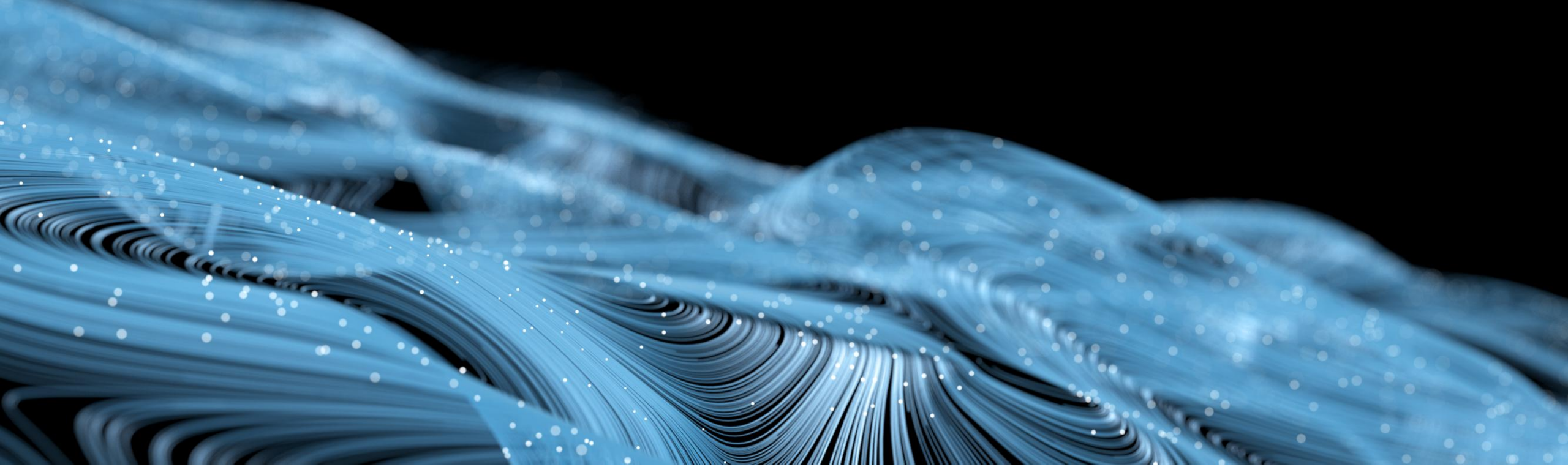


AI in Aviation

Scope, Context & IATA

Katharine Leney
Principal Data Scientist, IATA

1945
Founded

350+
Airlines

+82%
Air Traffic

“To represent, lead and serve the airline industry”


"Working together to shape the future growth of a safe, secure and sustainable air transport industry that connects and enriches our world"
IATA

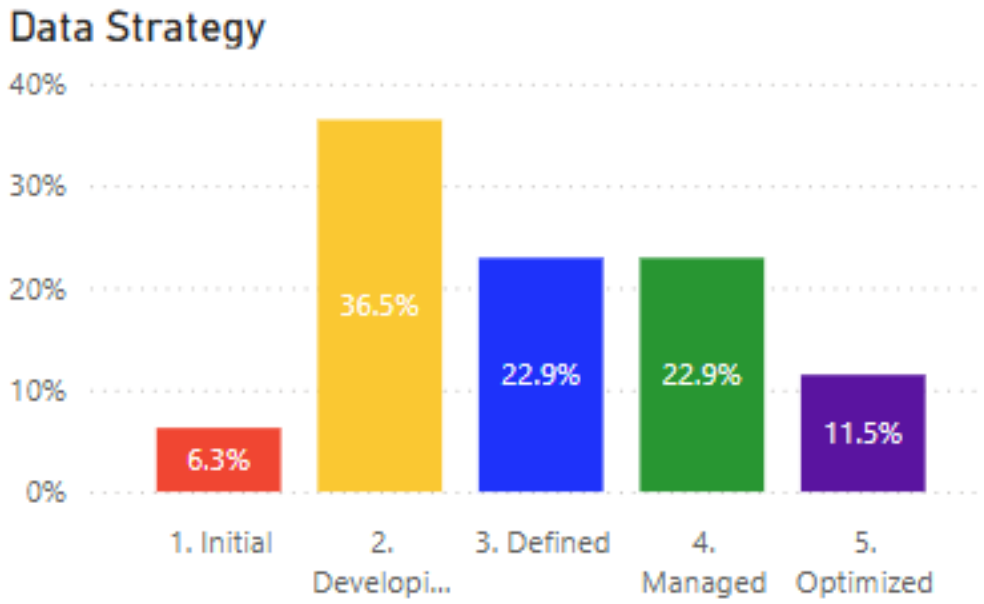
IATA's additional role in the industry: collect, govern and maximize value of aviation data

How is IATA contributing?

