



klever exchange

klever.io

Klever Exchange Whitepaper
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Introduction

**Trading is
difficult, but
it shouldn't
be.**



The idea behind Klever Exchange is to provide a simple, intuitive, safe and powerful user experience where anyone can trade, with unmatched speed and advanced security architecture.

Klever Exchange was created as a home to users who are completely new to crypto trading by providing a simpler user experience, while enabling reliability and useful features to experienced traders through market-leading speed, ironclad security, market maker opportunities and low fees.

All features and concepts deployed on Klever Exchange are built and designed with the end users in mind. This includes both users that are taking their first steps in the world of crypto and do not yet understand how crypto trading exactly works, but at the same time facilitating advanced tools for more seasoned traders to profit and benefit from.

3+ years of development.

Klever Exchange is the evolution of our goal to provide our users a seamless, secure, stable and incredibly fast trading experience, and is based on over 3 years of industry research and product development.

3+ million transactions per second.

Able to handle over 3 million transactions per second, Klever Exchange will be a centralized crypto-to-crypto exchange (CEX) with a clear emphasis on security, high performance, seamless user experience and usability through easily accessible features.

Trading experience.

Klever Exchange sets out an ambitious plan to make crypto trading simple, joyful and accessible to all, and aims to take the world of crypto to the next level. The launch of Klever Exchange will be a game changer for the entire ecosystem and the KLV token, which will be playing a central role in not just the exchange, but all products and platforms in the Klever world of apps.



01 Klever Exchange

Klever Exchange is built to be a borderless and global trading platform where literally “anyone can trade”.

Users from all over the world will be able to trade at extremely low amounts and very low fees. We have had the third world strongly in mind when building the exchange structure and low threshold for entry.

Klever Exchange is meant to be a tool to give freedom to the little guy, who on other platforms is often forgotten or neglected, since priority is primarily put on larger traders or whales. Like always, we will do it differently.

Klever Exchange will be a fundamentally fair platform where our first-class support team will give as much emphasis on new and small traders as on big and experienced traders, and the exchange experience will fit both newcomers as well as seasoned traders.

After many years in the field we understand that even with many exchanges out there, only a small number of exchanges are really professional in what they do. We have witnessed that firsthand.

This also means there's a lot of room in the market to improve the user experience and deliver better, faster, smarter and more reliable services, which is exactly what Klever Exchange sets out to do.

The ultimate trading experience is klever.

— Dio Ianakiara, Co-Founder & CEO of klever.io

An incredibly low fee model allows users to trade very small amounts and attracts makers to provide liquidity to our exchange.

Like all the products launched by Klever, we want to make crypto easier and more accessible to the user that has never heard about crypto, but at the same time also serve the traders that are considered advanced users. We have built an exchange that will maximise the potential for crypto trading across the globe for anyone with a connection to the internet, everyone deserves to have the same chances to succeed as the crypto whales do today.



Klever.io has grown rapidly over recent months to now serve more than 150,000 daily active users, well over half a million monthly active users and record 3 million downloads worldwide, providing our users with a seamless experience of self-banking and self-custody.

Many of our users have for a long time been requesting a secure, simple and versatile crypto exchange that they can trust and feel at home with. It's with their feedback and years of research that we are launching Klever Exchange in Q2 2021 for mobile, and for web in Q3 2021.

Our global team, now consisting of more than 100 developers, engineers and staff, has been and continues to be guided by these principles when constructing the building blocks for the Klever Exchange:

First, ironclad and advanced security measures that protect Klever traders against any malicious external attacks.

Second, a user experience centric approach to make the trading experience as enjoyable, elegant, intuitive, profitable and fast as technologically possible.

Third, unmatched speed and reliability through the innovative use of autonomous order books that function independently, ensuring 3 million transactions per second. Per orderbook.

Fourth, regulatory compliance in any and all legal jurisdictions that Klever Exchange will be operational as a top priority.

Klever Exchange will later this year be using the upcoming Klever Blockchain and the apps running natively on the Klever Blockchain for increased efficiency and optimized performance. This future integration will make the exchange be closely intertwined with the Klever ecosystem as a whole while being able to utilize the speed, native Klever apps and wide array of future stablecoins and K-Tokens that will be running on *Klever Blockchain.*



1.1 Software Architecture

Klever Exchange is built on top of an innovative Microservices Architecture where each component of the exchange infrastructure has its own autonomous responsibilities and functions independent from other components.

Using this architecture, each microservice is authenticated independently in our infrastructure and is identified through their own roles, functions and responsibilities.

The primary reasons for using this approach when constructing the Klever Exchange software architecture are to keep each layer of our exchange:

