

SUPTECH WEEK 2023: DAY 1 TAKEAWAYS

Supervisory agencies are making significant investments in technology and talent to foster the growth of SupTech. This rise in SupTech highlights the increasing recognition of its potential to revolutionize financial supervision. The complexity involved in the evolution of SupTech underscores the vital role of community and teamwork in understanding and implementing technology and data science within supervisory processes. Collaboration within the SupTech community is enhanced by open-source technology, which serves as a critical component, facilitating shared progress and innovation.

Advancements in each generation of SupTech are expanding the possibilities for creating a more inclusive financial sector. This collective effort allows individuals working together to amplify the impact and significance of their contributions. Innovation within SupTech extends beyond mere technological solutions; it includes improving case management practices. Hasan Fawsi exemplified this by highlighting the training, proof-of-concept development, and prototyping initiatives undertaken by OJK in collaboration with the Cambridge SupTech Lab, with support from the Bill & Melinda Gates Foundation.

A significant majority of financial authorities are now actively engaged in SupTech initiatives. These authorities are strategically focusing on establishing new teams and offices specifically dedicated to managing SupTech. However, the journey of progress is not straightforward. Agencies face obstacles such as internal resistance to innovation, often described metaphorically by Daniela Shackis of ECB as antibodies rejecting new developments. There is also a crucial need for a deeper understanding of supervisory needs that goes beyond technological solutions.

The importance of annual State of SupTech Reports is emphasized as a critical tool for agencies to measure and track their advancements in SupTech, as noted by Jeremy Premio of BIS FSI. These reports provide valuable benchmarks and insights, guiding agencies in their development efforts.

Moreover, the successful development of SupTech hinges on robust collaboration. Addressing challenges such as policy differences, data confidentiality issues, and the consolidation of technology infrastructure requires innovative solutions like interoperability and APIs. By tackling these challenges collectively, the SupTech community can ensure more effective and efficient supervision in the financial sector.

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DAY 1

4 December 2023

KEYNOTE



Hasan Fawzi

Chief Executive of Financial Technology Innovation, Digital Financial Assets, and Crypto Assets
Indonesia Financial Services Authority

THE STATE OF SUPTECH

The session offers a comprehensive overview and insightful discussion on the latest advancements and trends in supervisory technology (suptech). It begins with a presentation of the highlights from the State of SupTech Report 2023, illuminating the ways in which financial authorities worldwide are harnessing technology to boost their supervisory capabilities. The session promotes an engaging dialogue among experts, delving into the effectiveness of suptech strategies and applications. By discussing the current landscape and the potential future developments of SupTech, based on evidence and insights provided by the report, this session will pave the way for the upcoming SupTech Week.



Juliet Ongwae

Senior SupTech Specialist
Cambridge Suptech Lab



Jermy Prenio

Principal Advisor
Financial Stability Institute



Daniela Schackis

Dept. Director General
Banking Supervision
European Central Bank

HARNESSING THE POWER OF COLLABORATION:

The Importance of Working Together Within Financial Supervision

With a deep dive into the strategic advantages of collaborative efforts in the adoption and development of supervisory technology, this panel discussion is designed to unpack the potential that lies in shared experiences and the collective tackling of challenges within the supotech space.

Attendees leave with a richer understanding of the key components that underpin successful partnerships and how these can be harnessed to foster innovation and efficiency. The session will also cast light on the emerging supotech domains where joint efforts are proving most effective.



Adam Scott

Director of Design and
Development
**Consumer Financial
Protection Bureau**



Lukasz Kubicki

Head of Supotech,
Technology
European Central Bank



Carmen Barendela

CBDC solution Architect
Bank of England



Whitney Austin

Strategy Risk and Innovation
Business Advisor
**Federal Reserve Bank of
Richmond**

DIGITAL SUPERVISORY INFRASTRUCTURE

The financial sector digital supervisory infrastructure encompasses technologies and systems designed to oversee financial markets and institutions, provide assistance and redress to consumers, support data ecosystems that catalyse innovation via the data commons, etc.



