



# Lykke

Online Briefing Session

## Session Agenda:

- What is Lykke?
- Lykke Architecture Overview
- Lykke Design Competition Rules



Richard Olsen,  
Founder & Mayor



Sergey Ivliev,  
Founding Citizen

## What is Lykke?



Lykke is a movement to build a global marketplace, where all assets and instruments can be traded.

We start with FX. The marketplace uses the distributed ledger technology pioneered by Bitcoin and offers immediate settlement and delivery.

The Lykke goal is to provide everyone around the globe direct access to the marketplace.

## What is Lykke City?

Lykke is crowd based at all levels with citizens from around the world that contribute.

Lykke Citizens are able to:

- Form teams/DAOs
- Trade Lykke coins
- Edit Lykke Wiki
- Initiate projects
- Participate in the projects
- Vote for the projects
- Take open positions



## Color coins issuance

**Alice:**

Opens account in AAA Bank  
Wants to trade CC products  
Cash in 1000k USD

**Bank AAA:**

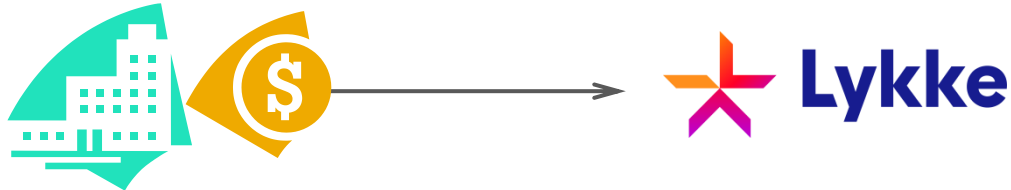
Freezes 1000k USD on Alice's account  
Issues 1000k USD 'I\_Owe\_You' in a form of CC  
Transfers 1000k USD CC to Alice's AAA\_USD Wallet

