
PraSaga™
Unlocking Economic Efficiency Across the Global Aerospace Ecosystem
Published Baselines • Transparent Modeling • Verifiable Sources

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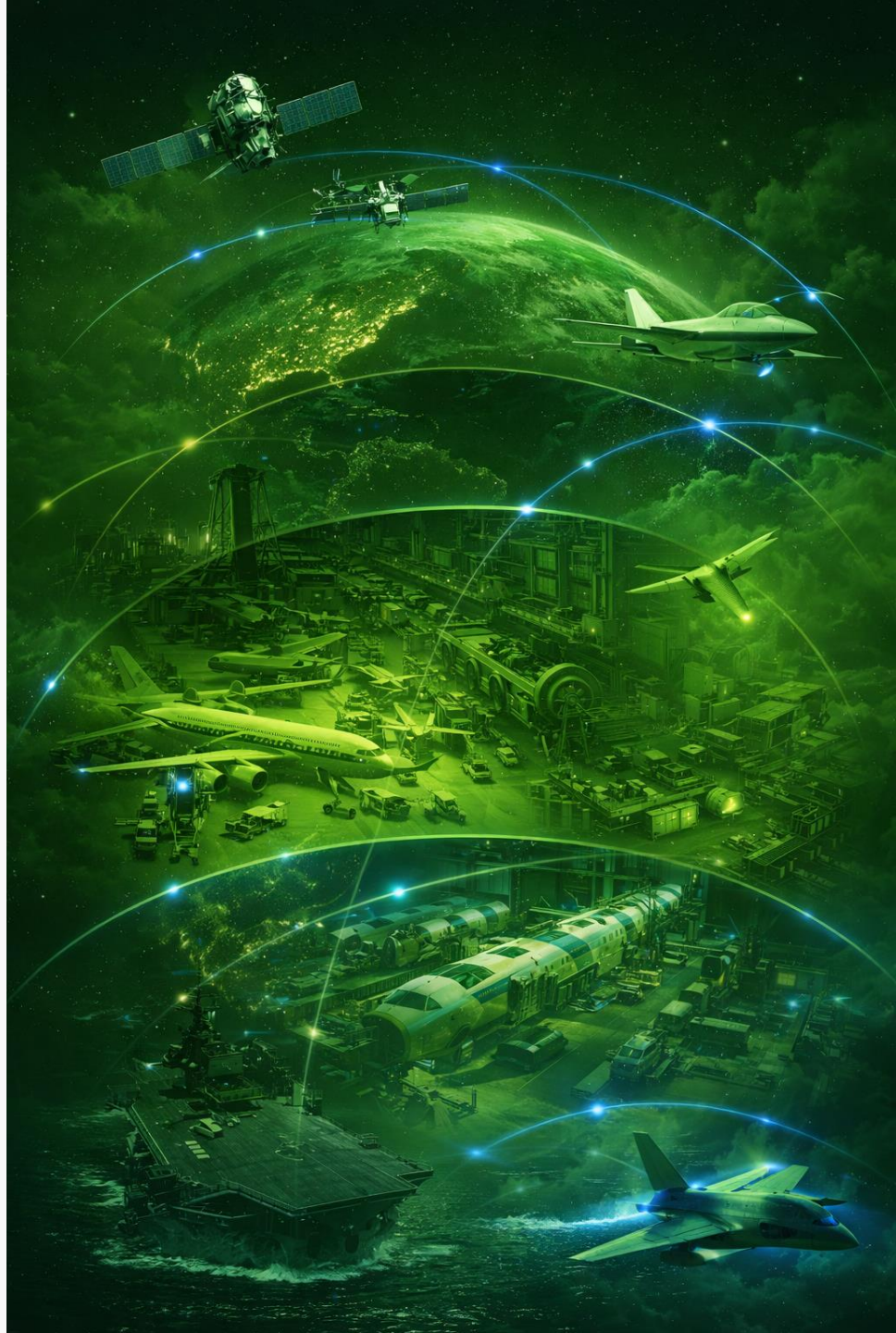
Executive Summary

- Aerospace is a **multi-trillion-dollar global system**
- Core cost pools are **well documented and published**
- Structural inefficiencies persist due to:
  - Fragmented standards execution
  - Manual compliance and reconciliation
- Even **small efficiency gains** create **material economic impact**
- This deck separates:
  - **What is published fact**
  - **What is transparently modeled**



