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7-8 Oct 2025

Innovate and regulate!

Technology Trends in the Financial Services Industry

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Red Hat FSI Industry Vertical

1. Payments

Payment Modernization

Instant Payments, Digital Currencies: CBDC, CBMT, Stablecoins

Real-time payments becoming the new normal

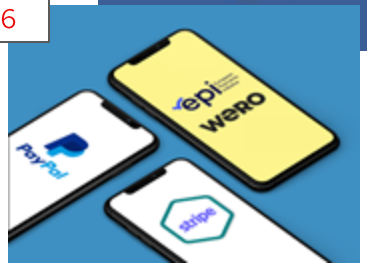
epi wero – an EU-sovereign alternative to PayPal, etc.
– a convenient alias service to SCT Inst

The ECB is preparing <u>three</u> Digital Euro CBDCs:

1. online retail D€ on a central database
2. offline retail D€ on secure HW element
3. online wholesale D€ on DLT/blockchain

GI+DE, Nexi, Capgemini

pilot starts 3Q26



Stablecoins: – US$-backed (USDT, USDC,..)
– EUR-backed (EURAU)

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Payment Modernization

Instant Payments, Digital Currencies: CBDC, CBMT, Stablecoins

Regulations

- EPC SEPA **Instant Credit Transfer** (SCT Inst)
  - no extra fees; recv 9 Jan'25; send 9 Oct'25
- EPC SEPA **Verification of Payee** (VoP)
  - mandatory 9 Oct'25
- **Stablecoins**
  - EU MiCAR Jun'23
  - US GENIUS Jul'25
- EU **PSD3/PSR**
  - upcoming '26-'27

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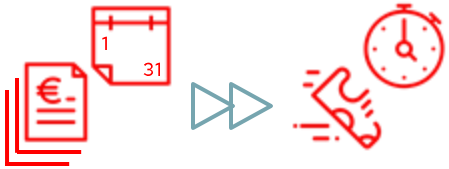
Payment Modernization

The role of IT in all of this



- **Shift from batch to real-time processing continues**
  - Resilience and fraud detection more challenging
  - Use of Predictive AI and Generative AI

- **Blockchain technology becoming relevant (again)**
  - Plateau of productivity is reached for some very relevant niches
  - Not just for digital money, also tokenization of assets/securities

- **Confidential Computing for ultra sensitive/valuable data**
  - In-memory encryption of data in-use and remote attestation
  - Better confidentiality and integrity in clouds and also on-prem

2. Digital Sovereignty

Digital Operational Resilience – Digital Sovereignty

What's the difference?

Digital Operational Resilience

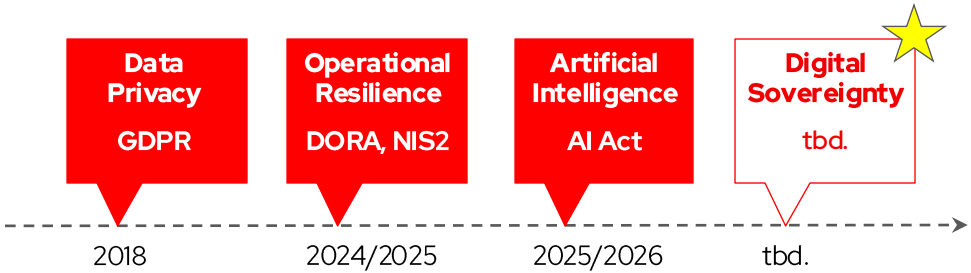
- 3rd party providers, exit-plans,
- app criticality classification, cybersecurity,
- testing, reporting, information sharing

Regulations

- for the FSI: EU **DORA** 17 Jan'25
- (for others: EU **NIS2** Directive)

Digital Sovereignty

- geopolitics - how to maintain control
- four dimensions of Digital Sovereignty
  - data, technical, operational, assurance
- national regulations, no EU regulation (yet)



https://access.redhat.com/compliance/dora
https://access.redhat.com/compliance/nis2