May provide leverage, e.g. 3:1

Transfers 3000k CC to Alice's AAA\_USD Margin Wallet

## Color coins register on Lykke

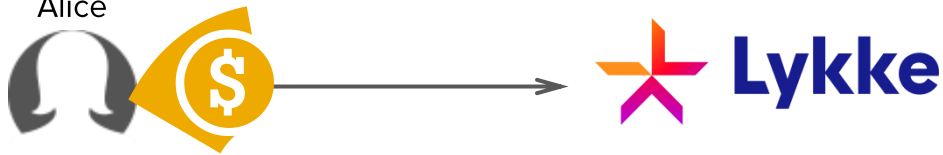
Bank AAA



**Bank AAA:**

Registers AAA\_USD CC Issuance on Lykke

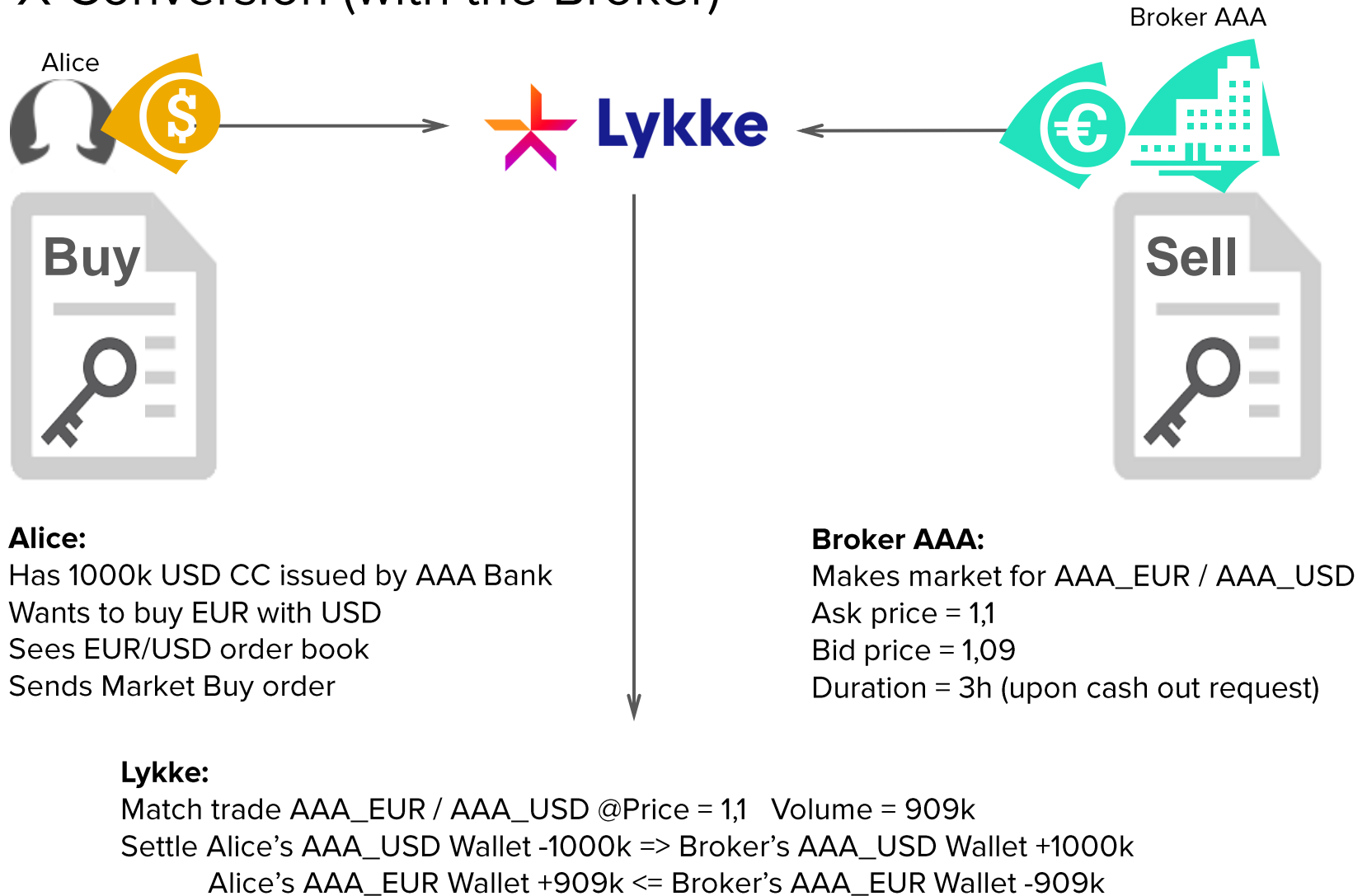
Alice



