



EUROPEAN CENTRAL BANK

BANKING SUPERVISION

SSM digitalisation – from exploration to full-scale adoption

Central Banking's
Summer Meetings

12 June 2024



Elizabeth McCaul
ECB Representative to the Supervisory Board

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Supervision and technology

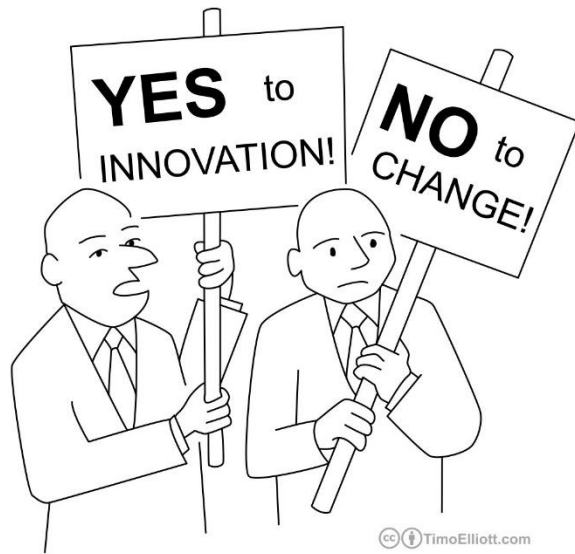
Technological innovation triggers structural changes in all areas of the global economy, and banking is no exception

- The banking sector is undergoing a rapid transformation, with **new players** entering the market and therefore the financial value chain
- Traditional banks are adopting **new business models** incorporating **fintech intermediaries** in key business processes
- **Banks are using AI to revolutionise** customer interfaces and data management, and to improve credit assessment, customer support and fraud detection
- The **volume of data** used in banking worldwide is **growing at an unprecedented pace** and is expected to grow from tens to hundreds of zettabytes within a few years



Banking supervisors must therefore adapt through innovation to align with these changes and the new environment

- **Digital innovation** and fostering an **innovation supervisory culture** is **not a choice** for supervisors **but a necessity** to meet new challenges
- **Supervisors** must leverage technology to effectively **manage** growing **data volumes** and new risks stemming from banks' use of AI or new business models
- **Harnessing the power of technology** allows supervisors to remain **efficient** and **effective** in fulfilling their mandate to keep the **European banking system safe and sound**
- At the same time, the ECB is **mindful of the risks** around digitalisation and takes into account the **legal framework** including the upcoming **AI Act**



*“We only have two demands!
Why don't people just give us what we want?”*

2

Our achievements

Since 2020 we have driven digital innovation forwards by connecting people, ideas and projects across European banking supervision

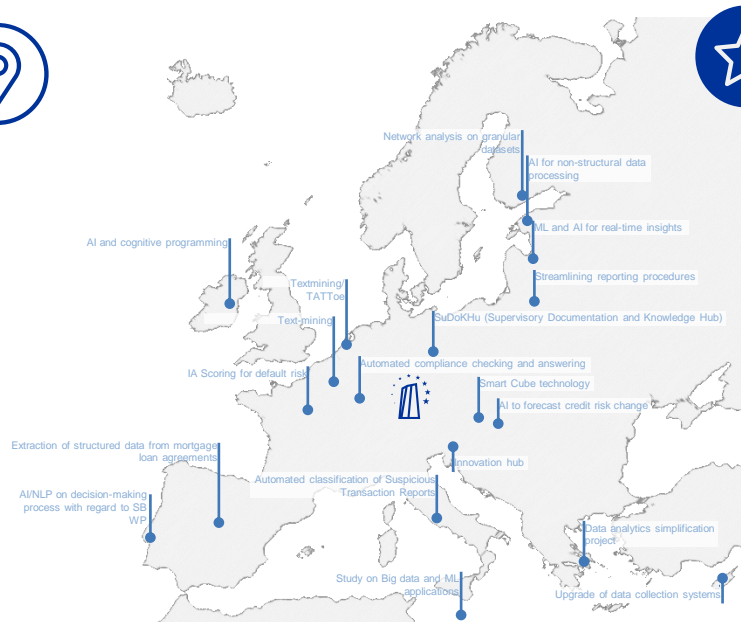
BEFORE



Full innovation potential not used

Multiple projects did not maximise the **full capacity of technology**

Limited approach to innovation, **few projects on key technologies** such as AI, RPA or NLP¹