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you have

you can execute

CONTROL

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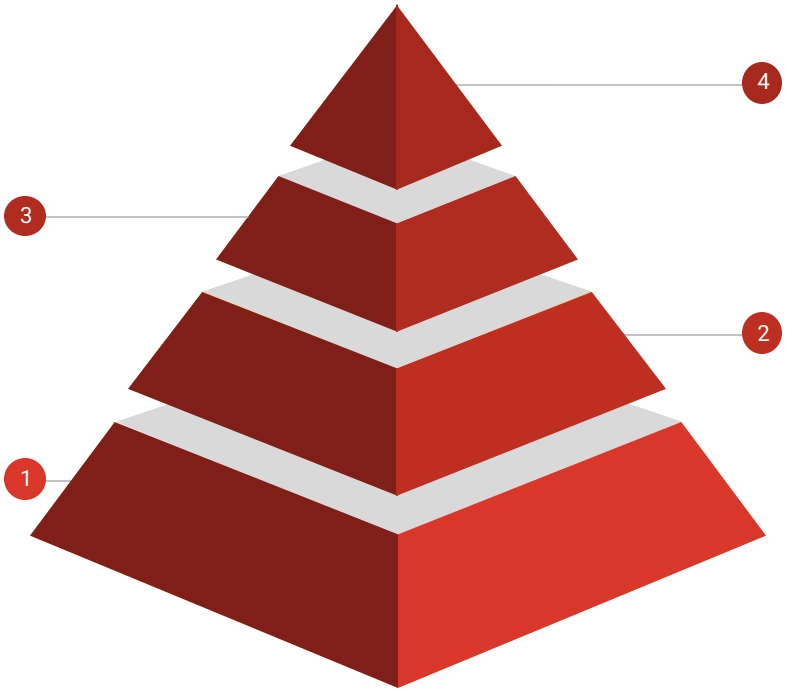
The **Dimensions** of Digital Sovereignty

Operational Sovereignty

Visibility and control over provider operations from provisioning and performance management, to monitoring of physical and digital access, to the infrastructure.

Data Sovereignty

Maintaining control over how data is collected, classified, processed and stored to ensure that data regulations are met.



Assurance Sovereignty

Ability to independently verify and assure the integrity, security, and reliability of digital systems and processes including resilience of critical services.

Technical Sovereignty

Running workloads without dependence on a provider's infrastructure or software, and protected from all extra-territorial interference and scrutiny.

"Sovereign Clouds and the Digital Sovereignty Imperative: Europe's Quest for Digital Independence" (IDC #EUR149098122, December 2022)
The Evolution of Digital Sovereignty: Moving Beyond Data and Cloud" (Rahiel Nasir, IDC, January 13, 2023)

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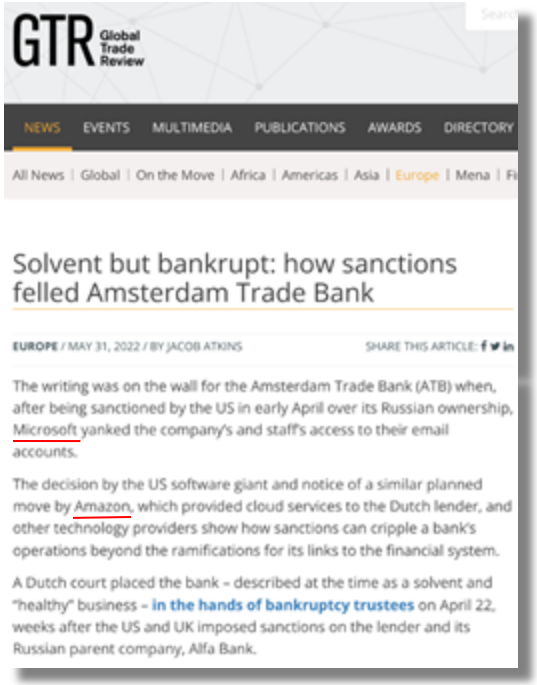
How did Russian (owned) banks deal with US sanctions impacting IT delivery?