IATA - not only an airline trade association - a trusted industry partner for Data and AI.

- 15+ billion passenger records, representing 350+ airlines across 230 countries and territories.
- Global datasets on:
  - Cargo
  - **Safety and Operations - see later GADM presentation**
  - Traffic
  - CO_2 emissions
  - Financials
  - Economics and many more

Data Maturity in Aviation



Data Strategy maturity distribution. Most of airlines consider themselves in early stages in their journey.*

*2025 Data Maturity Survey, IATA

The Economist | Topics | Current edition | More

Regulating the internet giants

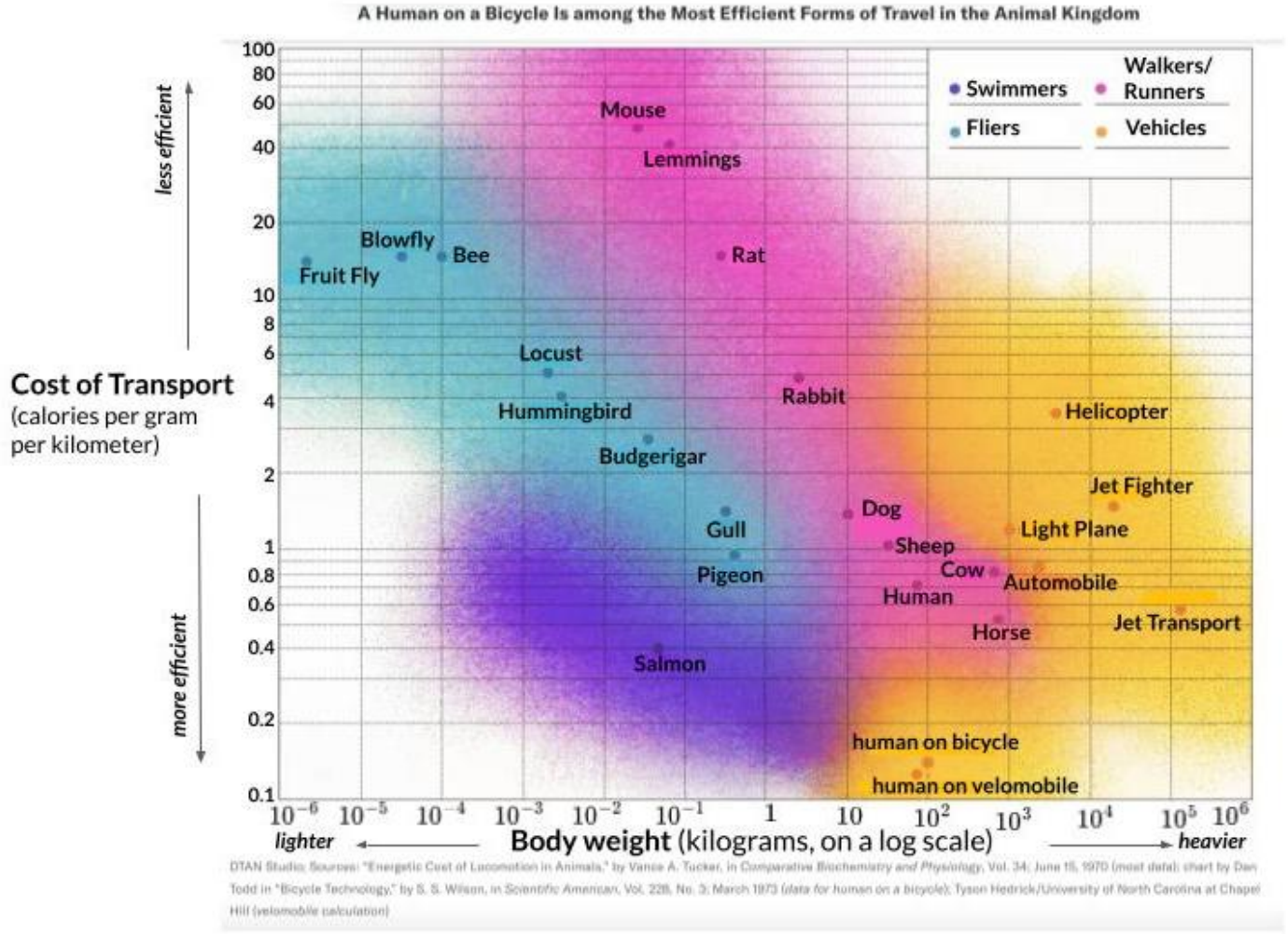
The world's most valuable resource is no longer oil, but data

