



浙江大学 国际联合商学院
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CBDC's Role in World Trade

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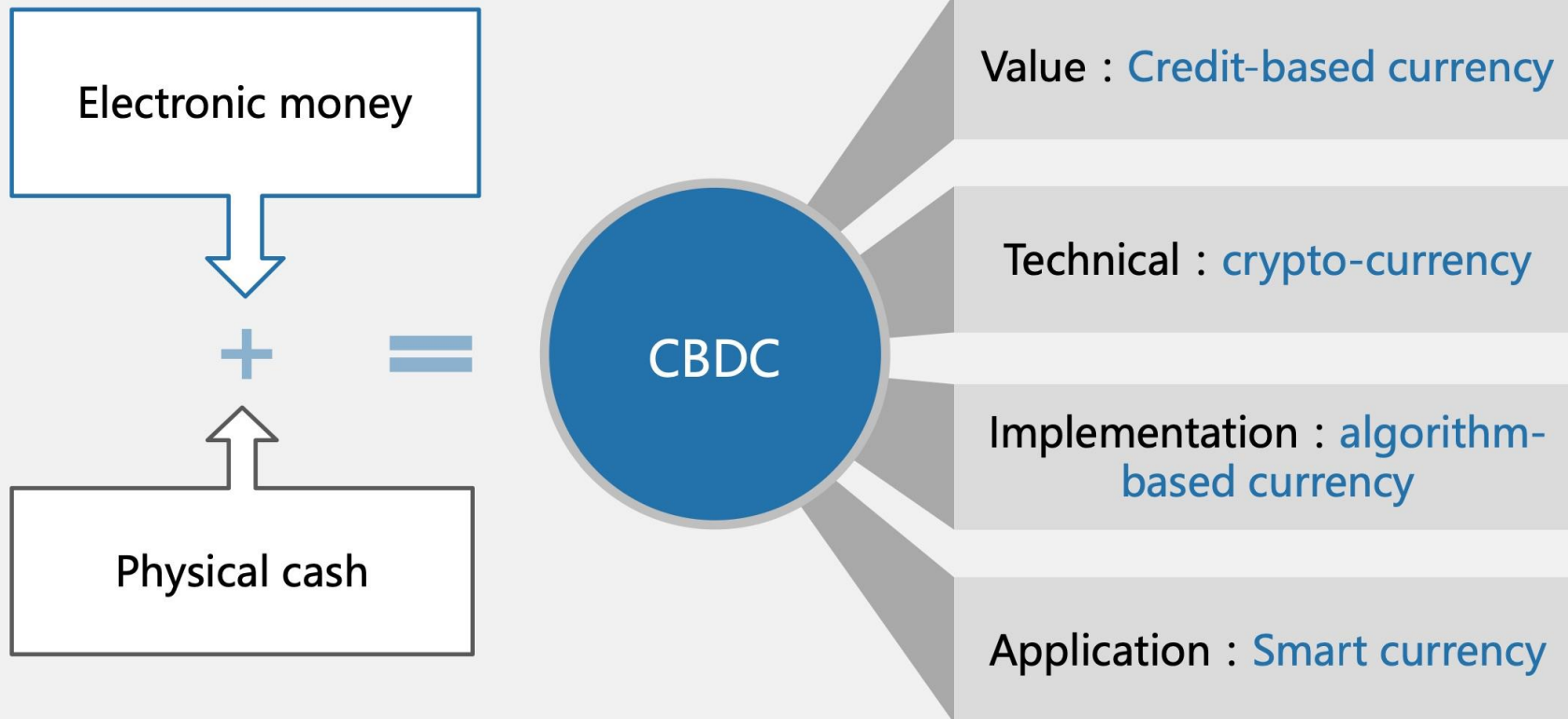
Overview

- CBDC in China and in the world
- CBDC's role in Digital Financial Infrastructure
- World trade challenges in BRICS
- Future Digital Financial Infrastructure based on CBDC
- SDR-C: An application in port-logistic digital platform
- What's next?

