

# The Future of Finance: Crypto Assets, Bitcoin, Tokenized Assets and the Digital Euro.



**Prof. Dr. Philipp Sandner**  
Blockchain Center  
Frankfurt School of Finance & Management

E-Mail: [p.sandner@fs.de](mailto:p.sandner@fs.de)  
Internet: [www.fs-blockchain.de](http://www.fs-blockchain.de)



# Frankfurt School Blockchain Center



Prof. Dr. Philipp Sandner  
Head of Frankfurt School  
Blockchain Center



## WHAT WE DO

The Frankfurt School Blockchain Center was **founded in 2017** by Professor Philipp Sandner. We are a **think tank and research center** which investigates implications of the blockchain technology for companies and their business models.



Consulting,  
prototypes  
& research



Education  
& trainings



Startups advisory  
& incubation



Community  
& events

## FACTS AND FIGURES



16 employees



100+ presentations worldwide



10 seminars



15+ research papers



20+ events



3 conferences



15 consulting & research projects

## OUR PARTNERS

COMMERZBANK 

 McDermott  
Will & Emery

 MAINFIRST

BLOCKROCKET  
European Blockchain Labs

d-fine

 eToro

 pwc

METACO

 RTX21  
THE REAL ESTATE TOKEN ECOSYSTEM

An aerial photograph of a city skyline, featuring several prominent skyscrapers. The image is overlaid with a semi-transparent blue filter. A white network diagram, consisting of interconnected nodes and lines, is superimposed on the left and bottom portions of the image. The text "Digital euro" is centered in the middle of the image in a white, sans-serif font.

# Digital euro

## In which domains could a digital euro be used as of 2022?

01	Industrial area (Industrie 4.0, logistics, data monetisation)
02	Capital market (delivery vs. payment)
03	Remittances (international payments, cross border payments)
04	Machine economy (IoT, micro payments, streaming money)
05	Crypto assets (trading, DeFi, storage of value)

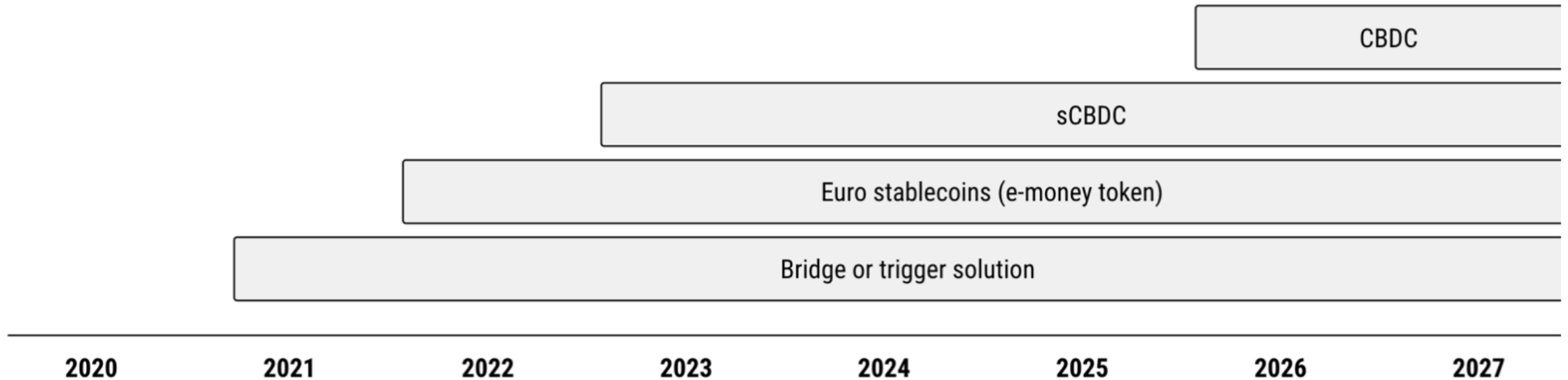
01	Cross-border payments
02	Automated payments and business processes
03	Integration of delivery vs. payment (DvP)
04	Tokenization of rights and assets
05	Machine economy, IoT, micro payments and streaming money
06	IT security and system resilience

# Four solutions to implement the digital euro

Nr.	Digital euro	Contract execution system (pillar 1)	Digital payment infrastructure (pillar 2)		Monetary unit (pillar 3)	
			System operator	Technology		
1	Euro on bank accounts	DLT	Commercial bank	No DLT (account-based)	Euro (commercial bank money)	2021
2	Euro stablecoin (e-money token, EMT)	DLT	Regulated organization (e.g. commercial bank, e-money provider) <sup>11</sup>	DLT (token-based)	Euro (potentially under e-money license)	2022
3	sCBDC	DLT	Commercial bank or e-money provider <sup>12</sup>	DLT (token-based)	Euro (commercial bank money, but 100% backed by central bank reserves)	2023
4	CBDC	DLT	ECB	DLT or no DLT (account- or token-based)	Euro (central bank money, legal tender)	2026-2028

