



Private Virtuelle Währungen - **Trends und Szenarienbetrachtung**

Peter Reuschel

Chairman and COO of Leondrino Exchange, Inc.

7. Dezember, 2016

Innovation in Technology and Regulation Enable Competition of Private Branded Currencies

Ben Lawsky @BenLawsky · 1 Jun
Here's a link to today's talk about the final #bitlicense framework.

COMPETITION AND CURRENCY

ESSAYS ON FREE BANKING AND MONEY

NYDFS today issued the first BitLicense
September 22, 2015



Fintech Competition Heats Up
October 28, 2015

Royal Bank of Canada Exploring Blockchain Loyalty Program
New York State Department of Financial Services

Into Tomorrow @RadioShow

Virtual Currencies from Leondrino Exchange at #IFA2015 in Berlin on #IntoTomorrow w/ @DaveGraveline

REGULATORY COMPLIANCE ASSOCIATION
VIRTUAL CURRENCY
A COMPREHENSIVE EXECUTIVE ANALYSIS
Volume 1 First Edition
Recognized by Regulatory Agencies as the Compendium for Alternative Investment and Asset Management Executives
Bart Chilton
Commissioner, CFTC (Former)

INSIDE: A 12-PAGE SPECIAL REPORT ON COLOMBIA
The Economist
OCTOBER 25-31 NOVEMBER 6TH 2015
007 and the spectre of Britain's past
Turkey votes to the sound of bombs
Those ever-creative accountants
America takes the fight to IS
Coywolves: the new superpredator

The trust machine

How the technology behind bitcoin could change the world

BLOCKCHAIN REVOLUTION
HOW THE TECHNOLOGY BEHIND BITCOIN IS CHANGING MONEY, BUSINESS, AND THE WORLD
DON TAPSCOTT
BESTSELLING AUTHOR OF WIKINOMICS
and ALEX TAPSCOTT



VIRTUAL CURRENCY
THE NEXT DISRUPTOR IN PAYMENTS

German Bank Association: Blockchain Could Revolutionize Securities

Capgemini: Finance 'Can't Ignore' Blockchain Tech
A new report from consulting and technology services firm Capgemini advises financial services firms that they can no longer "afford to ignore" blockchain technology

Choice in Currency
A Way to Stop Inflation
F. A. Hayek
Commentaries by Ivor F. Pearce, Harold B. Rose, Douglas Jay, Sir Keith Joseph

BetterRegulation.com @BetterRegUK · 16. Juli
EU brings virtual currency exchanges and wallet providers under the EU Anti-Money Laundering Directive dlvr.it/LpmhLq

Virtual currencies: what are the risks and benefits?
Others Article - EU Parliament, Economic and monetary affairs - 26-01-2016 - 18:16

WirtschaftsBlatt
24.07.2016, 21:47 von Wolfgang Tucek
EU-Plan gegen Geldwäsche: „Virtuelle Währungen werden tatsächlich zu Geld“

Leondrino Exchange – Spezialist und Emittent für Markenwährungen

- Als Firma Ende 2014 in New York gegründet; Software-Entwicklung in Berlin
- Angebot von Leondrino Exchange
 - Service für LifeCycle Management von Währungen
 - Elektronische Brieftaschen (Wallets) für Konsumenten
 - Basistechnologie (LEX Platform) für Umsetzung kundenspezifischer Use Cases
- Grundlagen
 - Neueste Technologien auf Basis Open Source aus der Blockchain-Community und auf Basis von eigenen Entwicklungen sowie Entwicklungen des LEX Eco-Systems (z.B. BigchainDB, Dais Software, Tymlez Software,...)
 - Aktuell: Private und sogenannten Consortium-Chains als Grundlage für kundenspezifische Entwicklungen
 - Berücksichtigung Anforderungen von Konzernen aus verschiedenen Industrien bzgl.
 - Skalierbarkeit
 - Datenschutz- und Datensicherheit sowie Selbstbestimmungsrecht bzgl. Datennutzung
 - Compliance inklusive industriespezifische Anforderungen