Incorruptible

Autonomous

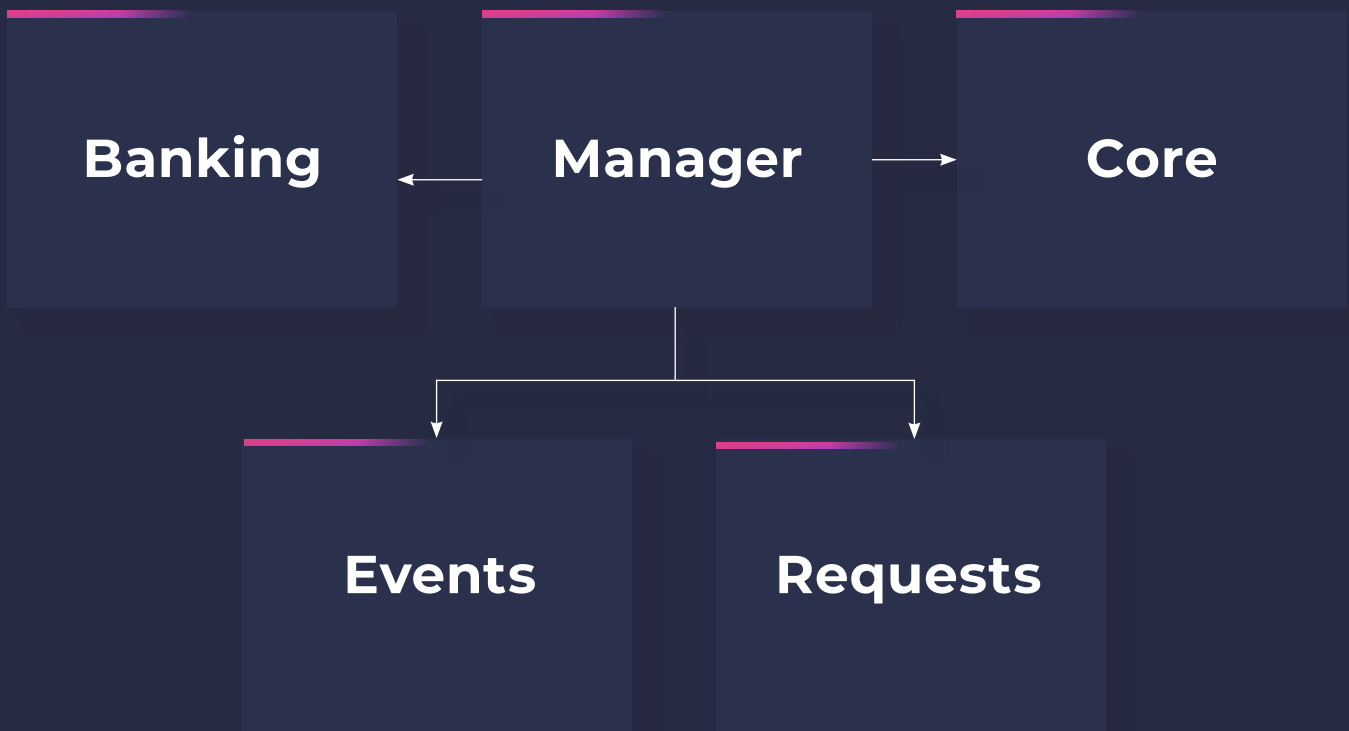
Reliable

Scalable

Immensely more secure

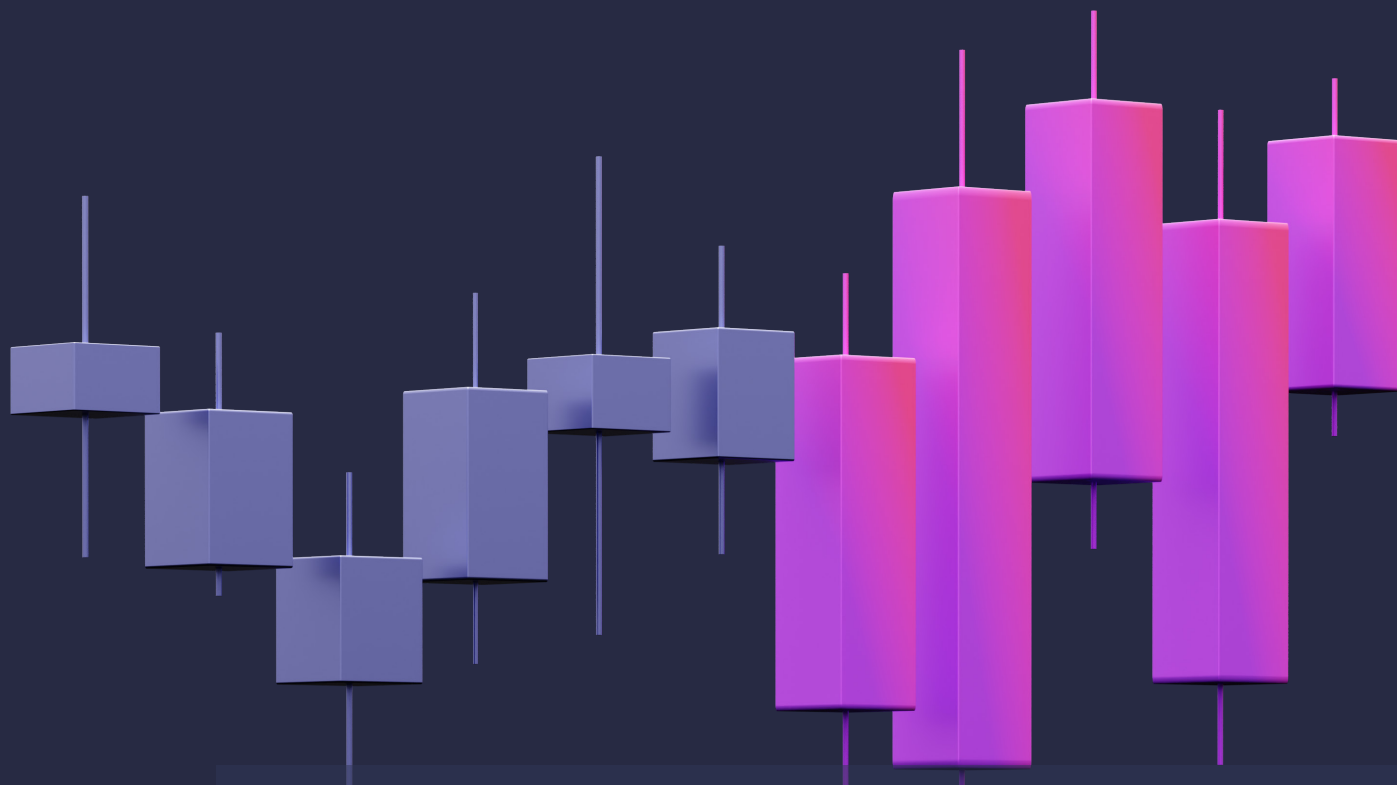
All to ensure a reliable, safe and incredibly fast trading experience, even during high market volume and volatility.

The roles of the Klever Exchange software architecture environment is based on these five following pillars:



These interfaces were born ready to support events connections and traditional requests, and are able to interact with user clients (Klever Exchange Mobile/Web) but also through API (Application Programming Interface) keys.

The API keys will allow users to run bots using their own strategy to negotiate in Klever Exchange following the configurations that users make while generating the bots.



1.2 Market Makers

Klever Exchange introduces a new Market Maker Program, with a competitive rebate on each maker order trade facilitated. The reward will be distributed in real time to the market makers after every trade.

Market makers, or liquidity providers, are essential to any token issuer success and has been a requirement for listing tokens on larger, more reputable centralized exchanges.

The role of a market maker is to maintain bid orders and offer orders of a certain size within a predefined price spread on a continuous basis.

Klever's high speed trading engine offers throughput of over 3M transactions per second, ensuring speed and reliability for both market makers and traders. For market makers, Klever Exchange offers an advantageous offer for those who enjoy the profitable opportunities of crypto-to-crypto exchanges.

