MenaPay

CRYPTO MADE EASIER THAN CASH

www.menapay.io

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Figures, Tables and Graphs:

1. Legal Disclaimer

MenaChain Solutions DWC – LLC is an organization which aims to help the digital transformation starting from Middle East and Africa region. It is committed to invest in areas which encourage the use of digital currency in daily life. The phrases of "Foundation" and "MenaPay Foundation" in this whitepaper, including Index pages, represent MenaChain Solutions DWC – LLC. The information contained in these documents is confidential, privileged and only for the information of the intended recipient and may not be used, published or redistributed without the prior written consent of MenaPay.

Investing in cryptocurrencies involves a high degree of risk and the potential for significant losses. Do not invest money you can not afford to lose.

2. Abstract

This whitepaper is written in order to inform the reader about how and why MenaPay project started and will continue.

MenaPay is the first fully blockchain based payment platform which focuses on the Middle East and North Africa region (MENA) preliminary. Main reason for the initial market decision is the high amount of unbanked population in the region as 84%. Traditional financial institutions cannot transform that population due to Islamic Finance requirements while MenaPay is the first non-bank mobile payment platform entering the region by the power of blockchain technology. MenaPay is a platform that allows transactions on a blockchain with very low transaction fees, is not affected by fluctuation of cryptocurrencies, faster and more secure than any traditional payment gateway.

In addition to all these benefits, MenaPay also assures instant transaction on blockchain which enables the daily life use of cryptocurrencies.

MenaPay aims to reach maximum user base hence it has been designed to comply with Islamic finance requirements which have big importance for MENA. The MenaPay Platform does not use or give interest and each transaction is performed under at least 2 witnesses thanks to the blockchain technology.

MenaPay token holders get benefits as long as the platform gets more popular which is also encouraged by the Islamic Finance approach.

MenaPay has its own stable coin “MenaCash” which is designed to be used in any online and offline transactions for the intention of daily usage. MenaCash has a stable 1 US Dollar value which is warranted by the same amount of USD kept in multiple banks as fiat currency equal to the amount of MenaCash in circulation. MenaCash solves one of the huge problems to use cryptocurrencies in daily life for users; fluctuation. The main objective of the project is to make it possible, easy and secure to transfer money for each user by using the advantages of today’s high–end technology.

As you can see in the following parts; it is obvious that there is a need in MENA region for a revolutionary payment system which can solve many problems that current old-fashioned banking system brings; such as security, difficult transaction process, highly expensive transaction fees.

MenaPay’s products are also designed with excellent user interfaces with the local languages, advanced data tools for both users and merchants to disrupt not only cash dependent payment system but also old-fashioned banking tools.

3. Introduction

3.1. Vision and Mission of MenaPay

MenaPay aims to become the most commonly used cryptocurrency in the world, starting from MENA region. Focusing on 18 country [1] and 441 Million [2] people as a starting point, MenaPay carries the mission of becoming the largest non-bank payment solution by using blockchain technology while generating significant returns for the investors. The business model that you can review in detail in this paper will create a whole new standard in crypto industry by creating an infinite “Green Mining Reserve” by using the the majority (75%) of the revenue to buy-back the MenaPay tokens from the market and fill the reserve.

MenaPay Token Holders will be the nucleus of a huge community to disrupt traditional banking system in MENA and will create the most advanced financial system which will cover the entire region with its Islamic compliant, transparent and decentralized structure.

Today, traditional financial system instruments such as banks, credit cards, debit cards and cash suffer from the lack of security, slow and inconvenient ways of transaction. These traditional financial institutions spend huge amounts of money and resource to prevent fraud but none of them fully succeed. Blockchain is the only way to solve all these problems that current banking and payment systems have, till a better technology comes out.

MENA does not have a similar non – bank payment system while other leading players such as China already has. Just like any other revolutionary dynamic; technology grows with the power of people who believes in it.

Developing the MenaPay Platform with community support is the futuristic way of finding the opinion leaders and securing necessary funds.

This futuristic way is now possible thanks to one of the last milestones of technology called "blockchain". Since the Internet came out in 1989, blockchain is the first tech wave, which shook the whole world with a similar impact. It will disrupt every single business and destroy them if they do not keep pace with it. Now it is time to create new structures that really belong to public, not to a certain central authority.

3.2. Definition of MenaPay

In order to understand what MenaPay is, first, it is important and a priority to understand MENA.

3.2.1. What is MENA?

The Middle East and North Africa region includes 18 countries and approximately 441M population. The region officially speaks two languages. 359M (81% of the region) people speak Arabic and 81M people speak Turkish. [3] 93% of the region practice Islam religion. [4]

Figure 1: MENA Region

Even though the region looks harmonized in terms of language and religion, it has an extremely fragmented structure in terms of geography, politics, economic power and currency. Turkey plays a bridge role between the Middle East and Europe. The Republic of Turkey is governed by full democracy and 99% of people practice Islam. It's the 17th largest economy globally.[4] It has a developed and broadminded banking and financial system while having 40 Million unbanked population. [11] [19]

The State of Fintech report says startups in MENA raised $50 million in funding in 2017, a 270% percent increase on the $18 million in disclosed investments 2016. [13]

GCC (Gulf Cooperation Council) region is the shining star of the Middle East. GCC is formed from Saudi Arabia, Kuwait, the United Arab Emirates, Qatar, Bahrain, and Oman. Average GDP per capita in these countries is 26,000 USD. [6]

All of the Middle East is considered an oasis for digital industries. Especially GCC region is the target of many global companies, while they all face difficulties while entering the region. Payment collection is one of the biggest challenges especially for online businesses. More than 50% of the GCC region is unbanked while 84% of the total MENA region is unbanked.

GCC is a region where Islam religion is practiced in the most conservative way. The fact is, traditional financial institutions do not comply with Islamic practices so huge amount people prefer to use cash in everyday transaction since it is more safe way than using banking tools in terms of their beliefs. That is the core reason of the high unbanked population ratio as 84% in such a rich region. Poor banking systems also do not make people's lives easier.

Most of the population in the MENA region prefers cash-on-delivery as a primary payment method for e-commerce. Interest is forbidden by Islam and any payment method developed by banks are not welcomed as their major revenue stream is from interest gains. Any P2P transaction should be witnessed by 2 parties in order to comply with Islamic jurisprudence to prove that there is no interest gain. The nature of blockchain and the MenaPay revenue structure perfectly meets Islamic tenets.

When we analyze the rest of the region, we see many crowded but unstable economies. Traditional financial institutions cannot provide trust to the public as they are fully controlled by the governments. In some countries such as Egypt, it is not possible to withdraw or make cross border transactions of foreign currency.
Meanwhile, keeping the money in the local currency became very risky in terms of consistent devaluation. There are 18 different currencies in the region which MenaPay wants to interconnect creating one common currency instead;

No	Country	Abbreviation of Currency	Currency
1	Algeria	**DZD**	Algeria Dinars
2	Bahrain	**BHD**	Bahrain Dinars
3	Egypt	**EGP**	Egyptian Pound
4	Iraq	**IQD**	Iraqi Dinar
5	Jordan	**JOD**	Jordanian Dinar
6	Kuwait	**KWD**	Kuwaiti dinar
7	Lebanon	**LBP**	Lebanese Pound
8	Libya	**LYD**	Libyan Dinar
9	Morocco	**MAD**	Moroccan Dirham
10	Oman	**OMR**	Oman Rial
11	Saudi Arabia	**SAR**	Saudi Arabian Riyal
12	Syria	**SYP**	Syrian Pound
13	Tunisia	**TND**	Tunisian Dinar
14	United Arab Emirates	**AED**	Emirati Dirham
15	Yemen	**YER**	Yemeni Rial
16	Sudan	**SDG**	Sudanese Pound
17	Turkey	**TRY**	Turkish Lira
18	Qatar	**QAR**	Qatar Rial

Table 1: MENA Currencies

Along with the challenging environment, the region has 49% of the total oil reserves in the world.[7] Countries like Turkey and Egypt are top tourism destinations with their deep history and natural beauties. UAE also became one of the top tourist destinations and one of the financial capitals in the world with their visionary government. Dubai is the first city using blockchain in their government operations.

Countries like UAE, Turkey, Qatar and Kuwait are leading the technology and innovations in the region. UAE is the number one country in terms of smartphone penetration in the world. [20]

Digital adoption of the rich Arabic public is impressive. Both Bahrain and UAE are competing to be the capital of blockchain projects by solid legal framework preparation and open-minded authorities. The average GDP per capita of the GCC region is 236% bigger than world average. [6] [8]

Other countries sometimes counted as part of MENA. Including the populations of Afghanistan, Armenia, Azerbaijan, Chad, Comoros, Cyprus, Djibouti, Eritrea, Georgia, Mali, Niger, Pakistan, Somalia, Sudan, Palestine and Sahrawi Arab Democratic Republic; wide MENA region has 827M population in total.

3.2.2. What is MenaPay?

MenaPay is the first blockchain based non-bank digital payment gateway for building the biggest cashless society in the world. It focuses on the MENA region primarily.

MenaPay allows users to transfer money within daily life in a secure, fast and decentralized way.

MenaPay focuses on MENA as its primary market so it is fully compliant with Islamic finance rules which are very important specifically in GCC region to provide a convenient and trustable digital payment solution. Users who most probably care about Islamic finance will see that blockchain technology meets the requirements of Islamic finance rules about money transactions between parties and earnings from the investments.

Three major statements in Islam are highly important in the region;

- **Interest is prohibited. People cannot generate profit via interest.**
- **There should be at least 2 witnesses to approve any debt transaction between 2 parties.**
- **Earning money via money is allowed if and only if people invest in a real working business and/or asset.**

On blockchain structure, at least 3 parties are needed to confirm the transaction. It cannot be deleted or rearranged by any individual or a central authority after a transaction has been confirmed.

MenaPay focuses on building a large community of consumers and merchants who prefer MenaPay as their primary method of payment for any digital business such as e-commerce, and any online/offline or traditional P2P transaction for each aspect of daily life, including P2P cross border transactions. MenaPay can be used in various places, restaurants, coffee shops, shopping malls, gas stations, vending machines; shortly in every possible money transaction activity. Basically, MenaPay aims to be integrated in every possible industry.

3.3. What is the Difference Between MenaPay Token and MenaCash?

The MenaPay Platform creates a token and a coin which you will see clearly and in detail through this whitepaper. In the blockchain ecosystem, a token represents a fungible or tradable asset or a utility on a blockchain.

MenaPay Token is a utility token which will be issued with a limited number of 400 million. 64% (256 million) of the total tokens will be owned by the public. MenaPay Token is used for mining purposes from the reserve by 2 ways, getting via peer to merchant (P2M) MenaCash transaction and MenaPay token staking. We apply this process via "Green Mining".

MenaPay token holders have the option of staking their tokens and earn tokens according to the amount of staked MenaPay tokens and the time they keep in their wallet. MenaPay will be able to be purchased (buy-back) from exchanges after the IEO to fill the Green Mining reserve. During the IEO period, only the confirmed users in the whitelist who completed the KYC process can purchase MenaPay tokens from **www.menapay.io** using various payment methods.

MenaCash; is a stable cryptocurrency of the MenaPay platform which will be used for daily transactions between 3 dynamics in the system; users, merchants and foundation. Transactions between users P2P (peer to peer), transactions between users and merchants P2M (peer to merchant) and transactions between approved merchants and MenaPay Foundation for conversion of their MenaCash to fiat currency purposes M2F (merchant to foundation) will be possible by using MenaCash. MenaCash will be generated on the MenaChain permissioned blockchain to assure secure and fast transactions between the users.

Circulating supply of MenaCash will always be equal to the US dollars in the bank accounts of the MenaPay Foundation.

1 MENACASH = 1 USD

Platform	PayPal	WeChat Pay	AliPay	**MenaPay**
Currency	*Money*	*Yuan*	*Yuan*	***MenaCash***

Table 2: Platform Examples

3.4. Governance Structure

Defining the governance structure is the key point to assure the trust in the community and integrity of the team as a whole. We've defined governance structure of MenaPay Foundation and management of MenaCash in order to have 100% trust by our entire ecosystem.

3.4.1 MenaChain Solutions DWC - LLC

MenaChain Solutions is a company which act as a foundation by its philosophical approach to its business, preliminarily MenaPay. MenaChain Solutions does not carry a profit motivation for the company itself so in this whitepaper "MenaPay Foundation" or "Foundation" describes MenaChain Solutions DWC - LLC. The main goal of the company is to create a total new payment and money transfer solution with its blockchain based technology which will belong to the community and bring a significant solution to the everyday problems that payment systems currently have.

That is why, MenaChain allocates its 75% of total income to buy-back MenaPay Token in order to fill its green mining reserve for the users. Shareholders of the company assign the Executive Board members. Executive Board members lead the company with full integrity. They consider benefits of the MenaPay community and all stakeholders of MenaPay ecosystem; including users, merchants and resellers.

Executive Board acts according to the vision of MenaPay. Since the priority is sustainable growth, Executive Board has right to make strategic decisions to change transaction fees, cash out fees, allocated revenue to buy-back the MenaPay tokens to fill the green mining reserve and the distribution ratio of the reserve.
Obviously, those token purchase activities would positively affect the token prices in the market. Executive Board is responsible to implement effective security measures and ethical standards to avoid fraud, insider trading and misuse of information.

The entire company team works full time, dedicated to MenaPay operations. The management team prepares the annual budget for marketing and operations. The Managing Director of MenaPay has the right to spend within the budget and has limited authority on the Power of Attorney. For the payments over the limit, 2 signature authorities are required; one from the Managing Director, and the other; from an Executive Board Member.

CFO directly reports to the Executive Board with respect to reporting, audit and internal control purposes.

Every quarter, at least one board meeting should be performed. Executive Board is responsible with controlling the management team. All strategic decisions such as investment, acquisitions, budget revision, etc. requires board approval.

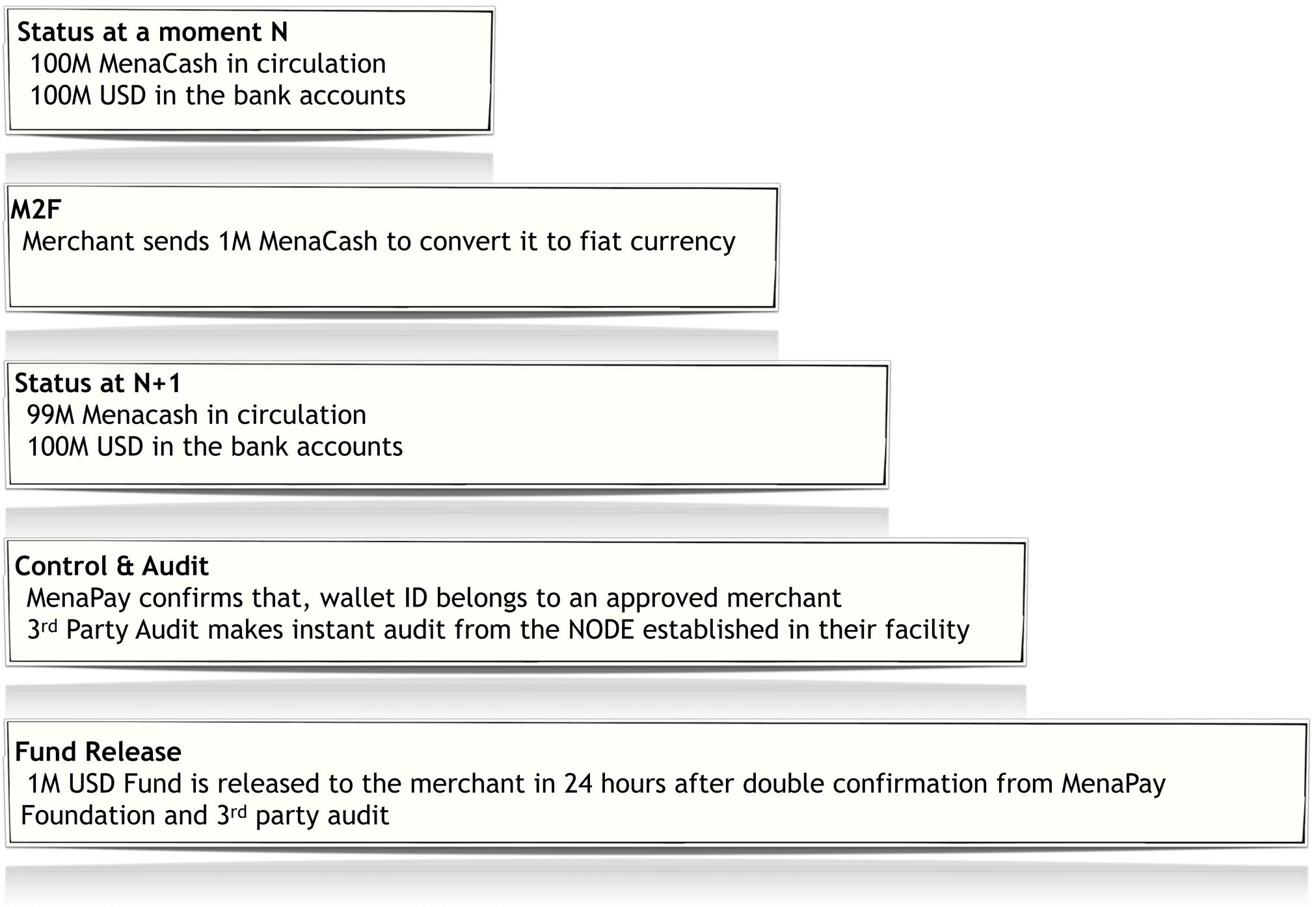
3.4.2 Trust structure for MenaCash

Trust structure of MenaCash is good use case of blockchain. Instead of using traditional audit methods by providing periodical financial documents, blockchain gives the freedom for an instant audit. Our 3rd party audit and escrow partners are announced on the **www.menapay.io** to assure the 100% safe and trustworthy structure for MenaCash.

As the total circulating supply of MenaCash should be equal to the US dollars in the bank, there will not be a moment where the US dollar amount is less than MenaCash in the circulation. In order to assure that structure, bank accounts of MenaCash will be separated from the MenaPay Foundation. Any cash that will be able to release only with the approval of MenaPay Foundation CFO and the reputable 3rd party audit company.

Minimum MenaCash reserves to be hold is calculated based on the USD equivalent of total assets and cash amount in the banks. Total provision should be equal to the MenaCash in the circulation after deducting the commission and cash-out fees that MenaPay deserves.

In order to explain the instant audit process clearly, it's better to explain by a chart below with the assumption that we have 100 million MenaCash in the circulation.



Our policy is to keep maximum 100M US Dollar in a single bank account. Bank accounts and the locations of the banks will be distributed worldwide. No interest profit will be generated based on reserved money. Instead of keeping all the money as a cash reserve in the bank, it will be kept in different assets such as other Islamic Finance compliant tools such as real estate, low risk venture capital funds, etc.

Executive Board holds the right to change the type of the reserved currency to any currency which is acceptable by the regional merchants. The US Dollar has been chosen for the convenience of merchants as of 2018. GCC countries use local currencies fixed to the US dollar and the oil price is determined with US dollars. In the future, we foresee that Euro or Yuan may become more popular. If the fiat currency expectation of the majority changes, Executive Board can decide to shift to another currency which is globally reputable and acceptable.

4. Need for MenaPay

The new digitized world requires using technology in each single area. The countries which inspired the others with their game changing steps such as China had readily been aware about the importance of the need in the fintech market. Today, the total amount of people who use Alipay and WeChat Pay in a month is around 900 million. [10] We can clearly say that they already started to live in a digitalized, cashless future.