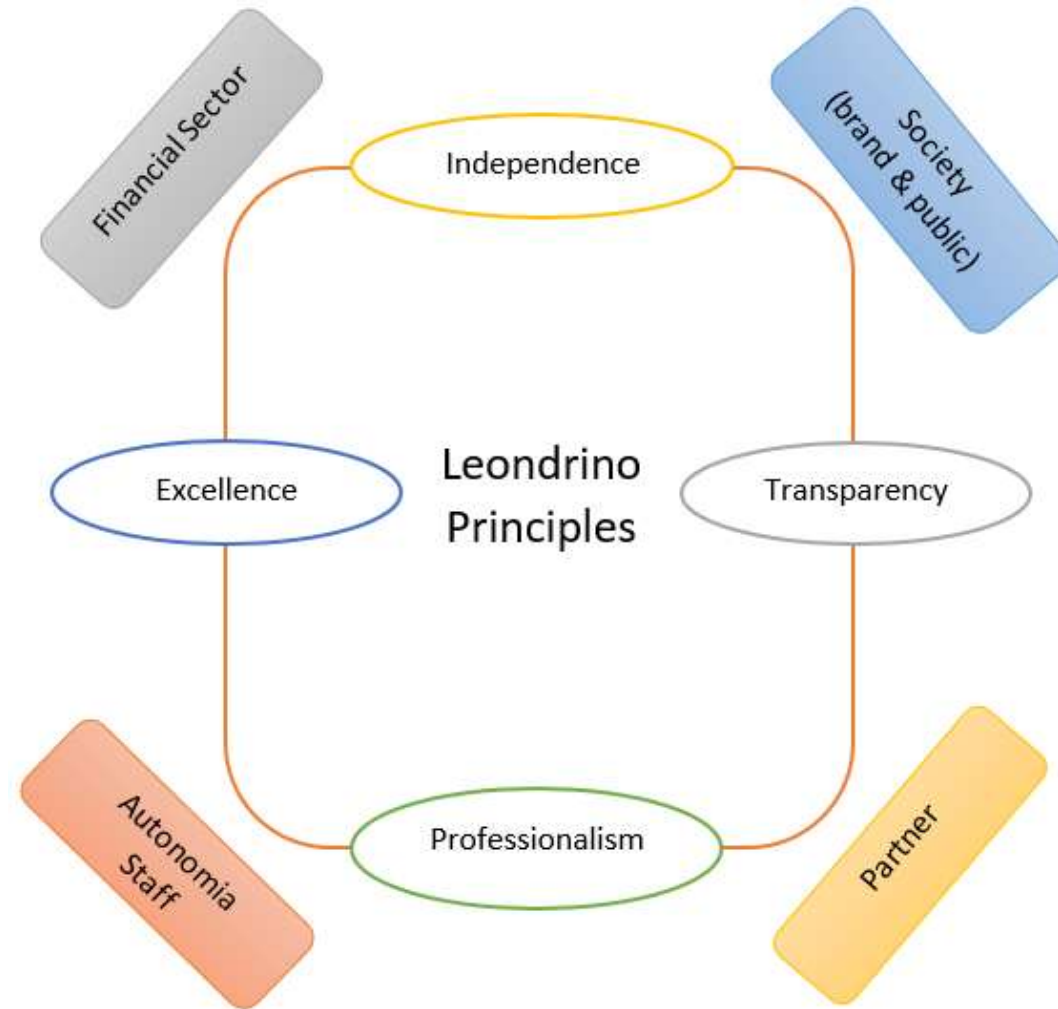
Core Idea of Leondrino Exchange

Instead of a Central Bank managing only **one** currency based on **one** monetary policy agreed with the government/society of **one** state:

A Private "Central Bank" which manages **competing** private **currencies** based on **different monetary policies** agreed with the management of the related enterprises

Autonomia:

Central bank department of Leondrino Exchange, Inc.



Trends - Virtual Currencies

Evolution of Virtual Currency Definition

- Definition by US Department of Treasury (2013):
 - "a medium of exchange that operates like a currency in some environments, **but does not have all the attributes of real currency**".
- Definition by European Central Bank:
 - "a type of unregulated, digital money, which is issued and usually controlled by its developers, and used and **accepted among the members of a specific virtual community**" (2012)
 - „...it is defined as a digital representation of value, not issued by a central bank, credit institution or e-money institution, **which in some circumstances can be used as an alternative to money.**" (2015)
- Definition by New York State Department of Financial Services relating to the BitLicense Framework (2015):
 - "Virtual Currency means any **type of digital unit** that is used as a **medium of exchange or a form of digitally stored value**. Virtual Currency shall be broadly construed to include digital units of exchange that (1) have a centralized repository or administrator; (2) are decentralized and have no centralized repository or administrator; or (3) may be created or obtained by computing or manufacturing effort."

Sources: [FIN-2013-G001: Application of FinCEN's Regulations to Persons Administering, Exchanging, or Using Virtual Currencies. 18 March 2013;](#)
<https://www.ecb.europa.eu/pub/pdf/other/virtualcurrencyschemes201210en.pdf> ; <https://www.ecb.europa.eu/pub/pdf/other/virtualcurrencyschemesen.pdf> and [BitLicense as of June 3, 2015](#)

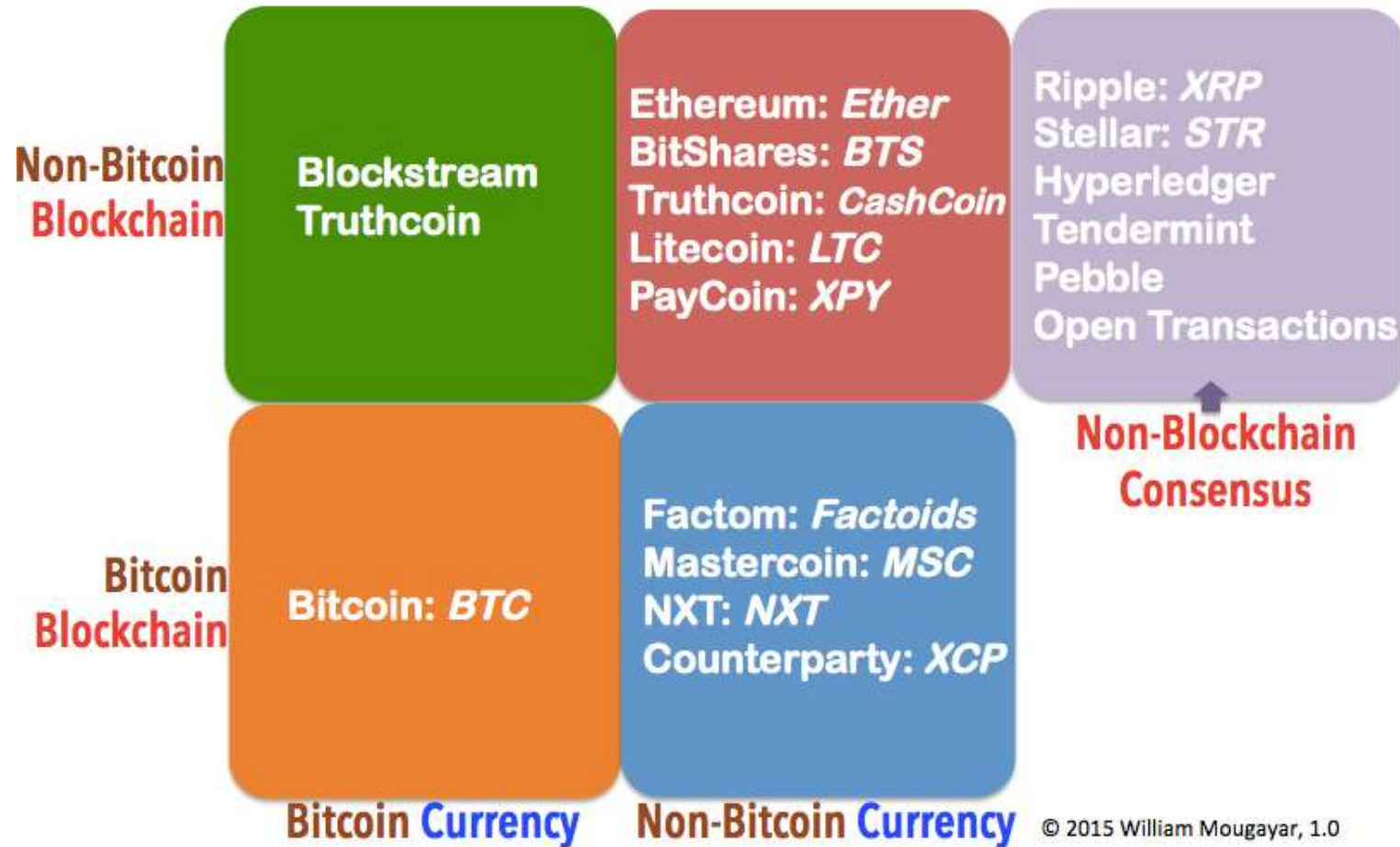
Implementation Alternatives - Centralized, Decentralized and Hybrid Models

- “Operations of VC schemes includes three components:
 - i. The issuance and redeemability
 - ii. Mechanisms to implement and enforce internal rules on the use and circulation of the currency
 - iii. Payment and settlement process
- Each area of operation may be managed by a trusted central (and private) party or in a decentralized manner among participants
- Hybrid schemes also exist, where some functions are performed by a central authority, while others are distributed among market participants.”
- We will probably see at least 2 more years of continuous innovation and market test of all models

Source of quote: IMF Staff Discussion Note January 2016: Virtual Currencies and Beyond: Initial Considerations.