Investors benefit from higher liquidity and reduced risk through more efficient pricing. Market makers make listed projects more attractive for investors, especially those seeking large-size investments.

As crypto continues to explode in popularity and value over the next few months, Klever will become the crypto hub that supplies the necessary liquidity for various crypto projects to operate, while ensuring reliability and never before seen trading engine speed.



1.3 Trading Engine

Klever Exchange trading engine is built in an innovative way that enables it to handle over 3 million transactions per second. Per orderbook.

To compare with the current industry standard, most exchanges are able to process up to 1 million transactions per second at most. We are able to achieve more than three times this speed by having each trading market and order book act fully autonomous from one another.

Autonomous Orderbook

The Autonomous Orderbook instances follow an event driven architecture coupled with a matching algorithm based on binary trees, allowing Klever Exchange to receive and process each order in a much faster way than current crypto exchanges.

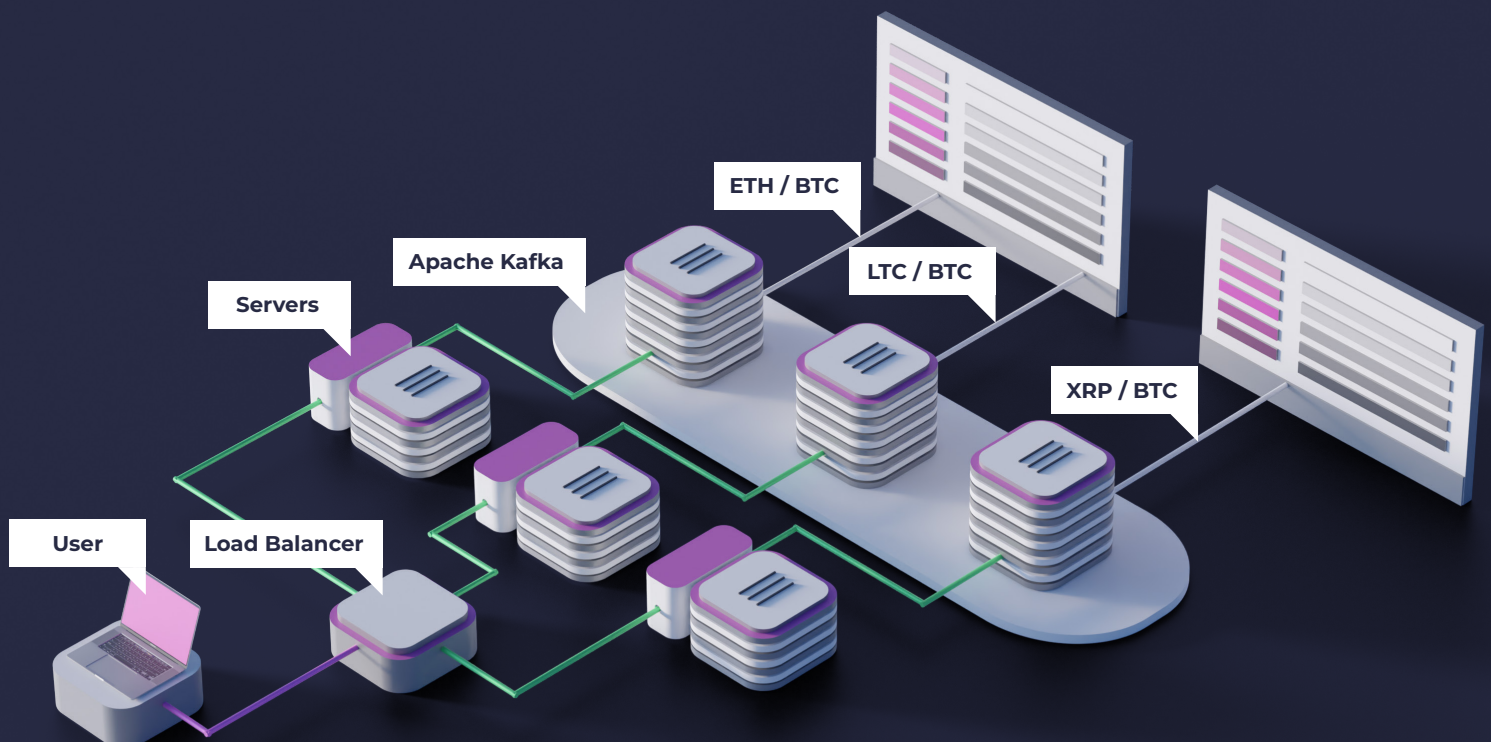
Each keypair, for instance KLV/BTC, is orchestrated by an autonomous orderbook, which means that the ability to process 3 million transactions per second is not actually related to the Klever Exchange as a whole, but to each keypair. Or in other words, each orderbook can process 3 million transactions per second.

