



Loopring Technology Limited

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# Content

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2. Vision
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# ABOUT US

**Daniel Wang** / Founder & CEO

Daniel worked as a senior software engineer and tech-lead at Google, a senior director of engineering at JD.com, and a senior director at Zhongan Insurance. He is also a cofounder of Hygene Inc. and a cofounder of Yunrang (Beijing) Information Technology Limited. He founded and operated Coinport, a cryptocurrency exchange.

Daniel's current focus includes layer-2 scalability, DEX technology, and high-performance systems.

linkedin: <https://www.linkedin.com/in/dong77>  
email: [daniel@loopring.io](mailto:daniel@loopring.io)  
location: Shanghai, China

**Jay Zhou** / COO

Jay has extensive skills and experience across online payments & financial operations with a particular focus on risk management and innovation. Prior to Jay's work in cross-border payments at PayPal, he worked in Financial Service Operations at Ernst & Young and as a member at Global Shapers Community.

Jay has been a columnist for Asian blockchain media and mentored blockchain courses at Stanford University.

email: [jay@loopring.io](mailto:jay@loopring.io)  
location: Shanghai, China

**Brecht Devos** / Chief Architect

Brecht Devos graduated from Ghent University with a masters degree in software engineering. Before joining Loopring, Brecht used to work at Graphine, a company that creates software used in video games and the VFX industry.

Brecht designed and implemented the latest Loopring protocol - Loopring 3.5, and is working on a new version with some major changes.

email: [brecht@loopring.io](mailto:brecht@loopring.io)  
location: Ghent, Belgium

**Steve Guo** / CTO

Steve has more than 15 years of project experience in Android OS architecture, Mobile Internet, Blockchain, and Zero-knowledge Proof technology.

He has been enrolled by the Special Gifted Young Class of the University of Science and Technology of China and received a PhD in computer science from the same university. He served as an R&D lead of Intel and Marvel for many years. He founded PowerMo which was later acquired by Cheetah Mobile.

email: [steve@loopring.io](mailto:steve@loopring.io)  
location: Shanghai, China

**Hoss Ma** / Chief Scientist

Hoss graduated from Shanghai Jiao Tong University with a masters degree in Computer Science, specializing in AI.

He worked at Google as a software engineer, then at Travelzen as an Engineering Director; in Ant Financial as a Regional Tech Lead for the India site. He was in charge of the system which supported billions of users and processed millions of transactions per day.

email: [hoss@loopring.io](mailto:hoss@loopring.io)  
location: Shanghai, China

**Matthew Finestone** / Business Director

Matthew graduated from McGill University with a BCom in Finance. He then went on to receive his CFA charter.

Before joining Loopring, Matthew worked at Casgrain & Company on the Institutional Fixed Income desk in sales & trading. He serves as a director at Canada's leading e-learning company, Wize.

email: [matthew@loopring.io](mailto:matthew@loopring.io)  
location: Montreal, Canada

# Team

We have 20 team members, including 3 operations and business staff, and 1 contractor. The rest are all engineers.

We have exceptional experience in smart contracts, high-performance server architecture, mobile app development, and zero-knowledge proof technology.

We have worked together for ~3 years, and have deployed and are operating the world's first and only zkRollup DEX in production, the Loopring Exchange:  
<https://loopring.io>



# Company Structure

The entity for fund raising is a BVI-registered company called Loopring Technology Limited. Currently it has 8 direct shareholders, as shown in the diagram to the right.

More information is available for potential investors upon request:  
[exchange@loopring.io](mailto:exchange@loopring.io)

Founding Engineers

Loopring Labs  
(BVI)

Loopring Project Ltd  
(Foundation, BVI)

Daniel  
Wang

Jay  
Zhou

Brecht  
Devos

Steve  
Guo

Hoss  
Ma

Matthew  
Finestone

**Loopring Technology Limited  
(Cayman)**

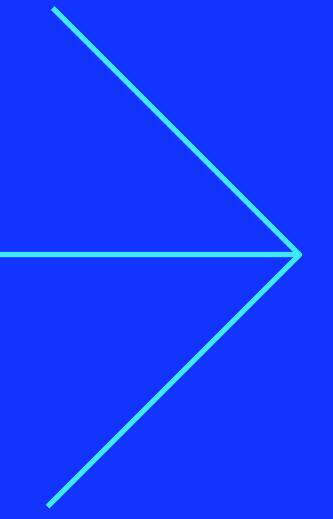


# VISION

# We Believe

- ▶ Digitization and the automation of financial functions accelerate the embrace of cryptocurrencies, tokens, and DeFi.
- ▶ Ethereum is becoming a global value settlement network.
- ▶ Layer-2 is an absolute necessity, and will soon power dapps to support tens of millions of users.
- ▶ Mobile user experience is critical for blockchain's massive adoption.

# Our Objective



Becoming the **gateway** of choice for **decentralized finance** by providing the best user experience and state-of-the-art layer-2 scaling technologies.