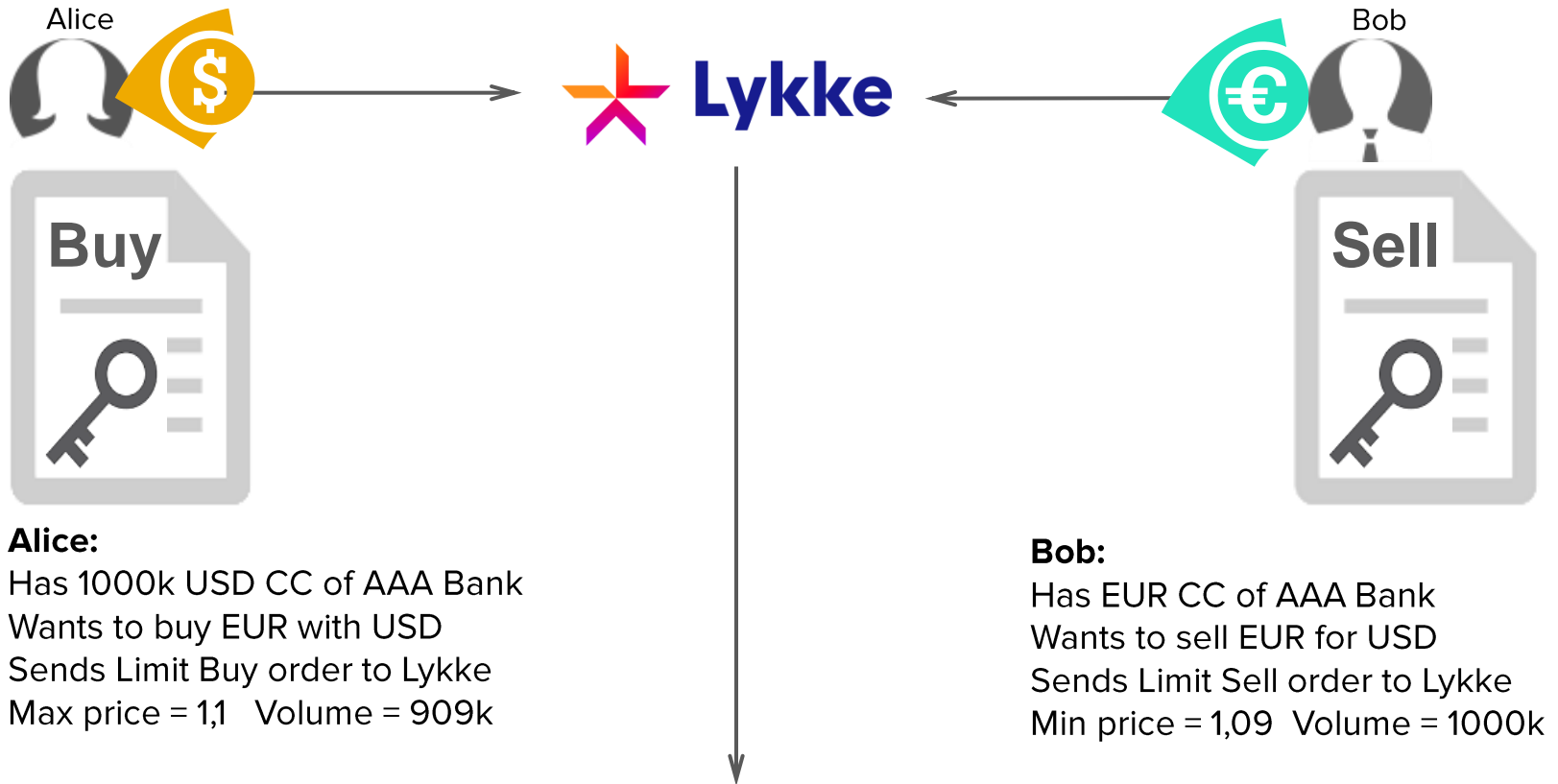
**Alice:**

Registers her AAA\_USD Wallets on Lykke

## FX Conversion (with the Broker)



## FX Conversion (P2P)



### Alice:

Has 1000k USD CC of AAA Bank  
Wants to buy EUR with USD  
Sends Limit Buy order to Lykke  
Max price = 1,1 Volume = 909k