TODAY

Connected people, ideas and projects across the ECB and the national competent authorities (NCAs)

Innovation is fostered and **benefits and knowledge are shared**

The SSM Digitalisation Blueprint, the first action plan to **deliver digital innovation across European banking supervision**, has been implemented

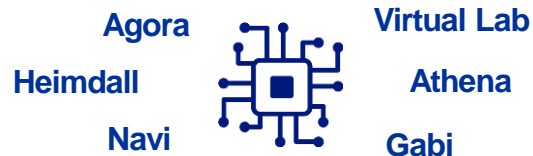
(1) AI: Artificial intelligence
RPA: Robotic process automation
NLP: Natural language processing

The digital transformation has resulted in significant achievements within a short time frame

14 | **Suptech tools implemented** from a starting point of more than 100 ideas prioritised using a structured innovation management framework

15+ | **Agile, multidisciplinary innovation teams formed** comprising IT and supervision experts from the ECB and NCAs working together

2,600 | **Experts trained** in innovation and digitalisation through comprehensive training programmes



coursera

The main result was the rollout of cutting-edge suptech tools to all European banking supervisors



Virtual Lab

Powered by SupTech

Platform for **SSM-wide digital collaboration** as well as code sharing, cloud computing and the development of generative AI capabilities



Athena

Powered by SupTech

AI-supported textual analysis platform offering **natural language processing** capabilities to all supervisory areas



Agora

Powered by SupTech

Single data lake bringing together all prudential data in one location, with access for all SSM users



Navi

Powered by SupTech

Graph and network analytics platform with advanced **visualisation** capabilities for data analysis



Heimdall

Powered by SupTech

Tool for **machine reading and analysis** of thousands of fit and proper applications



Gabi

Powered by SupTech

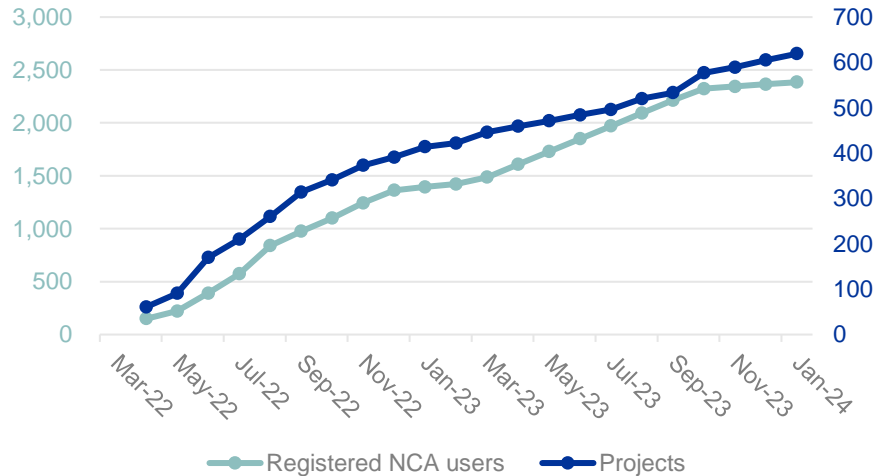
Specialised model development platform for **big data analytics**

Suptech tools are in high demand and becoming increasingly popular among European banking supervisors...