Amsterdam Trade Bank



GTR Global Trade Review

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Solvent but bankrupt: how sanctions felled Amsterdam Trade Bank

EUROPE / MAY 31, 2022 / BY JACOB ATKINS SHARE THIS ARTICLE:

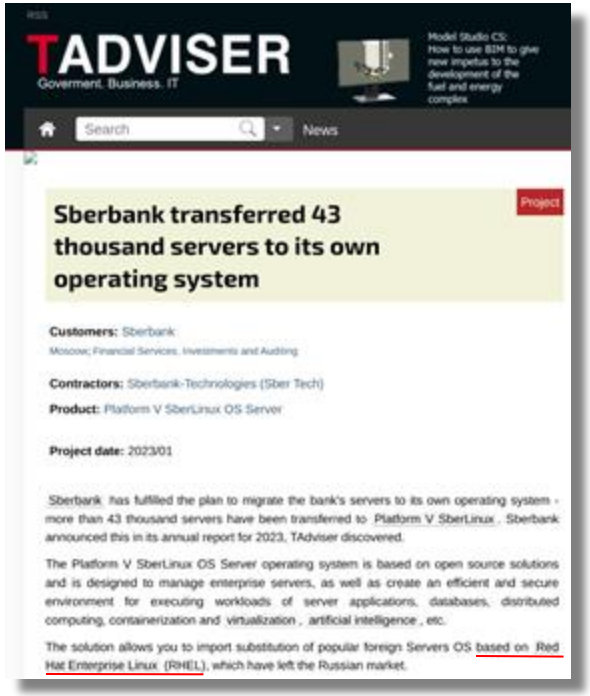
The writing was on the wall for the Amsterdam Trade Bank (ATB) when, after being sanctioned by the US in early April over its Russian ownership, Microsoft yanked the company's and staff's access to their email accounts.

The decision by the US software giant and notice of a similar planned move by Amazon, which provided cloud services to the Dutch lender, and other technology providers show how sanctions can cripple a bank's operations beyond the ramifications for its links to the financial system.

A Dutch court placed the bank – described at the time as a solvent and "healthy" business – **in the hands of bankruptcy trustees** on April 22, weeks after the US and UK imposed sanctions on the lender and its Russian parent company, Alfa Bank.

https://www.gtreview.com/news/europe/solvent-but-bankrupt-how-sanctions-felled-amsterdam-trade-bank/

Sberbank



TADVISER Government. Business. IT

Model Studio CS: How to use BIM to give new impetus to the development of the fuel and energy complex

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Project

Sberbank transferred 43 thousand servers to its own operating system

Customers: Sberbank

Moscow; Financial Services. Investments and Auditing

Contractors: Sberbank-Technologies (Sber Tech)

Product: Platform V SberLinux OS Server

Project date: 2023/01

Sberbank has fulfilled the plan to migrate the bank's servers to its own operating system - more than 43 thousand servers have been transferred to Platform V SberLinux. Sberbank announced this in its annual report for 2023, TAdviser discovered.

The Platform V SberLinux OS Server operating system is based on open source solutions and is designed to manage enterprise servers, as well as create an efficient and secure environment for executing workloads of server applications, databases, distributed computing, containerization and virtualization, artificial intelligence, etc.

The solution allows you to import substitution of popular foreign Servers OS based on Red Hat Enterprise Linux (RHEL), which have left the Russian market.

https://tadviser.com/index.php/Project:Sberbank_(Platform_V_SberLinux_OS_Server)

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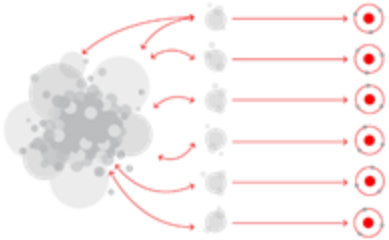
There's a better way

Open Development & Support Model

Enterprise Open Source



- built transparently in the **open**
- built and controlled by **global** communities
- long-term enterprise support by commercial companies such as **Red Hat**

Open Deployment & Operation Model

Open Hybrid Cloud

use multiple computing environment, and keep the **option to switch** environments