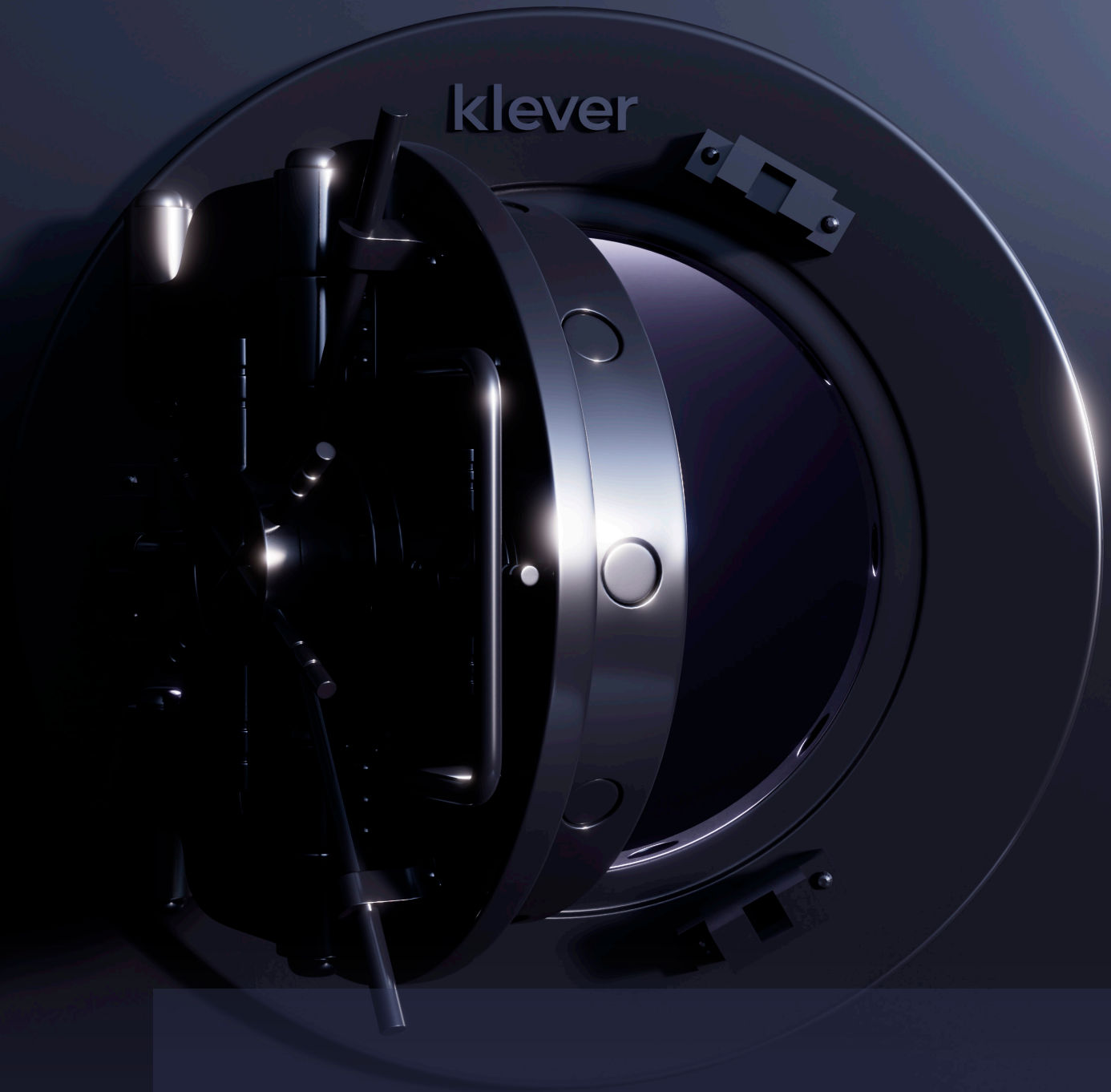
This upgrade in speed will become very useful for Klever Exchange users especially during high volatility, when many exchanges today stop functioning and traders are not able to execute their orders or take advantage of the high volatility.

This trading engine architecture also ensures that if one market or keypair for some reason temporarily goes down, it does not affect any other market or order book. This fact increases the reliability and resilience of Klever Exchange significantly in case of an attempted entry or exploit.

All scenarios have been taken into consideration, and the security architecture is built in such a way that our users will know that their funds are always safe with Klever Exchange.

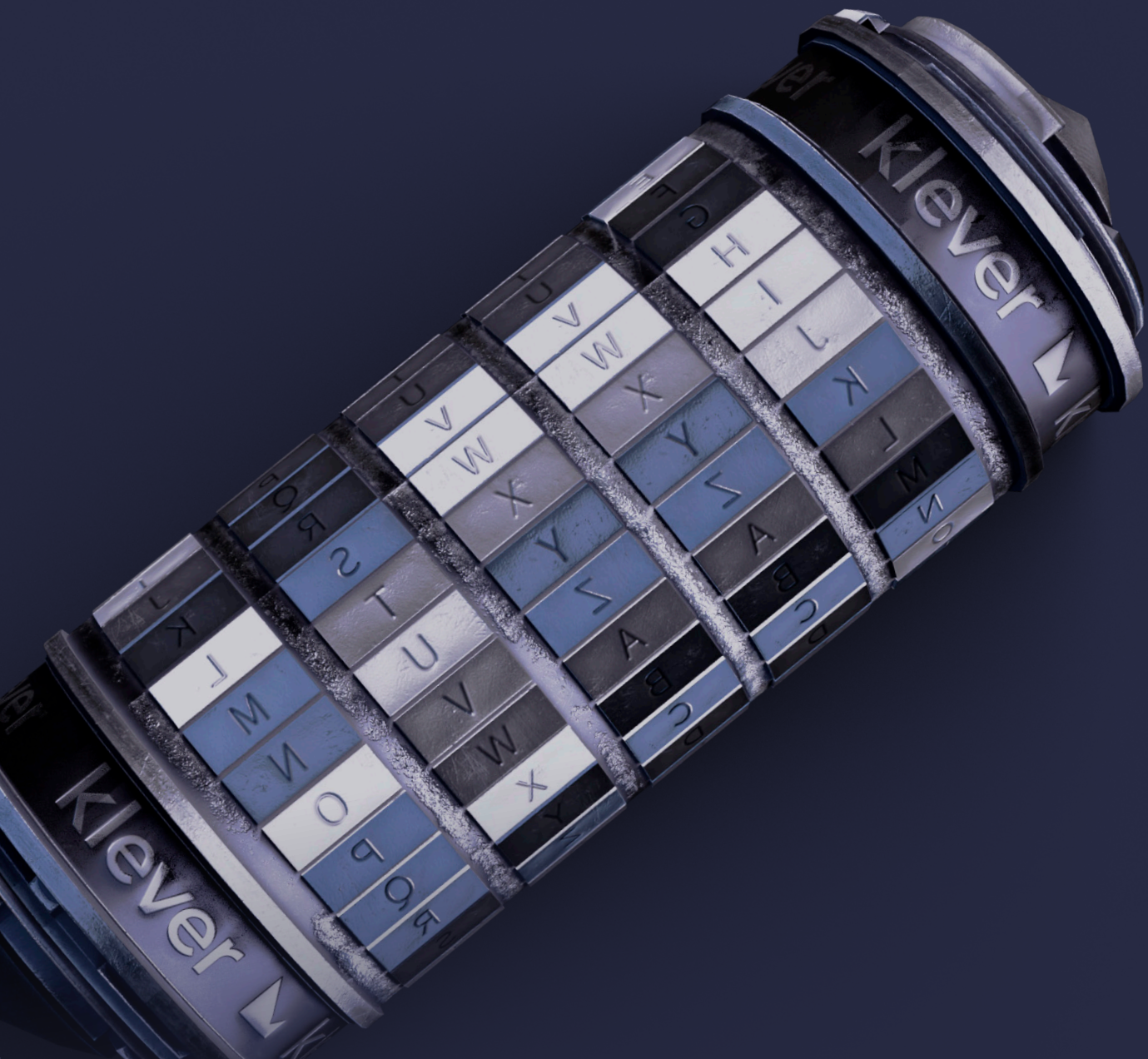
Trading Engine Architecture:





1.4 Secure Exchange

Klever Exchange is using an innovative and proprietary security software architecture we have been perfecting for years through our work in the crypto wallet field and banking sector, making the exchange wallet system extremely secure, based on the latest encryption methodologies available.



