

KyberNetwork



And Applications of On-Chain Decentralized Exchanges

Loi Luu

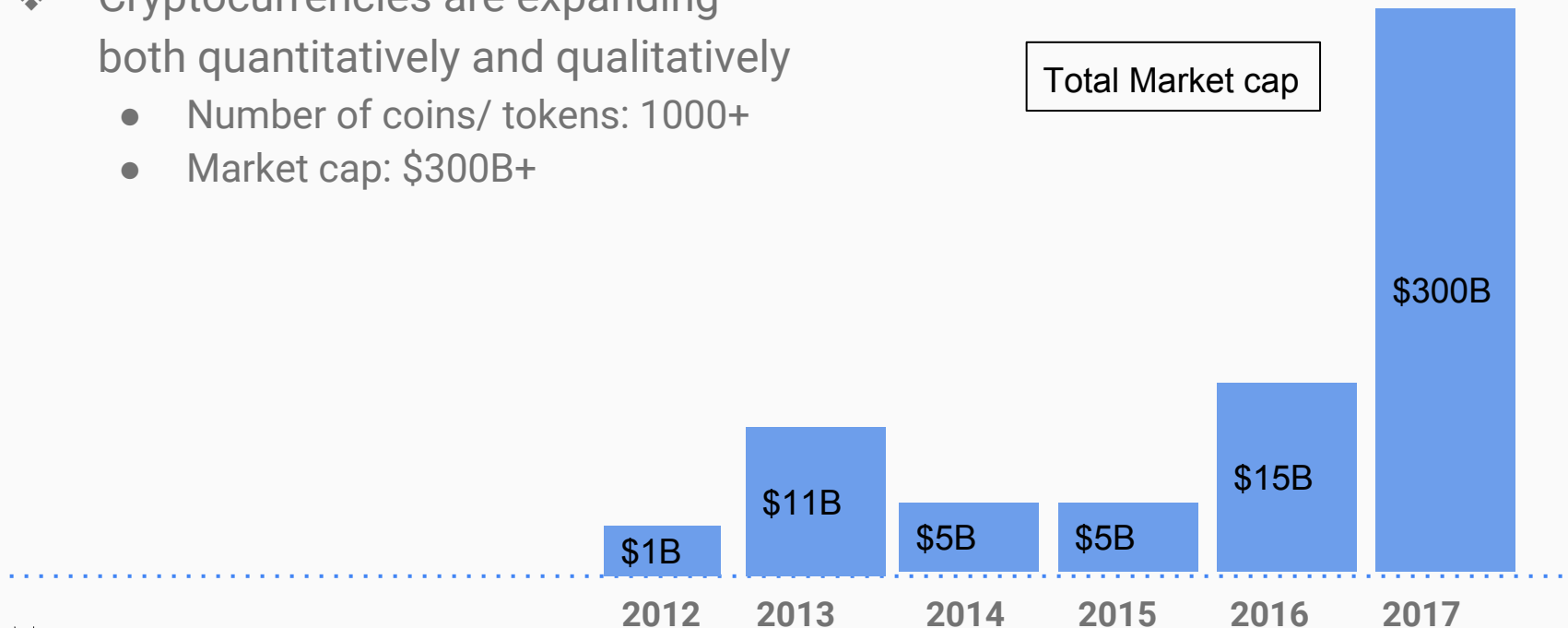
CEO and Co-founder of KyberNetwork

Shenzhen, December 2017

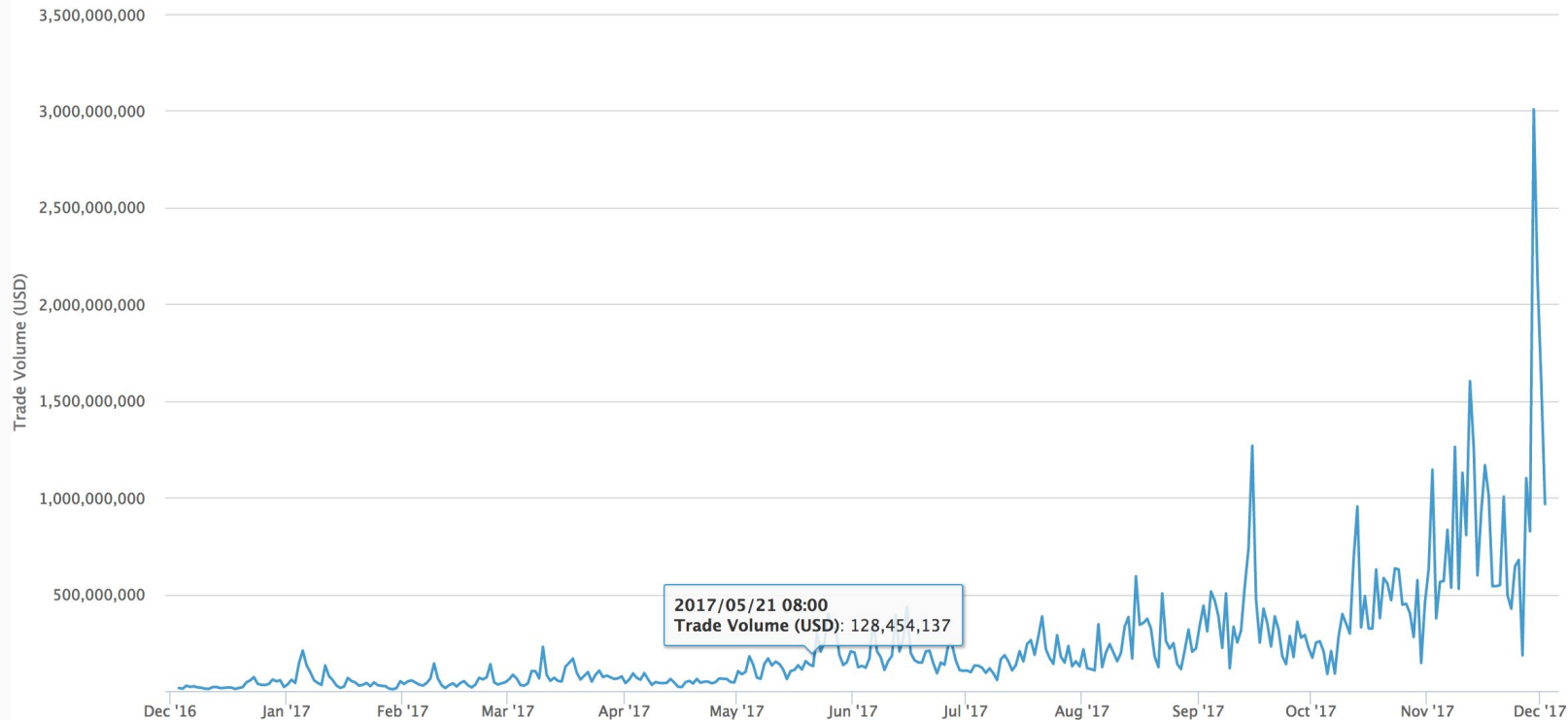
The Rise of Cryptocurrencies

❖ Cryptocurrencies are expanding both quantitatively and qualitatively

- Number of coins/ tokens: 1000+
- Market cap: \$300B+



Trading Volume Exploded

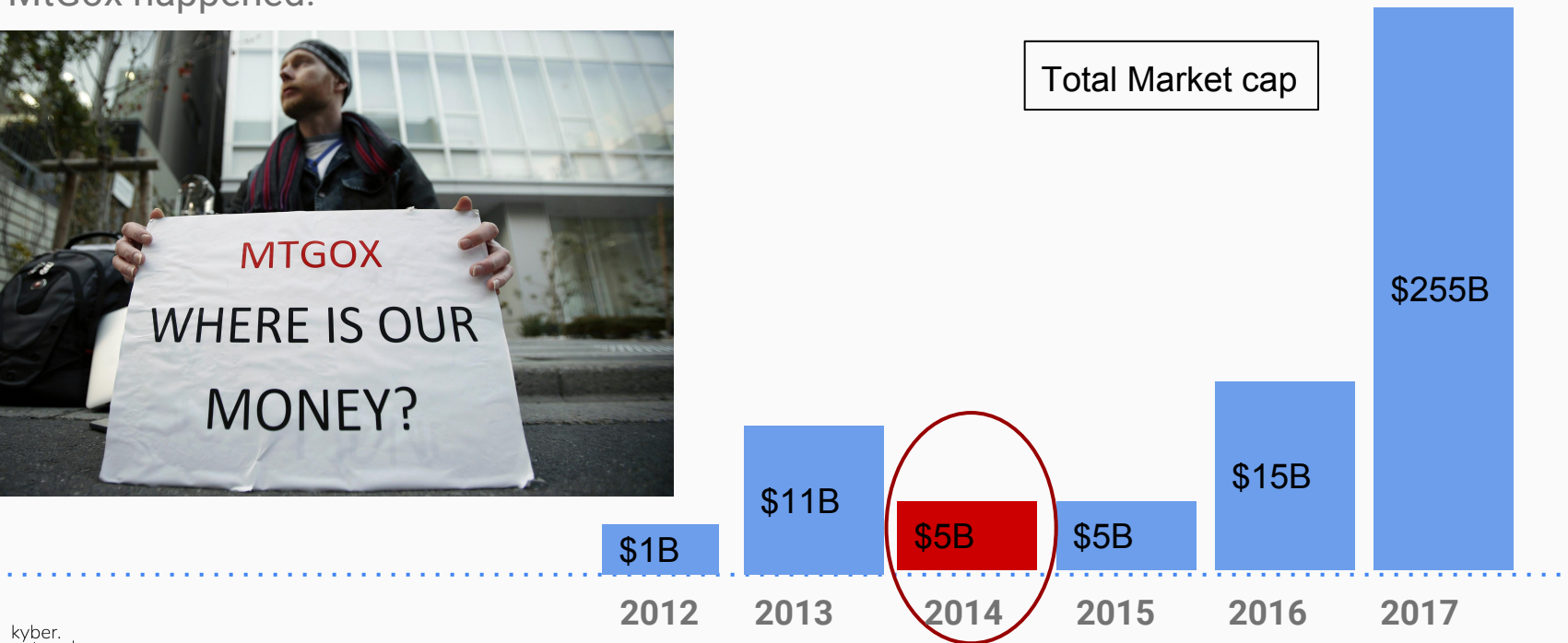


kyber.
network


blockchain.info

Cryptocurrency Exchange: The Holy Grail


MtGox happened!




And many more other incidents

 **CoinDesk** ***Poloniex** Loses 12.3% of its **Bitcoin** in Latest **Bitcoin** Exchange Hack*

Mar 2014

 **Bitstamp** exchange hacked, \$5M worth of **bitcoin** stolen

Jan 2015


 **CoinDesk** *Digital Currency Exchange **ShapeShift** Claims Hack Was Inside Job*


April 2016

FORTUNE *Bitcoin Worth \$72M Was Stolen in **Bitfinex** Exchange Hack in Hong Kong*