Matt Grasser

Co-Head
**Cambridge
SupTech Lab**



Miguel Diaz

Head of Toronto
Centre
BIS Innovation Hub



Iman van Lelyveld

Head of the Data
Science Hub
De Nederlandsche Bank



Beatrice Sablone

Data & Information
Strategist
**Swedish Financial
Supervisory Agency**

APPROACHES TO SUPTECH:

The Bank of England's Regtech Strategy



Lewis Webber
Head of Division
RegTech & Data Innovation
Bank of England



Francesca Hopwood Road
Head of London Centre
BIS Innovation Hub

EMBEDDING INNOVATION IN FINANCIAL AUTHORITIES

This session explores why embedding innovation in supotech as a strategy is important. It explores how to strategize and navigate challenges for innovation, collaboration and building a culture for acceptance of innovation and practical ways to embed innovation in supotech solutions.



Francesca Hopwood Road
Head of London Centre
BIS Innovation Hub



Sunayna Tuteja
Chief Innovation Officer
Federal Reserve System

SUPTECH WEEK 2023: DAY 2 TAKEAWAYS

Cecilia Skingsley (Head of the BIS Innovation Hub, at the Bank for International Settlements) emphasized that data is fundamental to the success of supervisory technology, presenting both opportunities and challenges due to its abundance. The need for granular data has never been more critical, and a seamless flow of data between supervisors and supervised entities is essential. While current technology offers some solutions, the ongoing development of more powerful tools over the next two years is expected to enhance these capabilities. SupTech's role is pivotal in advancing risk-based supervision, although challenges persist in transforming conceptual ideas into practical applications. Effective risk-based supervision relies on technical skills, user-friendly tools like heat maps, and continuous feedback mechanisms.

Improved data governance is necessary, focusing on data quality, granularity, standardization, and the use of collaborative tools such as data hubs and APIs to ensure a seamless flow of information. New tools like web scraping and sentiment analysis are revolutionizing data collection and analysis, with methodologies varying between data-first and outcome-first approaches. SupTech requires a blend of technical, domain, and soft skills to adapt to the evolving regulatory and financial landscape.

The role of AI in SupTech is significant, but addressing biases in data and maintaining human oversight are crucial to ensuring fairness and minimizing harm. AI bias often reflects real-world biases, making it imperative to recognize and mitigate these biases before they influence algorithmic outputs. This highlights the importance of keeping a "human in the loop" to manage bias effectively. Implementing AI responsibly involves understanding its mechanics, checking for biases, and establishing clear accountability and security measures.

Cybersecurity is a top global threat, and while AI can aid in combating it, human-assisted responses and cross-border collaboration are also essential. Effective information sharing during incidents and regular, proper training of staff are crucial components of a robust cybersecurity strategy. Supervisory agencies must commit to investing in well-trained staff, seek or develop user-friendly solutions (since even well-trained staff struggle with overly complex tools), and implement a feedback loop to adjust tactics, improve technology, and better serve stakeholders.

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DAY 2

5 December 2023

KEYNOTE



Cecilia Skingsley

Head

BIS Innovation Hub

SUPTECH-POWERED RISK BASED SUPERVISION

This session explores the role that supotech is playing in enabling and supporting risk-based supervision. Advanced technologies such as big data analytics, machine learning, Natural Language Processing (NLP), and network analysis are being deployed to identify, assess, and classify risks and thus prioritize supervisory actions. The goal is to improve risk identification and management with more effective and efficient utilization of limited supervisory resources. The panel will also discuss the required skills to interpret the output of these systems and integrate insights into the supervisory process.



Haoying (Ivy) Ou

Managing Director of
Supervision Data and
Analytical Insights

Office of the
Superintendent of Financial
Institutions Canada



Magno Condori

Deputy Superintendent
Superintendencia de
Banca, Seguros
y AFP



Javier Tarancon

Head of Information
Analysis

Banco de España



Perttu Korhonen

Head of Department
Financial Analysis
and Innovation
Qatar Financial Centre
Regulatory Authority

THE ETHIC AND REGULATION OF AI: Implications for Suptech

The State of SupTech Report has demonstrated a continued growth in the prominence of machine learning and AI-driven supervisory technologies within financial authorities. Central to this adoption is a requisite discussion and exploration of the ethical responsibilities arising from the widespread adoption of these technologies, particularly focusing on issues of fairness and accountability. This session will feature insights into the evolving legal and regulatory landscape surrounding AI applications, with a specific emphasis on how these frameworks will impact public sector use.