Background of China's DCEP



3、 Four dimensions of CBDC



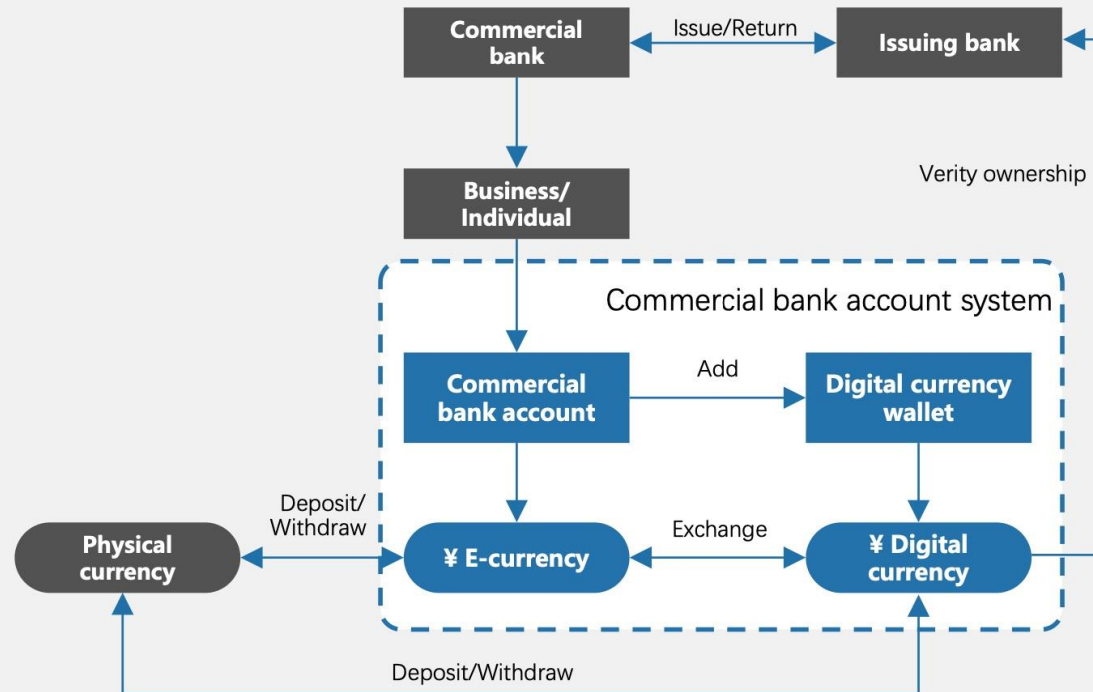
Background of China's DCEP



4. To realize loose-coupling with bank account: introducing digital currency wallet to bank account



An implementation model: based on commercial bank account



Digital currency



Ownership of digital currency verified by agents

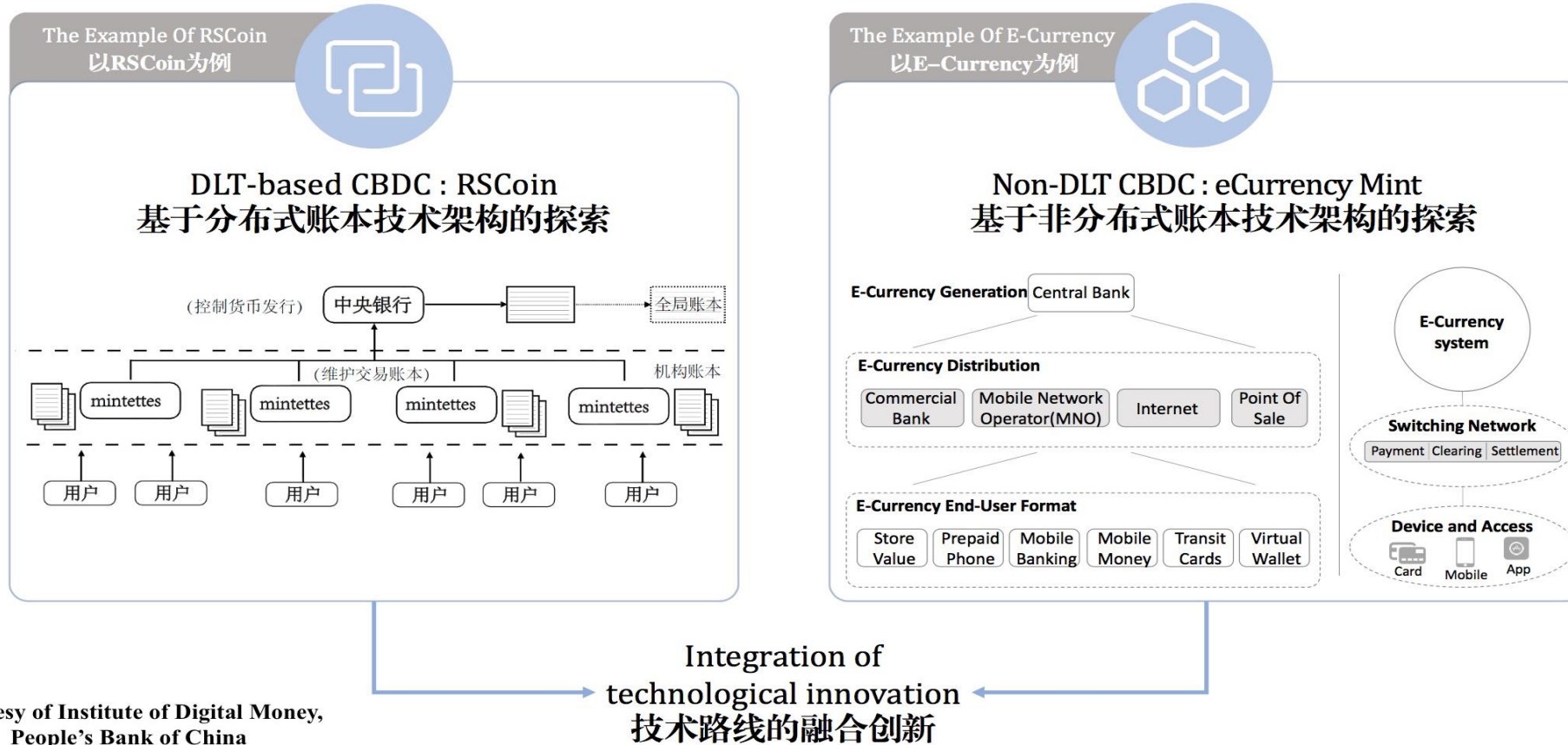


Greatly enhance KYC and AML capacity of banks

Traditional bank accounts

CBDC: One Size Doesn't Fit All

Decoupling CBDC from Blockchain Technology 数字货币与区块链技术的松绑



Courtesy of Institute of Digital Money,
People's Bank of China

What is DCEP According to the e-CNY Whitepaper

- **Definition:** e-CNY is digital version of cash (1) legal tender (2) centralized and two-tier (3) substitute for cash but will co-exist (4) used for domestic retail purpose (5) e-CNY and funds in current accounts are inter-operable
- **Objective of DCEP** is (1) diversify forms of cash, financial inclusion in new digital economy (non-banked and foreigner) (2) support fair competition, efficiency of payment systems (3) respond to international initiative on cross-boarder payment
- **Principle of design:** (1) legal (2) safety and convenience (3) open and compatible
- **Feature of e-CNY:** (1) Hybrid with account and value based features (2) no-interest (3) low-cost (4) instant settlement (5) managed anonymity (6) Secure and programmable