# PRODUCTS

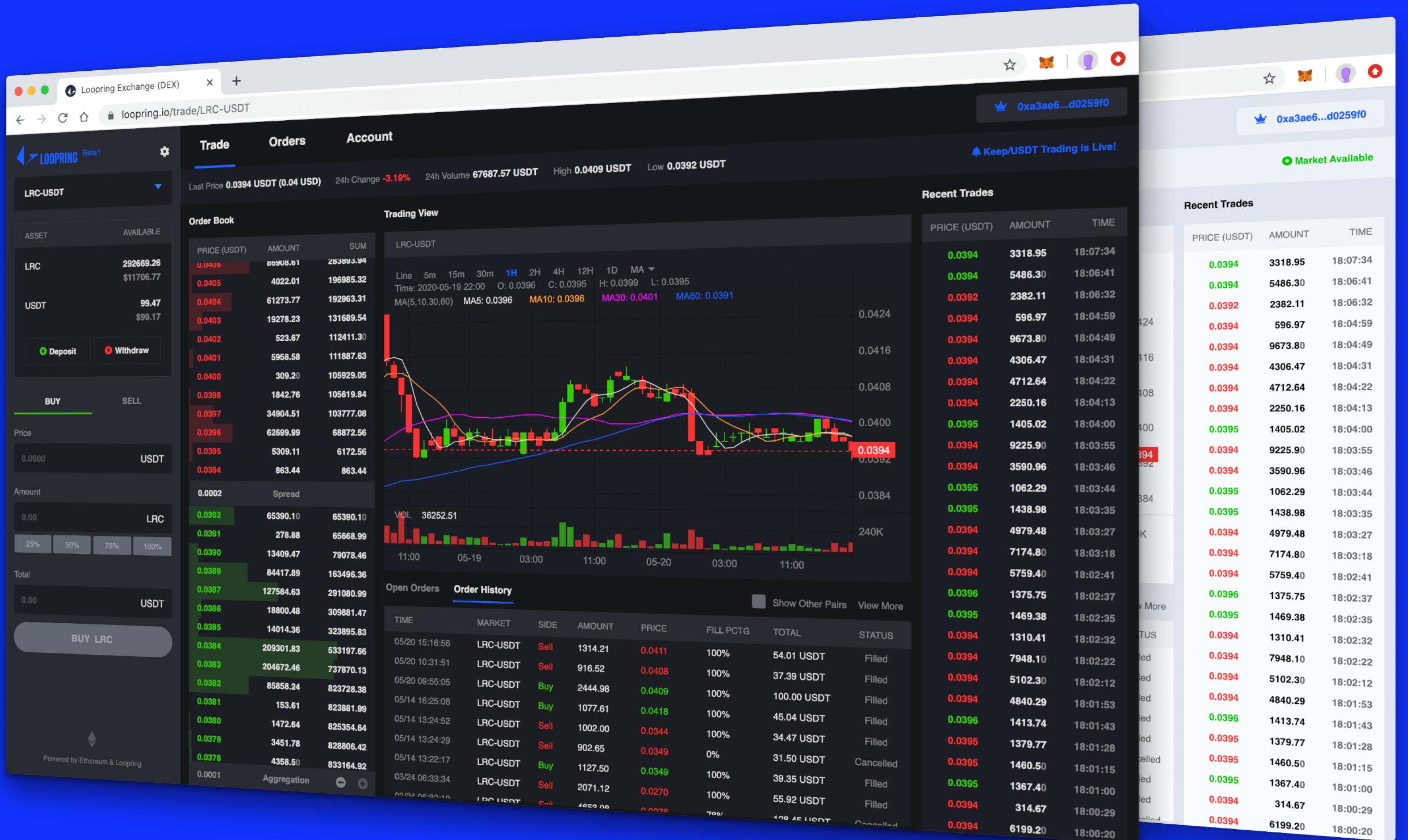
# 1. Loopring Exchange

- ▶ Supports ERC20 spot trading
- ▶ As secure as Ethereum (non-custodial)
- ▶ As anonymous as Ethereum
- ▶ No brain-passwords

Our exchange is LIVE since 2020/03:

<https://loopring.io>

We settled ~1 million trades since launch, way more than any other DEXs over the same period, and paid an order of magnitude less in settlement (gas) fees.



## 2. Relayer-as-a-Service (**RaaS**)

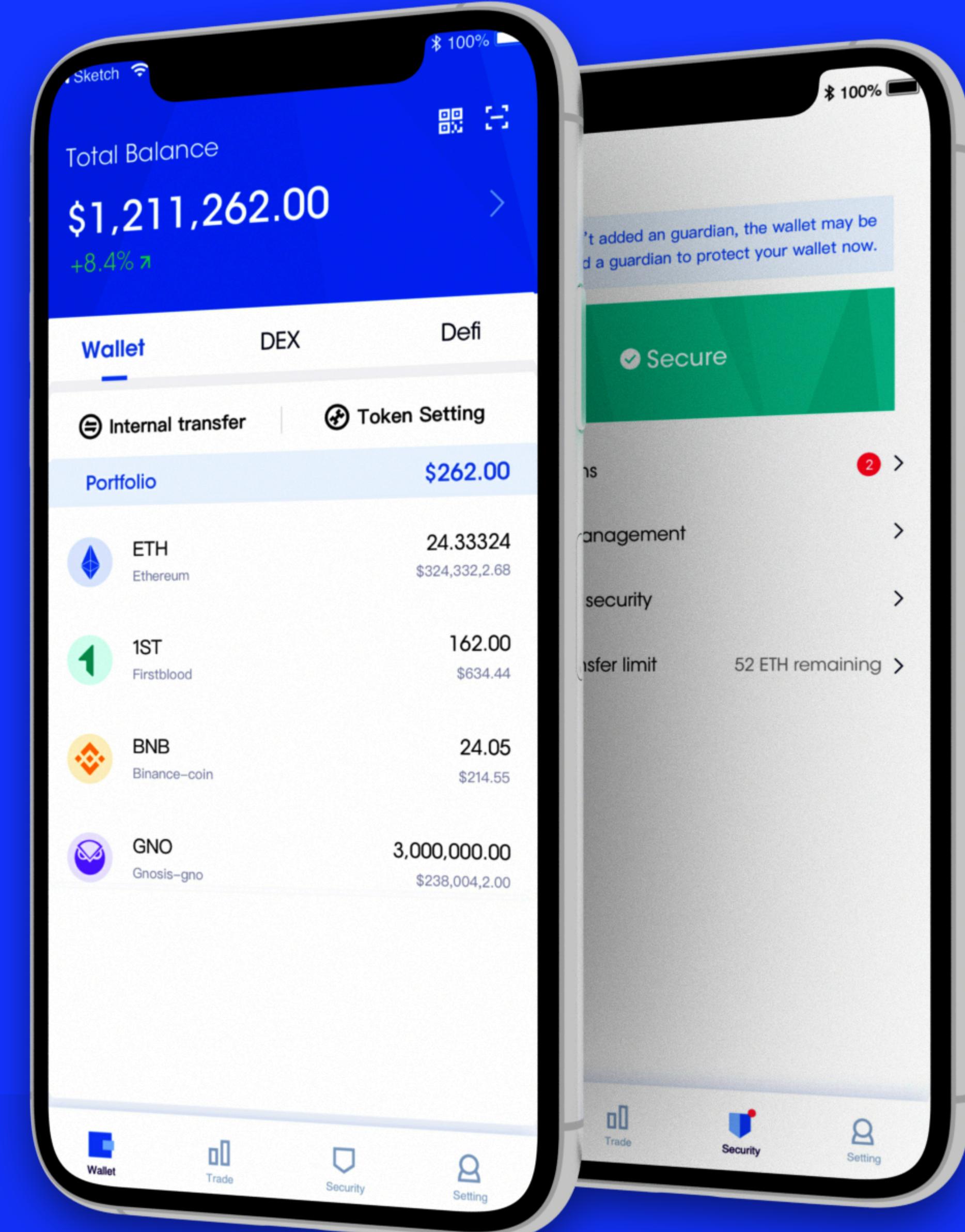
- ▶ First-ever zkRollup layer2 settlement service in the cloud for DEXs and Payment Processing
- ▶ Current throughput: 200 trades/second
- ▶ Low settlement cost: \$150/million trades
- ▶ Serving [WeDEX.io](#)