Audience members will walk away with a more nuanced understanding of the multifaceted challenges and opportunities at the intersection of AI, ethics, and regulation in the context of supervisory technologies, fostering a dialogue that guides responsible and compliant implementation in the financial sector.



Gabriele Mazzini
Team Lead–AI–Act–
Directorate
General CNECT
European Commission



Matt Grasser
Co-Head
Cambridge SupTech Lab



Elizabeth Adams
CEO
EMA Advisory Services



Per Nymand-Andersen
Lecturer
**Goethe-Universität
Frankfurt**

DATA JOURNEY: Collection, Validation, and Governance

Data is the lifeblood of financial supervision. It is crucial for financial authorities to have efficient processes across the spectrum of the data journey – encompassing collection, validation, and governance. This session will explore the current state of play and how financial authorities are meeting this challenge, both in terms of creating greater efficiency but crucially in adopting user-centric design to ensure that the data tools we create meet the needs of the end user – the supervisor. The panel will discuss how emerging technologies and techniques can potentially transform this data journey and overcome long-standing challenges, as well as the importance of experimentation to this transformation process.



Lewis Webber
Head of Division, RegTech,
Data & Innovation
Bank of England



Edita Lukaševičiūtė
Head of Governance
Bank of Lithuania



Noel Quinto
Director, Supervisory
Analytics
**Banco Sentral
ng Pilipinas**



Patrick Hoffman
Advisor
BIS Innovation Hub

DATA JOURNEY:

Cybersecurity and Suptech

This session will explore the potential role that emerging technologies and SupTech solutions can play in strengthening cybersecurity frameworks within financial authorities, with reference to recent examples of experimentation.



Beju Shah

Head of Nordic Centre
BIS Innovation Hub



Adrian Waddy

Head of Innovation
(Data Science)
**Australian Prudential
Regulation Authority**



David Whyte

Head of Corporate Security
and Cyber Resilience
Coordination Centre
BIS Innovation Hub

DATA JOURNEY:

Web and Social Media Scrapers and Sentiment Analysis

Delve into the intricate world of web scraping, unraveling its theoretical underpinnings and practical applications. Explore the supervisory value embedded in the art of collecting and analyzing information from the vast expanse of the internet. Panelists will illuminate the diverse types of data that can be harvested from online sources, providing a detailed exploration of the analyses that can be derived.

Furthermore, we discuss the indispensable role of sentiment analysis and other innovative methods in quantifying unstructured data, unveiling their pivotal value and utility in a supervisory context. This will be an opportunity to gain profound insights into the power of web scraping and how it can revolutionize information gathering and decision-making processes.



Matt Grasser

Co-Head
Cambridge SupTech Lab



Abhisekh Rana

Senior Data Scientist
Cambridge SupTech Lab



Sanea Daruwalla

Chief & Legal People
Officer
Zyte



Christopher Guess

Lead Technologist
Winnov Technologies

THE ETHIC AND REGULATION OF AI: Algorithmic Fairness

This session convenes deep experts from technical research, academia, and central banking to examine the intricate dimensions of fairness in algorithmic decision-making. The session's primary goal is to delve into the technical advancements, ethical considerations, and real-world implications associated with algorithmic systems. By fostering dialogue among these diverse perspectives, the panel aims to identify collaborative pathways that bridge technical innovation, academic research, and regulatory policies, aiming for a collective approach to ensure fairness and equity in algorithmic outcomes across different sectors.



Matt Grasser
Co-Head
Cambridge SupTech Lab



Kelly Cochran
Deputy Director
Cambridge SupTech Lab



Elizabeth Adams
CEO
EMA Advisory Services



Per Nymand-Andersen
Lecturer
Goethe-Universität
Frankfurt

SUPTECH WEEK 2023: DAY 3 TAKEAWAYS

The vast amount of data and reporting responsibilities banks face makes data-driven strategies essential for their operations. SupTech holds significant promise for delivering major cost savings to the private sector, which has fueled banks' growing interest in its development and implementation. The relationship between RegTech and SupTech reveals more commonalities than differences, highlighting the need for collaboration among key players in both fields. Standardized taxonomies can accelerate progress in both areas, fostering a unified approach to regulatory and supervisory technology.