The data economy demands a new approach to antitrust rules

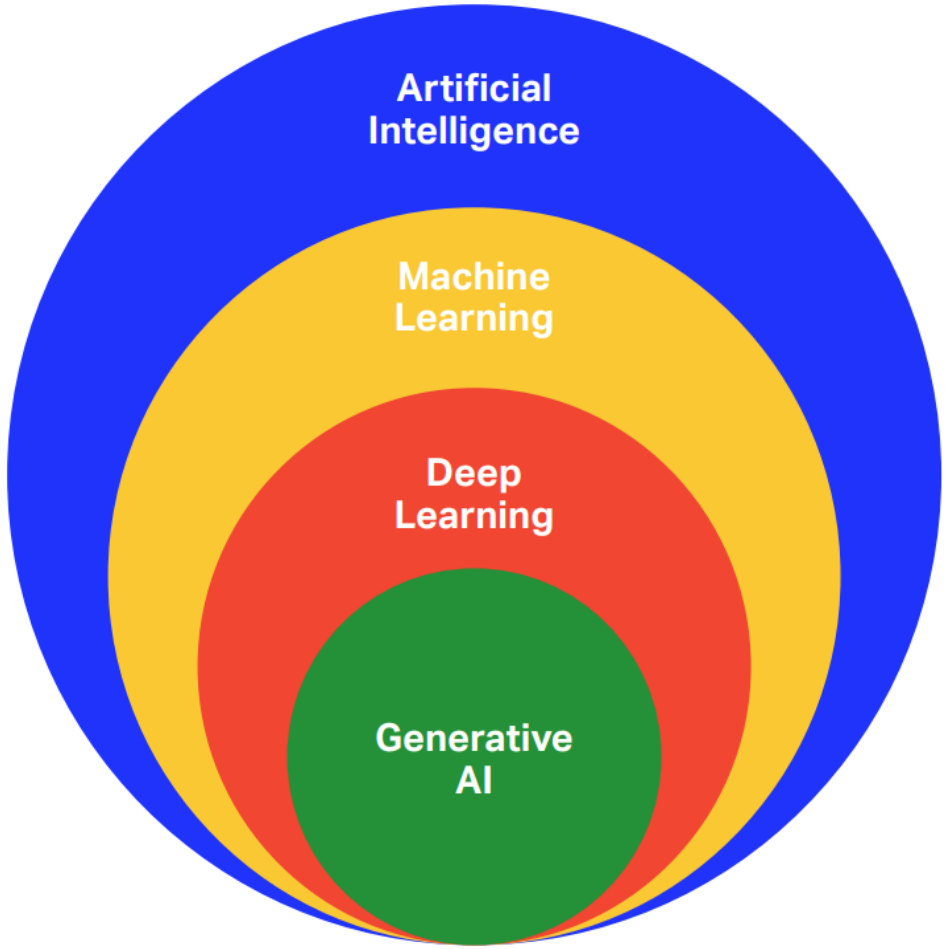
AI: An Intelligence Enabler

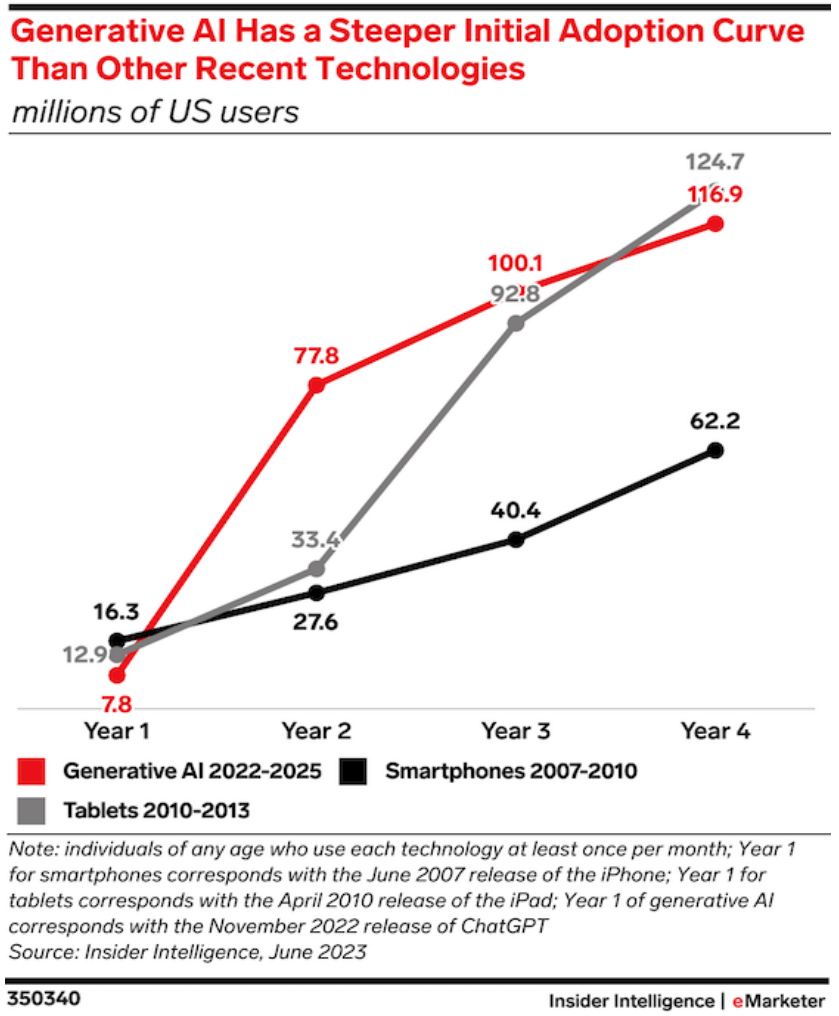
"A computer is the bicycle of the mind."