### 3. Smart Wallet **Mobile App**

Loopring Wallet is our focus and priority.

- ▶ For Ethereum with layer-1 and layer-2 DeFi/dApp integrations
- ▶ Focus on the Chinese market
- ▶ See more slides for top features



# Loopring Wallet **Mobile App** Top Features



1

## Private key/mnemonic phrase management? **Not any more.**



What are private keys?  
What are mnemonic phrases?  
What are paper wallets?  
How am I supposed to keep copies of this sensitive information?



We no longer require users to learn these concepts and terms. They only need to know who they can trust and how much they can trust them in the **real** world — a trust-based network of guardians will help them recover their wallets easily with a majority approval, aka social recovery.

Loopring Wallet  
**Mobile App**  
Top Features



2

Say goodbye to Ethereum addresses?  
**Use ENS domain names.**



“Alice, can you tell me your Ethereum address again?  
“Bob, can you confirm 0x244c270716ff9...5551f702d703 is your address please?



Loopring Wallet gives each user a unique ENS subdomain to represent his/her addresses, such as “alice.loopring.ens” and “bob.loopring.ens”. Users will rarely use addresses directly on our app. The experience is superior to the best mobile banking apps.

Loopring Wallet  
**Mobile App**  
Top Features



3

Worried about personal data leakage?  
**We collect the minimum.**

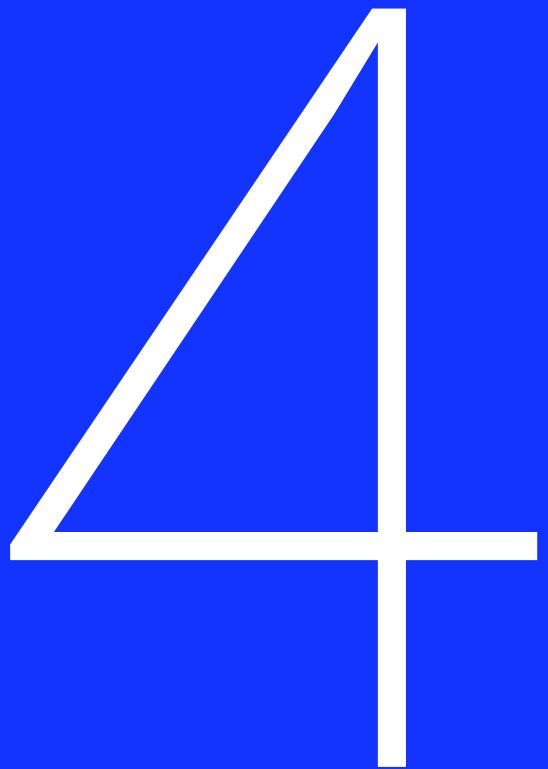


Many platforms know too much about their users: gender, names, IDs, addresses, bank accounts, income, jobs, ...



For each user, we only connect an email address or a phone number to prevent sybil attack. All users are anonymous to us and to each other. We believe anonymity is a basic human right and a critical factor for personal and asset safety.

Loopring Wallet  
**Mobile App**  
Top Features



## What if my wallet falls into the wrong hands? **Daily Quota.**

!

How can the Loopring Wallet prevent me from mistakenly sending assets to a malicious user or application?

What if my wallet is stolen and the bad guy tries to transfer all of my assets away?

✓

Each user will have a customizable daily quota. If your daily spending exceeds the quota, you'll have to ask one of your guardians to approve your transaction. The daily quota is your safety-net.

You can whitelist wallets that you have verified and trust, so they are not subject to the daily quota.

Loopring Wallet  
**Mobile App**  
Top Features



5

A large, stylized number '5' composed of a blue circle and a white outline, with a white stroke extending from the top-left corner of the circle.

## What if the rightful wallet owner passes away? **We offer built-in Inheritance**



Most people don't have a plan for such emergency situations. They don't share their DeFi and/or exchange accounts with their families. The worst case is to lose everything just because their families don't know the crypto-assets actually exist.



The wallet owner has the option to set up an heir who will automatically gain control of the wallet after a designated period starting from the latest owner activity. As long as the owner is active, he/she will maintain the ownership.

In the near future, more complicated rule-based inheritance will also be available.

Loopring Wallet  
**Mobile App**  
Top Features



6

## How can I make money using your app? **Sub-Accounts & Seemless DeFi integrations**



DeFi products are still designed for pro-users, and they introduce even more financial and complex terms.



We abstract many DeFi products as sub-accounts with fixed or variable interest rates. Investing in DeFi is as easy as moving funds between different sub-accounts, with easy to understand purposes such as 'savings'.

We integrated Loopring Exchange ([loopring.io](https://loopring.io)) into the app as a sub-account. Trading on Loopring is a better experience than centralized exchanges.

