

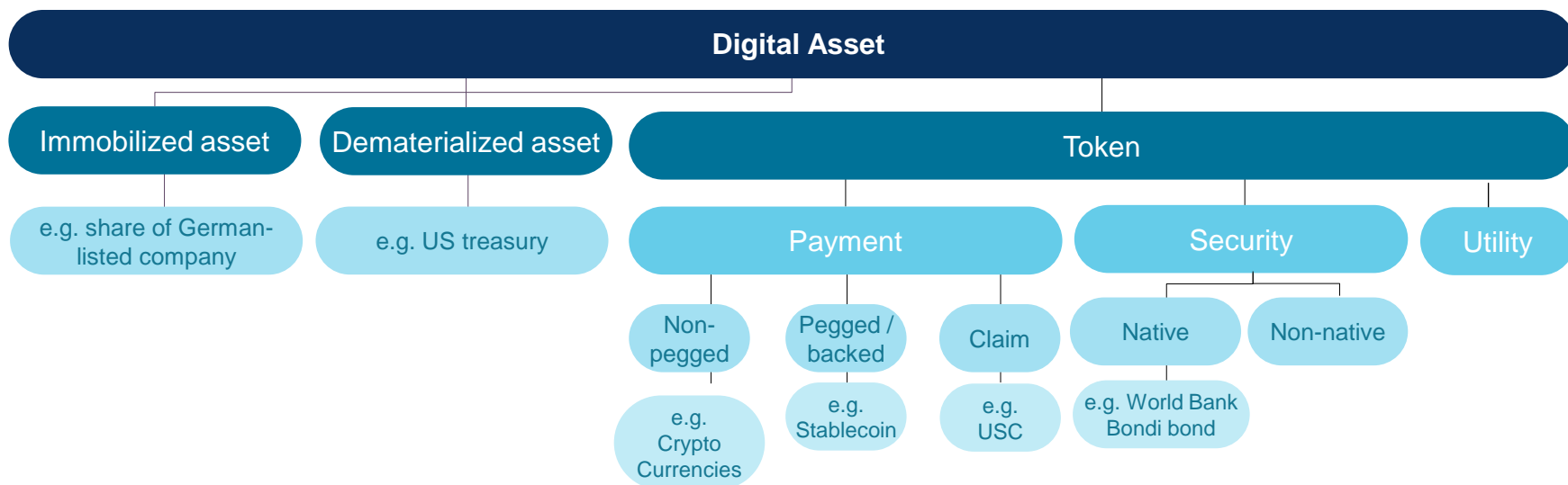
Do token-based digital assets matter? Where are we in this journey?

December 2019

Michele Curtoni – Digital Product Development

Digital Assets taxonomy

Digital Assets have been around for a while, but now something new is coming about