### Bob:

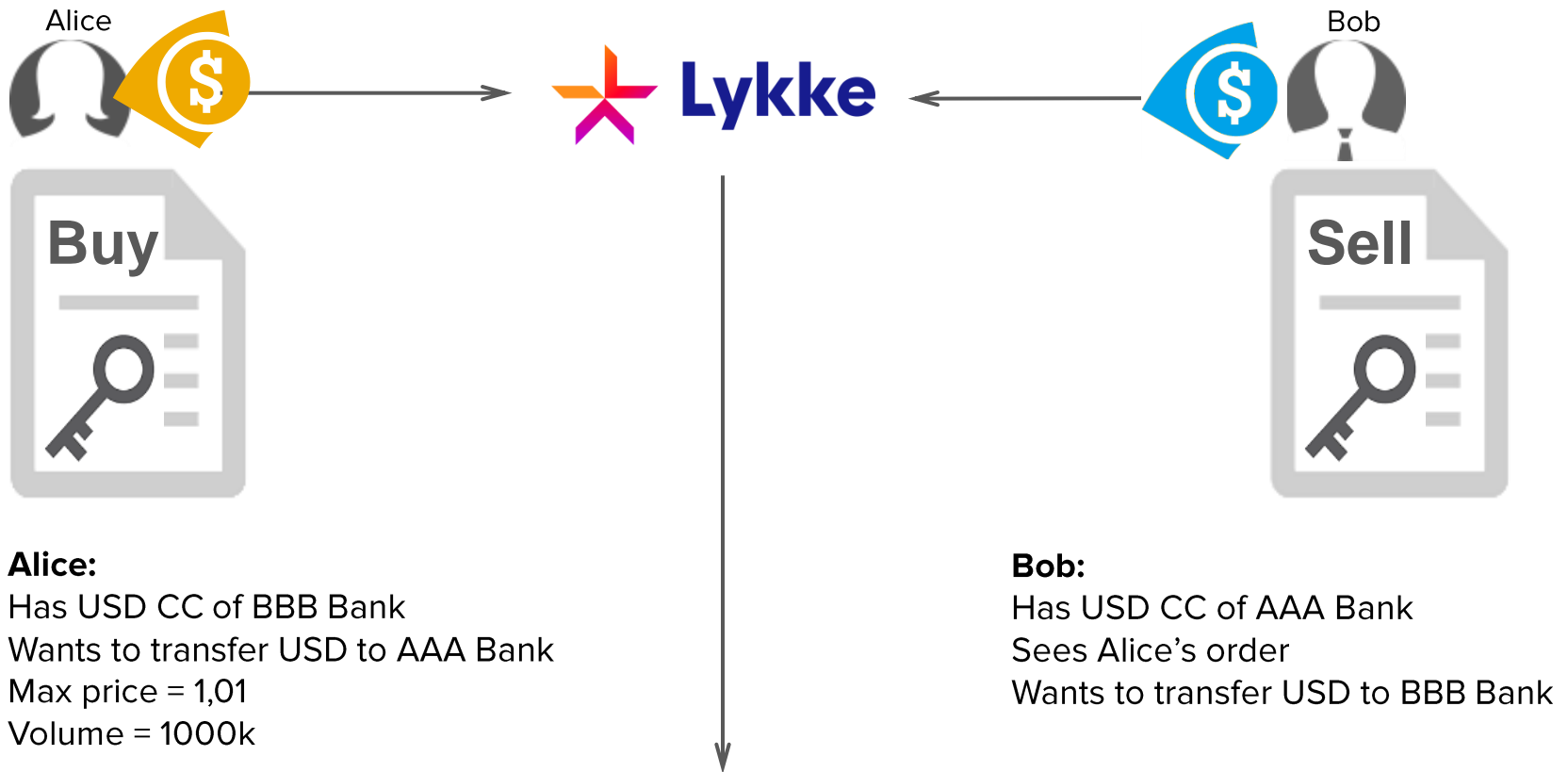
Has EUR CC of AAA Bank  
Wants to sell EUR for USD  
Sends Limit Sell order to Lykke  
Min price = 1,09 Volume = 1000k

### Lykke:

Match trade AAA\_EUR / AAA\_USD @Price = 1,1 Volume = 909k  
Settle Alice's AAA\_USD Wallet -1000k => Bob's AAA\_USD Wallet +1000k  
Alice's AAA\_EUR Wallet +909k <= Bob's AAA\_EUR Wallet -909k