We are focused on providing the simplest, fastest and most secure exchange platform built on the top of the Klever OS SDK (Software Development Kit) through our Software Security Module (SSM).



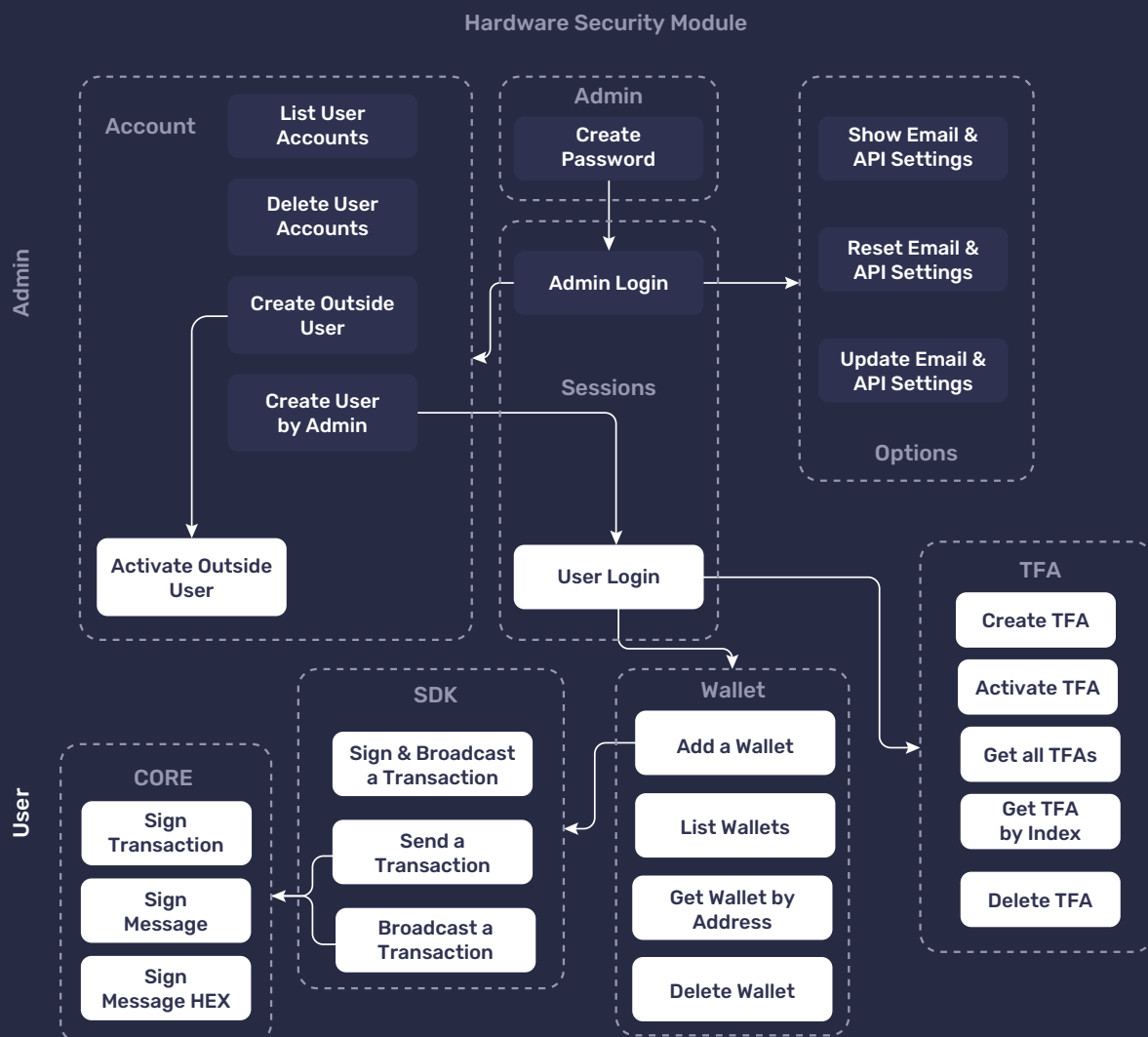
kleverOS^{SDK}

This in-house built technology functions as an “HSM” but through Klever innovation we have made it software-based.

HSM is a Hardware Security Module used by most banks and financial services throughout the world, but we have decades of experience in both banking and blockchain technology, and have been able to merge the two approaches through novel thinking and engineering to make it software-based instead.

In other words, we have built an autonomous and robust security mechanism that uses our own independent banking component to communicate with our own software-based HSM, but the banking component is unable to give commands to this “HSM”, which in turn handles withdrawals and deposits end-to-end fully autonomously.

Since all components of the security architecture can communicate with one another, but not give commands to or affect the other components’ actions, this makes the entire system virtually bulletproof against malicious actors or hackers, and introduces a new era of wallet security for the crypto exchange industry.



Klever Custody

The Klever Exchange will offer custody to user funds in multiple Klever Security Modules (KSMs).

These KSMs will autonomously manage the funds between themselves based on the balance that they are storing. The security architecture of the KSMs will follow strong security patterns to encapsulate the access to them, and enable them to only communicate with our services. The KSMs instances are using the already consolidated Klever Core used in the Klever Wallet, all based on Klever OS (Operating System).



klever

Security Module

The autonomous order book on the Klever Exchange provides an extremely high throughput of orders. Multiple KSMs will custody users funds in a unique, independent and extremely secure way.

With the launch of Klever Exchange, the Klever ecosystem will give our users the option of holding their crypto in self-custody through the Klever app, as well as in the custody of Klever Exchange in order to trade at the fastest crypto exchange on the market, supporting over 3M transactions per second.