-Steve Jobs



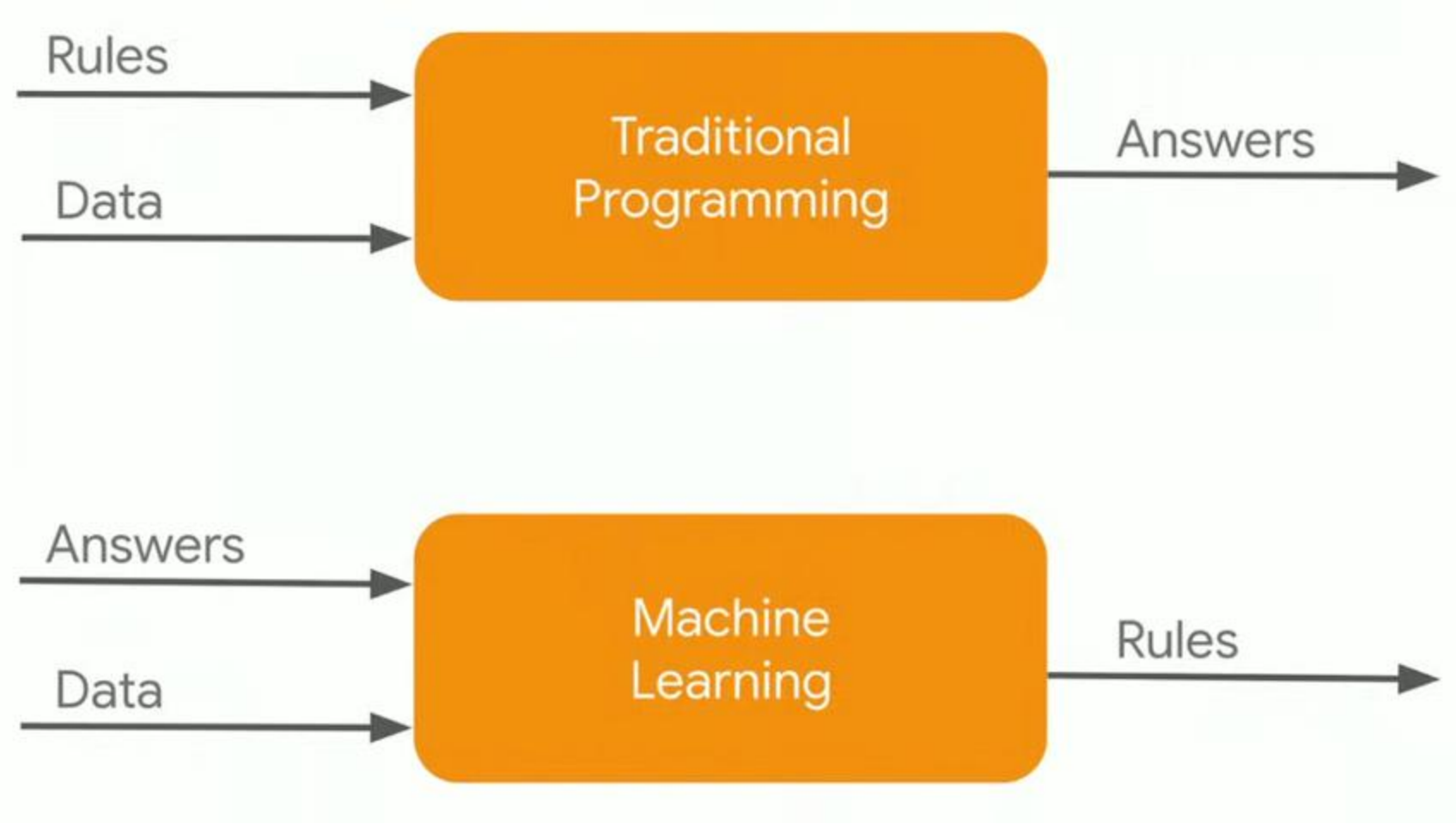
Data Science, AI, Machine Learning & Generative AI