VC Implementations and Networks – Examples (1)

Major Crypto-Tech Platforms



VC Implementations and Networks – Examples (2)

Additional Initiatives:

- With payment innovation focus
 - **Utility Settlement Coins** backed with fiat at central banks – announcement
 - **Visa/BTL** (Interbit platform and Ethereum ledger code) – POC
 - **Align Commerce** (Blockchain and traditional rails) –live

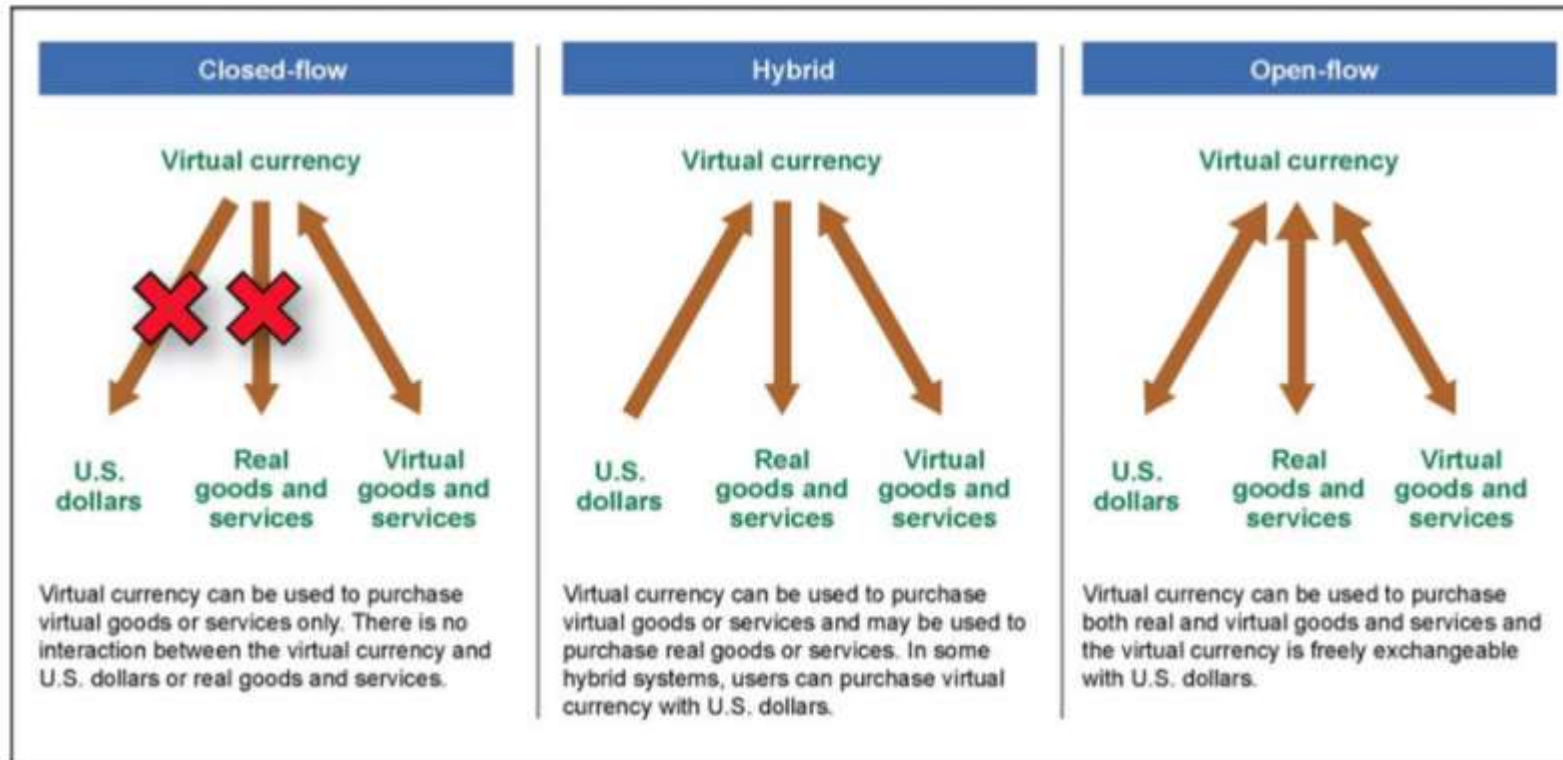
- With focus on full currency live cycle and backed by business of private (global) organizations
 - **Leondrino** (currently on private DLT environment) –
POC of pre-currency scenarios with selected brands

Enterprises Prefer Private or Consortium DLT

- Major Reasons:
 - More transactions without scalability issues
 - Response time
 - Easier to deal with regulations such as
 - the Health Insurance Portability and Accountability Act (HIPAA),
 - anti-money laundering (AML) and counter-terrorist financing (CTF)
 - and know-your-customer (KYC) laws
 - Issues around governance of public chains
 - Risk management
- Trust of participating stakeholders is not only dependent on technology. An interim step through a consortium DLT seems to be necessary.
- As technology matures and acceptance of applied DLT based networks rises, public DLT might become more acceptable also for enterprises.

Evolution of Virtual Currency Systems

- From internal currencies of games to private, exchangeable currencies of startups and enterprises



Source: United States Government Accountability Office, 2013 (Hrsg.): Virtual Economies and Currencies

Push of Consumers Led to Action of Regulators

Remarks on revised BitLicense framework for virtual currency regulation of Benjamin Lawsky in 2014:

“... what we are seeing ... is the classic type of market failure that exists in a monopoly-like system – where existing entrants have little incentive to innovate and are instead content to continue extracting unjustified rents from consumers. The technology exists to change the system for the better, just not the will.

