

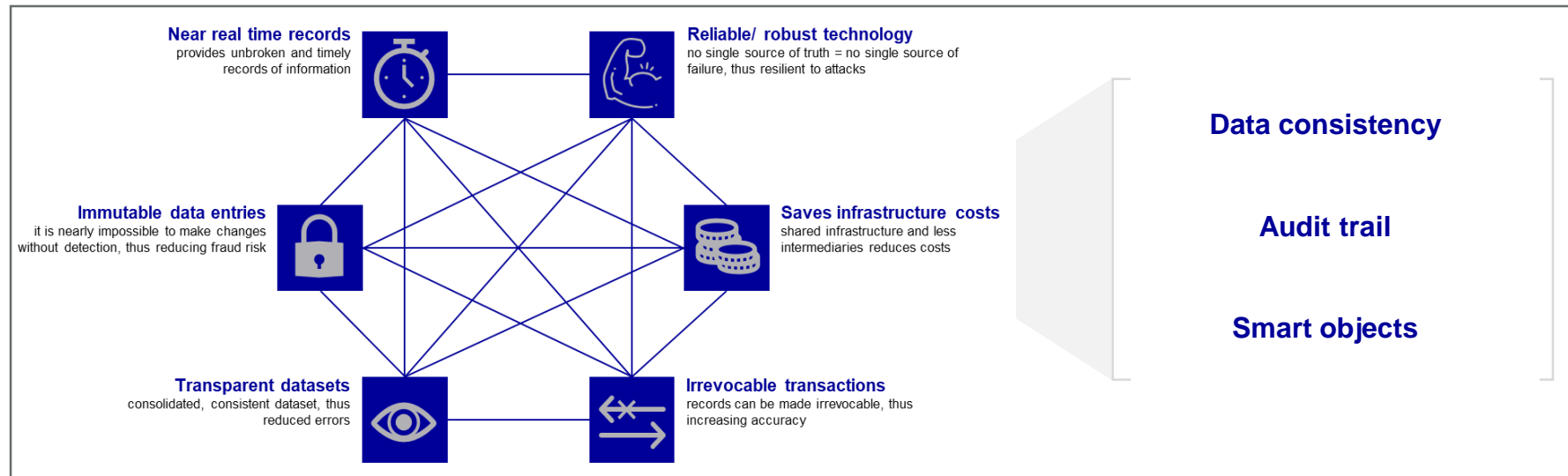
Digital transformation and distributed networks @ Deutsche Börse

Annual AECSD Training Seminar

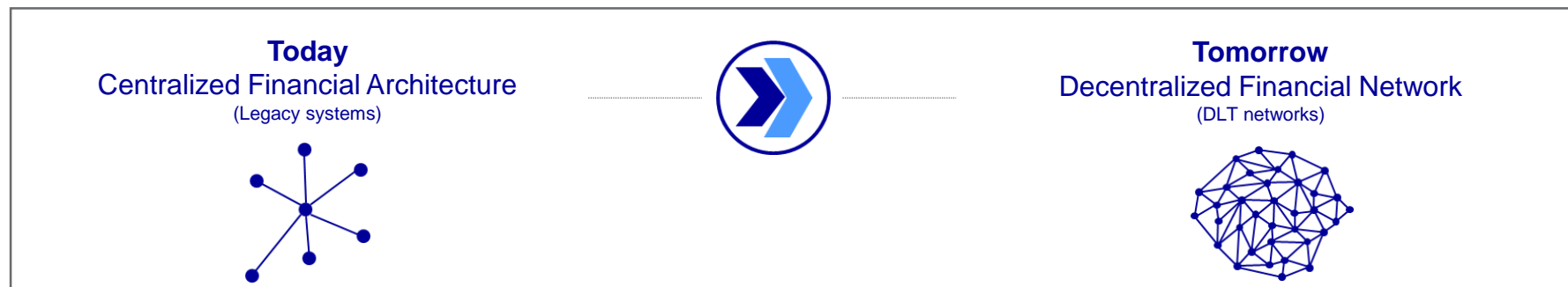
23 June 2021

Distributed-Ledger technology (DLT) offers strong benefits for financial markets: data consistency, audit trail and smart objects