Even though banks worked well enough till now, the system is designed according to the antiquated economy and just like any other industry; it will be disrupted by the new technology. The issue with banks had and has been a problem in regions like MENA. Despite the high penetration rate of smartphones and internet connectivity, more than 84% of the adult population in the region is unbanked, [11] while three in four GCC bank customers are ready to switch banks for a better digital experience. [12] With the population of MENA getting younger, better educated and more demanding, a need for a massive overhaul in financial services occurred.

MenaPay has been designed to solve the lack of problems that traditional payment/ banking system has, besides creating a chance to get rid of the obligation of carrying cash and recognition of fake cash. MenaPay is also the way to have an easy, fast and secure payment opportunity for those who does not prefer banks and bank products—debit or credit cards—due to their religious beliefs whom contain 378 Million people.
With this chance to digitize payment in all areas of daily usage; life will be easier for MenaPay holders while merchants who do not use credit and debit cards will be available for shopping.

4.1. Payment Problems in MENA and Solutions by MenaPay

- **Single Payment Method for Online Shopping**

As a result of the poor banking system and lack of proper applications of Islamic finance, the only way to shop online is using the most common method; cash on delivery (CoD). But it also brings some other risks and problems such as high costs and uncharged deliveries. Also, CoD method can only be used for physical goods. Proper monetization of digital goods and services is still a big challenge. MenaPay introduces fully Islamic finance compliant digital payment system to users along with its stable currency MenaCash.

- **Obligation of Carrying Cash**

Apart from security problems, this brings despair to users since this payment method is the only way. People are not happy to carry large amounts of cash but they love shopping. There is no solution if the user loses that high amount of money on the way to buy a valuable good. One of the goals of MenaPay is to get rid of cash with the ease of digital payments and security of blockchain technology. MenaPay brings a digital, single and stable currency to the region which people can carry within their smartphones.

- **Cross - Border Money Transaction**

Due to the extreme conversion rates of banks, it is very costly to make cross border transactions or online payments in various currencies. MenaPay aims to make this process as easy as sending a message on any online platform. After completing the KYC process that MenaPay requires from the users, money transfer between countries will take seconds, as it is a necessity of the digital age we live in.

- **Dependent Central Authorities**

Because there are trust issues and high inflation risks, people mostly do not prefer to hold their money in the national banks of their countries. Blockchain technology, solves any trust or dependency problems that might occur by its nature. All savings are recorded on the blockchain and can't be changed by anyone. The MenaPay platform also belongs to the community, it's designed to sustain forever.

- **Counterfeit Money Problem**

Counterfeit money is a serious problem especially in North Africa and the north part of the Middle East, where people have plenty concerns about fraud. Digitalized and stable currency MenaCash of the MenaPay Platform will also be a solution for this common concern.

4.2. Stable Cryptocurrency for Transaction: MenaCash

Digital or blockchain based payments are typically much faster than today's classical financial tools, since there are no intermediaries.
The major obstacle for the crypto-payments could be the unexpected fluctuations in the currencies. As a solution to this problem, MenaPay offers its own 100% USD backed stable coin, MenaCash.

Another problem could be the wrong addressing the wallet ID while sending money. MenaPay offers a useful way to preclude this problem with solutions such as QR Code and UI/UX design which shows Merchant's name on the screen during the payment.

MenaCash, will be easily reachable through MenaPay app via all current payment systems such as credit or debit cards and our offline reseller network in the region.
1 MenaCash will always be equal to 1 USD, so user will not worry about the value of the money. The exact amount of, circulating MenaCash will be held in several banks so the users can always be sure that their wealth is under protection and available in fiat currency form.

This will be reputable and trustworthy specifically by and for the approved merchants on the system since they will easily be able to cash out MenaCash from the foundation. Only approved merchants will be able to convert their MenaCash to fiat currency with a minimum amount restriction. We will not let the users cash out through the foundation, due to money laundering concerns. Users can cash out their MenaPay tokens from exchanges.

4.3. Easy Cash-Out for Merchants

MenaPay Foundation will give the right to cash out only to the approved merchants of the system. They will be able to convert MenaCash in their wallets to fiat currencies at any time.

Merchants will be entitled to convert their MenaCash easily from the company with the minimum limit of 1.000 MenaCash. The Foundation will take 5% commission on the average. The ratio could change sector and the amount dependently. When merchants cash out, they will receive the exact amount excluding cash out commission as 1 MenaCash = 1 USD. Detailed information on the cash out system is given in section 6.6.

5. Products of MenaPay

With its ease of use and blockchain infrastructure, MenaPay aims to be the ultimate platform for users to carry out their all and every payment operation, while enabling merchants a simpler reach out to their customers and a faster mean of payment.

The MenaPay Platform offers a comprehensive payment solution to be used in every aspect of the daily lives of the cash using MENA region community with its blockchain-based payment infrastructure, mobile and desktop applications, its specially-designed Dashboards for merchants and Reseller applications.

After a quick registration process, MenaPay enables its users to store MenaCash by using global and/or regional payment methods or using cash through its wide Reseller Network across MENA region. Once MenaCash is stored, the user can transfer MenaCash to his/her peer, or he/she can shop from thousands of merchants within the MenaPay system effortlessly using QR codes, e-mails and phone numbers.

5.1. KYC for Profile Verification

To ensure no illegal activities are performed on the MenaPay Platform and serve our customers a secure network, the platform conducts a KYC (Know Your Customer) procedure. All users, merchants and resellers who reach an accumulated process volume of 100 MenaCash are subject to a detailed KYC process.

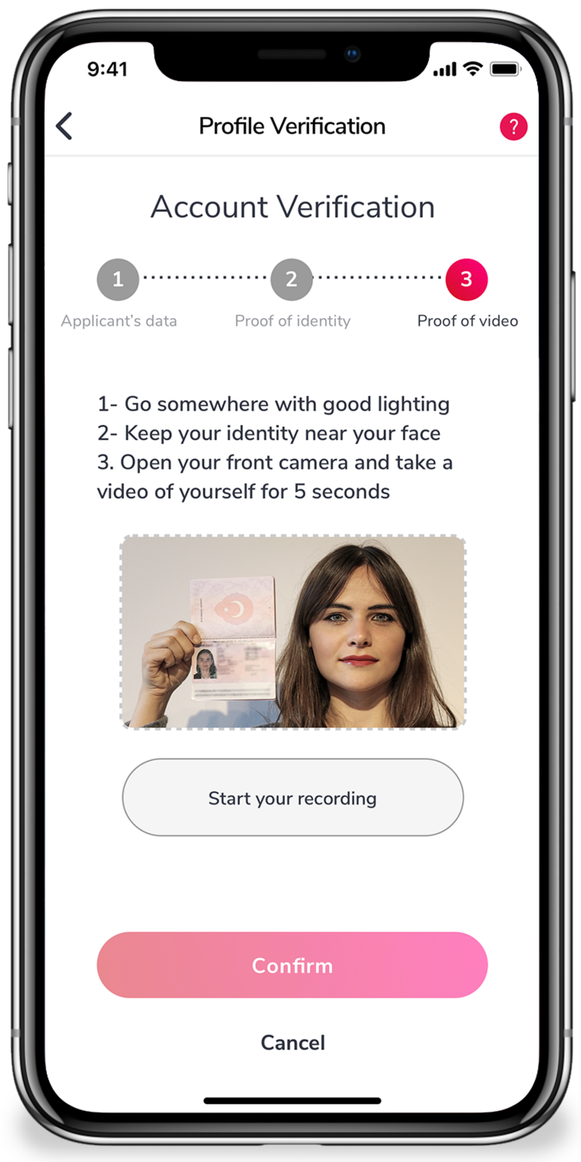


Figure 2: KYC Steps

The process is pursued with 4 steps;

- The user completes the mandatory and optional profile information and confirms his/her email address.
- Any officially recognized identity document (National ID, Drivers Licence or
- Passport) is uploaded to the platform.
- A 5-second video record which clearly shows the document and the face of the person is uploaded to the platform.
- Approval of the information by MenaPay Foundation.

KYC process is held to include firm information including legal documents, firm's financial history and business licenses for institutional users.

User data collected by the KYC process is kept on an off chain secure database and all General Data Protection Regulations (GDPR) are met. Information on GDPR is found in section 11.

5.2. Business Dashboard for Merchants and Resellers

Data oriented decision making is crucial for merchants. The most important advantage in a highly competitive sector as the e-commerce business is to know your customers closely, observe their purchasing tendencies and to take actions to improve sales according to these data. On the other hand, offline commerce businesses cannot aggregate this type of data due to the shortcomings of their existing payment tools.

Businesses which add MenaPay as a payment method and sell MenaCash for additional revenue can use its detailed Dashboard to get important insights about their business and make decisions comfortably or take the necessary actions.

Figure 3: MenaPay Dashboard

Merchants using MenaPay Dashboard can;

- Track the number of transactions, transaction volume and Transaction ID, customer ID, Revenue, Payment Status, Date, etc. processed over the MenaPay Platform and get detailed reports within seconds.
- Reach their retrospective transaction details using the Transaction IDs which are produced uniquely for every transaction.
- Reach the payment history, payment frequency and shopping tendencies data of their customers on a user base.
- Join the "Approved Merchant" network and cash out their MenaCash.
- Dynamically change their exchange rates even for different currencies on their sales and build a risk management system according to price ranges.
- Refund their customers individually or as a group.
- Offer a secure shopping experience with its KYC (Know Your Customer) property.

5.3. Business Application for Merchants and Resellers

Businesses that would like to receive payment by MenaPay as an alternative to cash or other payment methods can start receiving payment just in seconds by downloading the MenaPay Business app right after signing up via the Business Dashboard and completing the profile verification steps.
With the MenaPay Business, member businesses can settle their own exchange rates when determining the amount of MenaCash that corresponds to the local currency they use. They will be able to calculate the value of the amount in MenaCash in their local currencies and receive payment in seconds. Detailed information can be found in the section 6.1.

In order to provide an easy MenaCash purchasing experience to its users, MenaPay Foundation authorizes some enterprises other than itself, which can sell MenaCash. These enterprises are called "Resellers" in the system.
The Reseller Application is designed especially for the MenaCash sales. Enterprises who are entitled to be Resellers and who are listed on the Reseller App can easily conduct MenaCash sales. More information can be found under the section 6.3.

5.4. Mobile & Desktop Payment App (Wallet)

The MenaPay application also has the digital wallet features. Every individual register with their phone number thereby creates a unique wallet. They can add wallets afterwards as they like.

Through their wallets, users can;

- Buy MenaCash from Resellers or the MenaPay Foundation.
- Send /receive MenaCash to/from another user at any time.
- See the Reseller network on a map to choose where to buy MenaCash.
- Shop using the QR code, phone number, barcode or the wallet ID the merchant has provided within seconds. (Detailed information is given under the headline 6.5.)
- See the retrospective transactions report.

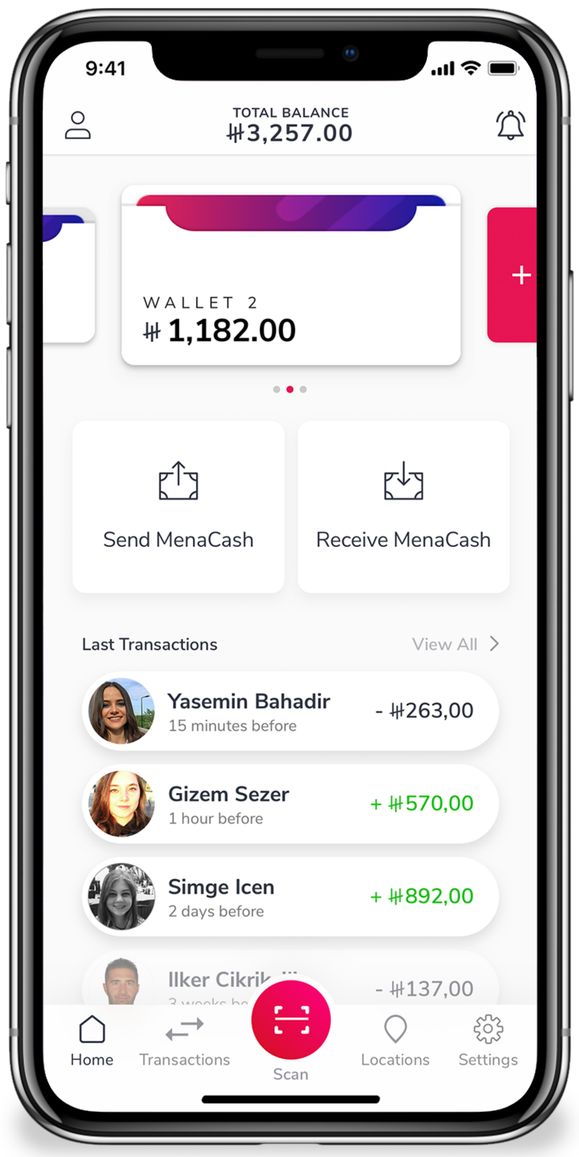


Figure 4: User Wallet

Taking any problems into account, MenaPay Foundation, offers a "Customer Relations" support where customers can easily reach for support next to its actively handled social media accounts.

5.5. MenaPay Card

For the users which do not prefer banking tools such as credit or debit cards, MenaPay offers a prepaid card besides Reseller points. Users will be able to use MenaCash even if there is no Reseller point around.

MenaPay Cards will be purchasable around 50.000 different points after the launch date as March 2019 so that taking place in MenaPay ecosystem will be easier than ever.

Figure 5: MenaPay Card

6. MenaPay EcoSystem

6.1. Merchants

Merchants are the building blocks of the MenaPay ecosystem along with individual users. Enterprises which accept MenaCash payments in return of their service or products are called merchants in the MenaPay system. MenaPay Foundation has readily signed contracts with 50 large establishments. Merchants who register with the platform and start MenaCash acceptances can use advantageous features of MenaPay. MenaPay presents an easy-to-register platform where they can execute their sales operations and keep track of the relevant sales data.

To develop the largest cashless society in the world, MenaPay presents an easy-to-integrate Software Development Kit (SDK). Any seller can accept MenaCash payments after they download and setup the SDK.

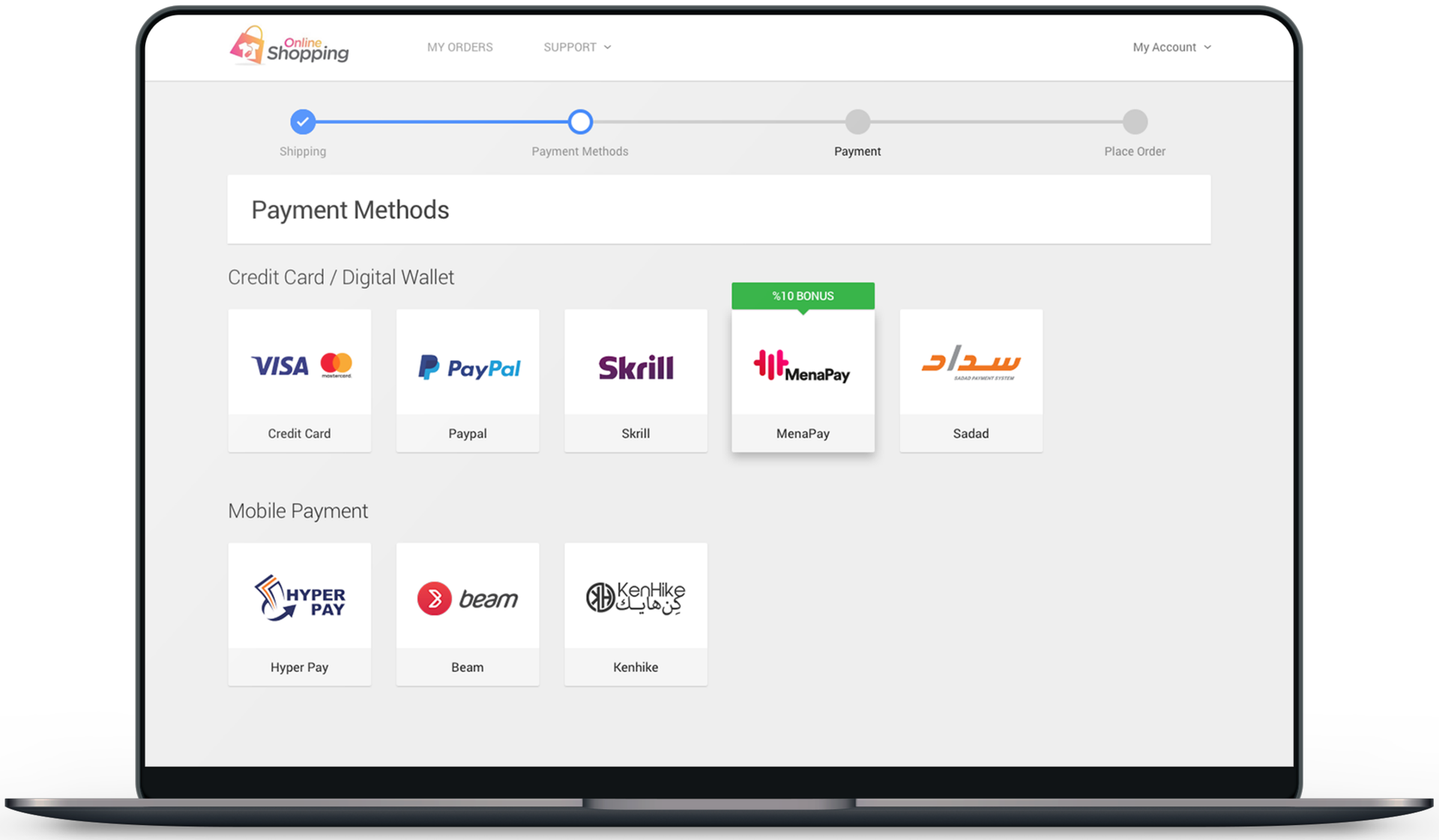


Figure 6: Pay with MenaPay

All merchants can take advantage of the MenaPay payment system. They can accept payments and spend the MenaCash they received as they wish. Merchants who use MenaPay solely as a payment intermediary and whom will not cash out their MenaCash are named "Standard Merchants". Otherwise, it is needed to get an approval for the cash out privilege in terms of Anti Money Laundering processes. When the approval process successfully finalizes, merchants who fulfill the necessary requirements are badged as "Approved Merchants".

6.1.1. Merchant Approval

Every merchant integrated with the MenaPay Platform should submit below documents and get the "Approved Merchant" badge to be able to cash out the MenaCash in their accounts.

- Certificate of incorporation
- Certificate of registered address
- Certificate of shareholders
- Passport copy of the signing director(s)

After the application is received, MenaPay team assesses the applications. If the requirements are met, the merchants are accepted into the MenaPay "Approved Merchant Network".

6.1.2. Merchant and Wallet ID Matching

All merchants and users can add more than one wallet into their applications. Every wallet has a unique ID and they are matched with users. Wallets that are held by merchants are matched with their identities as a company also and are shown to the customer during the payment transaction. This assures the customer of the address he/she is transferring MenaCash to.

MenaPay ID matching process is designed to transfer MenaCash with top security measures. Every user's information is matched with the ones that are kept on the off chain. During every transaction request which comes over the MenaGateway, validity of these informations are confirmed by the user.

During MenaCash transfer, receiving side's app produces a QR code encoding its public key. When the sending side's app scans this QR code, it gets this public key which is enough for performing the transaction.

But to ensure receiver's real identity, sender additionally requests supplementary identity information using receiver's public key. The public key is matched with the identity of the receiver on MenaPay servers and masked identity information is returned to the sender side as identity hints.