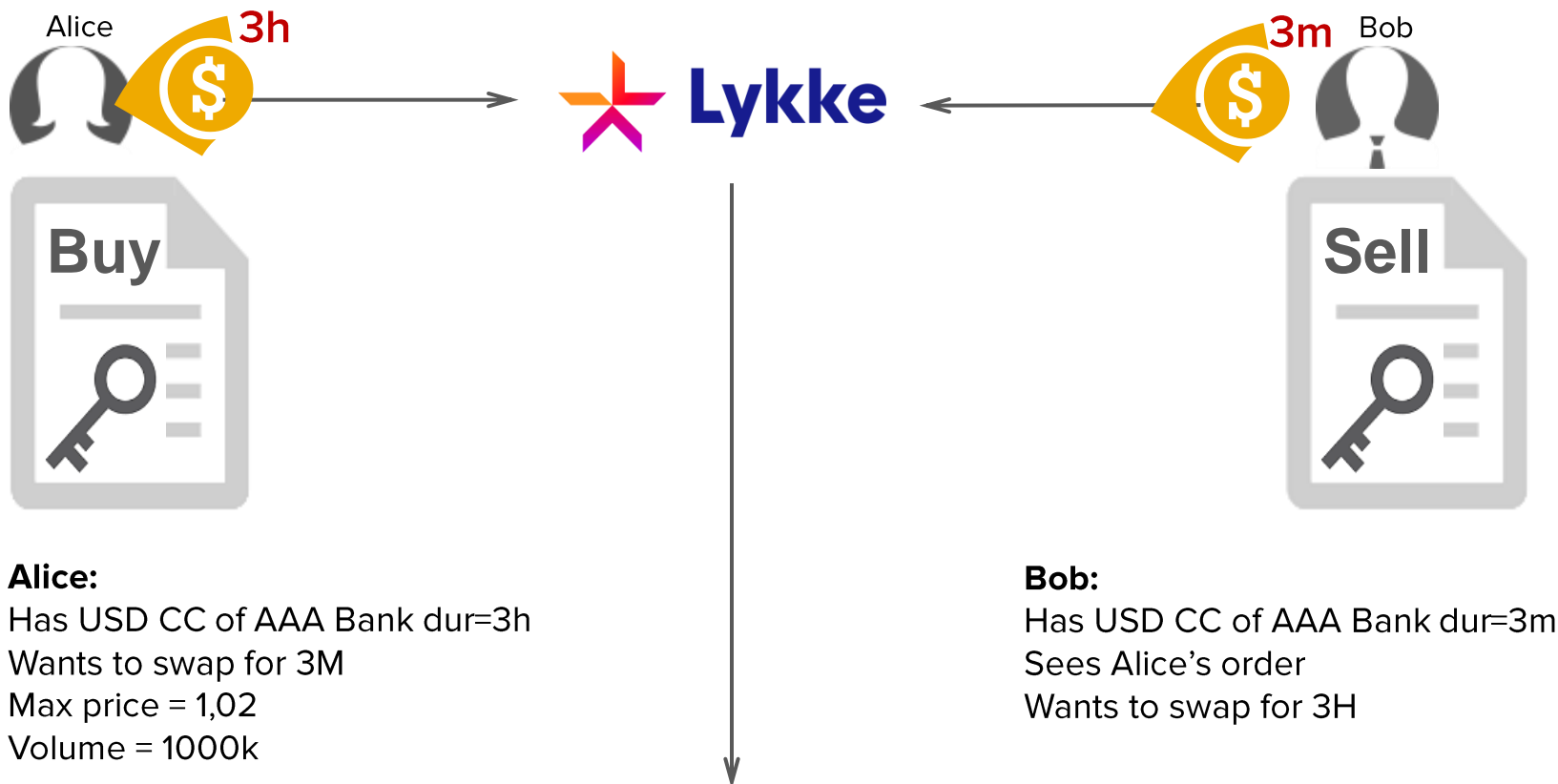
## Interbank Transfer



### Lykke:

Match trade AAA\_USD / BBB\_USD @Price = 1,01 Volume = 1000k  
Settle Alice's BBB\_USD Wallet -1000k => Bob's BBB\_USD Wallet +1000k  
Alice's AAA\_USD Wallet +990k <= Bob's AAA\_USD Wallet -990k