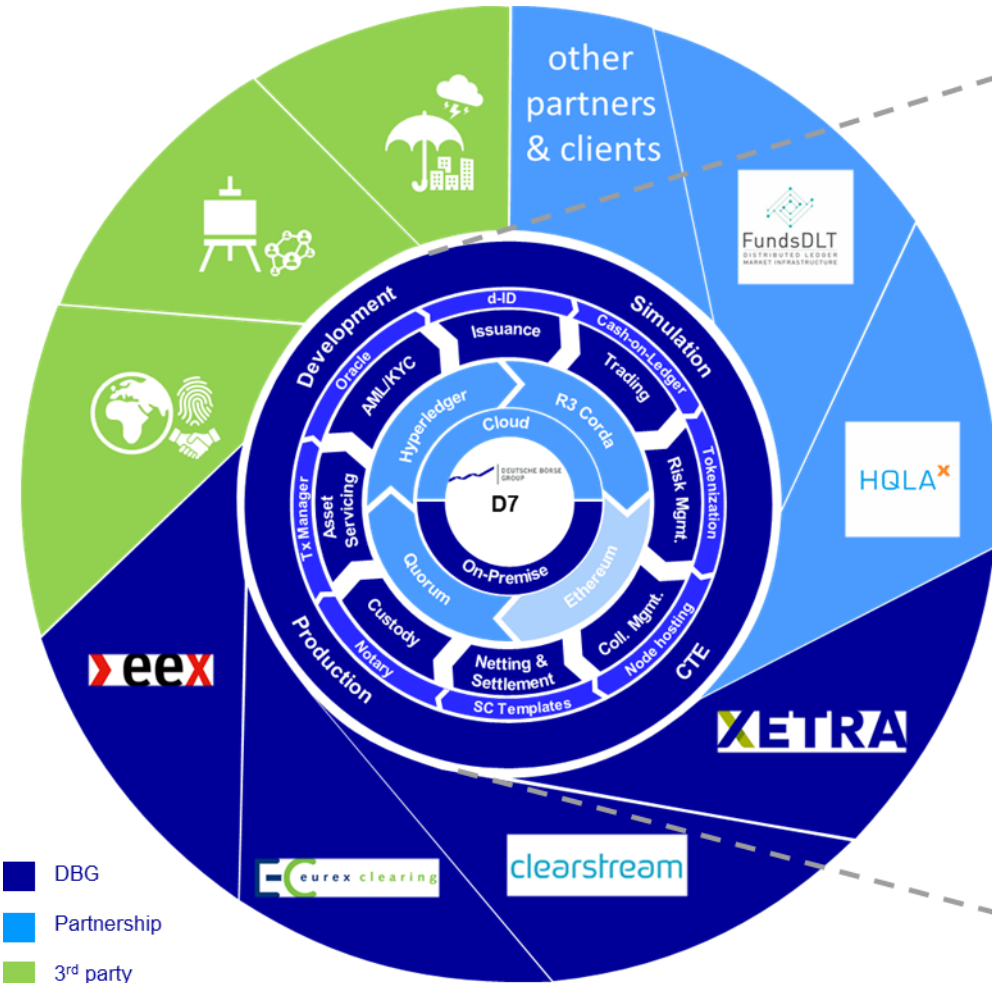
- ▶ DLT networks generate high efficiencies where multiple parties having low level of trust, transact with each other and where same transaction data is stored across separate (legacy) systems/ databases.