The debate over whether to "buy" or "build" technology solutions often presents a false dichotomy, as many applications incorporate both purchased and internally developed components. Deciding between these options involves evaluating factors such as available budgets, existing open-source components, time constraints, legal considerations like data residency and privacy laws, and the capabilities of the IT team.

AI's role in SupTech is substantial, but it comes with potential risks, including AI hallucinations. To mitigate these risks, it's crucial to maintain a "human in the loop," ensuring continuous human oversight and intervention. This approach helps manage AI's unpredictability and enhances its reliability and fairness in supervisory applications.

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DAY 3

6 December 2023

KEYNOTE



Peter Cai

Managing Director, Global Head of Risk Data, Analytics,
Reporting, & Tech

Citigroup

REGTECH AND SUPTECH:

Two Sides of the Same Coin?

This session explores the intersection between SupTech and RegTech and will offer perspectives on how we can facilitate increased, and more meaningful, interaction between the two.



Antoine Bourdais
Product Director
Regnology



Drew Propson
Head of Technology and
Innovation in Financial
Services
World Economic Forum



Francesca Hopwood Road
Head of London Centre
BIS Innovation Hub



Thomas Bull
Partner, UK Head of
Fintech Growth
EY



Deborah Young
CEO

The RegTech Association

DEVELOPING SUPTECH APPLICATIONS

Buy v Build

This session examines the decision-making process for developing supotech applications in house or through an external provider. Panelists will share insights on the pros and cons of both 'build' and 'buy' approaches and key considerations that decision-makers should take into account.



Matt Grasser
Co-Head
Cambridge SupTech Lab



Sam P. Selim
President & Chief
Innovation Officer
SQL Power Group



Carmelle Cadet
Founder & CEO
EMTECH

RECENT TRENDS AND DEVELOPMENTS IN SUPTECH

This session explores recent trends and developments and considers the full evolution of supotech. Panellists will reflect on advancements over the past few years, including the integration of AI in supotech, data governance and privacy approaches, and increased cybersecurity in supotech systems, amongst others. Panellists will also highlight challenges and opportunities they are observing for the years ahead.



Anne Leslie
Cloud Risk and Controls
Leader, EMEA
IBM Cloud for
Financial Services



Patrick Contech
CEO
Africa FinTech Network



Aman Thind
CTO
State Street



Curtis Matlock
CEO
Proto



Kwame Oppong
Head, Fintech and
Innovation
Bank of Ghana

2023 LAUNCHPAD PROTOTYPE DEMOS

Advanced ML/AI Consumer Protection Suites

Vendors demonstrate the prototypes that have been developed in collaboration with financial authorities. Financial authorities share their experience and how they envision using innovative technology such as social media scraping and ML/AI to gain predictive insights to detect potential misconduct and improve consumer protection.



Nathalie Lenehan
Technical Program Manager
Cambridge SupTech Lab



Vanessa Babicz
COO
Proto



Nicolás Tirado
Corrective Action
Supervisor
SBS Peru



Alvin Tolosa
Market Conduct, Data
Analytics, and Policy Group
Bangko Sentral ng Pilipinas



Thomas Nilsson
Director of Central Bank
Solutions
FNA



Christopher Guess
Lead Technologist
Winnov Technologies



Clarence Blay
Assistant Director
Bank of Ghana

APPROACHES TO SUPTECH:

Banco do Brasil & Saudi Central Bank



John Yeo
Advisor
BIS Innovation Hub



Mansour A Alsaleh
Head
Saudi Central Bank



Anthony Butler
Senior Advisor
Saudi Central Bank



Rodrigo Baratta
Machine Learning Engineer
and Data Scientist
Banco do Brasil

**REGULATORY TAXONOMIES AND MACHINE-READABLE REGULATION:
FINRA DEMO**



Alex Khachaturian
Director in the Office of
Financial Innovation
FINRA



Afshin Atabaki
Special Advisor and
Associate General Counsel
FINRA



Nick Vitalo
Asistant General
Counsel
FINRA



Haimera Workie
Vice President and Head of
Financial Innovation
FINRA

**PUBLIC/PRIVATE COLLABORATION:
Furthering Suptech Adoption**



Simran Singh
Techsprint Lead,
Innovation Lab
**Financial Conduct
Authority**



Ekaterina Borisova
Senior Associate,
Global Innovation
**Financial Conduct
Authority**