## Money market



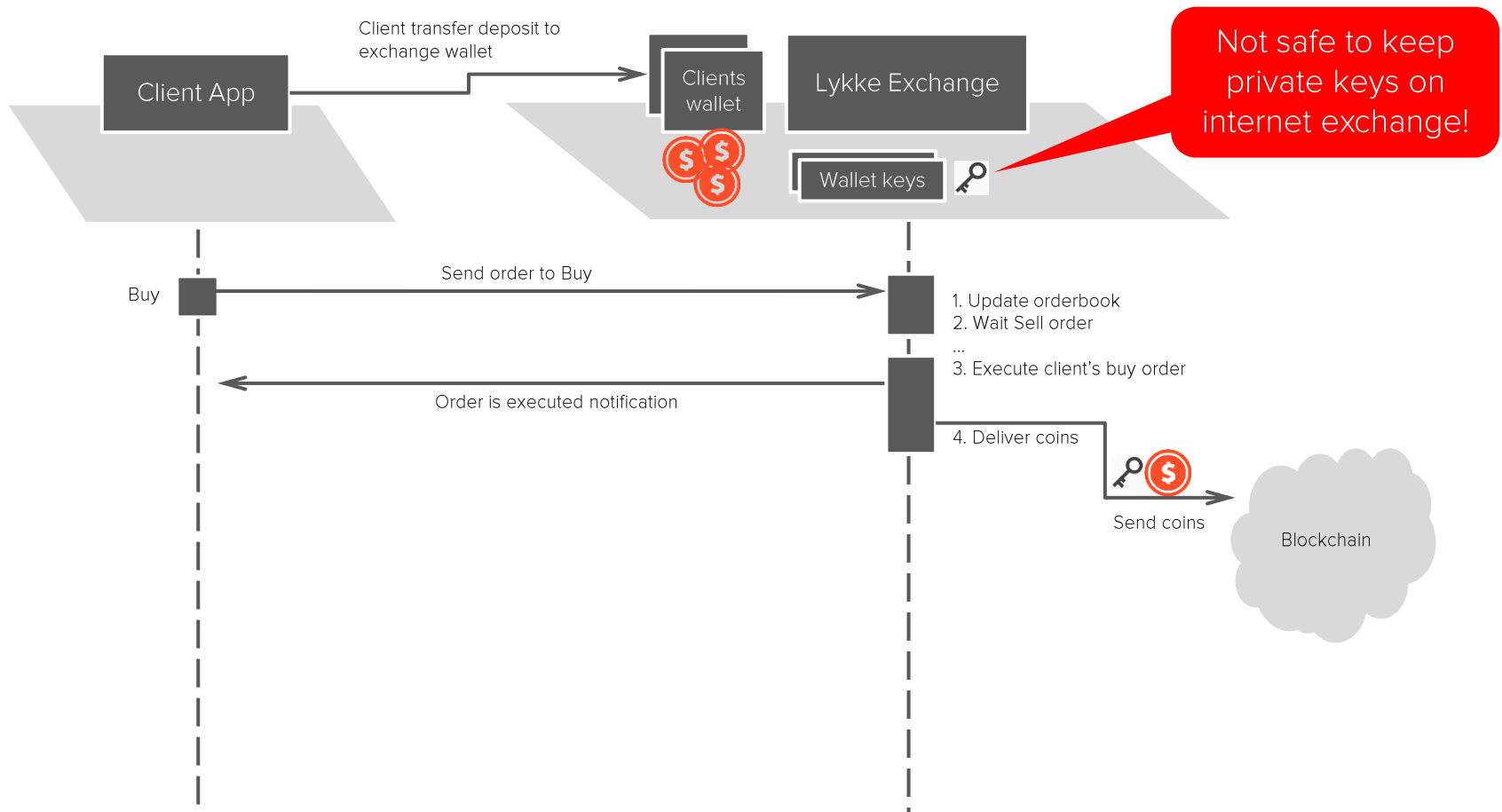
**Lykke:**

Match trade AAA\_USD\_3M / AAA\_USD\_3H @Price = 1,02 Volume = 1000k

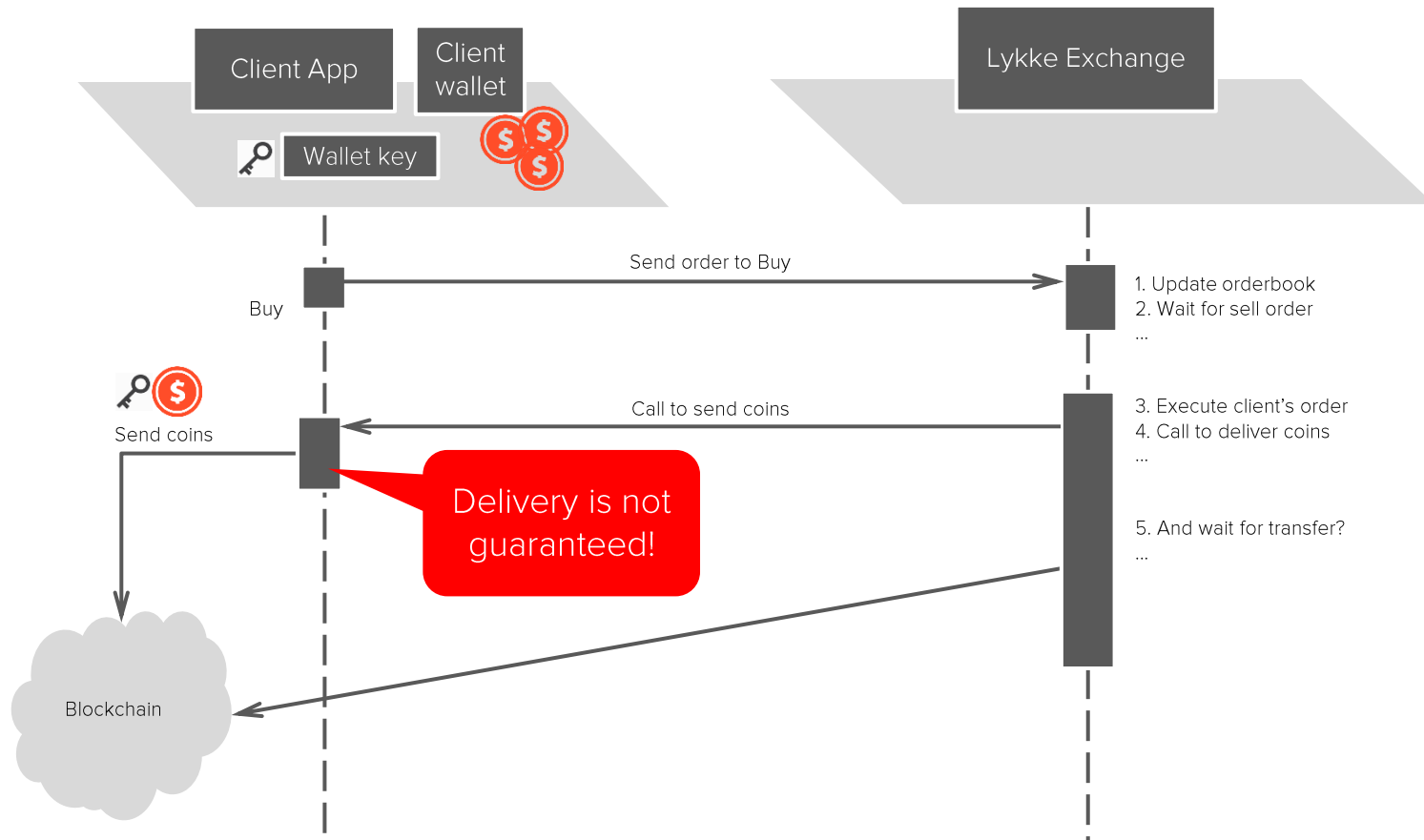