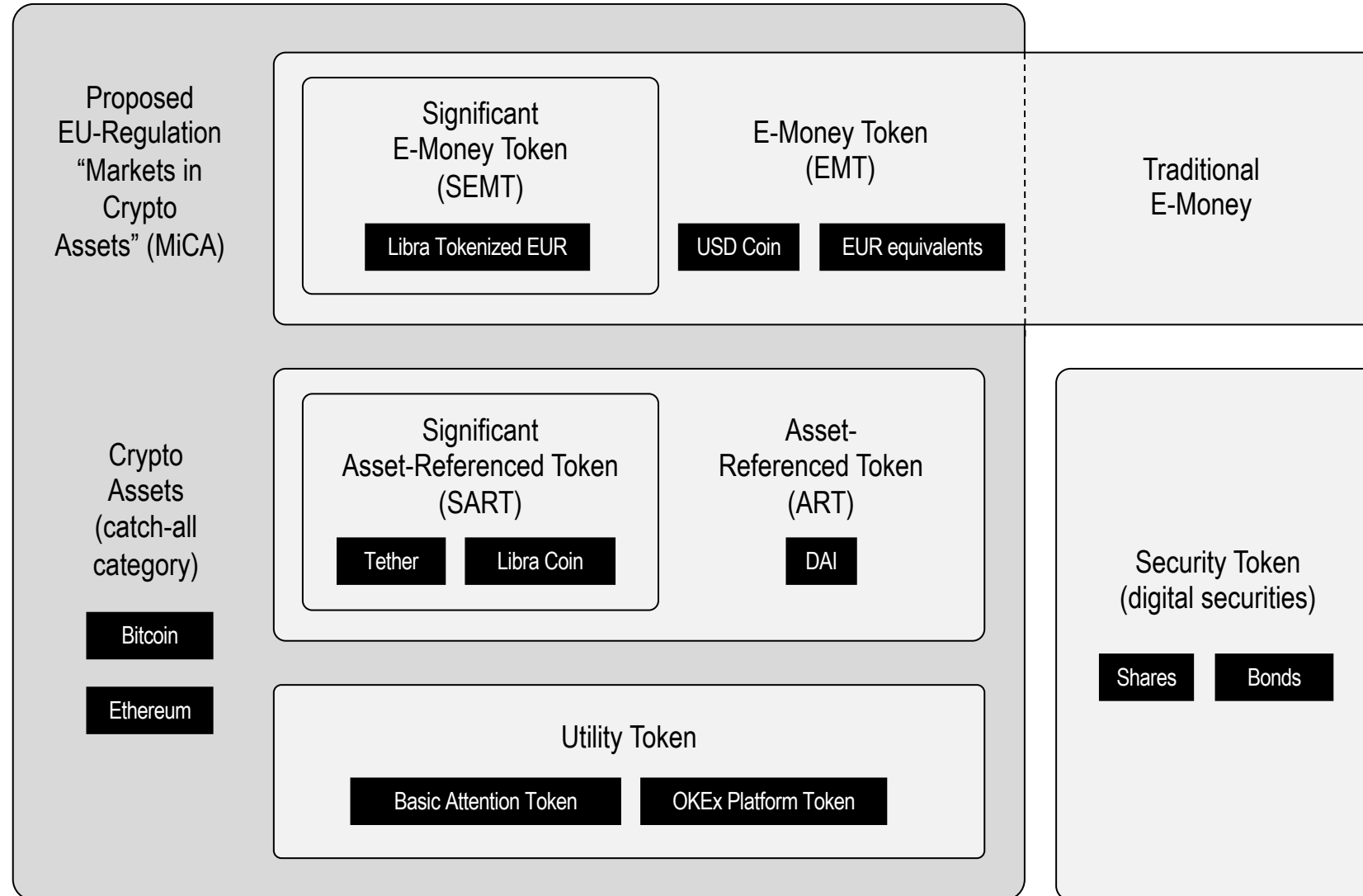
Source: Bechtel, Ferreira, Gross, Sandner (2020)

# Roadmap for future digital payment solutions



Source: Bechtel, Ferreira, Gross, Sandner (2020)

# European „Markets in Crypto Assets Regulation“ (MiCAR) : Types of crypto assets





**Prof. Dr. Philipp Sandner**  
Frankfurt School Blockchain Center  
Mail: [p.sandner@fs.de](mailto:p.sandner@fs.de)

Please feel free to contact me via mail,  
Xing, LinkedIn or Twitter (@philippsandner)





## Current position

- Professor at the faculty of the Frankfurt School of Finance & Management
- Head of the Frankfurt School Blockchain Center (FSBC)

## Memberships and affiliations

- Member of the Fintech Council (FinTechRat) of Germany's Federal Ministry of Finance
- Member of the EU Blockchain Observatory established by the European Union
- Co-founder of the German Blockchain Association, the International Token Standardization Association (ITSA), the Multichain Asset Managers Association

## Expertise

- Blockchain technology in general, crypto assets such as Bitcoin and Ethereum, the digital programmable Euro, tokenization of assets and rights, digital identity.

## Experience and education

- Board of Directors of Avaloq Ventures, Board of Directors of Tokentus Investment AG
- Advising financial organizations, industrial corporations and startups concerning their blockchain activities
- Research fellow at the Technical University Munich, the Ludwig-Maximilians-University Munich and the Berkeley Center for Law & Technology
- Studies of business administration focusing on computer science at the University Mannheim, Copenhagen Business School
- Co-founder of a consulting company specialized in the area of innovation strategy, IP and technology transfer

## Awards and prizes

- Ranked as one of the "top 30" economists by the Frankfurter Allgemeine Zeitung (FAZ), a major newspaper in Germany, in 2018 and 2019
- "Top 40 under 40" ranked by the German business magazine Capital
- Awarded with several scholarships and research prizes

## Publications

- Publications in international peer-reviewed journals such as Administrative Science Quarterly, Research Policy, the Journal of Marketing Research and the Journal of Business Venturing
- Editor of two books; one book focuses on the implications of blockchain technology on companies, the other one focuses on the implications for the society. More: [www.die-blockchain.ist/die-zukunft/](http://www.die-blockchain.ist/die-zukunft/)

## Frankfurt School Blockchain Center

- Analyzing the implications of blockchain technology on companies and business models
- Providing a platform for decision makers, startups, technology experts and industry professionals to exchange their knowledge and share their visions