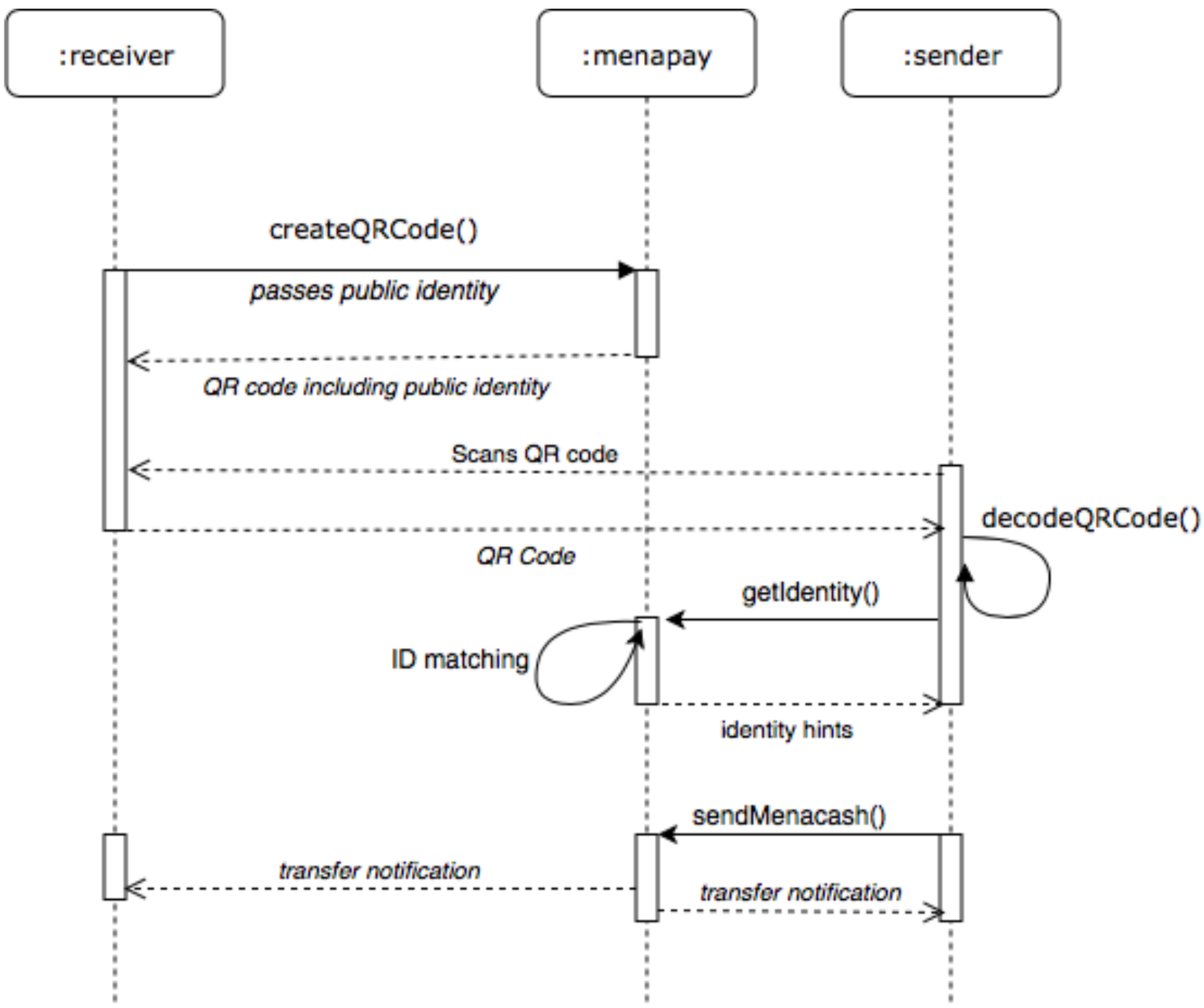


Figure 7: Wallet – ID Matching

6.1.3. Business Application for Merchants

Merchants can take in-store payments as mobile via MenaPay Business Application. This mobile application will be synchronized with merchant's dashboard and merchant can specify exchange rate, refund or check the total sales.

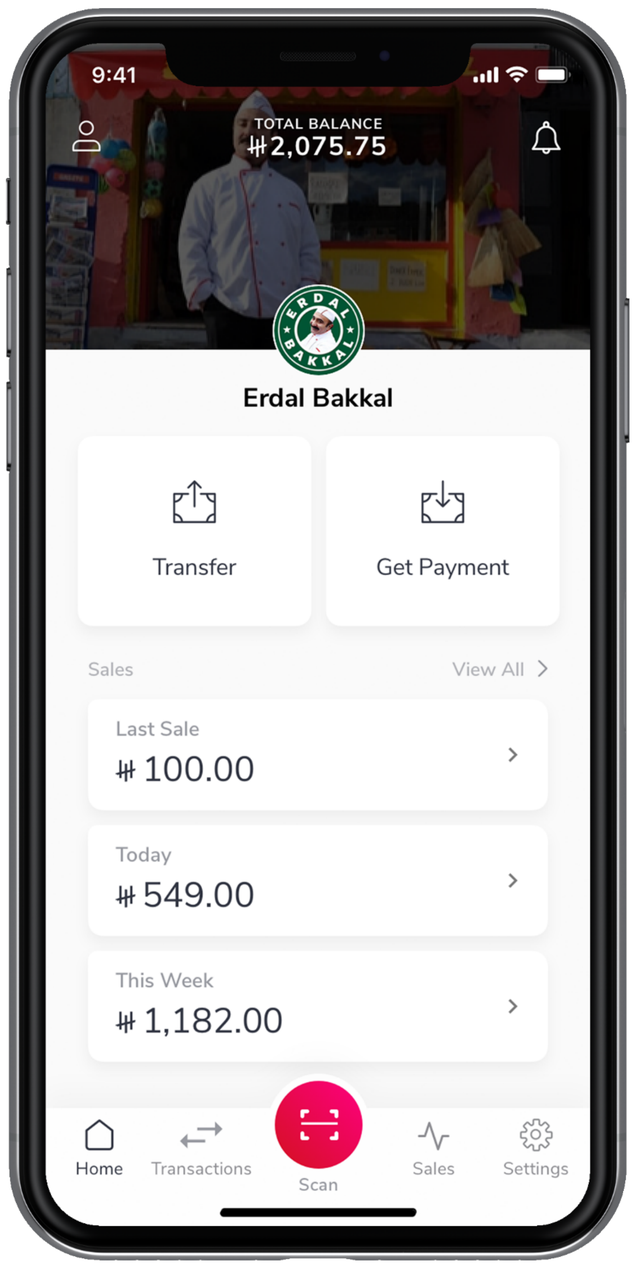


Figure 8: Business Application for Merchants

6.2. Individual Users

Since MenaPay preliminarily focuses on the MENA market, each product of MenaPay is designed to fully meet user habits and expectations of the region. MenaPay users will be able to login the platform with a well-designed fast onboarding process. When the transaction volume is to become more than 100 MenaCash cumulatively with the previous transactions, the user will need to complete the KYC process.

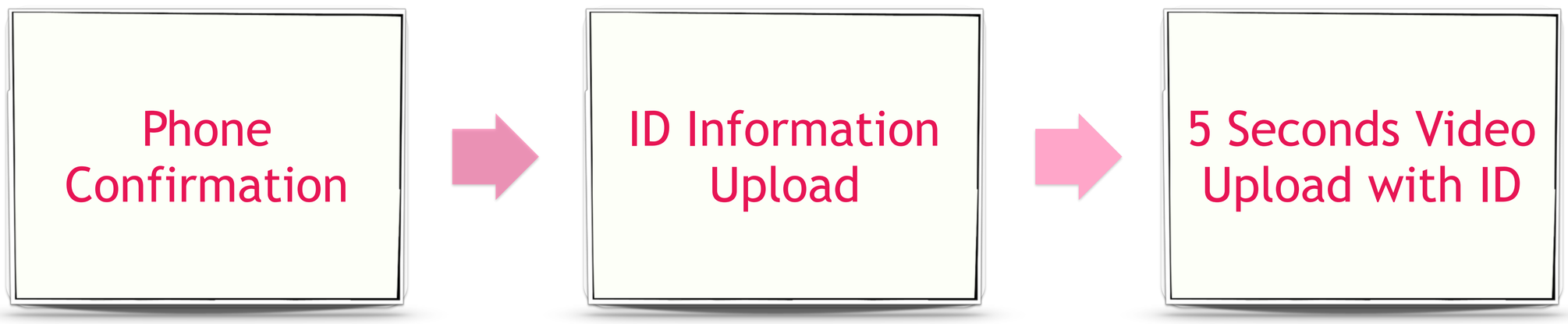
6.2.1. User Approval

The user can sign up to the MenaPay Platform with his/her phone number after downloading the app from app stores or the website www.menapay.io. He/she completes the signup process after entering the verification code sent to his/her phone. Anybody who provides necessary information to MenaPay can become registered to the MenaPay Platform upon confirmation.

The users might use theirpin code during login or request an additional password security as well as activating two-factor authentication feature.

The MenaPay Platform has an age limit of 16 for the use of MenaCash; to become a MenaPay token holder and related MenaPay token attributes the user must be 18 or older. In October 2019, "Parental Control" feature will be added to the MenaPay Platform to enable users under 16 to use the platform safely. Detailed roadmap is given under 8.4.

Above the cumulative 100 MenaCash transaction limit, KYC process is initiated to prevent fraud and fake account possibilities. This process, mentioned in 5.1 in detail, prevents security breaches without compromising transaction speed.



6.3. Reseller Network

Users joining the MenaPay ecosystem should be able to purchase MenaCash with ease. For this purpose, there exists contracted enterprises to sell MenaCash other than the MenaPay Foundation. These establishments are named "MenaCash Resellers" in the ecosystem. Reseller application is designed especially for MenaCash sales.

MenaPay Reseller Network would be the greatest strength of MenaCash in the MENA region. We believe it is crucial for users to reach MenaCash through cash as easily as possible to transfer money into the digital medium and start the digital transformation in this mainly cash using region.

Internet cafes, exchange desks, jewelers, markets, etc. can apply for the reseller status under the condition of providing the necessary documents. Accepted enterprises would be able to add another income channel to their existing business and expand their customer portfolio.

Corporate businesses who apply for the reseller status should fill the application form along with the necessary documents. These documents are listed below;

- A copy of the Certificate of Incorporation
- Registered Name
- Registered Address
- Shareholder List
- Passport or Driving Licence of the Director.

MenaPay Foundation reviews the applications of businesses who want to become a reseller considering attributions such as location, need, prolificacy, customer potential, etc.

Establishments who are accepted in the Reseller Network can;

- Buy MenaCash from the foundation through credit cards or wire transfers.
- Decide the commission rate over their sales and make rate updates on a customer base.
- Share the sales document with the customer which is issued at the time of the sale.
- Track sales records and produce reports over their sales with the Dashboard provided for them.

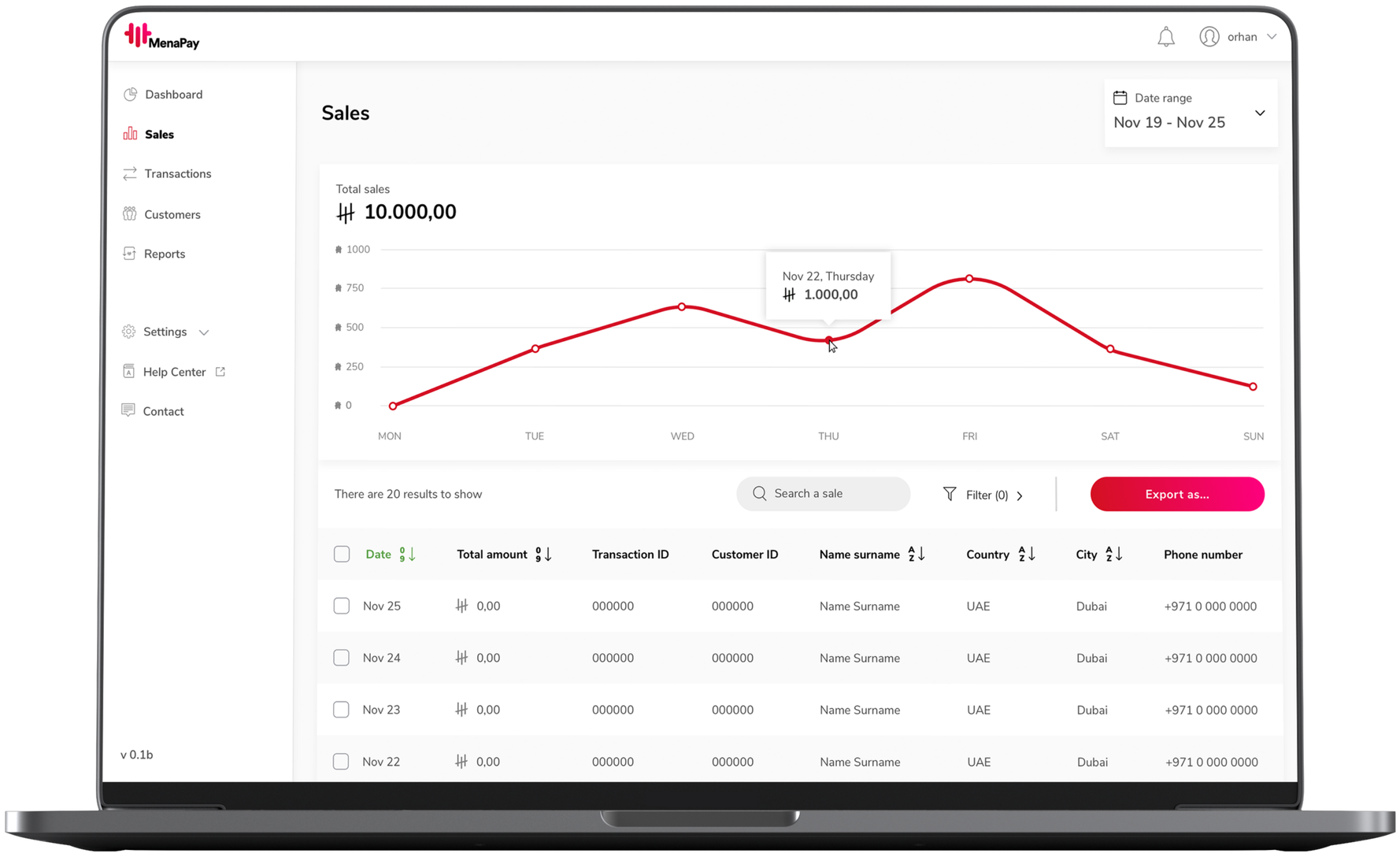


Figure 9: Reseller Dashboard

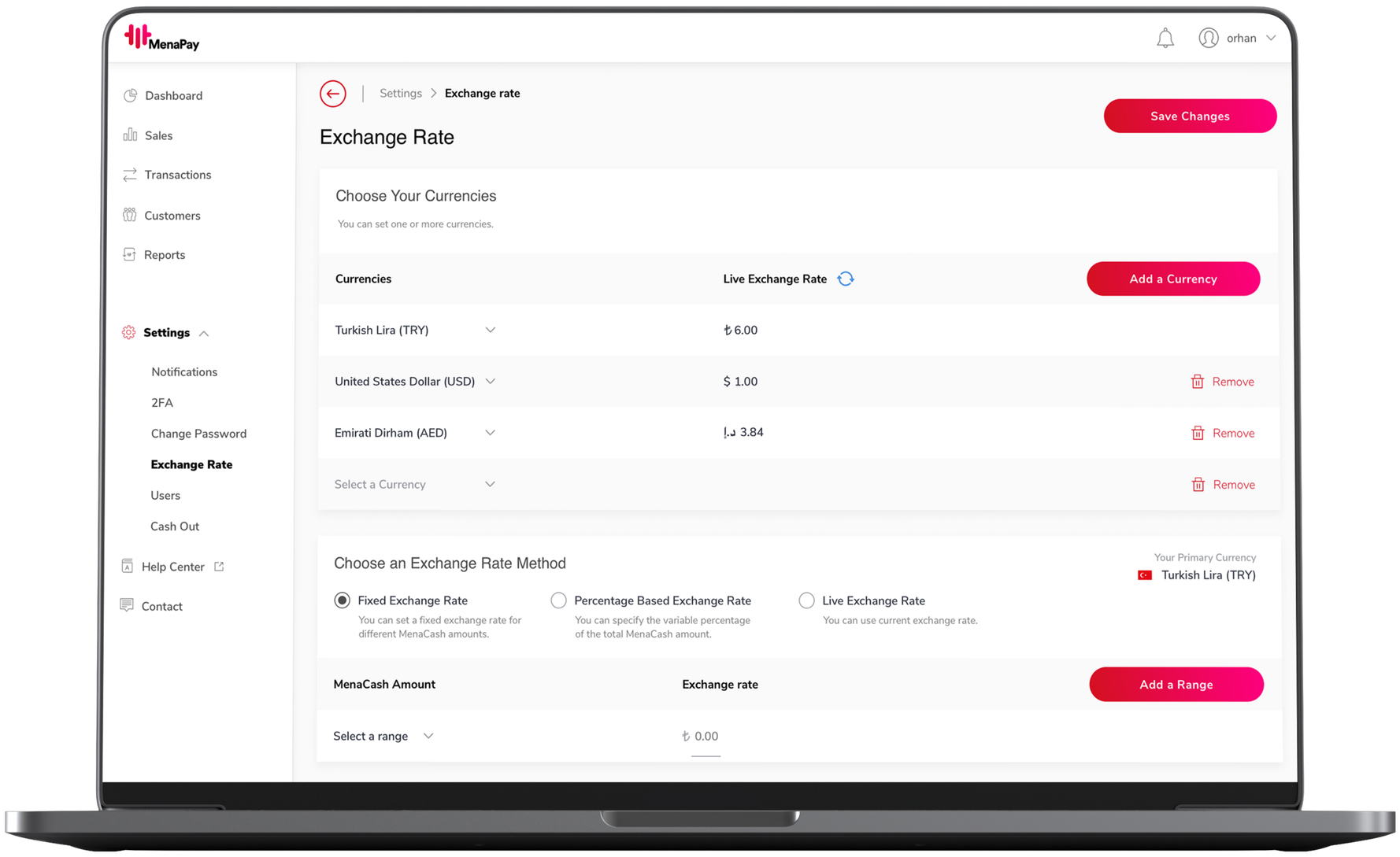


Figure 10: Reseller Dashboard-Commision Rates Screen

MenaPay Foundation, reserves the right to interfere with the exchange rates or service fees that could harm the MenaPay ecosystem.

Users can see the nearest Resellers through the Reseller Network from their Web and mobile applications. They can purchase their MenaCash from these points.

6.4. P2P (Peer to Peer) Transaction

Transactions performed in between the users.

Details of the receiving party (phone number, email, nickname, public key or QR code) are requested from the sending party. Following MenaGateway and the MenaPay Platform approvals the transaction is realized by the user approval.
MenaPay Foundation presents this innovative and fast payment system with lower costs of transaction compared to existing payment methods. MenaPay takes 1% commission for each transaction.

6.5. P2M (Peer To Merchant) Transaction

Transactions made by the customers to the merchants.

During this process, a unique transaction code is produced for every purchase from the merchant. Within this code, there exists information on the purchased product or service and the cost. This code is reflected as a QR code on the merchants' screen. The QR code is scanned by the customer's app and the payment is realized after system approval.