August 2016

Cryptocurrency Exchange: The Holy Grail

 **CoinDesk** *Poloniex Loses 12.3% of its Bitcoins in Latest Bitcoin Exchange Hack*
Mar 2014

 **Quartz** *Cryptocurrency exchanges can't stop getting hacked, no matter what security system they use*
August 2016

FORTUNE *Bitcoin Worth \$72M Was Stolen in **Bitfinex** Exchange Hack in Hong Kong*

August 2016

The Rise of Decentralized Exchanges



Ether**Delta**



0Xproject



kyber.
network

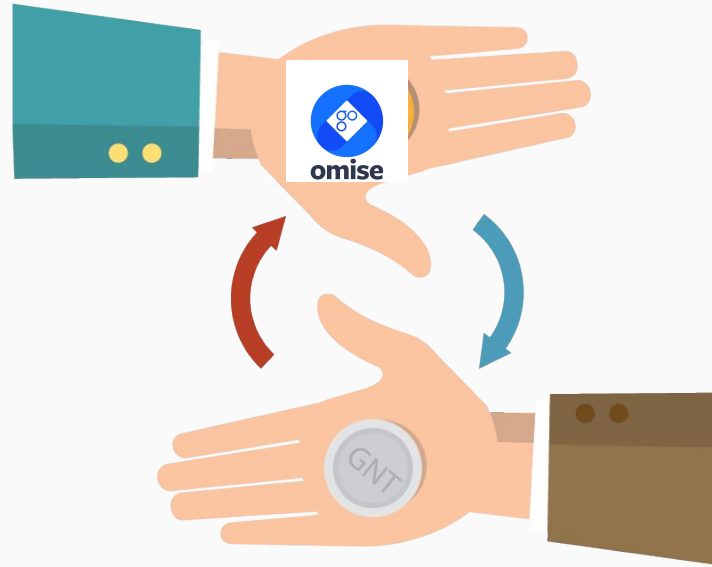


AirSwap

A Quick Tour of Decentralized Exchanges

Exchange	What to trust	On-chain (ETH)	Guaranteed Liquidity	Transaction rate
EtherDelta AirSwap 0xProject	EtherDelta Relays Indexers	Hybrid (Off-chain order book, on-chain settlement)	No	As much as Ethereum allows
OMG	OMG Plasma Network	No (sidechain/ Plasma)	No	High
Kyber Network	Wallet	Yes	Yes	As much as Ethereum allows