Loopring Wallet  
**Mobile App**  
Top Features



Can I send tokens easily using your wallet?  
**Definitely. Much Faster and Cheaper!**



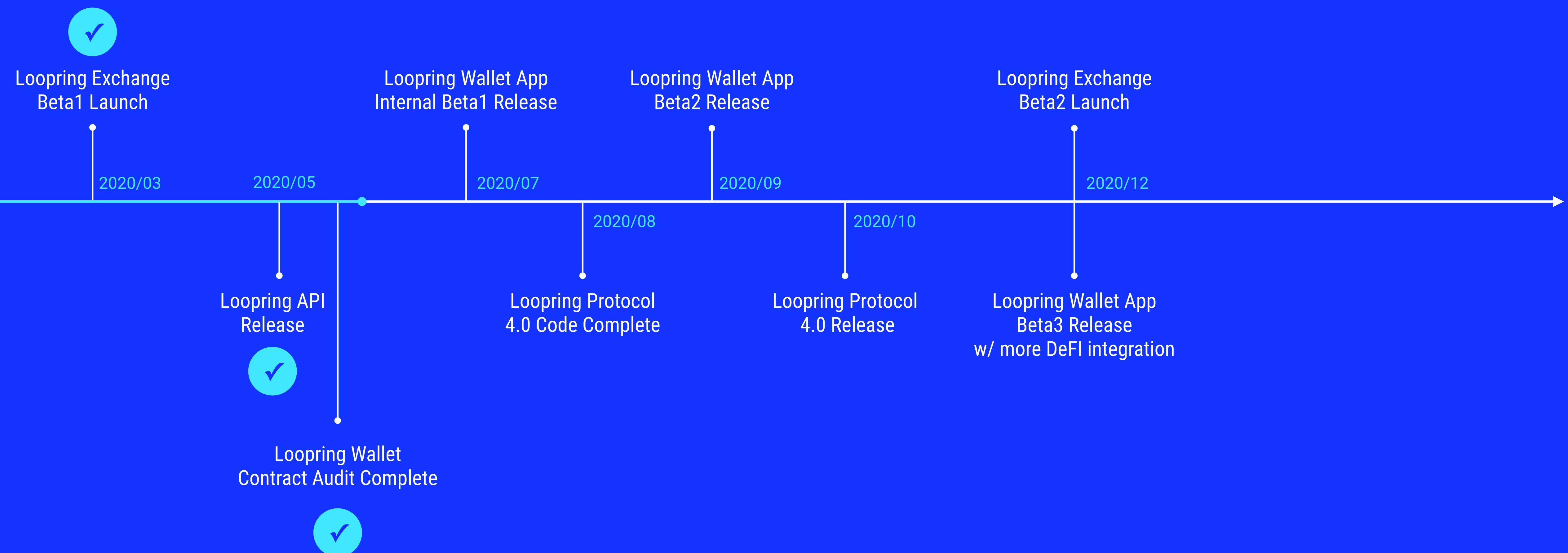
Sending Ether and tokens on Ethereum mainnet (layer-1) has been becoming slower and more expensive. This trend is irreversible and ETH2 is still years away.



Transfers and payments have immediate apparent finality. Our users never have to wait for more than a second. The fees? Close to zero.

Using Loopring Wallet app, you'll never have to worry about Ethereum network congestion. Thanks to zkRollup and the Loopring protocol.

# 2020 R&D Roadmap

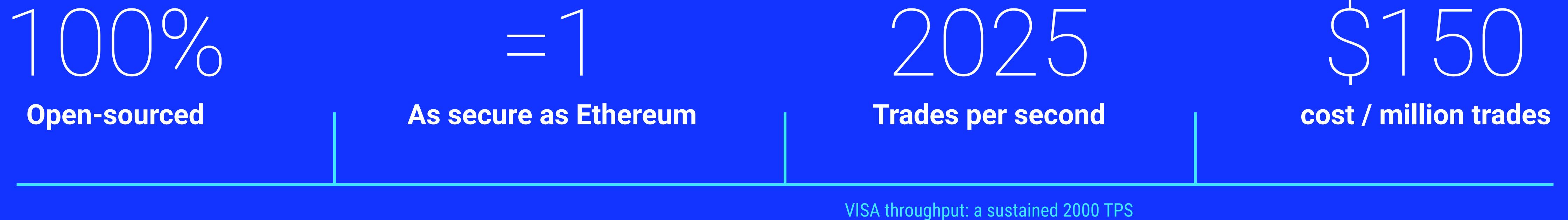




# TECHNOLOGIES

# Loopring Protocol

Compared to Layer-1 DEX solutions,  
Loopring offers 1000X throughput and reduces settlement  
cost by 800X, without any tradeoff in security.



For more information regarding the Loopring protocol,  
please visit <http://loopring.org>

# Community Endorsement

Loopring is the world's first zkRollup layer-2 scaling protocol.  
 Loopring is still the only zkRollup DEX protocol and exchange platform in production as of 2020/05.

 **vitalik.eth**  @VitalikButerin

Things Ethereum has in 2020 that it did not in 2017:

- \* Uniswap
- \* [Tornado.cash](#)
- \* Status
- \* MakerDAO
- \* ZK Rollups (eg. Loopring), >2k TPS capacity
- \* PoS testnets
- \* Uncle rates < 10% with 10m gas blocks
- \* Gitcoin grants

 **vitalik.eth**  @VitalikButerin

Rollups (both the ZK and optimistic family) exist and continue to make great progress. While sharding is still coming along fast, we do NOT depend on sharding to achieve 1000+ on-chain TPS.

And in eth2, the scaling gains of sharding and rollups \*multiply\*.

 **vitalik.eth**  @VitalikButerin

Decentralization is not necessarily anti-regulator. Building your application in a way that does not let you steal or cheat (eg. non-custodial exchanges like [@StarkWareLtd](#) [@loopringorg](#)) reduces risks, which is something many regulators \*want\*.

 **vitalik.eth**  @VitalikButerin

Replies to [@USD4BTC](#)

Rollups exist and are on mainnet.

[loopring.io](#)

 **vitalik.eth**  @VitalikButerin

7/ Yes, it really sucks that the gas prices are currently high (especially when it's caused by scams/ponzis) but it's good to remember that it's temporary.

There are smart people working on scaling solutions every day with some already live ([@loopringorg](#) & [@synthetix\\_io](#) demo).

 **Alex G**  @gluk64

Congrats [@loopringorg](#) team! Excited to see the first zkRollup going to production.