**BEYOND CHATBOTS:
Advanced Analytics Hackathon and Other Collaborative Events**

This session introduces the various event types that have evolved to bring people together to solve big world problems with technology. The panel discusses how data products created in global collaboration of data scientists and domain experts can transition to support consumer protection initiatives.



Nathalie Lenehan
Technical Progam Manager
Cambridge SupTech Lab



Nitya Malladi
Programme Manager
**Alliance for Innovative
Regulation**



Abhisekh Rana
Senior Data Scientist
Cambridge SupTech Lab

POTENTIAL BENEFITS OF GENERATIVE AI:

Fireside Chat

A discussion highlighting the potential benefits of Generative AI for regulatory agencies in the realm of supervision and consumer protection



Mariama Jalloh-Heyward
Programme Director
**Alliance for Innovative
Regulation**



Edmund Towers
Head of RegTech and
Advanced Analytics
Financial Conduct Authority

SUPTECH WEEK 2023: DAY 4 TAKEAWAYS

SupTech is an indispensable tool in aiding law enforcement and authorities to combat money laundering, weapons proliferation, and other financial crimes. By fostering collaboration across the public sector, private sector, and academia, and leveraging SupTech technology, we can better prevent individuals from falling victim to fraud and other crimes. However, it is crucial to recognize that criminals also have access to these tools, underscoring the importance of continued dialogue and cross-border cooperation to stay ahead of these threats.

Mitigating climate risk in the financial sector requires identifying how these risks manifest. SupTech technology will be instrumental in the global effort to maintain a healthy and livable planet by providing the necessary tools to monitor and manage climate-related financial risks effectively.

Consumer protection is a fundamental human right and a collective responsibility. Realizing this right involves using technology capable of analyzing vast amounts of data to identify and stop fraudsters, particularly those targeting vulnerable populations.

Creating a truly inclusive financial system that integrates women into the global economy is one of the most critical economic initiatives worldwide. Despite progress, more efforts are needed to facilitate women's participation in financial services. Supervisory agencies must be intentional in gender-desegregating data to reveal specific challenges and take targeted actions to address them, thereby improving financial inclusion for women.

The establishment of a SupTech community that spans the public, private, and academic sectors is crucial for co-creating a global financial system that offers equal opportunities for success, regardless of an individual's background or birthplace. SupTech represents more than just technology; it is a movement aimed at fostering an inclusive and equitable global economy.

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Cambridge
Centre
for Alternative
Finance

CAMBRIDGE SUPTECH LAB



BIS



DAY 4

7 December 2023

KEYNOTE



Elsie Addo Awadzi
Deputy Governor
Bank of Ghana

SUPTECH POWERED AML/CFT/CPF SUPERVISION:

Consumer Complaints Analytics

The session explores the evolving field of suptech and its impact on enhancing Anti-Money Laundering (AML), Counter-Financing of Terrorism (CFT), and Countering Proliferation Financing (CPF) efforts. We aim to dissect how suptech is amplifying the efficacy of the fight against financial crime and the emerging trends expected to shape the future of AML/CFT/CPF financial supervision. The panel will also address strategic approaches to integrate suptech effectively into existing systems and share their vision of how technology and data science will enhance supervisory outcomes.



Sarah Paquet

Director and CEO
Financial Transactions and
Reports Analysis Centre
of Canada



Nick Maxwell

Head
Future of Financial
Intelligence Sharing



Leslye Sihuay

Suptech Specialist
Cambridge SupTech Lab



Marco di Simoni

Senior Researcher
Financial Intelligence
Unit of Italy



GREEN FINANCE AND SUPTECH

This session explores the innovative ways in which supotech is reshaping the landscape of climate finance, facilitating more effective risk management, sustainable investment, and regulatory compliance. Participants will gain valuable perspectives from leading experts from supervisory authorities and international organisations working in state-of-the-art synergies between finance and technology to pursue a more sustainable and resilient future.



