over your data and your rules — so answers are relevant, accurate, and aligned to your process.

→ *Faster execution. Less manual effort. Audit-ready by default.*

Meet the team that never sleeps



Quote Assistant

Reads incoming RFQs and drafts complete, priced quotes



Document Assistant

Reviews Certificates of Conformance and flags discrepancies



Audit Assistant

Preps for AS9120 / ASA-100 by checking compliance records



Customer Service Assistant

Answers order-status and generates key-account reports

They plug into your ERP, CRM, and document systems — and use OCR + analytics on both structured and unstructured data.



SECTION 03

03

10 High-Impact Applications

Where AI moves the needle in a distribution business — from the RFQ inbox to the boardroom. Each one is running in the field today.

Ten places AI pays off

1 Faster, accurate quoting

3 Automated traceability (AS9120)

5 Enhanced customer service

7 Compliance automation

9 Sales & CRM intelligence

2 Inventory & demand forecasting

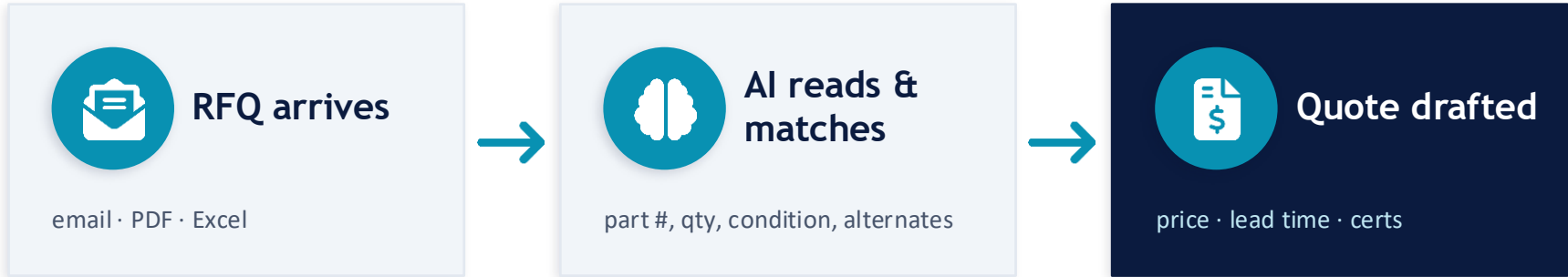
4 Supplier & pricing intelligence

6 Fraud & counterfeit prevention

8 Predictive logistics

10 Strategy & market forecasting

1 Faster, more accurate quoting



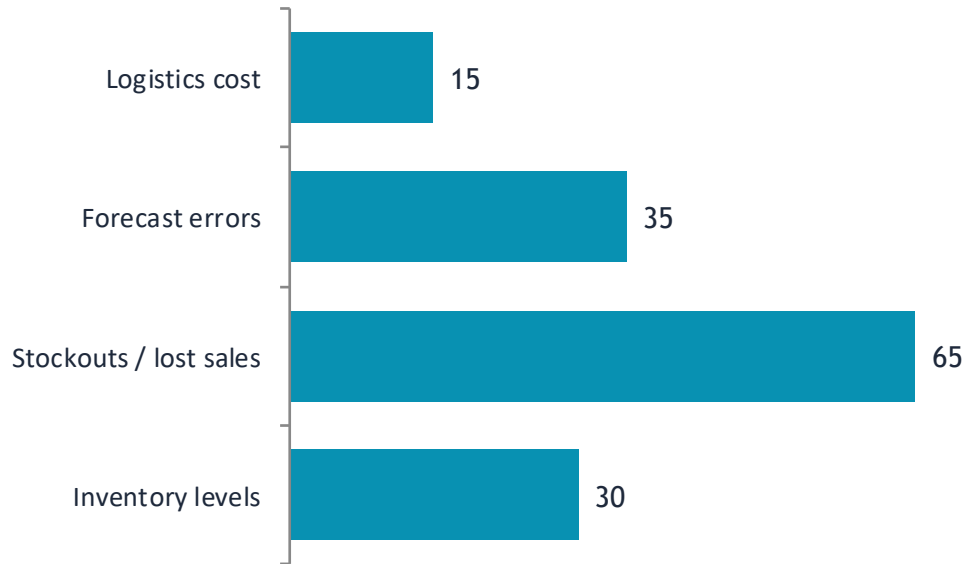
NE · OH · AR conditions identified automatically · superseded parts cross-referenced · audit-ready output

BENEFIT Quoting drops from hours to minutes – higher win rate, fewer human errors.

AI document extraction runs at 95–99% accuracy and up to 80% faster than manual entry.