About KyberNetwork



An **on-chain** decentralized exchange that supports **instant** and **secure** token-to-token conversion with **guaranteed liquidity**

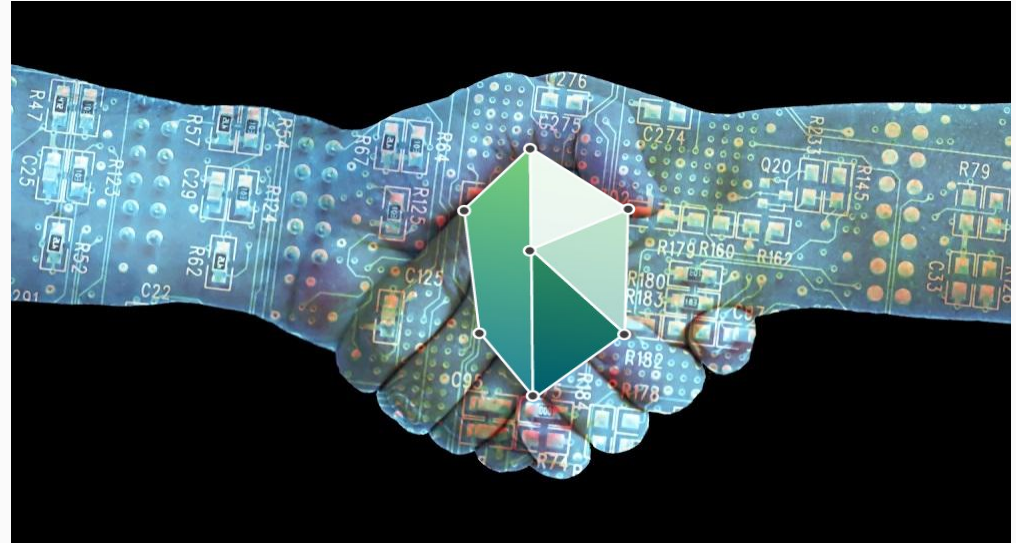


KyberNetwork

- Secure
- Trustless
- Block-instant trades
- High liquidity
- Compatibility

How We Build KyberNetwork

- ❖ Do everything on-chain, because off-chain channels:
 - Rely on trusted third parties (relays, indexers)
 - Do not provide settlement guarantee
 - Low compatibility



How We Build KyberNetwork (2)

- ❖ Remove the order book
 - Maintain the on-chain order book is a waste of resource
- ❖ Introduce reserves which process all the trades
 - Like a bank in real life
 - Guarantee liquidity



BUY	VALUE	AMOUNT	BID	ASK	AMOUNT	VALUE	SELL
0.39	140.13	0.39142960	356.00	360.00	1.3550	487.41	1.36
0.50	180.30	0.50390	357.80	360.00	0.9250	3049.00	4.20
2.00	715.58	2.0	357.79	360.00	5.758454	200.00	4.84
3.05	199.44	0.557			0.590	116.91	0.17
0.15	999.28	1.875200				333.63	0.10
0.40	107.27	0.30			48.18882230	17287.74	54.70
0.99	199.23	0.55721171			0.31480	113.00	0.40
0.13	50.01	0.140			5.58502233	8826.72	79.10
0.80	96.40	0.278			4.5828	580.31	80.81
7.99	214.25	0.60	357.09	360.00	0.410	266.82	81.55
27.29	7230.87	20.250	357.08	360.00	0.60140	144.20	81.96
20.04	280.26	0.7850	357.02	360.00	0.6590	240.49	82.83
11.05	1288.39	3.60803448	357.01	360.00	1.0880	391.52	83.71
31.79	49.97	0.140	356.95	360.00	0.7260	261.52	84.43
31.39	35.68	0.10	356.83	360.00	0.8520	307.22	85.26
32.54	231.89	0.650	356.75	360.00	0.29910	107.96	85.50
32.75	77.42	0.21703390	356.71	360.00	0.06470953	3271.91	94.55
60.61	11007.77	30.86003162	356.70	360.00	1.1350	409.60	95.78



How We Build KyberNetwork (3)

- ❖ Bring market makers on-chain
 - Earn profit from spread
 - Provide sufficient tools/ software