Custody with a trusted exchange as well as self-custody are highly requested by our users, now consisting of more than 3 million users worldwide, and very useful for the global crypto community.

Service Resiliency

All components of Klever Exchange are using the microservices standards and they are designed to be resilient to failures. Through the communication between the services they must identify that a component went down and keep operating without issues, until systems have been restored to normal.

Signed Code

All the code deployed to the Klever Exchange is using a signature from the Klever Core developers and requires multiple approvals to reach Dev, Staging and Production environments.



1.5 User Experience

Our goal as a company is to make cryptocurrency simpler, more adoptable and closer to people's hands and their hearts.

And we at Klever are not talking about numbers, we talk about and see people, our users. We deal with the money, savings and dreams of millions of people on a daily basis. We take that task very seriously and it comes with a lot of responsibility.

That responsibility also entails providing an incredibly simple and powerful user experience for all our users, beginner and seasoned trader alike, and the Klever Exchange will have the new elegant and intuitive concepts of visual identity that will be launched on Klever App v5.

We are guiding crypto beginners in the Klever Exchange app to understand the core concepts of the actions that they are taking.

Together with the clean design and seamless user experience, Klever Exchange make each main feature easily reachable from the main screen with just one click.



Market



Trade



Home



Holdings



Orders

The main idea of the Klever Exchange trading experience is simple:

Enable users to create Buy and Sell orders at Market Prices for immediate execution.

To place Buy and Sell orders using Limit Orders at pre-established prices by carrying out transactions according to users own needs and expectations.

It took years of research, testing and development to arrive at the ideal model.

Klever Exchange is a second step for the users of our Klever Wallet, and it will become the best and simplest choice for most people who are either new to crypto or yet to enter the crypto market.

Advanced users and experienced traders will take advantage of the high performance and remarkable speed of the Klever Exchange, through which they will be able to check the graphics updating as soon as the events reach our autonomous orderbooks, and also take swift actions to execute trades, even during high volatility.

The fees of Klever Exchange are as follows:

VIP Level	Trading Volume (30 Days)	Min KLV Holding (30 Days)	Maker	Taker	KLV Pay Fees (Maker)	KLV Pay Fees (Taker)
Regular	-	-	0.110%	0.110%	0.090%	0.090%
VIP 0	< 10,000 USDT	< 10,000 USDT	0.100%	0.100%	0.080%	0.080%
VIP 1	≥ 10,000 USDT	≥ 10,000 USDT	0.090%	0.100%	0.072%	0.080%
VIP 2	≥ 20,000 USDT	≥ 20,000 USDT	0.070%	0.090%	0.056%	0.072%
VIP 3	≥ 50,000 USDT	≥ 50,000 USDT	0.050%	0.080%	0.040%	0.064%
VIP 4	≥ 100,000 USDT	≥ 100,000 USDT	0.030%	0.070%	0.024%	0.056%
VIP 5	≥ 200,000 USDT	≥ 200,000 USDT	0.000%	0.070%	0.000%	0.056%
VIP 6	≥ 500,000 USDT	≥ 500,000 USDT	0.000%	0.060%	0.000%	0.048%
VIP 7	≥ 1M USDT	≥ 1M USDT	0.000%	0.050%	0.000%	0.040%
VIP 8	≥ 1.5M USDT	≥ 1.5M USDT	-0.005%	0.045%	-0.005%	0.036%
VIP 9	≥ 3M USDT	≥ 3M USDT	-0.005%	0.040%	-0.005%	0.032%
VIP 10	≥ 5M USDT	≥ 5M USDT	-0.005%	0.035%	-0.005%	0.028%

Disclaimer: Fee structure may be subject to minor changes due to market conditions and exchange volume.



1.6 Klever Support

What can we help you with?

— Mathijs Bok, Head of Customer Support

The Klever Support Team consists of more than 30 dedicated customer support agents who provide swift and personal support to all of our users worldwide. Users of the Klever Exchange will have access to the same high-quality level of support that our Klever Wallet users enjoy today.

The Klever Support team will attend our users' requests 24 hours a day, 7 days a week, making sure that all questions and potential issues that our users are facing are met in a professional and timely manner.



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Help Center

24 HOURS A DAY | 7 DAYS A WEEK

We truly believe that providing first-class support is a core part of providing an optimal and seamless user experience on our platforms, with particular emphasis on the Klever Exchange. With the use of the support chat you will get instant answers to your requests, giving a safe feeling when using our platform. Fast, personal and optimal experience is the key of our support operations both for the Klever Wallet, and soon for the Klever Exchange.



1.7 Listing Process

The listing process on Klever Exchange will be 100% automated from the perspective of the applying projects.

This will allow the project to independently track what stage it is in, what information is being analyzed by the Klever listing team and what the next steps are.

The listing process will be divided into three steps:

1. Basic Information: General information about the project and token.
2. Listing Information: Which will be the pairs, Choice of Marketing Packages, Market Making Account (MM), Release Date and Signature of the Listing Agreement.
3. Payment.

At each step of the automated listing process, the information submitted will be analyzed by our listing team and approved/rejected for the next step. Simple, safe, automated and straightforward, as a listing process should be.



1.8 Compliance



Klever has partnered with market leading Jumio to provide a global AI-driven and biometric identity verification solution for Klever Exchange in order to remain KYC (Know Your Customer) and AML (Anti Money Laundering) compliant in all countries and regions we operate.

Jumio supports more than 3,500 different ID types from over 200 countries and regions to ensure global coverage for Klever Exchange, setting it apart from the competition by offering more countries and ID types than its competitors.

Klever Exchange has integrated this seamless identity solution, making the KYC registration of new users simple, fast, secure and complete in mere minutes.

Together with Jumio, Klever has created an automated, simple and quick process to onboard new customers globally using a fast registration for Klever Exchange users.



1.9 KLV Powers Klever Exchange

Klever (KLV) is the main utility token powering all aspects of the Klever Exchange.

KLX is the fuel for innovation and will serve as a key trading pair for all future listed coins and tokens on Klever Exchange.

