

EU AI Act

Cloud data flows

April 2024



Cloud Data Flows: *“the movement or transfer of data within cloud computing environments. This encompasses the processes through which data is transmitted, processed, and stored across cloud services and platforms, often involving multiple geographic locations and jurisdictions..”*

Several articles indirectly relate to aspects crucial for understanding and managing data flows in cloud environments, especially concerning AI systems. These include, the need for authorization for using copyrighted content in AI model training, highlighting the importance of lawful data sourcing and utilization.

This presentation examines data from the [European Commission’s European Data Flow Monitoring](#) to provide insights relating to Enterprise EU AI Act implementation. This covers:

Understanding Data Flows in the EU, EFTA, and the UK

Enterprises leveraging cloud services, including edge computing, generate substantial cross-border data flows, crucial for AI development, deployment, and operation, necessitating strategic management and governance.

EU AI Act - A Catalyst for Responsible Data Management

The EU AI Act emphasizes transparency in AI systems, mandating providers to document and publicly disclose data sources and training datasets, ensuring compliance with Union copyright law. Specific obligations for general-purpose AI models underscore the need for copyright compliance and transparent data practices, potentially driving the adoption of standardized documentation like model cards and data sheets.

Strategic Implications for Enterprises

Enterprises must ensure transparency in data flows, especially concerning AI systems, to comply with the Act. Robust data governance frameworks respecting copyright laws are essential, with a potential shift towards standardized documentation practices. The Act's emphasis on transparency and copyright compliance may drive innovation through AI regulatory sandboxes, particularly benefiting SMEs and startups, contributing to a trustworthy digital economy in the EU, EFTA, and the UK.

European Enterprise Cloud Data Growth

By 2024, European enterprises using cloud services are projected to generate over 64,000 petabytes/year of enterprise cloud-based data flows (ECBDFs), showcasing a significant digital transformation trend.

Concentration in Top Five Countries

The UK, Germany, Italy, Poland, and France are anticipated to contribute two-thirds of Europe's ECBDFs due to high cloud service adoption rates and workforce size, highlighting regional disparities in data generation.

Sectoral Contribution to Enterprise Cloud-Based Data Flows

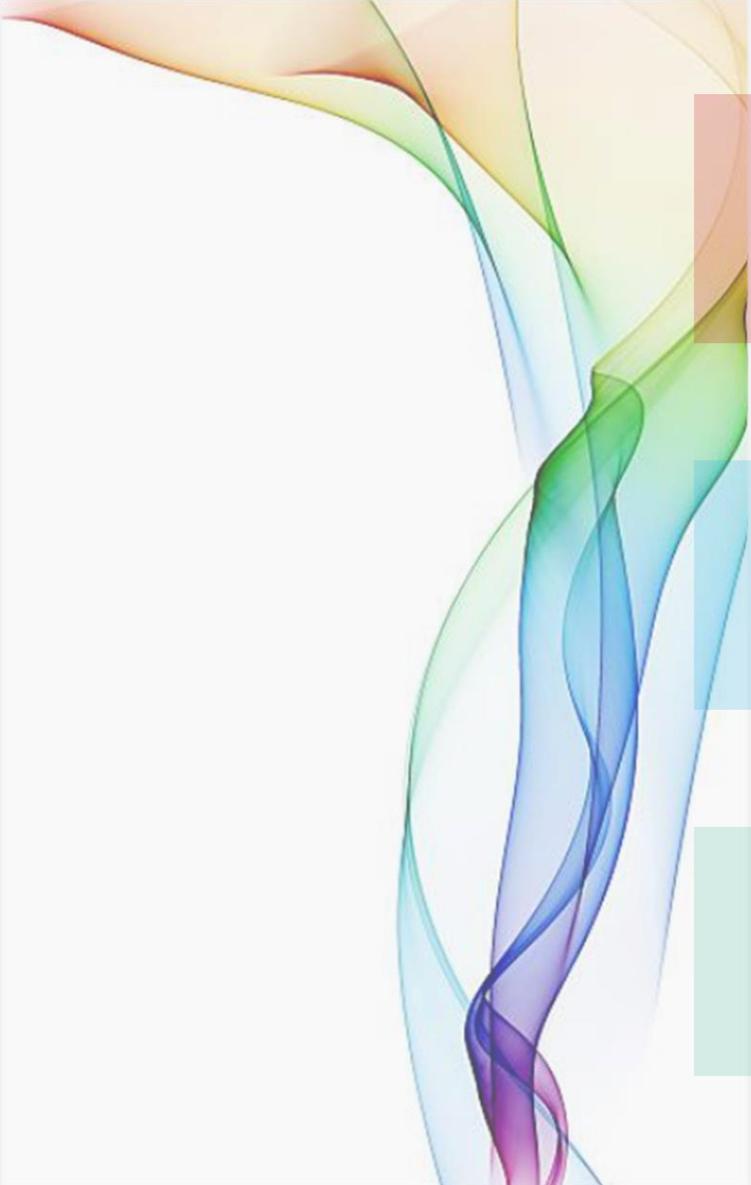
Manufacturing, wholesale and retail, and human health & social work activities sectors are poised to be the largest generators of ECBDFs in 2024, reflecting the correlation between workforce size and cloud adoption within sectors.