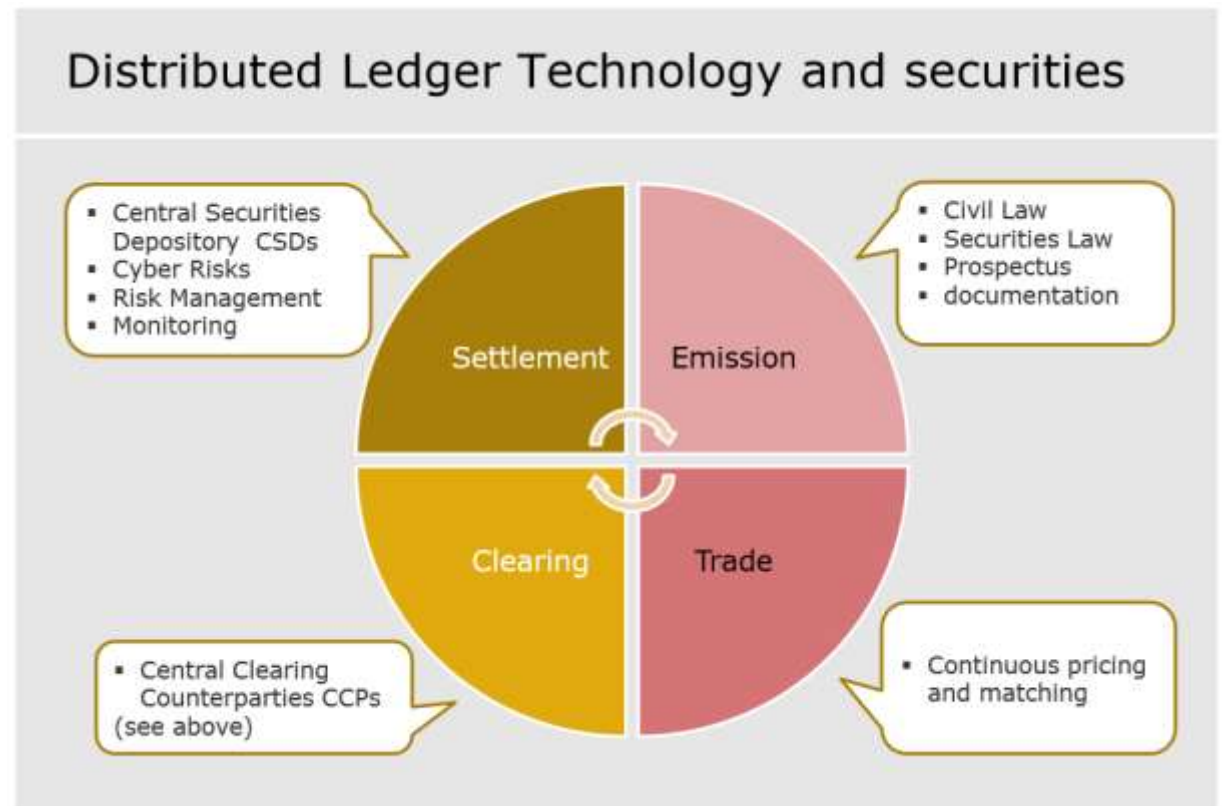
That is not to say that regulators are blameless. When you have a monopoly-like system – with very high barriers to entry – it is the regulator’s job to prod their institutions to overcome that collective action problem.

In other words, it is sometimes the regulator’s job to serve the public interest by pushing market actors to do what those market actors are unwilling to do themselves.”

Quote: Benjamin M. Lawsky, former Superintendent of New York State Department of Financial Services at Bipartisan Policy Center on Regulating Virtual Currencies and Payments Technology Washington, DC December 18, 2014

Aspects of Regulation Around Virtual Currencies

- Regulation of virtual currencies is getting momentum in several countries and **will foster competition between regulators**
- All aspects of major phases of lifecycle of currencies are influenced
- Examples of regulation initiatives:
 - BitLicense in New York:
 - enables „open flow“ currencies
 - defines clear roles and their responsibilities around issuance and administration
 - EU does address AML requirements with its attempt to regulate Wallets and Exchanges
- Still open: Additional need for a specific „eCash“ regulation?



Sources: Jens Muenzer, Blockchain for Finance Conference, London, October 3rd, 2016

Virtual Currencies – New Form of Venture Capital?

	TRADITIONAL VENTURE CAPITAL	CRYPTO-TOKEN POWERED INVESTING
1 Return Horizon	7-10 Years	1-5 Years
2 Ownership Model	Preferred Shares	Shares and/or Tokens/Cryptocurrency
3 Entry Phases	Angel, Seed, Early to Late Stage	Pre-mine, Genesis, ICO, Exchanges or private purchase from company
4 Exit Method	Acquisition, IPO	Acquisition, ICO, or via Crypto Exchanges listing
5 Business Model	Selling a Product or Services	Creating a self-sustaining Circular Economy with its own currency or token
6 Legal Structure	Startups are LLC's or incorporated via traditional corporate law in a given jurisdiction	LLC creates technology/protocol and runs separate business on top of it, or creates a valuable ecosystem around it, or it operates as a non-registered DAO
7 LP Mix	Institutions, High Net Worth Individuals, Family Offices, Funds of Funds	Institutional strategic / discretionary initiatives, progressive Family Offices, forward-thinking High Net Worth individuals, innovative Funds of Funds, interested Consumers via crowdsourced funding (i.e. could take a % of fund from general public following crowdfunding rules)
8 Fund Currency	Fiat	Accepts Fiat or Cryptocurrency (to be converted right away to fiat as the reference currency)
9 Market Approach	Creating new models, or supporting existing ones.	Creating new business models
	<i>Source: William Mougayar (C) 2016</i>	

Source: <http://startupmanagement.org/2016/10/06/how-cryptocurrencies-and-blockchain-based-startups-are-turning-the-traditional-venture-capital-model-on-its-head/>

Trust in Enterprises – Basis for Currency?