IATA Generative AI report

From Programming to Machine Learning



The Paradigm Shift: Traditional Programming vs Machine Learning | by Sadaf Siddiqui | Medium

AI in Aviation Today

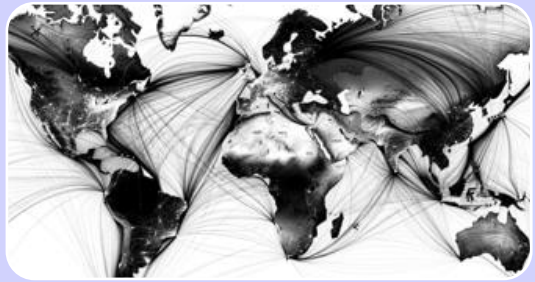
AI is disrupting the Aviation Industry on the full value chain. Some examples:

Customer satisfaction

- Personalization, PAX segmentation
- Baggage handling
- Cabin baggage prediction
- Gen AI (chatbots)

Ground operations

- Ops optimization
- Baggage profiling, offload prediction
- Air Traffic Management optimization



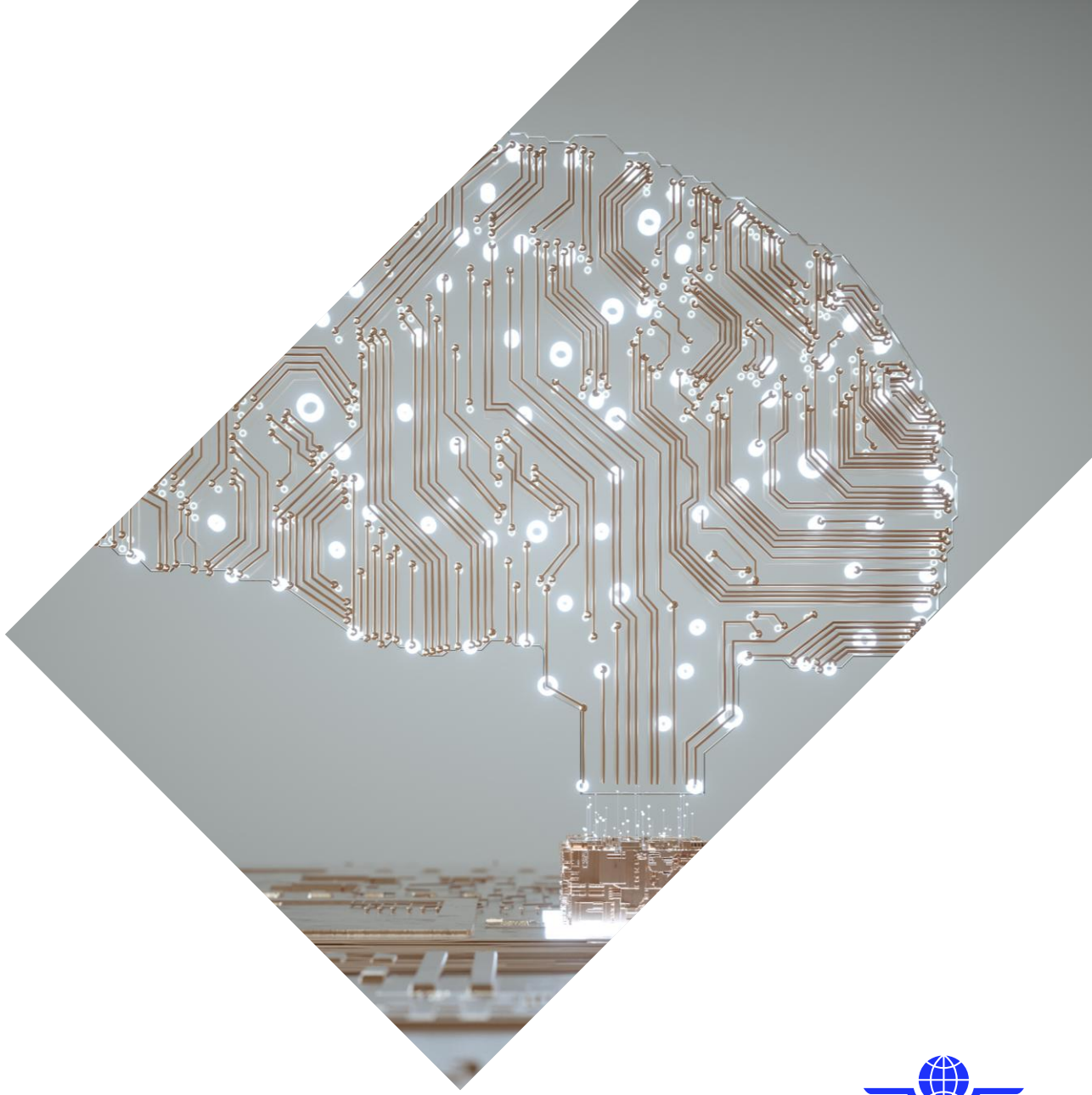
Flight Operations

- Route optimization
- ATM optimization
- Crew management
- Flight Safety management