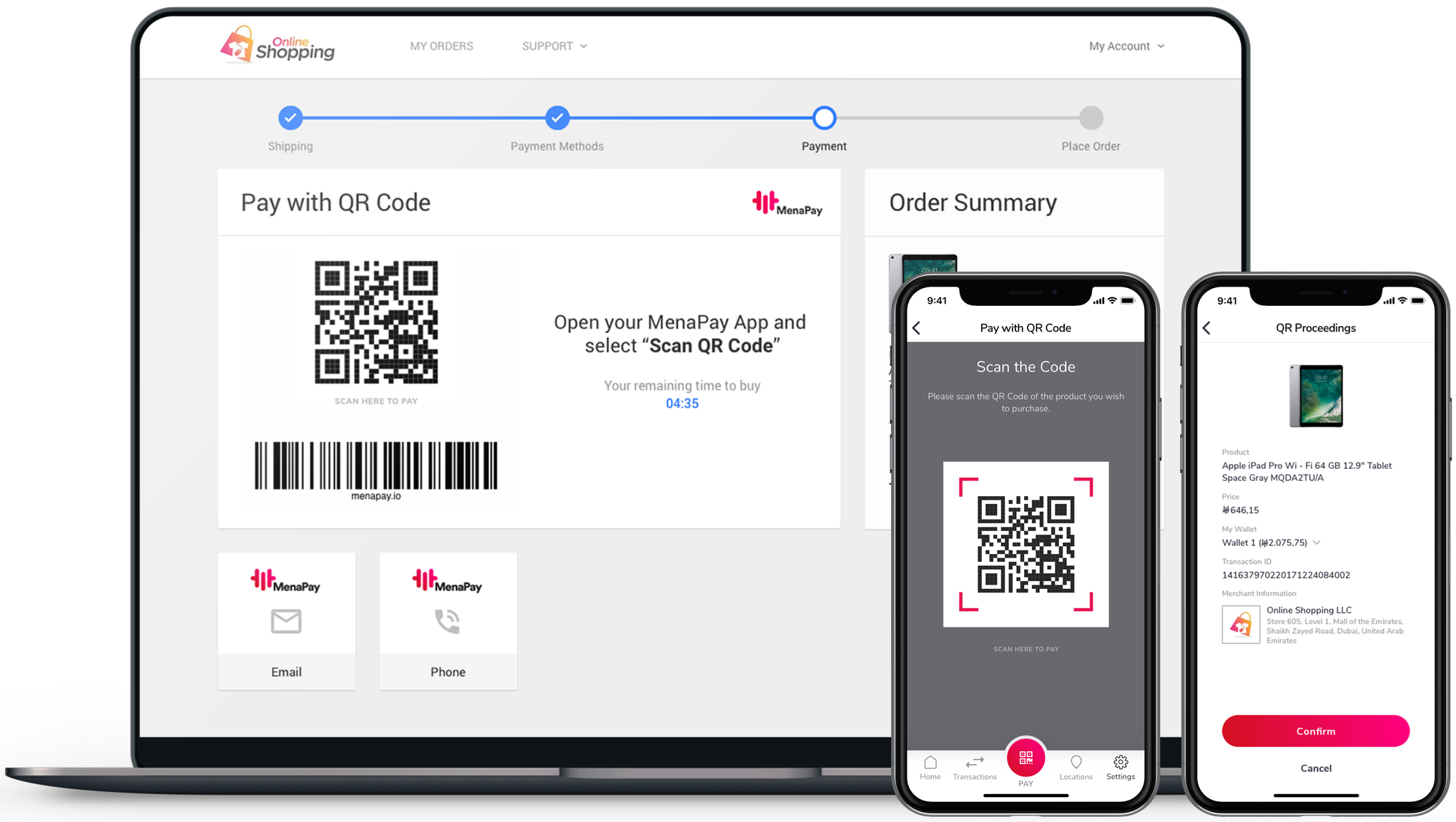


Figure 11: Payment via QR Code

6.6. M2F (Merchant to Foundation) Transaction

MenaCash is easily converted to fiat currency for approved merchants.

As merchants can use the collected MenaCash for their own purchase purposes, they can also join the Approved Merchant Network and cash out from MenaPay Foundation. Cash out requests opened by approved merchants are closed by the foundation on returning the fund, keeping 1 MenaCash = 1 USD equality. The minimum limit for cash out is 1,000 MenaCash. MenaPay Foundation claims 5% commission on average over the amount cashed out. The rights to change the commission rates are reserved by the MenaPay Foundation.

Net US Dollar Received by Merchant = Received MenaCash – Commission Fee (Avr. 5%) – Transaction cost of the traditional financial system

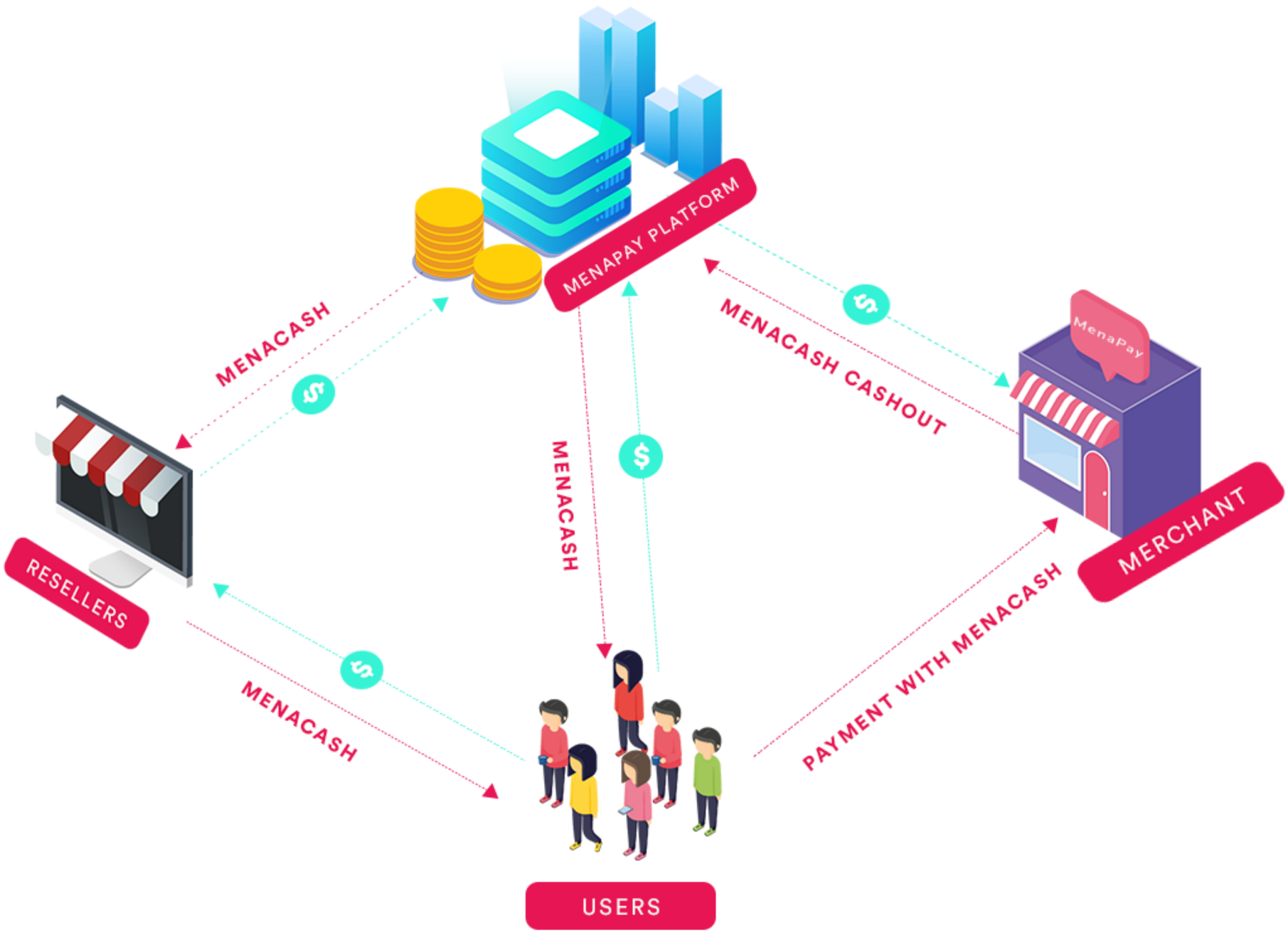


Figure 12: MenaCash Possible Flows

7. Introduction to Technical Design

The problem with public blockchains such as Bitcoin as day-to-day payment systems is that they are not as easy to use as credit cards or cash. You cannot be expected to wait in your favorite coffee shop for half an hour or a few minutes for Bitcoin for your payment transaction to go through. Most blockchain based currencies are slow compared to traditional payment methods.

Both consumer or institutional wise privacy is a problem when a blockchain is considered as a day-to-day payment system. Users, or companies may not want their transactions to occur on a public platform, that is all transactions and payments can be traced publicly. Privacy is a problem (for now) as a payment system on daily basis.

Today payments systems such as Visa have the capacity to handle thousands of transactions per second (TPS). When TPS is considered, most blockchain platforms fall short. Bitcoin can handle 7 TPS, whereas Ethereum can handle 15 TPS.
These limits are probably going to increase in the future with 2nd layer technologies like lightning network, sharding, etc. MenaChain is designed to support over 100s of TPS initially but will be scaling up to support thousands in the following years.

It is important to remember that TPS does not mean a clear explanation of the transaction in terms of speed. Today, while Visa finalizes an entire transaction in 15 seconds in CEMEA (Central Europe, Middle East and Africa) region.[25] MenaPay Platform requires less than 10 seconds to finalize a transaction. The technologhy behind platform makes MenaPay at least %33 faster than current common payment system such credit cards.

7.1. Why MenaPay Chose Ethereum?

MenaPay is utilized on the Ethereum platform using ERC-20 technology which is public, easy-to-use, and one of the biggest and widespread blockchain platforms in the world. Ethereum has the most widespread-use utility tokens. Whether it is stock exchanges or transactions between two dynamics, all operations are held much faster than the existing banking system by the blockchain technology.

Ethereum is a decentralized network of computers with two basic functions. These functions are a blockchain that can record transactions, and a virtual machine that can produce smart contracts.

Thanks to these two functions, Ethereum can support decentralized applications (DApps). These DApps are built on the existing Ethereum blockchain, piggybacking off its underlying technology. In return, Ethereum charges developers for the computing power in their network, which can only be paid in Ether, the only inter-platform currency.

Depending on its purpose, DAPPs might create ERC-20 tokens to function as a currency, a share in the company, for points in a loyalty program, or even proof of ownership, say, of an amount of gold or the deed to a house.

A smart contract is a computer protocol on the blockchain which technically orders projects. In our use, smart contracts are the unchangeable agreements on how transactions are approved according to the rules written within them. They are responsible for the autonomous ruling of the system. Smart contracts basically act as objective escrow mechanisms.

Since smart contracts can be written to define rules for token uses and for decision making processes, a central authority is disintermediated.
The tokens follow a list of standards so that they can be shared, exchanged for other tokens, or transferred to a crypto-wallet.

Ethereum community has created these standards with three optional rules, and six mandatory ones: [15]

Optional

- Token Name
- Symbol
- Decimal (up to 18)

Mandatory

- TotalSupply
- Balance Of
- Transfer
- TransferFrom
- Approve
- Allowance

7.2. MenaCash Technical Details

7.2.1. Permissioned Blockchain: MenaChain

MenaChain is the blockchain platform designed to build MenaPay's scalable payment system. MenaCash is the default and only cryptocurrency of MenaChain. MenaCash is a stable coin backed by USD. All created MenaCash will be backed where
1 MenaCash = 1 USD.

MenaChain is designed to support over 100s of TPS initially but it will be scaled up to support thousands in the following years via parallel blockchain. Parallel blockchain structure creates basically as an alternative way to overlocked blockchain. The important part for speed of transactions is transaction finality which measures how long one user must wait for the confirmation of transaction from the starting moment. After at least 2 confirmation the transaction is recorded on the blockchain and. This is a significant property for a business, because waiting an hour on a blockchain network can have significant repercussions for businesses.[24] In MenaPay, time for transaction finality is measured in seconds; not minutes, hours, or days. That means user will not spend longer time than current payment process with any common credit/debit card or cash usage.

MenaChain is decentralized and borderless. There are no leaders, miners or coordinators with special influence towards consensus. Every node is equal. MenaChain is designed as a permissioned blockchain platform, therefore an identity authentication service is required. Rather than providing unknown entities like in open networks participants are known, but all the participants can hide sender, receiver addresses as well as the amount that is being transferred from other merchants on the chain. MenaChain also supports multi signature wallets for its corporate users. The transactions on the chain can be configured to require the signatures of multiple users when the use case calls for it.

MenaChain built on standalone installation of Stellar nodes. Since approval of MenaPay Foundation is needed in order to join the MenaChain network as a node, all nodes assumed safe participating the MenaChain Network. MenaChain platform will start with a small number of nodes during the testing phase. Then it will expand to have nodes run by approved organizations which meet certain requirements. The real-life identities of all the participants are known. These participants have a common goal—they want to do business together—but they do not necessarily trust or like each other. Nevertheless, knowing the identities of the participants allows a permissioned blockchain to use the SCP (Stellar Consensus Protocol), a federated Byzantine Algorithm.

7.2.1.1. Federated Byzantine Agreement / Stellar Consensus Protocol (SCP)

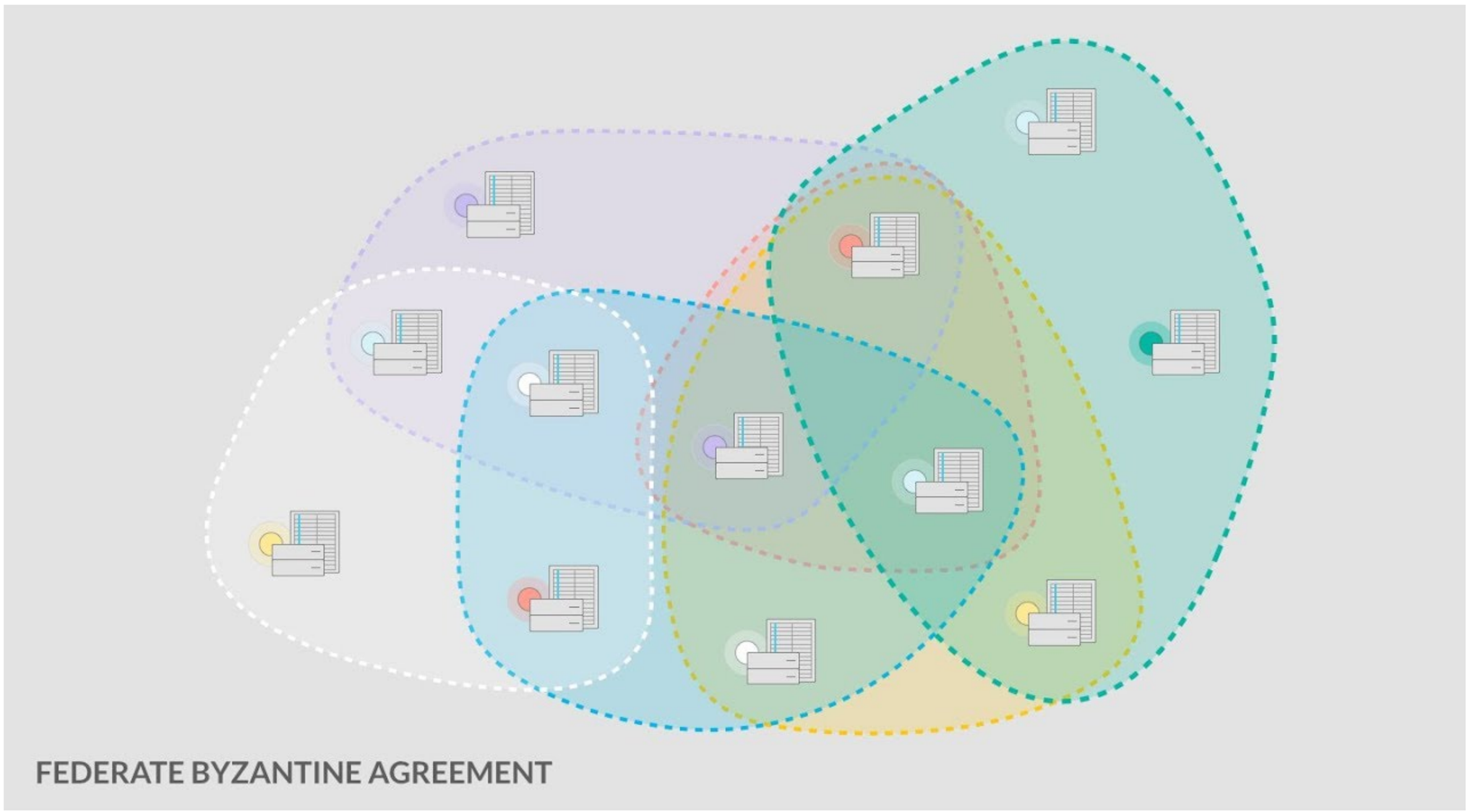


Figure 13: Federate Byzantine Agreement

Consensus means achieving agreement across validators in a network. The validators must each agree on a transaction in a network and the network must also tolerate faulty or incorrect messages from misbehaving validators.

There are several protocols in achieving consensus in a network, such as Bitcoin's Proof of Work, where the consensus mechanism relies on the computing power of the nodes competing with each other to solve cryptographic puzzles, and thereby reach consensus. Another widely known practical consensus mechanism is Proof of Stake, where nodes are not associated with computing powers and electricity consumption, but instead the creator of the next block is chosen via various combinations of random selections. Odds of block discoveries are in parallel with the amount held in individuals' wallets. Simple selection by account balance would result in undesirable centralization, as the single richest member would have a permanent advantage.

Federated Byzantine Agreement (FBA) was pioneered by Ripple and refined by Stellar. In FBA, each participant knows of others it considers important. It waits for the vast majority of those others to agree on any transaction before considering the transaction settled. In turn, those important participants do not agree to the transaction until the participants that they consider important agree as well, and so on. Eventually, enough of the network accepts a transaction that it becomes infeasible for an attacker to roll it back.

Stellar Consensus Protocol is derived from the concept of Byzantine Agreement that functions as a provably safe construction of Federated Byzantine Agreement. It achieves robustness through quorum slices, since all the nodes in the network are assumed safe and trusted. Individual trust decisions made by each node that together determine system level quorums.

7.2.1.2. Quorum and Quorum Slices

A quorum is the minimum number of votes that a distributed transaction has to obtain in order to be allowed to perform an operation in a distributed system. In a distributed system, a transaction could be executing its operations on multiple nodes. Since distributed transactions are required to be atomic, the transaction must have the same fate at every node, even when nodes are partitioned and the partitions may not be able to communicate with each other. This is where a quorum-based technique comes in. The fundamental idea is that a transaction is executed if the majority of nodes vote to execute it.

Traditional non-federated Byzantine agreements require every node to be involved with every transaction to reach a quorum. This is a waste of time and resources. In federated Byzantine Agreement, a quorum slice is the subset of a quorum convincing one particular node of agreement. A node can rely on multiple set of nodes asserting statements. Each node chooses one or more quorum slices, which are sets of nodes including the node itself, resulting in a more federated and decentralized environment. A quorum slice represents a sufficient set of peers that the node selecting the quorum slice believes the slice collectively speak for the whole network.

Compared to decentralized proof of-work and proof-of-stake schemes, SCP has modest computing and financial requirements. SCP works through the use of quorums, which are set of nodes used to reach an agreement. This gives the ability to process larger number of transactions quickly and cheaply since there is no expansive mining operation involved.