- US Hyperscaler Clouds
- regional Sovereign Clouds
- on-premise Data Centers, Edge locations

use **Confidential Computing***

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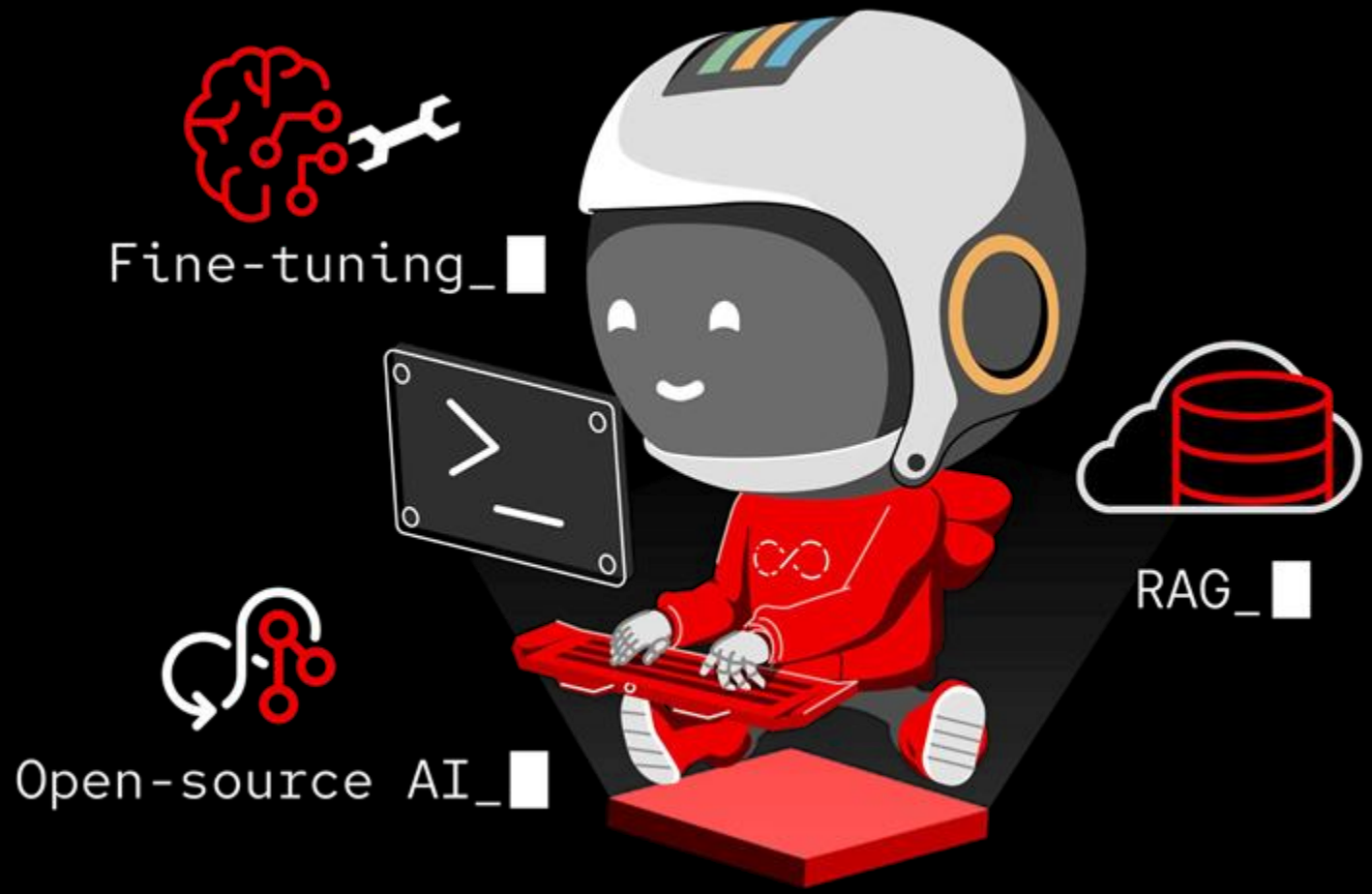
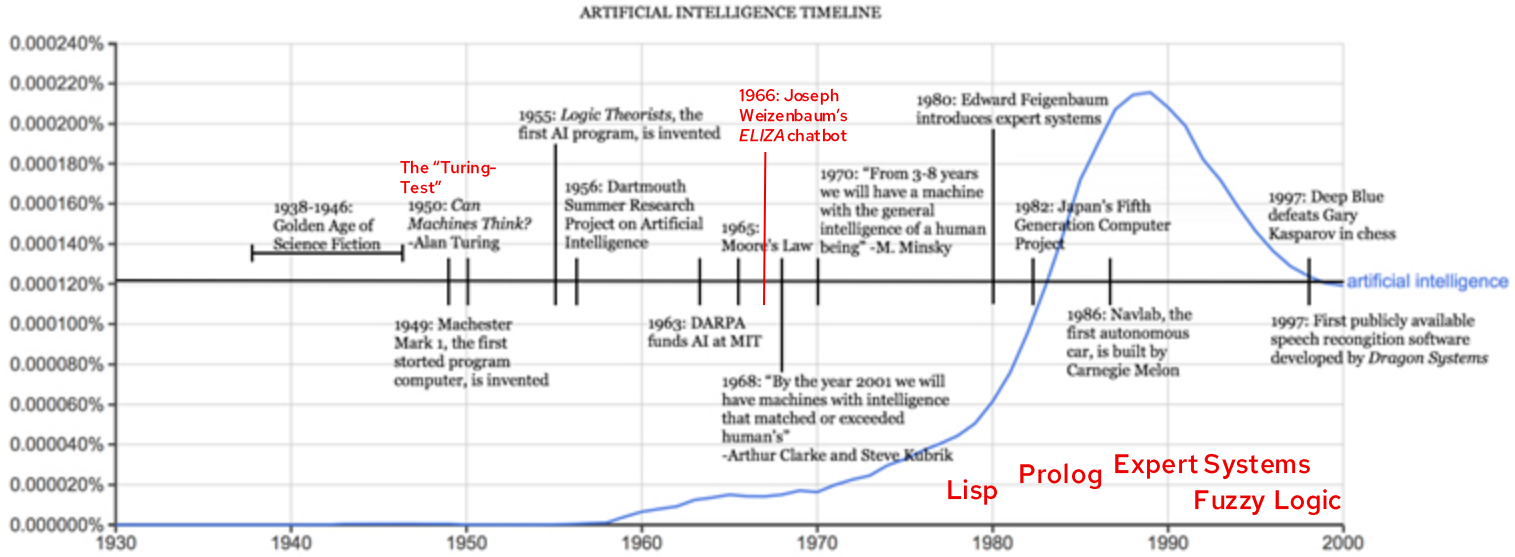
* in-memory encryption, secure boot, remote attestation, hold your own key