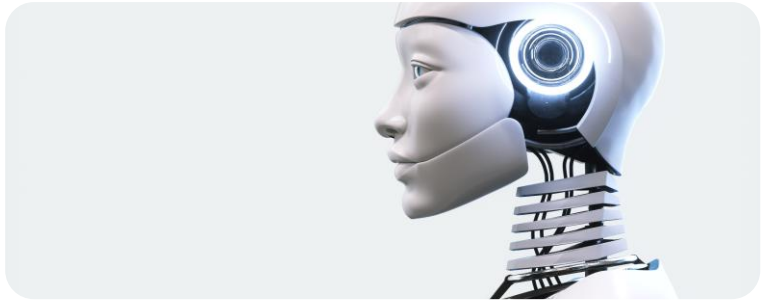
Sustainability

- Environmental impact cases
- Contrail prevention
- Fuel burn optimization

AI at IATA



AI portfolio @ IATA



AI Governance

- AI Literacy
- AI Governance
- AI Experimentation
- AI Advocacy and Regulations

AI Communities

- Data Experts Community
- AI Community with Business Stakeholders
- AI Network for Airlines

Delivery of AI Projects

- IATA Internal Use Cases
- IATA Products and Services

Advanced Analytics & Machine Learning

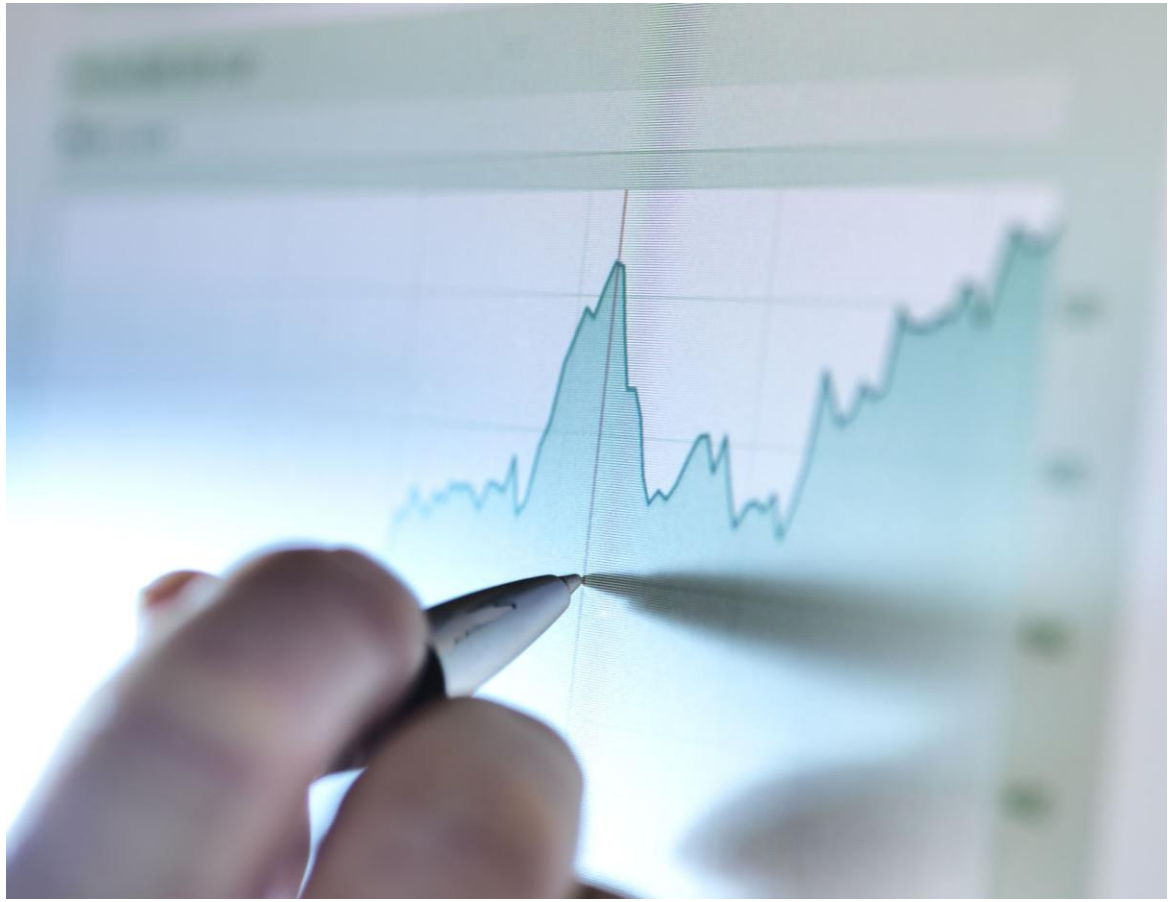
Use Cases

- Anomaly detection on financial transactions
- Travel agents classification
- Data-driven Analytics, e.g. understanding usage patterns of IATA products and services
- **Airline similarity & actionable insights use cases (see later GADM presentation)**

