

ARTIFICIAL INTELLIGENCE CONSIDERATIONS IN THE SAFETY LANDSCAPE

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“AI will take over everything!”

At least that’s what the overwhelming volume of news coverage might lead you to believe. There is no doubt that AI is a fast-evolving technology with enormous potential. That potential will likely manifest itself across many parts of aviation, from maintenance diagnostics and safety reporting analysis to scheduling, documentation, and customer service.

But enthusiasm alone does not make a technology successful. When considering how AI might affect aviation safety, and therefore the risk profile of insured operations, it helps to balance excitement with a practical framework for evaluating adoption.

For those in the aviation insurance ecosystem — whether working in safety, underwriting, brokerage, or agency roles — asking the right questions early can help determine if an operator’s AI adoption is thoughtful, controlled, and sustainable.

Turning on AI is not the endgame; using AI to achieve clear operational goals is.



When discussing AI adoption with an operator, begin with these fundamental questions.

WHAT SPECIFIC BUSINESS PROBLEM ARE YOU SOLVING WITH AI?

There is no shortage of marketing material describing what AI can do. But understanding why it is being used is far more important. Is the operator trying to analyze maintenance trends faster? Identify safety-reporting patterns? Improve flight scheduling? AI for the sake of AI rarely produces meaningful outcomes.

WHAT OUTCOMES DO YOU EXPECT FROM USING AI?

Will it save time? Reduce manual work? Improve safety insights? Enable new capabilities? It is

worth understanding both the expected benefits and the anticipated cost. Organizations that cannot clearly articulate expected outcomes may struggle to evaluate whether the investment was worthwhile.

HOW ARE YOU VALIDATING THE AI APPROACH BEFORE DEPLOYING IT OPERATIONALLY?

Many AI initiatives stumble because change management is overlooked. No one plans to fail, but many fail to plan. Before implementation, organizations should assess impacts across departments, systems, and workflows. For example, if AI is being used to analyze safety reports, how will those insights be reviewed and integrated into existing safety management processes?

HOW ARE PRIVACY AND DATA SENSITIVITY BEING ADDRESSED?

AI systems depend heavily on data, which raises understandable concerns about where information is stored, processed, and reused. Operational data, personnel information, and customer records may all be involved. Being able to clearly explain how data is protected and where it is processed can prevent trust issues with employees, customers, and partners.

ARE POLICIES AND PROCEDURES BEING UPDATED TO REFLECT THE CHANGE?

Adopting AI is not simply a technical change; it is an operational one. Updated procedures, documentation, and internal

guidance help ensure the organization understands how AI outputs should be used and interpreted. These documents also become the foundation for training and accountability.

AI OFTEN RAISES CONCERNS AMONG EMPLOYEES ABOUT JOB ROLES AND RESPONSIBILITIES.

IS THE TECHNOLOGY ECOSYSTEM READY TO SUPPORT AI?

AI systems rarely operate in isolation. They often interact with scheduling platforms, maintenance databases, safety reporting systems, and operational software. If the surrounding technology environment cannot effectively

support the new tools, even a well-designed AI system may underperform.

HOW WILL THE WORKFORCE BE PREPARED FOR THIS CHANGE?

AI often raises concerns among employees about job roles and responsibilities. Transparent communication and thoughtful training can help ensure the technology is seen as a tool that improves performance rather than a threat to the workforce.

HAVE LEGAL AND REGULATORY IMPLICATIONS BEEN REVIEWED?

Depending on the application, AI adoption may involve regulatory considerations,

intellectual property concerns, contractual obligations, or liability implications. Legal review of vendor agreements, terms of service, and regulatory obligations is a prudent step before implementation.

HOW WILL THE AI SYSTEM'S PERFORMANCE BE MONITORED?

Unlike traditional software, AI systems can produce unexpected outputs. Monitoring accuracy, auditing results, and maintaining “human-in-the-loop” oversight are critical. In some organizations, this becomes an ongoing quality-control responsibility to ensure AI outputs remain reliable.

HOW WILL THIS CHANGE BE COMMUNICATED TO CUSTOMERS AND PARTNERS?

New technology can affect how an organization interacts with others. Operators may need to communicate changes to processes, expectations, or data-handling practices to external stakeholders.

AI has the potential to transform aviation operations in meaningful ways. But successful adoption rarely comes from excitement alone. When organizations approach AI with clear objectives, thoughtful planning, and ongoing monitoring, they significantly increase the likelihood that the technology will support both business success and safe operations.

For those evaluating aviation risk, asking these practical questions can provide valuable insight into whether AI adoption is a strategic improvement or simply a response to the latest technology trend.

As the Chief Revenue Officer at Polaris Aero, Steve Bruneau is responsible for expanding the company's suite of safety management solutions through customer success, sales, marketing, and partnerships. Prior to joining Polaris, he was the Chief Operating Officer of Pulsar Informatics, delivering Fatigue Risk Management Systems. Steve is the Co-Chair of the AIA Safety Committee and has over 25 years of process consulting experience helping organizations meet regulatory requirements and achieve new levels of performance by blending people, process, and technology. Steve has a BS in Mechanical Engineering, an MS in Aerospace Engineering, and has been a leader of three successful startup companies prior to joining Polaris.

Danny Maco is the Co-Founder of TriVector Labs, an AI innovation lab created around the idea that breakthrough innovation often happens when different disciplines converge. He is also the Founder of AeroTelematics where he focuses on advancing aviation safety and operational insight through telematics, data analytics, and emerging technologies. He is a member of the AIA Technical Committee, contributing to industry dialogue on innovation, risk management, and the evolving role of data in aviation and insurance. Danny has over 30 years of experience as a technology executive, leading product innovation and data-driven initiatives across mobility, insurance, and connected-technology sectors. In addition to his work in aviation, he spends a significant portion of his time advising and supporting international companies entering the U.S. market, helping founders navigate market entry and technology commercialization. Danny holds Bachelor's degrees in Mechanical Engineering and Computer Science from Cal Poly State University, San Luis Obispo.