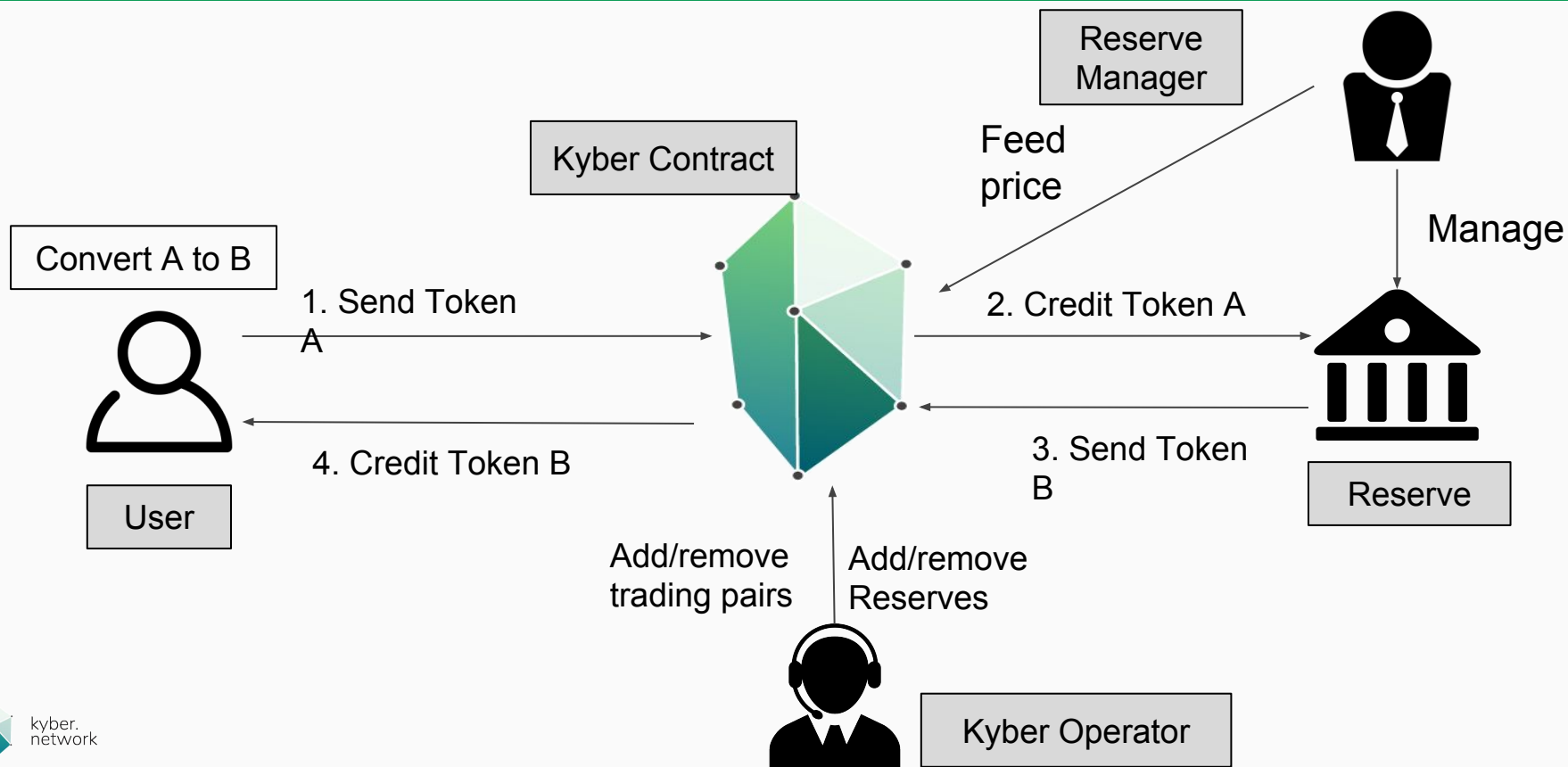


How we build KyberNetwork (4)



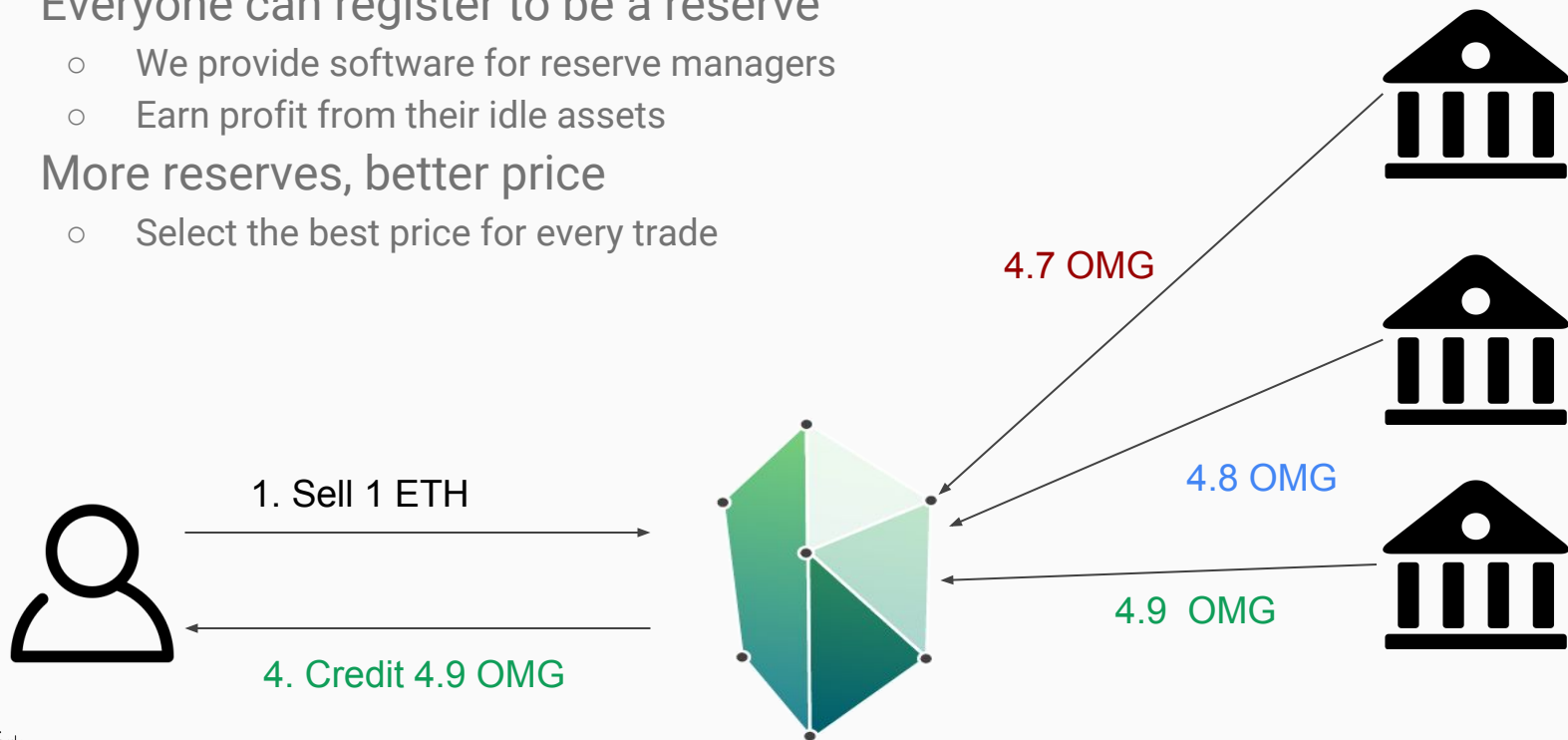
Work with popular wallets and platforms to generate traffic