- ▶ Due to these strong benefits, financial markets are moving towards decentralised network infrastructure, redefining the role of FMIs



Digital financial market infrastructure D7 to cater for a broad variety of use cases



Technology:

- Infrastructure (on premise, cloud - multi provider)
- Platform operation (environments, deployment, escalation management, BCP, back-up, etc.)
- Development (DLT protocols, programming languages,...)

Shared support services:

- Notary, digital identity, oracle
- Smart contract libraries
- Cross DLT transaction manager
- ...

Shared business services:

- Digital custody
- Payment
- Smart financial product
- ...

Offered under one D7 Rulebook as umbrella for all Use Cases (Trusted Third Party)

Core beliefs

- Digital and faster
- Highly automated and cost efficient
- Modular and flexible
- Integrated/ accessible/ open for variety of connectivity formats
- Open for other platforms, networks and partners

Core competencies of Deutsche Börse

- Organization of markets
- Standardization
- Running of business networks
- Running of legal frameworks
- Ensuring interoperability of networks

■ DBG
 ■ Partnership
 ■ 3rd party

HQLAx: accelerating collateral mobility

Operating Model

Live

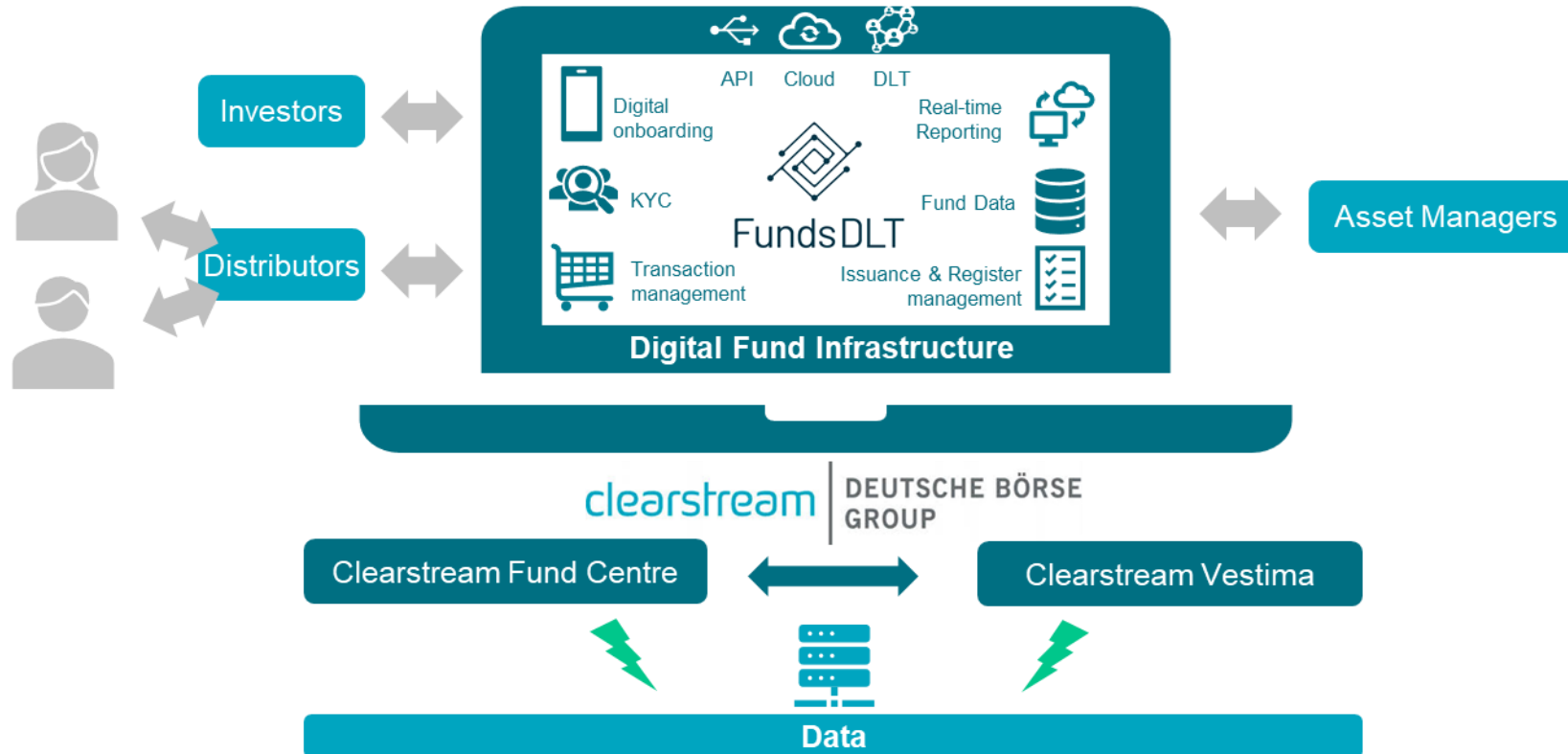


(BNY Mellon Triparty, BNP Paribas Securities Services, Citi - Custodian connecting in 2021)

HQLAx Secures EUR 14.4m Series B Funding from BNY Mellon, Goldman Sachs, BNP Paribas Securities Services, Citigroup and Existing Shareholder Deutsche Börse
JANUARY 11, 2021

FundsDLT: the digital fund market place

Ready



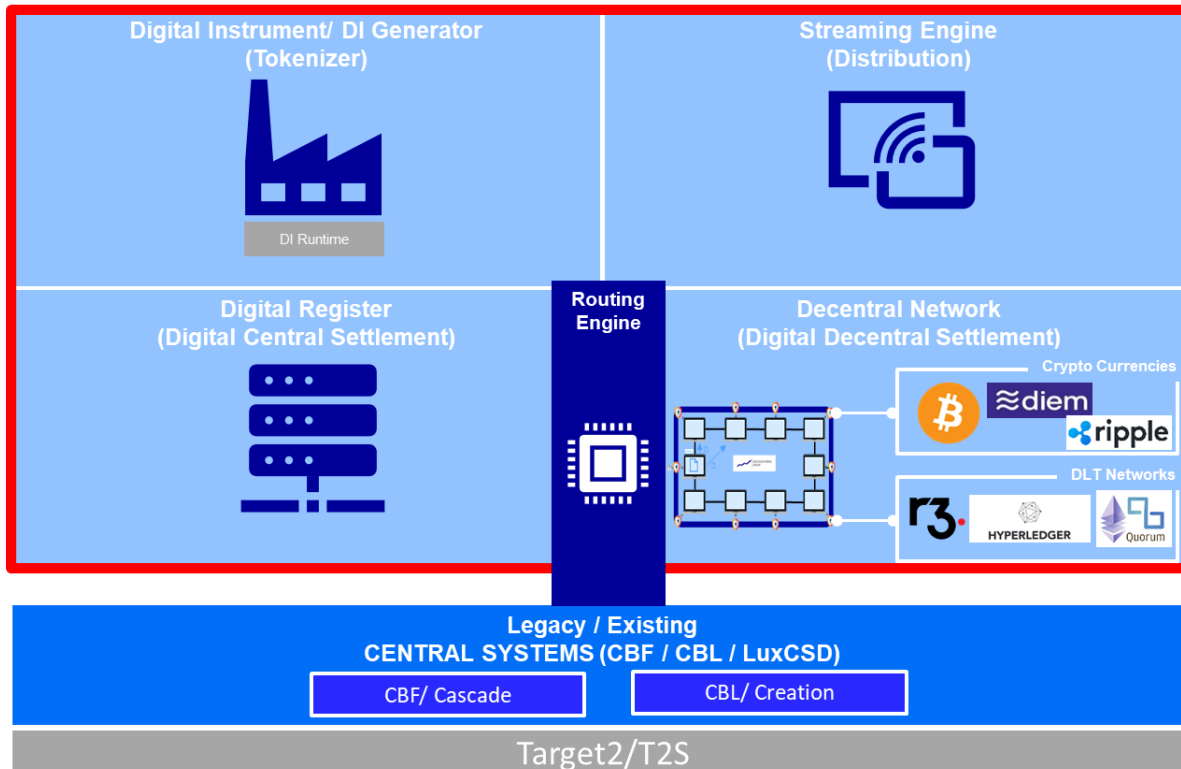
Through its partnership with FundsDLT, Clearstream brings a plug-&-play digital experience to its institutional clients and their customer base by streamlining end-to-end investment funds processing, complementing our Execution, Distribution and Data offering.