SCP provide lots of advantages such as decentralized control, low latency, flexible trust and asymptotic security. MenaChain mainly enjoys, low latency, flexible security and asymptotic security. Nodes can reach consensus in a couple of seconds which is normal human expectation for a web or payment transaction. Safety rests on digital signatures and hash families whose parameters can realistically be tuned to protect against adversaries with unimaginably vast computing power. Users also have freedom to trust any parties that they see fit.

The reason that MenaPay choose SCP is Compared to decentralized proof of-work and proof-of-stake schemes, SCP has modest computing and financial requirements. SCP works through the use of quorums, which are set of nodes used to reach an agreement. This gives the ability to process larger number of transactions quickly and cheaply since there is no expensive mining operation involved.

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There is 1% fee for each MenaCash transaction between individual users. The fees will be gathered in a special decentralized address.

MenaPay secures its MenaCash transfers and intakes with the MenaGateway technology. MenaGateway technology again offers a transparent substructure for both MenaPay users and the merchants.

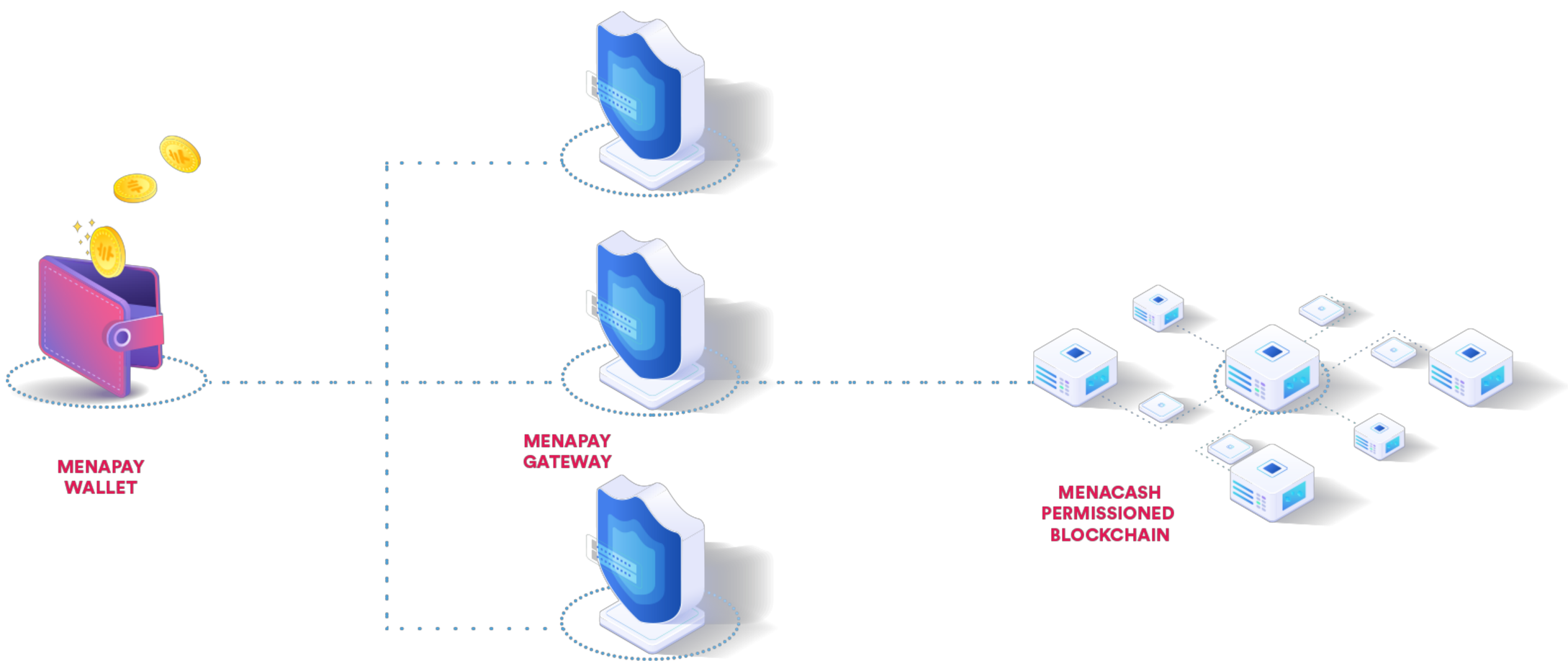


Figure 14: MenaPay Permissioned Blockchain

7.3. What is Green Mining?

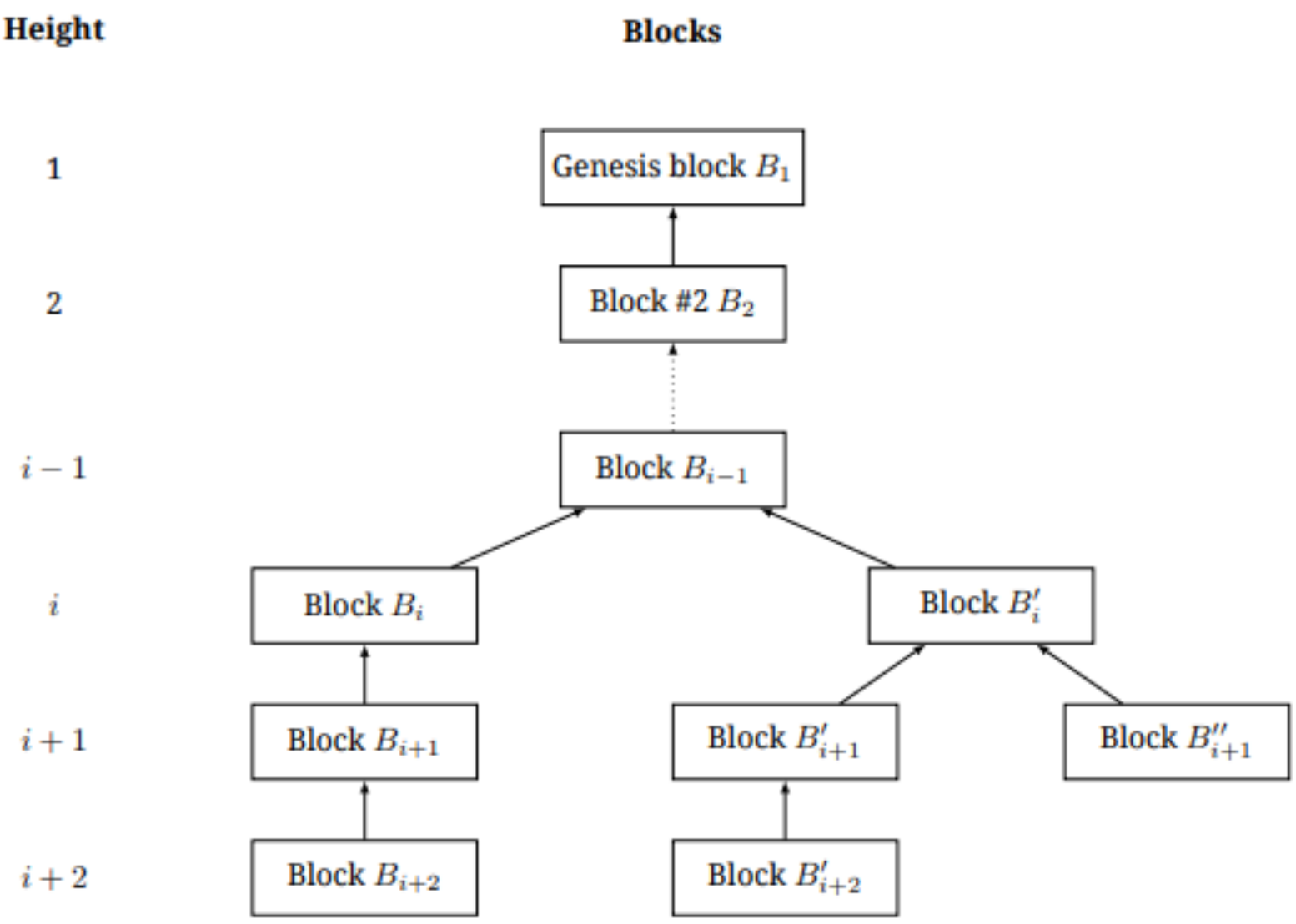
In order to understand the mining system of MenaPay let's take a look at the blockchain technology first.

Theory: A cryptocurrency system such as Bitcoin possesses state information enabling users to derive their balances. For Bitcoin, the system state is a collection of unspent transaction outputs (UTXOs), with each output cryptographically locked, requiring the user to provide a proof of ownership to spend a UTXO. Instead of explicitly storing the balance, Bitcoin and other digital currencies maintain a complete history of users' transactions, which can be used to infer the current state and all past states of the system. Transactions represent atomic changes to the system state. Transactions are grouped in blocks; blocks form an ordered collection called the blockchain. To organize the blockchain, each block contains a reference to the previous one. The first block in the chain is the genesis block; it does not have a previous block and is usually hardcoded into the protocol. New blocks are discovered according the specified set of rules set by the cryptocurrency protocol.

An important function of these rules is to protect against attacks on the blockchain and to reach consensus in case multiple instances of the blockchain appear. Proof of work and proof of stake refer to two kinds of restrictions on valid blocks and imply two different consensus mechanisms.

Definition 1: We say that a user works on top of block B if he attempts to discover a block that references B as the previous block. Note that B uniquely determines the entire blockchain so we can denote a blockchain with its latest block and say that blocks are discovered on top of blockchain B. A cryptocurrency system can be viewed as a distributed database, with copies of the database belonging to infrastructure providers for the currency communicating via a peer-to-peer Internet protocol. In terms of the CAP (consistency, availability and partition-tolerance) theorem, cryptocurrency systems are available (every request receives a response) and partition- tolerant (the service still performs even if some nodes fail) but are not consistent.
From time to time, different users of the system will see different states of the system as current. In some cases, the inconsistency corresponds to the situation when a new block has been discovered but has not yet been relayed to all users of the system. To obtain eventual consistency, a sound consensus protocol should impose the following requirement:

Condition 1: A user who discovered a block should be encouraged to broadcast it over the network immediately and not hold it for himself. In other cases, system inconsistency is caused by the blockchain splitting into several branches. There are various causes of blockchain branching (forking):



- Two users discover new blocks at about the same time
- An attacker attempts to reverse completed transactions by forking the blockchain

In order to discourage deliberate branching, a sound consensus protocol should add the following requirement:

Condition 2: A user should be discouraged from discovering blocks on top of intermediate chains. More precisely, if there is a known block B' referencing the block B, the user should have no reason to build on B. With the situation depicted in Figure 1, only three blocks can be used as a base for extending the blockchain according to Conditions 1–2: Bi+2, B" i+1, and B' i+2. There are further restrictions imposed on valid blockchains; in most cases, these conditions amount to selecting a chain with the maximum number of blocks (which excludes B" i+1 from blocks a rational user could build on his own chain). The goal of consensus rules is to assure selection of a single chain; however, it is usually the case that some rules depend on the user. E.g., if there are multiple Bitcoin blockchains with the same length, users should select the one they received first. Thus, there is no way to enforce the selection of the same blockchain for all users (as it is very difficult or impossible to ensure that user-specific rules are followed). In order for the system to be eventually consistent, its consensus protocol should satisfy the following third requirement:

Condition 3: Consensus rules should be constructed in a way that results in resolving blockchain forks, i.e. one of the competing branches should take over all other branches in a reasonable amount of time. We will use separate terms for discovering blocks using proof of work and proof of stake algorithms:

Definition 2: The process of solving a computational challenge imposed by a proof of work protocol is called (block) mining.

Proof of Work (PoW): PoW systems need computing power and electric consumption to approve the operations on the network. (Ex: Bitcoin)
Consider Bitcoin as an example of a cryptocurrency systems secured with a proof of work algorithm. Each block in Bitcoin consists of two parts:

- Block header of key parameters, including block creation time, reference to the previous block and the Merkle tree root of the block of transactions
- Block list of transactions.

To reference a specific block, its header is hashed twice with the SHA-256 function; the resulting integer value belongs to the interval [0, 2256 − 1].

To account for different possible implementations, we will use a generic hashing function hash (·) with a variable number of arguments and range [0, M]. For example, arguments of the function can be treated as binary strings and merged together to form a single argument that can be passed to the SHA-256 hashing function.

The block reference is used in the proof of work protocol; in order for a block to be considered valid, its reference must not exceed a certain threshold;

$$hash(B) \leqslant M/D, \ (1)$$

where $D \in [1, M]$ is the target difficulty. There is no known way to find B satisfying (1) other than iterating through all possible variables in the block header repeatedly. The higher the value of D, the more iterations are needed to find a valid block; the expected number of operations is exactly D.

The time period T(r) for a miner with hardware capable of performing r operations per second to find a valid block is distributed exponentially with the rate r/D:

$$P\{T(r) \leqslant t\} = 1 - exp(-rt/D)$$

Consider n Bitcoin miners with hash rates r1, r2, …, rn. The period of time to find a block T is equal to the minimum value of random variables T(ri) assuming that the miner publishes a found block and it reaches other miners immediately. According to the properties of the exponential distribution, T is also distributed exponentially:

$$P\{T \stackrel{\text{def}}{=} \min(T_1, \ldots, T_n) \leqslant t\} = 1 - \exp\Big(-\frac{t}{D}\sum_{i=1}^{n} r_i\Big);$$

$$P\{T = T_i\} = \frac{r_i}{\sum_{j=1}^{n} r_j}.$$

The last equation shows that the mining is fair: a miner with a share of mining power p has the same probability p to solve a block before other miners. It can be shown that proof of work as used in Bitcoin satisfies Conditions 1–3.

Proof of Stake (PoS): On the contrary to Proof of. Work (PoW), Proof of Stake networks are not associated with computing powers and electricity consumption. Odds of block discoveries are in parallel with the amount held in individuals' wallets.

In proof of stake algorithms, inequality (1) is modified to depend on the user's ownership of the particular PoS protocol cryptocurrency and not on block properties. Consider a user with address A and balance bal(A). A commonly used proof of stake algorithm uses a condition as

$$hash(hash(Bprev), A, t) \leqslant bal(A)M/D, \ (2)$$

where

- B*prev* denotes the block the user is building on.
- t is the current UTC timestamp.

For various reasons, some cryptocurrencies use modified versions of (2) which we discuss in the corresponding sections.

Unlike (1), the only variable that the user can change is the timestamp t in the left part of equation (2). The address balance is locked by the protocol; e.g., the protocol may calculate the balance based on funds that did not move for a day. Alternatively, a PoS cryptocurrency may use unspent transaction outputs as Bitcoin does; in this case, the balance is naturally locked. A proof of stake protocol puts restrictions on possible values of t. For example, if t must not differ from the UTC time on network nodes by more than an hour, then a user can attempt no more than 7200 values of t. Thus, there are no expensive computations involved in proof of stake.

Together with an address A and a timestamp t satisfying (2), a user must provide a proof of ownership of the address. To achieve this, the user can sign the newly minted block with his signature; in order to produce a valid signature, one must have a Private Key corresponding to the address A.

The time to find a block for address A is exponentially distributed with rate bal(A)/D, the (2) implementation of proof of stake is fair: the probability to generate a valid block is equal to the ratio of user's balance of funds to the total amount of currency in circulation. The time to find a block for the entire network is distributed exponentially with rate ∑ a bal(a)/D.

Thus, if the monetary supply of the currency ∑ a bal(a) is fixed or grows at a predictable rate, the difficulty D should be known in advance: D = 1 Tex ∑ a bal(a), with Tex denoting the expected time between blocks. In practice, D needs to be adjusted based on recent blocks because not all currency owners participate in block minting.[16]

7.4. Innovative Reward System by MenaPay Green Mining

MenaPay introduces 2 approach via Green Mining as explained below:

7.4.1. MenaPay Token Chance for Each P2M Transaction

First one comes with the chance of earning MenaPay Token. Each individual who uses the MenaCash for the transactions to the merchants (Peer to Merchant transaction - P2M) has a chance of getting MenaPay Token as a reward via the system calls Proof of MenaCash Transaction (PoMT). When a transaction happens between a user and a merchant; users qualify for a chance to earn MenaPay Token regarding the following formula:

V_m = Total value to be divided between participants for month m.

k_m = Number of participants in month m.

s_{im} = Total amount of share that participant I receives in month m.

x_{im} = Share coefficient of participant I in month m.

y_{inm} = Value of nth transaction by participant I in month m.

z_{inm} = Random number, $z_{inm} \in [0,1]$ and z_{inm} can have a different probability distribution function every month.

F = Cumulative distribution function for transactions. Returns a constant number for each transaction depending on its value.

$$\delta(y_{inm}) = \begin{cases} 1, if\ F(y_{inm}) \geq z_{inm} \\ 0, \qquad \text{otherwise} \end{cases}$$

$$x_{im} = \sum_{n} \delta(y_{inm}), \forall im$$

$$s_{im} = \frac{x_{im}}{\sum_{i=1}^{k_m} x_{im}} V_m, \forall m$$

As a major revolution, the reward is independent from the volume of each transaction and reward make the user a MenaPay community members even if they had never purchased a MenaPay Token before.

7.4.2. Staking Model for MenaPay Token Holders

Second and the most reformist way to generate additional revenue apart from the price increasing is staking the MenaPay Tokens.

Since Menapay Platform is a nonprofit organization it must use majority of its revenue to fill Green Mining reserve. This amount calculated as 75% of Menapay Platform's revenue and will be used to buy MenaPay Tokens from the exchanges in order to feed Green Mining pool.

It is creating a new standard in the crypto industry for the level of participatory returns, beyond the regular incentives for users and investors.

Each staked MenaPay Token is considered as a mining token and has chance to win an additional token based on the smart contract designed by the criteria mentioned below;

- Total # of tokens staked on daily basis

- Total # of tokens in the green mining reserve

The users who stake their MenaPay Tokens will have right to earn tokens from Green Mining pool according to the number of staked tokens. In order to take advantage of this model, user must stake minimum 5.000 MenaPay Token with the minimum time limit as 30 days. Users who decided to get back their tokens before the minimum period may not take any share from the Green Mining reserve.
Only staked tokens holded in the native MenaPay wallet or MenaPay payment application will be considered.

As a summary; staking income by MenaPay tokens will be distributed on the (N+30). day where N is the first day of staking for the individual.

It is important to highlight that MenaPay Token is a utility token since MenaChain Solutions DWC - LLC does not issue dividends and/or voting rights to the token holders. MenaPay Foundation will distributeMenaPay Tokens from Green Mining reserve with holders according to the amount of their staked MenaPay Token in their wallets as mentioned above. MenaPay Foundation keeps the right to adjust the model according to the needs of the market and community.

7.5. Security

Today, existing payment systems and solutions are open to data breaches, hacks, malignant uses. According to IBM, in 2016 data breaches have increased by 937% and have reached 200M financial service records with respect to the previous year.[17]

Financial services spend multibillion US dollars to prevent this kind of malicious cases. Another control mechanism is added to the system for each added control mechanism to inhibit the added control mechanism.This process is an endless chain reaction which is reflected as inefficient time and money on both internal processes of financial institutions and user experience. In the technology environment we live in, this system is still used while it has continuously given deficits which has ended with great amounts of labor and money thefts. The seven-year fraud which has reached a $81M volume in India is an example from hundreds.[18]

For credit card purchases, mostly the information on the card is sufficient. A card left on the table is open to be used outside of the owner's knowledge. MenaPay is developed with 2FA, payment passwords or approval processes considering this kind of possibilities.

Every transaction step is written in a block on the blockchain and MenaPay, which is on a permissioned blockchain, keeps records of these transactions. Records cannot be tampered with, since the blockchain is fully closed to outside interventions.