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Global Aerospace Economic Baseline (Published)

Annual Regulated Economic Activity

- Commercial aviation revenues
- Global military aerospace expenditure
- Global space economy
- Aerospace manufacturing, MRO, and supply chains

Combined global aerospace activity exceeds $3.5–4.0 trillion annually

(Published data only; sources in citations section)

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Aerospace Operations & Supply Chain Baseline (Published)

Large, recurring operational cost pools

- Global aviation MRO market: **$100B+ annually**
- Highly fragmented global supplier base
- Heavy certification, audit, and documentation requirements
- High dependency on parts availability and traceability

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Aircraft-on-Ground (AOG) Exposure (Published)

Operational disruptions drive outsized costs

- AOG events create:
  - Lost revenue
  - Crew and aircraft repositioning costs
  - Downstream schedule disruption
- Academic and industry sources estimate:
  - **Billions to tens of billions annually in global economic impact**

(Baseline ranges published; no modeling yet)

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Counterfeit & Unapproved Parts (Published Risk)

Recognized by regulators as a systemic issue

- Dedicated FAA enforcement programs
- Persistent global counterfeit trade across industries
- Aerospace treated as a **high-risk, safety-critical sector**

No authoritative single global aerospace dollar total is published
Risk acknowledged; totals must be modeled conservatively

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Insurance & Risk Context (Published)

Insurance pricing reflects uncertainty and opacity

- Aviation insurance market remains volatile
- Loss ratios and pricing influenced by:
  - Data quality
  - Traceability
  - Claims resolution timelines
- Insurers explicitly cite transparency and risk visibility gaps

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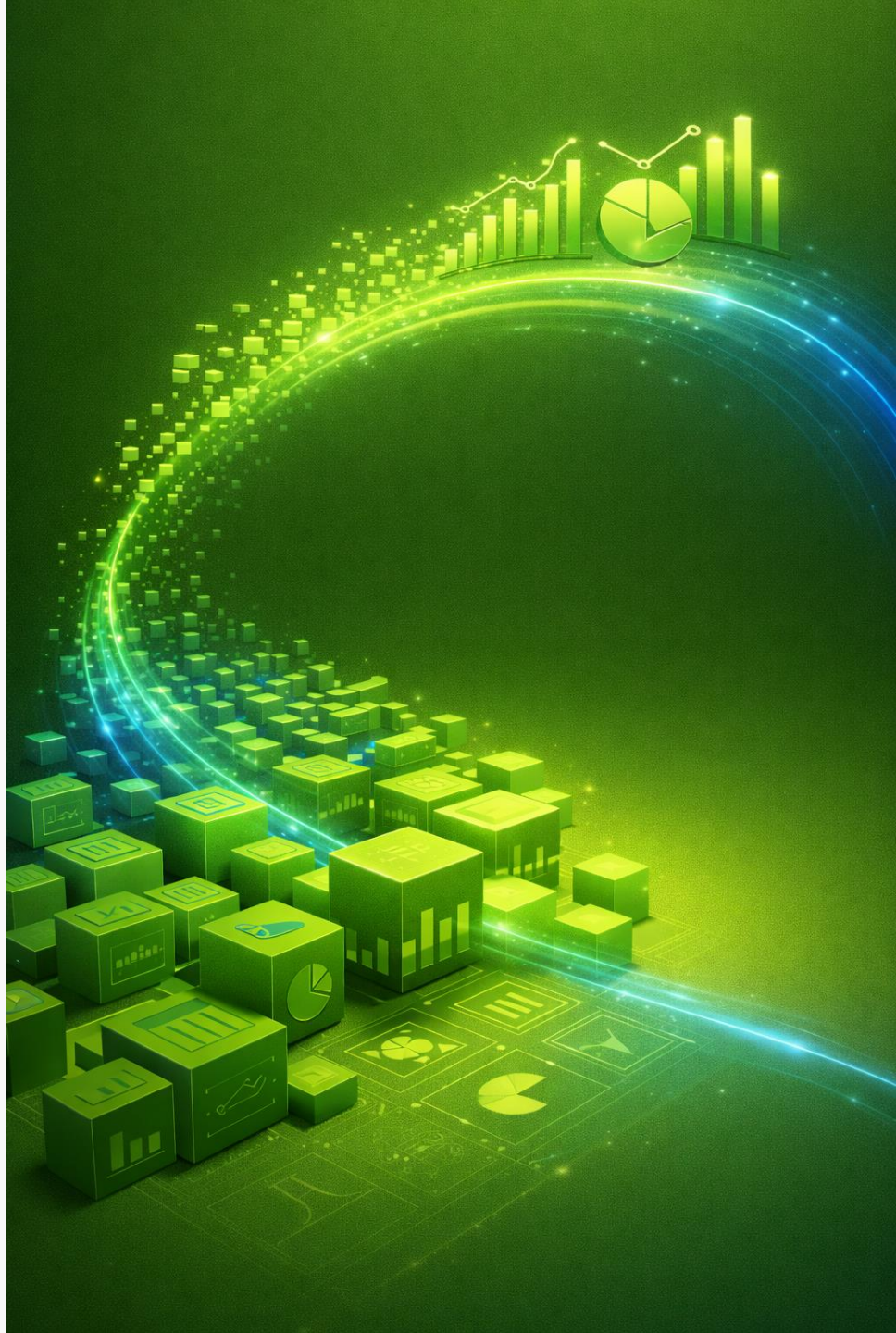
Modeled Impact Framework