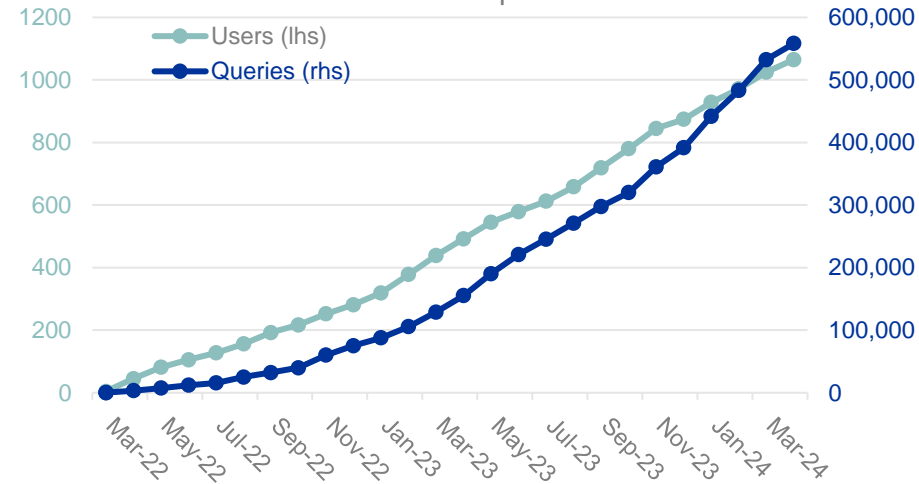
VIRTUAL LAB

Users and projects

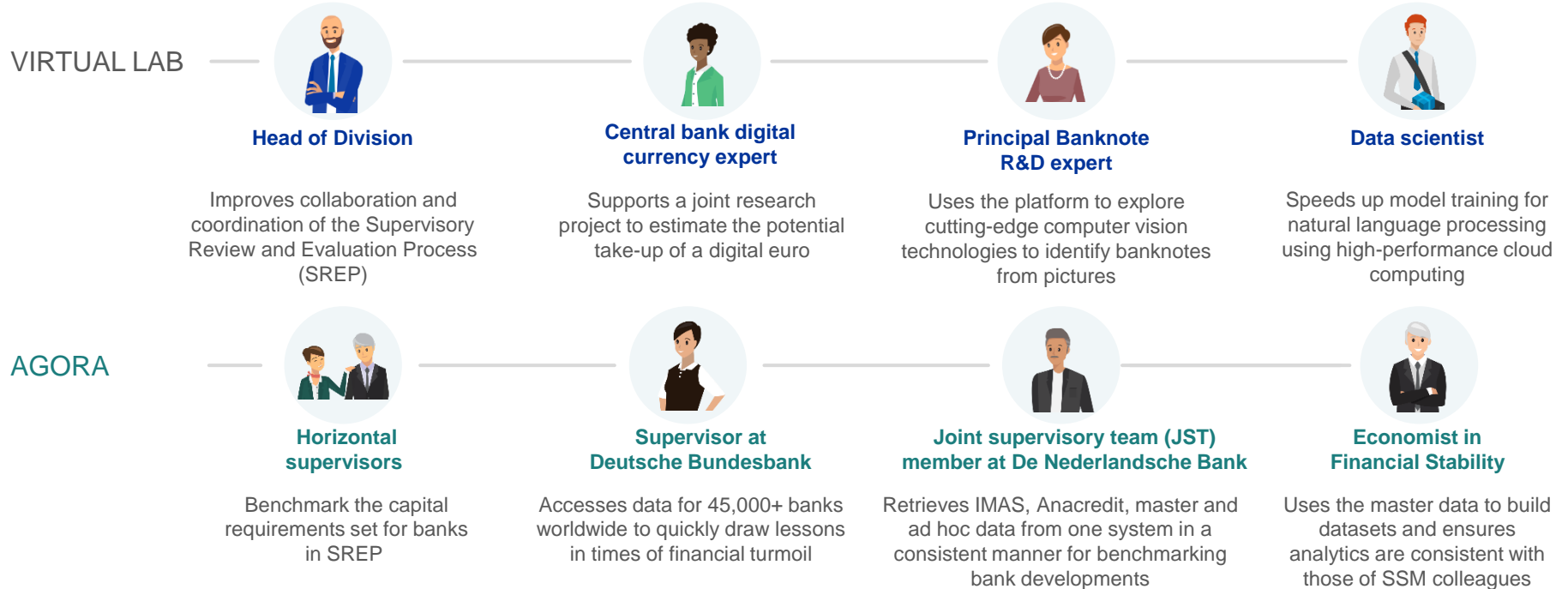


AGORA

Users and queries



...and are having a tangible impact on their daily work



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The new SSM tech strategy

Several pressing business needs require further innovation and digitalisation efforts