CBDC's role in digital financial infrastructure

Evolution of Crypto Currency Regulation

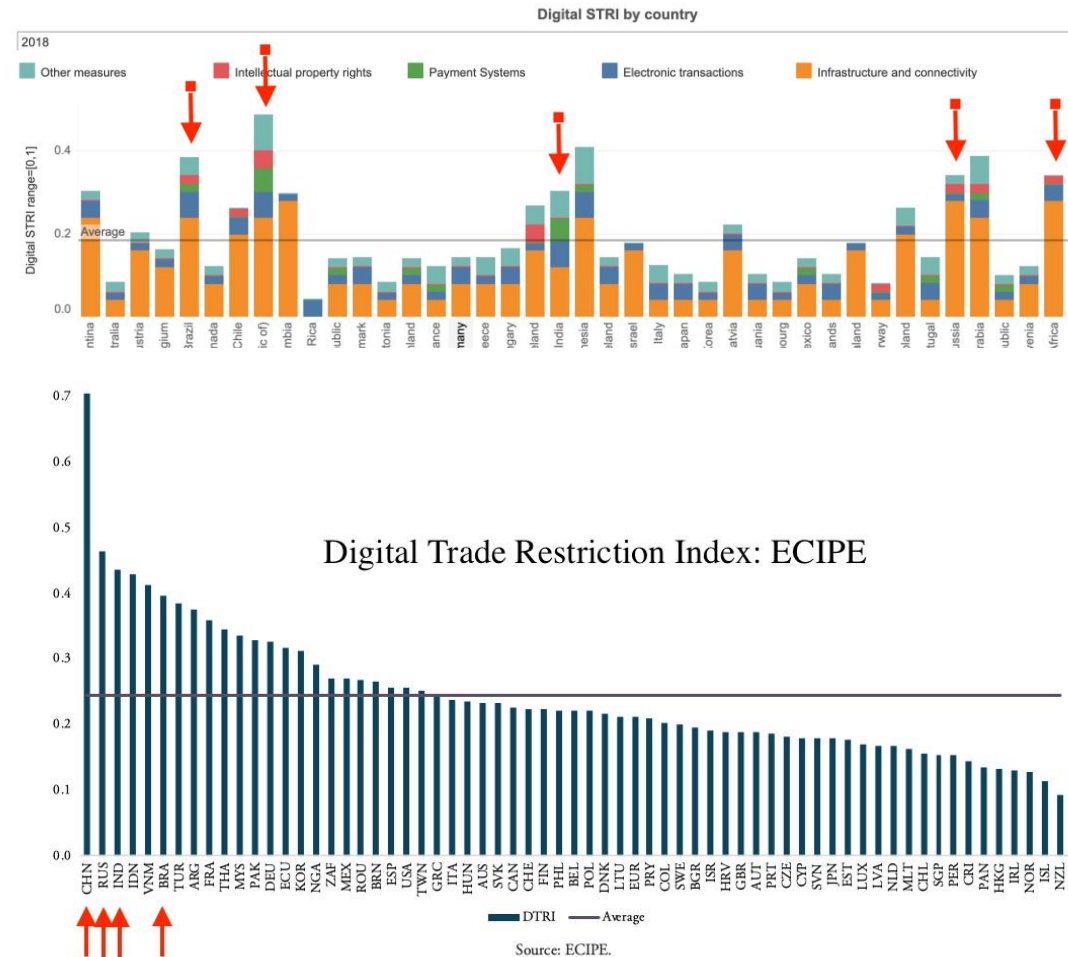
- Bitcoin was initially regarded as digital cash and payment, and as such subject to Central Bank regulation
- Then people bought Pizza figured out it's more like gold, hence subject to Commodity and Exchange regulation
- Then ICO came about, and SEC was involved
- Today with NFT and Metaverse, blockchain creates token that can be any of the above

	Trad Financial Markets (Stock/Future/Forex/ Bond/Commodity)	Crypto Financial Market (Crypto Currency, NFT)	Future Digital Financial Infra (SCISA)
Reserve	US \$	Native Crypto / Stable coin (\$)	Digital Assets, SDR-C, SDR-IP
Exchange	Wall Str, London, HK, National exchanges	Traditional /DeFi	Regional, Government Smart Contract
Clearing/ Settlement	SWIFT/ CHIPS	Blockchain	Hybrid/SCISA
Payment	Inter-bank transfer	Blockchain	Mobile/E-Commerce
Currency	Cash or bank money (i.e. \$ or ¥)	Native Crypto / Stable coin (\$)	CBDC (multiple)

Asset ↑
Currency ↓

BRICS trade challenges in digital economy

- According to ECIPE and OECD research on restrictions for digital trade and digital service trade, BRICS are leading the world
- For non-tariff restrictions, trading restrictions, foreign investment restrictions, fiscal restrictions, restrictions on the mobility of natural persons and intellectual property rights. Data restrictions include data policies, intermediary liability, content access, etc. It is becoming more restricted.
- For example: order information, customs information, payment information etc must match for each individual items exported or imported items in most of the cases. However data sharing for such purpose are restricted



CBDC based SDR-C can hit two birds with one stone

Settlement and Value Store

Fiat Currency (\$ or Euro)

Payment Network

SWIFT (Network)

Form of Currency

Bank Accounts (claim money)

“SDR-C”: **Special Drawing Rights on Commodity** is a unit of account for cross-boarder trade settlement system among collaborating parties based on relevant international laws and regulations. It is calculated based on a registered list of commodities, their official invoices, custom claims, spot prices etc. Using BASIC technologies (Blockchain, AI, Security, IoT, Cloud), it seamlessly binds digitized commercial contracts, logistic bills, bank credit letters, storage bills, with verified real production, logistic, transaction, customs clearing data. Such a blockchain based platform will provide real-time, traceable, securitized unit of account for efficient, regulated cross-boarder digital trade.