How the modeling works

1. Start with **published baselines**
2. Apply **conservative efficiency capture assumptions**
3. Show **ranges**, not point estimates
4. Exclude speculative growth or new markets

*This is an **economic sensitivity analysis**, not a forecast*



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Modeled AOG Reduction Impact

Baseline (Published):

- Global AOG economic drag: **$3B – $46B annually**

Modeled Scenarios:

- 5% improvement
- 10% improvement
- 20% improvement

Modeled Annual Impact:

- **$0.15B – $9.2B**, depending on adoption and effectiveness

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Modeled MRO Efficiency Impact

Baseline (Published):

- Global MRO spend: **$104B annually**

Modeled Efficiency Capture:

- 3% → 7%

Modeled Annual Impact:

- **$3B – $7B**

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Modeled Airline Operations Impact

Baseline (Published):

- Airline industry revenues: **~$1T annually**

Modeled Operational Efficiency:

- 1% → 3%

Modeled Annual Impact:

- **$10B – $30B**

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Modeled Insurance & Risk Impact

Baseline (Published):

- Aviation insurance market acknowledges systemic inefficiency

Modeled Assumption:

- Loss-ratio improvement from transparency: 2% → 5%

Modeled Annual Impact:

- **$1B – $3B** (directional, conservative)

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Consolidated Modeled Impact (Illustrative)

Annual Impact Range (Modeled)