2

Inventory optimization & demand forecasting



% reduction (McKinsey ranges)

- Predict demand by part number
- Set optimal stock from usage & seasonality
- Liquidate slow movers, deepen fast movers

BENEFIT Lower carrying cost, better cashflow, fewer stockouts.

3

Automated traceability

AS9120 / ASA-100 — AI validates every cert and matches it to the PO and part.

VALIDATED

✓ **C of C** matched to PO & part number

✓ **8130-3 / EASA Form 1** present & valid

✓ **Test reports** lot & quantity reconciled

AUTO-FLAGGED

✓ **Wrong lot or part number**

✓ **Missing signatures**

✓ **Mismatched quantities**

BENEFIT Lower audit risk and labor time; stronger quality compliance.

4

Smart supplier & pricing intelligence



Market pricing

Track real-time trends on hardware, seals, connectors, chemicals



Best-supplier scoring

Rank by price, quality and lead time — automatically



Shortage prediction

See titanium, forgings & elastomer squeezes coming

BENEFIT Better purchasing decisions and stronger negotiating leverage.

5

Enhanced customer service



Account Desk – 24/7

“Status on PO 48820? Cert available?”

Shipped today via FedEx, ETA Thu. C of C + 8130-3 attached. Want the monthly usage report?

- Instant answers to common inquiries
- Shipment status, cert availability, quote follow-ups
- Weekly/monthly usage reports for key accounts
Safran · Spirit · Collins · Airbus & Boeing subcontractors

BENEFIT More professional service – without adding headcount.

6 Fraud & counterfeit prevention

AI compares every new document against thousands of legitimate ones — catching what a tired human eye misses.



Document inconsistencies

analyzes formatting, fonts & layout



Typography & signatures

matches against known-good certs



Unknown-supplier screening

auto-vets first-time sources

BENEFIT Stronger counterfeit prevention — a top AS9120 focus.

7 Compliance automation

AS9120B · ASA-100 · FAA — the recurring work that AI keeps current automatically:



Internal audits

checklists & CAPA tracking



Calibration

schedules kept on time



Training

requirements tracked



Risk assessments

for purchasing decisions



Supplier scoring

performance, continuously

BENEFIT Less audit-prep time, fewer NCRs, smoother recertifications.

8

Predictive logistics & shipment optimization



- Pick the fastest / cheapest method per order
- Optimize international documentation
- Predict customs delays before they hit
- Warn when a shipment will miss its dock date

BENEFIT Lower freight cost and better on-time delivery metrics.

9

Sales & CRM intelligence

All accounts

Likely to buy this part

Dormant – re-engage

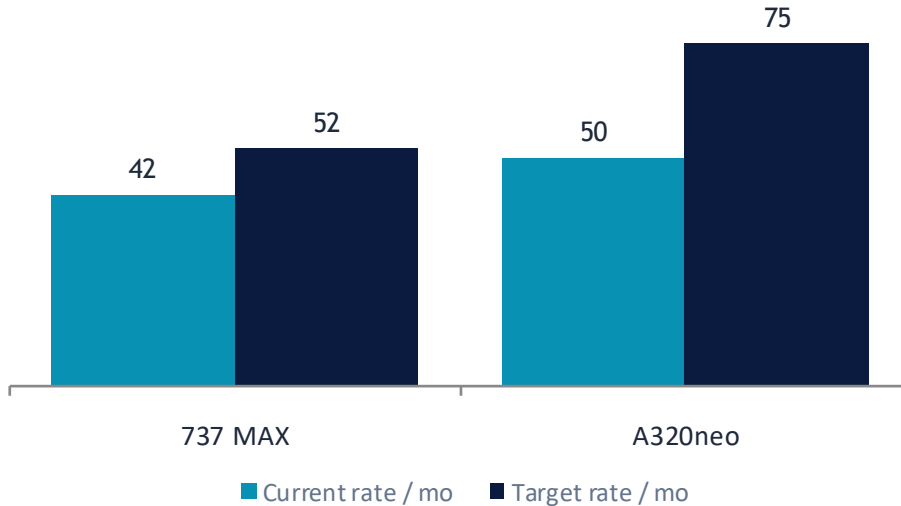
Prioritized leads

- Predict which customers buy which parts
- Surface dormant accounts to re-engage
- Draft personalized sales emails
- Rank leads by probability to convert

BENEFIT Higher revenue through smarter targeting.

10

Business strategy & market forecasting



Narrowbody monthly build-rate targets

Defense locks in demand, too

\$2.1T

F-35 lifetime program cost

2,456

aircraft planned through 2049

1,230+

delivered to U.S. + 19 nations

BENEFIT Program-level forecasts (A320 · 737 · F-35) drive smarter stocking bets.