Meanwhile, [@the\\_matter\\_labs](#) is working on getting the newer proof systems (universal/transparent setup) ready for live deployment.

 **vitalik.eth**  @VitalikButerin

For the last week ethereum tx fee revenue has exceeded most estimates of what PoS validator rewards will be.

Rollups+sharding are coming ([@loopringorg](#) zk rollup already on mainnet!) to increase capacity, but even today this is an important milestone for economic sustainability.

 **Anthony Sassano | sassal.eth**  @sassal0x

7/ Yes, it really sucks that the gas prices are currently high (especially when it's caused by scams/ponzis) but it's good to remember that it's temporary.

There are smart people working on scaling solutions every day with some already live ([@loopringorg](#) & [@synthetix\\_io](#) demo).

 **Ali Atia**  @aliatiia\_

First ZK-Rollup L2 in the wild. dApp-specific ZKR interesting because: (1) instant L2 confirmation, good UX (2) near instant L1-grade irreversible finality = time to generate validity proof by ZKR operator + time to getting mined on L1.

Done and done.

 **DeFi Dad - defidad.eth**  @DeFi\_Dad

Replies to [@DeFi\\_Dad](#) [@craiglashmet](#) and 5 others

However, for trading with margin, I use:

-  [@dydxprotocol](#)
-  [@ddexio2018](#)

For lightning fast trades, the feel of Binance or CB Pro, I prefer [@loopringorg](#).

9:44 PM · Apr 4, 2020 · Twitter for iPhone

 **ChainLinkGod.eth**  @ChainLinkGod

Replies to [@paul\\_btc](#)

[@loopringorg](#) offers 2025 TPS for DEXs using their protocol which leverages zkRollups so it has the same asset security as Ethereum itself

 **KAMESCG.ETH**  @KamesCG

The future is here.

[@loopringorg](#) is a game changer.

Check it out. Seriously.

Decentralized exchanges will never be the same again.

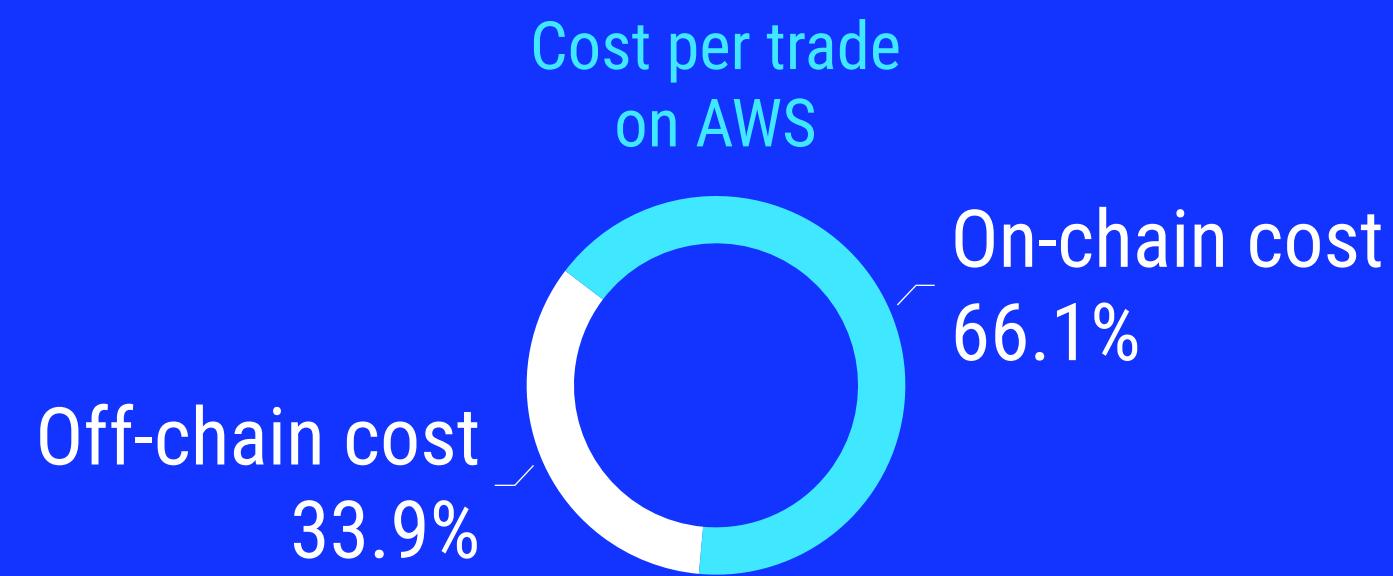
So excited for 2020. Amazing things happen you build great products on top of complex protocols.

# zkSNARK Prover Optimizations

We optimized the groth16 prover in libsnark/ethsnarks and reduced Loopring's total settlement cost to \$0.000124 per trade or \$124 per 1,000,000 trades\*. The prover cost is now just \$0.000042 per trade or \$42 per 1,000,000 trades, a 15x improvement compared to our previous proving costs.

With our optimization, consumer level hardware (\$1000) can prove 20 transfers/second or 10 trades/second.

This means Loopring can achieve greater than Visa's 2000 TPS throughput today by



- ▶ Investing \$100,000 in hardware cost for zkSNARK prover.
- ▶ Bidding 50% of today's total Ethereum throughput.

\* Assuming ETH price is \$220 and gas price is 1GWei. For more information, please visit <https://medium.com/loopring-protocol/zksnark-prover-optimizations-3e9a3e5578c0>

# Recent Media Coverage

Loopring has received very positive feedback from the Ethereum community and has been covered by several blockchain media.



- ▶ <https://epicenter.tv/episodes/340>
- ▶ <https://defipulse.com/blog/defi-dive-loopring/>
- ▶ <https://www.youtube.com/watch?v=edZPUeoCFCK>
- ▶ <https://thedefiant.substack.com/p/decentralized-money-shouldnt-be-traded-f6a>
- ▶ <https://mp.weixin.qq.com/s/TUQNTzeP0Gi3LK3NtdSbHQ>

We also proactively publish tech & product updates at:  
<https://loopring.org/#/blog>

# Smart Wallet Tech-Stack

Work in Progress

## Mobile App

- ▶ We focus on mobile experience to access a much larger potential user base.