3. AI



AI is not a new phenomenon

AI models were **designed**: procedural, symbolic, logic,... programming languages



... and then **Big Data** happened:

https://sitn.hms.harvard.edu/flash/2017/history-artificial-intelligence/ Y-axis represents the frequency of the phrase "Artificial Intelligence" in publications.

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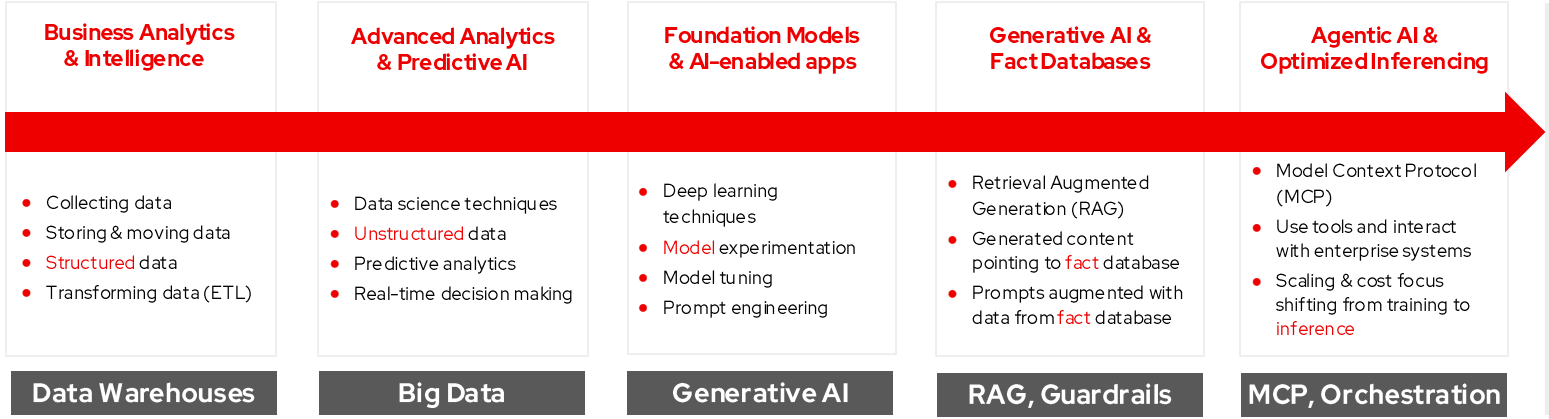
AI has undergone significant evolution