SDR-C (Digital Asset)

Crypto Asset is “an” Asset

SCISA (Blockchain)

CBDC (object)

SCISA: System for CBDC/DFC Intl Settlement and Application

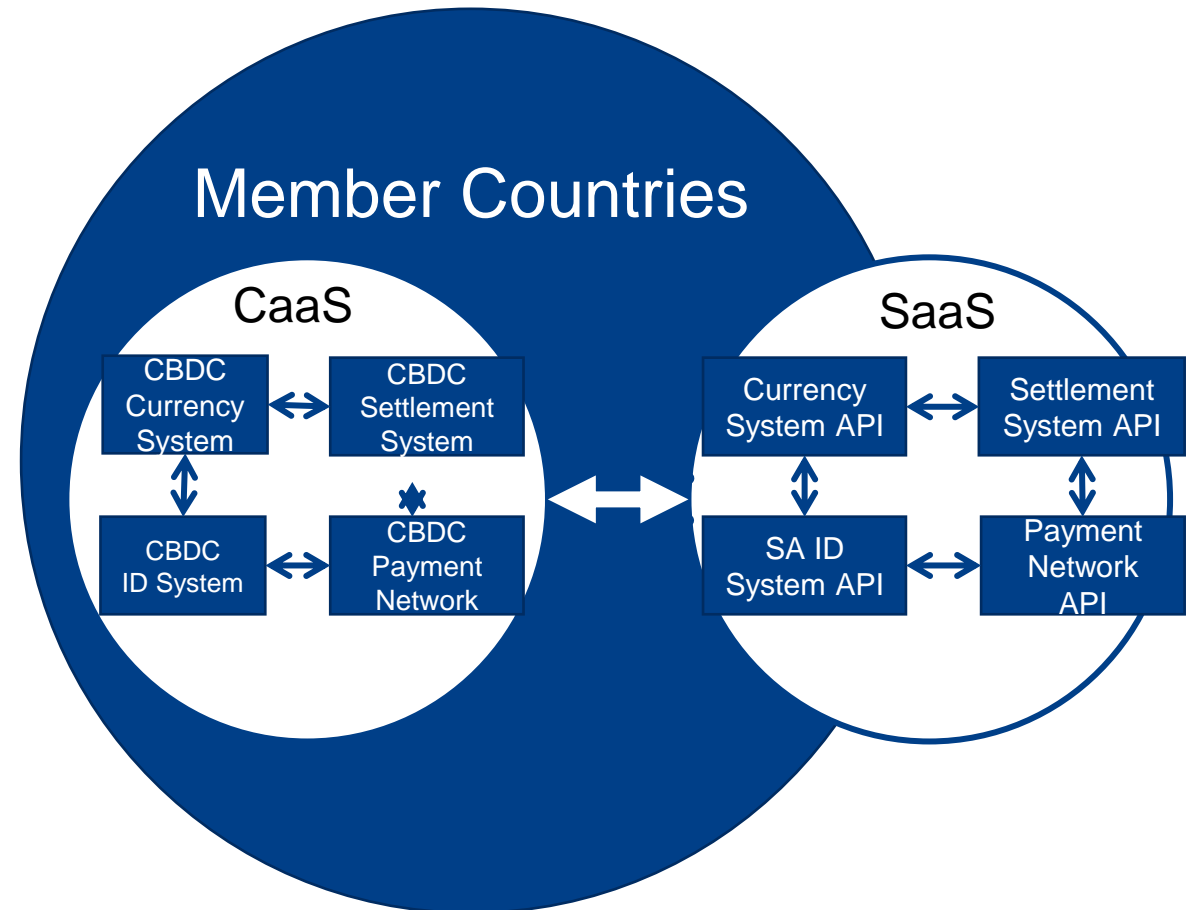
International Collaborative Network on Digital Fiat Currency (DFC-ICN)

- ITU focus group on Digital Fiat Currency reports
- Digital Identity: ITU mobile roaming protocol, IEEE DiD on blockchain
- Secure hardware: FIPS 140-3 and ISO/IEC 19790
- Smart contract: ERC