Technical Implementation

- Supervised and unsupervised machine learning models
- Analytics on transactional data
- Extraction of data-driven insights for enhanced business decision-making

Forecasting & Trend Estimations



Use Cases

- Air traffic monitoring estimation
- PAX total market estimation
- PAX traffic forecasting
- Cargo traffic forecasting

Technical Implementation

- Several time horizons (6 Months - 5 Years)
- Different geographical scopes (airport, country, region)

Generative AI Usage Enhancing Productivity

How do we leverage Generative AI in our daily tasks?

- LLMs for productivity enhancement
- Text proof-reading
- Communication content generation
- Document summarization
- Knowledge management
- Information retrieval

IATA Generative AI Use Cases

Use Cases

- Automated customer service chatbot
- Information retrieval from documents
- Code and unit test generation
- **IDX generative AI use cases (see later GADM presentation)**

Technical Implementation

- Pre-prompted Large Language Models
- Retrieval Augmented Generation (RAG)

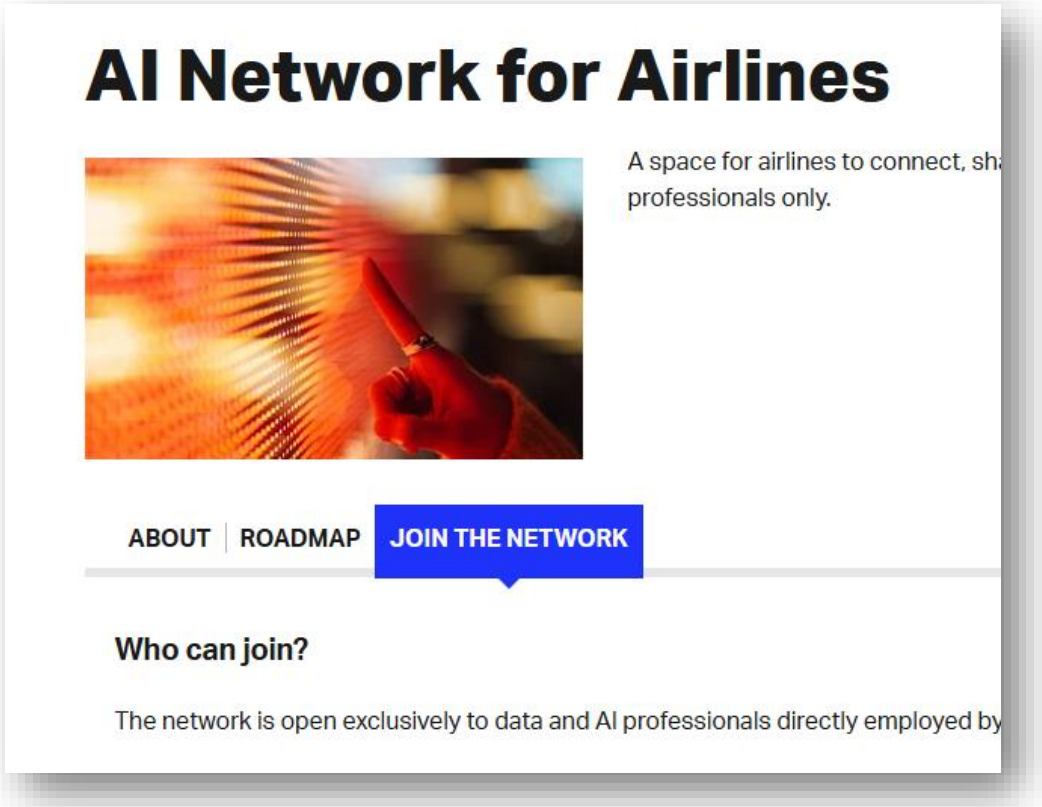
IATA's Industry initiatives on AI

Developing an AI-enabled offer

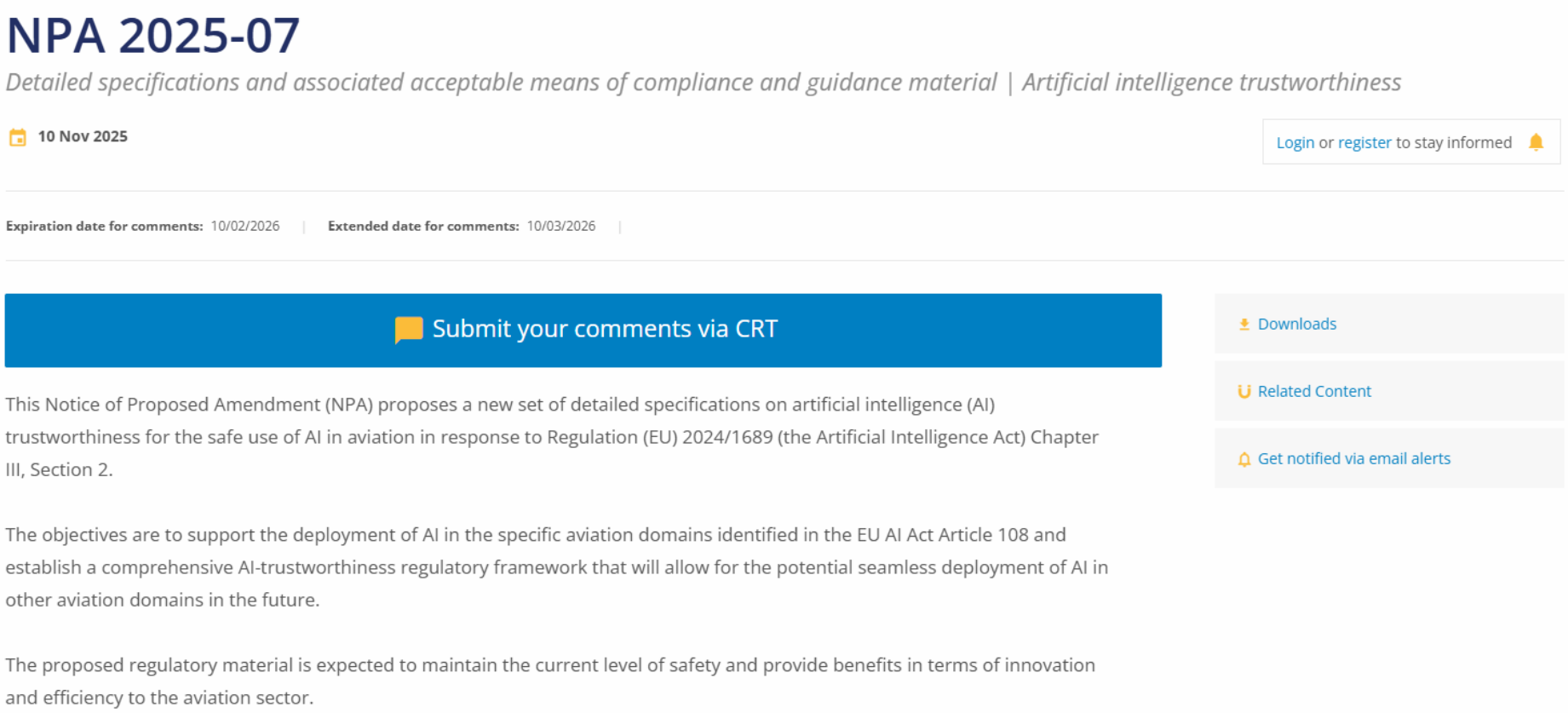
- Current AI and Gen AI use cases at IATA.

Supporting the industry

- Actively contributing to the creation of frameworks for AI adoption (Code of Practice, EASA RMT).
- Fostering collaboration between airlines, tech players, and regulators.
- Offering a network for AI practitioners - [IATA - AI Network For Airlines]
  - Quarterly online events
  - In-person event associated with WDS
  - Monthly news digest covering AI trends, aviation use cases and success stories.
  - Join, or find out more: **www.iata.org/ai-network**



EASA NPA: IATA currently collecting your comments



NPA 2025-07

Detailed specifications and associated acceptable means of compliance and guidance material | Artificial intelligence trustworthiness

10 Nov 2025

Login or register to stay informed

Expiration date for comments: 10/02/2026 | **Extended date for comments:** 10/03/2026 |

Submit your comments via CRT

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This Notice of Proposed Amendment (NPA) proposes a new set of detailed specifications on artificial intelligence (AI) trustworthiness for the safe use of AI in aviation in response to Regulation (EU) 2024/1689 (the Artificial Intelligence Act) Chapter III, Section 2.

The objectives are to support the deployment of AI in the specific aviation domains identified in the EU AI Act Article 108 and establish a comprehensive AI-trustworthiness regulatory framework that will allow for the potential seamless deployment of AI in other aviation domains in the future.

The proposed regulatory material is expected to maintain the current level of safety and provide benefits in terms of innovation and efficiency to the aviation sector.

20 February 2026

Thank you