The evolution of **Data-driven** AI: from Business Intelligence to Agentic AI



- Today, practical AI is **Data-driven**
- Models are embedded in and **guarded** by applications

- **Predictive AI** runs businesses today
- Foundation models provide a shortcut for realizing the value of **Generative AI**

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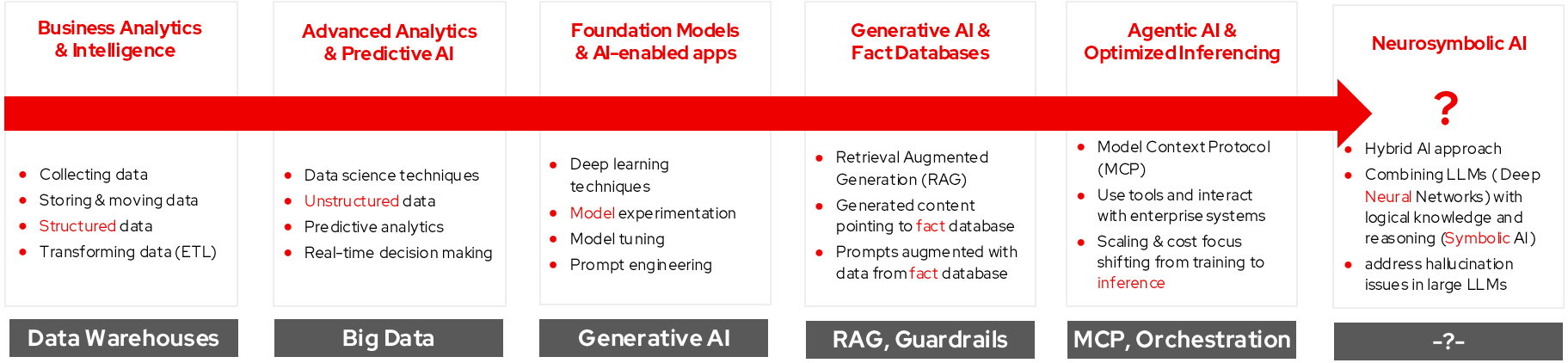
AI has undergone significant evolution

The evolution of **Data-driven** AI: from Business Intelligence to Agentic AI



- **Predictive AI** runs businesses today
- Foundation models provide a shortcut for realizing the value of **Generative AI**