Kyber Network Architecture



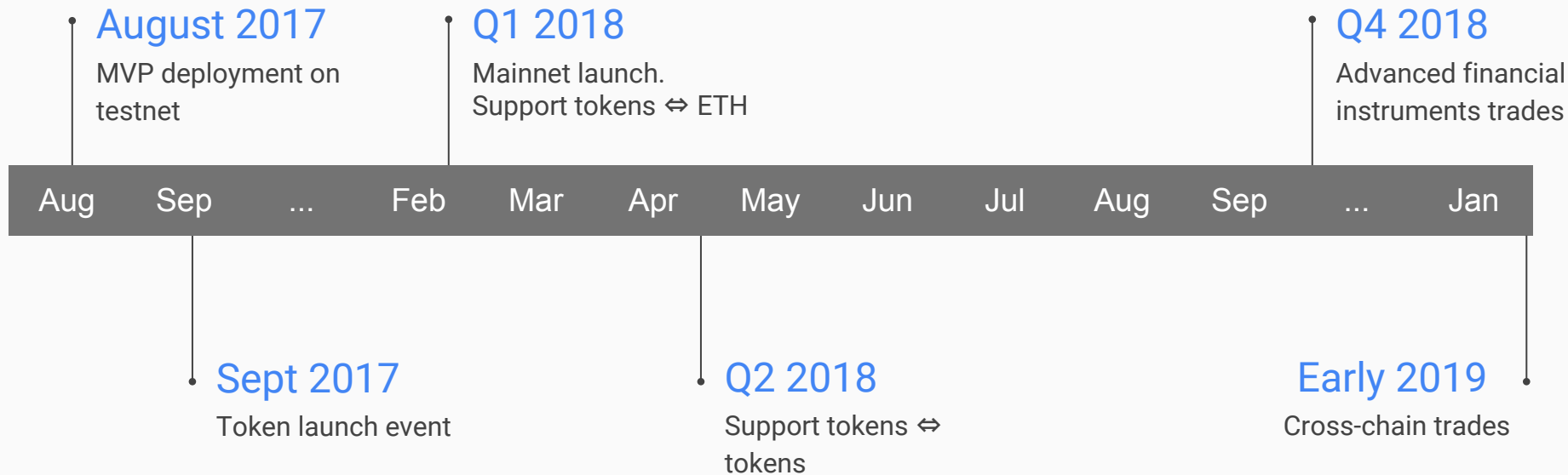
Multiple Reserves

- Everyone can register to be a reserve
 - We provide software for reserve managers
 - Earn profit from their idle assets
- More reserves, better price
 - Select the best price for every trade



Milestones

(Tentatively)



Progress Update

Platform development

Wallets/Platforms

- ❖ Bring more traffic
- ❖ Convenient to users

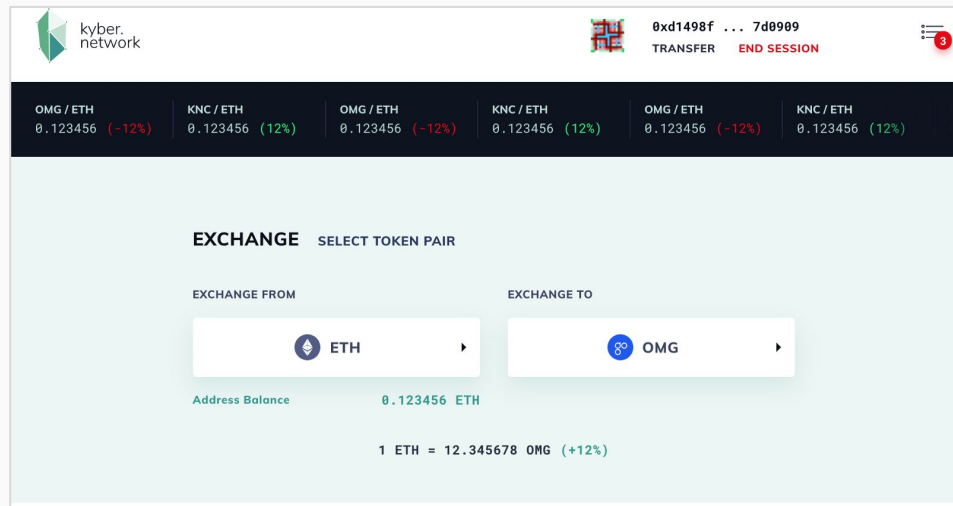
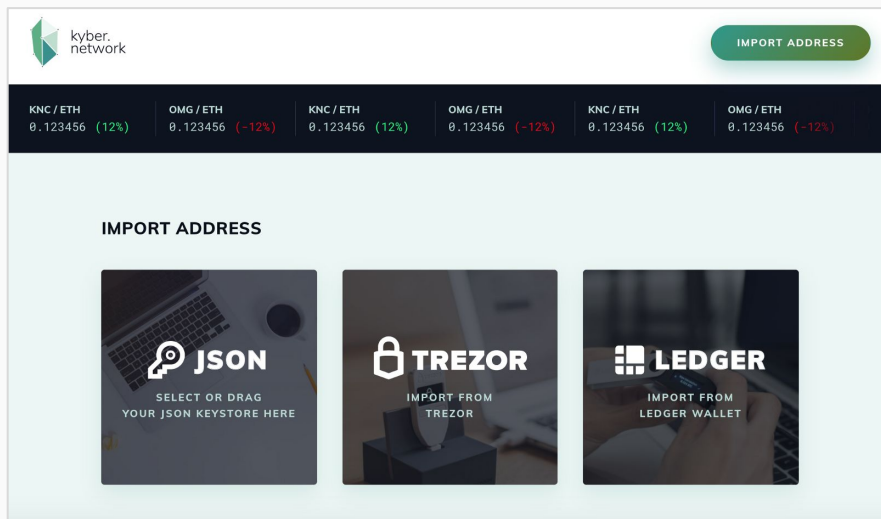
Smart Contracts