Physical Asset



Dematerialized Assets



Digital Currency



Tokenized Assets

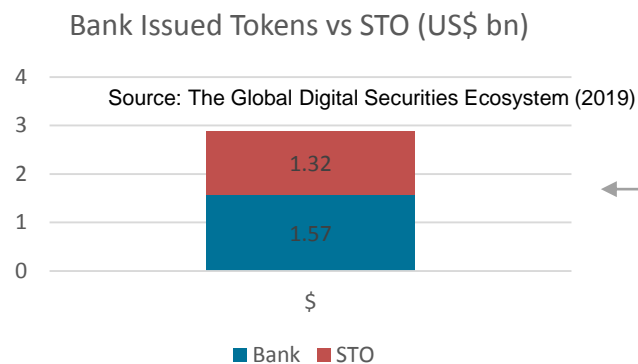
Pre-electronification era

1980s 1990s

2000s

2010s

The digital asset market is skewed towards crypto for now



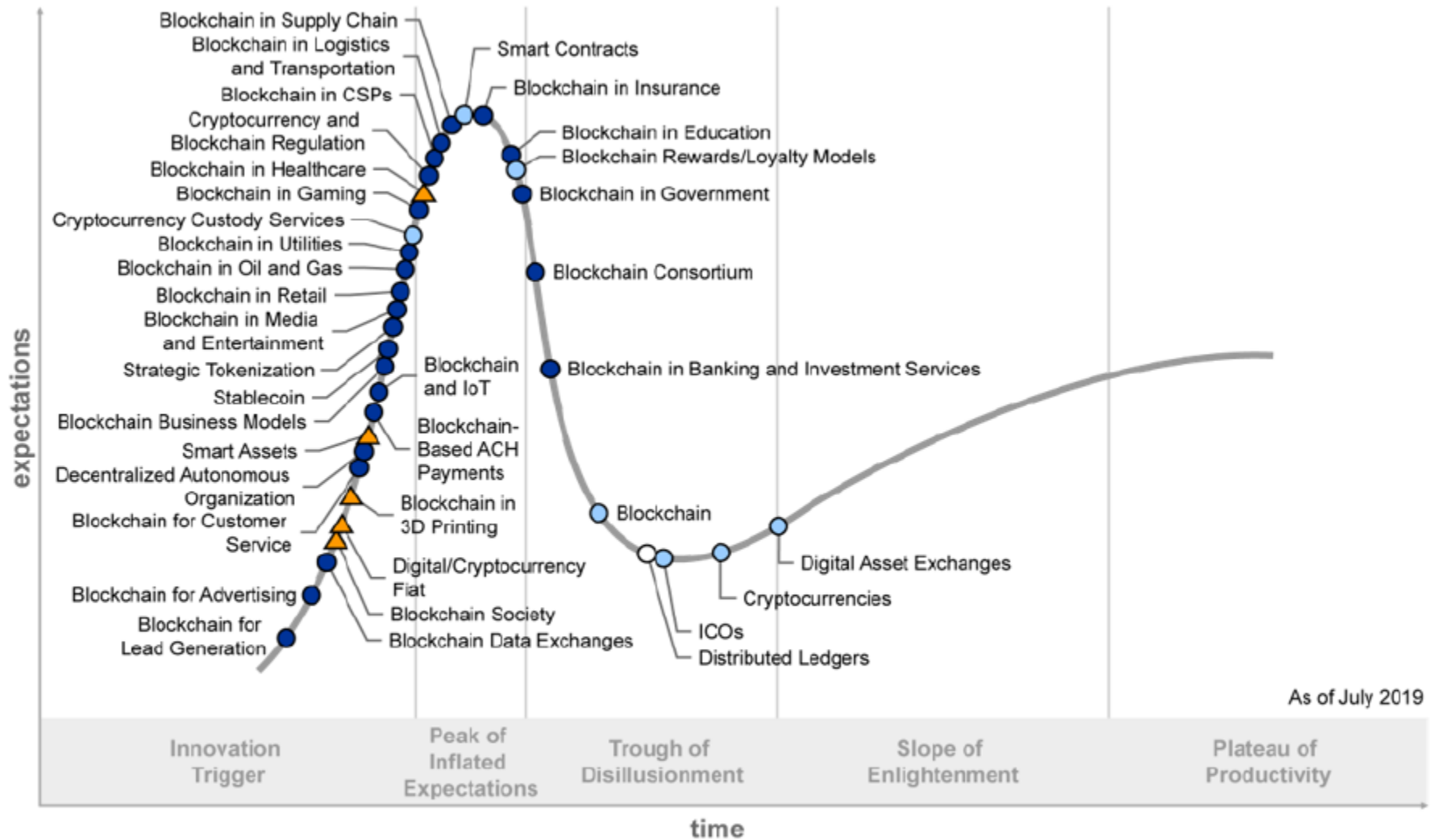
Source: The Global Digital Securities Ecosystem (2019)

Estimated Valuations

Crypto Companies	Valuation	Founded	Industry
Bitmain	\$12B	2013	Mining, Hardware
Coinbase	\$8B	2012	Exchange / Custody
Kraken	\$4B	2011	Exchange
Binance	\$2B+	2017	Exchange
Bitfury	\$1B	2011	Mining / Infrastructure
Liquid	\$1B	2014	Exchange

Source: Crunchbase, Bloomberg, 2019, Coindesk, 2018, SST adjustments

Hype Cycle for Blockchain Business, 2019



Plateau will be reached:

- less than 2 years
- 2 to 5 years
- 5 to 10 years
- ▲ more than 10 years
- ⊗ obsolete before plateau

Source: Gartner

ID: 390391

2836008.1.1.EMEA.