Settle Alice's AAA\_USD\_3H Wallet -1000k => Bob's AAA\_USD\_3H Wallet +1000k

Alice's AAA\_USD\_3M Wallet +1020k <= Bob's AAA\_USD\_3M Wallet -1020k

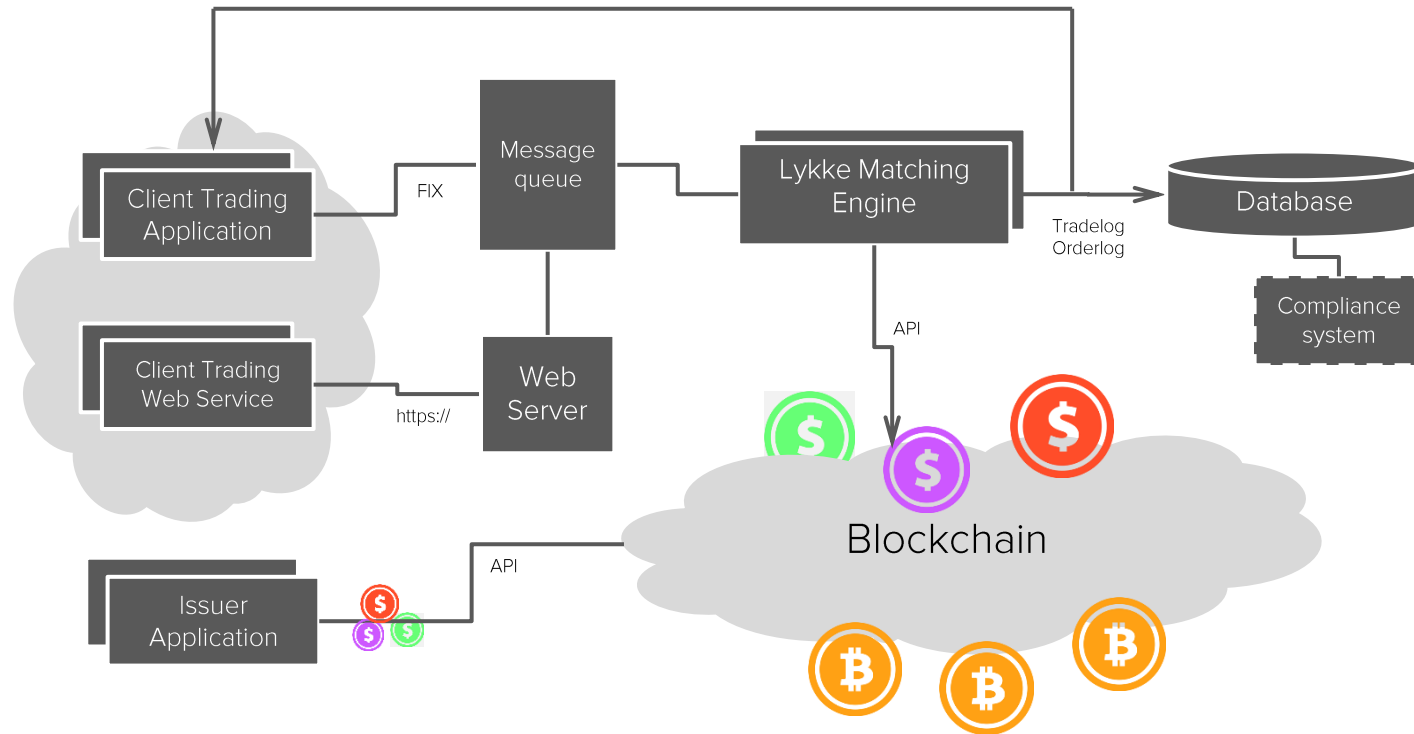
## How it should not be?