Iman van Lelyveld
Head of the Data
Science Hub
De Nederlandsche Bank



Samir Kiuhan
Senior Researcher
Cambridge SupTech Lab



Carine Bastos
Deputy Advisor
**Banco Central
do Brasil**



Chrissy Martin Meier
Director, Policy
Digital Impact Alliance



Andres Alonso
Senior Economist
Banco de España

SUPTECH-POWERED CONSUMER PROTECTION SUPERVISION:

The session offers an insightful discussion on the latest innovations in consumer protection supervision. It begins with an overview of supotech initiatives that have been designed and developed for a wide range of use cases, providing real-world examples of technologies that authorities are currently leveraging to take consumer protection supervision to the next level. Then, our invited experts will share their experiences and perspectives as early adopters of supotech in this field. By sharing their lessons learned, this session will unveil the challenges and opportunities for supotech adoption and encourage more supervisors to experiment with innovative technologies to better protect consumers in the financial markets.



Jamile Valles
Head of Market Conduct
Enforcement Department
**Superintendencia de Banca
Seguros y AFP del Perú**



Jose Miguel Mestanza
Supotech Specialist
Cambridge SupTech Lab



Simone Portuesi
ICT Expert
Banca d'Italia



Rochelle D. Romas
Deputy Director
Bangko Sentral ng Pilipinas

CLOSING THE GENDER GAP

The panel discussion centres on the critical intersections of supotech, gender dynamics, and the strategic utilization of gender-disaggregated data in the financial domain. The primary objectives are two-fold: firstly, to delve into the transformative role supotech plays in advancing gender inclusivity and its ability to harness disaggregated data for insights; and secondly, to scrutinize challenges and opportunities associated with these dynamics. The aim is to foster a nuanced understanding of how supotech can serve as a catalyst for positive change, empowering financial authorities and financial institutions to make informed decisions that drive gender equity. Through collaborative exploration, we aspire to outline actionable strategies that leverage technology for the betterment of gender representation and outcomes within the financial sector.



Greta Bull

Director Women's
Economic
Empowerment
**Bill & Melinda Gates
Foundation**



May Abulnaga

First Sub-Governor,
Office of the Governor
Central Bank of Egypt



Juliet Ongwae

Senior Supotech
Specialist
FINRA



Haimera Workie

Vice President and Head of
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Simran Singh

Techsprint Lead,
Innovation Lab
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Authority**



Ekaterina Borisova

Senior Associate,
Global Innovation
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Authority**



Simran Singh

Techsprint Lead,
Innovation Lab
**Financial Conduct
Authority**



Ekaterina Borisova

Senior Associate,
Global Innovation
**Financial Conduct
Authority**

SUPTECH: THE PATH FORWARD

In this session we reflect on the rich tapestry of discussions, insights, and breakthroughs that have been shared. In our final session, we will encapsulate the key themes, lessons learned, and the future trajectory for supervisory technology. This wrap-up roundtable summarizes the innovative ideas and strategies that have been showcased and chart a path forward, identifying actionable steps and best practices that can be implemented by financial authorities and ecosystem partners globally.

We distill the essence of this transformative week into a coherent vision for the future, ensuring that the momentum gained here continues to inspire and guide us in the dynamic landscape of financial supervision.



Anna Wallace

SPO Consumer Protection
and RegTech
**Bill & Melinda Gates
Foundation**



Monica Shelton

Director, Regulatory
Technology
**Consumer Financial
Protection Bureau**



Liezl Neething

Divisional Head
**South African
Reserve Bank**



Douglas Arner

Kerry Holdings
Professorin Law
**The University of
Hong Kong**



Drew Propson

Head of Technology
and Innovation
Financial Services
World Economic Forum



Ines Paez

Subdirector
**Superintendencia de
Bancos de la
República Dominicana**



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Head of London Centre
BIS Innovation Hub



Simone di Castri

Co-Head
Cambridge SupTech Lab