The Evolution of Artificial Intelligence in Central Banking: Toward Agentic AI

As we stand on the cusp of a new era in financial technology, central banks are poised to harness the transformative power of artificial intelligence. This presentation explores the journey from traditional AI applications to the revolutionary concept of Agentic AI in central banking.

A **by Andreas Fredrich**

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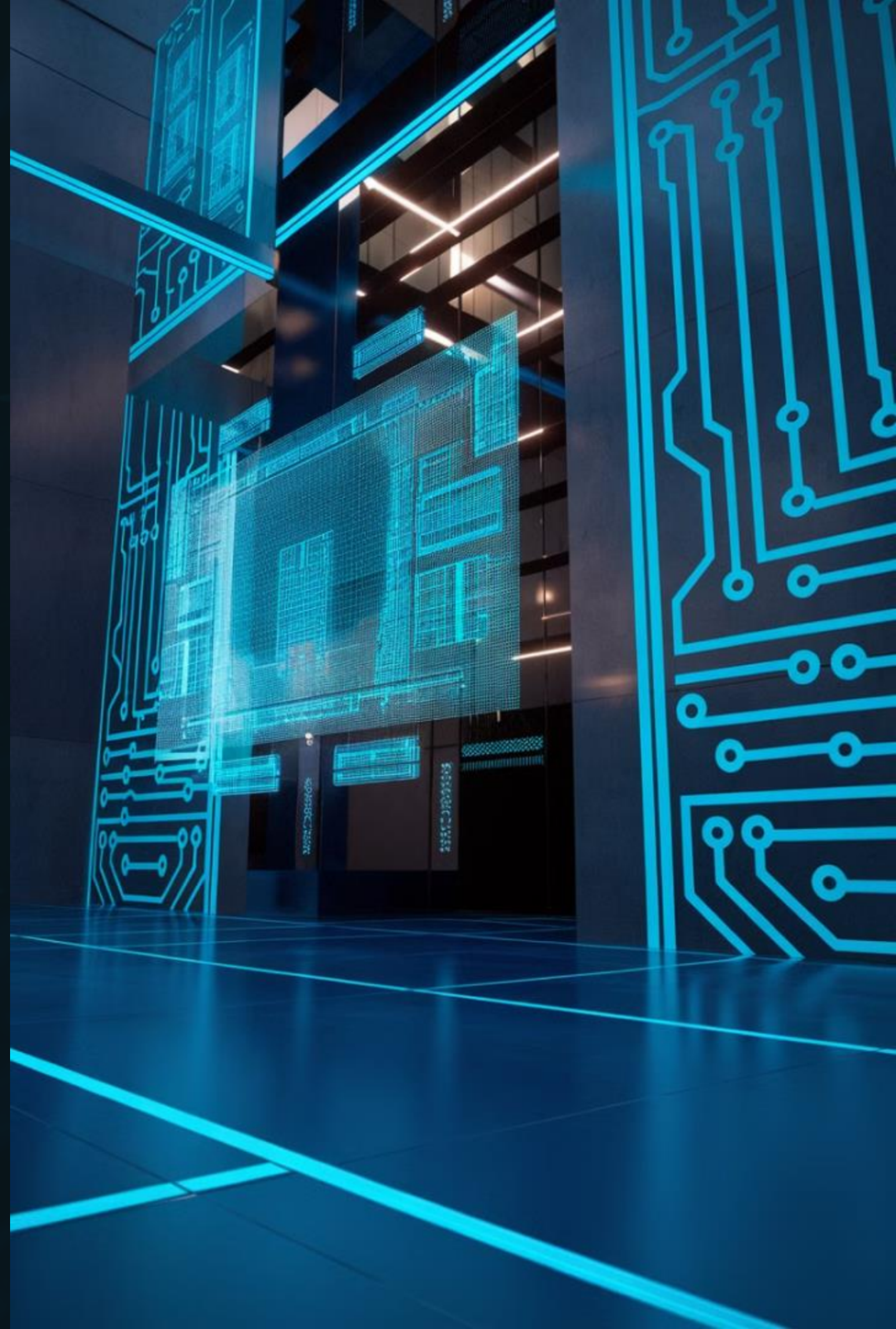
AI & CB