## How it should not be?



## Sample technical architecture



- High-throughput (max 100k tr/sec) AND Immediate settlement (<15 min)
- Direct ownership AND Guaranteed delivery

[https://wiki.lykkex.com/colored\\_coin\\_exchange\\_white\\_paper](https://wiki.lykkex.com/colored_coin_exchange_white_paper)

## Business requirements

### Prime broker (issuer) functions

- Issue assets (colored coins, CC)
- Open client account
- Destruct issued CC
- Provide credit (margin trading)
- Handle margin call
- Cash out request

### Client functions

- Open an account with prime broker
- Deposit coins (provided by the broker)
- View trade log
- View order book
- Send limit order
- Send market order
- Cancel order
- Withdraw from the account
- Close account

### Exchange functions

- Register issuer
- Register asset (CC)
- Open client's account
- Open trading for a pair of assets
- Manage trading parameters (e.g. tick size, minimum quote life, risk management parameters)
- Process orders placement and cancellations
- Dynamic reordering of orders (Price-Spread-Time Priority)
- Match orders and execute trades
- Notify clients of their trades
- Deliver assets
- Order book display
- Close client account

## Technical requirements

### **Safety and privacy requirements**

- Use decentralized ledger to record the executions and store the register of transactions
- Ensure privacy of transactions
- Guarantee delivery versus payment
- Ensure safety of customer funds in a low trust environment (even if hacked)
- Ensure safety of coin issuance for prime brokers (no forfeiting possible)

### **Performance requirements**

- Ability to handle peak loads of up to 100,000 transactions per second
- Delay in the supply of public ledger up to 15 minutes

### **Resilience requirements**

- 24x7 availability
- Resiliency to attacks and hardware failures
- The minimum recovery time after a failure

<https://wiki.lykkex.com/technicalrules>

## Timeline

Stage	Period
Period 1	12:00 CET October 08, 2015 – 23:59 CET October 22, 2015
Period 2	12:00 CET October 27, 2015 – 23:59 CET November 11, 2015
Period 3	12:00 CET November 16, 2014 – 23:59 CET November 30, 2015

Stage	# of Prizes	Prize	Equivalent
Period 1	16	500'000 Lykke coins per winner	\$2000
Period 2	4	1'000'000 Lykke coins per winner	\$4000
Period 3	1	2'000'000 Lykke coins for winner	\$8000

- Open source
- Scrum development process
- Lykke coin price guarantee (1 Lykke = 0.004 USD)

<https://wiki.lykkex.com/competitionrules>



# Thanks!

Visit Lykke City <http://wiki.lykkex.com>