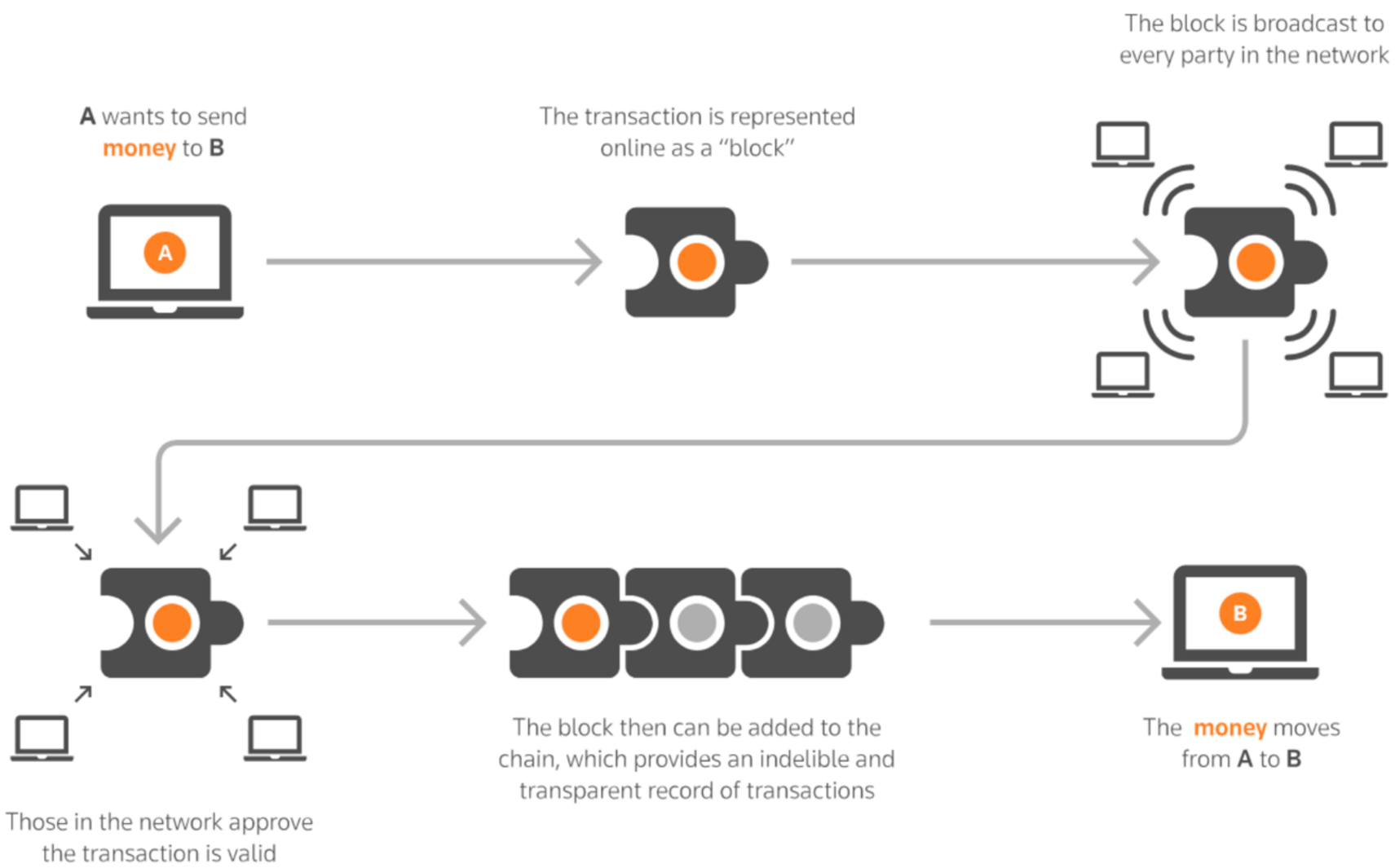


Figure 15: Transaction Steps on Blockchain

MenaPay uses technology to create an innovative and maximum-safety-platform against below possible safety problem scenarios;

- Someone else obtaining the private key:

The private key belonging to the user and the password the user enters to login MenaPay is encrypted together. Algorithms which encrypt these are tested so that third parties cannot possibly decrypt the key and password combination.

- Attacks on MenaGateway:

We will request a MenaGateway over HTTPS, which will prevent DNS Attacks, DDoS Attacks, SSL certificate attacks, etc. on the server side.

- 3rd Party integrations:

All libraries and SDKs used within the application are controlled by MenaPay developers. Only the versions which have safety approvals exist on the platform.

- 2FA login:

2 Factor Authentication is a security process where two methods of identification are needed. The password and the special code produced by the identification readily embedded in your application forms the two steps of the process.

- Mnemonic phrases are used:

We use 16-word phrases for retrieval of accounts in case of forgotten passwords. Users will keep their 16-word auxiliary passwords elsewhere which are given during the sign-up period.

What is Mnemonic Phrase?

Mnemonic phrase is the name given to the 16-word password which enables users to retrieve their wallets in case of password loses. This 16-word password is unique for every user and shared during the signup process.

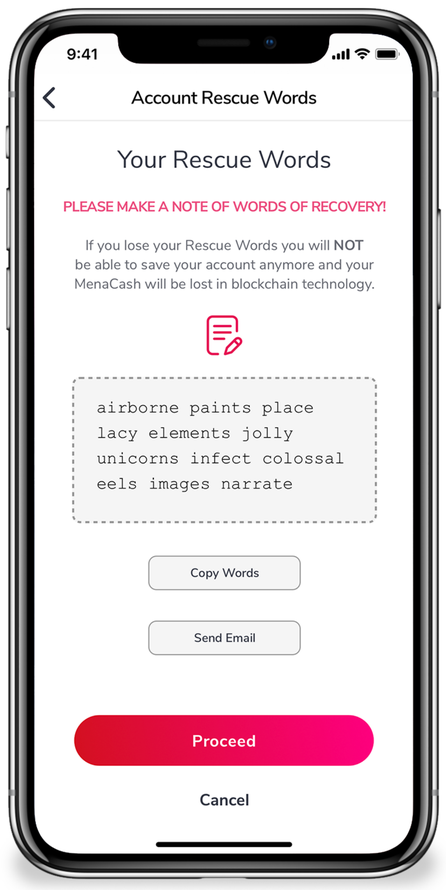


Figure 16: Mnemonic Phrase Screen

- Detection of Private Keys:

Private keys are encrypted within the application and are only decrypted during transactions.

- Payment/transfer approval:

Users will be able to see transaction summaries including the counter party and amount information at the last step of the payment/transfer so that they can pay safely and transparently.

- Except private keys, 256-bit Advanced Encryption Standard will be used for the data within the application.

- In cases of MenaGateway use, different data centers will be assigned regarding any possible technical problems that might occur in the existing datacenter. If such problems occur, CDN service will be used to direct traffic to the other data
- centers. This will ensure an uninterrupted user experience.

All users, merchants and resellers who reach an accumulated process volume of 100 MenaCash are subject to a detailed KYC process in order to prevent fraud and fake accounts. This process is told in detail under 5.1 and doesn't compromise speed while preventing security breaches.

MenaPay, presents a permissioned blockchain cleared from attack possibilities rather than a public blockchain which are usually under attack at 51%.

MenaPay is not responsible for the theft of information from individual users from their own devices. This situation is under user's own risk.

8. Business

We're building the MenaPay Platform in an untapped region within the fintech industry with the power of blockchain technology.

One of the other reasons why MenaPay focuses on MENA is the power of well networked founders and investors who are highly reputable and well known in the region. MENA will be a very strong "hometown" to grow fast, dominate as a first mover and then move to the global scenery.

8.1. How to Develop the Most Commonly Used Cryptocurrency

MenaPay brings a first-time solution for crypto currencies to be ease and practical in daily life. Such a practical and robust solution will naturally attain Top 10 ranking by market cap.

Today, current steps of 2 commonly used payment systems in the MENA region is mostly like below:

MenaPay aims to become the most commonly used payment platform by replacing the banks with Resellers and/or MenaPay Foundation itself in a transaction process.

So instead of this flow which requires bulk of bureaucracy to get in;

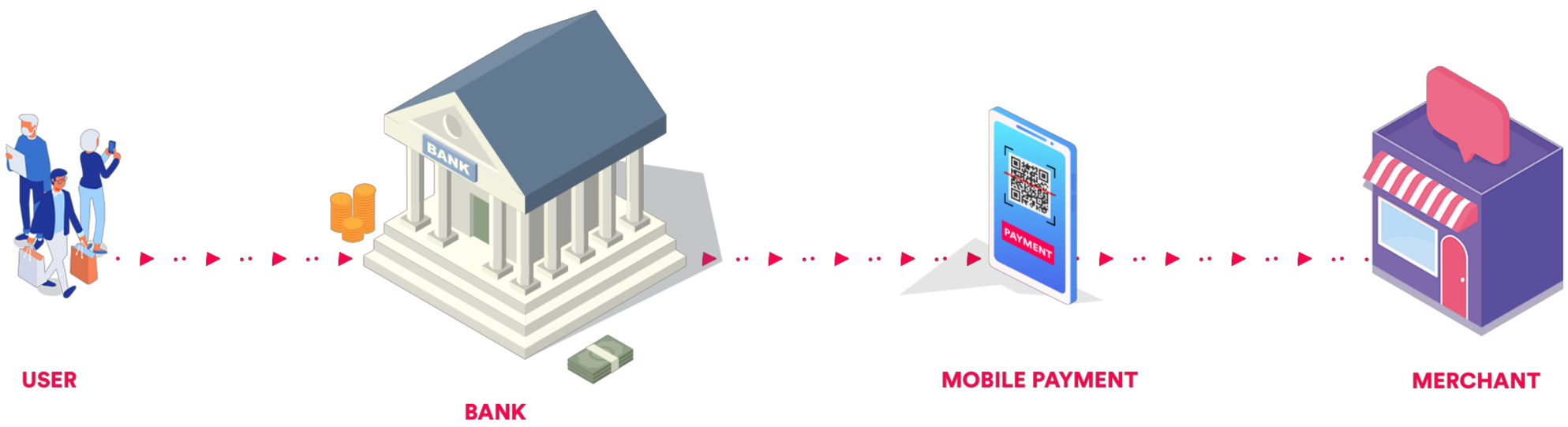


Figure 17: Current Payment Steps

MenaPay offers below process by replacing the banks with resellers:

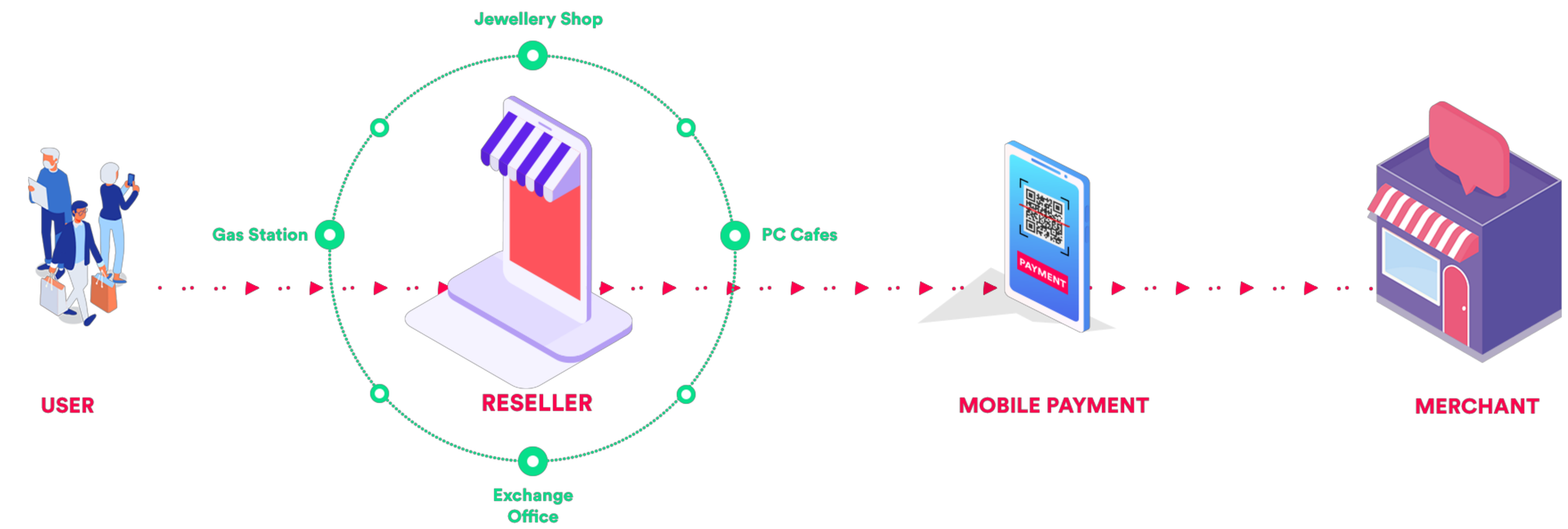


Figure 18: Payment Steps with MenaPay

If you look at the leaders of technology which disrupted conventional ways, one of the most common specialty of them is being distributed. Airbnb distributed the accommodations, Uber distributed the vehicles and any online market place website distributed one store to hundreds of them.

Our major strategy is to distribute one single money source (bank) to hundreds of them (Resellers) for the MenaPay users. This way comes with the chance of defaecating from whole bulky requirements of traditional payment system which includes banks. Distribution method will work easier than ever with the power of decentralization on blockchain technology. Besides this method, integrating merchants starting from the ones which has biggest customer databases will bring millions of users in a short period of time to the MenaPay Platform.

MenaPay follows a certain plan for the exponential growth in the region with being data driven, adaptive and solution-oriented. MenaPay will follow the channels below for marketing and business development purposes;

- Discount on premium merchants for MenaPay users (*Discount amount will be covered by MenaPay Foundation*)
- Very low commission offers to merchants compared to current payment gateways
- Significant online and offline marketing actions
- Data oriented performance marketing
- Influencer marketing
- Social media channels
- Offline events and organizations
- Regional partnerships with brands
- Bounty & referral program
- Media Relations, PR
- Business development team located in UAE, KSA, Turkey and Bahrain
- Business network of the founders and investors

MenaPay's most important customer segments are merchants and the individual users. Therefore, its marketing strategy comes in two steps; reaching merchants and acquiring users.

When it comes to merchants, we have already started to make deals with merchants from the region, using our previous experience and network. Currently, we managed to make deals with 50 merchants from the region. With the aim of reaching 1.000 merchants within a year, we will build a two-way communication with our potential and existing merchants using a well-designed, data-driven, problem solving B2B sales strategy to create a sustainable and satisfied ecosystem.

We have designed a simple and fast user interface in our product, so users could easily get used to the system. User will have 10 different language options including Arabic, English, Turkish and so on. We have built a strong digital marketing strategy for our social media channels which we will be fully and constantly active to connect and communicate with our community.

To fully understand the culture and the needs of the region, we will build an experienced, strong sales team to get in touch with the merchants and resellers in the field. As we set our purpose to become the most commonly used cryptocurrency of MENA, MenaPay will spread effectively in the region.

MenaPay will gladly share tokens to make sure that they have privileges in the community as discounts, priorities, private events etc. 10% of tokens separated for bounties and airdrops which is equal ratio for team members and founders.

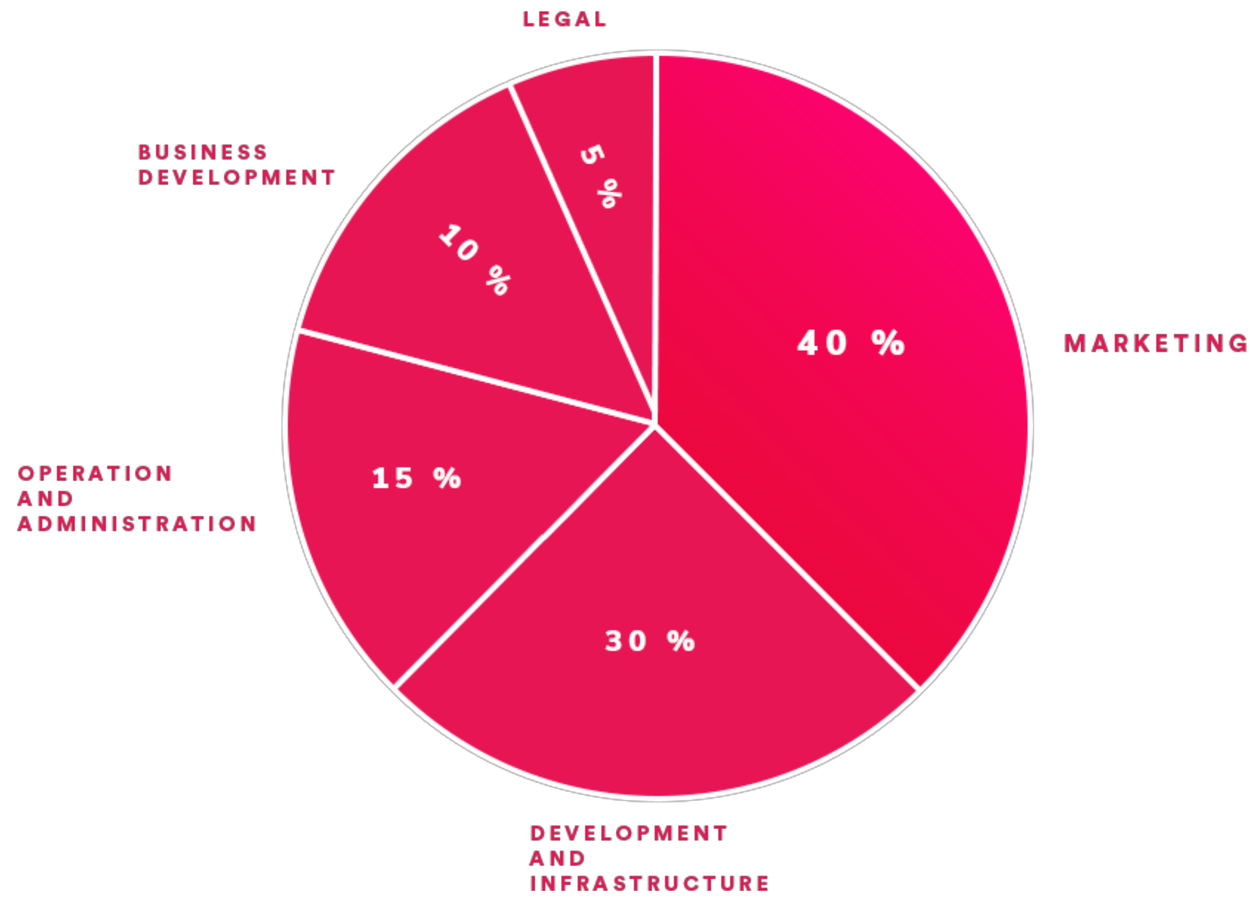
8.2. Initial Exchange Offering (IEO) Details and Timeline

While creating MENA region's first blockchain based common payment system, MenaPay Foundation will collect the necessary funds with an IEO, Public Token Sale will be done with Initial Exchange Offering, which is a safe and innovative way of fundraising.