Why is tokenisation being
“promoted” to financial services?

Tokenisation is in competition with existing/legacy tech

There are opposing views whether tokenization will impact wholesale financial services

INSTITUTIONAL

RETAIL

	Current State	Target State – Legacy Tech	Target State – DA		Target State – Legacy Tech	Target State – DA	
Speed	Financial transactions can be subject to delays or fails	Existing platforms and market practices are embracing faster settlement	Atomic settlement; instant transaction (T0 vs T+2)	Distribution	Outsourced transfer agency. Reduction and elimination fees	Digital transfer agency models	
Transparency	Account based models don't allow to track asset	Market is embracing transparency improve existing op model		Inclusion/ Access	Stock splits		Fractionalization of assets
Cost & Risk Efficiency	Counterparty risk and/or cost	Industry is embracing process standardization		User Experience	Online portals		Consumer centric interface that are easy to use
Liquidity	Liquidity is locked in various accounts & platforms	Better tools and processes for cash management and liquidity savings		Digital Commerce	E-Money		Payment platforms provided by tech companies
		Improve existing infrastructure			Utilize tokenization		

OR/AND?

STATE STREET

Developing a paradigm shift?

The transition from normal to something new...

“[...] a proliferation of compelling articulations, the willingness to try anything, the expression of explicit discontent, the recourse to philosophy and to debate over fundamentals.”

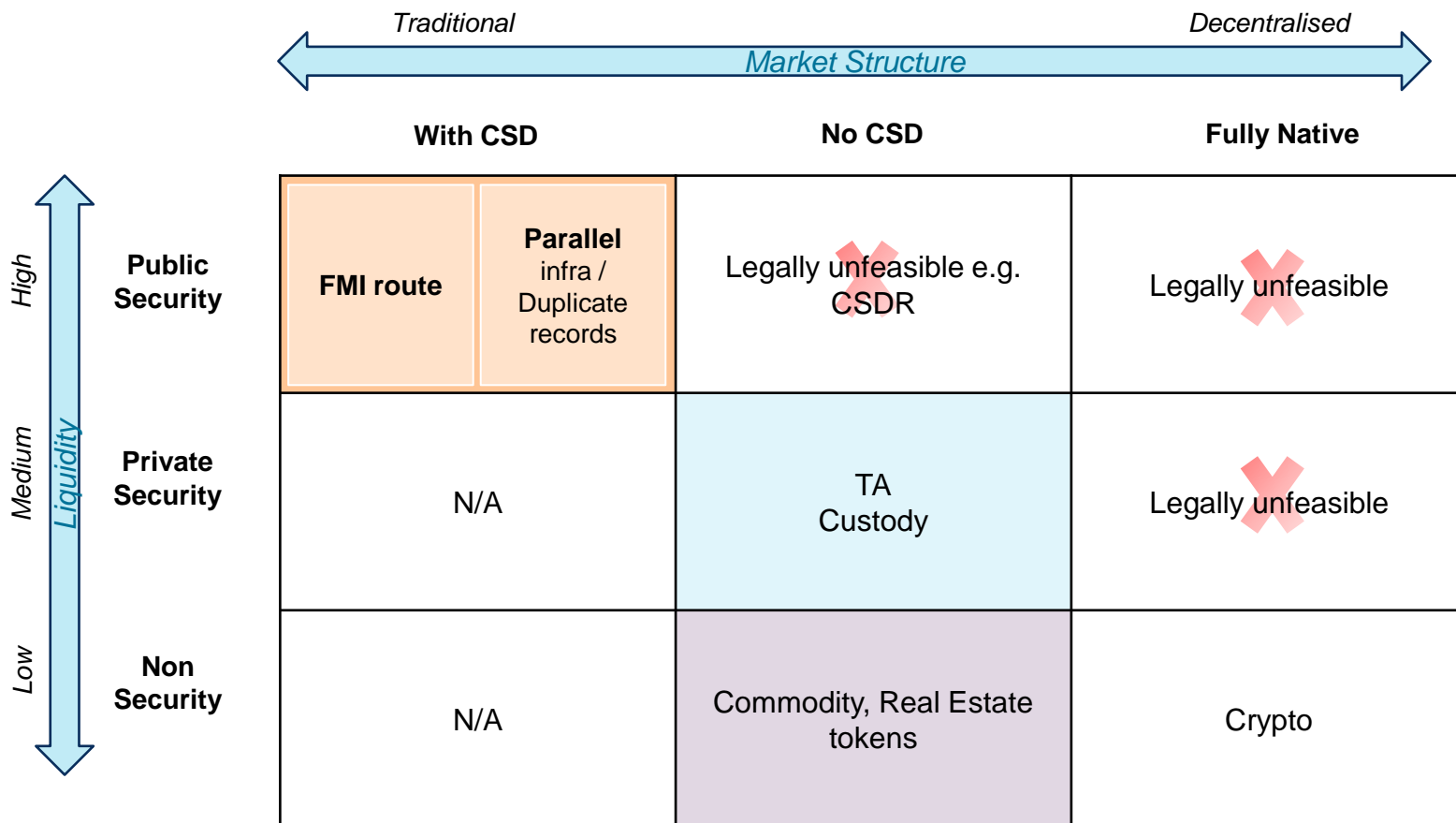
Thomas Kuhn – 1962, *The Structure of Scientific Revolutions*