Code-Complete  
Being Audited

## Smart Wallet (Contracts)

- ▶ Our app speaks the same language as our non-technical users, on-boarding is easier than ever.
- ▶ We use a trust-based social network to secure crypto assets (social recovery), no more private-keys, mnemonic phrases, or keystore files.
- ▶ Investment is just a few taps away with our seamless layer-1 and layer-2 DeFi/Exchange integrations.



## Non-Custodial

- ▶ We do not take custody of user assets to minimize risks, liability, and massively reduce operational cost.
- ▶ Being non-custodial also makes our service regulator-friendly.



## High-throughput DEX & Payment

- ▶ We have targeted and solved the most fundamental technical challenges in the blockchain sector.
- ▶ Exchange and payment will become a goldmine once our product is polished to offer superb user experience.

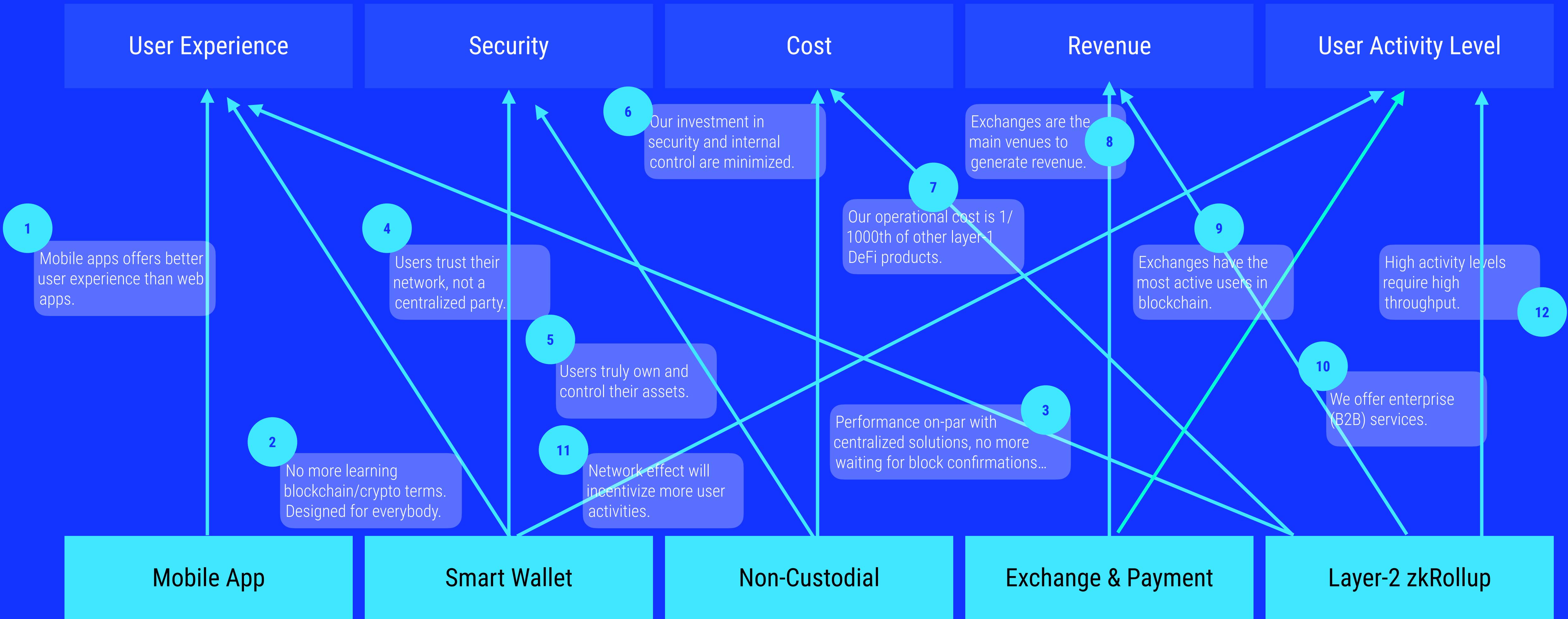


## Layer-2 Scaling With zkRollup

- ▶ Loopring is World's first and still the only in-production zkRollup spot-exchange and payment protocol.
- ▶ Loopring (open-sourced) and our relayer (close-sourced) offer high-throughput and low cost spot trading and p2p transfer experience. Our trading/transfer throughput is 1000x greater and fees can be as low as 0.01% compared to solutions on layer-1.

# Problems and Solutions

The following problems have to be addressed before a wallet can be widely adopted and profitable.





# PROFITABILITY

# Trading Fees and Protocol Fees

For every trade, the Loopring protocol charges the taker order a 0.06% fee as the [protocol fee](#). Those who staked LRC will receive the protocol fees proportionally. If we stake  $\frac{2}{3}$  of our LRC holding (15% of LRC's total supply), and assume 40% of LRC total supply are staked by holders, we will receive  $25\% = 15\% * \frac{2}{3} / 40\%$  of all the protocol fees contributed by all Loopring-powered exchanges.

In addition, our exchange charges taker orders additional 0.04% as trading fees. This can be configured higher after attracting an initial user mass.

## What if we become 1% of Binance?

Binance's reported spot trading volume is roughly \$7.5B per day. If our daily spot trading volume reaches 1% of Binance, our yearly fee revenue will be:

$$(\$7.5B * 0.06\% * 25\% + \$7.5B * 0.04\%) * 365 * 1\% =$$

**\$15M**

There are also other fees we charge, including deposit, fees, password-reset fees, and withdrawal fees.

# Layer-2 Transfer Fees

According to [Messari](#), starting from April 2020, Ethereum has transferred over [\\$1.5B dollars](#) of value on a daily basis, contributed mostly by USD stablecoins such as USDT and USDC.

On the other hand, Ethereum's gas price has been rising and is expected to be even higher. Layer-1 transfers are already slow and expensive, especially for micro payments.

**32** | FAST < 2m  
\$0.132 / Transfer

**28** | STANDARD < 5m  
\$0.116 / Transfer

**26** | SAFE LOW < 30m  
\$0.108 / Transfer

Ethereum's gas price on 05/22/2020  
<https://ethgasstation.info>

Loopring's solution costs only [\\$50-75](#) per million transfers, a [1500X](#) reduction.