Decentralization of Trust¹

- 62% trust “a person like yourself”
- 43% trust CEOs
- 36% trust government officials or regulators

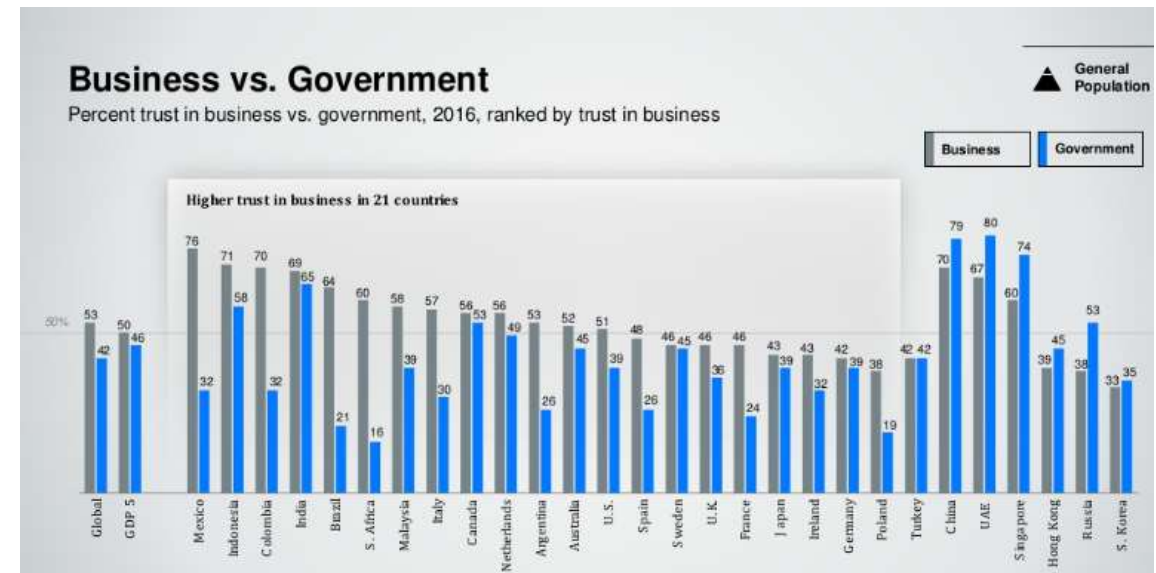
While another survey shows²

- 45% of 25-34 year olds in the US are **comfortable with independent or branded currencies**

¹Source: Edelman Trust Barometer 2014

²Source: Contagious Communications 2014

Business is also significantly more trusted than government in 21 of 28 countries



Source: 2016 Edelman Trust Barometer Q1 1-14. Below is a list of institutions. For each one, please indicate how much you trust that institution to do what is right using a nine point scale where one means that you "do not trust them at all" and nine means that you "trust them a great deal." (Top 4 Box, Trust) General Population, 28-country global trust.

GDP 5 = U.S., China, Japan, Germany, U.K.

Trends - Loyalty Programs

Trends in Loyalty Programs (1)

- Extension of loyalty systems to loyalty coalitions
- Test of mobile payment systems and integration with point of sale systems
- Example: American Express
 - Plenti in the US and Payback in Germany
 - Combination with American Credit Card
 - Payback Pay in Germany



Trends in Loyalty Programs (2)

- Special purpose loyalty points to influence behavior
- Examples:
 - Nike Sweat Points
 - Sweatcoin



The app that PAYS you to get fit: Sweatcoin rewards people for the number of steps they make every day

- Sweatcoin is available for free in the UK from Apple's app store
- It offers one coin for every 1,000 steps which can then pay for goods
- Rewards include Vivobarefoot shoes and fitness classes from Wonderush
- Android app is in development, and app will roll out to other regions soon

By [VICTORIA WOOLLASTON FOR MAILONLINE](#)

PUBLISHED: 13:51 GMT, 5 May 2016 | UPDATED: 17:57 GMT, 5 May 2016

Trends in Loyalty Programs (3)

- Example Marks & Spencer – started their own M&S Bank:
„Bring M&S Retail Values into banking: Quality, Value, Trust, Innovation and Excellent Customer Service.“ **The Relationship Bank**
 - Originally coming from a store card (1985), savings accounts and insurance products
 - Started with retail accounts (retail loyalty advantages but fees for the account) in 2012
 - Continued with current accounts without fees and without loyalty advantage in 2014

NEW
FASHIONED
BANKING

Pre-register for the new M&S Premium
Current Accounts* today

[Find out more](#)

*We offer M&S Premium Current Account or M&S Premium Current Account with insurance. Monthly fee applies.



Source: FinTech Network, November 2016: Open Banking and the API Economy. By Daryl Wilkinson from DWC

Convergence of Loyalty Programs with VCs

Interactive Experience and Branded Currency



Consumers become co-creators of value and change their process of decision making

Example: Healthcare

Currency of a Health Insurance Company

Transactions in a health care currency can increase brand awareness in health related topics that go far beyond the current coverage of a health insurance company.

Moreover, it can **foster growth** even with non-members who might simply use the advantages of savings in a health care currency to receive high-quality treatment based on the health insurance company's service catalogue.