Introduction: AI's Transformative Impact

Revolutionising Operations

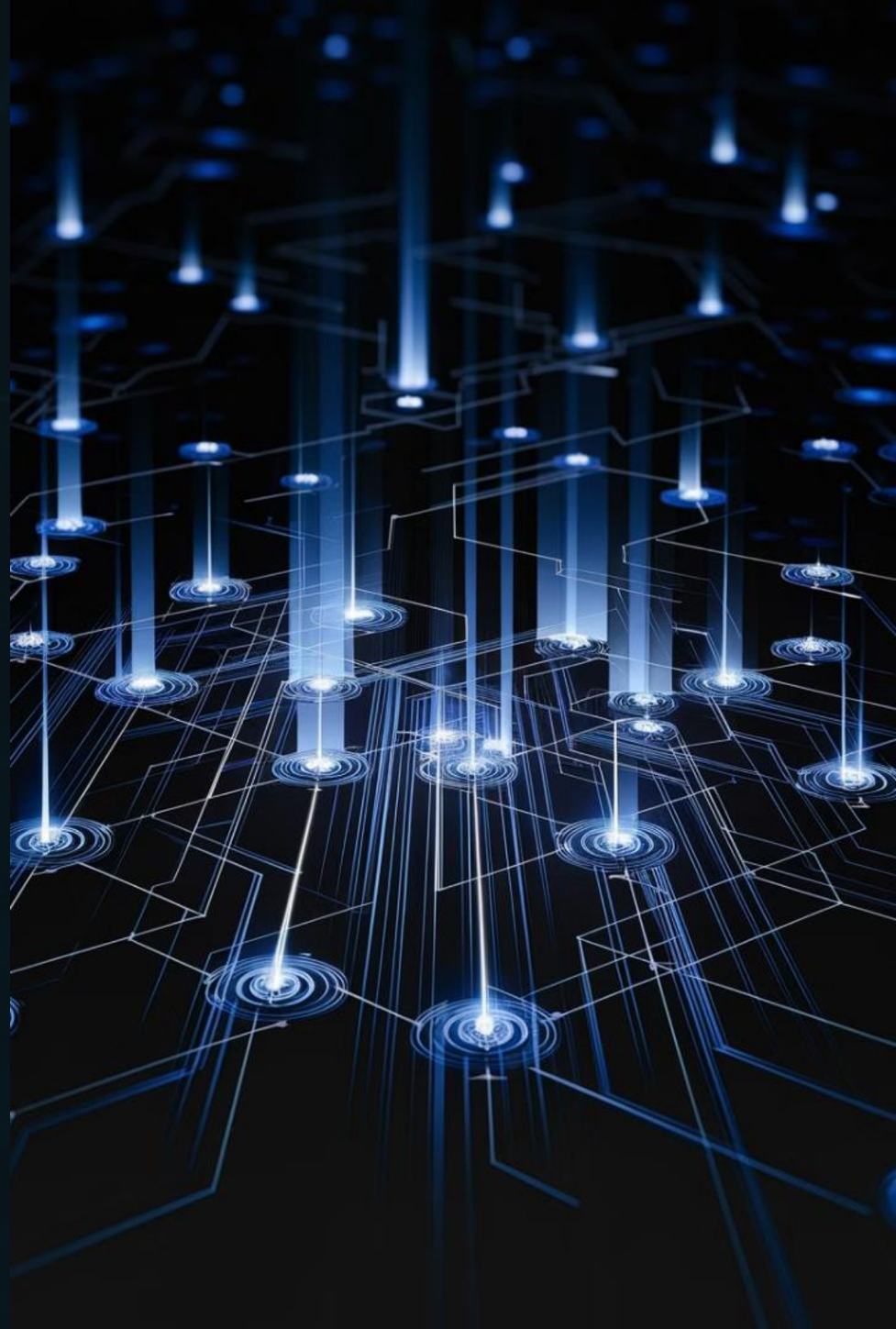
AI is reshaping central banking operations and policy-making processes.