Patterns in Intra- and Extra-EU Enterprise Cloud-Based Data Flows

While a substantial portion of ECBDFs remains within European borders, there's a noticeable shift towards intra-EU data flows, expected to reach 90% by 2035, driven by the rise of edge data centres.

Value of Extra-EU Enterprise Cloud-Based Data Flows

Extra-EU ECBDFs represent significant value, with €5.6bn of user value attributed to cloud data flows from EU Member States to other regions in 2024, emphasizing the importance of global data connectivity and international partnerships.



Market Surveillance and Control of AI Systems (Art. 74)

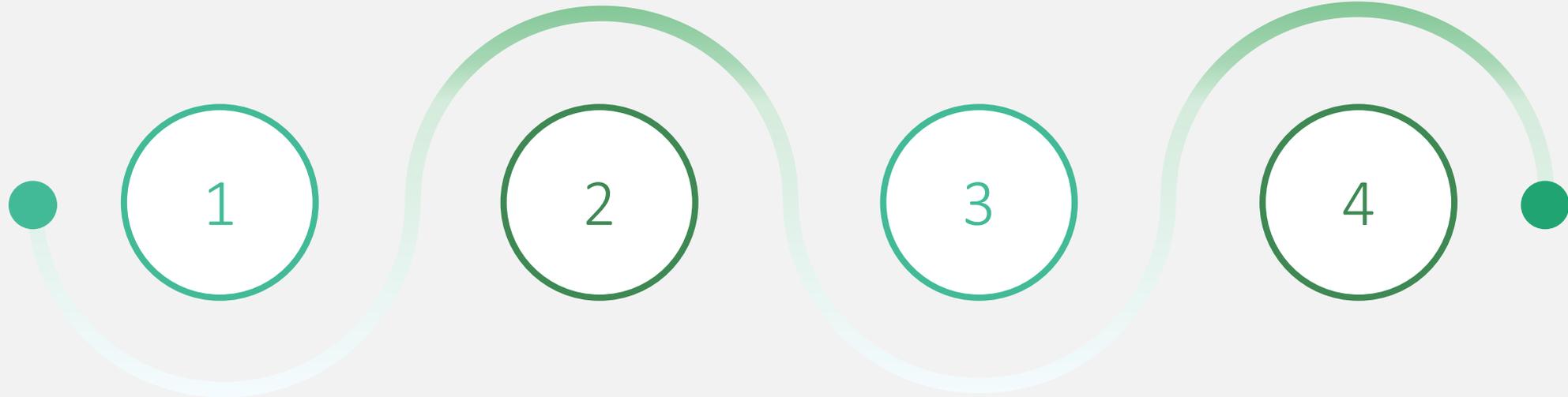
- This article outlines the responsibilities of market surveillance authorities, including ensuring compliance with the AI Act and facilitating coordination between different authorities.
- The strategic analysis and monitoring capabilities of the Cloud Data Flow Strategic Visualization Tool could indirectly support these activities by providing insights into cloud data flows related to AI systems.

AI Regulatory Sandbox (Art. 57)

- The AI Act encourages the development of AI regulatory sandboxes to facilitate innovation and testing of AI systems under real-world conditions.
- The Cloud Data Flow Strategic Visualization Tool could potentially support the operation of these sandboxes by offering strategic analysis and visualization of data flows, aiding in the assessment of AI systems' impact and compliance.

Data Governance and Transfer (Art. 10)

- The Act emphasizes the importance of appropriate data governance and the safe transfer of data, including for testing AI systems in real-world conditions.
- While not explicitly mentioned, tools that enable strategic analysis and monitoring of data flows, like the Cloud Data Flow Strategic Visualization Tool, could play a role in ensuring that data governance principles are upheld, particularly in the context of cross-border data flows.



EU AI Act and Cloud Data Flows

- The EU AI Act emphasizes the need for transparency in AI systems, including the documentation of data sources and training datasets.
- This has implications for enterprises using cloud services, as it necessitates clear documentation and transparency of data flows within cloud environments.

Cross-Border Data Transfer Compliance

- The Act underscores the importance of adhering to Union law when transferring data, which is particularly relevant for cloud services that operate across the EU, EFTA, and the UK.
- Enterprises must ensure that appropriate safeguards are in place for both personal and non-personal data, aligning with regulations such as the Data Governance Act and the Data Act.

Insights for Enterprises

- Enterprises leveraging cloud services for AI systems must prioritize transparency in their data flows and ensure compliance with EU regulations on data transfer.
- This includes making publicly available summaries of data used in AI model training and adhering to legal requirements for cross-border data transfers.

Strategic Implications

- Understanding and adhering to the EU AI Act's provisions can guide enterprises in strategic decision-making regarding cloud service usage, data management practices, and AI system development, ensuring legal compliance and fostering trust.

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Thank You!

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