We believe a steady revenue source from transfer/  
payment processing fees is certain.

# Relayer as a Service (RaaS)

Loopring's relayer is close-sourced, proprietary software. We host cloud-based relayer clusters to provide backend service to DEX and payment processing clients. This is the most advanced exchange backend on the market.

We have been serving [WeDEX.io](#) since March.

We charge clients the following 3 types of fees:

## #1 Retainer Fee

A fixed amount of fee paid on a monthly basis, this is regardless of the actual trading volume.

## #2 Trading Fee Share

We take a percentage of our client's entire trading fees.

## #3 Special Handling Fees

We also charge fees for special technical support, such as DEX upgrade, shutdown processing.

# Deposit Interest Sharing

Loopring does not take custody of any user assets, but provides an option to manage user deposits in a decentralized & trustless way.

We plan to integrate with layer-1 DeFi apps to earn interest for users.  
We'll get a percentage of the interest earned in return.\*

Assume an annual return of merely 1% and we take 25%  
as fee, our annual Deposit Interest earnings will be

0.25% \* DEPOSITS

\* Note that we may have to provide certain capital to offer some type of insurance for DeFi integrations. DeFi apps are not risk free.

## and More ...

When our wallet acquires a large user base and builds an irreplaceable trust-based guardian network, the sky is the limit!



# FUNDRAISING

# Important Patents

PTO/AIA/14 (11-15)  
Approved for use through 04/30/2017. OMB 0651-0332  
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE  
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

<b>Application Data Sheet 37 CFR 1.76</b>	Attorney Docket Number	LRP-8001US01																														
Application Number																																
Title of Invention METHODS AND SYSTEMS FOR DIGITAL ASSET TRANSACTION																																
<small>The application data sheet is part of the provisional or nonprovisional application for which it is being submitted. The following form contains the bibliographic data arranged in a format specified by the United States Patent and Trademark Office as outlined in 37 CFR 1.76. This document may be completed electronically and submitted to the Office in electronic format using the Electronic Filing System (EFS) or the document may be printed and included in a paper filed application.</small>																																
<b>Secrecy Order 37 CFR 5.2:</b>																																
<input type="checkbox"/> Portions or all of the application associated with this Application Data Sheet may fall under a Secrecy Order pursuant to 37 CFR 5.2 (Paper filers only. Applications that fall under Secrecy Order may not be filed electronically.)																																
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<table border="1"> <tr> <td>Inventor 1</td> <td>Remove</td> </tr> <tr> <td colspan="2">Legal Name</td> </tr> <tr> <td>Prefix</td> <td>Given Name</td> <td>Middle Name</td> <td>Family Name</td> <td>Suffix</td> </tr> <tr> <td>[ ]</td> <td>Dong</td> <td></td> <td>Wang</td> <td>[ ]</td> </tr> <tr> <td colspan="5">Residence Information (Select One)</td> </tr> <tr> <td colspan="5"> <input checked="" type="radio"/> US Residency    <input type="radio"/> Non US Residency    <input type="radio"/> Active US Military Service         </td> </tr> <tr> <td>City</td> <td>Fremont</td> <td>State/Province</td> <td>CA</td> <td>Country of Residence</td> <td>US</td> </tr> </table>			Inventor 1	Remove	Legal Name		Prefix	Given Name	Middle Name	Family Name	Suffix	[ ]	Dong		Wang	[ ]	Residence Information (Select One)					<input checked="" type="radio"/> US Residency <input type="radio"/> Non US Residency <input type="radio"/> Active US Military Service					City	Fremont	State/Province	CA	Country of Residence	US
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<b>Application Data Sheet 37 CFR 1.76</b>	Attorney Docket Number	LRP-8002US01																														
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Title of Invention METHODS FOR PREVENTING FRONT RUNNING IN DIGITAL ASSET TRANSACTIONS																																
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<b>Secrecy Order 37 CFR 5.2:</b>																																
<input type="checkbox"/> Portions or all of the application associated with this Application Data Sheet may fall under a Secrecy Order pursuant to 37 CFR 5.2 (Paper filers only. Applications that fall under Secrecy Order may not be filed electronically.)																																
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EFIS Web 2.2.12

## Ring Matching

LRP-8001US01, pending

Ring-style order matching will discover better trading prices and reduce price slippage.

## Dual Authoring

LRP-8002US01, pending

A powerful way to prevent front-running in DEX.