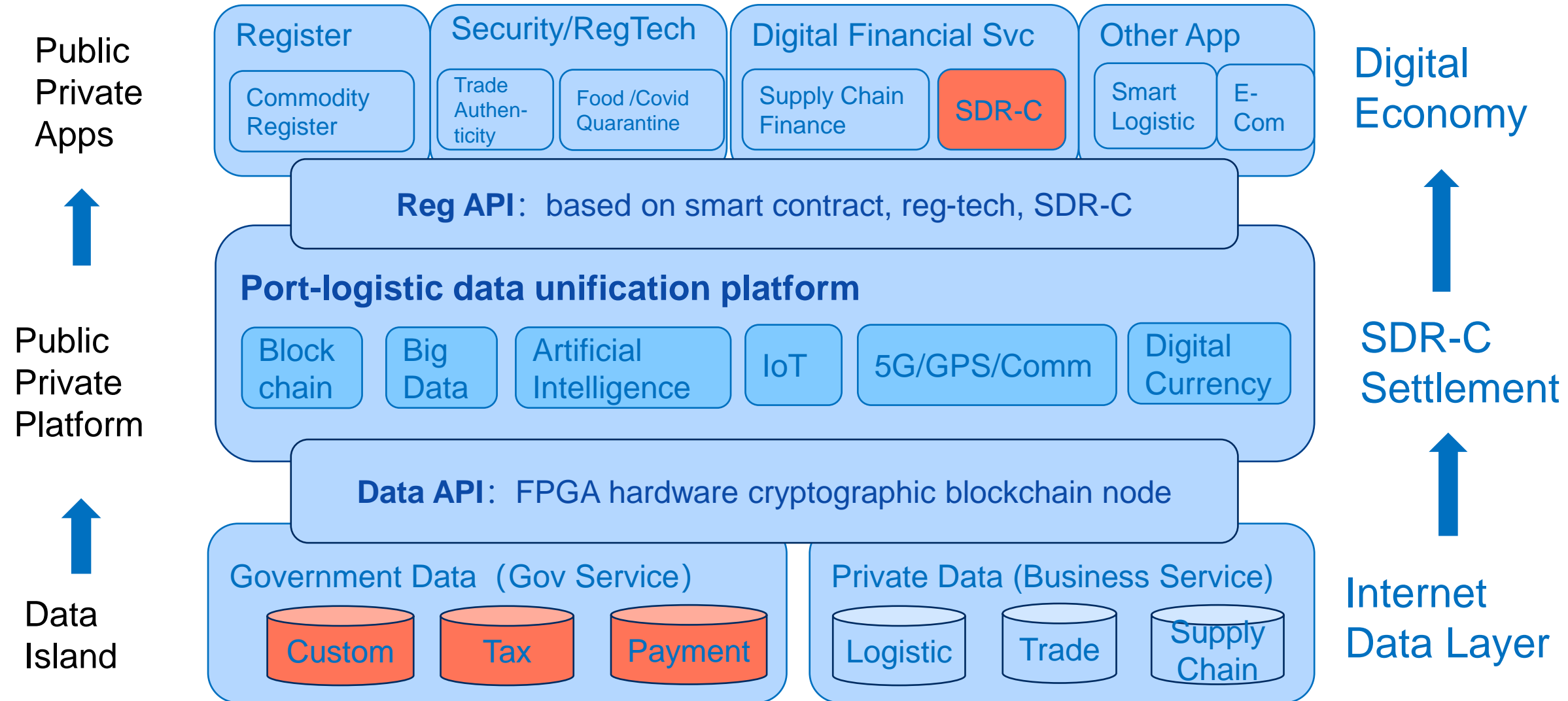


Member Countries connects to SCISA

- CBDC and DFC: CBDC is based on the currency law of a country, it is a digital version of cash instrument (M0). Digital Fiat Currency is based on the law or convention of association of member countries or institutions. For example World Customs Organization (WCO) can be the regulator and issuer of SDR-C, a type of DFC.
- CaaS: CBDC as a Service. Each country will have complete control (via secure and cryptographic hardware) over the full life cycle management of its CBDC
- SaaS: Settlement as a Service. This is how each member country access the SCISA network platform's settlement functions and applications, such as SDR-C.



SDR-C application to port-logistic platform



What's Next?

- Digital Fiat Currency Institute (DFCI) will help with the establishment of DFC-ICN in the next few months
- Through ICN we will kick off
 - “World Change” : Digitization of all forms of cash instrument
 - SDR-C: with Ningbo free-trade zone supply chain management and settlement technology company
 - SDR-C sandbox testing environment (with the help of APDEI in Hongkong) and plan to work with regulators globally
 - Working with CBDCTT on openCBDC testing environment on our sandbox testing environment
- IEEE Future Technology Summit : CBDC and Sustainable Development forum



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