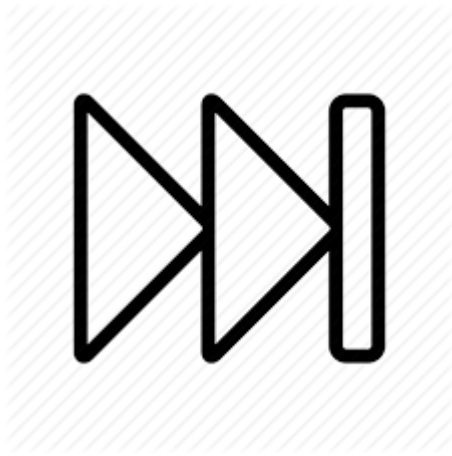
...is more cultural than logical.

"a new scientific truth does not triumph by convincing its opponents and making them see the light, but rather because its opponents eventually die, and a new generation grows up that is familiar with it."

Max Planck – 1950, *Scientific autobiography*

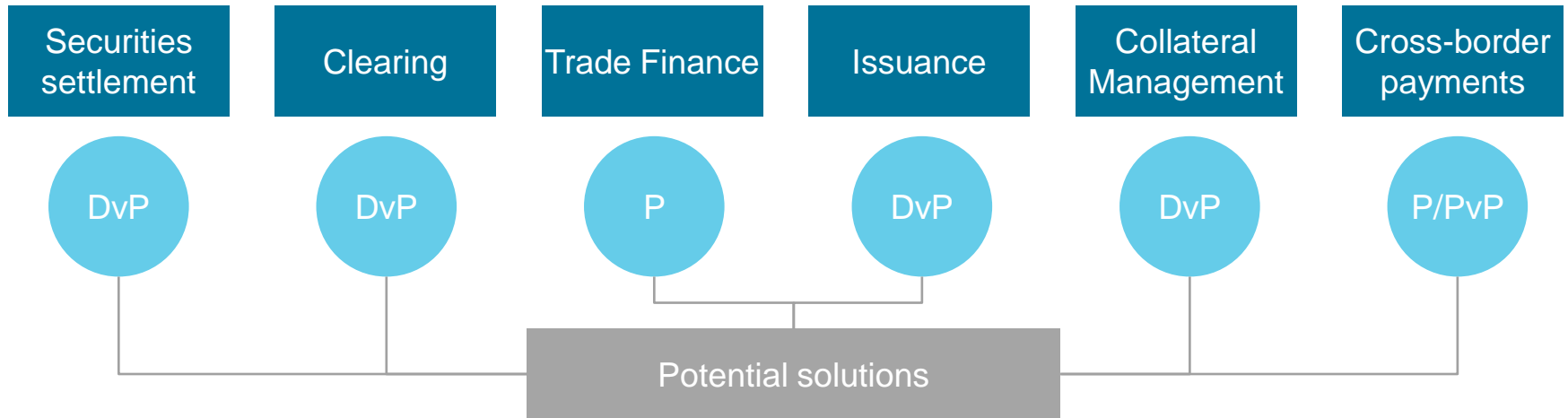
There are multiple approaches to go about it within current reg framework