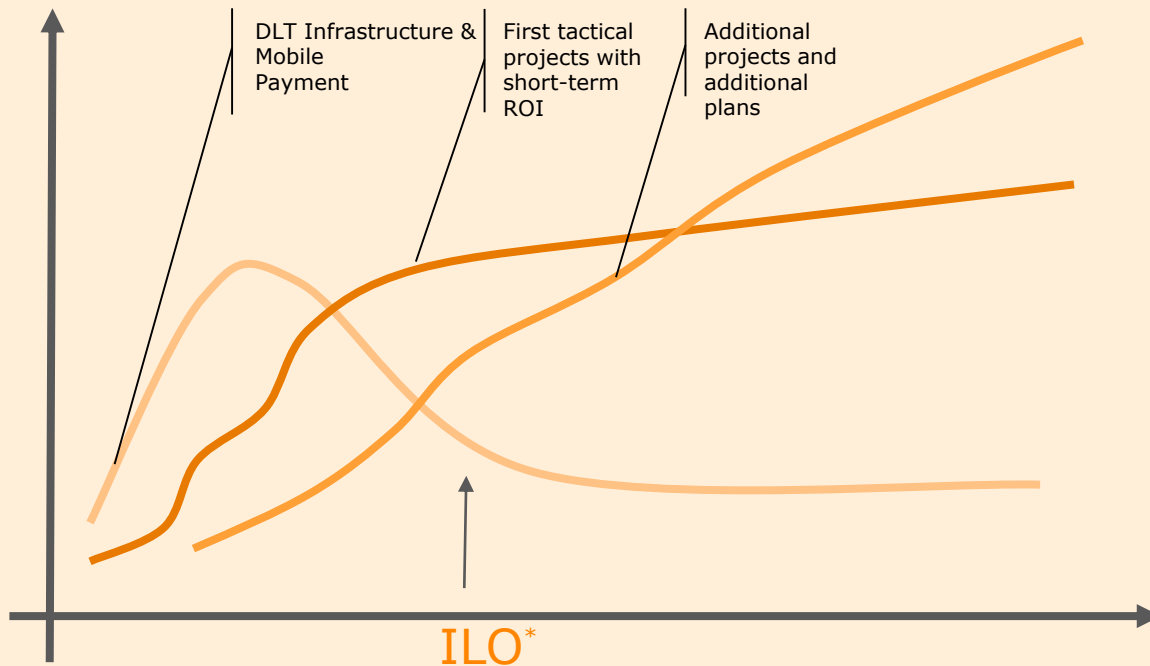
Health Care Payer

Short-Term

Incentives in form of Vouchers (pre-currency) for individual members

- Highly flexible IT infrastructure to distribute vouchers to members to reinforce desired behaviors and to support new plan designs that can attract and acquire new members
- A new incentive/reward system with an outlook of a conservative monetary policy (already during the pre-currency phase) will attract members, employers and providers to the health plans of the corresponding payer
- Blockchain technology will support to reduce administration (register, document, manage) of members with chronic conditions and complex populations (optimal risk score management)

Introduction of Healthcare Currency in Three Waves



Three waves

- Infrastructure (blockchain, mobile payment,...)
- First tactical projects with near term ROI using vouchers (pre-currency) which can be subsequently transferred into currency
- Additional projects of other ecosystem partners using the DLT infrastructure

*ILO = Initial Leondrino Offering

First Tactical Projects: Incentive Based Programs with Short-Term ROI

- Programs that help to improve care coordination resulting in better care (risk score improvements resulting in higher revenue)
- Programs that improve quality of care resulting in higher star ratings (Quality improvement Strategy (QIS) measures and higher revenue)
- Programs that promote preventive measures, use of lower unit cost settings and lower out of pocket (lowering medical cost)

Long-term: Prepare for Global Ecosystem in Healthcare

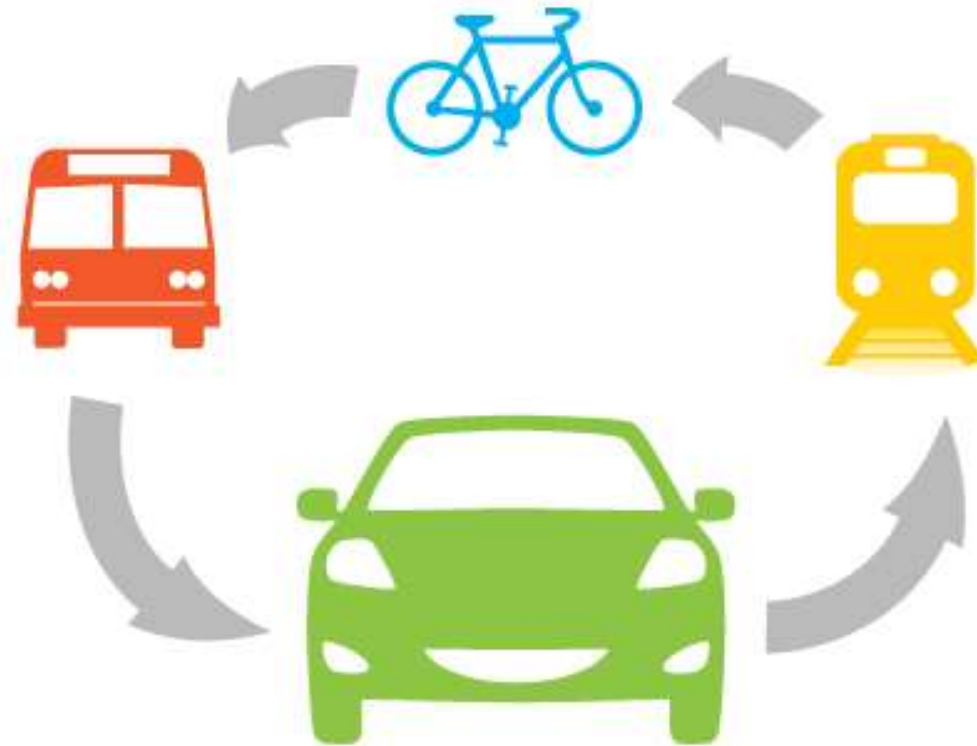
- Opportunity to **create a private ecosystem for a Branded Currency** under legislated regulations, guided by its own monetary policy, with a private “central bank” as issuer and administrator.
- **First-mover** in the market that has the potential to dramatically impact the **acceleration of its own (global) growth, support member retention and market penetration** of its affiliate licensee organizations.
- **Early adaptors can secure a leadership position** in category specific currencies, enabling business strategies that will **support data-driven marketing at member level** and an influence on behavior and therefore costs – and health outcomes.



Example 2: Mobility Service Provider

Currency of a Mobility Service Provider

Based on the new strategy of a globally operating manufacturer of luxury automobiles to become a mobility service provider, **transactions in a mobility currency can increase the number of touch points of the existing customer base outside the automaker's traditional ecosystem** and secure access to new target groups.



Potential of Convergence for Consumers

- Reducing risk
 - Alternative liquid asset complementing fiat currency
(Reminder: rise of Bitcoin in Greece a few years ago)
 - Portfolio of alternative commodities to secure savings
- Convenience
- Getting return as exchange for
 - Support of the brand (reputation, customer acquisition)
 - Cost saving behavior
 - Data sharing

Potential of Convergence for Brands

- Deployment of loyalty schemes on all sides of the market – customers and retailers/merchants
- Rewarding customers for desired actions with stronger influence on loyalty (stickiness to “own” economy based on trust in currency)
- Opening new revenue streams by stretching currency area of a brand
- Reduced long-term liability position in balance sheet (Calculate benefit real-time at POS)
- For global brands: Reduce risk of exchange rates

Aspects of Extended Multi-Currency World

Multi Currency World For Consumer

■ It is all about the Wallet

- **Usability is key** – Currently, operators and mobile phone vendors are major combats, especially in Asia
- Cryptocurrency wallets are still in early adaptor phase
- Key product features today:
 - Money messages
 - Digitize existing cards
 - Compare and go – simple integration of brand offers
 - Ability for offline transactions vs. online transactions only
 - NFC
- Key product features of the future:
 - Smart Integration of brand offers
 - Seamless handling of fiat money and private currencies at POS
 - Integration with back office of high street banks