- Low adoption: **~$14B**
- Mid adoption: **~$30B**
- High adoption: **~$50B**

*Derived entirely from **published baselines + conservative assumptions***

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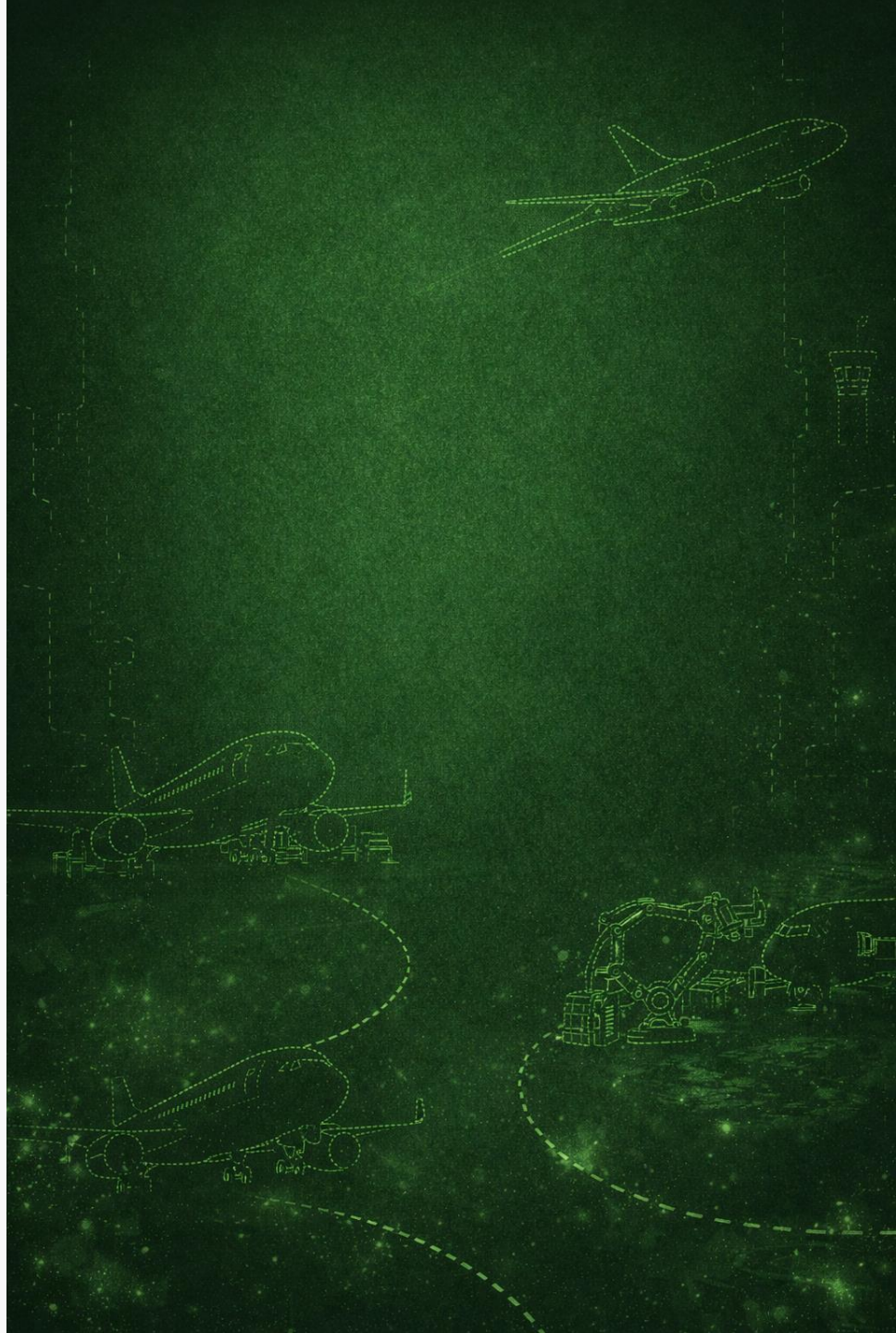
What This Does *Not* Include

To remain conservative, this deck **excludes**:

- New revenue creation
- Defense-specific readiness multipliers
- Space sector productivity spillovers
- Long-term network effects

*These represent **upside**, not required for the case*



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Why This Matters Strategically

- Aerospace margins are thin
- Capital intensity is high
- Risk is asymmetric
- Small efficiency gains compound at scale

*This is **infrastructure-level leverage**, not IT optimization*

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Citations

Global Aerospace Baselines

- IATA — Airline Industry Financial Outlook
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  https://www.sipri.org/publications/2025/sipri-fact-sheets/trends-world-military-expenditure-2024
- Space Foundation — *The Space Report 2025 Q2*
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Operations, MRO, AOG

- Oliver Wyman — Global Fleet & MRO Market Forecast
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  https://www.lse.ac.uk/business/consulting/assets/documents/sky-high-economics-chapter-two-evaluating-the-economic-benefits.pdf
- Boeing (industry-cited AOG estimates)
  https://en.wikipedia.org/wiki/Aircraft_on_ground

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Citations: Cont.

Risk, Insurance, Counterfeit

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  https://www.oecd.org/en/publications/trade-in-counterfeit-and-pirated-goods_9789264252653-en.html
- Marsh — Aviation Insurance Market Overview
  https://www.marsh.com/en/industries/aviation-space/insights/aviation-insurance-market-overview.html
- Allianz — Aviation Risk Outlook
  https://www.agcs.allianz.com/news-and-insights/reports/aviation-risk.html

Methodology Disclosure

- All baselines sourced from **named institutions**
- All impact figures labeled **modeled**
- Assumptions shown explicitly
- No black-box aggregation

Thank You

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