to a tokenised
asset world

An institutional grade payment solution for a tokenised market is missing



Stable Coins

Examples:

- Gemini
- Paxos
- Circle

Available:

- Now

USC

Key characteristics

- Market led solution
- Regulated structure aligned with domestic RTGS
- Interoperability
- Settlement Finality

Available:

- 2020 (TBC)

CBDC

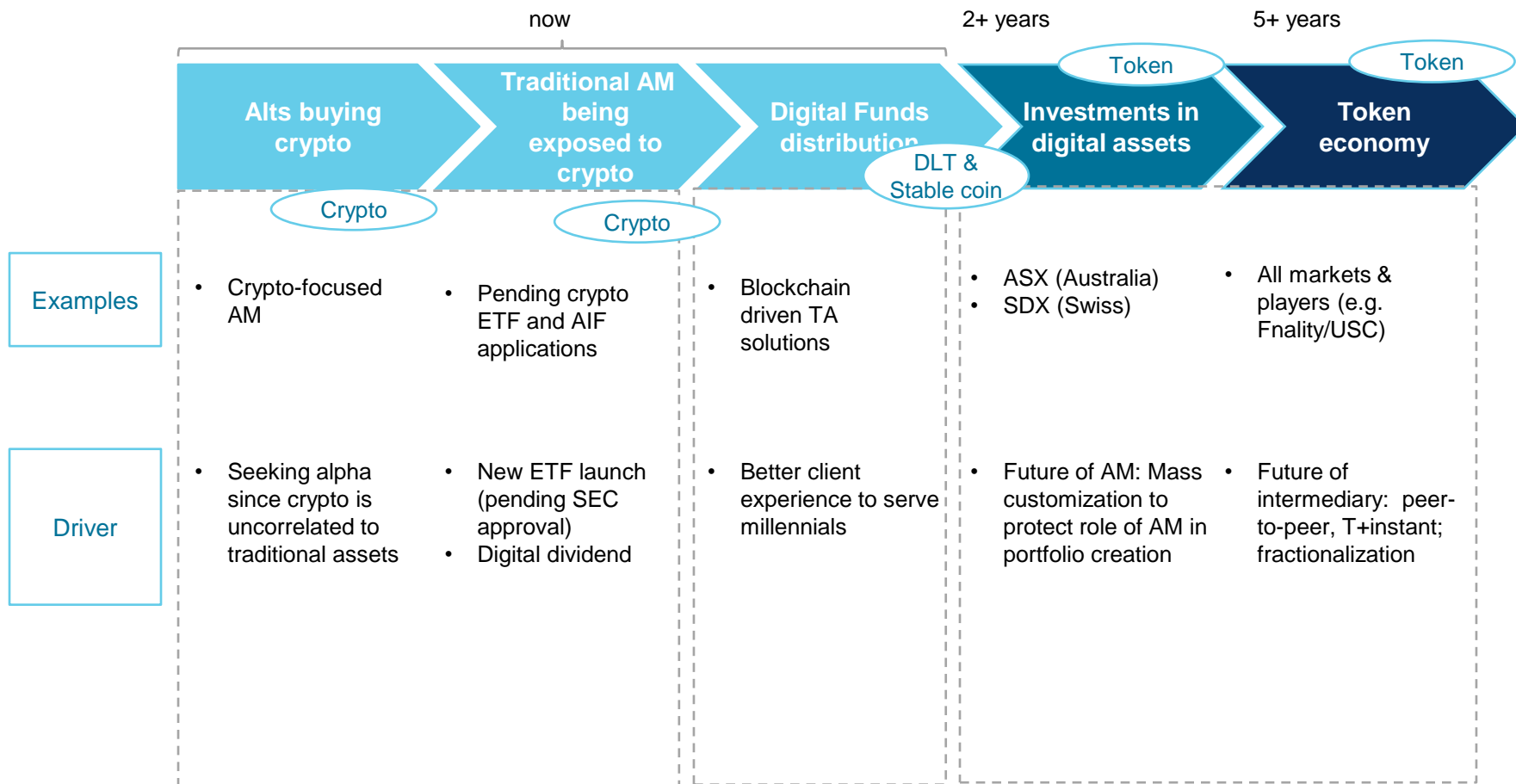
Examples:

- Jasper (CAD)
- UBIN (SGD)
- Khoka (ZAR)
- Research from BoE, ECB, BIS etc

Available:

- TBC

A roadmap towards a token economy



Disclaimer

Digital Product Development & Innovation (DPDI) Marketing Materials Disclaimer – North America

State Street Global Markets® is the marketing name and a registered trademark of State Street Corporation®, and is used for its financial markets business and that of its affiliates.

This communication is not intended for retail clients, nor for distribution to, and may not be relied upon by, any person or entity in any jurisdiction or country where such distribution or use would be contrary to applicable law or regulation. This communication or any portion hereof may not be reprinted, sold or redistributed without the prior written consent of State Street Global Markets.

This document is a communication intended for general marketing purposes, and the information contained herein has not been prepared in accordance with legal requirements designed to promote the independence of investment research. It is for clients to determine whether they are permitted to receive research of any nature. It is not intended to suggest or recommend any transaction, investment, or investment strategy, does not constitute investment research, nor does it purport to be comprehensive or intended to replace the exercise of an investor's own careful independent review and judgment regarding any investment decision.

This communication and the information herein does not constitute investment, legal, or tax advice and is not a solicitation to buy or sell securities or any financial instrument nor is it intended to constitute a binding contractual arrangement or commitment by State Street of any kind. The information provided does not take into account any particular investment objectives, strategies, investment horizon or tax status.

The views expressed herein are the views of State Street Global Markets as of the date specified and are subject to change, without notice, based on market and other conditions. The information provided herein has been obtained from sources believed to be reliable at the time of publication, nonetheless, we make no representations or assurances that the information is complete or accurate, and you should not place any reliance on said information. State Street Global Markets hereby disclaims any warranty and all liability, whether arising in contract, tort or otherwise, for any losses, liabilities, damages, expenses or costs, either direct, indirect, consequential, special, or punitive, arising from or in connection with any use of this document and/or the information herein.

This document may contain statements deemed to be forward-looking statements. These statements are based on assumptions, analyses and expectations of State Street Global Markets in light of its experience and perception of historical trends, current conditions, expected future developments and other factors it believes appropriate under the circumstances. All information is subject to change without notice. Digital assets are currently and will likely continue to be subject to substantial risk including, but not limited to, market risk, counterparty risk, legal, tax, and regulatory risk. Past performance is no guarantee of future results.

Products and services may not be available in all jurisdictions. Please contact your State Street representative for further information.

DPDI NA 2019-11

© 2019 State Street Corporation – All Rights Reserved