Current AI Focus

Present AI systems excel in data analysis and decision support.

Introducing Agentic AI

We explore AI systems capable of autonomous action within ethical frameworks.



AI's Foundational Contributions

Data Analysis

AI streamlines operations through advanced data processing and automation.

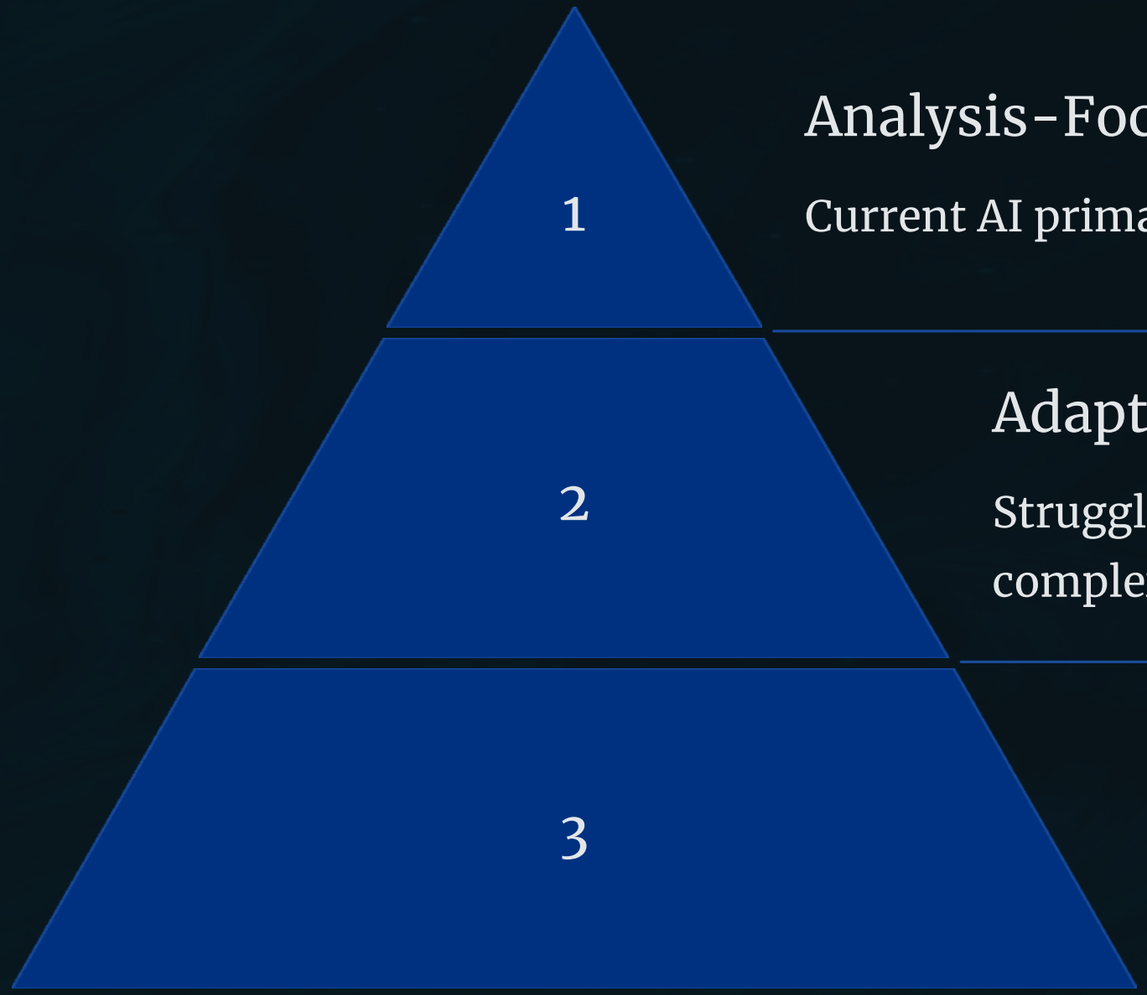
Decision Support

Enhanced support for monetary policy and risk management decisions.