Retail Structured Products: our proposal for a digital post-trade platform bringing significant efficiencies for market participants

In built

D7 high-level architecture model based on Retail Structured Products use case....

D7



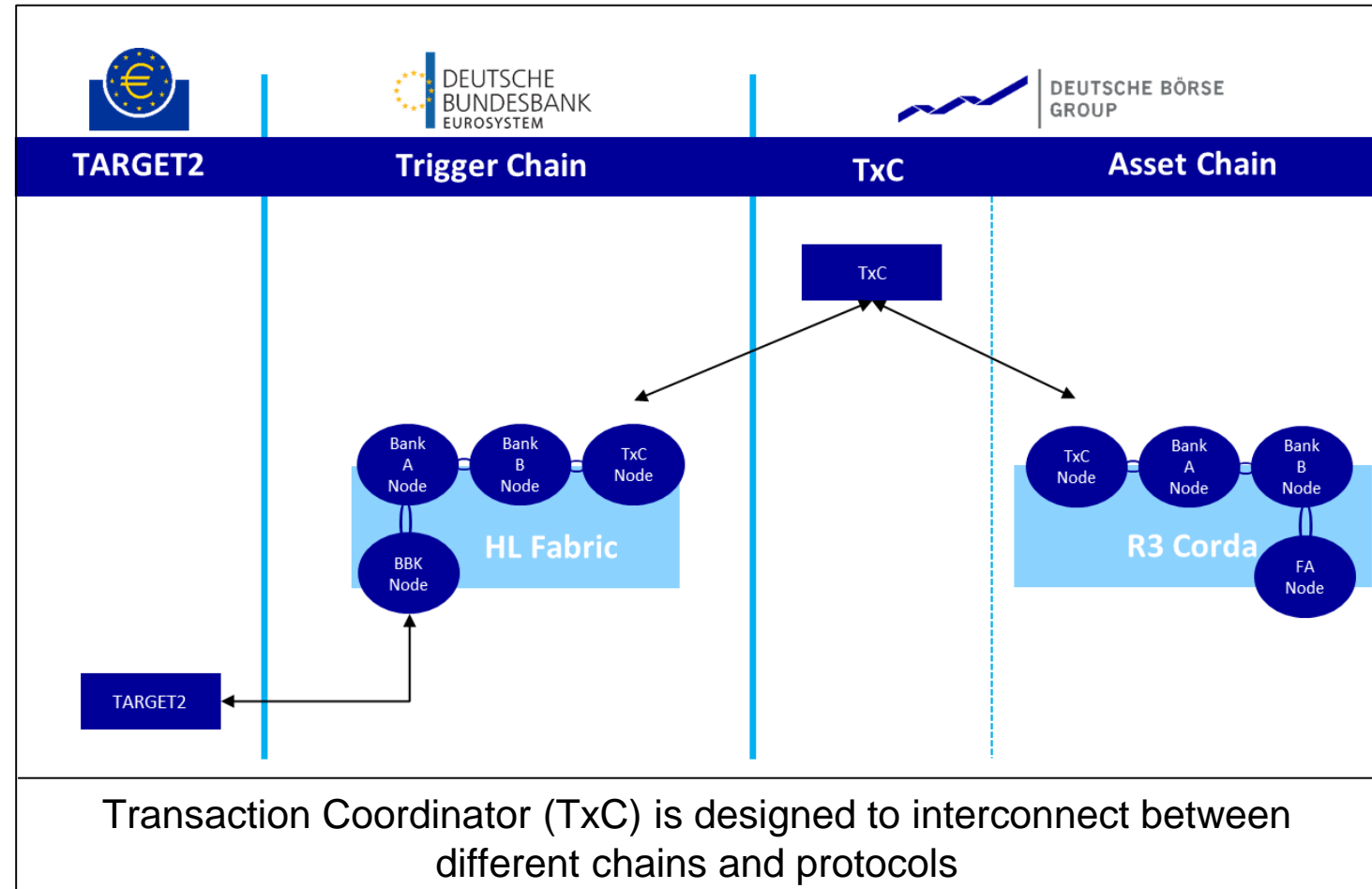
...reusable for other (digital) asset classes