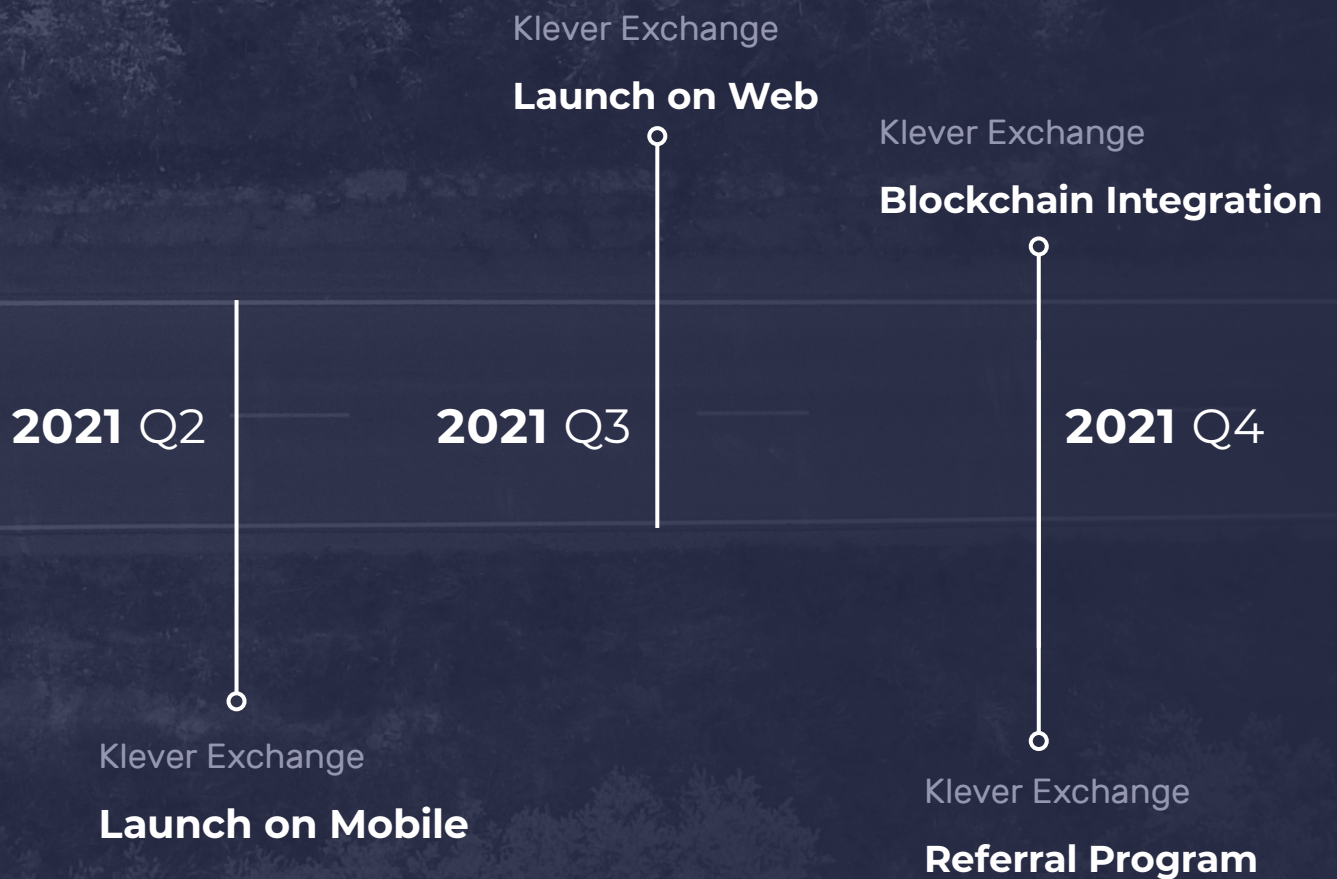
In other words, all coins that we will support on Klever Exchange will have a direct trading pair to and from KLV.

Additionally, all Klever Exchange trading fees, exchange fees, swap fees and withdrawal fees will be paid in KLV, while market makers will be able to add liquidity to liquidity pools using KLV where users will be able to participate in KLV mining pools and KLV staking.

Moreover, market makers will also be rewarded by adding to liquidity pools, and KLV will be used as liquidity for other tokens.

Search for markets				🔍
All		Favorites		
Name	Price	24h Change		
KLV/BTC	0.00000149 \$ 0.05	+2.34%	Vol. 23,12M	
KLV/TRX	0.931706 \$ 0.05	-3.71%	Vol. 22,10M	
KLV/ETH	0.000025 \$ 0.05	+1.16%	Vol. 19,05M	
KLV/XRP	0.081795 \$ 0.05	-0.10%	Vol. 18,10M	
KLV/DOGE	0.256037 \$ 0.05	-1.15%	Vol. 15,14M	
KLV/BCH	0.000109 \$ 0.05	+0.25%	Vol. 14,31M	
KLV/LTC	0.000402 \$ 0.05	+2.77%	Vol. 14,10M	
KLV/KFI	0.000303 \$ 0.05	-0.50%	Vol. 12,80M	
KLV/DGB	1.312184 \$ 0.05	+4.18%	Vol. 10,05M	
KLV/DASH	0.000432 \$ 0.05	-1.75%	Vol. 9,77M	
KLV/BNB	0.000185 \$ 0.05	+1.16%	Vol. 7,05M	