Total Number of Tokens	400 Million
Tokens Available	256 Million (64%)
Soft Cap	$ 5 Million
Hard Cap	$ 25 Million
Payments Method Accepted	ETH,BTC,LTC,BCH,WAVES,USD,EURO,WON
Token Format	Ethereum ERC-20 Standard

Table 3: MenaPay IEO Info

Collected funds will be operated respectively:

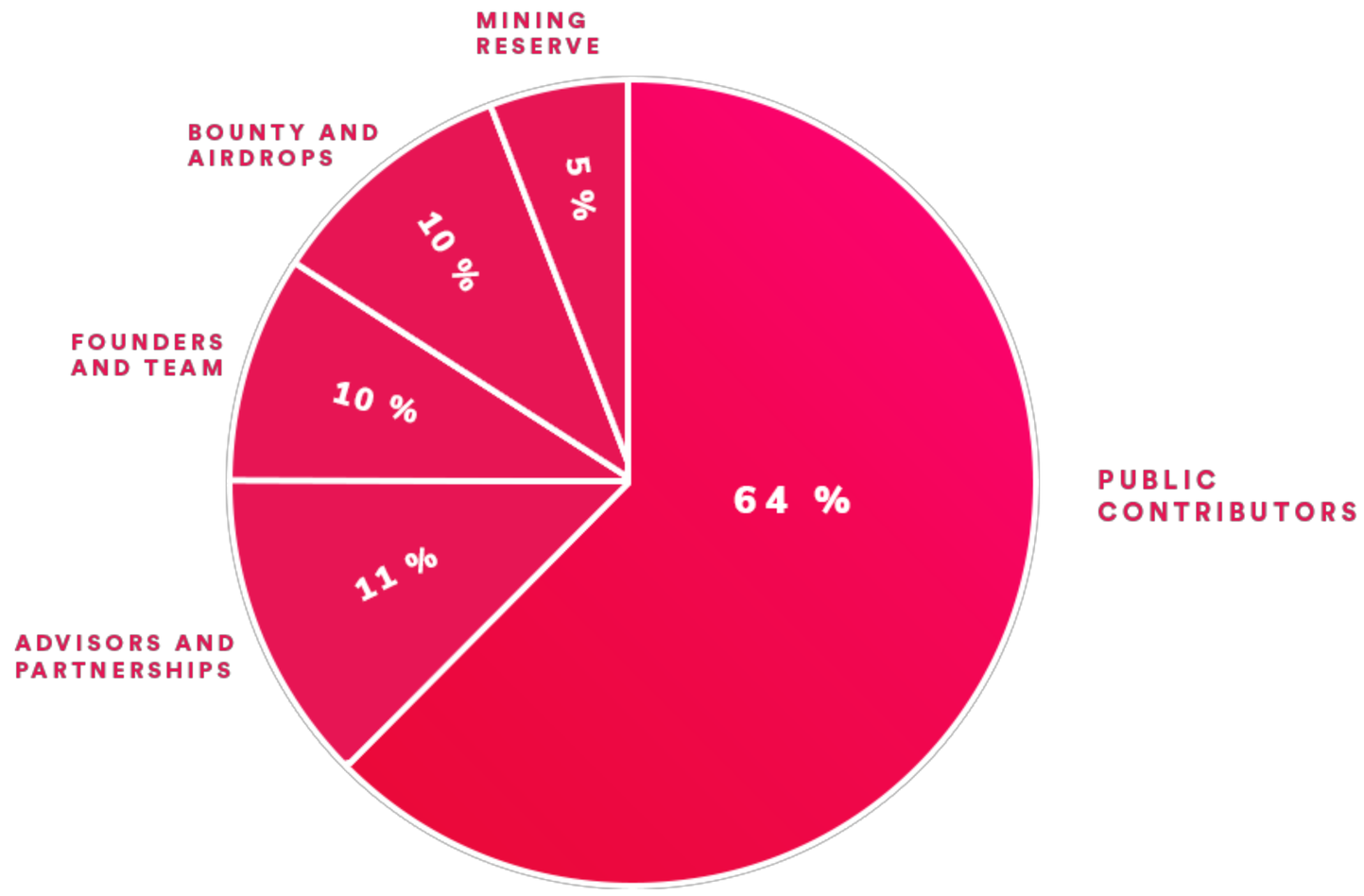


Graph 1: Allocation of Funds

No further tokens will be created.

Within 2 weeks after the IEO finalizes, investors' tokens will be sent to their digital wallets using smart contracts along with their bonuses.

8.3. Token Distribution



Graph 2: Token Distribution

- The tokens reserved for Founders, Team, Bounty, Airdrops, Advisors and Partnerships will have 12, 24 or 36 months of lock up periods and will only be released in 10% brackets (10% of the assigned token amount) in each month after lock-up period.

- Green Mining Reserve, is the portion to provide MenaPay tokens earned by MenaCash transactions and staking model.

8.4. Timeline and Growth Plan

When the IEO finalizes, the MenaPay Platform will start to operate with the 50 existing merchants in the system. MenaPay users will be able to pay these merchants with MenaCash over the platform. As of July 2019, there will be at least 500 merchants on the platform. Relevant information could be found under the headline 8.1.

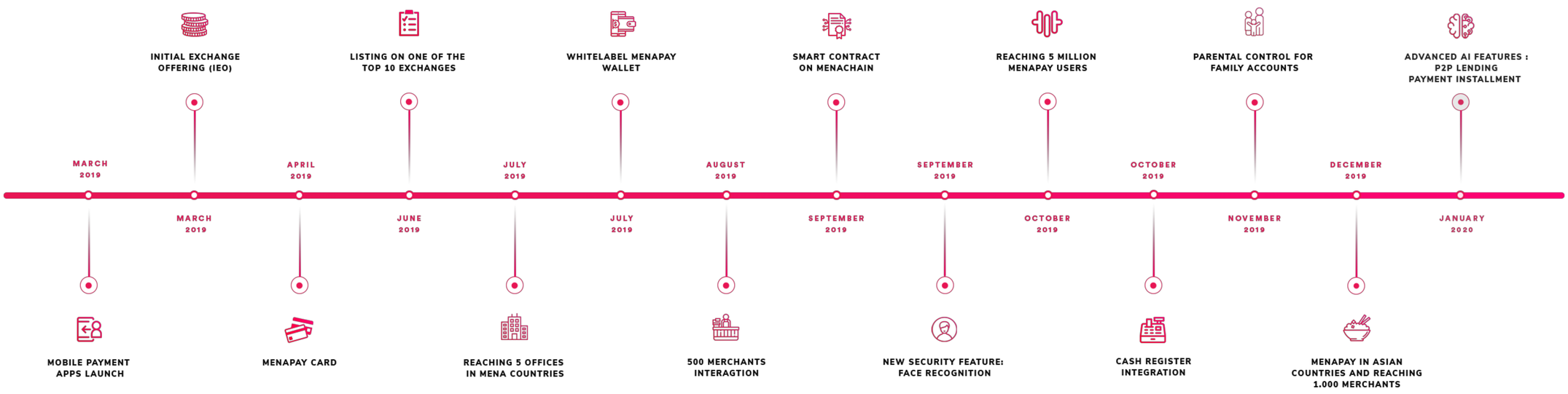


Figure 19: Timeline

Face Recognition: In order to increase security measures and provide user convenience, face recognition feature will be added on September 2019. Our R&D team is also working on the integration of mnemonic passwords and face recognition which will create a unique solution in the industry.

5 Offices in MENA Countries: We've already opened offices in Dubai (UAE), in Istanbul & Ankara in Turkey and in Manama (Bahrain). Our plan is to open KSA (Kingdom of Saudi Arabia) and Egypt offices in the short term to speed up penetration in the region.

50 Merchant Integration: We've already signed "LOI - Letter of Intent" with more than 50 merchants who are willing to integrate MenaPay as a payment gateway and become the grand launch partners of MenaPay platform. Our business development team has already started participating in the international exhibitions to present the MenaPay solution and acquire new merchants. All events can be followed on **https://www.menapay.io/#events**

5 Million MenaPay Users: When the critical milestone of 5 million accumulated users is reached by mid-2019, we will have more than 2 million monthly active users which will make MenaPay one of the most commonly used cryptocurrencies in the world and distinctly the #1 crypto currency in MENA region. Accordingly, we expect to enter into the Top 30 Cryptocurrencies by Market Capitalization.

Smart Contract to MenaChain: In the third quarter of 2019, MenaChain will also have a smart contract so it will have the securest way to transact money between two parties. Specifically companies which have security concerns will be able to define a 3rd party to control the transaction of money and/or goods.

Whitelabel MenaCash Wallet: Since it requires a long, detailed process to develop a wallet for merchants; MenaPay will offer a whitelabel wallet to the merchants in the platform. Merchants will be able to name and use their own digital currencies in MenaPay ecosystem.

Cash Register Integration: In order to propose another useful experience to MenaPay user, in the second half of 2019, MenaPay will apply cash register integration.

500 Merchant Integration: MenaPay business development team is focused in the integration of premium online merchants at phase 1. Together with the increasing trend of active users, many merchants will be willing to integrate MenaPay as their primary payment method.

Parental Control for Family Accounts: Family account feature will be activated. Parents will monitor and control their children's accounts.

Supporting 10 languages: Since our priority is MENA region, all products will be launched with Arabic, Turkish and English languages firstly. After reaching over 5 million users, MenaPay community will be willing to use MenaPay at overseas as well. We expect a significant request from the merchants located in the countries such as UK and USA where MENA-region-people frequently visit. Also, merchants and users in the other Islamic countries (extended MENA region) will be willing to use MenaPay and we'll support the community by adding more languages.

Expansion to Asian countries: MenaPay expansion plan especially covers the Islamic Asian countries such as Malaysia and Indonesia. We'll take Islamic Asian countries as our base point to penetrate the large and promising Asia market. At the same time, Asian digital companies are aware of the monetization problems in the Islamic regions and they are willing to integrate solutions to help them better monetize their businesses. We plan to open offices in Asia to reach the potential merchants with local teams.

Advanced AI features, P2P Lending and payment installment: MenaPay is the future of finance. MenaPay platform collects user data and analyses them with advanced machine learning and AI features. By the end of 2019, MenaPay data platform will reach a sophisticated level to calculate proper credit score for the users. Credit scores can be shared with the merchants upon approval from the users. Then, merchants can decide whether to allow users to pay in installments or start payment after a certain period of time according to their credit score.

Dubai, İstanbul, Bahrain, Riyad and Kahira will be the places welcoming MenaPay's first offices in the region.

During the IEO, MenaPay plans to be listed on the Top exchanges. After the IEO, since the key part for a cryptocurrency to take place in any exchange is the number of users and the volume. MenaPay aims to reach 1M users in a very short period of time and 5M users in 6 months which would make MenaPay globally #1 cryptocurrency in terms of number of users. The main reason for MenaPay's development is to serve any person who wants to use a digital payment system in their daily life.

AliPay and WeChat Pay examples which dominate the payment system industry in the Asia region are guarantees for the success of MenaPay within the MENA region by easily gaining users where the internet and mobile penetration rates are extremely high.

8.5. Business and Revenue Model

MenaPay eliminates major cost channels of POS machines, monthly fixed fees, expensive credit and debit card fees by integrating barcode and QR code technologies, which are usable on every smartphone, into the system. This opportunity is highly intriguing for the merchants. Built with these advantages and the blockchain technology, which eliminates intermediaries, MenaPay aims to create its own ecosystem without depending on other dynamics.

MenaPay Foundation, generates the revenue to be distributed to MenaPay Token Holders through 3 channels;

- P2P transaction fee
- P2M transaction fee (from merchant)
- M2F cash-out fee

Transaction fees for P2P will be 1% on average and cash-out fee will be 5% on average.

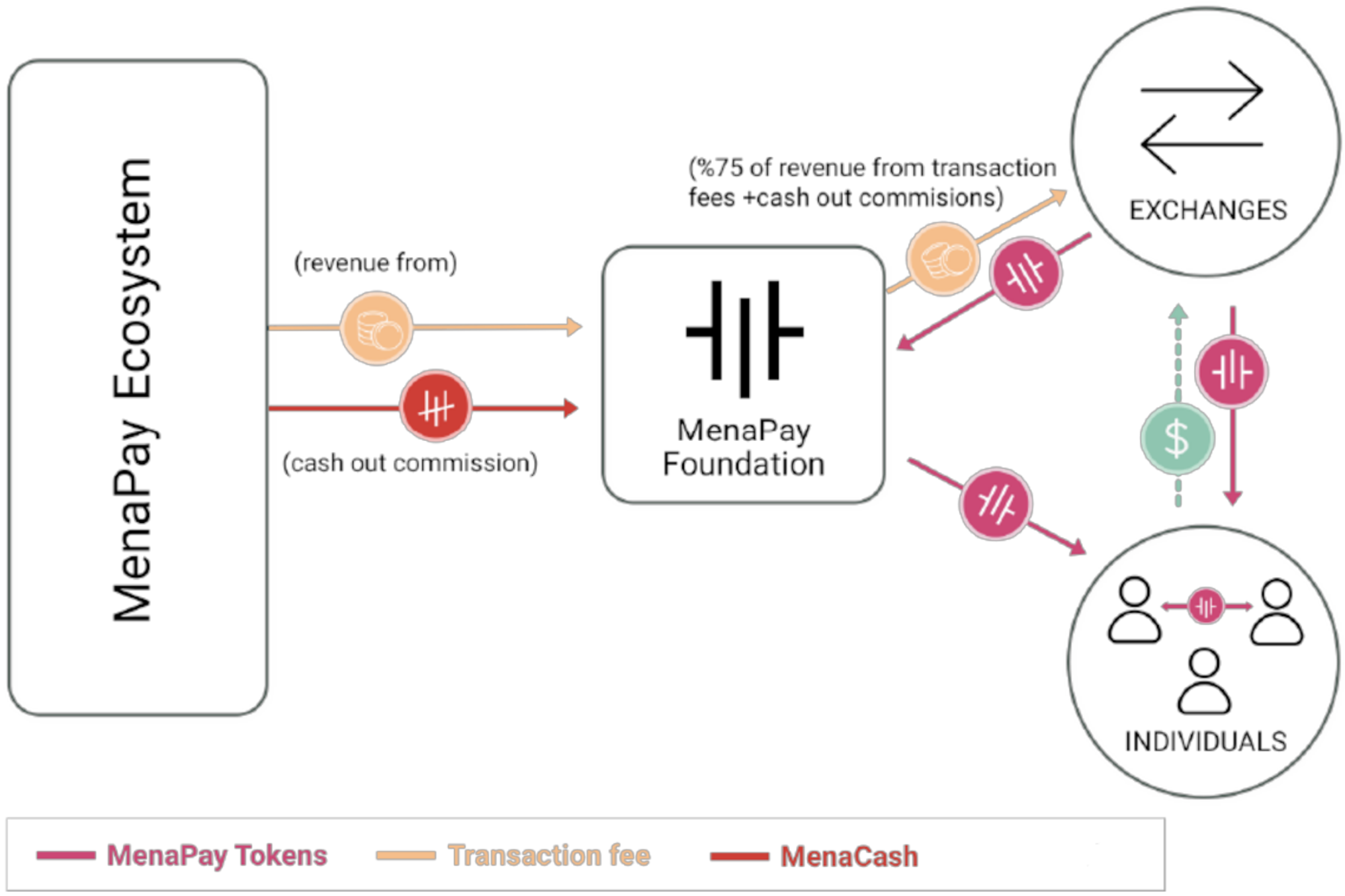


Figure 20: MenaPay Platform Revenue Models

All transactions are 100% transparent and secure whether guaranteed by the technical structure of the blockchain technology or by the nodes that will be given to the 3rd party audit companies.

Revenue generating methods of MenaPay do not include any interest methods. MenaCash equivalent USD is kept in accounts of MenaPay. This money is never to be subjected to interest. The accounts are interest-free. In case of large sums of money, money will be held in baskets of gold, different fiat currencies and liquid real estate assets. Any P2P transaction witnessed by 2 parties is considered as compliant with Islamic jurisprudence, so long as there is no financial interest within that system.

MenaPay Foundation also assures not to generate any interest gain from the cash reserve of MenaCash.

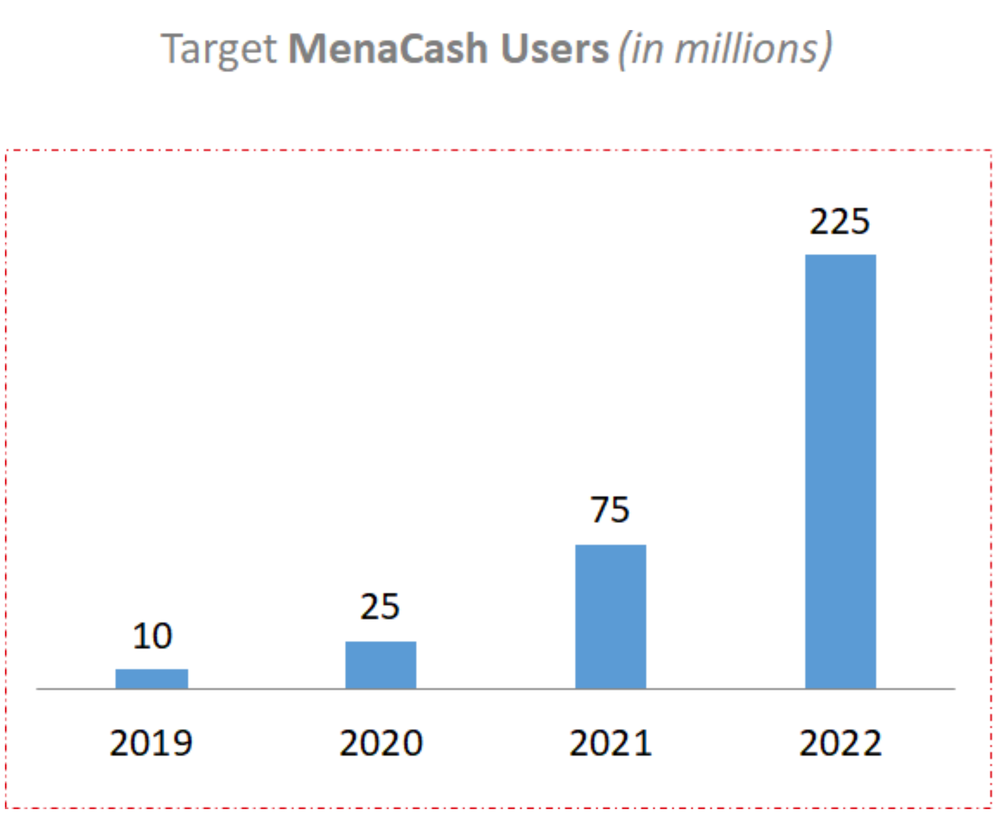
MenaPay Foundation uses %75 of its total revenue to fill the Green Mining pool which will use for staking and rewarding models. Detailed information can be found under section 7.4.