Source: <http://www.it-finanzmagazin.de/>

Example for Brand Integration – Dashboard of Leondrino Wallet

Ease of use and user inspired functions are key success factors

Examples:

- Show total value of all owned branded currencies of a your wallet calculated in fiat reference currency
- Special view on favorite currencies

Smart Marketing Functions:

- Opportunities to gain value by supporting brands or using special offers or trigger points
- Individualized offers based on collected interest data and history of transactions in branded currencies
- Trust ranking based on recommendations and usage of private (pre-) currencies

The screenshot displays the Leondrino Exchange dashboard for user Peter Reuschel. The interface includes a navigation bar with 'Dashboard', 'Leondrino Wallet', 'Gutscheine', 'Bonus Leondrino', 'Marken', and 'Hilfe'. The main content area is divided into several sections:

- Hallo Peter!** and **TEST DATA** header.
- Meine Favoriten**: Shows three favorite currencies: Adidas (SO ADI), CTS eventim (SO CTS), and LeafSystems (EF LEAF). Total value: **Gesamtwert 572,80 USD**. Buttons: 'Marke hinzufügen', 'Marke vorschlagen'.
- Meine Gutscheine**: Shows one voucher for Samsung. Button: 'Gutschein aktivieren'.
- Meine Bonus Leondrino**: Shows 3 earned bonuses and 0 outstanding. Button: 'Bonus Leondrino erwerben'.
- Was gibt's Neues?**: News section with updates on Leondrino Creditscore (C-94,7), LEAF Leondrino split candidates, and new brands like 'Leondra music' and 'Marken'.
- Aktuelles Marken Ranking**: Horizontal bar chart showing brand rankings: Amazon (AMZN), Microsoft (MFT), Coca-Cola (COKE), Apple (APL), Samsung (SSU), Sony (SONY), McDonald's (MCD), Nike (NIKE), Tesla (TSLA), NVIDIA (NVD).
- Footer**: Includes a 'fan ticket' for Silbermond, a 'mi adidas mi Style' advertisement, and social media icons.

HINT:
The coins shown on this page exemplify potential future branded currencies.

Example For Brand Integration - Brand View

Transparency about

- General information and news about brand
- **Phase of currency lifecycle** of a brand and its **risk score**
- **Individual loyalty status** based on
 - Brand supporting activities; and
 - Individual past transactions using the branded currencies
- Personal offers are based on individual profile data and discounted at time of transaction:
considering loyalty status real-time at POS

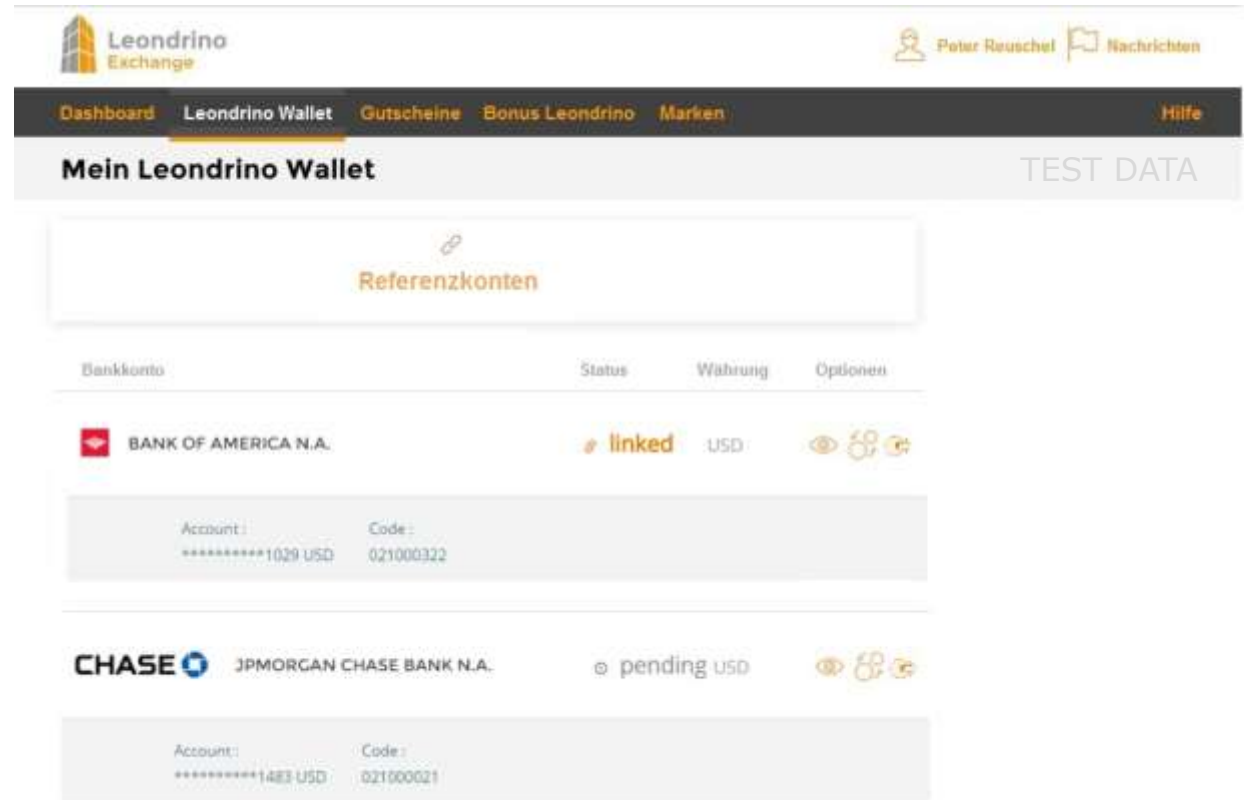
The screenshot displays the Leondrino Exchange interface for the 'Leondra music' brand. At the top, there's a navigation bar with 'Dashboard', 'Leondrino Wallet', 'Guthaben', 'Daten Leondrino', 'Marken', and 'Hilfe'. The main content area is titled 'Leondra music' and includes a 'TEST DATA' label. A central card shows the brand logo, the conversion '1 LMC = 1,75 EUR', a 'Risk Score' gauge, and a 'LMC Leondrino kaufen' button. Below this, it states 'In Deinem Wallet 80 LMC entspricht 140 EUR' and 'Dein Loyalty Status Gold' with a star icon. To the right, a section titled 'Über Leondra music' provides a description of the platform as a business platform for musicians and managers. Below that is a 'Aktuelles Marken Ranking' pie chart with 'LMC' highlighted in orange. The bottom section, 'Dein persönliches Marken-Erlebnis', features a 'Ticketalarm' for Udo Lindenberg's concert on 03.05. - 19.06. 2017, with a ticket price of 22,00 LMC. Other sections include 'Sting-Fans aufgepasst!' with concert information and a 'Ticketalarm' for Sting's concert on 16. November 2016.