- ❖ KyberContract
- ❖ ReserveContract
- ❖ OperatorContract

Reserve Dashboard

- ❖ Market view
- ❖ Protect reserves
- ❖ Rebalance

Exchange Directly with Hardware Wallets



Partnership with ImToken

- ImToken is one of the most popular wallets in China
 - 320,000 active users
- Users can instantly trade with Kyber on ImToken wallet
 - Don't have to leave their wallets
 - Tokens/Coins always stay within their wallets
- Demo
 - http://v.youku.com/v_show/id_XMzE50TQ1MjMyMA
- More wallet integrations to come

Partnerships with major platforms



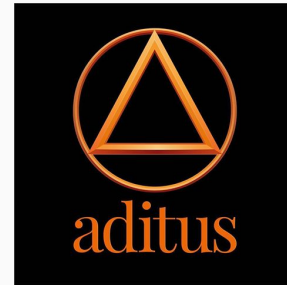
GiFTO



AppCoins



RequestNetwork



Give KyberNetwork direct access to millions of users

Strategic/ Research Partners

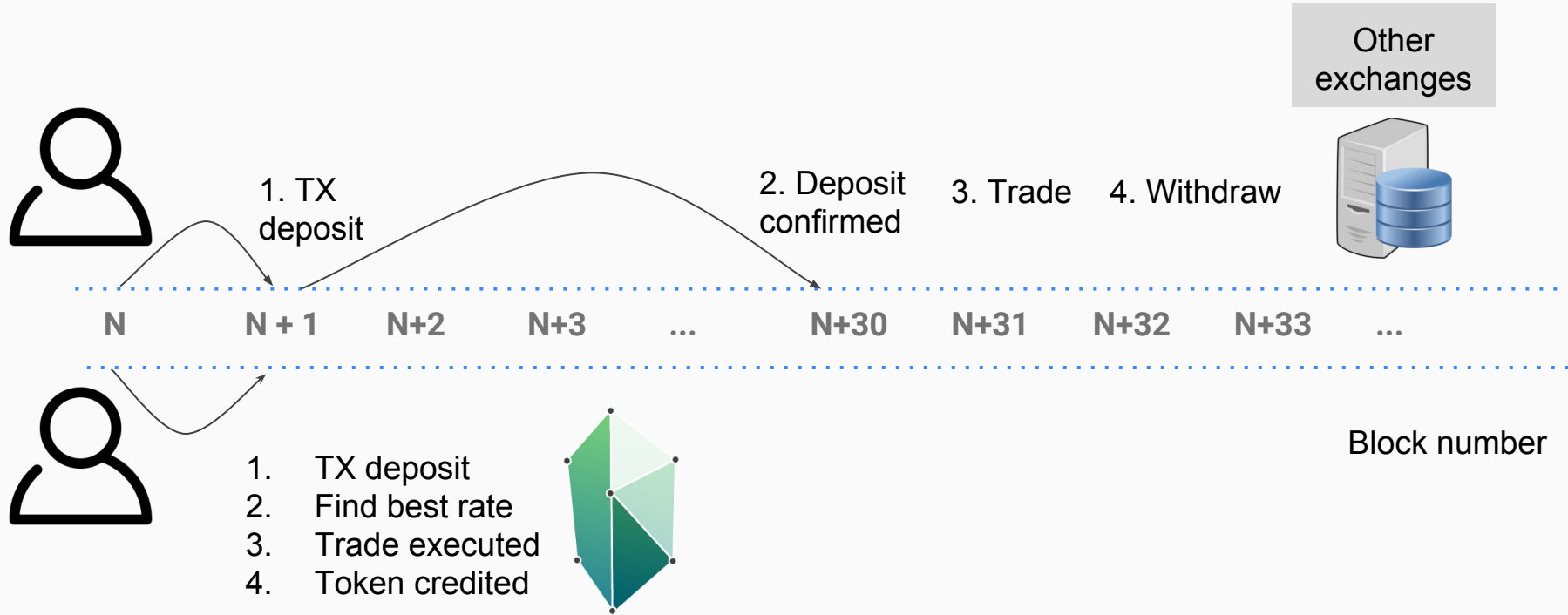
- Get market data
- Pricing strategy and Rebalancing strategy
 - Prevent depleting reserves
 - Offer competitive prices



enigma

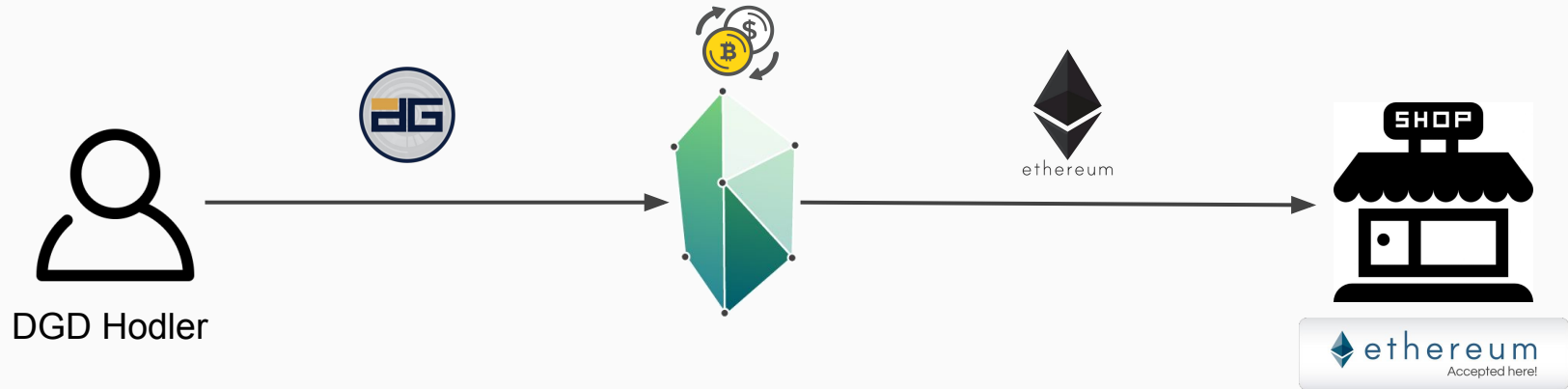
Applications of On-Chain Decentralized Exchange

Applications: Instant Exchange



Applications: Proxy Payment

- Pay to anyone in any tokens



Integration with other Dapps

- On-chain exchanges allow easy integration
 - Easy to interact with other smart contracts