02 Klever Exchange Roadmap 2021



2.1 Klever Ecosystem

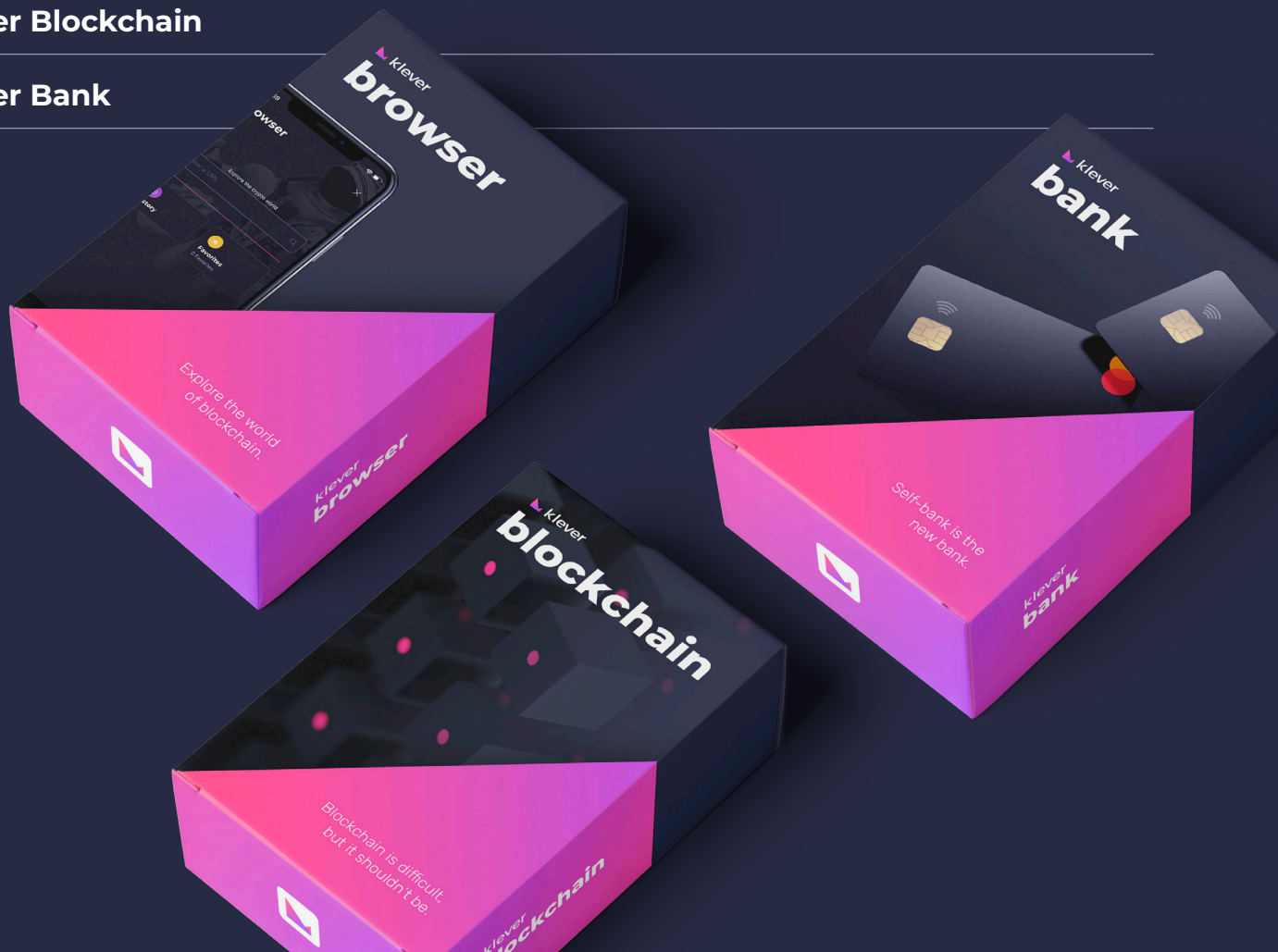
The Klever ecosystem today consists of three main components: Klever App, Klever OS (Operating System) and Klever Swap.

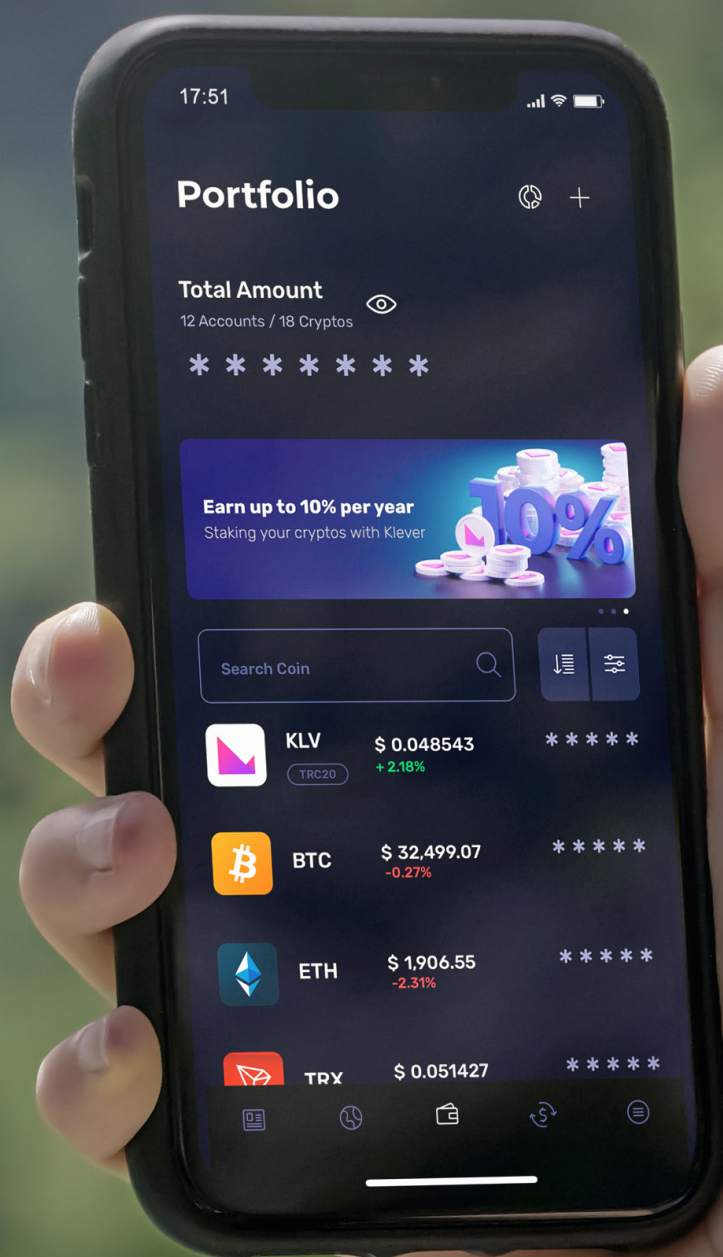
The current offering of products from Klever is however just the tip of the iceberg. The entire development team, comprised today of over 85 developers and growing daily, are in the process of building and optimizing several additional major platforms set to launch this year alone:

Klever Browser

Klever Blockchain

Klever Bank





03 Klever Downloads



**Try out Klever
Wallet now and
be ready for
Klever Exchange
launching this
quarter.**

DOWNLOAD KLEVER APP FOR IOS OR ANDROID



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