Real-World Applications

ECB and Bank of England leverage AI for financial stability.

Limitations of Traditional AI



Analysis-Focused

Current AI primarily supports analysis, lacking true autonomy.

Adaptability Challenges

Struggles with real-time adaptability and explainability in complex scenarios.

Regulatory Gaps

Governance and regulatory uncertainties hinder full adoption and integration.

What is Agentic AI?

Autonomous Action

Systems capable of independent decision-making within predefined ethical parameters.

Dynamic Partners

Moves beyond prediction to execution, acting as collaborative decision-making entities.

Key Features

- Action-oriented functionality
- Ethically governed operations
- Collaborative integration with human experts

Applications of Agentic AI

1

Economic Policy Innovation

Real-time scenario testing and policy adjustment capabilities.

2

CBDC Management

Autonomous oversight and optimisation of digital currencies.

3

Financial Stability

Proactive risk identification and mitigation strategies.

Building Trust in Agentic AI

Transparency

Implement explainable AI for traceable and understandable decision-making processes.

Governance

Develop robust frameworks balancing innovation with safety and ethical considerations.

Risk Mitigation

Address cybersecurity concerns and potential algorithmic biases proactively.

From Vision to Reality

1

Collaborative Development

Engage with diverse stakeholders to shape Agentic AI systems.

2

Controlled Pilots

Implement and validate systems through carefully monitored test phases.

3

Public Engagement

Build societal trust through transparent communication and education initiatives.

Conclusion: The Next Frontier

1

Transformative Potential

Agentic AI represents the future of central banking technology.

2

Balanced Approach

Innovation requires careful consideration of risks and benefits.

3

Call to Action

Embrace ethical, responsible AI development for financial stability.

Example Use Cases

EU AI Act Agent

Autonomous system for monitoring and optimising EU-wide financial policies.

CBDC Insight Advisor Agent

AI-driven management of Central Bank Digital Currencies across networks.

Renewable Energy Agent

AI system for integrating green finance initiatives into monetary policy.

Digitalpayments

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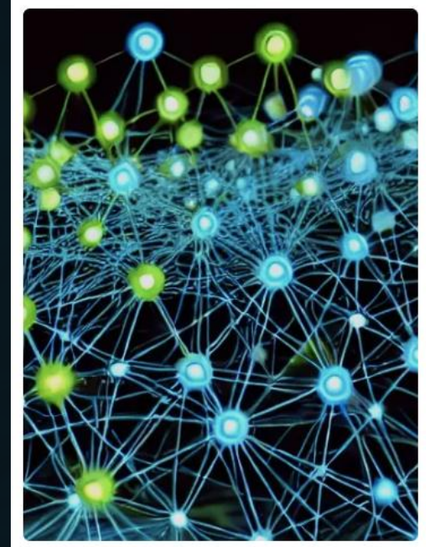
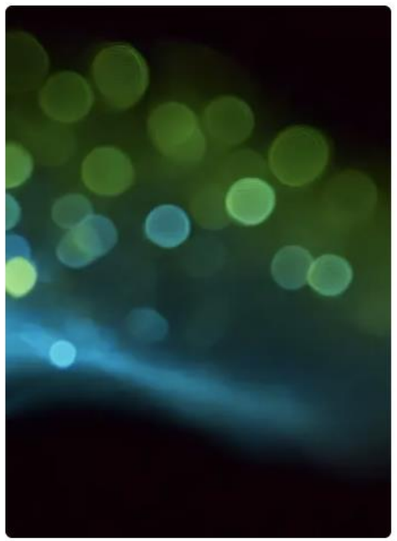


Artificial Intelligence

Focus on how complex things can be transformed into simple thinks



Digital Payments Intelligence

Focus on how digital payments can be done simpler for clients

Software Intelligence

Focus on how to accelerate complex software development

Website:

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