BLOCKCHAIN PROJECT ECOSYSTEM

CURRENCIES

BASE LAYER PROTOCOLS



PAYMENTS



PRIVACY



DEVELOPER TOOLS

SMART CONTRACTS



SCALING



LIGHTNING NETWORK



ORACLES



SECURITY



LEGAL



INTEROPERABILITY



PRIVACY



DAGs



SOVEREIGNTY

USER-CONTROLLED



GOVERNANCE



COLONY



VPN



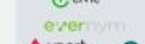
COMMUNICATION



IDENTITY



SECURITY



STABLECOINS



FINTech

TRADING/DEX



INSURANCE



LENDING

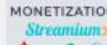


FUNDS/INVESTMENT



VALUE EXCHANGE

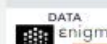
CONTENT MONETIZATION



FILE STORAGE



COMPUTATION



MESH NETWORKING



ENERGY



SOCIAL



VIDEO



NON-FUNGIBLE



SHARED DATA

INTERNET OF THINGS



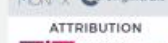
SUPPLY CHAIN/LOGISTICS



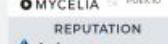
ATTRIBUTION



REPUTATION



CONTENT CURATION



AUTHENTICITY

DATA



TICKETING



GAMING/ ESPORTS



OTHER

PREDICTION MARKETS



VIRTUAL REALITY



STAKING POOLS



GAMBLING



GAMING/ ESPORTS

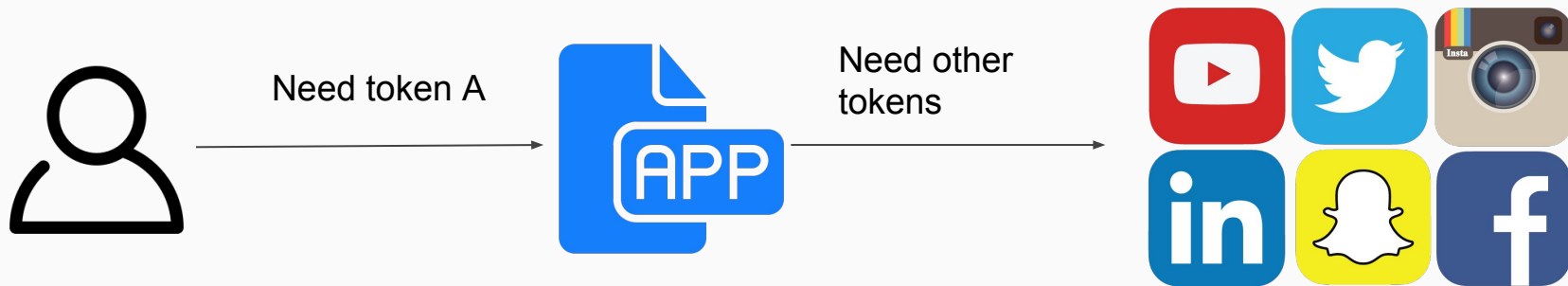


compound

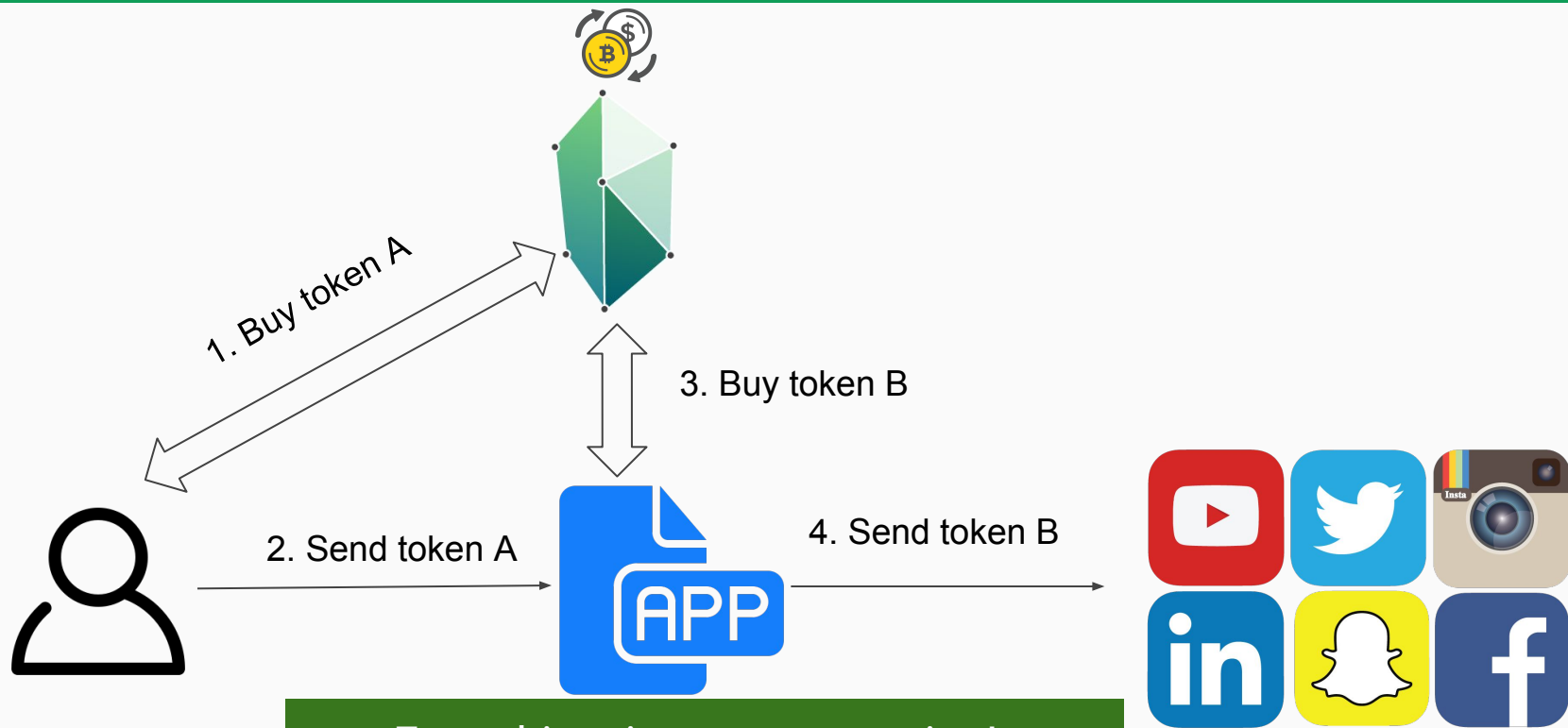
@JOSH_NUSSBAUM

Integration with other Dapps

- On-chain exchanges allow easy integration
 - Most apps require native tokens