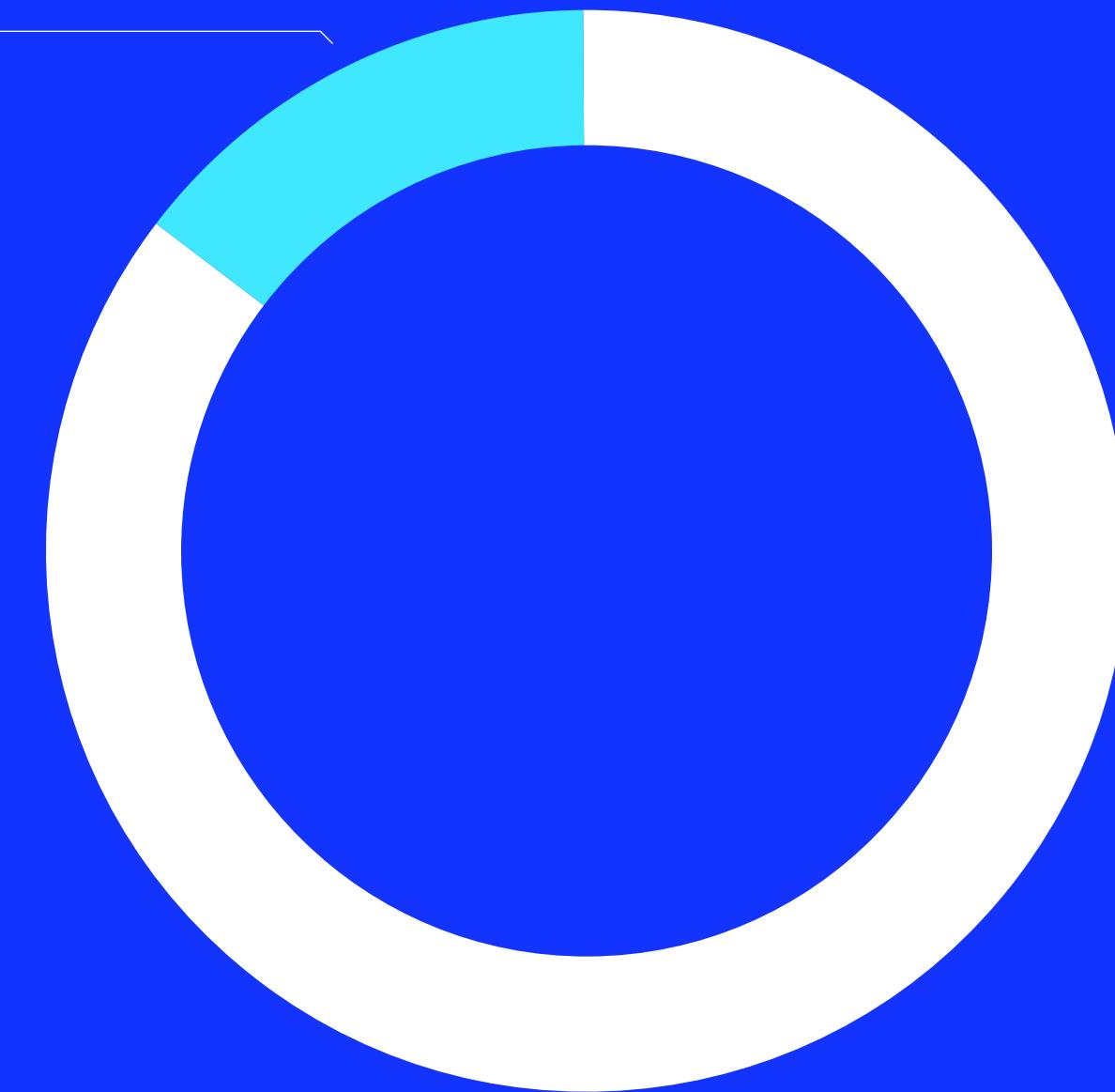
## Merkel-Tree Concurrent Update

To be filed.

A system design to allow concurrent update to a single Merkel-tree for relayer scalability.

# We hold 200 Million LRC Token

15% of total LRC supply  
= 8 Million USD  
(2020/05/15)



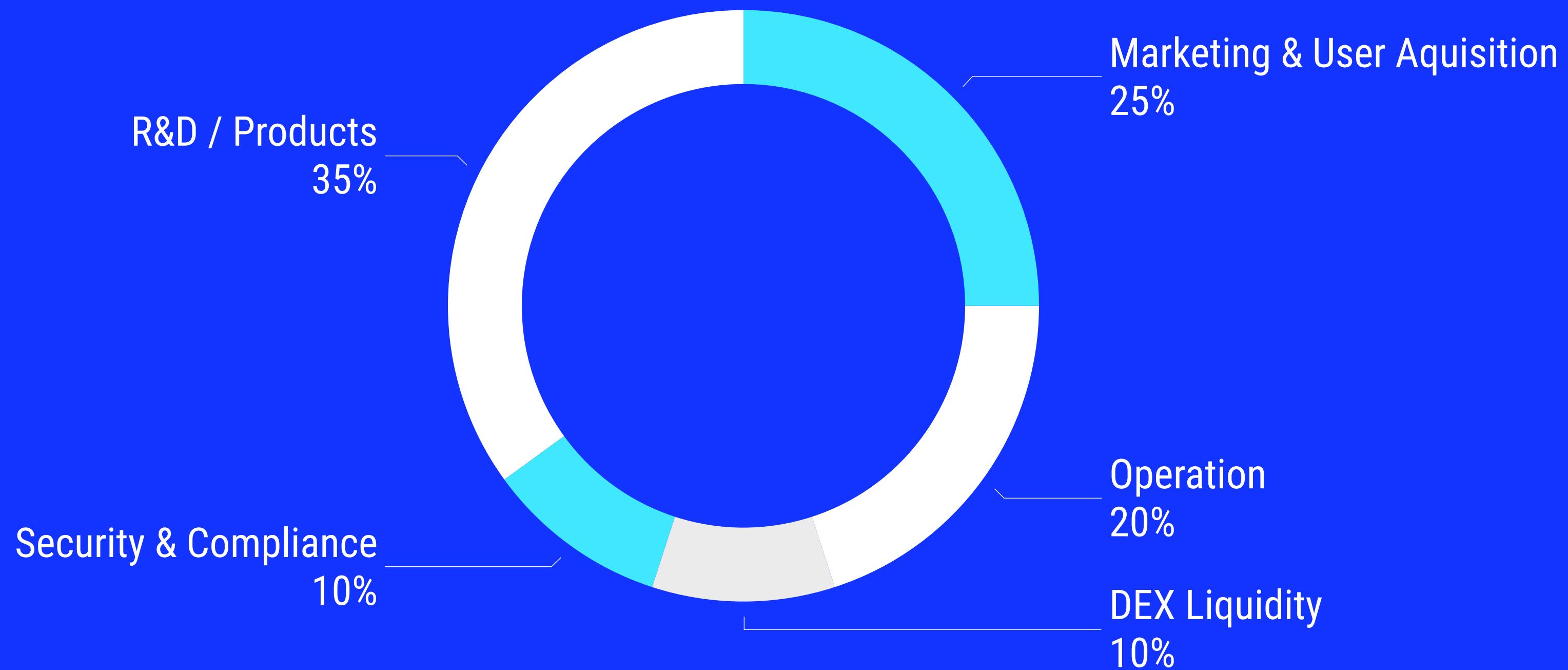
These LRC are company assets and will not be immediately distributed to investors upon investment.

The liquidation and/or distribution will be based on future plans approved by the board.

# Valuation and Target



# Planned Spendings





# Thank you!

Loopring Technology Limited  
[exchange@loopring.io](mailto:exchange@loopring.io)