The new SSM tech strategy connects people and technology to deliver “supervision at your fingertips”

SSM tech strategy 2024-28

SUPERVISION AT YOUR FINGERTIPS

Core systems and
data infrastructure

Supervisory
analytics

Technology + People

Process automation
and collaboration

Culture

Organisation

Partnerships

The strategy outlines a comprehensive action plan in line with SSM priorities and objectives

BY 2028

Core systems and data infrastructure

- ▶ Adapt IT tools to evolving **processes & methodologies** (e.g. update of SREP methodology in core IT systems)
- ▶ Upgrade data infrastructure and consolidate **information exchange** with significant institutions (e.g. Agora upscaling, SSM portal)
- ▶ **Simplify** SSM IT landscape and address barriers for joint work (e.g. enhanced SSM data governance, Olympus project)

Optimise the SSM IT landscape to maximise the impact and use of existing applications

Supervisory analytics

- ▶ Address **emerging risks** (e.g. IT and cyber risk supervision and climate and environmental risk monitoring)
- ▶ Explore **new datasets** and sources of information (e.g. social media monitoring and non-bank financial institution data analytics)
- ▶ Holistically assess, **consolidate and upscale SSM data analytics** (e.g. streamlined dashboards and repositories, SSM cockpit)

Enhance supervisory risk assessment by augmenting analytical capabilities

Process automation and collaboration

- ▶ Strengthen **SSM integration and collaboration** (e.g. ECB-NCA's shared calendar and mailboxes)
- ▶ Automate **workflows** and support information searches (e.g. robotic process automation applications)
- ▶ Monitor and adopt **pioneering technologies** (e.g. generative AI support for supervision)

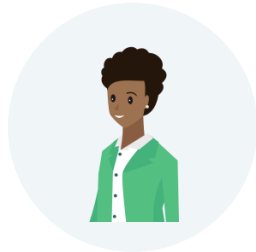
Deliver breakthrough solutions to automate workflows and improve SSM collaboration

The action plan will increase the effectiveness and efficiency of supervisors using technology accessible with only a few clicks



**JST
members**

... will connect to a single and integrated **SSM cockpit for everyday tasks**, bundling 80% of the most highly demanded supervisory data and IT services for addressing **supervisory priorities**



**Horizontal
supervisors**

... will be prompted with new insights powered by **generative AI** and new **SSM data analytics capabilities** following **expert group** recommendations



**On-site
inspectors**

...will work on an **AI-assisted findings and measures** tool to improve **remediation effectiveness** across all types of supervisory findings



**Regulatory experts
at supervised banks**

...will exchange all information about their bank through a **single channel**, significantly reducing compliance efforts for their institution

The strategy also follows a clear, people-oriented approach



Impact measurement

Use of **key performance indicators** for each tool to **pinpoint bottlenecks and identify areas for improvement**



Suptech champions

Ambassadors in all areas to foster awareness and support the use and development of suptech

People-focused approach

One-click initiative

Provide intuitive and consistent experience across all IT systems and tools, focusing on **ease of use for supervisors**