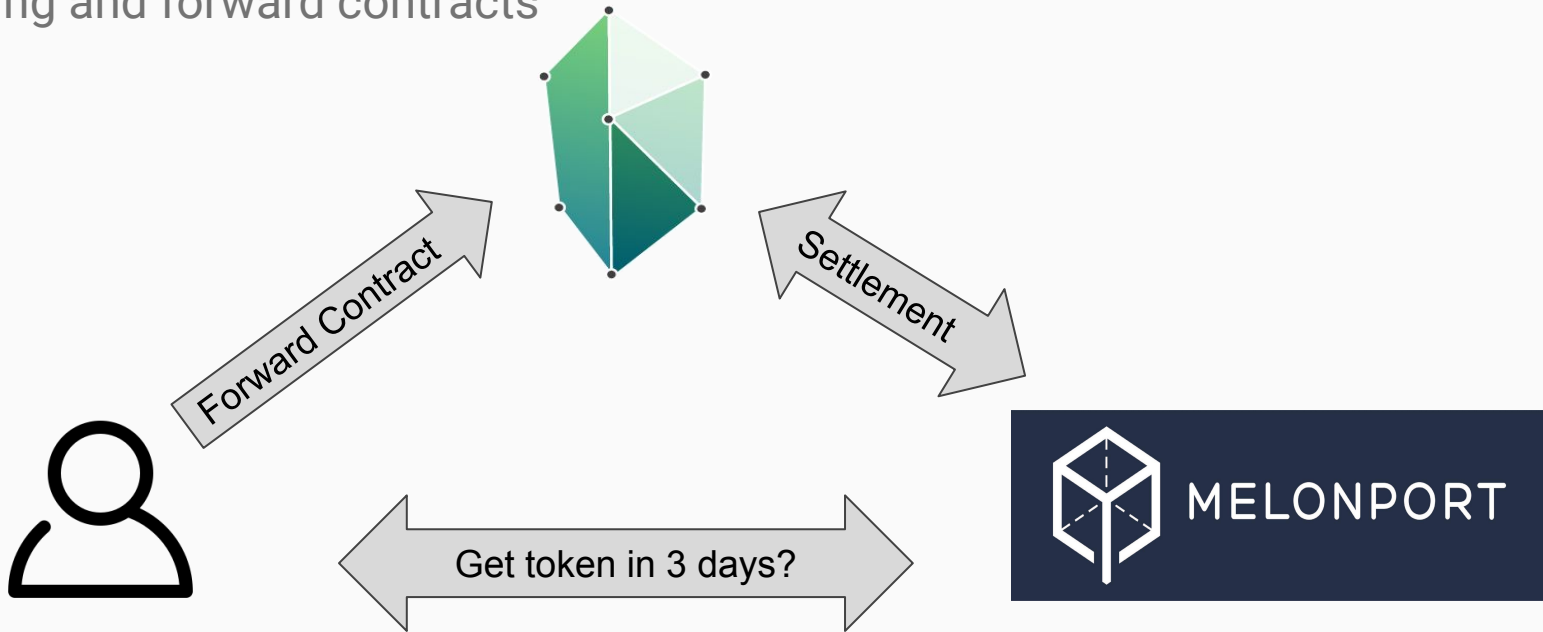
Integration with other Dapps



Everything in one transaction!

Example: Advanced Financial Instruments

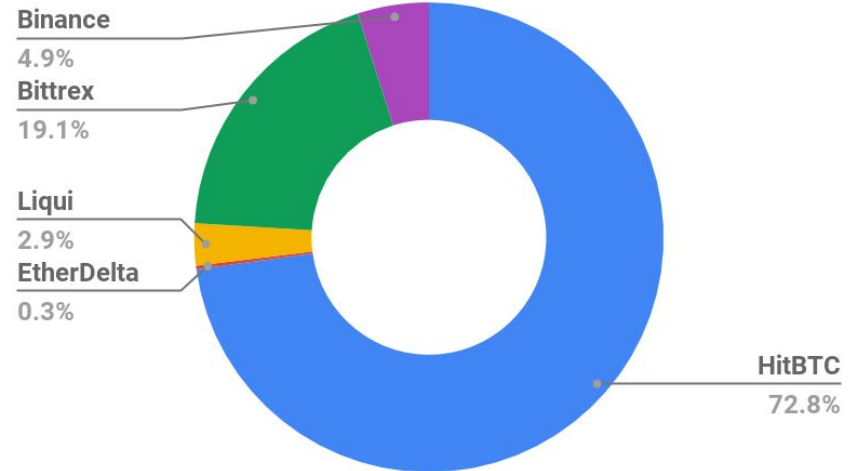
- Melonport: Decentralized fund management
- Hedging and forward contracts



Are We Done yet?

- ❖ No
 - Centralized exchanges have more than 99% of the trading volume
- ❖ Main reasons
 - Low liquidity
 - Not user friendly

SNT/ETH trading volume distribution



Source: <https://coinmarketcap.com>

Security vs Usability

	Centralized exchanges	Decentralized exchanges	Kyber Network
Trading Cost	Low	High	Low
User friendly	Yes	No	Yes
Liquidity	High	Low	High
Trustless	No	Yes	Yes
Secure Against Attacks	No	Yes	Yes

An aerial photograph of the New York City skyline at dusk. The sky is a mix of dark blue and orange, with scattered clouds. The city lights are visible, and the Empire State Building stands out prominently in the center. The word "Thanks!" is written in large, white, sans-serif font across the upper left portion of the image.

Thanks!

Slack: <http://slack.kyber.network>

Reddit: [/r/KyberNetwork](https://www.reddit.com/r/KyberNetwork)

Twitter: [@kybernetwork](https://twitter.com/kybernetwork)

Email: hello@kyber.network

Applications: Seamless Proxy Payment