04

The 10-Point Implementation Plan

Capability is easy to admire and hard to adopt. This is the structured path from pilot to scale — built for an audit-ready industry.

The 10 points, in four moves



FOUNDATION

1 Data readiness · 2 Clean part master · 3 Document repository



GOVERNANCE

4 AI policy & ownership · 5 Access & security · 6 Human-in-the-loop



COMPLIANCE

7 Audit-ready logging · 8 Validation & QA of AI outputs



ADOPTION

9 Workforce training · 10 Scale what works, fund the next use case

Crawl, walk, run



Reinvest each win into the next use case — make AI self-funding.

AN HONEST WORD – BECAUSE THIS ROOM VALUES IT

AI is a marathon you fund in sprints

6%

of organizations see ROI in under a year

2-4 yrs

typical time to satisfactory ROI

85%

increased AI investment in the past year

So start with one workflow that pays for itself – then let the savings buy the next.

Is it safe to give AI your aerospace data?

Not a yes / no — it's a deployment choice. Match the environment to the data.

▲ MORE SECURE



On-prem / air-gapped

Runs inside your walls. No outside connection.

MAX



Gov cloud — Azure Gov · AWS GovCloud

US-only, FedRAMP. The home for controlled data.

ITAR



Enterprise / Business / API

No training by default · encrypted · SOC 2.

OK



Consumer ChatGPT (Free / Plus)

Inputs may be used to train the model.

AVOID



ITAR ISN'T A CHECKBOX

Export control, not a certification. No AI is “ITAR-certified” — your compliance team owns the call.

WHERE it lives

WHO can access

ALREADY IN PRODUCTION



ULA — the Boeing + Lockheed venture — runs “RocketGPT” for ~150 engineers on Microsoft's ITAR-approved Azure secure cloud.

Source: SpaceNews, 2025

AI assists. People stay accountable.



Explainable & validated

Every AI output is traceable to its source documents



Human sign-off

Airworthiness & C of C acceptance stay with qualified people



Audit-ready by design

Inputs, outputs and overrides are logged automatically



Never the final authority

AI flags and drafts; it does not certify

Done right, AI doesn't weaken your quality system – it makes it impossible to skip a step.

The tools distributors are already using



ERP add-ons

IFS · SAP · Oracle Cloud ·
Epicor / Kinetic



RFQ automation

ZENO · Part Analytics ·
RFQ2Go



AI OCR

Rossum · Hyperscience



Predictive analytics

ThoughtSpot · Palantir
Foundry



Custom GPT tools

Quote bots · doc
readers · audit
assistants

WHERE TO START

You don't need all of these. Start
with the one tool that fixes your
loudest bottleneck first.

Your first 90 days

- 1 Pick one painful workflow** Most likely: RFQ-to-quote. Highest volume, clearest payback.
- 2 Clean the data it touches** Part master, conditions, certs, pricing — garbage in, garbage out.
- 3 Pilot with a human in the loop** AI drafts; your team approves. Measure time saved and error rate.
- 4 Set the governance rails** Logging, access, sign-off — so it's audit-ready from day one.
- 5 Show the number, fund the next** Take the win to leadership; reinvest into use case #2.

THE THROUGH-LINE

From ideas to impact



Quote faster



Stock smarter



Certify cleaner



Decide sharper

One blueprint. Audit-ready. Self-funding. Yours to start Monday.

DON'T LEAVE WITH A STRATEGY. LEAVE WITH A STEP.

Start with one RFQ.

Pick a workflow. Pilot it. Measure it. Then let the result make the case for the rest.

Thank you · [Questions & discussion](#)



Where these numbers come from - reference base

Demand & backlog	Forecast International / Flight Plan monthly orders & deliveries (2026); Boeing Q1-2026 8-K (SEC)
Supply-chain cost	IATA, “Supply chain to cost airlines \$11B+ in 2025” (Oct 2025)
Counterfeit parts	ProvenAir & AssessmentDrive (FAA ~520k/yr est., 2025–26); Deloitte 2025 A&D Outlook
AI in supply chain ROI	McKinsey, “Harnessing AI in distribution operations”; Open Sky Group; ToolsGroup; DataRobot
Document AI / OCR	Parseur 2026 benchmarks; GeneralMind; ChatFin / ABBYY; Veryfi
AI market & adoption	Precedence Research 2026; Gartner; Accenture; ABI Research; Deloitte 2025
F-35 program	Air & Space Forces Mag; AeroTime; GAO-25-107632; Simple Flying (2026)

Beyond the warehouse floor

The End of Work, the Beginning of Life

AI Is Coming for the Mind, Not the Muscle

Dr. Rajendra Pratap Gupta, PhD · LinkedIn, 30 May 2026 · Policy maker, researcher, author & TEDx speaker