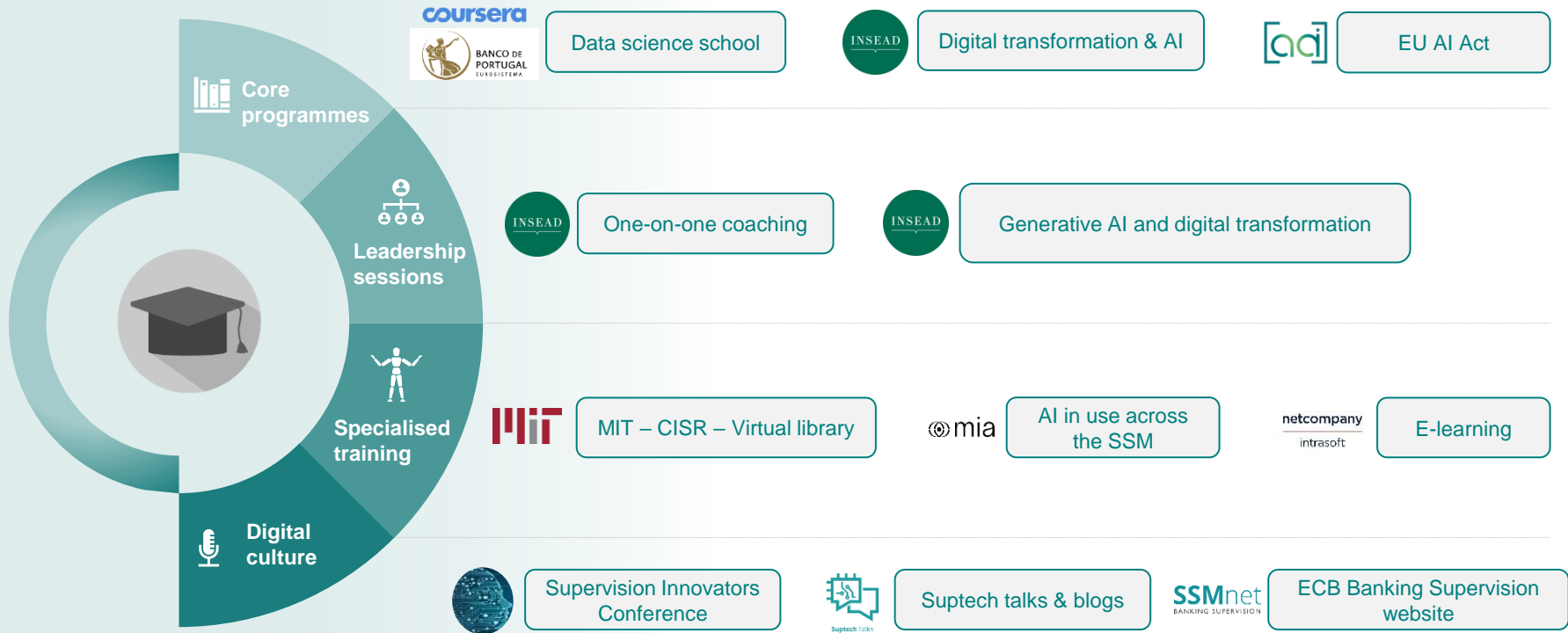


Engagement strategy

Raise awareness and increase user base of tools through targeted initiatives, such as **roadshows** and **people-oriented** training



High-quality training and digital culture initiatives are equally important and provided for all staff levels



Partnerships with peer authorities, industry, academia and startups allow supervisors to leverage the most recent trends and knowledge

Academia and research

Work with leading academic institutions and research centres



ETH zürich

Startups

Work with several startups to develop tools and studies



International authorities

Connect to key institutions and innovation leaders in Europe and worldwide



Industry

Partner with leading players to develop and host cutting-edge tools for supervision



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Conclusion

Our digital transformation efforts will pave the way for the banking supervisors of the future

Augmented data expert

combines prudential data with other sources using AI to derive new insights



Suptech

Agile supervisor

collaborates in virtual teams and works on fully integrated and AI-empowered systems



Banking supervisor of the future

Business orientation

Citizen technologist

uses latest technologies, leveraging self-built apps to resolve pain points

Cloud-native systems

Low-code

European banking supervisor

works together with all European banking supervisors based on a common set of tools

Advanced analytics

Modular IT services