- **Scope:** Digital Securities, Digital Assets, Stable Coins, Crypto Currencies
- **Coverage:** Entire value chain of issuance, custody, settlement/ payment, asset servicing
- **Jurisdiction:** Regulated in DE and Lux
- **Governance:** Joint rulebook
- **Connecting and enabling:** Central and decentral digitization (enterprise DLT solutions, CBDC and Crypto Currencies), legacy infrastructure
- **Serving:** Clearstreams CSDs, ICSDs as well as shared infrastructure for custodians, business networks etc.

Blockbaster IV project proved the issuance and DvP settlement of an electronic security on DLT

Proof-of-concept

- Joint project of **Deutsche Börse, Deutsche Bundesbank, German Finance Agency** joined by 6 banks*
- Issuance of a **public bond as ,e-security'** on a DLT
- Settlement** of primary and secondary market transactions **on DLT**
- Cash side settled in central bank money (TARGET2) via a so-called **,trigger solution'**
- Technical proof of concept;** the concluded trades were not legally binding



* Barclays, Citibank, Commerzbank, DZ Bank, Goldman Sachs, Société Générale

Further information on Deutsche Börse DLT activities

Ctrl + Click to
follow the link

Joint projects with Commerzbank and MEAG

[Deutsche Börse Group - Commerzbank, Deutsche Börse and MEAG to reach further step in post-trade services using distributed ledger technology \(deutsche-boerse.com\)](#)

[Deutsche Börse Group - Commerzbank and Deutsche Börse execute legally binding securities settlement using distributed ledger technology \(deutsche-boerse.com\)](#)

Collaboration in Switzerland

[Deutsche Börse Group - Deutsche Börse, Swisscom and partners successfully settle securities transactions via tokens in Switzerland \(deutsche-boerse.com\)](#)

Collaboration with Bundesbank („Blockbuster“)

[Deutsche Börse Group - DLT-based securities settlement in central bank money successfully tested \(deutsche-boerse.com\)](#)

[Deutsche Börse Group - Deutsche Bundesbank and Deutsche Börse publish concept study on DLT-based collateral management \(deutsche-boerse.com\)](#)

[Deutsche Börse Group - Deutsche Bundesbank and Deutsche Börse successfully complete tests for blockchain prototypes \(deutsche-boerse.com\)](#)

HQLAx

[Deutsche Börse Group - HQLAx Secures EUR 14.4m Series B Funding from BNY Mellon, Goldman Sachs, BNP Paribas Securities Services, Citigroup and Existing Shareholder Deutsche Börse \(deutsche-boerse.com\)](#)

[Deutsche Börse Group - Commerzbank, Credit Suisse and UBS execute first live transactions on the Deutsche Börse-HQLAx securities lending platform \(deutsche-boerse.com\)](#)

FundsDLT

[Zürcher Kantonalbank, Clearstream and FundsDLT process blockchain-based fund transactions](#)

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