HINT:
The data shown
on this page
are test data.









Example Leondrino Wallet – Integration with Banks

- Open banking and trend towards API economy will lead to better integration between core functions of banks and Wallets, e.g. reference account for fiat currency of a banks in Wallets
- Hypothesis:
Private branded currencies will dramatically reduce customer acquisition costs for banking services.

This might be used by fast moving enterprises with a bank license including retailers – but might be also attractive for established banks.



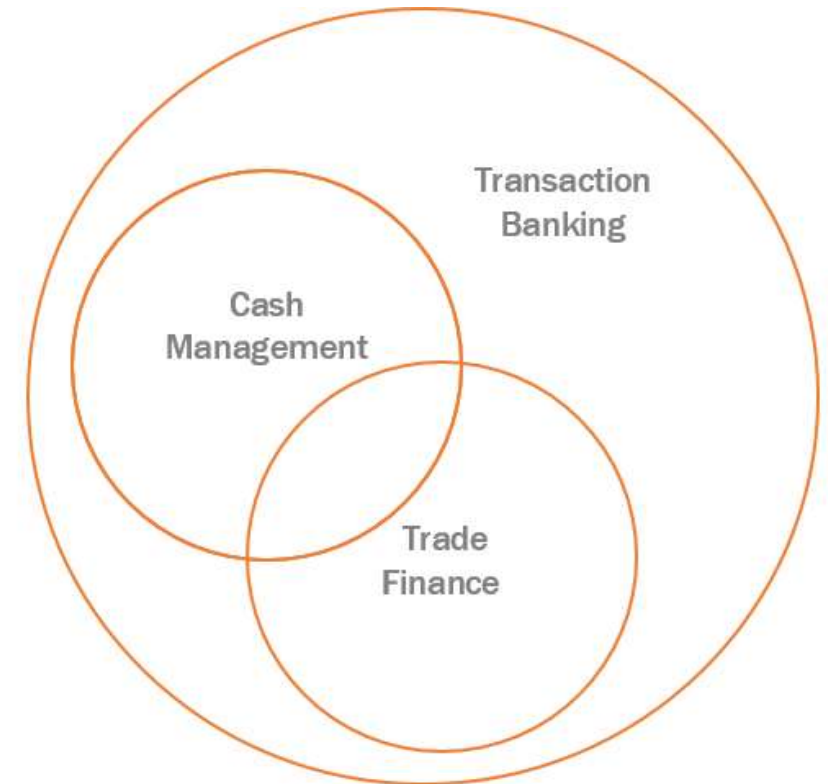
The screenshot displays the 'Mein Leondrino Wallet' page on the Leondrino Exchange. The page features a navigation bar with 'Dashboard', 'Leondrino Wallet', 'Gutscheine', 'Bonus Leondrino', and 'Marken'. The user is identified as 'Peter Reuschel' with a 'Nachrichten' icon. The main heading is 'Mein Leondrino Wallet' with a 'TEST DATA' label. Below this, there is a section for 'Referenzkonten' (Reference Accounts). A table lists two bank accounts:

Bankkonto	Status	Währung	Optionen
 BANK OF AMERICA N.A.	linked	USD	  
Account: *****1029 USD	Code: 021000322		
 JPMORGAN CHASE BANK N.A.	pending	USD	  
Account: *****1483 USD	Code: 021000021		

HINT: The data shown on this page exemplify potential future bank integration.

Multi Currency World For Enterprises

- Importance of Global Transaction Banking
 - Cash Management in national fiat money and private currencies
 - Trade finance will become more sophisticated and increase pressure on new IT infrastructure.
- Who is the right banking partner for a global enterprise in the future world of private currencies?
 - Importance of modern transaction banking capabilities
 - Global presence, especially in Asia and other fast moving emerging markets
 - Speed in cross-country transaction processing based on latest technological achievements
 - Integration capabilities with core business of enterprises



Rising Role of Shared IT Services For Banking

Private Consumer			
Banking B2C Layer (private)	Direct-to-Consumer <ul style="list-style-type: none"> Distribution of Multi-Currency Wallets (MCW) Account Management 	Private Banking <ul style="list-style-type: none"> Distribution of Multi-Currency Wallets Investment Consultancy Account Management 	Brand Banking <ul style="list-style-type: none"> Distribution of Multi-Currency Wallets Account Management Loyalty Programs
IT-shared Service (standardized)	Currency Infrastructure / White Label Multi-Currency Wallet Solution / KYC, White Label Account Solution / Online Banking Solution		
Market Maker Layer	Direct	Trusted Third Parties for real-time transactions	Intermediaries (Market Maker/Broker/Dealer)
Exchange Layer	LEX & other Exchanges		
Issuer & Administrator Layer	LEX Autonomia or other Issuer		← Leondrino Contract & Leondrino → \$ Brand
Exchange Layer	LEX & other Exchanges		
Market Maker Layer	Direct	Trusted Third Parties for real-time transactions	Intermediaries (Market Maker/Broker/Dealer)
IT-shared Service (standardized)	Currency Infrastructure / White Label Multi-Currency Wallet Solution / KYC, White Label Account Solution / Online Banking Solution		
Banking B2C Layer (Corporate & Institutional Investors)	Business Banking SME <ul style="list-style-type: none"> Distribution of Multi-Currency Wallet & PoS Payment Service Distribution of Loans & other simple Financial Products (ensuring liquidity) 	Business Banking Corporates <ul style="list-style-type: none"> Distribution and Production of complex Financial Products (ensuring liquidity) Risk Management 	Business Banking Inst. Investors <ul style="list-style-type: none"> Distribution Portfolio Mgmt. of Leondrino & Certificate Trade Risk Management (Wealth Management)
Final Customer Corporate & Institutional Investors			

Ausblick

Konvergenz von Loyalty Programmen und privaten Währungen – Wunschtraum oder reale Chance?

Die Ergebnisse der laufenden POC Projekte werden zeigen, wie schnell es zur Akzeptanz und Nutzbarkeit von privaten Markenzwährungen kommen wird.

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