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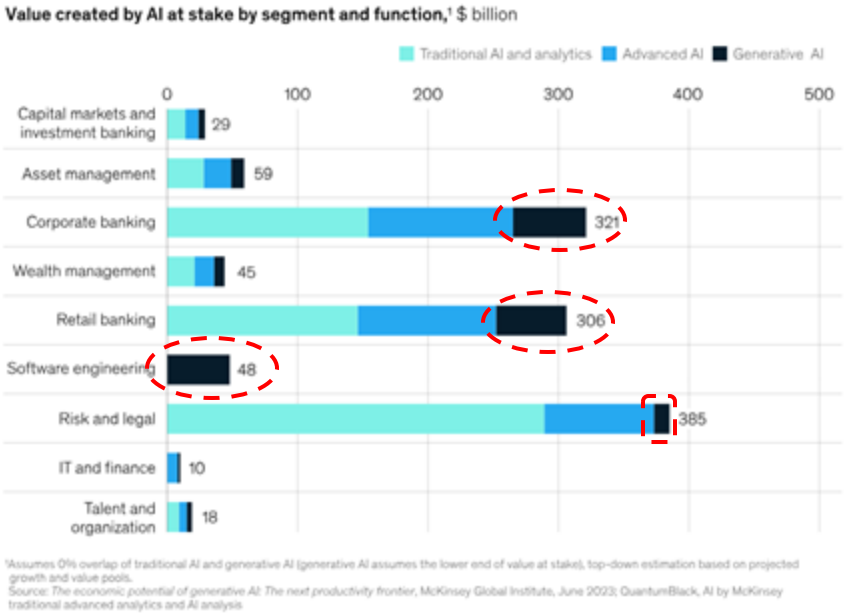
Predictive AI and Generative AI in banking

McKinsey Insights: Capturing the full value of generative AI in banking



Among industry sectors, banking is expected to have one of the largest opportunities, largely from increased productivity

- The economic impact will likely benefit all banking segments and functions, with the greatest absolute gains through Generative AI in the corporate and retail sectors with $56 billion and $54 billion, respectively
- No surprise: software engineering ❤ LLMs
- Risk and legal get largest value from AI, but that's mostly traditional AI

https://www.mckinsey.com/industries/financial-services/our-insights/capturing-the-full-value-of-generative-ai-in-banking

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Regulating AI: The EU-AI Act

Unregulated, irresponsible or abusive use of AI could lead to negative consequences for individuals or the society, create public opposition and **hinder AI innovation in the EU**.

The EU is committed to strive for a balanced approach to AI: lawful, ethical, robust

EU AI Act Requirements:
Explainability, Documentation,
Process & Data Governance,
Human Oversight,
Risk Management, Auditability.

There are some exceptions for AI systems released under **Open Source** licenses.

banned:

Unacceptable Risk

1 Highest level of risk prohibited in the EU. Includes AI systems using e.g. subliminal manipulation or general social scoring.

High Risk

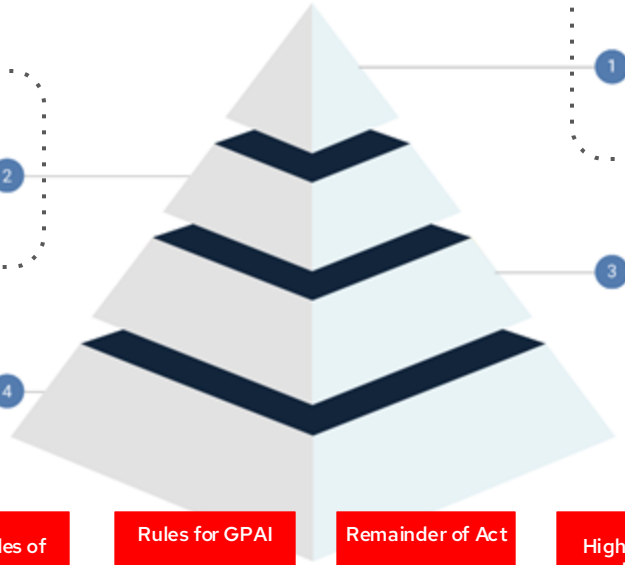
2 Most regulated AI systems, as these have the potential to cause significant harm if they fail or are misused, e.g. if used in law enforcement or recruiting.

Limited Risk

3 Includes AI systems with a risk of manipulation or deceit, e.g. chatbots or emotion recognition systems. Humans must be informed about their interaction with the AI.

Minimal Risk

4 All other AI systems, e.g. a spam filter, which can be deployed without additional restrictions.



Feb'25	May'25	Aug'25	Aug'26	Aug'27
Prohibition of certain AI systems AI literacy reqs	GPAI Codes of Practice	Rules for GPAI Penalties	Remainder of Act Except Art. 6	High risk rules apply (Art. 6)

https://www.trail-ml.com/blog/eu-ai-act-how-risk-is-classified
https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32024R1689

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