8.6. Financial Projections

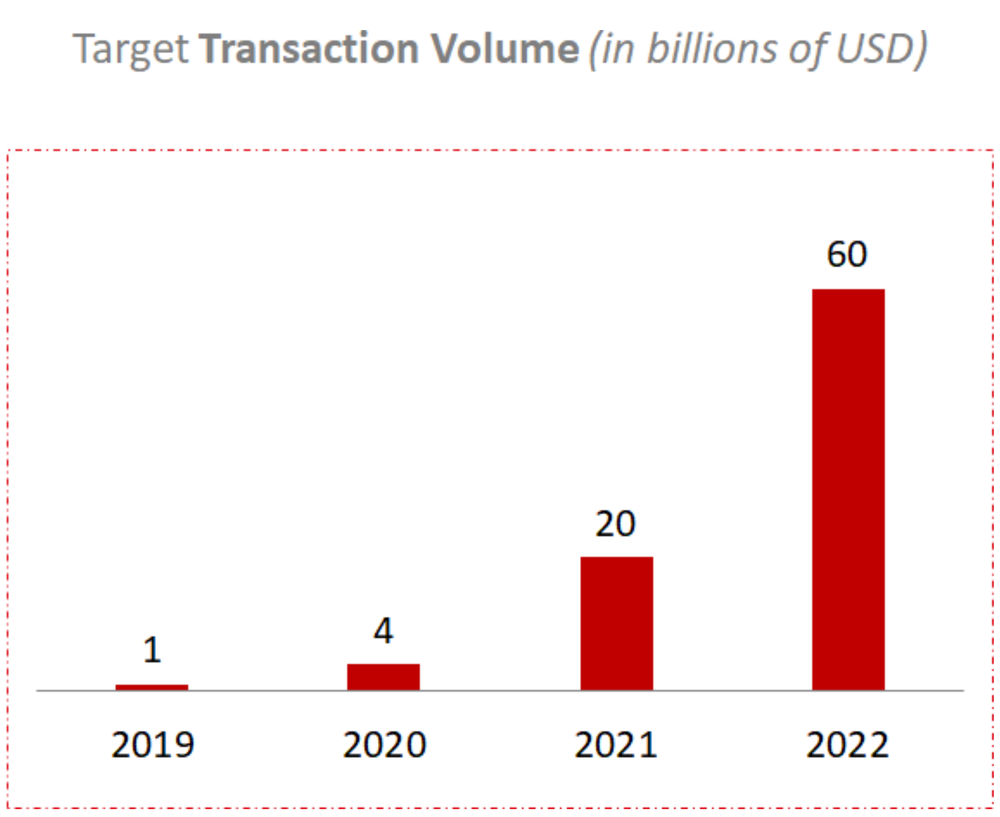
From the 1.000 merchants we will be reaching at the end of year 2019, there will be 10.000 users acquired on the average for each. This will bring our user number to 10M. Today, the mobile payment penetration of WeChat Pay is around 87% in China. WeChat Pay first arose in September 2014. If this high percentage achieved by WeChat Pay and MENA region's digital transformation rates are taken into account, the number of users solely within the MENA region would become 225 million in year 2022.

The average money transfer per person made within the year 2017 through digital POS machines is 243 USD. [21] Even if the exponential increase of the transfer amount is disregarded, with 225M users, MenaCash transaction volume would be 60B USD.

Research produced by the University of Cambridge estimates that in 2017, there were 2.9 to 5.8 million unique users using a cryptocurrency wallet, most of them using Bitcoin. [22] Considering Bitcoin is the most used cryptocurrency even with the fast-paced volatility it is accustomed with, we can predict that MenaCash would become the most used cryptocurrency with its stable USD backed value in the region and the world.



Graph 3.a: MenaCash User Target



Graph 3.b: MenaCash Transaction Volume Target

9. Board Members, Advisors and Team Members

9.1 Executive Board Members

Barış Özistek

- Top Executive in multinational companies for more than 20 years
- CEO at Netmarble EMEA
- Chairman at Boğaziçi Ventures
- Founding Board Member at StartersHub
- Board Member at Turkish Informatic Foundation
- Board Member at tech ventures; ProTranslate, Biznet, eGüven, Metamorfoz, SadeceOn
- NGOs; Turkish Blockchain Platform, TUSİAD, Fenerbahçe Club, GİRVAK

https://tr.linkedin.com/in/baris-ozistek-b071374

Burak Balık

- Previous large exits in MENA region; Pay2Go and Joygame
- Co-founder at the leading VC firm; Boğaziçi Ventures
- Co-founder at tech-ventures ProTranslate.net, Hugent and CCMedia
- Online gaming veteran
- Blockchain and Cryptocurrency Enthusiast

https://www.linkedin.com/in/burak-balık-417a2717/

Lawrence Du Pre

- Group Vice President and Group CEO at Medina Turgul DDB
- Managing Director at DDB & Tribal Worldwide in Amsterdam
- 20 years of advertising experience starting with the first advertising agency in Turkey; ManAjans

https://www.linkedin.com/in/lawrence-du-pre-9671293/

Bora Çetinoğlu

- Co-founder at the leading VC firm; Boğaziçi Ventures
- Chairman of electricity trading company ‘SEE Power Trading’ in Eastern Europe, General Partner
- Tech-entrepreneur and Serial Investor in technology and internet focused businesses
- Lover of Coding, Crypto Trader
- Board Member at tech-ventures; Protranslate, CC Media, SadeceOn

https://www.linkedin.com/in/bora-cetinoglu/

Zeynep Ağa Tevetoğlu

- Attorney at a successful law office; Tevetoglu Legal
- Diversified area of expertise; IT, Online Gaming, e-Commerce, New Media, Payment Systems and more
- More than 10 years experience as a lawyer of Digital Economy
- Extensive experience in blockchain and cryptocurrencies

Kazım Akalın

- Fintech & Gaming exits in MENA region; Pay2Go, Gamesultan and Joygame
- Co-founder at the leading Venture Capital firm; Boğaziçi Ventures
- Co-founder at successful tech-ventures; CCMedia and SadeceOn
- Visionary investor in tech and media industry with an excellent track record
- Crypto Hodler

https://tr.linkedin.com/in/kazim-akalin-1654434

Füsun Nebil

- Author of the book “Bitcoin and Cryptocurrencies”
- Founder and Information Technology Consultant at tech consultant firm SANE Communications
- CEO & Co-founder at Incobiz and InterVizyon Ltd.
- Expert in telecommunications

https://www.linkedin.com/in/fusunnebil/

Aykut Sanver

- Investor at 3D image and AR company Starelya, apparel retail company Modgrey & Hugent human resources firm
- Managing Partner at large MENA exits; Gamesultan gaming company & Pay2go payment initiative
- Founder at reputable production firm Mavi Baykuş Film Studios

https://tr.linkedin.com/in/aykutsanver

Burak Günsev

- Leader at Game Changer eSports & Gaming Entertainment
- 16 years of graphic design & advertisement
- Managing Partner at Wanda Digital graphic design
- Founding Partner at Wanda Socialist and MobiWan mobile
- More than 200 award-winning advertising campaigns carry his signature.

https://www.linkedin.com/in/burakgunsev/

9.2 Selected Board Members

H.H. Hanadi Ahmad Khadher
Princess of Kingdom of Saudi Arabia

- Chairman of the Board of Directors of Siam Gulf
- Chairman of the Board of Directors of Siam Al Khaleej for Organizing and Organizing Exhibitions and Conferences
- Tech Industry Enthusiast
- Has an active role in the digital transformation of KSA
- Advising MenaPay on government relations

Hasan Aslanoba

- Founding Chairman at venture capital firm Aslanoba Capital and Webnak transportation
- CEO, Local Shareholder, and Board Member of Erikli and Nestle Waters, Turkey Joint Venture
- An active technology and entrepreneur supporter with a great know-how
- Turkey's first true angel investor with 80.6 million investment in 112 domestic and foreign enterprises.

https://www.linkedin.com/in/hasanaslanoba/

Kamal Al Borno

- Associate Director, Strategic Partnerships at King Abdullah Economic City
- Former Head of Sustainable Development at King Abdullah Economic City
- Former head of the entrepreneurship platform at the National CommercialBank (NCB)

https://www.linkedin.com/in/kamalalborno/

Erol Özmandıracı

- CEO at successful art media company Artful Living
- Board member and founding partner at home textiles firm Eralteks & rice trading company Bay Gıda food enterprises
- Board member at real estate firm Kendo & successful construction firm Bay İnşaat
- Board member at Serial entrepreneur in several industries

https://www.linkedin.com/in/erol-ozmandiraci-2aa63966/

Billy Sungwoo

- COO at worldwide recognized billing system PayLetter Inc. for 16+ years
- Team member at gaming venture Gameflip
- Team advisor at decentralized gaming network Yumerum
- Blockchain & Cryptocurrency Enthusiast

https://www.linkedin.com/in/billy-sungwoo-lee-21b41a1/

Kenan Çolpan

- CEO at one of the leading accelerators in Turkey; ITU Arı Teknokent
- Board Member at technology firm ITUNOVA TEKNOLOJI
- General Manager of R&D at 3M worldwide corporation
- Board Member at Swiss Chamber of Commerce
- A true supporter of entrepreneurs in their journey to becoming global

https://www.linkedin.com/in/kenan-colpan-a549a845/

Amin El Husseini

- Mobile Business Development & Senior Product Manager at Middle East Broadcasting Center
- 13 years of experience in Middle East media sector
- Great knowledge in marketing, sales and product development
- Has a wide network in the Middle East

https://www.linkedin.com/in/husseiniamin/

Onur Topaç

- CEO at Gedik Investment Securities Inc.
- Vice Chairman at the Board at one of the leading accelerators; StartersHub
- Certified Angel Investor for more than three years
- A serial investor with a true support for entrepreneurs

https://www.linkedin.com/in/onur-topac-a938b354/

Alemşah Öztürk

- Chief Happiness Officer / CEO 4129 Gray marketing firm
- CoFounder at Grupanya and Dijital Buro Istanbul
- Angel Investor for five years
- ICO Marketing Adviser at 4th Pillar
- Marketing Adviser at DaoStack, powering decentralized companies
- Strategic Adviser and Founder of IcoSwat.team
- Chief Marketing Officer at Colendi
- 20+ years of Marketing experience

https://www.linkedin.com/in/alemsah/

Deniz Devrim Cengiz

- 19+ years of banking experience & Fintech expert
- General Maneger, Group Chief Digital Officer at National Bank of Kuwait
- Previous Group Director at Digital Banking at TEB (BNP Paribas JV)
- Head of CEPTETEB, Business Line P&L Owner
- Columnist at Fintechtime Magazine
- Played an active role in the digital transformation of banking industry

https://www.linkedin.com/in/denizdevrimcengiz/

Ersin Pamuksüzer

- Co-Founder at Turkcell, the leading telecommunications firm in Turkey
- Chairman and Head of the Basaksehir Living-Lab Project
- Founder at one of the leading accelerators; Starter Hub
- Founder at the Well-Being companies "The LifeCo" and "SAF" brands
- Well-known mentor in the Turkish startup ecosystem

https://www.linkedin.com/in/ersin-pamuksuzer-66584282/

Seyit Özgür

- CTO at one of the leading gaming firms; Netmarble EMEA
- Founder at PeerGuess, collaborative cryptocurrency ticker
- Master skills at Network and Internet Security products
- 10+ experience in Information Technologies
- A strong know-how on blockchain technology and cryptocurrencies

https://www.linkedin.com/in/seyitozgur/

Selçuk Saraç

- Founder at NG Inc., a major player in the e-commerce world
- Board Member, Investor of Sendloop, Gtech Gaming Tech, Online Mobile Payment A.S., Scorp, Mobilus and NGX Storage
- Board Member at Radore Data Center Services Inc.
- Founder at S4 Cloud Bitcoin Mining Services and Turo Group, BitTuro Crpyto Coin Services

https://www.linkedin.com/in/selcuk-sarac-1682755/

Oğuzhan Öztürk

- BoD at the leading VC firm; Boğaziçi Ventures
- Chairman at ARON Tourism
- Entrepreneur
- Crypto Investor
- MENA region veteran

https://www.linkedin.com/in/oğuzhan-öztürk-2b0a1245

Alper Kulak

- Partner at Maven Partners
- Partner at Maven Insights and Solutions
- 25 years of experience in Telecommunications and Media, Real Estate and Financial Services
- Expertise in expanding and growing customer bases with professional strategic planning

https://www.linkedin.com/in/akulak/

Serkan Sevim

- CEO at content delivery network company Medianova
- Internet business veteran
- Exits in online flower business, 444cicek.com and online media business, mezun.com
- A technology supporter with several enterprises and investments
- Expert in e-commerce with an inner understanding of merchants and customers

https://www.linkedin.com/in/serkansevim/

9.3. Selected Advisors

Mahmud Merali

- Member of Institute at Taxation (UK)
- Executive Partner at Meralis Group
- Regional Head of EMEA at Meralis Group
- Vice chairman of largest listed retail company in Turkey, BIM
- Fellow at the Institute of Chartered Accountants of England and Wales
- Provides training and consultancy for the Dubai Real Estate Institute

Minwoo Kim

- CEO at a mobile game publisher consultant firm specialized in MENA region, KBM Connect
- Director of Strategic Planning at Barunson E&A
- Former Director of Global Business at Netmarble Games
- Gaming veteran
- Blockchain Enthusiast

Tuğrul Sevim

- Partner at one of the biggest information law firms, BTS & Partners Law Firm
- Lecturer at Istanbul Bilgi University
- Provides professional consultancy services in the fields of electronic commerce, electronic signature, information security, nonmaterial rights, drm, information and communication technologies, law - policy and strategies.

https://www.linkedin.com/in/tugrulsevim/

Selin Beceni

- Partner and Attorney-at-Law at BTS & Partners, one of the biggest information law companies
- Former Partner at Köksal Attorney Partnership
- More than 15 years of whole range of corporate and M&A work experience
- Specialist in public procurement law, employment law and property law
- Legal advisor for startups and investors

https://www.linkedin.com/in/selin-beceni-6665424b/

Mete Tevetoğlu

- Legal Counsel at Turkey Game Developers Association
- Assistant Professor at Maltepe University
- PhD from Marmara University
- Rewarded with the Unal Aysal Thesis Prize from the Economic Research Foundation
- Research at the London School of Economics and Political Science (LSE) and University of London Institute of Advanced Legal Studies

https://www.linkedin.com/in/mete-tevetoğlu-phd-4023104b/

Frankie Cheung

- Global BD Lead of Mi Entertainment
- Former VP at Beijing Wali Network Technology, acquired by Xiaomi, largest Chinese Smartphone Manufacturer
- Co-founder at Trend Design Limited for more than 21 years
- Former Advisor at Peterson & Gibbs Consulting Limited, Magic Star Engineering Limited, EFJ Marketing Limited

https://www.linkedin.com/in/trend/

Elsie Habib

- Founder at Ambition Legal Consultancy
- Speciality in International Law, UAE Laws and International Corporate Law
- 11 years of legal experience
- Expert in MENA laws and regulations
- Strong knowledge in corporate law and governance

https://www.linkedin.com/in/elsie-habib-55050418/

Serkan Ömerbeyoğlu

- Co-founder at decentralized credit scoring & microcredit company, Colendi
- Former Business Development & Sales at Mastercard
- Former co-founder at successful fintech company, ininal
- CCO at Provus Informatics
- 5+ years of experience in fintech
- Excellent knowledge and an opinion leader in product management and mobile payments

https://www.linkedin.com/in/serkanomerbeyoglu/

Kerem Kalkancı

- Shareholder at tech-venture, freelancer startup, SadeceOn.com
- Co-founder at professional translation service, protranslate.net
- 11 years of software experience
- Former consultant for Fortune 500 companies to improve their software systems
- MBA at F. W. Olin Graduate School of Business
- Alumni at Northeastern University

https://www.linkedin.com/in/keremkalkanci/

9.4 Selected Team Members

Tolga Odoğlu

- Managing Director at MenaPay
- 20+ years of finance experience
- 17+ years of management experience
- 10+ years of funding management
- Blockchain & Cryptocurrency Enthusiast

https://www.linkedin.com/in/tolga-odoglu/

Tuna Orbay

- CTO at MenaPay
- METU Alumni
- Former CTO & Co-founder at nokta.com Media & Nokta Domains
- Co-founder at Barakatech
- Solution Partner at IdeaCoaching
- Interested in BlockChain Technologies & ICOs

https://www.linkedin.com/in/tunaorbay/

İlker Çıkrıkçılı

- Chief Marketing Officer at MenaPay
- 2+ years of experience in Marketing
- 4+ years of experience in Software Engineering
- 5+ years of experience in Project Management

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Orhan Bayram

- Chief Product Officer at MenaPay
- Managing Partner at QEC
- Secretary General at Mentor Effect
- Founder at Quick Execution
- Business Development and Partnership Manager at StartersHub

https://www.linkedin.com/in/orhanbayram/

Çağatay Karabulut

- Project Director at MenaPay
- METU Alumni
- Former COO & Co-founder at nokta.com Media
- Co-founder at Barakatech
- Solution Partner at IdeaCoaching
- Serial entrepreneur & Innovator

https://www.linkedin.com/in/ckarabulut/

Burak Erdir

- Business Development Director at MenaPay
- 8+ years of experience in business development
- 3+ years of experience in account management
- 2+ years of experience in product management

https://www.linkedin.com/in/burak-erdir-9104228/

Khawla Benbennasser

- Business Development Specialist at MenaPay
- 3+ years of sales experience
- 2+ years of experience in business management
- Arabic, French, Spanish and English speaker

https://www.linkedin.com/in/ms-benbennasser/

Polina Ercin Vinokurova

- Business Development Manager at MenaPay
- 3+ years of experience in business development
- 2+ years of experience in project management
- English, Russian and Chinese speaker.

https://www.linkedin.com/in/polinaercin/

10. Data Protection

General Data Protection Regulation (GDPR), which covers the protection of customers of enterprises, has been regulated by the European Union with the number 2016/679 25. GDPR compliance is mandatory for any enterprise that has been validated after May 2018 and that processes the data of people living within the European Union Borders, regardless of the enterprise whereabouts.

The MenaPay Platform keeps the privacy and security of the user at a maximum level and fulfills the GDPR compliance requirements.

All personal (sensitive) data obtained from the user is kept on the off-chain. Wallets and users on the blockchain are matched on the off-chain.
Data held on the blockchain are the executed transactions. These transactions are kept anonymous and matched with the off-chain database if necessary.

11.References

[1] https://www.wikizero.pro/wiki/en/MENA

[2] http://www.worldometers.info/

[3] https://www.wikizero.pro/wiki/en/List_of_countries_where_Arabic_is_an_official_language

[4] https://www.wikizero.pro/wiki/en/Religion_in_the_Middle_East

[5] https://www.wikizero.pro/wiki/en/List_of_countries_by_GDP_(PPP)

[6] https://gccstat.org/en/statistic/economic/

[7] https://www.worldenergy.org/data/resources/region/middle-east-north-africa/oil/

[8] https://data.worldbank.org/indicator/NY.GDP.PCAP.CD?locations=ZQ&year_high_desc=false

[9] https://www.wikizero.pro/wiki/en/Payment_gateway

[10] https://www.businessinsider.com/alipay-wechat-pay-china-mobile-payments-street-vendors-musicians-2018-5

[11] https://globalfindex.worldbank.org/

[12] https://www.ey.com/em/en/newsroom/news-releases/news-ey-three-out-of-four-gcc-customers-would-be-ready-to-switch-banks

[13] https://www.wamda.com/2017/03/100m-invested-in-mena-fintech

[14] https://gomedici.com/overview-of-the-payments-industry/

[15] https://cointelegraph.com/explained/erc-20-tokens-explained

[16] https://bitfury.com/content/downloads/pos-vs-pow-1.0.2.pdf

[17] https://www.businessinsider.com/bank-data-breaches-are-up-and-its-an-insider-job-2017-5

[18] https://www.bloomberg.com/news/articles/2018-02-21/how-an-1-8-billion-indian-bank-fraud-lasted-seven-years

[19] https://www.wikizero.pro/wiki/en/Demographics_of_Turkey

[20] https://newzoo.com/insights/rankings/top-50-countries-by-smartphone-penetration-and-users/

[21] https://www.statista.com/outlook/296/106/digital-payments/africa-middle-east#market-arpu

[22] https://www.wikizero.pro/wiki/en/Bitcoin

[23] https://datatracker.ietf.org/doc/draft-mazieres-dinrg-scp/

[24] https://www.stellar.org/papers/stellar-consensus-protocol.pdf

[25] https://www.visa.de/dam/VCOM/download/about-visa/visa-rules-public.pdf

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